
Covering ABS: Addressing the Need for Sectoral,
Geographical, Legal and International Integration in the
ABS Regime

Papers and Studies of *The ABS Project*

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This publication has been made possible in part by funding from BMZ.

Published by: IUCN, Gland, Switzerland in collaboration with the IUCN Environmental Law Centre, Bonn, Germany

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Citation: Young, Tomme (Ed.) 2009. *Covering ABS: Addressing the Need for Sectoral, Geographical, Legal and International Integration in the ABS Regime. Papers and Studies of The ABS Project.* IUCN, Gland, Switzerland. xxii + 201pp.

ISBN: 978-2-8317-0983-3

Cover design by: IUCN Environmental Law Centre

Cover image: Beverly Lorenc

Layout by: ceterum printdesign – Dieter Müller, 53340 Meckenheim, Germany

Produced by: IUCN Environmental Law Centre

Printed by: medienHaus Plump, 53619 Rheinbreitbach, Germany

Available from: IUCN Publications Services
Rue Mauverney 28
1196 Gland
Switzerland
Tel +41 22 999 0000
Fax +41 22 999 0010
books@iucn.org
www.iucn.org/publications

A catalogue of IUCN publications is also available.

The text of this book is printed on Novatech 90g/m² made from raw materials originating from responsibly managed forests.

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Foreword

On behalf of IUCN's Environmental Law Programme, I am pleased to present this book *Covering ABS: Addressing the Need for Sectoral, Geographical, Legal and International Integration in the ABS Regime*, written by Tomme Young with contributions from many others, and published as IUCN Environmental Policy and Law Paper (EPLP) No. 67/5. This book commemorates a project which has provided researched professional analysis into one of the most legally challenging concepts currently facing the international community – access and benefit sharing (ABS) under Article 15 of the Convention on Biological Diversity. As exemplified in this book, the project provided inputs on a wide range of specific issues within the ABS concept, and has had a recognized positive impact on international negotiations which are currently ongoing, as well as on actual ABS developments and practices at the national and regional level, through governments, NGOs, stakeholder groups and others. The IUCN EPLP series dates back to 1972, and has through 35 years maintained a high standard of legal scholarship and quality outputs.

The ABS Series, which includes this book, is the first 'sub-series' within the EPLP, designed in this way to maximize the usefulness and accessibility of these writings to the broad range of participants addressing the ABS challenge at both national and international levels. We believe that this Series offers a real contribution that will enable progress on an issue which has, up to now, been stymied both by its complexity and by its controversial nature. It is only through the understanding of those complexities that consensus and useful compromise can be attained that will resolve the controversies and enable a functional system for achieving the all-important equity objective of the Convention on Biological Diversity.

I would like to express my sincere gratitude to the sponsors of this project, the German Federal Ministry for Economic Cooperation and Development (BMZ), for their unending support in this process.

Dr Alejandro Iza

Director

IUCN Environmental Law Centre

2007

Preface: Clarifying the Legal Basis for ABS

This book constitutes the final summation of an intensive period of work.¹ Its general goal, to provide expert assistance to national legislators, implementing agencies, NGOs, lawyers and others in understanding the legal issues and problems underlying the various aspects of the Convention on Biological Diversity (CBD) concept known as ‘access to genetic resources and equitable sharing of the benefits arising from their commercial and non-commercial utilization’ or ‘ABS.’

The need to prepare for five books and a somewhat astounding number of articles and workshops to achieve this one-paragraph objective may be surprising to some, given that the entire ABS concept was created in one-third of the CBD’s Article 1 (which set the Convention’s objectives),² and an operational framework expressed in seven clauses, five definitions, and five other phrases.³ In 2002, the Sixth CBD Conference of Parties (COP 6) attempted to provide a more detailed basis for ABS implementation in its 19-page document, known as the Bonn Guidelines.⁴

Still, however, a team of 25 of the most able ABS experts in the world seeking material to clarify unresolved conflicts have found enough unresearched and necessary issues and concepts to fill five books with relatively little overlap. Our problem was cutting down this material, rather than finding enough to fill our books. This team, whose works are reflected in these five books, engaged in serious study, analysis, and explanation, but attempted to the maximum extent

possible to present their findings in terminology and formats accessible to lawyers and non-lawyers alike.

The first four books examine specific issues that were selected based on current priorities and urgency. Books 1-3 focus on the questions of law and governance which have been given the highest levels of current attention – (1) provider-side ABS legislation; (2) user-side ABS legislation, and (3) transboundary tracking options. Book 4 looks at the primary questions of ABS operation (contractual issues). This final book provides focused research papers, as well as some general understandings about the range of issues beyond the scope of the first four books, memorializing lessons learned by other project activities and research.

It is probably not difficult to predict the issues that were intended for examination in this book, by considering a list of the issues that have not been agreed internationally, and are not included in the above description of Books 1-4. Most of these issues have been on the table since the earliest CBD negotiations. Although *The ABS Project* has been able to pay the costs of in-depth expert analysis into many key issues, that work has only underscored the need for additional inquiry, to provide an appropriate, credible and balanced analysis that can serve as a basis for sound decision making and the creation of a workable and well-designed international ABS regime. Specifically, these analyses address aspects of key questions of integration of the various elements of the international ABS regime, focusing on five areas of concern:

-
- 1 That we have reached this point and with a body of work which meets our objective of credible research-based legally expert work, is due to the fact that our donor and institutional sponsor, the German Ministry for International Development Assistance, understood the challenges we faced in converting a straightforward project – implementing CBD Article 15 (one of the most difficult provisions in international environmental law) – to suit the change in circumstances that arose when the international community commenced intensive new negotiations that will reconfigure the world’s conception of ABS.
 - 2 The three objectives of the convention are listed in Article 1. The first two, ‘conservation of biological diversity’ and ‘sustainable use of its components’ are stated simply and directly. The third, benefit sharing, is more complex: ‘the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.’
 - 3 The seven main clauses comprising the ABS framework are Article 15.1–15.7. The five relevant definitions (‘biological resources,’ ‘biological material,’ ‘country of origin,’ ‘country providing resources’ and ‘genetic resources’) are found in Article 2, and the five other phrases are found in small clauses within Articles 16–21, and some would add Article 8.
 - 4 The *Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization*, originally adopted as an addendum to CBD Decision VI-24 (UNEP/CBD/COP/6/24), and in 2002 were reproduced in a booklet published by the CBD Secretariat.

- ABS issues in sectoral ministries and instruments;
- The legal issues and experiences relevant to designing an ABS framework that is functional within countries and across boundaries, and effective in achieving ABS objectives;
- The relationship between ABS and international frameworks addressing social welfare issues;
- Concerns regarding inter-framework issues and relationships; and
- The need for ABS discussions and implementation mechanisms to include the ‘forgotten’ ABS components relating to technology transfer, information sharing and the creation and sharing of development opportunities.

The need for further analysis, however, continues to be critical, and it was feared that an effort to organize unconfirmed impressions in this book might forestall some important inquiry in future. This book, therefore, discusses only formally researched analyses, identifying issues of additional concern, and explaining why and how additional inquiry can contribute to the ABS process. Like all work in this field, this book is an amalgamation and analysis of ongoing work that has evolved through many books, papers, processes and discussions, suggesting that in a very real sense, it is the work of hundreds of people.

The primary substantive content of *Covering ABS: Addressing the Need for Sectoral, Geographical, Legal and International Integration in the ABS Regime – Papers and Studies of The ABS Project*, is the formal presentation of a number of final individual outputs prepared under *The ABS Project*, in the hope of preserving them and sharing them with a wider audience, as well as offering some additional information on issues and concepts identified by the Project as areas in need of intensive analysis in the coming months and years. Through *The ABS Project*, many of these papers have been circulated in international, regional, national and non-governmental meetings and processes during the term of *The ABS Project*, some have also been presented in high-level

workshops and seminars, or have formed the basis for contributions by the *Project* to other meetings and publications. This book represents an effort to provide a balanced view of these contributions, considering a variety of factors linking the participants in ABS processes with each other and with the rest of the world, governmentally and in other ways.

Unlike the other books in this *Series*, however, this book does not attempt to edit out legal or scientific ideas, and contains a number of chapters and articles that were intentionally written to memorialize legal research and explain the results of that research in supported legal analysis. The authors have attempted to avoid the most complicated constructions and legalisms, however, and believe that there is much here for readers without legal educations. We also believe that it is important to begin the process of clarifying the legal issues and concepts for lawyers, few of whom have, as yet, researched or analyzed the law of ABS in any systematic way that would give them the confidence and knowledge required to enable them to advise in this field. It is, as noted, not a complete analysis of ABS law, but does hope to begin or enable the process of such analysis.

This book, and indeed the entire *ABS Project*, owe a great debt to our primary financial supporter, the German Federal Ministry for Economic Cooperation and Development (*Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung* or BMZ), and especially to Julia Kaiser, Andrea Laux and Frank Schmiedchen – without whom this work could not have been completed. Numerous other partners and collaborators have also made important and sustaining commitments for which we are very grateful.

Finally, I express our gratitude for the support and foresight of Dr Alejandro Iza and the IUCN Environmental Law Centre. It was through Dr Iza’s efforts that *The ABS Project* became a reality, and his understanding of the difficulties in its implementation as well as his support and the unstinting assistance of the staff of the Environmental Law Centre, including especially Project Assistant Ann DeVoy, Senior Information and Documentation Officer Anni Lukács, Documentation Assistant Monica Pacheco-Fabig and

Legal Officer Daniel Klein have been the primary reason that the Project could finish its work and that outputs throughout the term of the project have achieved

the level of legal excellence expected of the IUCN Environmental Policy and Law Papers, among which *The ABS Series* has been included.

Tomme Rosanne Young
Series Editor and Project Manager, *The ABS Project*
Editor and co-author of this book

April 2008

About the Series

The ABS Series represents a response to two realities: First, the ABS issue is both controversial, and technically and legally complex. Because of the constant international concern over controversial policy and political issues, the primary focus of all writing has been focused on political positions and advocacy, even where the expressed purpose of a particular document is ‘practical legal advice.’ Many purportedly professional inputs are characterized by opinions that are unsupported, or supported only by citations to the opinions of other experts or random references to or excerpts from laws and policy instruments, taken out of context.

To IUCN’s Environmental Law Centre, it became clear that the complexity and the controversiality of the ABS concept were linked problems. Solutions to the international ABS controversies are currently stymied by the lack of credible, non-biased technical analysis of the elements and issues of national implementation. Serious in-depth analysis is needed concerning not only the few examples of ABS law, but also the kinds of legal options that are available, and the manner in which they function. Simply put, one cannot build a structure without the right tools – and having the tools is meaningless without knowledge of what they can and cannot do.

The second reality faced by this project is that genetic resources are being taken, studied, developed and utilized every day. Countries do not have the luxury of waiting for international negotiations to answer their questions, before taking action. It is consequently urgent for all parties (users, source countries, source communities and resource owners, user countries, researchers, middlemen and others) to have some basis for taking these actions – and to have some certainty that this basis will be robust enough to protect his/its rights, even after international negotiations provide some guidance or assistance to all or part of the ABS issue. Even where national laws and practices exist, they are proving inadequate to this objective, in some measure owing to the lack of technical help, as described above.

Consequently, this *Series* is intended to raise the level of professional analysis and scholarship that goes into ABS writing and advice, by providing researched professional analysis focused on national implementation and the legal and legislative issues that must be addressed, rather than on advocating or addressing a particular side or position in the international negotiations. Through this process, the *Series* creates the best possible base of researched information on the practical application issues. It is thus not only a tool for national decision makers and implementers. While it is not always possible to be certain that one has been unbiased, we have made an effort, at minimum, to note the existence of other credible positions on the issues discussed, and to give some reason why these positions were not more fully expounded.

As of this writing, the international process for development of the international ABS regime is still ongoing. While not intended to ‘influence’ that process, *The ABS Series* has been designed and written in the hope that a better knowledge of the realities of ABS will enable the negotiators to develop the regime as a functional and effective tool of conservation, equity, and international development. As such, we believe that the books in this series will continue to be primary works of scholarship and professional analysis on which the architects and implementers of the ABS regime will rely long after the negotiations have concluded.

Target audiences: Writing for a broad audience can sometimes be challenging for lawyers. In this *Series*, however, we recognize that our primary audience includes national decision makers, NGOs and others, as well as lawyers and economists. We have endeavored to present our research in an accessible way, without doing harm to our absolute standard of legal correctness. Although many readers would like a simplified pamphlet-style analysis of the ABS issue, which can answer all of their questions in a few pages, this is not possible – the only simple fact about ABS is that it is not simple. Although *The ABS Series* provides summaries of the complexities in the issue that legal

specialists must grapple with, it avoids ‘legalese’ and its companion ‘econo-ese.’ For the legal or economics professional, however, these books also provide resources and information that will enable their deeper understanding of ABS issues. In this way, we feel that the *Series* provides both clarity and understandability for the non-lawyer, who may obtain a thorough grounding in the ABS issue through reading these books.

The future: The ABS issue is still evolving. After the commencement of *The ABS Project*, the CBD embarked on a groundbreaking process of re-evaluating ABS and attempting to develop the necessary tools, consensus and understanding (e.g., a clearer and more functional international ABS regime) that will enable progress toward achieving the goals of the CBD. With this decision, *The ABS Project* underwent its first evolution. It had begun as a project aimed at helping national

governments to find some positive steps to enable them to try to achieve the objectives behind the fixed language of CBD Article 15. In 2004, it necessarily expanded that focus-embracing the goal of informing all participants and interested persons (at national and international level) regarding the options, instruments, practices and processes that can enable the ABS regime to become a functional mechanism for achievement of the CBD third objective. Only time can decide how far the international negotiations will go toward assisting and supporting ABS implementation. The team of professionals who have worked to provide *The ABS Series* hope that a useful and innovative result is quickly obtained, and that we will all have the opportunity to extend the work of this *Series* and to guide, analyze and promote the new regime components that will be developed.

Acknowledgements

The provenance of these works, having spread over more than five years, presents a challenge to the author, in listing acknowledgements. Without slight to persons not mentioned, there are several contributions which must be specially mentioned.

First, other authors whose articles are reproduced here are of the highest calibre in their respective disciplines and countries. All worked for significantly less than their normal professional fees in producing these publications. Despite the demands of peer review and a very exacting editorial inquiry, all were available, helpful and not very testy in response to my frequent requests for additional clarifications or corrections. In the face of these requests, their responses were kind and constructive. In the end, all benefited from these exchanges, and these papers are the better for them. This is all the more praiseworthy when it is noted that these papers and articles were each produced first for a particular event, so that they have been through two or three separate review and re-edit processes, spaced very widely apart. The primary author offers her sincerest thanks for their excellent and insightful work.

In addition, much of the Project's most detailed analysis that is reproduced in this book was commissioned with additional funding and other support through:

- Environment Canada, with the help of Timothy Hodges, now a co-Chair of the CBD's Ad-hoc Working Group on ABS;
- IUCN-Canada, with special thanks to John Herity, its Director;

- the CBD Secretariat, whose ABS focal point, Valerie Normand, has provided not only administrative and financial support but also significant and valuable expert insights and advice.

The assistance, motivation and other contributions of these individuals and their respective organizations have been unstinting and universally excellent and helpful.

Similar contributions from IUCN's Regional Office for Southern Africa, UNDP's Regional Office for Africa, and the Southern African Development Community (SADC) Secretariat, as well as the fellowship programme of the Humboldt Foundation have been significant.

Finally, although certain important contributors of information, experience and knowledge must be omitted at their request, contributions from the following peer reviewers and others were less direct, but no less valuable:

Shakeel Bhatti, Dr Charlotte Briede, Matthias Buck, Jorge Cabrera Medaglia, Jorge Caillaux, Claudiane Chevalier, Kate Davis Hodges, Andreas Drewes, Thomas Dux, José Carlos Fernández-Ugalde, George Greene, Imene Meliane, Kent Nnadozie, Nicola Notaro, Laurent Ntauga, Paul Oldam, François Pithoud, Tom Rotherham, Peter Schei, Caroline Strulik, Seizo Sumida, Krystina Swiderska, Prof. David VanderZwaag, Morten Walløe Tvedt and Jacob Werksman.

Tomme Rosanne Young
March, 2008

1 Introduction: Identifying What is Needed to Enable Creation and Functionality of the International ABS Regime

This book constitutes the final summation of a long period of project work, which examined the challenges involved in the implementation of a difficult provision of an international agreement. During the pendency of that work, the international provision under scrutiny became the subject of intensive new negotiations. In the course of that project, a group of highly competent and respected ABS experts engaged in serious study, analysis, and explanation, with the goal of providing credible information and analysis which can support the highly controversial processes of (i) adopting and implementing national ABS legislation, and (ii) developing the supporting concepts and processes necessary so that ABS can function across national borders. Much of their work is memorialized in the other six books published by The ABS Project, and in other ways.⁵

1.1 Short-term and long-term options for implementation of the ABS regime

One of the most difficult challenges of the ABS regime arises out of the primary reasons behind its creation: ABS is intended to provide support to and be supported by the other objectives of the Convention on Biological Diversity (CBD) – ‘the conservation of biological diversity [and] the sustainable use of its components.’⁶ Many challenges of creating the ABS system described in the books of this Series seem like child’s play when compared to the task of inexorably linking that system to conservation and sustainable use.

During the CBD negotiations, and in the years immediately following, the third objective’s link to first two objectives was expressed very simplistically – that ABS would enable developing countries to obtain recognizable ‘value’ in exchange for their wild and traditionally developed biological resources, thereby creating a new and strong incentive (presumably financial) to conserve them.⁷ The succeeding years, however, have raised serious questions about whether this is a reasonable expectation. A bitter lesson has been learned through the international community’s experience with incentives and other attempts to implement or regulate environmental objectives through commercially focused measures, incentives, motivational provisions and other measures –

they are not easy to design, and they are not free of costs to governments. With very few exceptions, each book or article addressing the question of ‘access to genetic resources and equitable sharing of the benefits from their utilization’ or ‘ABS’ begins with a discussion of the ABS legal and practical system as it exists and/or as it is envisioned. What is most interesting in examining those discussions is their divergences rather than their similarities.

All commentators note or quote the various provisions of the CBD that comprise ABS and most follow this by noting or bemoaning the fact that these clauses do not give much of an indication of what countries must do to meet their ABS commitments nor exactly how the ABS system will function. From there, however, the variability in descriptions of ABS is an important indicator of the challenges to be faced in attempting to realize the ABS concept as an effective system:

- *Equity focus:* One perspective focuses on the perceived need for ABS to provide funds as a tool of equity, compensating developing countries and indigenous groups for the fact that they have, whether through conservation and sustainable development

5 See, the final page of this book for a list of major publications. In addition, The ABS Project presented or co-presented workshops in Peru, Kazakhstan, Germany and a number of other countries, produced Side events at CBD COPs 7 and 8 and at CBD/WG-ABS Meetings 3 and 4. It also provided advisory services for governmental and government-supported meetings in Russia and China, as well as regional meetings in Southern Africa, Europe and Latin America.

6 CBD, Article 1.

7 See, e.g., Hendrickx, F, V. Koester and C. Prip, 1993. ‘Convention on Biological Diversity Access to Genetic Resources: A Legal Analysis.’ *Environmental Policy and Law* 23(6): 254-255. Glowka et al., 1997; Young, 1994.

or simply by the fact that they have not developed as rapidly and completely as developed countries, maintained high levels of diversity both of known species, and of ecosystems containing a broad range of as-yet-unknown species.

- *Conservation incentive focus:* Another position looks at the underlying objective of ABS – to serve as an incentive for conservation and sustainable use, especially in developing countries.
- *Focus on conservation and developing funding:* Another focus – the ‘green gold’ perspective – sees ABS as a way of generating the high levels of funding needed for many kinds of conservation activities, especially for protected areas.
- *Focus on non-interference with commercial markets:* Another important faction is primarily focused on what ABS should NOT do – specifically, that it should not cause any alteration in existing commercial markets or necessitate any reconsideration of trade laws and relationships.
- *Focus on linkage to enhanced access to genetic resources:* Another perspective notes that the primary immediate impact of ABS has been an increase in the regulations and restrictions on access to genetic resources, and on biological/genetic field research and collection activities, especially in developing countries. This generally undisputed fact is somewhat ironic, given that the CBD does not require that Parties adopt legislation on access, and in fact its provisions on access are limitations on the limitations that countries may apply.
- *Focus on interrelationship with other international and national legal frameworks:* An astoundingly large percentage of ABS work has focused on the relationship between ABS and three other legal frameworks – specifically, the frameworks governing intellectual property (the conventions adopted under the auspices of the World Intellectual Property Organization (WIPO), and the Agreement on Trade-related Aspects of Intellectual Property Rights or TRIPS Agreement);⁸ those governing international movement of species (the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)); and other documents adopted within the international trade regime (World Trade Organization (WTO)); as well on national frameworks on all of these issues. *The ABS Project* has identified a number of key ways in which so-called ‘antitrust’ law – another body of law (found in most developed countries and many developing countries) may offer potential to assist in the implementation and application of the ABS concept.
- *Focus on contractual negotiation and commercial implementation:* Commercial entities, especially, consistently seek to bring the focus back to the mechanism itself – that is the need for the ABS system to operate in a legally and commercially rational and predictable way, if it is to function through but not interfere with the application of contractual and business mechanisms.
- *Focus on contractual enforcement:* In contrast, many provider-side officials, negotiators and analysts, focus on the contractual element of ABS, generally viewing its failures to be a result of non-compliance and non-enforcement, raising the claim that developed countries (sometimes called ‘user countries’) have not addressed their obligations to enforce the ABS ‘user’ requirements.
- *Focus on the lack of legislative measures:* Although many articles have been written about the last 15 years’ experience with ABS implementation through legislation, the fact remains that fewer than 12% of CBD parties have adopted any actual legal, regulatory or other measures implementing and addressing ABS. More important, perhaps, but less well considered prior to this writing is the fact none of these countries or regional bodies have attempted to meet the obligations of Article 15.7, which call for specific legal, regulatory or administrative measures directed at the users under their jurisdiction who are utilizing genetic resources with origin in other countries. The only type of measure that has been adopted with any user impact at all is the (voluntary or mandatory) ‘disclosure of origin in patent

⁸ Although much of the attention within the ABS discussions focuses on Article 27.3(b) of the TRIPS Agreement, a significant swath of Part II (Articles 9-40) contains provisions and elements of much greater import and impact on ABS.

applications,' a measure that does not include any requirement or recommendation for (or any type of user-side government involvement in) 'sharing the benefits arising from utilization of genetic resources.' This is all the more notable, since user-side measures are specifically required under the CBD.⁹

- *Focus on other paths to the ABS objective:* A few Parties, ABS commentators and institutions have emphasized different approaches, based on the perceived spiralling needs that are arising in trying to actualize the ABS framework, including. These approaches include the following:

- To integrate the current discussions with the other elements of ABS as specified in the CBD, especially ABS provisions regarding technology transfer, information sharing, and development opportunities.
- To find create/appropriate incentive or motivation mechanisms and integrate them into the ABS framework, to alleviate its dependence on mandatory provisions and their (nearly impossible) enforcement.

1.2 Matters addressed in this book

Like *The ABS Project*, this book attempts to fulfil three objectives:

- Memorializing project research;
- Considering the options for how to adopt the new international decisions and instruments of the ABS regime quickly, without creating a new set of obstacles that prevent its functionality for another 15 years; and
- Identifying key areas for further work.

The first objective is addressed in Chapters 2-8, which are offered with minimal introductory material. The

- To link ABS with already functional and effective voluntary certification programmes for corporate social responsibility, enabling ABS implementation to rely on these systems to effectuate ABS compliance without governmental mandate or direct involvement.

- To re-link ABS to other genetic-resource related issues, enabling the ABS negotiations and resulting framework to reflect a more 'bilateral' compromise through which those most resistant to ABS implementation will see a political, commercial or other justification for taking action.

In evaluating the large volume of data and analysis available, this book has focused on identifying work or further analyses not yet conducted by other publications. Consequently, it will not commence with an overview or overarching analysis of what ABS is, expecting the reader to find these summaries in books 1-4 of this Series, and in the other books published by the *Project*.

five-year *ABS Project* has attempted to mobilize experts for focused research at need – that is, to provide professionally competent legal analysis by experienced lawyers and other experts addressing specific issues of immediate concern. In addition to the ever-widening scope of its substantive researches and resources, the *Project's* integration into the ABS processes provided opportunities to interview a large number of representatives of governments, civil society, industrial/commercial sector, and the research community, regarding ABS issues and their impacts. In the course of this long process, a sizeable body of information has been compiled internally, which should be preserved and memorialized as the project ends, in the hopes of it being useful to other projects and activities in future. This book collects a number of

⁹ Although some non-lawyers have suggested that the phrase 'as appropriate' in Article 15.7 (which calls for 'legal, administrative or policy measures, as appropriate') gives countries the option of adopting no measures at all. Legal construction would not allow this, however, unless the country already had 'legal, administrative or policy measures' in place which achieved the required objective – something that no country appears to have, based on detailed analysis of all the relevant laws of Australia, USA, Norway and the EU, and of the laws submitted by all countries which have complied with the CBD-COP request that they provide copies of relevant law to the CHM. See Tvedt, M.W. and T.R. Young. 2007. *Beyond Access – Exploring Implementation of the Fair and Equitable Sharing Commitment in the CBD*. EPLP 67/2, at chapter 3. Gland and Bonn: IUCN in collaboration with IUCN ELC.

shorter works developed in the *Project*, which are more focused and generally outside of the primary perspectives presented in the other *ABS Project*-produced books.

In addition to these works, *The ABS Project* produced another publication, which provides an initial inquiry into the relationship of the four different ‘genetic resource’ issues:

- Utilization of genetic resources (ABS);
- GMOs, as products of genetic resource utilization (the Cartagena Protocol);
- Agricultural development (the ITPGRFA); and
- Traditional knowledge and intellectual property regimes (the WIPO IGC).¹⁰

That analysis, from 2005, focuses on a critical fact – that the availability of benefits, both monetary and informational, is essentially related to commercial development. Hence, a reciprocal commitment to support this type of development may be essential to both the success of ABS and the creation of the incentives necessary to inspire users and user countries to assertively implement ABS.¹¹

Chapters 9-10 offer a variety of other analyses, intended as the beginnings of an integrated analytical framework addressing the manner in which legal/practical subjects address ABS and interrelate with one another. Finally, Chapter 11 presents a brief listing of some urgently needed further analytical studies, and for each a brief discussion of the reasons that it is important to the creation of any functional regime. All articles are reprinted with permission of their authors and of all other sponsors of such publications.

10 Young, T.R. 2005. ‘Incentive and Effective Operation: Re-linking the Components of International Law on Genetic Resources.’ In: Werksman, J., (Ed.) *Yearbook of International Environmental Law* (anchor article).

11 Id.

Part I Sectoral Issues: Marine Genetic Resources as an Example

The following papers were developed as initial inquiries into the possible value of contributing some expert understanding of ABS into the work of the international marine sector, through the UN Convention on the Law of the Sea (UNCLOS) and the UN Open-ended Informal Consultative Process on Oceans and the Law of the Sea (UNICPOLOS). Those discussions, although specifically described as addressing 'genetic resources' had not been informed about, nor seriously considered the nature of that concept, including the problems of determining what sort of resources are genetic resources and which are normal biological resources. As a consequence, most UNICPOLOS and UNCLOS discussions relating to genetic resources focused on issues of sustainable use and avoidance of collection practices that

damage or destroy the ecosystem under study. While these issues, and the entire concept of marine conservation are of critical importance and interest, they are obviously not 'ABS issues.'

The following are two initial papers, commissioned by the *Project*, presenting actual 'genetic-resource facts' and identifying the ABS issues that are most relevant to oceans beyond national jurisdiction and the law of the sea. As noted in Chapter 11, these papers are only the beginning of the most important process in this sector – finding a way to inform the biodiversity sector about marine issues, and the marine sector about biodiversity issues.

2 The Ecological Significance of Seamounts: Threats and Conservation

Sarah Patton with the assistance of Dr. François Bailet*

**At the time of submission, Sarah Patton was Marine Science Advisor, International Ocean Institute-Canada and Dr Bailet is Honorary Advisor to the President of the Board of Governors of the International Ocean Institute. This paper was prepared to serve as the first half of a Joint IOI-IUCN Information Pamphlet, to be provided as background information for the 5th United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea (UNICPO-LOS-5), in 2004, in its consideration of genetic resource issues relevant to oceans. It is reprinted here with their permission, and with the gratitude of the Project Manager for the excellence of their contribution and their extraordinary patience and understanding.*

2.1 Typology of seamounts

Seamounts are submarine mountains that rise steeply from the surrounding abyssal plains but do not penetrate the sea surface. They comprise nearly 6% of all seafloor topography and are found in all ocean basins; they are categorized either based on height (seamount = >1000m, knolls = 500-1000m; hills = <500m) or on morphology (seamount = conical; guyot = flat-topped; atoll = coral-reef formation) (Keating, 1987). It is estimated that there are more than 50,000 true seamounts in the Pacific and over 1000 in the Atlantic (Koslow, 1997). Typically, seamount summits are found at depths of at least 1000m ($z = 1000\text{m}$) but some 'shallow' seamounts rise to within 25m of the surface (DFO, 2001).

For many years, seamount formation was a topic of some debate (Fornari et al., 1987; Fryer and Fryer, 1987); modern theory now suggests that seamounts are formed primarily by volcanic activity over hotspots in the earth's crust. Dower and Fee (1999) states that the

spreading of the sea floor away from these hotspots via plate tectonic movement means that seamounts are often arranged in chains or clusters which radiate out from such spreading centers. Of special geological interest is that although they might be over hundreds of thousands of years old, seamounts are often much younger than the surrounding sea floor.

Shallow seamounts in particular are often referred to as 'open-water oases' (Dower and Fee, 1999; Koslow, 1997; DFO, 2001) because they have a much higher biological richness and productivity than the waters surrounding them. Although they never penetrate the surface, seamounts act as underwater 'island groups' in that they tend to exhibit a high level of rare deep-sea endemic speciation. Generally, there is very little overlap between ranges with respect to species similarity ($C = 0.04$) and community composition, even when the ranges are less than 1000m apart (DeForges et al., 2000).

2.2 Seamounts in ocean ecosystems

Seamounts are formidable geological structures that exert effects on both ocean circulation and on the structure of the water column. When ocean currents encounter these massive undersea mountains, eddies, jets and vortices are formed and diurnal tides are affected, altering the daily vertical migration of plankton and other food sources. Because near-surface waters in the open ocean tend to be oligotrophic, primary production there is generally limited; cold, deep water by contrast is usually nutrient-rich (Dower and Fee, 1999). When deep-sea currents

encounter a seamount, water is directed upward, resulting in the strong turbulent mixing of abyssal nutrients along the slopes and at the summit of the seamount. This upwelling not only increases nutrient availability in near-surface waters, it also transports deeper phytoplankton closer to the surface where more light is available for photosynthesis (Johnston and Santillo, 2002). These effects combined often lead to localized bursts of primary production in the form of phytoplankton blooms.

The concentration of food over seamounts creates a cascade effect at higher trophic levels, making them attractive habitat for a wide range of organisms (Dower and Fee, 1999). Food is also concentrated over seamounts by closed, re-circulating eddies called 'Taylor columns' which span tens of kilometers in diameter and form only under specialized oceanographic conditions common at seamounts. These clockwise eddies often play a key role in the speciation of seamount habitats (Dower and Fee, 1999): they collect and trap up-welled or bloomed phytoplankton and other larval forms over seamounts,

2.3 Seamounts as ecosystems

The majority of the deep sea ($z > 1000\text{m}$) is inhospitable to most marine organisms. Only animals whose body plans and energetics have evolved to exploit dark, oligotrophic environments thrive in this harsh environment (DeForges et al., 2000).

Seamounts are one exception; they are thriving deep-sea oases able to support high biomass densities, maintain increased productivity and exhibit high levels of endemism (22-36%) (Dower and Fee, 1999). In addition to permanent seamount resident species, sharks, sea turtles, tunas, squid, seabirds, dolphins and other marine animals (including those of global concern) frequently congregate around shallow seamounts to exploit this rich food source (Dower and Fee, 1999).

Seamounts are unique in the deep sea because they are able to provide a variety of habitats for a wide array of uniquely adapted organisms.

Four main habitat types exist at seamounts:

1. Pelagic;
2. Hard substrate (pebbled/bouldered);
3. Soft substrate (sediment); and
4. Hydrothermal.

Suspension feeders and grazers dominate the permanent faunal assemblages at seamounts, but higher order animals such as fish and squid are also locally abundant (DeForges et al., 2000).

intercept and concentrate vertically migrating organisms (which stay in deeper, darker waters during the day to avoid predation) and can act as backwaters, reducing the energetic cost associated with maintaining swimming animals' position around the seamounts (Koslow, 1997). As a result of current activity, the physical and biological conditions at seamounts combine to concentrate highly important food sources, provide re-colonization opportunities and create unique habitat for many organisms that could not otherwise thrive in the open ocean (Dower and Fee, 1999).

By virtue of seamount geography, seamount fauna that employ a dispersed larval stage face significant challenges with respect to the maintenance of their communities.

The four current larval dispersal hypotheses which address methods of seamount population maintenance are that:

1. Communities rely on external recruitment and dispersal (dependent on recruitment from and production to adjacent seamounts) for speciation;
2. Communities rely on returning juveniles (larvae with long dispersal modes return to seamount as juveniles or adults);
3. Larvae are retained by oceanographic conditions (i.e., Taylor columns trap larvae); and
4. Species evolve reduced larval dispersal times to ensure retention within habitat (behavioral retention of larvae) (Johanssen, 1988).

It is generally thought that a combination of these strategies governs community maintenance, but biotic input is still unpredictable and a high level of genetic isolation is possible when the last three methods are employed.

This genetic isolation creates ideal conditions for the endemic speciation documented at seamounts. Unlike species which disperse larvae, seamount fishes do not face equivalent community maintenance issues, but they are of interest to science and fisheries as they have

evolved unique characteristics that separate them from other deep-sea fishes. Most deep-sea fishes have reduced bone and musculature for the maintenance of neutral buoyancy, low protein and lipid content, high water content, a greatly reduced metabolism and a body plan poorly suited to predator escape (Koslow, 1997).

Many seamount fishes by contrast more closely resemble near-surface or vertically migrating fish species; they exhibit increased food consumption, increased energy expenditure and a body plan well suited to strong swimming performance (Koslow, 1997). Roughly equivalent to haddock (*Melanogrammus aeglefinus*), seamount fishes have firm flesh with a high lipid and protein content, and low water content (DeForges et al., 2000).

2.4 Threats to seamounts

Seamounts are currently exploited for many reasons including non-renewable resource exploration and extraction, tourism and recreation, and commercial biomass removal. The high level of endemism found at seamounts means that exploitative activities, particularly unselective and structurally damaging fishing methods such as trawling and dredging, have the potential to have whole ecosystem implications through species extinctions, loss of habitat, and altered interspecific interactions (DeForges et al., 2000). Commonly targeted seamount fish include the Pelagic Armourhead (North Hawaiian ridge and the Southern Emperor Plateau), the Orange Roughy (New Zealand and Australia), and the Alfonsin (*Beryx splendens*) – Emperor seamount chain in the western north Pacific and the Kyushu-Palau ridge in the Philippine Sea (Dower and Fee, 1999). Many of these areas also support a valuable but destructive trade in precious corals (the pink and red corals of the genus *Corallium* are especially prized) (Dower and Fee, 1999). Canada and the United States currently conduct fisheries over 12 seamounts in the N.E. Pacific for Rockfish, Black Cod and Sablefish (Dower and Fee, 1999).

Extraction techniques such as dredging, trawling and blasting are not only physically damaging to seamounts but can threaten the integrity of whole ecosystems by sweeping away critical benthic epifaunal biomass as by-catch, and decimating coral assemblages (DeForges et al., 2000). According to Dower and Fee (1999), directed fishing began for the Pelagic Armourhead and Alfonsin in the 1960s over seamounts in the central north Pacific;

Firm-fleshed seamount fish such as the Orange Roughy (*Holostethus atlanticus*) and the Pelagic Armourhead (*Pseudopentaceros wheeleri*) aggregate in very high densities over predictable seamount areas, making them an abundant, available and highly attractive resource to the global fisheries industry.

In some countries and regions (e.g., New Zealand and S.E. Australia), the above-mentioned seamount fish comprise the main commercial fishery (DeForges et al., 2000), but because these fish live at or near their energetic budget and are slow-growing, long-lived species (they reach maturity at around 32 years, and live up to 150 years) (Dower and Fee, 1999), they are extremely vulnerable to overfishing (Koslow, 1997).

by 1969, the yield of Pelagic Armourhead had climbed to more than 130,000t/annum. By the mid-1970s, though targeting grew internationally, the annual yield had already declined significantly for this species to less than 30,000t/annum. By 1976, less than 10 years after the boom began, the fishery had collapsed altogether.

Around 1980, the Orange Roughy commercial fishery began in earnest in New Zealand and Australia. Initially, catch rates were about 30,000t/annum but have since declined dramatically, a crisis which prompted the Australian government to design and implement a series of Marine Protected Areas (MPAs) to protect critical Orange Roughy spawning habitat (Dower and Fee, 1999).

There are currently 75 species of fish and invertebrates that are targeted by commercial seamount fisheries (Koslow, 1997). Inherent problems associated with geographic isolation, specialized adaptations and aggregating behaviors common to many seamount species make them especially vulnerable to overexploitation (Koslow, 1997). Roughys and other firm-fleshed seamount fish are of particular concern because their yields are clearly outside of 'safe biological limits' (Johnston and Santillo, 2002), and they are often fished from international waters where no management exists.

Research and history have demonstrated that without proper management, these communities are typically depleted in 5-10 years (Koslow, 1997).

2.5 Protection of seamounts

The highly specialized environmental conditions found at many seamounts have profound implications for their conservation. Current pressures are applied by industry to seamounts and their associated biotic communities through the deployment and/or loss of fishing gear, aggressive non-renewable resource extraction, shipping activities (oil, chemical and cargo spills), the strategic use of seamount habitats for marine warfare, poor research sampling methods, and of course the removal of animal biomass (DFO, 2001).

Two major issues of seamount conservation are (1) that seamount fisheries are often located in international waters where no management exists; and (2) that very little is known about the biology and life histories of the commercially targeted and by-catch species (DeForges et al., 2000). Although substantial research is required if we are to better understand seamount biotic assemblages, it is known that biological factors of seamount species compound the effects of their exploitation, particularly in reference to trawling. Seamount species' slow growth and extreme longevity, the high variability of recruitment to or between seamounts, high levels of within-range endemism, genetic isolation, and limited, fixed suitable habitat results in a low sustainable commercial yield. Seamount populations are thus very easily over-exploited and have been shown to be incapable of rapid recovery (DeForges et al., 2000).

Because of the fragility of seamount fish stocks and the delicate balance between biology and physics found only at seamounts which is required to ensure their survival (Dower and Fee, 1999), careful management must be quickly implemented to protect them from poten-

tially devastating overexploitation. It is imperative to design and implement internationally enforceable protective regulations and as well as a comprehensive system of protected areas to champion these unique and essential deep-sea habitats. Protected areas provide venues for concerned parties to address pressing and often complex conservational issues (Dower and Fee, 1999). The study of MPAs can also allow scientists and managers opportunities to investigate questions pertaining to seamount biodiversity, genetic isolation, seamount-current interactions (predict recruitment, ecosystem stability, estimate sustainability, identify potential seed populations, understand how flow features affect ecosystem function), and the importance of these biological oases for transient, migratory and dependent species, and those of global concern (Dower and Fee, 1999).

The rapid historical collapses of overexploited seamount fauna should be interpreted as an indicator of how little is known about these commercial stocks, and of seamount community dynamics in general (Johnston and Santillo, 2002). The collapses should also provide the evidence necessary to encourage the international community to work together, and to evoke the precautionary principle to ensure that entire thriving seamount ranges are not transformed into barren, lifeless wastelands as a result of inadequate management. Seamounts provide a unique and vital habitat which we have only just begun to understand.

The protection of these deep-sea oases is not only the prudent environmental course of action, it is essential if we are to ensure the continued proliferation of a healthy global marine environment.

References for Chapter 2

- DeForges, B.R., J.A. Koslow and G.C.B. Poore. 2000. 'Diversity and Endemism of the Benthic Seamount Fauna in the Southwest Pacific.' *Nature* 405: 944-946.
- Dower, J.F. and F.J. Fee. 1999. *Ocean's Background Report: The Bowie Seamount Area*. Vancouver: University of British Columbia Press.
- Fisheries and Oceans Canada (DFO). 2001. Bowie Seamount MPA. Management Plan: Draft.
- Fornari, D.J., R. Batiza and J.F. Allan. 1987. 'Irregularly Shaped Seamounts Near the East Pacific Rise: Implication for Seamount Origin and Rise Axis Processes.' In: Keating, B.H., P. Fryer, R. Batiza and G.W. Boehlert (Eds), *Seamounts, Islands, and Atolls*. Washington, DC: AGU (American Geophysical Union), at 35-48.
- Fryer, P. and G.J. Fryer. 1987. 'Origins of nonvolcanic seamounts in a forearc environment.' In: Keating, B.H., P. Fryer, R. Batiza and G.W. Boehlert (Eds), *Seamounts, Islands, and Atolls*, Washington, DC: AGU (American Geophysical Union), at 61-69.
- Hyrenback, K.D., K.A. Forney and P.K. Dayton. 2000. 'Marine Protected Areas and Ocean Basin Management.' *Aquatic Conservation: Marine and Freshwater Ecosystems* 10: 437-458.
- Johnston, P. and Santillo, D. 2002. 'Conservation of Seamount Ecosystems: Applications of the MPA Concept.' Presented at the annual ICES Conference, Copenhagen, October, 2002.
- Keating, B.H., P. Fryer, R. Batiza and G.W. Boehlert (Eds). 1987. *Seamounts, Islands, and Atolls*. Washington, DC: AGU (American Geophysical Union).
- Koslow, A.J. 1997. 'Seamounts and the Ecology of Deep-Sea Fisheries.' *American Scientist* 85: 168-176.

3 Raising the Floor: Legal Issues regarding the Biological Richness of the Area (an Initial Inquiry)

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For a variety of reasons, this paper has not been circulated prior to this publication and as such represents a preliminary analysis. The authors' and many others are engaged in ongoing work on these complex issues, through other organisations. The state of knowledge is a constantly changing phenomenon. This is nowhere so true as in the study of oceans. When the successful negotiations for the creation of a comprehensive law of the sea commenced, in 1967, there were but few remote indications of the possibility that biological resources could exist at all on the floor of the ocean beyond the continental shelf.¹² Outside of the scientific community, the general perception of policy makers was that, due to lack of photosynthesis, the ocean below the first 200m of depth was an almost barren area, populated only by a few species that had evolved to descend below the region of light, and 'fertilized' by the carcasses of some light-dwelling species. Pelagic fish species were considered to

be abundant, and the stocks infinitely renewable. Taxonomy still generally recognized only two kingdoms of life (animal and plant). When the final text of the UN Convention on the Law of the Sea (UNCLOS) was adopted in 1982,¹³ the initial negotiations that led to the CBD¹⁴ had not yet been thought of, and all biologically-based resources (terrestrial and marine) that were not privately (or governmentally) owned were still generally thought of as commonly held or generally available (under various, sometimes, conflicting theories).¹⁵ Genetic development, utilizing the Watson-Crick discoveries regarding DNA, was still perceived to be 'science fiction' by large segments of the population. Neither law nor practice separated the rights to a specimen's genetic material from the more general rights of ownership of the physical specimen. Consequently, there was no suggestion that very small inaccessible populations of highly localized/endemic species and specimens could be commercially

12 A few limited indicators had been publicized. Hydrothermal vents had been identified years earlier, in the Red Sea (discussed in Gianni, M., 2004, High Seas Bottom Fisheries and Their Impact on the Biodiversity of Vulnerable Deep-Sea Ecosystems: Summary Findings, Kuala Lumpur: IUCN, WWF, NRDC, at 4); however their biological significance had yet to be discovered or fully investigated. Limited research had indicated the existence of 'submerged islands' in deeper ocean areas with biological properties of interests (see H.H. Hess, 1946, 'Drowned Ancient Islands of the Pacific Basin,' 244 American Journal of Science 772).

13 United Nations Convention on the Law of the Sea, 10 December 1982, 21 ILM 1261, entry into force 16 November 1994.

14 Convention on Biological Diversity, 5 June 1992, 1760 U.N.T.S. 79, entry into force on 29 December 1993.

15 The pre-UNCLOS literature contains a welter of descriptions, using terms such as 'common property,' 'things common to all,' 'common heritage' and 'free access' in a variety of different ways. It should be noted that within the specialized area of maritime/marine law, none of these terms bears the definition and usage that it is accorded in most other areas of law. 'Common property' is often not used to describe any type of legally recognized property interests or any property-based legal regime; 'common heritage' frequently does not encompass either equitable heritability or preservation; and 'free access' is used in a way that suggests that it is synonymous with 'unrestricted exploitation,' rather than availability for permitted use. These usages continue today, and pose a major obstacle to integration of marine law with other legal systems, including those that address conservation issues at the national level. Discussions of the use of this terminology by UNCLOS and in its deliberations can be found in Colombos, J., 1968, The International Law of the Sea, 6th Ed. reprinted, London: Longmans Green & Co. Ltd, at 65; or Churchill, R.R. and A.V. Lowe, 1999, The Law of the Sea, 3rd Ed., Manchester University Press, at 204; or Beslar, K., 1998, The Concept of the Common Heritage of Mankind in International Law, The Hague: Martinus Nijhoff Publishers. Further discussion of the use of these terms in other context can be found in a wide range of books and articles, including, e.g., Brownlie, I., 1990, Principles of Public International Law, 4th Ed., Oxford University Press.

valuable. The primary values of deep seabed ('the Area')¹⁶ were perceived to be geological (mining for minerals and scientific study of the deep geology).¹⁷

Perceptions and knowledge in all of these areas of 'fact' have changed markedly since that time. Modern taxonomy recognizes at least five, and as many as seven, different kingdoms.¹⁸ As described by Patton and Baillel, in the preceding section, discoveries of biological importance indicate an enormous variety of marine life in deep oceans.¹⁹ Biological discoveries include chemosynthetic life forms (around hydrothermal vents), cold-water/deep-water corals, and a variety of other biological phenomena with unique and potentially valuable properties.²⁰ Many of these species are believed to be highly localized, having evolved separately at each geological structure (each seamount, hydrothermal vent, each cold seep, etc.), although even that belief is being challenged. Seamounts and ocean sediments have been discovered to be teeming with both sedentary and mobile species, ranging from the single-celled to the highly complex – again nearly all thought (but not yet shown) to be very limited in distribution through the oceans.

Genetic science today has a wide-ranging commercial application, encompassing a variety of developments in agriculture, pharmaceuticals, cosmetics, and micro-technologies.²¹ As further discussed below, international and national law has increasingly adopted the

view that genetic material, even when found on public lands or otherwise legally obtained, should not be used for commercial purposes without permission from the source country (and others with authority from the source country), and explicit sharing of the benefits derived from that use.

Moreover, it is generally recognized that the above, relatively massive influxes of new knowledge and understanding are only the 'tip of the iceberg' with regard to the world's oceans. While extrapolation suggests that hundreds of hydrothermal vents may exist, for example, and has given rise to an estimate that there are over 50,000 seamounts, only a relatively small number of these have been specifically, albeit partially, studied. Work on other seabed phenomena has barely begun (a recent statement, IUCN declared that more than 90% of the ocean areas beyond national jurisdiction remains completely unexplored as of 2007).²²

At the same time, international estimates of populations of commercially fished species indicate that many of these fisheries are near complete collapse, and the complex of ecosystem factors that may contribute to either their restoration or their continued destruction is not yet well understood.²³ Improvement of fishing capture technologies, combined with the lack of other sources of income have motivated the fishing industry to broaden both the range and volume of marine taking, sometimes

16 As this paper is expected to be circulated to lawyers in two expert areas that have up to now been very separate (biodiversity law under the CBD, and marine law under UNCLOS and other instruments), it is necessary either to avoid using specialized terminology or to explain it. Accordingly, it is necessary to note that, in marine law circles (particularly those focused on UNCLOS), as further discussed below, 'the Area' is a term of art, referring to the sea-bed and ocean floor and subsoil beyond the 'outer continental shelf' (OCS) (or beyond the EEZ or territorial sea, as to countries that have not declared an OCS) and the resources in, on or under it). UNCLOS, Art. 1.1(1).

17 The possibility that the 'manganese nodules' on the seabed beyond national jurisdiction might be extracted for commercial and other use was one of the primary motivating factors behind the intensive negotiations of UNCLOS, Articles 133–191, later more completely enumerated in the Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, GA Res. 48/623, 28 July 1994, entry into force 28 July 1996 (the 'Part XI Agreement'), and the meetings and activities of the International Seabed Authority (ISA) created thereunder.

18 A generally accepted list of kingdoms is Monera, Protista, Plantae, Animalia and Fungi. Other experts list seven kingdoms, as follows: Archaeobacteria, Eubacteria, Protozoa, Chromista, Plantae, Eumycota and Animalia. A relatively simple analysis of the current thinking on the longer list of taxonomic kingdoms can be found online at <http://www.mycolog.com/CHAP1.htm#kingdoms>

19 For further reading see Dziak, J. and H.P. Johnson, 2002, 'Stirring the Oceanic Incubator,' 296 Science 1406 at 1406; Ré, P., 2000, 'Deep-Sea Hydrothermal Vents: 'Oases of the Abyss', in: Beurier, J.P., A. Kiss and S. Mahmoudi, (Eds), *New Technologies and Law of the Marine Environment*, The Hague: Kluwer Law International, 67 at 67 [hereafter *Oases of the Abyss*]; and van Dover, C.L., 2000, *The Ecology of Deep-sea Hydrothermal Vents*, Princeton, NJ: Princeton University Press, Table 2, after Korn, H., S. Friedrich and U. Feit, 2003, *Deep Sea Genetic Resources in the Context of the Convention on Biological Diversity and the United Nations Convention on the Law of the Sea*, Bonn: Bundesamt für Naturschutz, at 36.

20 As discussed in the IOI paper (Chapter 2) in this book.

21 Analysis of these developments and their relevance to legal and trade issues can be found on The ABS Project website, at www/iucn.org/themes/law/abs01.html

22 See Hesse, R., April–July 2006, 'UN Update,' in *Go Between*, Issue 110 (UN Non-governmental Liaison Service) quoting Kristina Gjerde, IUCN Policy Officer, Oceans and Marine issues. Although no scientific expert can confidently confirm such broad statements regarding the extent of the oceans that are unstudied, a 1991 meeting of oceanographic experts, when asked to guess what proportion of the oceans had been studied as of that date, settled on a 'guesstimate' of between one/one-thousandth (0.1%) and one/ten-thousandth (0.01%). See Theide, J. and K.J. Hsü, 1992, 'The Future of Ocean Resources,' in: Theide, J. and K.J. Hsü, (Eds), *Use and Misuse of the Seafloor*, New York, NY: Wiley.

decreasing populations of commercial and by-catch species to unsustainable levels, and causing other harmful ecosystemic impacts. As ‘new’ fisheries have been discovered and utilized, the lack of detailed study prior to utilization has caused many to be fished into threatened status in a relatively short time.²⁴

This paper represents the authors’ initial inquiry into the questions of how existing ocean law and international/national law on access to genetic resources and equitable sharing of the benefits arising from their utilization (ABS) can be integrated, to achieve the shared goal of protecting the sustainability of the biological richness of the oceanic region known in marine policy circles as ‘the Area’ – that is, the seabed (including the ocean floor,

stationary biota on it, and the subsoil beneath it) beyond national jurisdiction.²⁵ It is offered as a starting point in increasing mutual understanding between the specialized legal experts in these two largely separate fields of law. The following is a summary of some the questions being researched, identifying five areas for further consideration: (i) the question of whether there are gaps in the overall legal system for addressing marine genetic resources, (ii) the overlap between the CBD and the international marine law framework, with regard to marine biological resources, (iii) regulatory questions of genetic resources and access and benefit sharing that are generally misunderstood or misaddressed in marine discussions, (iv) issues of sovereignty and sovereign rights over the genetic resources, and (v) equity issues.

3.1 Of ‘lacunae’ and unfulfilled mandates

One of the most common repetitions regarding the legal relationships relating to the biological resources of the Area is the (frequently unanalyzed) statement that there is currently a ‘legal lacuna’ with regard to these matters.²⁶ Although the use of Latin gives this statement a somewhat undeserved aura of enhanced credibility, it remains, at best, a challengeable hypothesis. If in fact there is a gap, the question that is relevant to marine genetic resources has still not been answered. One must then determine

whether that gap is (i) a complete exclusion of this topic from the coverage of the UNCLOS (and the CBD), (ii) a need for clearer designation of institutional authority, or (iii) simply a lack of specific regulatory or procedural implementation. This is a highly complex question requiring study and peer review by a team of international experts. Initial study indicates three avenues of investigation.

3.1.1 UNCLOS’s broad mandate

The first avenue relates to the comprehensiveness of UNCLOS. In general, UNCLOS has attempted to address oceans as comprehensively as possible, clearly demarcating and apportioning rights and responsibilities with regard to all aspects of the world’s oceans. It specifies

that several ocean components are specifically within the responsibility and dominion²⁷ of national governments. These include the waters and seabeds within territorial seas, contiguous zones and exclusive economic zones (EEZs) which countries have declared (or may declare

23 See, e.g., FAO, Agriculture and Fisheries Status Report, 2002. ‘The global situation of the main marine fish stocks for which assessment information is available follows the general trend observed in previous years. Overall, as fishing pressure continues to increase, the number of underexploited and moderately exploited fisheries resources continues to decline slightly, the number of fully exploited stocks remains relatively stable and the number of overexploited, depleted and recovering stocks is increasing slightly.’ As a continuing trend rather than an explainable aberration, this decrease in the number of underexploited fisheries and an increase in the number that are overexploited, raises troubling questions.

24 The most commonly cited example of this is Orange Roughy (discussed in the previous chapter), whose long lifespans and regeneration periods could not keep up with catch levels, after that fishery was discovered and began to be exploited.

25 See note 16, above.

26 Glowka, L., 1999, ‘Testing the Water: Establishing the Legal Basis to Conserve and Sustainably Use Hydrothermal Vents and Their Biological Communities,’ 8 *Interidge News* 1 at 1.

27 Although the dominion of each state in these areas is well established, the question of which UNCLOS areas are ‘within national jurisdiction’ is somewhat unclear, since UNCLOS does not use the term ‘jurisdiction’ in its geographic context, with regard to any of these categories. It is undisputed that the ‘territorial sea’ is within national jurisdiction (at least to the extent of the UNCLOS descriptions and measures). Similarly, each country’s rights in its continental shelf appear to be jurisdictional. As to the other areas (within the EEZ), however, the argument for ‘jurisdiction’ in the legal sense (as opposed to dominion granted to the country through the international instrument) is not precise. Under UNCLOS, a state has certain sovereign rights in its EEZ, relating to the exploration, exploitation, conservation and management of the natural resources in that zone, including the living resources, as well as the water, seabed and subsoil. The state has the right to govern questions regarding the establishment of artificial islands, installations and structures, and marine scientific research. Analysis of whether these rights constitute ‘jurisdiction’ for the purposes of other international instruments (such as CITES Articles I(e), III.5 and IV.6, and the Basel Convention, which apply specific rules regarding certain aspects of ‘areas outside of national jurisdiction’) continues to be controversial and unresolved after more than 30 years of discussions.

in future, subject to particular limits set out in UNCLOS). In addition, each country has clear jurisdiction (sovereign rights) over the seabed of its 'outer continental shelf' (OCS),²⁸ including the right to exert dominion over:

*mineral and other non-living resources of the seabed and subsoil together with living organisms belonging to sedentary species, that is to say, organisms which, at the harvestable stage, either are immobile on or under the seabed or are unable to move except in constant physical contact with the seabed or the subsoil.*²⁹

Even when it regulates or asserts rights over its OCS, the State acquires no sovereign rights or jurisdiction over the water column above ('superjacent to') the OCS.³⁰

The remainder of the oceans (that is the areas beyond national jurisdiction) consists primarily of three components:

3.1.2 Possibility that seabed genetic resources are specifically assigned to ISA

Additional inquiry into the precise language of the Convention further substantiates the idea that the drafters intended all resources of the seafloor to be covered by the Convention. UNCLOS defines the Area as follows:

*'Area' means the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction;*³¹ (emphasis added).

This conjunctive construction is usually interpreted to mean that several different components are included. In this case, the language seems to suggest that the drafters wanted to ensure that the term was as inclusive as possible. None of the included concepts is specifically or

- The Area (seabed beyond national jurisdiction);
- The water column (the liquid part of the ocean beyond national jurisdiction, and all of the non-stationary living resources within it) above the Area and above the continental shelf; and
- The air space above those waters.

On the surface, it appears from this overall approach to coverage that the UNCLOS framework was expected to cover all aspects of oceans, from the centre of the earth to the outer atmosphere, including all known stationary resources attached to the Area. This rather strongly suggests that the overall system for oceans makes sense only based on the interpretation that all marine resources (including the biological resources of the Area) are apportioned among these three components.

generally defined anywhere in UNCLOS, but it is suggested that 'seabed' and 'ocean floor' may have different meanings.³²

This approach is substantiated to some extent by current discussions in the context of the International Seabed Authority (ISA), formally established by separate instrument within the UNCLOS framework.³³ In that forum, it has been argued that the authorization of the ISA although primarily focusing on mining and minerals appears to include a broader mandate, including bio-prospecting.³⁴ UNCLOS specifically requires the ISA to adopt 'appropriate rules, regulations and procedures' to ensure effective protection for the marine environment

28 A country that has not delimited the boundaries of its continental shelf, or issued any proclamation regarding it, however, will not have lost any of its sovereign rights over it. See 'North Sea Continental Shelf cases,' [1969] International Court Reports 3 at 23.

29 UNCLOS, Article 77.4.

30 UNCLOS, Article 78.

31 UNCLOS, Article 1, para 1(1).

32 This question of interpretation necessarily requires a deeper level of research and analysis of national and international laws and principles and their historic application and interpretation, before a final conclusion can be attempted.

33 Part XI Agreement, supra. Adopted at the same time as UNCLOS, the Part XI Agreement entered into force two years later. See also, Declaration on the Principles Governing the Seabed and the Ocean Floor, and the Subsoil Thereof, Beyond the Limits of National Jurisdiction, G. A. Res. 2749 (XXV), 25th Session, Supp. No. U.N. Doc. A/8028 (1970), reprinted in (1971) 10 ILM 220. ISA is responsible for organizing and controlling activities in the international seabed area beyond the limits of national jurisdiction, and in particular, it is responsible for administering the 'resources in the Area' – a term that is specially defined in UNCLOS to mean only 'all solid, liquid or gaseous mineral resources in situ on or beneath the seabed, including polymetallic nodules (UNCLOS Art. 133(a)).

34 Scovazzi, T., 'The Concept of Common Heritage of Mankind and the Resources of the Seabed Beyond the Limits of National Jurisdiction' presented to the 10th Session of the ISBA Assembly, through an 'Expert Panel on Future Directions' on 26 May 2006.

from harmful effects which may arise from activities in the Area for ‘the protection and conservation of the natural resources³⁵ of the Area and the prevention of damage to the flora and fauna of the marine environment.’³⁶

Dispute regarding the conclusion that this provision mandates ISA’s involvement in genetic resource issues centers on the fact that the above-quoted provisions are focused only on protection of the living resources (including swimming fish and other mobile species, as well as ‘stationary living resources’ of the Area) from the harmful effects of activities in the Area³⁷ – a term which is specially defined in UNCLOS and limited to mining and geological pursuits.³⁸

A better view ultimately may be to recommend ISA as the responsible agency for determining ownership of

seabed genetic resources, and possibly other ocean resources as well, based on the combination of:

- (i) the above mandate that ISA become competent to address natural resource issues (rather than being limited to addressing the geological and non-living matter covered by the defined term ‘resources of the Area,’³⁹) and
- (ii) the general purpose of the ISA to serve the agency which controls the exploitation of mineral resources *and sharing their benefits*.

It is reasonable on this basis to conclude that ISA is intended to address matters similar to the ABS issues (access to, and sharing the benefits arising from utilization of, genetic resources) when applied to the Area.

3.1.3 Possibility that seabed genetic resources are generically assigned to ISA

A second avenue for inquiry relates to the nature and uses of stationary biological resources and the resources of the Area as defined in the Convention (and as known at its adoption). In general, stationary biological resources⁴⁰ of the seabed appear very similar to the specifically described elements of the resources of the Area.’ That definition clearly includes a broad range of resources, virtually all that were then thought to exist in the lightless realm of the ocean floor – at the time, limited to ‘solid, liquid or gaseous mineral resources in or beneath the seabed.’⁴¹

The intent to maximize inclusiveness and to avoid gaps and overlaps is evident in the provision that specifically states that rights in the Area do not affect ‘legal status of the waters superjacent to the Area or that of the air space above those waters’⁴² without considering the possibility of ‘other resources of the seabed.’ Moreover, as to waters and seabed within national control, the apportionment between the water column above the continental shelf and the seabed resources, stationary biological resources are specifically a part of the latter.⁴³

35 The phrase ‘natural resources’ is generally used within UNCLOS to refer broadly to living things.

36 Article 145 (chapeau and clause b) provides that: Necessary measures shall be taken in accordance with this Convention with respect to activities in the Area to ensure effective protection for the marine environment from harmful effects which may arise from such activities. To this end the Authority shall adopt appropriate rules, regulations and procedures for inter alia... (b) the protection and conservation of the natural resources of the Area and the prevention of damage to the flora and fauna of the marine environment..

37 Id.

38 Article 1.1(3): ‘activities in the Area’ means all activities of exploration for, and exploitation of, the resources of the Area.

37 Id.

38 Article 1.1(3): ‘activities in the Area’ means all activities of exploration for, and exploitation of, the resources of the Area.

39 UNCLOS article 133(a): the term ‘resources,’ when used in reference to the Area, means all solid, liquid or gaseous mineral resources in situ in the Area at or beneath the seabed, including polymetallic nodules.

40 ‘Sedentary resources of the seabed’ are defined in UNCLOS Article 77.4 as ‘organisms which, at the harvestable stage, either are immobile on or under the seabed or are unable to move except in constant physical contact with the seabed or the subsoil.’ This definition is provided in the context of defining the rights of a country in its outer continental shelf, however, there are clearly living resources in the Area (seabed beyond the outermost limits of national OCSs) that would meet this description.

41 Articles 133 and 136. The provisions of UNCLOS in Part XI (and the related 1994 Agreement) generally govern activities related to exploration and exploitation of mineral resources.

42 UNCLOS, Art. 135.

43 UNCLOS, Arts. 68 and 77.4.

3.1.4 Is this a lacuna?

In conjunction with the comprehensive approach of UNCLOS, these two approaches seem to present a basis for concluding that the natural resources of the seabed must be within the scope of ISA's mandate. It is possible, on the basis of general principles of statutory interpretation,⁴⁴ that deeper inquiry into these issues will yield a legal conclusion that UNCLOS does indeed include everything in the oceans, from subsoil to sky. Indeed, a review of the contemporary accounts and statements of the persons negotiating the Convention seems to indicate this shared intent.

The primary arguments underlying the claim of a lacuna are based on an odd fact about UNCLOS – a kind of textual schizophrenia – regarding what kind of instrument it is. Specifically, while many of UNCLOS's chapters incorporate and effectively codify very specific and detailed pre-existing law of oceans, others propose new ideas that have little background or prior practical application within the long global history of maritime and admiralty law.⁴⁵ Moreover, UNCLOS defines itself as a framework instrument – that is, one that creates a basis for further legal development within its scope. The national parallel would be the creation of a law that includes many different levels of provisions:

- Some provisions mentioning key issues in the form of 'policy' statements suggesting a wide range of possible methods by which the government may take action;
- Others that specific law-style provisions, calling for

government and public to take particular action – in the form of regulatory development – to achieve particular legislative outcomes; and

- Others that include intensive levels of detail, in the style of regulations, as a way of communicating to regulatory agencies that the legislative body will not allow other approaches.

This kind of 'portmanteau' law is not uncommon, in many countries. Although all subject matters mentioned are within the scope of the instrument, some of them (the latter category) are more easily implemented than others. The fact that only a few measures are specified in detail does not prevent the government from acting to implement other measures.

While the authors generally feel that there is no lacuna but only a need for a framework instrument to fulfill regulatory needs in this area, we are not recommending this conclusion, which must be reached through both political and legal analyses by the Parties. As with all aspects of ABS, it is less important which choice is selected than that some choice is agreed with finality. So long as the issue remains unresolved, the fact remains that utilization of genetic resources of the seabed is already happening, yielding informational benefits as well as financial ones. The longer this situation continues without application of CBD benefit-sharing principles to those uses, the larger the share of these benefits that will be denied to less developed countries (and all countries) with an equitable right to share in those benefits.

3.1.5 Distinguishing between stationary and mobile living resources

Another issue to be addressed through the negotiations is the fact that UNCLOS (because of its focus on delimitation of rights to resource exploitation) clearly distinguishes stationary living resources from mobile ones, in some cases. A decision to appoint ISA with responsibility for seabed living resources, would create a very notable difference between their utilization and the utilization of

other living resources in oceans beyond national jurisdiction.

Should the ISA jurisdiction then be found to include rights to regarding the utilization of genetic resources, it would be able to assume the role of a 'provider' of those genetic resources, or to represent the 'countries provid-

44 Incorporated into international law under the Vienna Convention on the Law of Treaties, which describes the process and analysis for determining the meaning and construction of international instruments (Vienna Convention on the Law of Treaties, 1969, Articles 31–33 (and Art. 1, para. 3(a)). See also, Statutes of the International Court of Justice Art. 38, para. 1b.

45 Concepts of common law applicable to the oceans and those who sail, fish and otherwise use them date even back to the 14th century (see Colombos, *supra* note 18, at 12), and are in some cases (such as laws of salvage, and those governing piracy and other maritime crimes) very specific. Marine conservation, especially beyond national jurisdiction, is of relatively new origins, and those provisions that do exist have not been intensively tested in legal practice.

ing genetic resources⁴⁶ under the CBD. At this point, the situation would underscore the real lacuna which exists regarding marine genetic resources – the fact that there is no basis for asserting sovereign (or jointly sovereign) rights over the genetic resources found in mobile living resources of the oceans.

Although the term ‘living resources’ is not defined in UNCLOS, it is most often used to refer to exploitable resources (fish, etc.).⁴⁶ It also appears in environmental and conservation provisions, however, in a way that suggests that it includes all biological resources of oceans.

As noted in other publications, due to current inconsistencies in patent practices, some countries allow genetic resources⁴⁷ of all species (including ocean species) to be generally patented, preventing all other users from commercializing innovations involving that gene. Thus, the only way to enable benefit sharing with regard to the utilization of marine genetic resources would be to empower an entity to serve the role of country pro-

viding the resources. If this right were applicable only to stationary resources, the result would be to create a duality regarding marine living resources, allowing the single user/patenter of a mobile marine gene to act with no benefit sharing.

Similarly, since the stationary resources on a country’s continental shelf are considered to be resources of the OCS, it is essential to find a way to avoid a similar impossible distinction, where one need only move to a point outside of the national OCS, collect the same species, and be free of benefit-sharing obligations. At a minimum, these principles seem to call for comprehensive management (primarily at the regional level) of all living resources of the ocean.⁴⁸ This may suggest an extension of the UNCLOS provisions for the creation of regional fisheries management agencies, although the entrenched ‘fisheries focus’ of the existing bodies may suggest a need for either greater guidance to help in addressing the added mandate, or the creation of different institutions, entirely to address marine genetic resource issues.

3.1.6 Available options

The foregoing suggests that the biological resources of the Area (that is, those that are fixed to the seabed beyond national jurisdiction) are clearly intended to be covered by UNCLOS. It also raises the possibility that they can be included within the authority of the ISA – a body whose mandate is built around the task of finding a way to ensure that the commercial use of certain ocean resources from beyond national jurisdiction yields a benefit that is shared among all countries, based on their common rights in those areas and their resources. This option would be realized by continuing and ratifying the ISA’s initial work on addressing genetic resource issues.

Another option, however, is also possible. If living resources affixed to the seabed beyond national zones (territorial sea, EEZ and OCS) are not resources of the Area, then either:

- They are governed by the broader terminology ‘living resources;’ or

- There is a lacuna which will require the opening of new negotiations to determine the nature of these rights.

Rather clearly, the second option is undesirable. However, even if there is no lacuna with regard to the question of responsibility for biological resources of the seabed, a different result may obtain when we focus on the separate question of rights in the ‘genetic resources’ of the seabed (and of the mobile species found in the water column), unless it is concluded that UNCLOS is intended to cover all marine resources and zones, in which case there may still be a need to develop clear rules and concepts (a subsidiary instrument under the UNCLOS framework.).

Regardless of the ultimate *situs* of responsibility for these resources, addressing their use and management will clearly require at minimum either the adjustment of existing mechanisms or the creation of new mechanisms,

46 See, for example, UNCLOS, Art. 61, which grants each state, within its EEZ, ‘sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds;’ and Art. 1, which includes in the definition of pollution actions which cause ‘harm to living resources and marine life’ (emphasis added).

47 Other aspects of the distinction between biological resources and genetic resources are discussed in later sections of this chapter.

48 See, for example, UNCLOS Articles 117, 118, 192, 193, 194.4, 194.5 and 311.3.

to ensure that exploitation of such resources is fair and sustainable. If they are considered to be living resources of the water column, it will be necessary to work through (and/or to expand) regional fisheries management organizations or to find new collaboration mechanisms for high-seas biodiversity. This may be significantly more challenging than attempting to endow the ISA with sufficient internal mandate and capacity to address these matters. It might also engender work addressing the use of genetic material from non-stationary resources of the water column, including the genetic material of fish, sea flora, plankton and other biological components.

On initial inquiry at least, there would seem to be some strong reasons to prefer the ISA situs. ABS is tied to many highly complex issues in areas such as seamounts, cold-water corals, hydrothermal vents, and microflora/fauna of the seabed sediments that are closely related to the mandate and competences of the ISA. It will add complexity to questions of the right to use/own/study these resources as well as many serious concerns about

how activities in the water column (including fishing, shipping/pollution, military activities) may affect these resources. It is clear that the ISA was generally created to address issues of the use of stationary resources of the Area, and to ensure that those uses are not abusive and are equitably conducted.

As noted, the functioning of the Law of the Sea depends in large part on the rationale underlying that instrument in general – a rationale that seems best satisfied if those resources are considered to be part of the Area, and suggests that the problem is not a lacuna but an unfulfilled or newly arising mandate, and clarification of its status. This situation is not uncommon in other aspects of law. For example, if it suddenly became common to drive automobiles on lakes as well as on land, the legal problem created would involve (i) evaluating what additional regulatory or institutional adjustments would be needed to address the new demand, and (ii) determining whether these vehicles should be regulated as cars or boats or both.

3.2 Biological and genetic resources of the seabed – special concerns

Questions relating to the status of the biological and genetic resources of the Area are particularly important in light of new developments in the use and replication of genetic material and biochemical properties of naturally occurring (and cultivated) life-forms. Science and industry have developed increasingly specialized tools for analyzing and using these materials and properties, in ways that have proven in some cases to result in extremely high levels of industrial/commercial profit. Since 1992 (the year of the adoption of the CBD),⁴⁹ it has been internationally recognized that the rights to use these special qualities of species and varieties differs markedly from the rights to obtain, use and sell or transfer physical specimens themselves.

The differences between the ownership of a physical specimen and the right to use its DNA or other genetic material, however, are sometimes difficult to explain. One analogy often used is the commercial sale of music. One may own a CD, tape, or even sheet music for a particular song, but have no right to make and sell copies,

or even to record and sell someone else singing/playing it. The right of ownership of the physical item is distinct from the right of commercial use (or some other uses) of its underlying information. It is similarly believed that, in the CBD, the use of the genetic material within natural and cultivated specimens is distinct from the ownership of the physical specimen itself.⁵⁰

In the case of genetic resources, there is an additional problem of course. Unlike a song or other intellectual property, genetic resources come from nature or from community development. This means that they are widely dispersed and no single individual may claim to be their creator or discoverer – the normal source on which the IPR holder derives his right to exclude all others from commercial use of the resource. Specimens from terrestrial areas are usually found in the ownership or control of thousands or millions of individuals, and very few species exist that have only one country of origin. In the case of ocean resources, it is likely that many species are distributed across many national territorial seas,

49 Rio de Janeiro, 1992. The CBD entered into force only 16 months later.

50 CBD, Arts. 1 (third primary objective), 2, and 15, and significant work under the CBD's crosscutting theme on 'access and benefit-sharing' or 'ABS'. Information on the CBD can be found on its website at www.biodiv.org/default.aspx.

EEZs and OCSs, as well as in international waters and the Area. There is a major unresolved legal inequity in claiming that any single individual may patent a gene held by large numbers of countries or individuals on the basis of gaining permission of only one (or of obtaining a sample from one, without specifically obtaining permission to use its genetic resources).

As described in many other articles and chapters,⁵¹ the CBD's provisions do not provide any adequate basis for determining the practical differences between genetic resources (the right to utilize DNA and other genetic material) and biological resources (the physical ownership of specimens). Some of these practical problems include a number of problematic facts, including the following, which are of greatest interest with regard to the genetic resources of the Area:⁵²

- First and most important, is the fact that there is objectively no difference between 'collecting genetic resources' and other harvesting activities, known by terms such as 'fishing,' and 'marine scientific research.' The only determinant of whether the action is 'bio-prospecting' (an informal term often used to describe the collection of species to screen them for biochemical properties or genetic characteristics of interest) is the intent of the collector. And many collectors' only intent is to collect for purposes of subsequent transfer. In order to determine whether these persons are obtaining 'genetic' resources, it is necessary to find out who ultimately receives the material they collect, and the use to which it is put.
 - Relatively small samples are often sufficient for initial research, and in some cases the ability to reproduce the genetic material (either biologically or synthetically) eliminates the need for ongoing harvesting of specimens from the 'country of origin'⁵³ when the time comes for commercial use and production. As a consequence, there is a significant
- continuing awareness that in many cases samples are removed from the country of origin without official notice or permission, and the concern that the person or company taking the sample will thereby avoid his responsibilities to (a) pay for the access to genetic resources (the right to physically collect the material) or (b) provide the country of origin with an equitable share in the benefits arising from commercial utilization of that material.⁵⁴
 - By contrast, in some cases (particularly with regard to marine resources), it may not be possible or cost-effective to reproduce the source materials, either biologically or chemically. In these instances, a right of access (often assumed to be a right to collect a small number of samples from each available species within a particular genus or class) may be used (or abused) to collect very large amounts of material, leading to environmental problems, and potentially extinctions of local populations or entire species. Where a variety or species is highly endemic, improper or excessive collection may contribute to its extinction in the wild.
 - Most genetic resources although often somewhat localized, are not limited in range to a single country, community, or other jurisdictional area. This can mean that a collector will obtain a right of 'access' at relatively low cost, from one country, community or authority, on the basis of which it might locate ('hit') a specimen whose genetic/biochemical properties can be commercially utilized. For commercialization, the company may attempt to locate the same species in another country or in an area beyond jurisdiction, to avoid the sharing of benefits with the original source country. This problem arises out of two sources. First, the current system gives the equitable rights (to a share of benefits) only to the country which is the source of the material used by the commercial developer. Until the practical in-

51 See e.g., discussions of this issue in chapter 1 (paras 1.2 et seq.) of Cabrera Medaglia and Lopez Silva (book 1 of the ABS Series), chapter 4 of Tvedt and Young, (Book 2 of this series, and in many other parts of this series.

52 Many important issues, including the rights of indigenous peoples (and persons living traditional lifestyles) to the knowledge and practices that they have developed. These issues are less relevant to the Area, but may have significance, including with regard to the genetic material in non-stationary living marine resources.

53 Since the CBD is focused on national implementation, it uses the term 'country of origin' or 'country providing genetic resources' (CBD Articles 2 and 15, et passim). Given the overall application of the convention to all global areas including those outside of national jurisdiction (Art. 4(b)), this term could include the entire body of countries who share some type of common rights over the oceans and especially seabed resources beyond national jurisdiction.

54 Ibid.

terpretation of this concept is clarified, it remains a source of potential abuses and inequity. Second, the international provisions relating to genetic resources called upon all governments to adopt regulatory measures regarding access and benefit sharing (implying full global coverage). If this had happened, then, as to (non-Antarctic) terrestrial species and varieties, opportunities for abuse would be substantially diminished, since the user would be required to provide compensation at all events. Where marine species are involved, however, ABS arrangements can be defeated wherever a specimen of the species is located in the high seas. Hence, coverage issues must be addressed.

- In some cases, resources may be collected under a special agreement based on the fact that the user is involved in research, rather than commercialization. Thereafter, through post-access transfers, the material or its extracted genetic information may come into the hands of an entity that will commercially exploit it. In many cases, the source country's only way of knowing this would be through voluntary disclosure by the original research entity.
- There is very little that most source countries or communities can do to protect their rights over genetic resources. It might be possible, (with access

to highly specialized and costly equipment) to determine where genetic material has been a source of a new innovation. In those cases, it may be possible to pinpoint the species (or possibly even the subspecies or variety) involved. However, the costs of the necessary tests, and the need to apply them across a wide range of products appear prohibitive at present. Moreover, these tests are almost certainly not sufficiently refined to identify the specific locale from which the material is collected.

Although many problems with the basic concept of ABS remain unresolved, the international community has clearly recognized the rights of source countries relating to the genetic resources found within their jurisdiction, where they 'exist within ecosystems and natural habitats, and, in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties.'⁵⁵ These rights are recognized to be equitable in nature – that is, they must be based on concepts of ultimate fairness (compensation for former contribution, pseudo-contractual behaviour, etc.) rather than solely on strictly defined regulatory law. The concept of equity, however, is not a voluntary matter. It is an essential required component of every legal system in the world, and can be (often is) supported by specific principles that are adopted in law.

3.3 Practical questions of the ABS framework and its application in the marine sector

As noted above, it is neither possible nor useful to apply the concept of 'genetic resources' to specimen collection practices, because it will be generally impossible to identify and observe all relevant activities to which such practices apply.

Moreover, there are already concepts of conserva-

tion law (sustainable use, natural resource management, integrated biodiversity planning⁵⁶ and the 'ecosystem approach')⁵⁷ that are expressly designed to integrate all uses of an ecosystem, with the goal of controlling harmful practices and avoiding over-harvesting and other sustainability dangers.⁵⁸ There is a significant overlap both substantively and politically between the relevant sections of

55 CBD, Art. 2.

56 This phrase refers to a concept created under the CBD (Art. 7), calling for the creation of a National (or Regional) Biodiversity Strategy and Action Plan (NBSAP or RBSAP) for each country.

57 Principles and practices for these concepts have been well established in many different sectors. The size and largely unexplored/unstudied nature of the ocean areas beyond national jurisdiction, causes these principles to remain somewhat undeveloped in that sector. For an excellent introduction to the recently adopted CBD's Sustainable Use Principles, and its Guidelines for Application of the Ecosystem Approach, see Dickson, B. et al., 2003, 'Comparing the Ecosystem Approach with sustainable use,' published as an IUCN Information paper at CBD SBSTTA-9 (available online at www.iucn.org/themes/pbia/wl/docs/biodiversity/sbstta9/info%20papers/eas_su_info_final.doc).

58 How these principles can be applied within the current UNCLOS framework poses a greater concern than any that arises with regard to ABS. The relevant UNCLOS provision regarding the integrated management of marine commercial activities in the water column with biodiversity concerns of the seabed is the statement that '[t]hese freedoms shall be exercised by all States with due regard for the interests of other States in their exercise

the two conventions,⁵⁹ suggesting an obligation under international law to find a method by which both may be implemented in an integrated or consistent manner.⁶⁰

ABS is, according to its terms and intentions, a mechanism for addressing the financial and other beneficial imbalances that arise where:

- Companies from developed countries possess significant technology and capital. As such, they can develop products and earn significant profits from genetic resources of a given species without using that species in bulk. That is, they can obtain profits from the resources of other countries, without any compensation to those other countries (without even purchasing large quantities of specimens), which remain responsible internationally for the conservation and preservation of those resources in situ;
- Researchers can obtain information of potential value and application from such genetic resources, without providing or sharing it with the country of origin; and
- Countries of origin do not have the opportunity to join in the value addition chain, nor to increase capacity, because the resources are simply taken (or a very small amount of them purchased) and used somewhere else, resulting only in a product that

may be marketed to the country at a high purchase price.

Moreover, although frequently spoken of as ‘creating a right that might be inconsistent with the so-called ‘high-seas freedoms’⁶¹ or with provisions relating to marine scientific research,⁶² the ABS concept can do neither. ABS does not create any right to enter property, to take resources or to take any other action. It is simply a framework for enabling/requiring equitable sharing of benefits arising from utilization of genetic resources – that is, the data, discoveries, properties and/or profits that accrue to entities that *use* genetic resources.

Once comfortable with the conception of ABS as the development of a commercial mechanism, whose purpose is to promote equity in transactions, it is relatively easy to see what sectoral issues are relevant in this context. Clearly, long discussions of the controls on the various actions of fishermen, researchers and others in ocean zones beyond national jurisdiction are not appropriately conducted under the heading of ‘genetic resources.’ No matter what reasons underlie the activities of one who is taking living resources out of the ocean, those activities must be addressed under principles such as the ecosystem approach and sustainable use. However, for purposes of benefit sharing, there are two linked concepts that must be addressed by the governance system for oceans – sovereignty and equity.

of the freedom of the high seas, and also with due regard for the rights under this Convention with respect to activities in [not ‘resources of’] the Area’ (UNCLOS, Art. 87.2, emphasis added). The provisions governing the Area are specifically limited in that they may not ‘affect the legal status of the waters superjacent to the Area or that of the air space above those waters.’ UNCLOS, Art. 135. The Convention further adjures States Parties to act within the Area ‘in accordance with the provisions of this Part, the principles embodied in the Charter of the United Nations and other rules of international law ... and promoting international cooperation and mutual understanding.’ UNCLOS, Art. 138. Numerous rules call upon States to ensure that their activities in the Area do not damage the activities of others in the Area, and to ensure that they do not harm living resources or the marine environment. See UNCLOS, Articles 139, 142.1, 145 and 147.1. The only specific provision relating to other marine activities again calls upon those conducting them not to act with reasonable regard for activities in the Area. UNCLOS, Art. 147.3, emphasis added. Given the lack of any provisions regarding the genetic material from free swimming ‘living resources’ in the water column, this lack of direct mandate to consider the impacts of fishing on genetic material may be a far more difficult and important lacuna in ocean governance, with potentially far-reaching impacts both in terms of hindering the recovery of high-seas fish stocks, and in the destruction of possibly valuable genetic material before it can even be collected for study. Far more than any concerns over the legal rights to use genetic resources of the Area, this issue is both important and in need of direct international mandate. It remains critically obvious, that activities in the water column are wreaking havoc to an important resource of the area – the seamounts. Although there are strictures within the Convention about protecting ecosystems (UNCLOS, Articles 192, 197 and 235.1), those limitations appear to place unnecessary scientific burdens of proving harm, on any attempt to curtail harmful activities.

59 As of 12 March, 2007, 190 States have acceded to or ratified the CBD (see www.biodiv.org/world/parties.asp) and UNCLOS was binding 153 States (see UNCLOS website at: www.un.org/Dept/los). Many of the States that are Parties to the CBD but not to UNCLOS are not coastal states. The USA is not a party to either Convention.

60 See Young, T.R., 2004, ‘Inter-Convention ‘Synergies’ and International Cooperation,’ in: Promoting CITES-CBD Cooperation and Synergy, Putbus: Bundesamt für Naturschutz, International Academy for Nature Conservation.

61 UNCLOS, Article 87, as elucidated in Part VII (Arts 86–115).

62 Art. 143 and Part XIII (Arts 238–265).

3.4 Sovereignty over genetic resources in the Area

The most important question that must be addressed in order to enable the application of the ABS to marine resources is the question of sovereignty over those resources. The benefit-sharing principles of CBD Article 15.7 are based on the concept of national sovereignty over genetic resources.⁶³ Although each CBD party has a recognized governmental system which includes institutions responsible for oversight of natural resources, it has still been difficult, in the 15 years since the CBD's adoption, for countries to identify the particular agencies that will oversee the exercise of that sovereignty and the standards and requirements applicable to this process.

Given that, as noted above, UNCLOS does not clearly state how rights relating to living resources of the Area are to be overseen, it will be a much more complicated process to identify and mandate the responsible agency, create standards and requirements controlling its exercise of sovereignty (i.e., the minimum requirements that must be satisfied in the "mutually agreed terms" by which genetic resource utilization and benefit sharing are to be governed), and the manner in which benefits received via the benefit-sharing element of the transaction shall be used. Other questions, regarding the management of the area (controls on collection processes, and other non-ABS matters) will also need to be collated with the new sovereignty issues.

3.5 Equity in the Area

As in every other sector, discussion of ABS in the marine sector inevitably leads to the question of how the concept of 'equitable sharing of the benefits from utilization of genetic resources' applies (or can apply) to marine resources. In the Area, there are clear mandates and relevant legal principles, which, although still in need of study, offer a potential basis and guidance for addressing genetic resource issues, whether those issues are eventually given into the mandate of the ISA or some other body.

Additionally, of course, marine genetic resources will share the same problems found in all ABS legislation and negotiations – the difficulties in determining the source of the resources. Remembering that every coastal state has jurisdiction or dominion over swimming resources (out to 200 miles) and over seabed resources (out to up to 500 miles), and that the ocean is remarkably difficult to penetrate with surveillance of any sort, there is a great potential difficulty in pinpointing the specific source of any resource. Moreover, with more than 90% of the ocean area/volume unstudied, it will be nearly impossible to attribute the source based on determinations that it is endemic to a particular area.⁶⁴

Most important, however, is the underlying purpose of the CBD. ABS is only one of three primary pillars on which the CBD is built – conservation of biological diversity, sustainable use of biological resources, and ABS – which are intended to be mutually supporting. Indeed, one of the most important points on which many contending negotiators can agree is that, if ABS were intended solely as a commercial measure, it would be discarded as unwieldy, unprofitable and ineffective. It is precisely because of its underlying social and environmental objectives that ABS continues to be negotiated, and it is those objectives, as applied to the oceans, that should guide ABS implementation through UNCLOS.

First, some key aspects of the concept of equitable sharing of benefits from the Area are well and specifically established in UNCLOS. It specifically notes, for example, that 'activities in the Area shall... be carried out for the benefit of mankind as a whole, irrespective of the geographical location of States, whether coastal or land-locked, and taking into particular consideration the interests and needs of developing States and of peoples who have not attained full independence or other self-governing status.'⁶⁵ In furtherance of this basic mandate,

63 Specifically recognized in CBD, Art. 15.1.

64 In recent publications, it has been pointed out that many species found attached to hydrothermal vents (temporary areas near the ocean floor that are superheated by vents from deep in the earth's core) are found at more than one such vent. Since these species are not found in normal ocean temperatures, it is not known how they have migrated among vents. However, this suggests that it may not be easy to assert that a given vent specimen is endemic to the vent at which it was found.

65 UNCLOS, Art. 140.1

the Convention calls on the International Seabed Authority (ISA) to:

- ‘Provide for the equitable sharing of financial and other economic benefits derived from activities in the Area through any appropriate mechanism, on a non-discriminatory basis;’⁶⁶
- ‘Consider and approve... the rules, regulations and procedures on the equitable sharing of financial and other economic benefits derived from activities in the Area... taking into particular consideration the interests and needs of developing States and peoples who have not attained full independence or other self-governing status;’⁶⁷ and
- ‘Decide upon the equitable sharing of financial and other economic benefits derived from activities in the Area, consistent with this Convention and the rules, regulations and procedures of the Authority’... ‘taking into particular consideration the interests and needs of developing States and peoples who have not attained full independence or other self-governing status.’⁶⁸

The Convention also calls for review and reconsideration of the ‘international regime of the Area’ both on a periodic basis,⁶⁹ and more intensively 15 years after the first resource contract by the Authority begins to be implemented.⁷⁰ The latter specifically targets the equitable benefit-sharing objective. Both provisions specifically envision that practices, procedures, rules and other documents may be revised by the Assembly as a result of these reviews.

Second, virtually all countries that are Parties to UNCLOS have already formally committed to application of the concept of equitable benefit sharing to genetic resources. Of the 153 States Parties to UNCLOS at this writing, all but three⁷¹ are also Contracting Parties to

the Convention on Biological Diversity. They have thus committed not only to the overall objective of ‘the fair and equitable sharing of the benefits arising out of the utilization of genetic resources,’⁷² but also to the principle of broader responsibility, which extends this objective beyond national jurisdiction:

- In connection with their ‘responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction;’⁷³ and
- In the case of ‘processes and activities, ... carried out under [a Party’s] jurisdiction or control, the provisions of this Convention apply... within the area of its national jurisdiction or beyond the limits of national jurisdiction.’

Most important, Article 5 of the CBD requires the parties to engage in appropriate cooperation, ‘directly or, where appropriate, through competent international organizations, in respect of areas beyond national jurisdiction... for the conservation and sustainable use of biological diversity.’ These provisions were all specifically created with full knowledge of the existence of the Law of the Sea, and with a specific mandate to ‘implement this Convention with respect to the marine environment consistently with the rights and obligations of States under the law of the sea.’

The UN General Assembly has specifically noted the CBD’s role in the protection and management of marine resources and vulnerable marine ecosystems. Its recent resolution on oceans and law of the sea specifically ‘welcomes the work of the Convention on Biological Diversity... in their development of strategies and programmes for the implementation of an integrated ecosystem-based approach to management; and urges [it] to cooperate [with other institutions] in the develop-

66 UNCLOS, Art. 140.2.

67 UNCLOS, Arts. 160.2(f)(i) and 162.2(o)(i).

68 UNCLOS, Art. 160.2(g).

69 UNCLOS, Art. 154.

70 UNCLOS, Art. 155.

71 Brunei-Darussalam, Iraq and Somalia. As discussed in many publications the USA is not a party to either instrument.

72 CBD, Art. 1.

73 CBD, Art. 3.

ment of practical guidance in this regard.⁷⁴ It went on to note the important role that the scientific and technical work of the CBD is playing with regard to marine and coastal biodiversity.

There is another important legal point to be examined with regard to any decision to include the stationary biological and genetic resources of the Area within the mandate of the ISA. UNCLOS is nearly unique among natural-resource related conventions in providing a clear mechanism for obtaining formal determinations regard-

ing these matters – the Seabed Disputes Chamber.⁷⁵ This body has clear authority to decide matters relating to ‘the interpretation or application of this Part and the Annexes relating thereto’ as well as ‘acts of the Authority alleged to be in excess of jurisdiction.’⁷⁶ Although this body’s decisions must occur on the basis of specific cases,⁷⁷ it may provide advisory opinions, if requested by the Authority itself.⁷⁸ As such, the Seabed Disputes Chamber could inevitably be the proving ground of ultimate decisions regarding whether and how the biological resources of the Area are governed.

74 United Nations General Assembly, UNGA 58th Session, 18th November 2003, UN Doc. A/58/L.19.para 50.

75 UNCLOS, Arts. 186–191.

76 UNCLOS, Art. 187(a) and (b)(ii).

77 I.e., it is not allowed to sit on the question of whether a rule is within the scope of the Authority’s jurisdiction, except where raised in regard to a specific application of that rule.

78 UNCLOS, Arts. 189 and 191.

Part II Regional and Other Coordinated Interests

Reportedly, the regional approach was not originally considered to be a part of the CBD. In the ensuing years, regional action has increasingly been recognized as a reasonable approach to enable countries to implement highly technical and science-oriented commitments. A number of regions have taken or proposed actions relevant to genetic resources, including ASEAN, the Andean Pact, the African Union, and many others. *The ABS Project's* work has taken interest in the topic, but was not able to address regional work broadly. The

following chapters reprint key work focused on Africa, seeking to identify in particular the manner in which ABS issues are addressed in the SADC region, and also to inquire whether there are special concerns for countries with low levels of diversity, many of which have high percentages of endemic species. Although these chapters focus on Africa, many islands, polar areas, deserts and other regions also may have unique concerns arising from their low diversity and high endemism.

4 SADC: Access to Genetic Resources, and Sharing the Benefits of their Use – International and Sub-regional Issues

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This paper⁷⁹ looks at many key important aspects of two linked concepts: Access to genetic resources; and equitable sharing of the benefits arising from the utilization of genetic resources (often referred to collectively as 'access and benefit-sharing' or 'ABS'). Before discussing the details of these concepts, however, it is essential to understand their context.⁸⁰

In general, the issues of access and benefit sharing are merged into 'ABS' for purposes of discussion, but there are many ways in which they are best understood separately:⁸¹

- Access: In the CBD, 'access to genetic resources' refers to the ability of a country or its subjects or representatives to obtain the right to sample or study particular specimens of genetic material.⁸²
- Benefit sharing: As noted above, the CBD identifies the 'fair and equitable sharing of the benefits arising

out of the utilization of genetic resources' as one of its three overarching objectives.⁸³ For this purpose, the broad concept of benefit sharing includes numerous other issues relating to genetic resources, such as access to genetic resources (Art. 15), transfer of technology (Art. 16), ownership/intellectual property issues, and financing issues. These issues are all inextricably bound together.

While the implementation of the express mandate of Article 15 is clearly an important component of the overall benefit-sharing concept, the development and implementation of systems for the administration of access policies and the payment of compensation (license fees, access payments, and 'non-monetary benefits') to specific provider countries or communities is clearly only a part of the overall benefit-sharing objective.

79 This paper was developed at the request of the Southern Africa Development Community (SADC) Secretariat, as part of the 2003 priority-setting workshop for the Southern Africa Biodiversity Support Programme. With permission from the Secretariat, it has been revised to enhance its accessibility in more general fora. Its preparation and initial publication were sponsored by UNDP, the SADC Secretariat, IUCN Regional Office for Southern Africa, and the IUCN Environmental Law Centre (*The ABS Project*). The paper has been re-edited and some material (duplicating other discussions in this book) has been removed for the purposes of publication.

80 With this discussion the authors are not attempting to explain the CBD, assuming that the participants are already well familiar with the Convention. The following brief discussion is designed to reinforce the relation of ABS to other parts of the Convention.

81 In designating 'access to genetic resources' as an area for in-depth discussion by COP 5, and 'benefit sharing' for COP 6 (Decision IV/16, Annex II), the Conference of the Parties provided some initial recognition of this distinction. Subsequent discussions, however, did not separate the issues of access from those of benefit sharing.

82 Article 15 of the CBD addresses access to genetic resources for environmentally sound uses, calling for the fair and equitable sharing not only of benefits obtained from the utilization of those resources (already stated in Article 1), but also of the results of research and development. Frequently, this obligation to share information is not attended to in ABS agreements, or is effectively eliminated by apparently minor provisions in the agreement regarding the rights to this information

83 CBD, Art. 1.

4.1 The southern Africa context

4.1.1 Status of biodiversity in southern Africa⁸⁴

In southern Africa, biodiversity is the cornerstone of the region's livelihood. Most people in the region, especially local communities, depend on biological resources on a day-to-day basis for survival, especially those living near biological systems such as forests, farmlands, and coastal habitats. They also provide an important source of income through the sale of timber, energy, woodcarvings, household goods, and tourism (consumptive and non-consumptive) services. Biodiversity is also significant for purposes of maintaining ecological systems.

They are however being threatened by both human activity and natural causes. Species-rich wetlands and forests are being converted to species-poor farmlands and plantations. The sea-level rise and drought is also taking a toll on these resources.

Despite the danger of depletion, the region is still richly endowed in biodiversity. For instance, it boasts a total of 23,404 taxa and it is the only region in the world in which there is an entire plant phylum. It has the highest recorded species diversity for any similar-sized temperate or tropical region in the world. The highest species diversity occurs in equatorial areas of the region, such as the Democratic Republic of the Congo, because species diversity tends to be highly correlated with annual rainfall.⁸⁵ Endemism is also high in the region. Madagascar, for example, is very rich in endemic species, as are other islands such as Mauritius. On the mainland, areas rich in endemic species include mountain forests (mainly in the eastern part of the Democratic Republic of the Congo) and coastal areas such as Tanzania and Mozambique. In the arid areas, major centres of endemism include Botswana and Namibia.

4.1.1.1 Socio-economic status of southern Africa

The region, as defined by the SADC Treaty of 1992,⁸⁶ is relatively highly populated with an average population

of 204,500,000 people in 2000, and an average annual population growth rate of 2.9% from 1992-2000. Besides biodiversity, poverty is also rife in the region. There are presently about 50.1 million people living in absolute poverty, and 68% of the population had access to health care in 1991. An estimated 42% of the population in 1991 had access to safe water and only 35% had access to sanitation.⁸⁷ The general wealth status in the region, as informed by indicators such as GDP, is low. There is, however, a contrast in levels of wealth among the SADC countries. The World Bank estimated that countries like Seychelles, Botswana, Mauritius and South Africa have per capita levels of more than US\$2500, while the rest of the SADC countries have per capita incomes of less than US\$1000.⁸⁸ The inflation rates are also high for a number of countries, for instance, Angola 10%, Malawi 29.8%, Zambia 24.5% and Zimbabwe 32.3%.

Poverty, poor health and sanitation facilities have the potential of adversely impacting on the sustainable management of the environment and natural resources in the region. These are the main challenges, amongst other issues, that the SADC Treaty was promulgated to address.

4.1.1.2 Significance of ABS to biodiversity conservation

ABS mechanisms for genetic resources, as defined above, comprise key elements in natural resource management that contribute to the conservation and sustainable utilization of biological diversity.

In prior years genetic resources primarily in the form of seeds moved via exchanges, theft, and other transfers, and continued to move as improved varieties.⁸⁹ Today the movement of genetic resources is increasing due to improved technological inventions especially in the field of biotechnology. This has incrementally facilitated the

84 *Seeding Solutions: Policy Options for Genetic Resources: People, Plants, and Patents Revisited*, IDRC and IPGRI (2000) 1.

85 Chenje, M., (Ed.), 1998, *Reporting the Southern African Environment*, SADC/IUCN/SARDC.

86 Declaration and Treaty establishing the Southern African Development Community (SADC), done at Windhoek, Namibia, August 17, 1992.

87 See Chenje, supra note 88.

88 Robert Kappel, 2001.

89 Juma, C. 1989. *The Gene Hunters: Biotechnology and the scramble for seeds*. Princeton, NJ: Princeton University Press.

transfer of seeds across species and nations. In many cases, another cause for the rapid increase in the flow of genetic resources is suggested – the rising perceived (potential and actual) value of the genetic resources. The figures being suggested are hard for developing countries to ignore. For example, some sources estimate the economic returns of trade in biodiversity to be as high as US\$ 32 billion per year.⁹⁰ The CBD itself has published estimates showing that the top 15 crops in the United States (with annual sales of US\$ 50 billion) originate from developing countries.⁹¹

Despite the apparent revelations of the importance of these resources, developing countries in the SADC re-

4.1.2 ABS in southern Africa

Although mechanisms for sharing genetic resources have been in existence and practiced in southern Africa for a long time, they have been formally recognized and popularized only recently, through the promulgation of the CBD and the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA).⁹³ These two instruments should not be seen as competing but rather as complementing each other.

4.2 Implementing and applying ABS

4.2.1 The most pressing law and practice issues

This section will briefly summarize the most basic of the many legal issues that present problems for the creation of an international regime for the access to, use of and sharing of the benefits arising from genetic resources:

- A discussion focused on defining what is covered by the ABS concept;
- Consideration of the legal framework needed to create and oversee ABS contracts; and

gion (especially the local communities and individuals supplying these resources and knowledge) have received insignificant or no benefits.

The above situation not only paints a picture of inequality, but also undermines efforts to conserve biological diversity and to ensure the sustainable utilization of its components. If local communities, who are the custodians of the resources, receive equitable benefits from its uses, they would have a greater incentive to help ensure conservation.⁹²

The remainder of this paper will outline and analyze the nature of ABS mechanisms at the international and SADC sub-regional levels, with the aim of identifying the major problems and how they impact on biodiversity conservation.

- A brief analysis of the administrative framework that is currently promoted as the means by which the ABS concept will be implemented.

4.2.1.1 Coverage: What are genetic resources?

At its most basic, the ABS concept is limited to genetic resources.⁹⁴ It is generally recognized that lack of clarity about what the term 'genetic resources' means is one factor that has complicated ABS implementation.

90 Rural Advancement Foundation International (RAFI). 1994. *Conserving Indigenous Knowledge: Integrating Two Systems of Innovation*. New York, NY: UNDP.

91 *Convention on Biological Diversity*. Nairobi: UNEP.

92 Mugabe, J., C.V. Barber, G. Henne, L. Glowka and A. La Vina. 1996. *Managing Access to Genetic Resources: Towards Strategies for Benefit-Sharing*. Biopolicy International Series No.17. Nairobi: ACTS Press.

93 The ITPGRFA was negotiated under the auspices of the Food and Agricultural Organization of the United Nations (FAO) to specifically regulate, inter alia, ABS of plant genetic resources for food and agriculture in harmony with the CBD (see ITPGRFA, Art. 1).

94 In current discussions, access and benefit sharing are limited concepts, relating to the utilization of genetic resources. Hence, this paper will focus on access to genetic resources, and equitable sharing of the benefits from those resources.

What then are genetic resources? Three CBD definitions are critical to answering this question:

- ‘Biological resources’ includes genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value to humanity.
- ‘Genetic material’ means any material of plant, animal, microbial or other origin containing functional units of heredity.
- ‘Genetic resources’ means genetic material of actual or potential value.⁹⁵

This definitional question is at the heart of the current problems preventing the implementation of the ABS objectives, because the same resource (specimen) is treated differently based on how it will be USED, while the process requires negotiation of contracts and other actions before any use has been made. By the time the resource is used, the samples are usually outside of the jurisdiction of the agencies that conducted the negotiation and signed the contracts. This means that most source countries will not be able to know how the resource is being used, or to enforce their permits and contracts against a bioprospector who violates the use restrictions (makes commercial use of the genetic resources) after he has left the source country.

4.2.1.2 Basic issues of property and contract law

Contract and property law issues present another difficult problem, one that is not clear on the ‘face’ of the Convention. From the earliest days after adoption of the CBD, conservation lawyers and CBD delegates strongly stated that:

ownership of genetic resources would be determined under national law,

and that:

the implementation of access and benefit sharing regarding genetic resources can be adequately addressed

*through existing mechanisms for negotiating, monitoring and enforcing contracts.*⁹⁶

The original source of these statements remains somewhat cloudy, although they were widely repeated and accepted, even within the CBD legal community. What is clear, however, is that they were made by persons with no professional experience in applying or developing national law in the fields of property and/or contracts. Before either of these assumptions can be tested, several basic changes are necessary in the national law of all countries involved in ABS contracts.

4.2.1.3 Law that must underlie any contract

After 11 years of trying to operate under the above assumptions, two simple facts remain true:

- First, no country has yet found or developed a workable legal framework that clarifies who owns genetic resources. The inability to pin down what a ‘genetic resource’ is, makes it very difficult to legislatively determine who owns it (or more precisely, who has rights to dispose of it, to give access to it, or to receive benefits from it). This issue is discussed in more detail below.
- Second, it is impossible to create a valid contract, unless the subject matter of the contract, and the nature of the rights involved, is clearly understood.

All legal relationships must be based on certain legal understandings, including basic principles regarding the rights of the parties, and the nature of the subject matter that the parties are negotiating. For this reason, it was not enough for the CBD Parties to agree that relevant genetic resource issues would be covered by national property and contract law. It was and is necessary to develop new elements of property and contract law, to enable judges, agencies and others to understand, administer and enforce contracts and other legal relationships, with regard to a kind of right and commodity that has not existed in the world prior to the adoption of the CBD.

95 CBD, Art. 2. Slight variations in the manner in which these definitions are expressed in French and Spanish do not alter the interpretation presented in this article.

96 Three relatively influential works on ABS that are based on these understandings are Ten Kate, K., 2000, *Commercial Use of Biodiversity*; Glowka, L., 1998, *Guide to Designing Legal Frameworks to Determine Access to Genetic Resources*, IUCN EPLP No. 34; and Glowka, L., F. Burhenne-Guilmin and H. Syngé. 1994, *Guide to the Convention on Biological Diversity*, IUCN EPLP No. 30.

4.2.1.4 Other contract issues: Prior Informed Consent (PIC) and Mutually Agreed Terms (MAT)

The Bonn Guidelines offer several specific suggestions about how the Parties should address the Convention's requirements that ABS agreements:

- Must be based on the prior informed consent of the Parties,⁹⁷ and
- Must be granted only on 'mutually agreed terms.'⁹⁸

In essence, however, these provisions are merely underscoring the fact that access and benefit sharing are matters that should be addressed through negotiations and documented in a binding way. Hence, these provisions say that, once the basic problems with contract and property law described above are resolved, ABS agreements may be handled in the normal way that contracts, conditional permits and other business relationships are handled around the world – through fair and mutual negotiations, backed up by a clear and binding document.

Virtually every country has legal or customary systems that provide that one may not be bound by a contract if he did not agree to it, or if his agreement was not based on a full and fair understanding of the facts. The CBD's provisions about prior informed consent say only that the country(ies)⁹⁹ involved in negotiation of an ABS Agreement must be accorded this same right.

Similarly, it is the nature of the term 'agreement' that all parties to it must mutually 'agree.' The CBD's provisions for 'mutually agreed terms' is included only to clarify that the source country is not required to grant access in all cases, but may grant it when there is mutual agreement about what is granted, and what is to be given in exchange, as well as key conditions (such as compliance with environmental protection and other requirements).

Both of these statements are equally true, no matter what other requirements are placed on the ABS transaction, and apply to all kinds of transactions – contractual

negotiations, permits or concessions, or other documents or agreements.

The Bonn Guidelines, by suggesting some basic principles for prior informed consent, and mutually agreed terms, appear to be focusing on standardization among countries, who would otherwise address these matters in conformance with their general legislation governing contracts, permits, and other documents. In this regard, the Bonn Guidelines foreshadow the current move toward an international regime.

However, there are a few points that must be kept in mind about the Bonn Guidelines:

- The issues addressed in the Bonn Guidelines are those matters that are already available and legally do-able in most countries. These include:
 - the creation/designation of an administrative focal point and structure;
 - the development of a system and standard terms for contractual or permit creation;
 - public participation; and
 - identification of possible non-monetary modes of payment.

They do not mention or provide guidance on the various legal, economic and practical issues that are preventing effective implementation of ABS:

- The Bonn Guidelines are voluntary and do not bind any country or any user corporation or institution, unless they are specifically included as a mandatory term of an ABS Arrangement ; and
- The Bonn Guidelines focus on ways that the source countries may change their legal and administrative systems to make it easier for corporations to enter into ABS agreements, but at present they do

97 CBD, Art. 15.5.

98 CBD, Art. 15.4.

99 Although the Bonn Guidelines focus primarily on informing individual communities, this is a matter that is purely within national jurisdiction. The CBD provides only that the 'Contracting Parties' involved (that is the countries that are Contracting Parties to the CBD) must give such consent.

not offer any tools to enhance the source countries' bargaining power or understanding, or to enhance the effectiveness of ABS as a tool for supporting the conservation and sustainable use objectives of the convention.

4.2.1.5 Enhancing bargaining power and understanding in ABS agreements and negotiations

One of the most important mandates that has been repeatedly imposed by the CBD COP has been the call for information on ABS negotiations, including requests for 'Assessment of user and provider experience in access to genetic resources and benefit sharing and study of complementary options' and more specific calls for information regarding: (a) User institutions; (b) The market for genetic resources; (c) Non-monetary benefits; (d) New and emerging mechanisms for benefit sharing; (e) Incentive measures; (f) Clarification of definitions; (g) Sui generis systems; and (h) 'Intermediaries.'

The Conference of Parties has repeatedly noted that such information is 'a critical aspect of providing the necessary parity of bargaining power ... in access and benefit-sharing arrangements.'¹⁰⁰ All of the above-quoted language was taken from the decision of COP 5, which constituted the Terms of Reference for the Secretariat and the Ad-hoc Working Group in their intersessional work in developing the Bonn Guidelines. Unfortunately, up to now, information has been provided on only two of the informational issues listed by COP 5:

- 'Non-monetary benefits' – this provision is only a list of different non-monetary ways that the user may pay under a contract. This does not answer the real question: If the users of genetic resources are supposed to equitably share the benefits arising from their utilization, then don't the source countries need to know what the benefits arising from utilisation of resources are?
- 'Incentive measures' – although it is clear from the convention that ABS should provide an incentive

for conservation and sustainable use, the 'incentives' section of the Bonn Guidelines focuses only on ways to increase the source-countries' incentive to enter into ABS agreements.¹⁰¹

The greatest objective for creation of such a system is broader accessibility of information of this type regarding how the system works. General understanding of these matters will increase the clarity and definiteness of the ABS system and its tools. Looking at the situation from a pessimist's viewpoint (which assumes that all people are primarily acting only in their own best interests)¹⁰² it seems clear that the best interests of the user countries and user corporations are enhanced while the ABS issue is in disarray, and will be diminished when a formal ABS system is in place.

It is possible that many of the problems caused by source countries' lack of information can be resolved without assistance from users, if the source countries cooperate to increase their bargaining power and assert some level of control over the market.

4.2.1.6 Valuation

For many countries, the most difficult issue is the lack of clear market information regarding the value of genetic resources. As a consequence, value is often determined by the user, who frequently determines the value of the genetic resource by comparison to a non-genetic substance that is currently in use – an approach that ignores the very different objectives of ABS, and the fact that, once a genetic resource has been transferred, it is not clear whether it can be subsequently sold to another user (as discussed below).

One thing is clear, however, when speaking of genetic resources; the value is not limited to the specific usability of a particular variety. One must consider elements of equity, practicality, and the desire that ABS provide an incentive for conservation and sustainability. The valuer must recognize that the particular specimen might not exist at all, if its entire ecosystem had not been protected.

100 CBD COP Res. V/26.

101 See Bonn Guidelines at para 51.

102 This is a fair assumption with regard to corporations. Under most countries' corporate law, a corporation's primary objective must be to maximize the legal return given to its shareholders.

4.2.1.7 Genetic resources found in many countries or communities – genetic resources as property and intellectual property

A very difficult problem with ABS relates to the fact that genetic resources are treated in three completely different ways under the CBD and under most national laws:

- They are treated as physical substances (when the user obtains physical ‘access’ to the resources, and the right to bio-prospect);
- They are treated as the property of the country that provides access, when the user negotiates the ABS agreement; and
- They are treated as internationally patentable information, when the user obtains a patent for his work with them.

Thus, the genetic resource user pays only the country or community from which he collects the sample, but then he may patent his use of this resource against all countries in which the species is found. Realistically, if the international regime is to function, it must choose between two views of genetic resources. Either:

- Genetic resources are a nationally owned resource (in which case the buyer should not be permitted to patent the resource, against any countries that are not part of the particular ABS agreement); or
- They are an international resource (in which case no country should receive benefits from a resource without compensating other countries which also have that resource).

[a] Special provisions for agricultural plant genetic resources

In 2001, under the auspices of the UN Food and Agriculture Organisation (FAO), the International Treaty on

Plant Genetic Resources for Food and Agriculture was adopted. The ITPGRFA creates a mechanism for transfer of the genetic resources for varieties of a specific list of basic ‘food and agriculture’ species. The ITPGRFA is fairly detailed in how these transfers will take place, but makes no attempt to specify how they integrate with the CBD’s ABS provisions, or how they will fit into an international ABS regime.

The ITPGRFA is a particularly important agreement, as it provides a concrete example of one way to approach ABS – by separating out one part of the overall concept (in this case a specific list of commonly traded agricultural varieties), and dealing with that. Presumably, other such issues could be separately solved, and these various single issue solutions could link together. In essence, ITPGRFA’s approach was to identify the genetic resources that are most commonly being freely traded around the world now – the basic food product varieties (beans, rice, bananas, etc.) – and create a mechanism for integrating and rationalizing the current systems of handling those trades, organized and approached in a way that will allow it to integrate into the developing ABS regime, when and if it is finally adopted. Thus, it is in many ways more important for countries to develop the institutional and other capacity to participate in the ITPGRFA¹⁰³ than in the international ABS regime, since:

- i. the ITPGRFA may be functional much sooner than the ABS regime; and
- ii. owing to its link to key millennium development concerns of poverty and hunger, the food-and-agriculture component of the international regime is much more important than the as-yet unrealized income potential of ABS agreements.

103 See Moore, G. and Tymowski, W. 2005. *Explanatory Guide to the International Treaty on Plant Genetic Resources for Food and Agriculture*. (IUCN, Environmental Policy and Law Paper No. 57). French and Spanish versions of this publication are due for publication in 2008.

4.3 Major pressing issues in the SADC sub-region

The discussion on ABS in southern Africa usually takes two forms: (i) current practices for sharing seeds and other genetic material (and their applicability as mechanisms for implementing ABS); and (ii) the possible de-

velopment of a new ABS system or systems (at the sub-regional or national levels) reflecting the CBD and the ITPGRFA. The structure of this section will follow this format.

4.3.1 Problems with current ABS systems

Southern African countries, like most countries in the developing world, have not developed adequate formal ABS systems based on the CBD and/or on the ITPGRFA. However, what currently obtains is not necessarily an 'open access' system but rather an ineffective regulatory framework that is open to abuse and leakage of resources. Specific problems in these systems can be categorized as follows:

4.3.1.1 Mutually agreed terms

In the majority of the SADC countries, there is no formal legislative or policy provision that describes how parties should apply the requirement that access be granted on mutually agreed terms (MAT).¹⁰⁴ In essence, the MAT requirement is simply the basic contractual requirement of 'agreement.' The supplier of the genetic resource and the bioprospector must be in agreement regarding the terms and conditions of the activity, including on issues of prior informed consent and benefit-sharing arrangements. Where the parties are at equal levels of bargaining power and understanding,¹⁰⁵ the achievement of true mutual agreement and understanding can be taken to mean that the 'deal' is fair and satisfactory (absent non-disclosure of relevant facts).

Generally, in the region, contracts that convey genetic resources are usually research agreements. The actual provisions typically are biological-resource-based, that is, they often use a contract similar to a material transfer agreement (MTA). Bioprospectors in Zimbabwe are bound by contracts that stipulate the terms and conditions as if for the collection of forest products.¹⁰⁶ There is no appreciation of the potential or actual value of the resource, and benefits are usually rigid.

This kind of contracting is often not appropriate for equitable arrangements regarding benefit sharing. A famous case in point is the agreement between University of Lausanne (Switzerland) and a US-based pharmaceutical company on the one hand, and the University of Zimbabwe and another Zimbabwe-based organization, regarding the collection and use of *swartzia madagascariensis*. The agreement, amongst other things, was interpreted by the University to enable them to obtain a patent on antimicrobial diterpenes, whose use was discerned from traditional knowledge (TK). Because the agreement did not address genetic resource issues (generally treating the matter as a forest extraction contract), key issues relating to the amount and nature of benefits were not mutually agreed upon, nor were the suppliers of TK involved in the negotiations.

In other cases such as in Malawi, institutional arrangements giving foreign collectors access to genetic resources are entirely within the discretion of the designated authority. While this type of simplicity may be appropriate for more conventional resource-extraction (biological resource) agreements, it does not facilitate equitable agreement regarding the bioprospecting for genetic resources and the sharing of the benefits arising from that use.

4.3.1.2 Prior informed consent

Prior informed consent (PIC)¹⁰⁷ is the language by which the CBD adopts the other key component of a valid contract. In essence, PIC requires that the supplier of the resource must fully appreciate the nature of the resource being sought, its potential or actual value and potential use before consenting to collection. In conventional con-

104 CBD, Art. 15(4).

105 Where one party's power or understanding is substantially greater than the others, an unsupervised process arriving at 'mutual agreement' may actually impose unknown or unfair burdens on the less sophisticated or powerful party.

106 Forestry Produce Act.

107 CBD, Art. 15(5).

tract law, this requirement is expressed in a combination of terms, designed to protect the parties against fraud, mistakes, misunderstandings, and wilful or unintentional failure to disclose relevant information.

A supplier whose consent was not based on a full appreciation of the context of the agreement has not really consented – in those cases the agreement is not informed and is therefore invalid. As discussed in the University of Lausanne case, inequitable sharing is not difficult to contemplate where the supplier exercises ‘selective amnesia’ and withholds crucial information such as the potential use or value of the sought resource.

It is clear, however, that the nature and amount of information supporting PIC in genetic resource transactions may be significantly different from that needed to support a more traditional material transfer. Thus, as with MAT, it is probably not sufficient to rely on existing institutions to define and implement the PIC process in ABS. In the Seychelles, for example, access agreements are typically controlled through the Seychelles Bureau of Standards.¹⁰⁸ Applicants are held to informational standards that would be perfectly relevant to resource extraction permitting. Thus, they are not legally obliged to give information regarding use of the resource, apart from the general statement that it is ‘for research.’ While this is appropriate where the question relates to harvesting forest products in bulk, it is not appropriate where the commodity being harvested is the right to use genetic information contained in the plant’s cells. Genetic resource permits or agreements granted on this amount of data are not based on ‘prior informed consent.’

4.3.1.3 Equitable benefit sharing

Under the CBD, the sharing of benefits should be fair and equitable – two terms that call on the concepts of basic justice that underlie, and sometimes take precedence over, the strict operation of law. The concept of equity is sometimes misunderstood, but can be thought of in this case as a way of recognizing that many countries and peoples have made a ‘historic contribution’ to conservation, without which large ecosystems and many traditional concepts would be lost.

One interesting issue is who receives these benefits. In many cases, it is thought that if ABS is to achieve its intended purpose of creating an incentive for the custodians, the benefits should be shared with the communities or individuals supplying the genetic resources. Others feel that it is important to ensure that the government agencies and national constituencies also see a benefit, as these groups too make key decisions that have direct impacts on conservation and sustainable use.

There is no specific type of benefit anticipated for a particular supplier. Principles of equity would decide this depending on the nature of the supplier and the extent to which it can maximally benefit. Some types of benefit that have been offered include scientific and technological knowledge, skills enhancement, pecuniary payment on collection of resource, and royalties on products developed.¹⁰⁹

In most SADC countries, at present, benefits appear to always accrue to the State, regardless of where the resource was obtained (i.e., from State land, protected areas, or land inhabited by communities). In Malawi for example, the National Research Council is empowered to retain for the state, all fees paid on bioprospecting approvals and for monitoring of the collection process. The fees paid by collectors revert to the State. This form of distribution is often used based on the expectation that the State will act as depository and use the benefits for the benefit of the country. This approach may make the key stakeholders (individuals or communities) feel alienated from the benefits.

4.3.1.4 Intellectual property rights of local communities

Traditional knowledge and indigenous knowledge systems in general, practiced by local communities in the region to conserve biodiversity, are not recognized or rewarded by the existing Intellectual Property Rights (IPR) regimes. Instead, IPR rewards specific innovations developed by distinct persons at a particular time. There is a ‘disconnect’ here, which has been the underlying reason for many calls for a sui generis system for protecting discoveries based on genetic resources and traditional knowledge.

108 Seychelles Country Report; Proceedings of the 7th Southern Africa Biodiversity Forum (2002).

109 See Mugabe et al., supra note 93.

Most southern African countries still subscribe to existing IPR regimes. If ABS was to operate under such a legal framework, this would mean (for instance) that local communities would not be entitled to benefits arising

from a new plant variety or plant-based cure, which had been developed incrementally and collectively over time.¹¹⁰ This is a clear affront to the purpose of ABS, and has dire consequences for conservation of biodiversity.

4.3.2 Implementation problems in an ITPGRFA-based ABS system

As highlighted in the preceding sections, the promulgation of the CBD and the ITPGRFA formally recognized the concept of ABS as, amongst other things, an important tool for biodiversity conservation. Parties to these two international law instruments are expected to inculcate the provisions in these instruments into their domestic laws for purposes of implementation. The process of incorporation and implementation is subject to various challenges that may have a bearing on the overall effectiveness of the adopted ABS system. This section of the paper is going to examine these challenges and further highlight how they may impact on biodiversity conservation. These challenges or problems can be classified as follows:

4.3.2.1 Capacity

Southern Africa, like the rest of the continent, has a clear gap in scientific and technological capacity.¹¹¹ Whilst the literacy levels are average,¹¹² there is a clear gap in specialized skills. The general economic status of the countries, as illustrated above, is low creating a need for financial capacity, creating the need for empirical challenges, which is currently being faced by SADC countries.

For example, national legislation and institutional frameworks are currently unable to monitor and enforce ABS agreements.¹¹³ Monitoring entails tracking the collection and use of the collected resources to determine whether they are being utilized in accordance with the agreement. This requires financial resources to set up tracking systems and human skills to effectively operate such monitoring mechanisms. Without such monitoring and enforcement, the provision on mutually agreed terms becomes impotent, thereby compromising the intended biodiversity conservation benefits from ABS mechanisms.

The significance of Prior Informed Consent to biodiversity conservation, discussed above, can also be jeopardized if there is no institutional and technical capacity to implement the provision. Specific skills are needed to examine, analyze, evaluate and validate the accuracy and implications of the information given by an applicant or bioprospector. If the supplied information is not verified, it may affect the nature of consent given by the resource supplier.

Other examples of capacity-building intervention include research and development for purposes of developing national biotechnology industries. This is particularly important, with regard to the advancement in biotechnology in collector countries that are threatening the economic value of genetic material. Presently the economic importance of genetic resources is based on the fact they are not ubiquitous, and therefore the supply side is low. However, biotechnological development is threatening the supply advantage by increasing effective supply. New biotechnology is making it possible for bioprospectors to analyze the genetic make-up of any material using smaller quantities. The effect is that the value of one extract of genetic material obtained drops. This situation presents a threat to the effectiveness of ABS mechanisms in biodiversity conservation.

4.3.2.2 Developmental concerns versus ABS

The SADC region has very urgent developmental concerns such as poverty eradication, infrastructural development, health in general and HIV/AIDS in particular.¹¹⁴ Presently almost all of the national developmental strategies of SADC countries are designed to tackle these issues. They therefore have precedence over other issues of national importance.

110 Ibid.

111 UNEP. 2002. *Africa Environment Outlook: Past, Present and Future Perspectives*. Earthprint.

112 Prescott-Allen, R. 2001. *The Wellbeing of Nations*. Washington, DC: Island Press.

113 See Mugabe et al., supra note 93.

114 SADC Regional Indicative Strategic Development Plan.

Whilst the development of ABS frameworks is pertinent for biodiversity conservation, it may play second fiddle to the urgent developmental concerns that currently exist. The probable consequence is bureaucratic delay in the incorporation of ABS mechanisms, and diversion of national resources (financial, human) to address the urgent concerns.

It is apparent therefore that notwithstanding the importance of ABS mechanisms, it cannot compete with the immediate developmental issues in the region. However, if ABS is introduced as a developmental issue and structured to fit within national developmental strategies, it may get the relevant attention and governmental support required for effective development and implementation.

4.4 Next steps

4.4.1 International regime development

The development of an “International Regime” on access and benefit sharing is an exercise of the power of source countries to insist that the Bonn Guidelines, which failed to improve the situation of developing countries, are not the end of international attention to this issue. In addition to the issues described above, the international regime will focus on other key international issues, including:

- The need for clear mechanisms of oversight, implementation and enforcement of ABS agreements, after the user has acquired the samples and taken them (or the information extracted from them) out of the country;
- The need for clear rules and mechanisms for addressing the relationship of ex-situ collections to the ABS regime;
- The international policy question of whether to begin negotiation of an ABS Protocol to the CBD, or to try to put the regime into place in some other way; and

4.3.2.3 Intellectual property rights

The successful implementation of CBD and ITPGRFA-based ABS systems could be thwarted by existing international IPR regimes. Multinational companies, mainly from collector countries with patented technologies, are generally hesitant to share their technologies with developing countries, such as SADC member states, that do not have the same level of IPR protection as in their countries. The fear is that the technology will be reproduced, in these countries, without any reward or compensation accruing to them. This can frustrate the technology-transfer and benefit-sharing objective of the CBD, and consequently encumber the desired results of conservation of biodiversity.¹¹⁵

- The need to consider a regional or multi-regional collective approach, under which the countries which are exclusively source countries or provider countries – i.e., countries that do not have significant domestic industries that create or market the products of genetic resources – can band together to increase their bargaining power, in the face of the lack of credible information from genetic resource users on the value, markets, and mechanisms relevant to ABS.

Unfortunately, at the international level, the availability of credible resources, standards and databases is somewhat limited. While there are a great many such documents available, nearly all have been created by particular groups that have particular interests to promote. Thus there are many “guidelines” that have been promulgated by industry groups, by ex-situ collections (herbaria, botanical gardens, zoos, gene banks, and agricultural variety centres), and by academics. After the disappointing results of the Bonn Guidelines, it is clear that there is still a need to develop standards that promote the interests of the source countries.

115 See Mugabe et al., *supra* note 95.

4.4.2 Sub-regional regime development

Whilst ABS issues have been in existence for a long time in the region, they have only recently been formally recognized, as illustrated above. Sub-regional efforts for regulating ABS by government or non-governmental organizations are also only just ‘sprouting.’

The principal sub-regional legal framework is the SADC Treaty of 1992 read together with the SADC sector Protocols. There is currently no instrument under SADC community law that specifically regulates or controls ABS. However, there are specific provisions in the recently adopted Protocol on Forestry (not yet in force) which address the access to and use of forest genetic resources.

Article 17 of the Forestry Protocol controls access and benefit sharing of forest genetic resources. Forest genetic resources are defined using the exact language from

the CBD. Beyond this, however, the Protocol commits member States to adopt national policies and to implement mechanisms that ensure that access to the forest genetic resources is subject to prior informed consent and mutually agreed terms. It further obligates them to guarantee equitable sharing of the benefits derived from the use of such resources.

Member States are also called upon to develop a regional approach and harmonized legislation that regulates access to, and the management and development of, forest genetic resources (especially transboundary resources),¹¹⁶ as well as the sharing of germplasm; to support the development of the forest germplasm collection in the SADC Plant Genetic Resource Centre;¹¹⁷ and to give a pledge of mutual support to member States asserting ABS rights against a third party.¹¹⁸

4.4.3 Non-governmental activities and support

The region is frequently engaged in ABS issues and practices through international agencies and NGOs organizing projects aimed at providing resources and valuable input to source countries: For the present, however, most of the informational resources of these projects are still in development.

On the regional level, the SADC Plant and Genetic Resources Centre (SPGRC) is a non-profit inter-governmental institution established in 1988 with funding from the Nordic countries. The centre was created to, amongst other things, conserve plant genetic resources. This includes ex-situ seed conservation; ex-situ field con-

servation; in-vitro conservation; in-situ conservation; and on-farm conservation.

The aim of the Nordic support was to assist the Southern African Centre for Cooperation in Agricultural Research and Training (SACCAR) to establish the SPGRC, and a network of National Plant Genetic Resources Programmes (NPGRPs). These included National Plant Genetic Resources Committees (NPGRComs) that coordinate activities at a national level and National Plant Genetic Resources Centres (NPGRC) that preserve the indigenous plant genetic resources (PGR) material.¹¹⁹

4.5 Recommendations

There are a number of particular concerns that have been raised in this study, on which it is clear that regional work and positions should be considered. These include the following recommended actions:

- Collaborate in the development of a region-wide understanding of the concepts and definitions underlying ABS implementation, using the informational resources being developed in the projects described above.

116 Equity concepts for sharing benefits are specifically defined in the Protocol to address forest genetic resources that are shared by two or more member States or that are of a transboundary nature (Art. 17).

117 The SADC Plant Genetic Resources Centre (SPGRC) is a non-profit inter-governmental institution that was established by SADC Member States to conserve plant genetic resources.

118 A peer-support system will be applied wherever a member State asserts a right against a third party. It further authorizes the harmonization of national laws that regulate access and benefit sharing of forest genetic resources (Art. 17).

119 SADC PGR Project www.ngb.se/sadc

- Develop a unified regional position regarding the international policy issue – i.e., whether the call for implementation of a global ABS regime must necessarily require the negotiation of an ABS Protocol.
- Begin discussions or negotiations over whether the SADC countries can increase their collective bargaining power by creating a “cartel” with regard to their biodiversity.
- Address institutional, financial, and research and development capacity needs at a national level.
- Replace, amend or modify current national IPR laws and adopt a system that recognizes and rewards traditional knowledge and innovations.
- Work collectively to develop information relevant to:
 - (a) user institutions;
 - (b) the market for genetic resources;
 - (c) non-monetary benefits;
 - (d) new and emerging mechanisms for benefit sharing;
 - (e) incentive measures;
 - (f) clarification of definitions;
 - (g) sui generis systems; and
 - (h) ‘intermediaries’ .
- Develop a unified regional position regarding property and intellectual property rights with regard to genetic resources.
- Develop a SADC sub-regional legislative and policy framework (probably in the form of a Protocol to the SADC Agreement) on ABS that is in line with the socio-economic realities of the region.

5 Biodiversity Access and Benefit Sharing in Arid Countries and those with Low Diversity and High Endemism

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This study was originally prepared in January, 2004, in preparation for the discussions in CBD COP 7. To avoid duplicating other material in this book or The ABS Series, only excerpts of its discussions are provided. Its conclusions and discussions are based in part on the case studies set out in parts 6.1 and 6.2, below.

5.1 Introduction

Because biodiversity is found in inverse proportion to technological and industrial wealth, the biologically rich South has argued that in order to allow companies access to its biodiversity – and indeed to justify the conservation of economically important biological resources in developing countries – the technologically rich North must transfer technology and share benefits from commercialization.¹²⁰ This is considered especially crucial given the historical accrual by colonial powers and Northern companies of benefits derived from the commercialization of resources from the South. These sentiments underpin the new policy framework encapsulated in the CBD, and also form the context for implementation of ABS provisions of the CBD, and the treaty's third objective – to share equitably benefits arising from use of genetic resources.¹²¹

Much of the most active developing-country participation in the ABS debates and processes has emanated from the so-called 'megadiverse' countries, and in particular from a newly formed 'like-minded, megadiverse' coalition, representing 15 of the most biologically diverse countries in the world.¹²² Seventy percent of the planet's biodiversity and 45% of the world's population are found within the boundaries of the member countries of this group.¹²³ Non-implementation of ABS provisions within the CBD and the voluntary nature of the Bonn Guidelines remain major frustrations for these countries, many of whom are targeted continuously, and often relentlessly, by Northern companies and their intermediaries seeking biological resources and traditional knowledge for commercial application.¹²⁴

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- 120 Macilwaine, C. 1998. 'When rhetoric hits reality in debate on bioprospecting.' *Nature* 392: 535-40; Sanchez, V. and C. Juma. 1994. *Biodyplomacy. Genetic Resources and International Relations*. Nairobi: African Centre for Technology Studies.
- 121 Convention on Biological Diversity (adopted Rio, 1992, entered into force 1993). Discussions are currently underway regarding the necessity for international instruments to achieve ABS commitments and objectives. These matters are discussed in detail in the other books in this series, and in: Chambers, W.B., 2003, 'WSSD and an International Regime on Access and Benefit Sharing: Is a Protocol the Appropriate Legal Instrument?' *RECIEL* 12(3): 310-320.
- 122 The so-called Group of Like-Minded Megadiverse Countries comprises Bolivia, Brazil, China, Colombia, Costa Rica, Ecuador, the Philippines, India, Indonesia, Kenya, Malaysia, Mexico, Peru, South Africa and Venezuela. The Group was formally constituted through the Cancun Declaration of February 18, 2002 as a 'consultation and cooperation mechanism' to promote common interests and priorities related to the conservation and sustainable use of biodiversity. The development of an international regime to promote and safeguard the fair and equitable sharing of benefits arising out of the utilization of genetic resources has been adopted by the group in its action plan as one of five areas of priority and action. See also www.megadiverse.org
- 123 Id. Note, too, recent thinking that challenges conventional thinking on biodiversity 'hot spots,' and calls for multiple strategies that take account of environmental degradation and local social and economic conditions (see Dickson, D. 2003. 'UN advisor urges focus on environmental 'hotspots'.' www.scidev.net).
- 124 SEARICE. 2002. 'The Bonn Guidelines on Access to Genetic Resources: Another false hope against Biopiracy?' *SEARICE notes, Translator series*; and Caillaux, J. and M. Ruiz. 2003. 'Legislative experiences on access to genetic resources and options for megadiverse countries.' www.megadiverse.org/armado_ingles/PDF/five/five5.pdf

But what of other developing countries that do not hold exceptionally rich repositories of biodiversity, and for whom ABS might not be an immediate priority? As acknowledged by the ABS expert panel set up under the CBD, there is 'enormous difference in the circumstances of particular cases of access and benefit sharing.'¹²⁵ A 'one size fits all' approach may well be inappropriate, and a presumption that all developing countries are biologically rich might result in practices, policies and instruments that are ultimately more onerous than helpful to developing countries. While standards, guidance and political support are clearly essential for ABS implementation, these must clearly address the needs not only of megadiverse countries, but also of countries with neither the resources, power nor interest to develop comprehensive ABS systems themselves.

5.2 Characteristics of low diversity and/or arid countries and those with high endemism

Countries seldom have a uniform set of characteristics that obviously classify them as having low or high levels of biological diversity. Clear distinctions are also made difficult by the fact that politically-defined regions seldom coincide with biologically-defined regions. For the purpose of this paper, however, we consider low diversity countries to be those outside of the tropics, without significant tracts of rainforest, outside of any major centres of plant or crop diversity, and often having arid climates and vegetation types and high levels of endemism. Of course we recognize this definition to be loose and open to interpretation. Some countries may have pockets of high species diversity within their boundaries, or high levels of endemism, but overall low species richness and ecosystem diversity. Others may have few biomes within their country borders, but high species richness within these biomes. For the purposes of this paper a rigorous scientific characterization is neither desirable nor appropriate. Rather, the intention is to draw attention to the different constituencies that may be affected by ABS, and the practical implementation of ABS in these countries.

Arid countries are often home to extraordinary and unique species and thus present a particular set of issues

This paper aims to explore these issues in further detail, by drawing on the experiences of arid and/or low diversity countries with high levels of endemism, and attempting to look practically at the legal and institutional implications of ABS arrangements in these countries, presenting case studies from southern Africa, Lebanon, and Burkino Faso. Following these it provides an overview of the biological, social and developmental characteristics of arid and/or low diversity countries and those with high endemism, and considers the differing impacts of ABS in terms of policy and legal approaches adopted by these countries, and their relevance to these countries.

for ABS. Arid plant species produce a wide array of secondary compounds as protective agents against abiotic (e.g., drought) and biotic (e.g., herbivore grazing) stress. These compounds aid plants in adapting to environmental conditions, competing with other plants, warding off attacks by predatory insects or animals, or attracting pollinators or seed dispersers. Many of these compounds are of commercial interest as medicinal agents or industrial chemicals. Active constituents of the succulent plants *Hoodia* sp. and *Trichocaulon* sp., for example, have recently been patented by the South African-based Council for Scientific and Industrial Research (CSIR), and are currently under development as an appetite suppressant drug. In another example, the desert shrub *Chrysothamnus nauseosus* (Rabbit Brush) produces high concentrations of natural rubber, resin for polymer plastics, and specific chemical compounds for the chemical industry.¹²⁶ In the Sonoran Desert of Arizona, the secondary metabolites produced by desert plants and micro-organisms are the subject of extensive testing for their anti-tumour properties.¹²⁷

Arid regions are often of particular interest for their agricultural resources. Agriculture, based on pastoral

125 Report of Experts on Benefit-sharing Arrangements (UNEP/CBD/COP/5/8, 2 November 1999).

126 Weber, D.J., W.M. Hess, R.B. Bhat and J. Huang. 1993. 'Chrysothamnus: a rubber-producing semi-arid shrub,' in: Janick, J. and J.E. Simon (Eds), *New crops*, New York, NY: Wiley, at 355–357.

127 McGinley, S. 2001. *Looking for anti-cancer compounds in the Sonoran Desert*. Tucson: University of Arizona College of Agriculture and Life Sciences.

systems and dryland crop cultivation, frequently forms the backbone of economic activities in arid countries. In Burkina Faso, for example, 85% of the economically active population is employed in the agricultural sector. In Lebanon, up to 50% of the population is involved in agriculture or related activities. In Namibia and Botswana, the majority of rural people practice livestock farming and subsistence agriculture. Often, land that is farmed is suitable only for nomadic or rotational grazing due to poor surface water availability, erratic rainfall and infertile soils. Traditionally, nomadic pastoralists and other mobile peoples have used arid rangelands, moving animals long distances to find water and grass, and managing livestock as mobile, flexible assets that can provide multiple social, cultural and economic benefits. Such systems spread economic risks over a range of activities and also enable greater maintenance of species diversity.¹²⁸

Over centuries, farmers cultivating dryland crops have similarly evolved traditional cultivars resistant to drought, poor soils, salinity and local pests. The selection and use of an array of cultivars with different traits is one of many ways in which to reduce crop failure. These stress-tolerant varieties are of great commercial interest for new agricultural applications. In the Arab Maghreb region of north-west Africa, for example, characteristics for resistance to drought and salinity are much sought after to improve agricultural production of important crops such as alfalfa, oats, wheat, barley, olives, vines and a range of fruit trees.¹²⁹ In the mountain-top habitats of Lesotho and South Africa, the resurrection plant *Xerophyta viscosa*, is able to survive for long periods without water, and is also highly tolerant of temperature extremes and high winds. Most remarkable is the plant's ability to rehydrate completely and resume its full metabolic func-

tions within 24-72 hours of rain.¹³⁰ Scientists at the University of Cape Town in South Africa are using *X. viscosa* as a source of genes that code for proteins responsible for this resurrection phenomenon. The ultimate intention is to engineer stress-tolerant crop plants for sub-Saharan Africa.¹³¹

High levels of endemism also often typify arid countries. Namibia, for example, is one of the world's driest countries, and contains the world's oldest desert, and an unusual and complex array of habitats, species and adaptations, many of them unique to the country and region.¹³² Africa's arid southwest zone is roughly centered on Namibia and is a major zone of evolution for melons, some families of succulent plants, and several invertebrate, reptile and amphibian species.¹³³ Namibia also includes parts of three floristic regions: the Zambezian regional centre of endemism, the Kalahari-Highveld transition zone, and the Karoo-Namib regional centre of endemism. The Karoo-Namib region, which stretches from southern Angola to the Eastern Cape (South Africa) includes at least half of its 7000 species as endemic.¹³⁴ The Arab Maghreb region in north-west Africa similarly includes high levels of endemism: of the more than 4000 species occurring in the region, at least 20% are endemic.¹³⁵

While arid environments have a suite of interesting biological and physical attributes, they are also most vulnerable to land degradation and desertification. Desertification carries huge economic, social and environmental costs for countries, among them a loss of soil productivity, loss of vegetation cover, reduced food production, reduced resilience to natural climate variability, and a loss of cultural diversity.¹³⁶ For many arid countries, and more

128 World Alliance on Mobile Indigenous Peoples. 2003. *Briefing notes on mobile peoples and conservation*. IUCN, WCPA, CEESP, TILCEPA, CMWG, Refugee Studies Centre, DICE, UNDP, WAMIP and CENESTA.

129 Brac de la Perriere, B. 2003. 'International project 'Growing diversity': Summary of the project on the Maghreb Region in North Africa,' see www.grain.org

130 Farrant, J.M. 2000. 'A comparison of mechanisms of desiccation tolerance among three angiosperm resurrection plant species,' *Plant Ecol.* 151: 29-39.

131 Peters, S. 2003. 'Resurrecting hope: drought tolerant crops,' *Science in Africa* (October 2003). www.scienceinAfrica.co.za/2003/october/drought.htm

132 Barnard, P. (Ed.) 1998. *Biological Diversity in Namibia: a country study*. Windhoek: Namibian National Biodiversity Task Force.

133 Ibid.

134 Cowling, R.M. and C. Hilton-Taylor, C. 1997. 'Phytogeography, flora and endemism.' In: Cowling, R.M. D.M. Richardson and S.M. Pierce, (Eds), *Vegetation of Southern Africa*, University of Cambridge, at 43-61.

135 See Brac de la Perriere, supra note 132.

136 See www.unccd.int

especially those in Africa, desertification is tied integrally to poverty, migration, food security, and development. Communities in dry areas with marginal, degraded land

resources are among the poorest of rural communities, and development choices are usually extremely limited.

5.3 Commercial activities in arid/low diversity countries

An important question to ask is what value is placed on resources from arid countries by companies seeking access to genetic and biological material. Although most countries of the world seem to have experienced some level of bioprospecting, in all most large-scale natural products programmes collect material from 20-30 countries, and most bioprospecting efforts to date have focused on a much smaller number of countries with high levels of species diversity rather than their less glamorous counterparts.¹³⁷ Merck, for example, list species diversity as a key question to guide their selection of countries in which to conduct sampling.¹³⁸ Monsanto, cited in Laird and ten Kate,¹³⁹ states that ‘areas with lots of biodiversity are extremely important sites for collection.’ Several other companies likewise reiterate the importance of collecting in regions of high biodiversity – and thus, chemical diversity.¹⁴⁰

While species diversity is an important criterion, a number of different approaches can be adopted for the sampling of natural products, most of which are used by companies to varying extents: Laird and ten Kate¹⁴¹ describe four main approaches:

- Random, where collections are conducted on a random basis to obtain a representative sample of local diversity;
- Ecology-driven, where collections are based on an understanding of ecological relationships between species which might lead to the production of secondary compounds;

- Chemotaxonomic, where collections are based on knowledge of taxa with important compounds; and
- Ethnobotanical, where collections are based on local knowledge of species.

Clearly, all of these could apply in arid and low diversity countries, although in all likelihood the ‘ecology-driven’ and ‘chemotaxonomic’ approaches would be most relevant. Ethnobotanical leads are also crucial, evidenced by the case of Hoodia, where traditional knowledge of the plant led researchers directly to further investigation of the plant’s pharmaceutical potential as an appetite suppressant. Similarly, traditional knowledge led researchers to patent active constituents of plants in the succulent Mesembryanthemaceae family for the treatment of mental disorders. Different factors are also likely to come into play depending on whether genes or chemicals are being sought. Genes for pest- or drought-resistant crops, for example, would best be located through a targeted search, focused on geographical areas where certain traits are evident. However, a screening programme for useful chemicals, such as new pesticides or drugs, is more likely to find success in biologically diverse systems.¹⁴²

To varying extents, these interests are played out in arid countries. Namibia, for example, reports a high level of commercial interest in the country’s biodiversity, and wide-ranging enquiries about exploiting the potential of local species – from the country’s cucurbits (melons) through to the venom of snakes, the urine of rodents, and the spectacular succulents of the *Sperrgebiet*. For the

137 Laird, S.A. and K. ten Kate, K. 1999. ‘Natural products and the pharmaceutical industry.’ In: Laird, S.A. and K. ten Kate, *The Commercial Use of Biodiversity*, London: Earthscan, at 34–77.

138 Borris, R.P. 1996. ‘Natural products research: perspectives from a major pharmaceutical company,’ *Journal of Ethnopharmacology* 51:29–38.

139 See Laird and ten Kate, supra note 140.

140 Ibid.

141 Ibid.

142 See Ten Kate and Laird, *The Commercial Use of Biodiversity*, supra note 140, at 213.

princely sum of US\$5000, an offer was recently made by a US institution to survey Namibia's entire flora!¹⁴³ In South Africa (a megadiverse country with arid regions), arid species are included by the parastatal CSIR in a major bioprospecting project aimed at investigating most of the country's 23,000 plant species for commercially valuable properties over the next ten years. Hoodia, which is an arid species found in and around the Kalahari desert of South Africa, Namibia and Botswana, is one of the species under development by the CSIR. Arid species are also collected in South Africa by the New York

Botanical Garden as part of a Global Systematic Phytochemical Survey, initiated in an endeavour to systematically collect representatives of every vascular plant family in the world.

5.4 Policy responses to ABS in low diversity and/or arid countries and those with high endemism

It is clear that ABS is of great relevance to arid countries, but that strategic responses to the issue may differ, depending on the range of social, economic, political, developmental and environmental circumstances at play in respective countries. Of interest is that none of the countries investigated have yet noted any need to develop comprehensive strategic planning processes for ABS, an observation that is shared for megadiverse countries.¹⁴⁴ For countries such as Burkina Faso, faced with desertification, crippling levels of poverty, and other pressing development needs, ABS issues unsurprisingly play second fiddle. But in other arid countries, limited development choices and unpredictable rainfall have led to increased recognition of the importance of alternative and diversified livelihood strategies such as wild product harvesting, bioprospecting and ecotourism. Only 6.5% of Namibia's land, for example, is suitable for arable farming, and wild products form an important component of drought-coping strategies in poor rural communities.¹⁴⁵ Commercial use of the country's biodiversity for wildlife tourism and trade in biodiversity is receiving increasing

In Lebanon, the Lebanese Agricultural Research Institute is involved in several agreements, including a bilateral transfer agreement with the International Centre for Agricultural Research in Dry Areas (ICARDA), and an agreement with Kew Gardens in which Kew covers the running costs of collections and training in the field. At the American University of Beirut, scientific research is being conducted as part of a bioprospecting project to investigate the scientific validity of traditional use of indigenous plants (see Case study 2, section 6.2).

Bioprospecting in Burkina Faso is also prevalent, with particular interest in agricultural varieties (see Case study 1, section 6.1). Historically, Burkina Faso was home to Sahel whippets, since exported to Europe and the USA by foreigners for use in cross-breeding and the development of new breeds of dog.

political support, accompanied by the introduction of supportive laws and policies. Reflecting these differences, arid countries have adopted a mix of policy responses to ABS, with some pursuing the issue more actively than others.

In Lebanon, there has been active discussion on ABS and ongoing participation in the development of the Bonn Guidelines, both through the CBD-constituted panel of experts and the ad-hoc Working Group on the matter. Lebanon's National Biodiversity Strategy and Action Plan (NBSAP) stipulates the need for laws relating to ABS, and the Environmental Protection Law (444 of 2002) calls specifically for the elaboration of a system to control access to genetic resources, to manage natural resources, and conserve biodiversity. In response, a draft law has been prepared to regulate access to Lebanese biological and genetic resources, and the sharing of benefits from their use, but this has not yet been adopted (see Case study 2). Lebanon has not developed a national strategy to protect traditional knowledge although the

143 Krugmann, H. 2001. Namibia's thematic report on benefit-sharing mechanisms for the use of biological resources. Namibia National Biodiversity Programme.

144 See Caillaux and Ruiz, *supra* note 127.

145 See Barnard, *supra* note 135.

recently adopted Law for the Protection of the Environment addresses the importance of traditional knowledge in rural areas and stipulates that indigenous information must be taken into consideration in the absence of available scientific information. Existing intellectual property laws are however considered ill-suited to the protection and promotion of TK use, and *sui generis* legislation is currently under development.

Namibia too has participated actively in the development of ABS policy and legislation and considers ABS legislation to be a priority issue, more especially to prevent illegal prospecting and to ensure national and local benefits.¹⁴⁶ ABS features prominently in the country's NBSAP, which stipulates as one of its strategic aims the need to 'promote and control bioprospecting and biotrade to generate sustainable benefits for Namibia'. A related objective is to 'demonstrate and promote the role of indigenous knowledge systems in biodiversity conservation and sustainable resource management, and estab-

lish opportunities for indigenous communities to share this knowledge with other parties.' Draft legislation on ABS has been under development for some years, and promulgation is anticipated in 2004.¹⁴⁷

Burkina Faso, in contrast to the two countries described above, does not consider ABS a strategic priority and there has been little debate on the issue within the country. However, ABS does feature in the country's NBSAP, which refers to the 'fair distribution of benefits obtained from the exploitation of genetic resources,' with a particular focus on the distribution of benefits at national and local levels. However, although Burkina Faso has ratified the CBD, no legislation exists or is under development to regulate ABS (see Case study 1). The need to preserve and protect traditional knowledge is similarly recognized by various programmes and action plans, but no legislative or institutional measures have been adopted to reach this objective.

5.5 Key ABS issues and needs

Arid countries (and, indeed, most developing countries) are clearly faced with a bewildering array of international initiatives to which responses need to be formulated, and a continual juggling and weighing up of priorities versus available resources takes place. While the above

discussion suggests that the regulation of ABS is still at an early stage, a number of common issues and needs can be identified – both in the regulation and practice of controlling ABS.

5.5.1 Governance in remote areas

The governance of natural resources in arid regions presents major administrative and technical problems, both because resources are often dispersed over vast areas, and because of the remoteness and inaccessibility of these areas. A key constraint is the ability to monitor and enforce harvesting and trade policies, particularly in more remote areas. In many instances, insufficient capacity exists within government, requiring innovative approaches to be adopted, including self-policing and monitoring by communities. This in turn requires capacity-building programmes at the local level, and an enhancement of existing extension services. Devil's Claw, for example, is a medicinal plant widely harvested in southern Africa for the international trade. The plant yields significant social and economic benefits, yet the

vast areas over which it occurs, combined with a lack of knowledge as to its population status, and low levels of capacity and community organization make its effective management especially difficult. Similar constraints exist for many other arid-zone species.

Obtaining the prior informed consent of communities to collect their biological resources and/or knowledge is also more difficult to implement and monitor under these circumstances. For mobile communities with no fixed abode, PIC is extremely difficult, but not impossible to physically administer. However this implies the existence of strong community institutions, and a uniform and well-informed understanding as to the purpose of the collection.

146 Shikongo, S., Ministry of Environment and Tourism, Namibia, pers. comm.

147 Ibid.

5.5.2 Land tenure and ownership

Land tenure is a central issue in most arid countries, where communal systems of tenure are generally most prevalent, and more appropriate than systems based on individual tenure. Communal lands typically fall under customary regimes, where rules governing access to biological resources (in the broadest sense), and cultural taboos are often far better understood and implemented than statutory measures.¹⁴⁸

Oral cultures and practices are the primary medium for communication, and approaches to property are likely to be very different from western norms, and more firmly embedded in a community collective than in a monopolistic, individualistic and privatized system.

5.5.3 Overlapping responsibilities and coordination

In the arena of ABS, arid countries share with other countries the problems of overlapping responsibilities of different Ministries and government departments, sometimes leading to different policy approaches being adopted to the same issue. However, this is less pronounced than in countries with more complex bureaucracies and institutions, suggesting that policy coherency may be more easily achieved in low diversity and/or arid countries. In Namibia, for example, PGRFA are included within the country's draft ABS law, whilst in South Africa territorial disputes between different Ministries have led to the recently adopted Biodiversity Act explicitly excluding

This is an extremely important context for the development and implementation of ABS laws. Chishakwe and Young¹⁴⁹ point out the difficulties countries have had in developing a workable legal framework that clarifies ownership of genetic resources. Because a definition of genetic resources is ambiguous, it has been hard to legislatively determine who has rights to dispose of, give access to, or receive benefits from such resources. Where customary laws apply at the community level, the situation is even more fraught. ABS legislation clearly needs to take into account the impact of different systems of land ownership on the way in which resources can be accessed and used.

agricultural biodiversity from its ambit, despite the legislative vacuum that exists for PGRFA and farmers' rights. While problems of overlapping mandates between different Ministries may be less pronounced in arid countries, the prevalence of communal systems of tenure suggests that overlapping responsibilities between traditional organizations and modern state administrative structures is likely to be an obstacle towards legal coherency and coordination. As is the case for other countries, an important challenge is to improve communication between decision makers, researchers, NGOs and communities.

5.5.4 Shared resources and regional approaches

The extensive nature of arid systems suggests that many biological resources and TK systems are likely to be shared between countries. This highlights the importance of regional initiatives to provide policy guidance on benefit sharing for shared resources and knowledge. The Hoodia case describes a rather unique situation where shared resources and knowledge were acknowl-

edged through benefit-sharing arrangements to reward the San in Namibia, South Africa and Botswana. In this case, the existence of suitable institutions and goodwill between parties allowed for an amicable agreement to be reached, but it is doubtful that these circumstances can be replicated in every case.

5.5.5 Adding value, research and development

ABS is generally predicated on the idea that source countries can move beyond simply being providers of raw materials and knowledge, by enhancing their technical capacity to add value to resources, through enhanced

manufacturing facilities and infrastructure, and increased research and development. Whether this is an appropriate strategy for all arid countries is, however, questionable. For countries struggling to provide basic services,

148 See, for example, Wynberg, R., S. Laird, J. Botha, S. den Adel and T. McHardy. 2002. *Policy Issues with Regard to the Management, Use and Commercialisation of Marula*. DFID report. www.nerc-wallingford.ac.uk/research/winners/

149 Chishakwe, N. and T.R. Young. 2003. 'Access to genetic resources, and sharing the benefits of their use: international and sub-regional issues.' Prepared for CBD COP 7 in Kuala Lumpur in 2004. [A slightly redacted form of this article has been published in this book as Chapter 4. Ed.]

an expensive national strategy to promote value-added products from biodiversity is unlikely to be the most efficient use of scarce resources, and a more prudent approach may be to form alliances and partnerships with trustworthy neighbours and responsible foreign partners.

While such matters fall within the scope of national strategic decision making, they also have implications for the nature and scope of ABS legislation and suggest

5.5.6 Integrating ABS into development priorities

Finally, systems for ABS in arid countries are likely to be most effective and workable if they are simple, flexible and well integrated into ongoing development programmes and policies. Implementing a complex ABS regime is a costly exercise, both in terms of the human and financial resources required. Experiences over the past decade suggest that as a development strategy, bioprospecting delivers limited benefits and, contrary to popular opin-

that countries need to consider carefully the implications of implementing cumbersome ABS systems. Moreover, they point to the need for countries to assess more broadly legal frameworks for trade in biodiversity, including for non-timber forest products traded regionally and internationally in bulk, and not as genetic resources. Improving the legal and policy framework for the trade and conservation of such resources could well deliver significant development benefits for low diversity countries, often reliant on trade in a few significant species.

ion, is unlikely to provide significant financial benefits to either high or low diversity countries. On the other hand, non-monetary benefits can be significant, especially with regard to the building of scientific and technical capacity.^{150, 151} This suggests that arid countries need to be cautious when regulating for ABS, and mindful of the 'transaction costs' of introducing and implementing new laws and institutional arrangements.

5.6 Conclusions and recommendations

Arid countries have a unique set of social, economic and environmental attributes but share many of the constraints faced by high diversity countries in implementing ABS systems. At the international level, there are distinct benefits that an international, legally binding ABS regime could offer arid countries, especially in cases where no legislation exists and where there is insufficient expertise to negotiate contracts.¹⁵² Specifically, there would be advantages for standardizing the terminology that is used in national ABS legislation, for stipulating the basic elements that require inclusion in material transfer agreements, and for setting criteria for access protocols and PIC procedures. Including such components within a legally binding protocol under the CBD seems to be an approach that would guarantee a certain level of protection for provider countries. A legally binding international tool is also likely to bring much-needed funding to arid countries, enhanced political support and awareness, and greater momentum to the issue.

Drawing on discussions in this paper, the following recommendations are made:

- ABS regulatory systems in arid countries should be simple, effective, clear and not draining on the national purse.
- National ABS policies and laws come at a cost that arid countries cannot afford on their own. Financial support is needed from the international community to enable the development and implementation of effective ABS systems in arid countries.
- Institutional and legal arrangements for ABS should combine and/or dovetail requirements of both the CBD, and those of the ITPGR and other related international agreements.

150 Wynberg, R. 2003. A review of benefit-sharing arrangements for biodiversity prospecting in South Africa. In: *Developing Access and Benefit-Sharing Legislation in South Africa. A Review of International and National Experiences*, Pretoria: IUCN, at 56-80.

151 Rodriguez, S. 2002. 'Bioprospecting has failed – what next? Sprouting UP' *Seedling* October 2002, GRAIN publications.

152 See Chambers, *supra* note 124.

- Different ministries working on issues relating to ABS need to ensure that policy responses are integrated and coherent.
- The elaboration of international and national ABS laws needs to take into account the fact that communal tenure and rights systems are often most prevalent in arid countries, and that customary law frequently applies in such areas. ABS legislation needs to recognize that resources are accessed and used in different ways under different systems of land ownership.
- Further attention should be given to the development of regional initiatives to provide guidance on benefit sharing for resources and knowledge shared between countries.
- ABS capacity building is an important need for a range of different stakeholders in arid countries but efforts need to be focused and tailored in accordance with the benefits that bioprospecting can realistically deliver.
- Wherever possible, ABS awareness-raising and capacity-building initiatives should be integrated into on-going development projects and programs, rather than being pursued as stand-alone projects.
- Special efforts should be made to support arid countries in inventory work to describe and catalogue local biodiversity.
- Greater efforts need to be made to investigate the type of legal regime that applies to trade in non-timber forest products and its relationship to ABS legislation.
- The limited financial rewards to be gained from bioprospecting suggest that on its own, financial gain is not a sufficient reason to initiate comprehensive ABS laws and programmes in low diversity countries. Broader benefits obtained from ABS, including those relating to conservation, research and development, need to be an integral part of ABS policies and laws.

6 Two Case Studies in Africa

6.1 Case Study 1: ABS in Burkina Faso

Amidou Garané*

** Amidou Garané is a faculty member of the University of Ouagadougou, Burkina Faso. This study was commissioned in 2003 by Rachel Wynberg in connection with her written contribution to The ABS Project (Chapter 5 of this book). It has been edited to focus on those aspects in which arid and low endemism countries may differ from other countries, to avoid duplication with other parts of this book and of The ABS Series.*

6.1.1 Overview of the biological, social and institutional characteristics of Burkina Faso

Situated in West Africa, Burkina Faso is a landlocked country of 274,000km² which shares its frontiers with six countries. Burkina Faso became an independent state in 1960 and today has a population of 12 million inhabitants with a density of 33 inhabitants per km². The annual rate of population growth is 2.6%. The economy of the country is essentially based on agriculture and cattle-breeding which employs 85% of the active population. Burkina Faso is amongst the most poverty-stricken countries in the world with an Index of Human Development (IHD) of 0.330 which places the country 173rd out of 175 countries. Average life expectancy is 45.8 years and the percentage of children in full-time education is 22%.¹⁵³ Burkina Faso is a contracting Party to the CBD, which it ratified in 1993.

This Sahel country is characterized by low rainfall and is affected by desertification. It is also characterized by a tropical Sudano-Sahel climate in which a long dry season alternates with a short rainy season. The country is fed by a weak hydrographical network consisting of three basins: the Volta, the Niger and the Comoé.

Desertification is Burkina Faso's principal problem, and since the mid-1970s, the country has faced recurrent waves of drought. This has hampered its economic and social development. In part, desertification has natural causes, but today it is due largely to human impacts and poverty. Burkina Faso is active both at the international (Convention to Combat Desertification) and domestic levels (adoption of a National Action Plan to Combat Desertification and a National Fund against Desertification) in its efforts to combat desertification.

Burkina Faso's biodiversity has been poorly studied up to now and few systematic studies have been done. The national monograph lists 3796 natural species, including 2389 animal and 1407 plant species.¹⁵⁴ Numerous threats are posed to the country's biological diversity and several species are threatened. This is largely a result of natural (drought, climate change) and human factors (ecosystem and habitat degradation due to continued agricultural expansion, unsuitable farming methods and practices such as bush burning, nomadic farming, demographic pressures, overexploitation of resources).¹⁵⁵

6.1.2 The relevance of access and benefit sharing to Burkina Faso

6.1.2.1 Extent of bioprospecting

Bioprospecting exists in Burkina Faso although its extent is hard to judge. Certainly individual researchers, companies and foreign research centres conduct research on the genes of animal or plant species of importance to Burkina Faso.

National research institutes have participated in collecting the majority of ecotypes of sorghum, millet, maize and other cereals present in Burkina Faso for the benefit of national and foreign laboratories, but there are no means of following up on use of these samples.

153 UNDP. 2003. World Report on Human Development, at 240.

154 Ministry of the Environment and Water Affairs. 1999. National Monograph on the Biological Diversity of Burkina Faso, at 25.

155 Ministry of the Environment and Water Affairs. 1998. National Biodiversity Strategy and Action Plan, at 42.

There is no doubt that elements of biodiversity extracted from Burkina Faso by foreign institutions have today been put to lucrative use. They have probably furnished large profits to the bioprospectors without any benefit going to Burkina Faso, the country of origin. There are, however, no official statistics on this matter.

Numerous reasons explain the difficulty in evaluating the extent of bioprospecting:

- Bioprospecting takes place without any legal control, and often in secret. Specimens and genes harvested are rarely declared and it is at present relatively easy to extract genes and remove them secretly from the country.
- There are no efficient control mechanisms for bioprospecting.
- It is difficult to control bioprospecting because so little is known of the biodiversity.

Only official scientific bioprospecting can be relatively easily controlled, including that done in partnership between official structures and industrialized countries. Such cooperation exists between the research centres of Benin, Burkina Faso and Niger and northern research centres in the resources of the frontier parks to the west of the Niger River in the framework of a sub-regional project financed by the European Union and entitled 'Protected Ecosystems of Sudano-Sahelian Africa' (ECO-PAS).

[a] Drivers of commercialization

A number of factors favor the demand for certain genetic products and underpin bioprospecting:

- Strong demand by western industries (pharmaceutical and agri-food); and
- An increasing demand (especially in Europe) for exotic products. For example, research and exportation (to Europe and the USA) of Sahel whippets, which were used for various purposes, including cross-breeding.

[b] Legal and institutional approaches Burkina Faso has adopted to deal with ABS

Burkina Faso has adopted a number of legislative and regulatory instruments to ensure the sustainable development of its biological resources. However, none of these laws requires benefits derived from use of biodiversity to be fairly distributed – neither do they articulate any mechanisms or procedures for benefit sharing. In policy documents, such as the National Biodiversity Strategy and Action Plan,¹⁵⁶ there are clear references to benefit sharing, which suggest that it should be extended to all biological resources, not just genetic resources, and that benefits derived from the direct or indirect use of biological resources should be redistributed amongst interest groups. However, these points are presented from a national and internal point of view only, with only a few references to the international level.

[c] Strategic approaches adopted to ABS

ABS does not yet constitute a major priority for Burkina Faso. Illegal or unregulated access to biological resources is recognized as a phenomenon to which solutions must be found, but is not yet considered a major issue or priority area compared to other environmental issues such as desertification, or other biodiversity issues (wetlands, genetically modified organisms (GMOs)). No national programme or action plan, seminar or national debating forum has been dedicated exclusively to the distribution of benefits linked to the exploitation of genetic resources on the international level.

[d] Approaches taken by Burkina Faso towards the protection of traditional knowledge

Customary knowledge and traditional practices benefit from the intrinsic protection offered by the nature of the knowledge itself. Because this knowledge is largely transmitted by oral means, it is not accessible to everyone and thereby benefits from a specific protection. This explains why until now it has been quite well preserved. Today, however, there is a growing risk that this natural defense mechanism will be eroded as a result of the increasing interest of educated members of the traditional communities in capturing customary knowledge and practices on paper. These 'children of the earth' are exposing the community's traditional assets and it could result in

156 Ibid., at 53.

important information being divulged. As yet, however, there is no specific legal protection in Burkina Faso of traditional knowledge, although the need to preserve traditional knowledge is affirmed by national authorities, and by various programmes and action plans.¹⁵⁷

6.1.2.2 Hurdles encountered in implementing ABS

Burkina Faso faces several hurdles in the application of ABS:

- Insufficient knowledge of national biodiversity despite recent efforts,¹⁵⁸ due largely to a lack of finances;
- Insufficient awareness by national authorities of the economic losses or risk of losses linked to foreign bioprospecting;
- Inadequate juridical means and an absence of legal instruments specifically aimed at the regulation of bioprospecting;
- Inadequate institutional measures and the absence of institutions specifically tasked with the regulation of bioprospecting; and
- Ignorance amongst local people (often the only ones to come into contact with bioprospectors) of the implications of genetic resource conservation and opportunities for benefit sharing.

6.1.3 Conclusions and recommendations

As a country with low levels of biological diversity and endemism, Burkina Faso has a major interest in ensuring sustainable conservation of these genetic resources and better participation in the sharing of benefits resulting from the exploitation of its national genetic patrimony. No national ABS policy, however, can be achieved without the support of the international community through

6.1.2.3 ABS needs of Burkina Faso

Burkina Faso's primary needs are technical – derived from the relatively limited amounts of manpower and capital available for addressing biodiversity matters most necessary for ABS:

- Continued action to develop a taxonomic inventory of all genetic resources. It will be necessary to evaluate the potential of known or prospective genetic resources of the different components of biological diversity;
- Creation of a database on the potential of the country's biodiversity which may be of interest to foreign countries and capable of generating benefits to be shared; and
- Follow-up evaluation of the state of national genetic resources and in particular those being researched by foreigners.

In addition, it shares with other countries the need to create a consistent national legislative framework on ABS, and to integrate it with international developments in this area, as well as a general need for institutional development, and awareness raising.

the existing international conventions. Any national ABS policy comes at a cost (financial and technical) that this country cannot afford on its own, given the multiple demands it faces for development. The international community should make ABS one of its priorities and obtain additional financial inputs for the country.

Additional Reference for Section 6.1

Ministry of the Environment and Water Affairs. 1998. National Forestry Policy.

157 Ibid.

158 Notably in the framework of the *National Monograph on Biological Diversity in Burkina Faso* in conformity with the CBD.

6.2 Case Study 2: ABS in Lebanon

Walid Nasser and Lina Haidar*

* Walid Nasser and Lina Haidar are affiliated with Walid Nasser & Associates. This study was commissioned in 2003 by Rachel Wynberg in connection with her written contribution to *The ABS Project* (Chapter 5 of this book). It has been edited to focus on those aspects in which arid and low endemism countries may differ from other countries, to avoid duplication with other parts of this book and of *The ABS Series*.

6.2.1 Biological, social and institutional characteristics of Lebanon

Lebanon, a country of a total surface area of only 10,425km², is an integral part of the Mediterranean Basin, and boasts a varied range of habitats with its islands, coastal lands, rivers and high mountains. This small country is biologically rich as a result of its geomorphology and microclimates. Over 9119 species have been identified, estimated to be 20% of the total existing number and including 4633 plant and 4486 animal species.¹⁵⁹ Roughly three quarters of the total surface area of Lebanon is mountainous, with extreme variability in climatic conditions, soils and the socio-economic status of its people. Lebanon's diverse topography gives rise to many microclimates, and several types of habitats, including altered habitats. These are favourable to the occurrence of many plant and animal species. However, steep terrains are prone to soil erosion, and ultimately land degradation, if poorly managed. Moreover, the eco-

systems in Lebanon have narrow ranges, and are thus vulnerable to changing environments. The coastal zone of Lebanon is particularly vulnerable to urban encroachment and loss of habitat. Overpopulation (400 inhabitants/km²) is considered a key threat to the country's biodiversity.¹⁶⁰

The war and its consequences have led to a general deterioration in social conditions, and an increase in the number of people who cannot satisfy their basic needs. A large number of Lebanese families live below the poverty threshold. The Lebanese monthly minimum salary is US\$200. Only a small percentage of the population has access to education. A high proportion (30–50%) of Lebanese society is involved in the agricultural sector, or related activities.

6.2.2 The relevance of ABS to Lebanon

6.2.2.1 Extent of bioprospecting

The government has not initiated any bioprospecting activities, but the Lebanese Agricultural Research Institute (LARI) and the American University of Beirut (AUB) are involved in bioprospecting projects. At the AUB, scientific research is being conducted to investigate the scientific validity of traditional uses of selected indigenous plants with medicinal, aromatic and ornamental values. The LARI is involved in research topics that include biotechnology, biodiversity, plant production and protection, plant nutrition, soil and water sciences, poultry and livestock production and is also the implementing agency in a regional project to characterize the floristic richness and study the genetic diversity and potential uses of selected species. Most research and academic institutions in Lebanon lack the infrastructure to handle biotechnology.

6.2.2.2 Drivers of commercialization

Lebanon has not adopted any incentives for the commercialization of biological or genetic resources. However, Lebanon has entered into bilateral treaties with some of its neighboring countries (Egypt, Syria, Jordan and Saudi Arabia), to exempt medicinal and non-medicinal plants from import duties. Lebanon has also entered into a bilateral treaty with the EU to exempt plant exports to Portugal from customs duties.

6.2.2.3 Legal, institutional and strategic approaches to ABS

To date, although Lebanese law¹⁶¹ calls for the elaboration of a system to control access to genetic resources, manage natural resources, and conserve biological diversity, Lebanon has not taken any direct regulatory measures to control ABS. Other measures of more general law may be relevant, however.¹⁶²

159 *National Biodiversity Strategy and Action Plan: Lebanon*. 1998.

160 *Ibid.*

161 Law No. 444 for the Protection of the Environment (July 29, 2002).

The government of Lebanon has prepared a National Biodiversity Strategy and Action Plan (NBSAP) as part of its obligations under the CBD. The NBSAP for Lebanon represents the only national agenda on biodiversity and provides the framework for biodiversity initiatives. One of the medium-term actions provided for in the NBSAP is to “develop and follow on the necessary legislation for biodiversity conservation such as the official endorsement of the NBSAP, official declaration of the National Biodiversity Committee *and laws relating to access and benefit sharing.*”

Lebanon has not developed a national strategy to provide protection for traditional knowledge. Furthermore, the traditional intellectual property laws are ill-suited for the protection of traditional knowledge. A *sui generis* legal system is required to protect TK and encourage its use. However, the recently adopted Law for the Protection of the Environment has addressed the importance of traditional knowledge in rural areas and stipulates that indigenous information must be taken into consideration in the absence of available scientific information.

6.2.3 Conclusions and recommendations

The new ABS law should be as flexible as possible to facilitate investment, encourage bioprospecting and protect biodiversity. The law should address the following challenges: balancing conflicting interests (investors, farmers, government...), benefit sharing between all the actors,

On the national level, the Ministry of Agriculture has facilitated the marketing of many traditional products and the Ministry of Environment has launched the Protected Area Project calling for the involvement of local communities in management. The Council of Development and Reconstruction has also launched a project with the support of the EU to give support to local communities to promote traditional practices used for production purposes.

6.2.2.4 Lebanon's ABS needs

Research to identify, study, conserve and use species is needed. Institutions have to be strengthened to carry out these activities. Training is badly needed in the fields of taxonomy, genetic resources, *in-situ* and *ex-situ* conservation, ecology, resource management, forestry, planning and data processing. There is a need to develop a regional rather than national program to regulate access to genetic resources. Finally, the issue is still at its early legal stages, and legislation urgently needs to be finalized and adopted.

preventing the depletion of biological resources, and resolving overlapping responsibilities of various ministries. Finally, there is a need to launch an awareness campaign among the decision makers and the public at large.

162 See, e.g., Patent Law 240 (August 7, 2000) regarding patents on new or innovated botanical products; Forest Law (January 7, 1949) regarding harvesting permits; Forest Protection Law (July 24, 1996) designating protected areas; Law 367 (August 1, 1994) limiting trade in medicinal plants and their products to pharmacists; Decree No. 11710 (January 22, 1998) regulating the importation of natural medicinal products and food additives; and Law 157 (October 2, 2001) which created a syndicate of importers of natural medicinal products and food additives.

Part III Social Issues: ABS and Livelihoods

It has generally been recognized that full assessment of the social implications of the ABS regime is premature at this time. At present, with the regime either incomplete (best case) or theoretical, its mechanism is a groundbreaking attempt to develop a commercial basis to promote equity and benefit sharing. Like any legal/commercial mechanism, the primary social implications of the regime will primarily be found not at the policy level but at the level of implementation. One example can be found in the social, gender, ethnic and cultural implications of forestry law. A permit system for harvesting and use of non-timber forest resources is only discriminatory where it is applied in a discriminatory fashion, such as for example where the regulations or the criteria for issuance of permits have the effect of prevent-

ing or limiting women, rural communities, indigenous peoples, and other groups from effective participation.

It was originally intended that this Part would address a broad range of social issues, however, upon analysis, it became clear that such research would have been untimely. The primary current research issues in the social area are those of human rights (discussed in Chapter 7) and the issue of 'traditional rights' which has been the subject of many hundreds of books and articles, and is even more controversial and problematic at present. *The ABS Project* is keenly aware of the importance of social issues in ABS, and recognizes that they should be given primary attention once the main configuration of ABS implementation and approach have been agreed.

7 The Human Rights Implications of Access to Genetic Resources and the Equitable Sharing of the Benefits Arising from their Utilization

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7.1 Introduction

The present contribution aims to paint a picture of the human rights obligations that may be most relevant to the establishment of schemes of access to genetic resources and equitable sharing of the benefits arising from their utilization.¹⁶³ Human rights have substantially contributed to shifting the focus of modern international law towards the pursuit of shared fundamental values,¹⁶⁴ eroding States' exclusive domain over their nationals.¹⁶⁵ In doing so, human rights have gradually penetrated all areas of the law.¹⁶⁶ This predicament applies also to the *Convention on Biological Diversity* (CBD), whose implementing measures need to comply with the human rights commitments undertaken by its Parties.¹⁶⁷

At the global level, the most comprehensive catalogue of human rights is the International Bill of Rights. The Bill of Rights comprises three instruments – the Uni-

versal Declaration of Human Rights,¹⁶⁸ the International Covenant on Civil and Political Rights (ICCPR)¹⁶⁹ and the International Covenant on Economic, Social and Cultural Rights (ICESCR).¹⁷⁰ While the legal significance of the Universal Declaration is controversial,¹⁷¹ the two Covenants are legally binding treaties, which have been ratified by the vast majority of States.¹⁷² Both the ICCPR and the ICESCR provide reporting duties and monitoring mechanisms.

All human rights entail a set of obligations that may be distinguished in consideration of three elements:

Respect – i.e. governments must refrain from interfering directly or indirectly with the enjoyment of human rights;

163 Convention on Biological Diversity, 31 ILM (1992), 818, entered into force on 29 December 1993, Art. 15.

164 Cf. Cassese, A. 2005. *International Law*, 2nd Ed., at 365. Oxford University Press.

165 Cf. *International Criminal Tribunal for the Former Yugoslavia, ICTY, Prosecutor v. Dusko Tadic*: 'The impetuous development and propagation in the international community of Human Rights doctrines, particularly after the adoption of the Universal Declaration of Human Rights in 1948, has brought about significant changes in international law, notably in the approach to problems besetting the world community. A State-sovereignty-oriented approach has been gradually supplanted by a human-being-oriented approach. Gradually the maxim of Roman law *hominium causa omne jus constitutum est* (all law is created for the benefit of human beings) has gained a firm foothold in the international community as well.' *ICTY, Prosecutor v. Dusko Tadic A/K/A*, Decision on the Defence Motion for Interlocutory Appeal on Jurisdiction, 2 October 1995, Case No.: IT-94-1-AR72, at 97.

166 See for instance the Report of the Study Group of the International Law Commission, Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law, 13 April 2006, UN Doc. A/CN.4/L.682.

167 CBD, Art. 22 (1): 'The provisions of this Convention shall not affect the rights and obligations of any Contracting Party deriving from any existing international agreement, except where the exercise of those rights and obligations would cause a serious damage or threat to biological diversity.'

168 Universal Declaration of Human Rights, UN G.A. Res. 217A, UN, 1948.

169 International Covenant on Civil and Political Rights, G.A. Res. 2200A (XXI), 21 UN GAOR Supp. (No. 16) at 52, UN Doc. A/6316, 1966, 999 UNT.S. 171, entered into force 23 Mar. 1976, hereinafter ICCPR.

170 International Covenant on Economic, Social and Cultural Rights, G.A. Res. 2200A (XXI), 21 UN GAOR Supp. (No. 16) at 49, UN Doc. A/6316, 1966, 993 UNT.S. 3, entered into force 3 Jan. 1976, hereinafter ICESCR.

171 Cf. Hannum, H. 1995. 'The Status of the Universal Declaration of Human Rights in National and International Law,' *GA. J. Int'l & Comp. L.*, 25: 287–397.

172 The ICCPR has to date been signed by 67 States and has 160 Parties. The ICESCR has to date been signed by 66 States and has 155 Parties.

Protect – i.e. governments have the duty to prevent third parties from interfering in any way with the enjoyment of human rights; and

Fulfill – i.e. governments must adopt measures necessary to achieve the full realization of human rights.¹⁷³

The two Covenants distinguish between civil and political rights, and economic and social rights.¹⁷⁴ This separation was the result of a precise political choice.¹⁷⁵ The drafters treated civil and political rights as urgent commitments in need of immediate enforcement, whereas economic, social and cultural rights were laid down as programmatic statements, unsuitable for direct enforcement. As a result, the ICCPR provides explicit obligations¹⁷⁶ and the body in charge of monitoring its implementation (Human Rights Committee)¹⁷⁷ may receive communications regarding human rights violation from both States and individuals.¹⁷⁸ The ICESCR, instead, has a more hortatory tone,¹⁷⁹ and the body in charge of monitoring its implementation, (Committee on Economic, Social and Cultural Rights), may not receive individual

communications.¹⁸⁰

This categorization seems to establish a hierarchy between human rights objectives.¹⁸¹ Such interpretation has however been rejected by the UN General Assembly, which has on several occasions reiterated that human rights are ‘indivisible.’¹⁸² On separate grounds, it is sometimes contended that human rights enjoy primacy over other international law commitments.¹⁸³ This theory is highly controversial and its analysis exceeds the purpose of the present contribution. It is nevertheless undisputed that many States Parties to the CBD have also adhered to the Covenants and other human rights instruments. These instruments have in some respects the same relevance as the ones undertaken with the CBD. It is therefore crucial to discern the human rights that may affect ABS systems. The ones that are more likely to be of some effect in this sense are the rights that deal with natural resources, land and property. The following analysis will seek to give an overview of these entitlement issues, detailing aspects that may be more sensitive to the elaboration of ABS schemes.

7.2 Human rights obligations

7.2.1 Self-determination

The notion of self-determination refers to a complex set of rules that have long been debated in international law. The principle dates back to the French Revolution, when it was first used to demand that territorial annexations or

changes took into consideration the will of affected populations.¹⁸⁴ The term has subsequently been deployed as a criterion for territorial changes in sovereign States; a democratic principle legitimizing modern States govern-

173 Cf. CESCR General Comment No. 12: The right to adequate food (Art. 11), 1999, UN Doc. E/C. 12/1999/5.

174 Cf. Vasak, K. 1977. ‘A 30-year struggle: the sustained efforts to give force of law to the Universal Declaration of Human Rights,’ *The UNESCO Courier* 30(11): 28–32.

175 The UN General Assembly opposed the separation of the catalogue of fundamental rights into two distinct Covenants.

176 ICCPR, Article 2 (2): ‘Where not already provided for by existing legislative or other measures, each State Party to the present Covenant undertakes to take the necessary steps (...) to adopt such laws or other measures as may be necessary to give effect to the rights recognized in the present Covenant.’

177 ICCPR, Articles 28 and 45.

178 ICCPR Art. 41; First Optional Protocol ICCPR, UNGA Resolution 2200A (XXI) of 16 December 1966, entered into force 23 March 1976.

179 ICESCR, Art. 2 (1): ‘Each State Party to the present Covenant undertakes to take steps, individually and through international assistance and cooperation, especially economic and technical, to the maximum of its available resources, with a view to achieving progressively the full realization of the rights recognized in the present Covenant by all appropriate means, including particularly the adoption of legislative measures.’

180 ECOSOC Resolution 1985/17. A draft optional Protocol, giving the Committee competence to receive complaints, is currently under consideration, cf. www.ohchr.org/english/bodies/cescr/index.html

181 Cf. Meron, T. 1986. ‘On a Hierarchy of International Human Rights.’ *American Journal of International Law* 80: 1–23.

182 Cf. e.g., Resolution on Alternative Approaches and Ways and Means within the UN System for Improving the Effective Enjoyment of Human Rights and Fundamental Freedoms, adopted 16 Dec. 1977, G.A. Res. 32/130, GAOR 32nd Sess., 105th Plen. Mtg., UN Doc. A/Res/32/130 (1977).

183 See for instance Orakhelashvili, A. 2005. ‘The Impact of Peremptory Norms on the Interpretation and Application of United Nations Security Council Resolution,’ EJIL 16 (1): 88–112. On the application of the jus cogens doctrine by human rights tribunals cf. Shelton, D. 2006. ‘International law and ‘Relative Normativity.’ In: Evans, M. (Ed.), *International Law*, 2nd Ed., at 168–170. Oxford University Press.

184 Cassese, A. 1995. *Self-determination of Peoples: a Legal Reappraisal*, at 11. Cambridge University Press.

ments; an 'anti-colonial' rule; and a freedom principle for minority groups in sovereign States.¹⁸⁵

The principle made its debut in an international law instrument with its inclusion in the UN Charter.¹⁸⁶ This led to a fierce ideological debate,¹⁸⁷ as Western States claimed that the Charter's reference to self-determination was as a mere guideline and did not impose any specific legal obligations. Socialist and developing countries, on the other hand, insisted on its anti-colonial significance. This conflict is mirrored in the identical provisions under Article 1 of the Covenants:

- (1) All peoples have the right of self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development.
- (2) All peoples may, for their own ends, freely dispose of their natural wealth and resources without prejudice to any obligations arising out of international economic cooperation, based upon the principle of mutual benefit, and international law. In no case may a people be deprived of its own means of subsistence.
- (3) The States Parties to the present Covenant, including those having responsibility for the administration of Non-Self-Governing and Trust Territories, shall promote the realization of the right of self-determination, and shall respect that right, in conformity with the provisions of the Charter of the United Nations.

Article 1 is one of the most controversial provisions in the Covenants.¹⁸⁸ In particular, the interpretation of the term *peoples* poses crucial questions as to the sphere of application of the norm. The drafters did not intend to limit self-determination to colonial peoples.¹⁸⁹ According to its most widely accepted definition, the term *people* therefore refers to 'entire populations living in independent and sovereign States,' as well as 'entire populations of territories that have yet to attain independence.'¹⁹⁰

The notion of self-determination has both an *external* and an *internal* significance. In its *external* meaning, self-determination entails people's freedom from other States interference, as well as the right to secession. In its *internal* significance, self-determination is a *continuing* and *permanent* process, by virtue of which the members of a population must be able to choose their legislators and political leaders, free from interference from domestic authorities. This freedom is intrinsically related to the expression of popular will associated with other fundamental rights, such as freedom of expression;¹⁹¹ freedom of peaceful assembly¹⁹² and association;¹⁹³ the right to take part in public affairs and the right to vote.¹⁹⁴ Furthermore, internal self-determination has strong links with public participation and may be regarded as 'a summa of civil and political rights.'¹⁹⁵

Article 1(2)'s reference to the use of natural wealth configures peoples' sovereignty over natural resources as the economic consequence of their political self-determination.¹⁹⁶ Some authors argue that this principle prohibits the use of natural resources to the exclusive benefit of small segments of the population.¹⁹⁷ This view was en-

185 Ibid., at 32.

186 Charter of the United Nations, June 26, 1945, 59 Stat. 1031, entered into force Oct. 24, 1945, hereinafter UN Charter. According to Article 1 (2), UN Members must aim 'to develop friendly relations among nations based on the respect of the principle of equal rights and self-determination of peoples.' The principle is further acknowledged in Article 55's reference to 'the creation of conditions of stability and well-being which are necessary for peaceful and friendly relations among nations based on respect for the principle of equal rights and self-determination of peoples.'

187 For an historical overview, cf. Brownlie, I. 1970. 'An Essay in the History of the Principle of Self-determination.' In: Alexandrowicz, C.H. (Ed.) *Studies in the history of the law of nations*, at 93. The Hague: Nijhoff.

188 Cf. Cassese, A. 1981. 'The Self-determination of Peoples.' In: Henkin (Ed.) *The International Bill of Rights – The Covenant on Civil and Political Rights*, at 92. New York, NY: Columbia University Press.

189 Cf. Bossuyt, M.J. 1987. *Guide to the 'travaux préparatoires' of the ICCPR*, at 44. Oxford University Press.

190 See Cassese, supra note 188., at 59.

191 Cf. ICCPR, Art. 19.

192 Cf. ICCPR, Art. 21.

193 Cf. ICCPR, Art. 22.

194 Cf. ICCPR, Art. 25.

195 See Cassese, supra note 192, at 102.

196 See Cassese, supra note 192, at 103.

197 See Cassese, supra note 188, at 56.

dorsed by the African Commission on Human and Peoples' Rights in *Social and Economic Rights Action Centre for Economic and Social Rights v. Nigeria*, where it found that the Government of Nigeria had violated the Ogoni people's right to dispose freely of their wealth and natural resources.¹⁹⁸

Peoples' rights over natural resources are not unlimited and must be exercised in compliance with international agreements aiming to promote international economic cooperation.¹⁹⁹ As a result, agreements contrary to this right may be unilaterally terminated, without prejudicing commitments flowing from other international law sources.²⁰⁰

The enforcement of the right to self-determination is problematic. Undisputedly, all Parties to the Covenants are entitled to claim the fulfillment of obligations under Article 1, and the Human Rights Committee insists that States specifically report on their performances under this provision.²⁰¹ Article 1, however, stands alone in the Covenants for the fact that its beneficiaries are peoples and not individuals, and the Human Rights Committee has reiterated on a number of occasions that its violations alone are not sufficient grounds for individual communications under the ICCPR.²⁰²

In spite of these difficulties, internal self-determination is a fully embodied human right that imposes binding obligations on States Parties to the Covenants. This right may be particularly relevant in national establishment of ABS schemes, which must comply with peoples'

right to benefit from the exploitation of their natural resources.

An issue closely related to self-determination is the right to enjoy the benefits of scientific progress and its applications.²⁰³ The Committee on Social, Economic and Cultural Rights interprets this right as a stimulus to promote 'the diffusion of information on scientific progress,' and 'to prevent the use of scientific and technical progress for purposes which are contrary to the enjoyment of all human rights, including the rights to life, health, personal freedom, privacy and the like.'²⁰⁴ Accordingly, this interpretation would call on States to ensure that intellectual property regimes are exercised in a non-discriminatory way.²⁰⁵

The same provision is of particular relevance to indigenous peoples.²⁰⁶ Paragraph 1 (c) of Article 15 ICESCR, in fact, sets out the right 'to benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.' The Committee on Economic, Social and Cultural Rights has stated its interpretation that this entitlement also applies to 'the knowledge, innovations and practices of indigenous and local communities.'²⁰⁷ With reference to indigenous peoples, this entails that States Parties adopt measures to ensure the effective protection of indigenous peoples' interests, taking into account their preferences. Such protection might include the development of system tools and concepts that enable countries to recognize, register and protect indigenous peoples' individual or collective authorship under national intel-

198 *The Social and Economic Rights Action Centre for Economic and Social Rights v. Nigeria*, African Commission on Human and Peoples' Rights, Comm. No. 155/96 (2001).

199 ICCPR and ICESCR, Art. 1 (2).

200 See Cassese, *supra* note 188, at 56.

201 Cf. the Committee criticized Canada IV Periodic Report for its absence of reference to self-determination as applied to Canada's aboriginal peoples, cf. UNDOC CCPR/C/79/Add. 5.

202 Optional Protocol to the International Covenant on Civil and Political Rights, adopted Dec. 1966, 999 UNT.S. 302, hereinafter *Optional Protocol*.

203 Cf. ICESCR, Art. 15(1).

204 Cf. Alston, P. 1991. 'The International Covenant on Economic, Social and Cultural Rights.' *Manual on Human Rights Reporting*, at 69–70. Geneva: UN Centre for Human Rights: UN Institute for Training and Research.

205 Cf. Coombe, R.J. 1998. 'Intellectual Property, Human Rights & Sovereignty: New Dilemmas in International Law Posed by the Recognition of Indigenous Knowledge and the Conservation of Biodiversity.' *Indiana Journal of Global Legal Studies* 6(1): 59.

206 Cf. Chapman, A.R. 2000. 'Approaching Intellectual Property as a Human Right: Obligations Related to Article 15 (1) (c).' Discussion paper submitted to the Twenty-fourth session of Committee on Social, Economic and Cultural Rights, 13 November–1 December E/C.12/2000/12, at 30.

207 CESCR General Comment No. 17 (2005): The right of everyone to benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he or she is the author (Article 15, paragraph 1 (c), of the Covenant) 12/01/2006 E/C.12/GC/17, at 9.

lectual property regimes and should prevent their unauthorized use by third parties.²⁰⁸ In implementing these measures, States Parties should respect the principle of

free, prior and informed consent of the indigenous authors (cf. *infra*).

7.2.2 Public participation

Citizens' involvement in government decision making is an essential building block of democratic societies. In human rights terms, public participation is an all-encompassing label used to refer to a variety of activities, including voting, petitioning, lobbying, campaigning, and access to government-held information. Public participation regimes find special application to vulnerable groups, such as women, indigenous populations, youth, racial and ethnic minorities.²⁰⁹

Since the 1970s, public participation has become common grounds in environmental regulations, both at the domestic and at the international level.²¹⁰ Participation is included amongst the Rio Declaration principles²¹¹ and Agenda 21 asserts that broad public participation is a fundamental prerequisite for sustainable development.²¹²

To date the most advanced international law instrument on the matter is the Convention on Access to In-

formation, Public Participation in Decision-making and Access to Justice in Environmental Matters (the Århus Convention).²¹³ The Convention was prepared in the framework of the UN Economic Commission for Europe and has been ratified by 41 Parties, including the European Community. The Convention combines elements typical of human rights and environmental agreements²¹⁴ and may serve as a useful tool for guidance and inspiration in ways of addressing public participatory and information rights, in national ABS schemes.

Article 1 of the Århus Convention recognizes the right to a healthy environment for present and future generations,²¹⁵ requiring State Parties to introduce procedures to guarantee this entitlement, articulated in three *pillars: public participation; access to information and access to justice*.²¹⁶

The general right to participate in public affairs in the ICCPR²¹⁷ provides the right to vote, the right to be

208 Ibid., at 32.

209 Declaration of the UN Conference on Environment and Development, UN Doc A/Conf.151/26/Rev.

210 For an historical overview, cf. Pring, G. and S.Y. Noé. 2002. 'The Emerging International Law of Public Participation Affecting Global Mining, Energy and Resources Development.' In: Zilman, D.N., A.R. Lucas and G. Pring, (Eds), *Human Rights in Natural Resources Development*, at 20. Oxford University Press.

211 Declaration of the UN Conference on Environment and Development, UN Doc. A/CONF.151/26/Rev.1, Report of the UNCED, Vol. 1 (New York), 1992, Principle 10: 'Environmental issues are best handled with the participation of all the concerned citizens at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.'

212 Agenda 21, UN Doc. A/CONF. 151/26, Report of the UNCED, Vol. 1 (New York), 1992, Ch. 23, 2: 'One of the fundamental prerequisites for the achievement of sustainable development is broad public participation in decision-making. Furthermore, in the more specific context of environment and development, the need for new forms of participation has emerged. This includes the need of individuals, groups and organizations to participate in environmental impact assessment procedures and to know about and participate in decisions, particularly those that potentially affect the communities in which they live and work. Individuals, groups and organizations should have access to information relevant to environment and development held by national authorities, including information on products and activities that have or are likely to have a significant impact on the environment, and information on environmental protection measures.'

213 Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, (Århus), 38 ILM (1999), 517, entered into force on 30 October 2001, hereinafter Århus Convention. The Convention has 40 signatories and 41 Parties.

214 To date UNECE has 56 member States, mostly European, but also includes the Russian Federation, Canada and the United States.

215 Article 1 makes express reference to 'the protection of the right of every person of present and future generations to live in an environment adequate to his or her health and well-being.' The Preamble to the Convention also asserts 'every person has the right to live in an environment adequate to his or her well-being, and the duty, both individually and in association with others, to protect and improve the environment for the benefit of present and future generations.'

216 Århus Convention, Art. 1 'Each Party shall guarantee the rights of access to information, public participation in decision making, and access to justice in environmental matters in accordance with the provisions of this Convention.'

217 ICCPR, Art. 25: 'Every citizen shall have the right and the opportunity, without any of the distinctions mentioned in Article 2 and without unreasonable restrictions: To take part in the conduct of public affairs, directly or through freely chosen representatives; To vote and to be elected at genuine periodic elections which shall be by universal and equal suffrage and shall be held by secret ballot, guaranteeing the free expression of the will of the electors; To have access, on general terms of equality, to public service in his country.' Cf. also the analogous provision sub Art. 13 ACHPR.

elected, and the right to take part in public affairs.²¹⁸ Several international legal instruments inject specific public participation mechanisms into environmental decision making.²¹⁹ The Århus Convention presents the broadest and most detailed requirements on the issue, prescribing public participation in all ‘plans, programs and policies relating to the environment,’ as well as in the preparation of ‘regulations and legally binding normative instruments.’²²⁰

The right of access to information is part of the broader human right to freedom of expression.²²¹ This entitlement includes freedom to seek information, as well as to receive it. Access to information is crucial to the enjoyment of several substantive human rights, such as the right to life and the right to respect for one’s home, private and family life.²²² The right of access to information is acknowledged in several international environmental law instruments.²²³ The Århus Convention prescribes very comprehensive obligations on the matter, including information on ‘the state of the environment and its components;’ ‘factors physically and institutionally affecting human health and safety;’ ‘cultural sites’ and

‘built environment.’²²⁴ Provisions on access to information are also specifically incorporated into Article 15 (5) of the CBD, which makes reference to prior informed consent (PIC).²²⁵ PIC practices are gaining currency as procedures to obtain the consensus of subjects likely to be affected by activities impacting on their health and well-being. These processes assume specific characteristics with reference to indigenous peoples (cf. *infra*).

Finally, the right of *access to justice* provided by the ICCPR²²⁶ and all main regional human rights instruments,²²⁷ entails the right to a fair and public hearing in front of an independent tribunal. These entitlements are cornerstones of the rule of law and of human rights protection.²²⁸ Numerous national legal systems lay down mechanisms enabling environmental organizations acting in the public interest to institute proceedings to supplement and scrutinize governmental action in environmental matters. Equally, several international instruments prescribe specific remedies that consent to redress environmental damage and to challenge the refusal of access to information, as well as the failure to enforce environmental regulations.²²⁹

218 Cf. Steiner, H.J. 1988. ‘Political Participation as a Human Right.’ *Harvard Human Rights Yearbook* 1: 96.

219 Cf. UNECE Convention on EIA in a Transboundary Context (Espoo Convention), Feb. 25, 1991, 30 ILM 1461 (1991), Art. 2; Association of South East Asian Nations (ASEAN) Agreement on the Conservation of Nature and Natural Resources, Jul. 9, 1985, Art. 16 (2); Protocol on Environmental Protection to the Antarctic Treaty (Madrid Protocol, Oct. 4, 1991, XI ATSCM/2; 30 ILM. 1461 /1991), Art. 7; North American Agreement on Environmental Cooperation (NAAEC), Sept. 14, 1993, Can-Mex-US, 32 ILM: 1480 (1993), Art. 4 (2).

220 Århus Convention, Articles 6–8.

221 ICCPR, Art. 19 (2): ‘Everyone shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of his choice.’

222 Cf. The European Court of Human Rights has been particularly proactive on this matter, cf. *Guerra & Others v Italy*, 26 EHHR, 357 (1998), and most recently, cf. *Öneryildiz v. Turkey*, 39 EHRR, 12 (2004).

223 Cf. The European Court of Human Rights has been particularly proactive on this matter, cf. *Guerra & Others v Italy*, 26 EHHR, 357 (1998), and most recently, cf. *Öneryildiz v. Turkey*, 39 EHRR, 12 (2004).

224 Cf. Convention for the Protection of World Cultural and Natural Heritage, Nov. 23, 1972, 27 U.S.T. 37, 1037 UNT.S. 151, Art. 27 (2); Association of South East Asian Nations (ASEAN) Agreement on the Conservation of Nature and Natural Resources, Jul. 9, 1985, Art. 16 (2); Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Mar. 22, 1989, 28 ILM. 657 (1989), Art. 2 (2); UN Framework Convention on Climate Change, May 9, 1992, UN Doc.A/CONF.151726, 31 ILM 849 (1992), Art. 6 (a) (ii); Convention for the Protection of the Marine Environments of the North-East Atlantic, Sept. 22, 1992, 32 ILM. 1069 (1993), Art. 9 (1); Convention on the Transboundary Effects of Industrial Accidents, Mar. 17, 1992, 31 ILM. 1330 (1992), Art. 9 (1); Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Mar. 17 1992, 31 ILM. 1312 (1992), Art. 16 (1); Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, June 21, 1993, 32 ILM. 1228 (1993), Art. 14 (1); North American Agreement on Environmental Cooperation (NAAEC), Sept. 14, 1993, Can-Mex-US, 32 ILM: 1480 (1993), Art. 1 (h).

225 Århus Convention, Art. 4.

226 CBD, Art. 15 (5): ‘Access to genetic resources shall be subject to prior informed consent of the Contracting Party providing such resources, unless otherwise determined by that Party.’

227 ICCPR, Art. 2 (3): ‘Each State Party to the present Covenant undertakes: to ensure that any person whose rights or freedoms as herein recognized are violated shall have an effective remedy, notwithstanding that the violation has been committed by persons acting in an official capacity; to ensure that any person claiming such a remedy shall have his right thereto determined by competent judicial, administrative or legislative authorities, or by any other competent authority provided for by the legal system of the State, and to develop the possibilities of judicial remedy; to ensure that the competent authorities shall enforce such remedies when granted.’

228 Cf. ECHR, Art. 13; ACHR, Articles 7, 25; ACHPR, Art. 7.

229 ICCPR, Art. 2 (3); ECHR, Art. 13; ACHR, Articles 7, 25; ACHPR, Art. 7.

The Århus Convention features the most elaborated set of guarantees in this respect, including a general right to the enforcement of environmental regulations and a specific right of appeal against the denial of access to information.²³⁰ The notion of public here refers both to private individuals and their associations, organizations or groups.²³¹

7.2.3 The right to develop

The UN Charter establishes a clear-cut relationship between human rights and economic and social development. Development is listed among the UN objectives and the Charter explicitly demands States to promote 'higher standards of living, full employment, and conditions of economic and social progress and development,' and 'universal respect for, and observance of, human rights and fundamental freedoms for all.'²³²

During the preparatory works of the International Bill of Rights, developing countries unsuccessfully petitioned the introduction of a specific right to development. After long controversies, the UN General Assembly adopted a Declaration on the Right to Development,²³³ followed by the acknowledgement of development as *a universal and inalienable human right*.²³⁴ The Rio Declaration further emphasized the conflicts and difficulties that might arise in establishing a link between development and environment.²³⁵ The mentioned acknowledgements,

Access to information and public participation may be regarded as core interests to the establishment of ABS schemes. It is therefore important that the undertakings associated with the right to participation *lato sensu* be taken in due consideration in the preparation of ABS schemes.

however, do not have the characteristics of binding legal commitments and to date the only treaty including an explicit right to development is the African Charter on Human and Peoples' Rights.²³⁶

The right to development refers to a combination of inter-state obligations, collective and individual entitlements based on existing economic and social rights. The beneficiaries of the right are not necessarily only States, but may also include peoples, groups and even in some cases individuals. The emphasis is again on participation. According to the Rio Declaration²³⁷ and Agenda 21,²³⁸ sustainable development contains both substantive and procedural elements, such as 'sustainable utilization of natural resources; integration of environmental protection and economic development; pursuit of both inter-generational and intra-generational equity in the allocation of resources.'²³⁹

230 Cf. e.g., Convention on the Protection of the Environment between Denmark, Finland, Norway and Sweden, Feb. 9, 1974, 1092 UNT.S. 279, 13 ILM 591 (1974); Convention on the Transboundary Effects of Industrial Accidents, Mar. 17, 1992, 312 ILM 1330 (1992), Art. 9 (3); Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, June 21, 1993, 32 ILM 1228 (1993), Articles 1, 6–11, 18; North American Agreement on Environmental Cooperation (NAAEC), Sept. 14, 1993, Can-Mex-US, 32 ILM: 1480 (1993), Articles 5–7; UN Convention on the Non-Navigational Uses of International Watercourses, May 21, 1997, UN Doc. A/51/869, 36 ILM 700 (1997), Art. 32.

231 Århus Convention, Art. 9.

232 UN Charter, Art. 55.

233 Declaration on the Right to Development, GA Res. 41/128 of 4 Dec. 1986, adopted by 146 votes to 1 (USA) with 8 abstentions (Denmark, FRG, Finland, Iceland, Israel, Japan, Sweden, UK).

234 World Conference on Human Rights: Vienna Declaration and Program of Action, UN doc. A/CONF.157/23, Part. I, adopted by consensus, hereinafter Vienna Declaration, at para.10: 'the World Conference on Human Rights reaffirms the right to development, as established in the Declaration on the Right to Development, as a universal and inalienable right and an integral part of fundamental human rights.'

235 UN Doc. A/CONF 151/Rev. 1, 13 June 1992, at Principle 3: 'The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.' The concept of sustainable development was first enunciated in the 1980 World Conservation Strategy: IUCN, UNEP and WWF. 1980. *World Conservation Strategy: Living Resource Conservation for Sustainable Development*. Gland: IUCN. The concept was later reported in Brundtland, G. (Ed.) 1987. *Our common future*. Oxford: The World Commission on Environment and Development.

236 ACHPR, Art. 22: 'All peoples shall have the right to their economic, social and cultural development with due regard to their freedom and identity and in the equal enjoyment of the common heritage of mankind. States shall have the duty, individually or collectively, to ensure the exercise of the right to development.'

237 UN Gen. Ass. A/CONF.151/26 (Vol. I).

238 Agenda 21, UNCED, Report, I, 1992.

239 For an analysis of the mentioned aspects, cf. Boyle, A. and D. Freestone (Eds). 1999. *International Law and Sustainable Development: Past Achievements and Future Challenges*. Oxford University Press.

Recent decisions have demonstrated that, even though not legally binding,²⁴⁰ sustainable development goals may influence the outcome of litigation.²⁴¹ Thus, in the *Gabcikovo-Nagymaros Dam* case, the International Court of Justice has made explicit reference to sustainable development, asking parties to ‘look afresh at the environmental consequences of their activities, according to contemporary international law standards and in the interest of sustainable development.’

7.2.4 The rights of indigenous peoples

Preambular provisions of the CBD contain its strongest recognition of indigenous peoples’ close and traditional dependence on biological resources.²⁴³ In operative language, Article 8 (j) addresses certain aspects of related knowledge, innovations and practices of indigenous and local communities, requesting contracting States to:

- Respect, preserve and maintain the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant to the conservation and sustainable use of biological diversity;
- Promote the wider application of traditional knowledge, innovations and practices with the approval and involvement of their holders; and
- Encourage the equitable sharing of benefits arising from the use of traditional knowledge, innovations and practices.

The right of development is particularly significant to the preparation of ABS schemes. It is therefore fundamental for those negotiating and implementing ABS to keep abreast of development issues and give due consideration to practices relevant to integration of ABS with the promotion and fulfillment of those rights.²⁴²

Representatives of indigenous communities have expressed concerns over the relationship between the establishment of ABS schemes and their interests as described above.²⁴⁴ The present section contextualizes indigenous claims in the pertinent legal framework, shedding light on the principles on indigenous human rights that are likely to have some effect to ABS.

The idea of separate protection for specific human groups in international law derives from ‘the right of a community which has a distinct character to have this character reflected in the institutions of government under which it lives.’²⁴⁵ This notion applies to two distinct kinds of communities: ‘minority’ communities and ‘indigenous peoples.’

The treatment of minorities was one of the founding reasons for international human rights law.²⁴⁶ After World War II, concerns over the condition of minorities were translated into affirmative action aimed to safeguard their ‘right to be different.’²⁴⁷ Culture, religion, language

240 Cf. Rosas, A. 2001. ‘The Right to Development.’ In: Eide, A., Krause, C. and A. Rosas (Eds). *Social, Economic and Cultural Rights*, 2nd Ed., at 126. The Hague: Kluwer Law International.

241 Cf. *Gabcikovo-Nagymaros Dam*, ICJ Rep. 7, 1997, at 140.

242 See Boyle and Freestone, *supra* note 241, at 18.

243 Cf. CBD, Preambular paragraph 12.

244 Cf. Statement of the International Indigenous Forum on Biodiversity at the Ad Hoc Open-ended Working Group on Access and Benefit Sharing, CBD, Bonn, 22–26 October 2001; Report of the Seventh Meeting of the Conference of the Parties to the Convention on Biological Diversity, Kuala Lumpur 2004, UNEP/CBD/COP/7/21, at 585.

245 Cf. Brownlie, I. 1988. ‘The Rights of Peoples in Modern International Law.’ In: Crawford, J. (Ed.), *The Rights of Peoples*, at 1–16. Oxford: Clarendon Press.

246 Cf. Alfredsson, G. 1993. ‘Minority Rights in a New World Order.’ In: Gomien, D. (Ed.), *Broadening the Frontiers of Human Rights: Essays in Honour of Asbjørn Eide*, at 1. Oslo: Scandinavian University Press.

247 Cf. Advisory Opinion of the Permanent International Court of Justice on *Minority Schools in Albania*, ‘the idea underlying the treaties for the protection of minorities is to secure for certain elements incorporated in a State, the population of which differs from them in race, language or religion, the possibility of living peaceably alongside that population and cooperating amicably with it, while at the same time preserving the characteristics which distinguish them from the majority, and satisfying the ensuing special needs. In order to attain this object, two things were regarded as particularly necessary, and have formed the subject of provisions in these treaties. The first to ensure that nationals belonging to racial, religious or linguistic minorities shall be placed in every respect on a footing of perfect equality with the other nationals of the State. The second is to ensure for the minority elements suitable means for the preservation of their racial peculiarities, their traditions and their national characteristics. These two requirements are indeed closely interlocked for there would be no true equality between a majority and a minority if the latter were deprived of its own institutions,

and group psychology are considered the key *indicia* to identify minorities.²⁴⁸

Although they may be drawn to the concept of minority, indigenous peoples have specific characteristics that justify their separate protection under international law. According to the most widely endorsed definition, indigenous peoples are:

*...those which, in having a historical continuity with pre-invasion and pre-colonial societies that developed on their territories, consider themselves distinct from other sectors of the societies now prevailing in those territories, or parts of them. They form at present non-dominant sectors of society and are determined to preserve, develop and transmit to future generations their ancestral territories, and their ethnic identity, as the basis of their continued existence as peoples, in accordance with their own cultural patterns, social institutions and legal systems.*²⁴⁹

Indigenous peoples' distinguishing features are therefore pre-existence to an invasion process; a non-dominant position in the society in which they live; self-identification as a group and relationship to territory.

The first international law instrument dealing with indigenous rights was the 107 International Labour Organization Convention Concerning the Protection and

Integration of Indigenous and Other Tribal and Semi-Tribal Populations in Independent Countries (Convention 107).²⁵⁰ This binding plenipotentiary instrument's aim is to integrate and assimilate indigenous peoples in hosting States. Its approach was criticized for its lack of consideration for indigenous identity. Convention 107 is still in force for 18 countries²⁵¹ but has been replaced by the 169 *International Labour Organization Convention Concerning Indigenous and Tribal Peoples in Independent Countries* (Convention 169),²⁵² to date ratified by 18 other States.²⁵³

Convention 169 aims to preserve the identity of indigenous peoples, placing great emphasis on their relationship to territory.²⁵⁴ The Convention further outlines some principles on indigenous natural resources, including the right to participate in their use, management and conservation.²⁵⁵ In particular, States must consult indigenous peoples before undertaking or permitting any exploration or exploitation of such resources in indigenous lands.²⁵⁶ Whenever possible, concerned indigenous peoples must also enjoy the benefits of these activities and receive compensation for any damage sustained.

The rights of indigenous peoples are the object of the UN Draft Declaration on the Rights of Indigenous Peoples, adopted by the UN Sub-Commission on Prevention of Discrimination and Protection of Minorities.²⁵⁷ The Draft Declaration represents a clear evolution

and were consequently compelled to renounce that which constitutes the very essence of its being as a minority.' Permanent International Court of Justice, 1935, PCIJ 1 (6 April 1935).

248 UN Special Rapporteur Capotorti, *Study on the Rights of Persons Belonging to Ethnic, Religious and Linguistic Minorities*, UN Doc E/CN.4/Sub.2/384/Add.1-7, 1977.

249 UN Special Rapporteur Martinez Cobo, *Study of the Problem of Discrimination against Indigenous Populations*, UN Doc. E/CN.4/Sub.2/1986/7 (1986).

250 107 International Labour Organization Convention Concerning the Protection and Integration of Indigenous and Other Tribal and Semi-Tribal Populations in Independent Countries, (ILO No. 107), entered into force 2 June 1959, 328 UNTS 24, hereinafter Convention 107.

251 Angola, Bangladesh, Belgium, Cuba, Dominican Republic, Egypt, El Salvador, Ghana, Guinea-Bissau, Haiti, India, Iraq, Malawi, Pakistan, Panama, Portugal, Syrian Arab Republic, Tunisia.

252 169 International Labour Organization Convention Concerning Indigenous and Tribal Peoples in Independent Countries (ILO No. 169), entered into force 5 Sept. 1991, 72 ILO *Official Bull.* 59, hereinafter Convention 169.

253 Argentina, Bolivia, Brazil, Colombia, Costa Rica, Denmark, Dominica, Ecuador, Fiji, Guatemala, Honduras, Mexico, Netherlands, Norway, Paraguay, Peru, Spain, Bolivarian Republic of Venezuela.

254 Convention 169, Art. 14(1): 'The rights of ownership and possession of the peoples concerned over the lands, which they traditionally occupy, shall be recognized.'

255 Convention 169, Art. 15(1): 'The rights of the peoples concerned to the natural resources pertaining to their lands shall be specially safeguarded. These rights include the right of these peoples to participate in the use, management and conservation of these resources. In cases in which the State retains the ownership of mineral or sub-surface resources or rights to other resources pertaining to lands, governments shall establish or maintain procedures through which they shall consult these peoples, with a view to ascertaining whether and to what degree their interests would be prejudiced, before undertaking or permitting any programs for the exploration or exploitation of such resources pertaining to their lands. The peoples concerned shall wherever possible participate in the benefits of such activities, and shall receive fair compensation for any damage which they may sustain as a result of such activities.'

256 Convention 169, Art. 15.

257 UN Draft Declaration on the Rights of Indigenous Peoples E/CN.4/Sub.2/1994/2/Add.1 (1994), hereinafter Draft Declaration.

in comparison with the ILO Conventions and explicitly includes indigenous peoples' right to *internal* self-determination.²⁵⁸ Most significantly for ABS, the Draft Declaration enunciates a variety of property rights, recognizing indigenous peoples' full ownership, control and protection of their cultural and intellectual property.²⁵⁹ The Draft Declaration has not yet been adopted by the UN General Assembly and does not have any binding legal status. It nevertheless provides an important source of reference for legal regimes dealing with indigenous peoples.

ABS schemes are liable to affect the human rights of indigenous peoples in several ways. Indigenous peoples' right to life, for instance, may be threatened by the opening or wider use of access to the remote areas where they live. This risk was recognized in *Yanomani Indians v. Brazil*, where the Inter-American Commission for Human Rights found that the construction of a Trans-Amazonian highway impaired the Indians' traditional life-style, amounting to a violation of their right to life. The same approach was endorsed in the admissibility decision of the case of *Community of San Mateo de Huanchor and its Members v. Peru*.²⁶⁰ Internal displacement and arbitrary denial of access to defined parts of territory may also contravene the right of liberty of movement and freedom to choose the place of residence.²⁶¹ Furthermore, the Committee on Economic, Social and Cultural Rights considers forced evictions incompatible with the right to adequate food and housing, which provides a degree of security of tenure against forced eviction and harassment.²⁶²

The protection of indigenous peoples against discrimination is also relevant to their access and use of

resources. According to the ICCPR, persons belonging to ethnic, religious or linguistic minorities must not be denied the right to enjoy their own culture, profess and practice their own religion, or use their own language.²⁶³ While ABS principles themselves will not prevent any of these activities, these principles might also be relevant where an external organization patents a traditional remedy or practice, and applies or asserts that patent against use or application of that remedy or practice by the traditional group.

The linkage is more obvious, when one notes that these rights against discrimination are often associated with property-related matters (territory) and the use of natural resources. In *Chief Bernard Ominayak and the Lubicon Lake Band v. Canada*, the UN Human Rights Committee has found that the expropriation of the territory of the band and its subsequent use for exploration and development amounted to a violation of the prohibition of discrimination. Equally, in *Maya Indigenous Communities of the Toledo District v. Belize*, the Inter-American Commission found that, by failing to take measures to recognize the Community property right to the lands they traditionally occupied, Belize had violated the Maya's rights to non-discrimination and equality before the law.²⁶⁴

Finally, indigenous peoples' right to internal self-determination has found significant acknowledgement in the jurisprudence of international tribunals and States practice.²⁶⁵ In *Mayagna (Sumo) Awas Tingni Community*, the Inter-American Court of Human Rights found that, by the fact of their very existence, 'indigenous groups have the right to live freely in their own territory.'²⁶⁶

258 Draft Declaration, Art. 3: 'indigenous peoples have the right of self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development.'

259 Draft Declaration, Art. 29: 'Indigenous peoples are entitled to the recognition of the full ownership, control and protection of their cultural and intellectual property. They have the right to special measures to control, develop and protect their sciences, technologies and cultural manifestations, including human and other genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs and visual and performing arts.'

260 Cf. *Yanomani Indians v. Brazil*, Decision 7615, IACHR, Inter-American YB on Human Rights (1985), p. 264; *Community of San Mateo de Huanchor and its Members v. Peru*, Case 504/03, Report No. 69/04, Inter-Am. C.H.R., OEA/Ser.L/V/II.122 Doc. 5 rev. 1 at 487 (2004).

261 ICCPR, Art. 12. Cf. HRC General Comment No. 27: General Comment No. 27: Freedom of movement (Art.12), 02/11/99CCPR/C/21/Rev.1/Add.9.

262 ICESCR, Art. 11. Cf. also: CESCR General Comment 7: The right to adequate housing (Art.11.1): forced evictions: 20/05/97.

263 ICCPR, Art. 27.

264 Cf. *Chief Bernard Ominayak and the Lubicon Lake Band v. Canada*, Communication No. 167/1984, U.N. Doc. CCPR/C/38/D/167/1984 (1990); *Maya Indigenous Communities of the Toledo District v. Belize*, Case 12.053, IA C.H.R. Report 40/04 (2004) at 153, 194.

265 Cf. Preliminary Report of the Special Rapporteur Daes, Commission on Human Rights, Sub-Commission on the Promotion and Protection of Human Rights: Prevention of Discrimination and Protection of Indigenous Peoples, Indigenous Peoples' Permanent Sovereignty over Natural Resources

Another significant endorsement of indigenous peoples' right to internal self-determination may be found in the land-claim agreements concluded by the Canadian Government. Canadian Courts have ruled that indigenous historical land occupation gives rise to land rights that have survived European settlement.²⁶⁷ The federal policy established to address unsettled aboriginal land claims has led to a number of land agreements,²⁶⁸ the most significant of which is the Nisga'a Final Agreement.²⁶⁹ This is a 'modern-day land claims agreement' which recognizes the Nisga'a as a nation. As a result, the Nisga'a own and control all subsurface resources and forests on their lands.²⁷⁰

They must be involved in management committees for the wider area and informed of projects that may affect them in a timely fashion.²⁷¹

Concerns over indigenous peoples' rights on access and management of natural resources have led some agencies to elaborate Free Prior Informed Consent practices (FPIC)²⁷² for dealings involving indigenous peoples. FPIC is based on the acknowledgment of indigenous peoples' rights to their lands and resources, and may be regarded as a component of the right to self-determination.²⁷³ If generally adopted within a country or institution, FPIC procedures would require that indigenous

peoples' negotiations with third parties be held on the basis of informed consent and in accordance with their customary laws and practices.²⁷⁴

The CBD indicates a preference that indigenous and local communities' traditional knowledge should only be used with their 'approval.'²⁷⁵ This principle is mirrored in the *Akwé: Kon Voluntary Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessment*,²⁷⁶ as well as in the regional standards on access and benefit sharing adopted by the Organization of African Unity²⁷⁷ and the Andean Community.²⁷⁸ Here also, the linkage between this general recommendation and the binding requirements of Article 15's ABS system is difficult and controversial.

The Inter-American Commission on Human Rights has established the American Declaration which calls on States to ensure that any determination of rights on indigenous lands be based upon a process of 'fully informed consent on the part of the indigenous community as a whole.'²⁷⁹ This implies that all community members receive *full* and *accurate* information on the nature and consequences of the process, and enjoy an effective opportunity to participate. In the Commission's view, these requirements also apply to State decisions that have an impact upon indigenous lands and their communities.

E/CN.4/Sub.2/2003/20. For an overview on the matter, cf. Foster, C. 2001. 'Articulating Self-determination in the Draft Declaration on the Rights of Indigenous Peoples.' *EJIL* 12(1): 141–157.

266 Cf. *Mayagna (Sumo) Awas Tingni Community Case* [2001] IACHR 9, 31 August 2001, Series C, No. 79, at 149.

267 *Calder et al. v. Attorney General of British Columbia*, [1973], 1 SCR 313.

268 Since 1973, the Canadian Government has concluded 14 comprehensive land-claim agreements: The James Bay and Northern Quebec Agreement (1977); the North-eastern Quebec Agreement (1978); the Inuvialuit Final Agreement (1984); the Gwich'in Agreement (1992); the Nunavut Land Claims Agreement (1993); the Sahtu Dene and Métis Agreement (1994); seven Yukon First Nation Final Agreements and corresponding Self-Government Agreements based on the Council for Yukon Indians Umbrella Final Agreement (1993); Nisga'a Final Agreement (2000).

269 Cf. Nisga'a Final Agreement, available at www.gov.bc.ca/tno/negotiation/nisgaa/default.htm.

270 Cf. A land-use plan for Nisga'a lands, available at www.nisgaalims.ca/landuseplan.html

271 For a detailed analysis of the Agreement, cf. Hurley, M.C. 2001. 'The Nisga'a Final Agreement.' Law and Government Division, available at [www.parl.gc.ca/information/library/PRBpubs/prb992-e.htm#\(18\)](http://www.parl.gc.ca/information/library/PRBpubs/prb992-e.htm#(18))

272 MacKay, F. 2004. 'Indigenous Peoples' Right to Free, Prior and Informed Consent and the World Bank's Extractive Industries Review.' *Sustainable Development Law & Policy* 4(2): 44–66.

273 Cf. Tamang, P. 'An Overview of the Principle of Free, Prior and Informed Consent and Indigenous Peoples in International and Domestic Law and Practices.' Paper presented at Workshop on Free, Prior and Informed Consent and Indigenous Peoples, organized by the Secretariat of UNPFII, available at: www.un.org/esa/socdev/unpfi/documents/workshop_FPIC_tamang.doc

274 Commission on Human Rights, Sub-Commission on the Promotion and Protection of Human Rights, Working Group on Indigenous Populations, Twenty-second session, 19–23 July 2004, at 5.

275 CBD, Art. 8(j). Cf. also: Report of the Second Meeting of the Ad Hoc, Open-Ended, Inter-Sessional Working Group on Article 8(j) and Related Provisions of the Convention on Biological Diversity. UNEP/CBD/WG8J/2/6/Add.1, 27 November 2001, at 11.

276 CBD COP Decision V/26A, at 11.

277 African Model Legislation For The Protection Of The Rights Of Local Communities, Farmers And Breeders, And For The Regulation Of Access To Biological Resources, available at: www.biodiv.org/doc/measures/abs/msr-abs-oau-en.pdf

278 Andean Community, Decision 391, Common Regime of Access to Genetic Resources of the Commission of the Cartagena Agreement, July 1996.

279 Report No. 96/03, Maya Indigenous Communities and their Members (Case 12.053 (Belize)), 24 October 2003, at 141.

In *Mary and Carrie Dann*, the Commission has also established that State authorities must put in place *special* measures to ensure the recognition of indigenous peoples' interest in their traditional lands and resources, as well as their right not to be deprived of this interest, 'except with fully informed consent, under conditions of equality, and with fair compensation.'²⁸⁰

7.3 The enforcement of human rights: Some conclusions

State practice displays several mechanisms elaborated to influence and encourage the respect of fundamental rights. In the field of international trade, for example, many countries have chosen to adopt unilateral import restrictions, economic sanctions and selective purchasing policies aimed with these objectives, despite strong international pressure to eliminate such measures.²⁸¹ Even strong WTO proponents such as the USA have adopted legislation to restrict import of all products from countries whose national policies are ill-perceived.²⁸²

Less difficult in terms of global trade law, the EU has established the practice of inserting human rights clauses in cooperation agreements with third countries. These clauses normally assert that protection of fundamental rights is an *essential element* of the agreement²⁸³ and include non-execution provisions, empowering Parties to take appropriate countermeasures, including suspension of the agreement,²⁸⁴ where such provisions are violated. These clauses are based on reciprocity and require that the EU also lives up to its human rights commitments. Human rights protection is also one of the conditions to access the EU,²⁸⁵ as well as to benefit from EU financial assistance²⁸⁶ and trade preferences.²⁸⁷

The treatment of indigenous peoples is one of the most sensitive human rights issues associated with the establishment of ABS schemes. It is therefore of the utmost importance that CBD Parties take into consideration the indigenous rights described in this section.

The UN has promoted significant action to integrate human rights concerns in international trade and business. In 2003 the Sub-Commission on the Promotion and Protection of Human Rights has approved the *UN Norms on the Responsibilities of Transnational Corporations and Other Business Enterprises with Regard to Human Rights*.²⁸⁸ The Norms set out human rights responsibilities for companies and, although they are not legally binding, they provide a useful framework of reference for companies that intend to improve their human rights records.

In 2005, another initiative was commenced, which may also exert an important influence on human rights issues, by working through the commercial sector. That year, the UN Human Rights Commission appointed a Special Representative of the UN Secretary General on Business and Human Rights, in charge of identifying best practices and standards of corporate accountability for businesses. That same year the Business & Human Rights Resource Centre launched a system monitoring companies' human rights performances.²⁸⁹

280 Inter-Am. C.H.R., Report N° 75/02, Case N° 11.140, *Mary and Carrie Dann* (United States), Dec. 27, 2002. OEA/Ser.L/V/II.116, Doc. 46, at 131.

281 Cf. Bandtner, B. and A. Rosas, 1999. 'Trade Preferences and Human Rights.' In: Alston, P. (Ed.), *The European Union and Human Rights*, at 699–730. Oxford University Press; McCrudden, C. 1999. 'International Economic Law and the Pursuit of Human Rights: a Framework for Discussion of the Legality of 'Selective Purchasing' Laws under the WTO Government Procurement Agreement.' *Journal of International Economic Law* 2: 3

282 Cf. Act Regulating Contracts with Companies Doing Business with or in Burma (Myanmar), Ch. 130, 1996 Session Laws, Mass. Gen. Laws Ann., Ch. / 223 (West 1997).

283 Cf. Riedel, E. and M. Will. 1999. 'Human Rights Clauses in External Agreement of the EC.' In: Alston, supra note 285, at 723–754. The clauses make reference to Human Rights catalogue of the 1948 Universal Declaration of Human Rights and, in the European context, the main references are the Helsinki Final Act 1975, 14 ILM 1292 (1975), and the Charter of Paris for a New Europe, 1990, 30 ILM 190 (1991).

284 Since 1995 the Human Rights clause has been inserted systematically in all trade and cooperation treaties of general nature.

285 Cf. Treaty of the European Union, Art. 49.

286 Cf. e.g., PHARE for Central and Eastern European candidate countries, TACIS for countries belonging to the former Soviet Union, MEDA for the Mediterranean area.

287 Cf. the General System of Preference, GSP, as currently laid down in the Council Regulation (EC) No 2501/2001.

288 For a commentary, cf. 'The UN Human Rights Norms for Business: Towards Legal Accountability,' available at: [www.amnesty.org/library/pdf/IOR420022004ENGLISH/\\$File/IOR4200204.pdf](http://www.amnesty.org/library/pdf/IOR420022004ENGLISH/$File/IOR4200204.pdf); cf. also Kinley, D. 2006. 'The UN Human Rights Norms for Corporations: The Private Implications of Public International Law.' *Human Rights Law Review* 6(3): 447.

289 Cf. www.business-humanrights.org

The practices described above represent samples of pragmatic enforcement of human rights. Whether they are effective is open to debate. From a legal point of view, no general rule prohibits the adoption of unilateral measures. Still, their extraterritorial effects may raise concerns as to their consistency with international trade law. From the policy point of view, these practices serve as means to

pressure States to comply with human rights objectives. In this regard, it is possible to argue that, once a State has undertaken to fulfill certain human rights standards, it has the duty to implement those standards by adopting appropriate national and administrative measures.²⁹⁰ From both perspectives, ABS schemes may take heed from lessons learnt through these efforts.

290 Cf. Francioni, F. 2001. 'Environment, Human Rights and International Trade', at 1. Oxford University Press.

Part IV Commercial and Legal Systemic Issues

One of the most basic activities of *The ABS Project* has been the analysis of critical legal issues that will affect the regime's ability to operate as a legally binding and enforceable system, whether through legislation or contracts. These 'classic' legal analyses have focused on identifying the legal problems which have caused the overwhelming majority of national legislative draftsmen and Attorneys General to conclude that it is not possible at present to implement ABS through legislation or through any form of regulatory instrument. Without such action, it is not possible for national governments to provide legal guidance to judges, arbitrators and parties

to implement ABS as a legally functional regime. Chapters 8-11 present an initial sweep of the most important legal obstacles to functional ABS – the basic problem of legal certainty (Chapter 8), the challenge of identifying which actions constitute misappropriation of genetic resources and which are the basis of unjustified claims against ABS-compliant users (Chapter 9), and the difficulties that obstruct the ABS system from relying on conventional legal remedies (arbitration and the courts) as tools for ensuring that ABS contracts and commitments are met (Chapter 10).

8

Summary Analysis: Legal Certainty for Users of Genetic Resources under Existing Access and Benefit Sharing (ABS) Legislation and Policy

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* *The ABS Project was commissioned to produce this paper by the CBD Secretariat (SCBD), in conjunction with IUCN-Canada, and with supporting funds from Environment Canada. It is reprinted with the permission of these organizations. The primary author would like to express her gratitude to Valerie Normand (Programme Officer, Access & Benefit Sharing, SCBD) for her collaboration and freely shared expertise, and to Michael Veck, a graduate of the University of Ottawa Law School, who undertook some limited initial research compiling materials in preparation for this paper.*

8.1 Introduction

This paper provides initial analysis of existing measures that have been adopted at national and regional level that provide ‘legal certainty’ for users over the terms and conditions of access and use of genetic resources. It responds to the Conference of the Parties (COP) Decision VII/19: Access and benefit-sharing as related to genetic resources (Article 15), and, more specifically, paragraph E/10(g):

[r]equesting the Executive Secretary to gather information... and undertake further analysis relating to... (g) Measures that preserve and promote legal certainty

for users over the terms and conditions of access and use [of genetic resources].

This study was based on analysis of the national and regional access and benefit-sharing measures available in the CBD Secretariat’s electronic database of provisions through which countries seek to provide legal certainty to those seeking genetic-resource access, use, and benefit sharing. It analyzes the general approaches used in existing measures in terms of legal certainty for legitimate users of those genetic resources.

8.1.1 Conceptual background: Legal certainty for users of genetic resources

In order to address these issues briefly, this paper offers a ‘summary-analysis.’ It does not purport to be a complete analysis, nor a compendium of existing measures, and cannot examine all elements of legal certainty. As a first step it lists characteristics of legal certainty that are specially relevant to ABS, and identifies indicative categories.

Taken in its broadest sense, an analysis of legal certainty for a party to a particular commercial or other instrument would encompass every aspect of law relevant to that party’s intended activity. A party would have legal

certainty regarding an instrument if he was fully aware of all relevant laws, *and certain that they were consistently and predictably in force and enforceable.*²⁹¹ Only after this was assured would he consider particular factors affecting his rights.²⁹² It is neither possible nor valuable to examine this entire range of legal certainty issues in this paper. Rather, for this ABS analysis, a narrower definition of legal certainty for users focuses on three elements:

- **Process certainty:** This kind of legal certainty encompasses:

291 Typically, vague or ambiguous measures in laws and regulations are not considered enforceable, when court action is sought, and may not be considered practically implementable by government agencies, in the absence of a court challenge. In addition, some provisions (and entire instruments) adopted as laws do not contain the necessary provisions and powers to be enforceable (by government or by private parties).

292 Basic principles of this approach to legislation are found in many publications. See, e.g., Hartley, T.C., 1994, in: *The Foundations of European Community Law* (3rd Ed.) at 149.

- establishment and empowerment of competent national authorities, specifying the rights and duties of others (landowners, communities, etc.) who may be involved;
 - clarity regarding the procedures for applying for ABS rights;
 - clarity regarding various deadlines for processing applications; and
 - clarity regarding appeal of the decision by the applicant or by others.
- **Scope and nature of the grant:** This factor enhances legal certainty by clearly defining the right granted, as well as enunciating mandatory provisions and conditions that must be included within the mutually agreed terms.
 - **Legitimate expectations and vested rights:** This kind of legal certainty can be supported in several ways including:
 - clear and specific statutory requirements and limitations regarding subsequent challenges to the user’s activities after receiving ABS rights; and
 - a clear delimitation of the nature of government’s power to alter, cancel, repudiate, amend or suspend an ABS right, once it has been received.

8.1.2 Methodology

In preparing this analysis, the researchers examined all of the laws submitted to the CBD, as contained in the CBD’s electronic database of ABS-related legislative measures,²⁹³ to locate those national or regional measures, focusing on those that (1) are currently in force or formally enacted at the time of this research;²⁹⁴ and (2) include specific implementation measures relating to access to genetic resources.²⁹⁵ Each law meeting these criteria was reviewed, and particular provisions relating to the three categories described above (process certainty, scope and nature of the grant, and expectations/vested rights) were specifically identified and studied in the context of the overall law.

Naturally, complete description and analysis of each such provision cannot be redacted in a paper of a proper length for the current publication. Rather, this summary identifies and explains specific and collective conclusions based on the examination of those laws. It offers

numerous examples from the laws reviewed, but does not exhaustively list all provisions relevant to a particular point.

It is important to note that, although this summary is based solely on a desk study of nationally submitted biodiversity laws, these laws are not the primary sources of legal certainty in most countries. In a few countries, biodiversity legislation specifically addresses, creates or restates rights of due process of law, administrative appeals, estoppel and other relevant legal concepts; however, these issues are more often addressed in broader governance frameworks (constitutions, commercial codes, administrative codes, civil codes, licensing laws, political and civil rights instruments, framework environmental laws, etc.), which have a much greater impact on legal certainty than any of the biodiversity laws examined, and will certainly address the relevant questions with greater specificity. It would be necessary to examine a

293 *CBD Database on ABS Measures*: www.biodiv.org/programmes/socio-eco/benefit/measures.aspx

294 The CBD database includes numerous laws that are identified as ‘draft’, many of which have existed in final draft form for upwards of five years, suggesting that there is a dwindling chance that they will be adopted. While these instruments were reviewed in detail and provided interesting and, in some cases, valuable ideas (see, especially, Guyana, (*Draft*) *Environmental Protection Bio-Prospecting Regulations 2001*, and Philippines, *Draft Guidelines for Bioprospecting Activities in the Philippines* (Joint DENR-DA-PCSD-NCIP (Final Report Draft, May 2004) and Ecuador, *Ley para la conservación y uso sustentable de la biodiversidad* (Draft, 2002)), the fact that they have not yet been enacted suggests that they may have limited value as examples. The authors were not able to independently confirm the status of all laws reviewed, but restricted this paper’s discussion to those that are listed as ‘in force’ in the database, or included gazette numbers or other indications of formal adoption. Note: The *African Model Law* is the exception to this general operational rule, as it is not intended for enactment, but is offered as a model. Its general applicability and formal acceptance by the AU suggest that it should be reviewed in this paper.

295 The laws that were considered in the course of this analysis are listed in Annex A to this paper. Annex B lists laws in force from the CBD’s ABS Database which have been identified as addressing ABS, but do so only in a general way, without including any specific provisions governing the manner in which it will be implemented, or only by authorizing the development and adoption of regulations which apparently have not been adopted, as yet.

much broader context of national law in order to fully determine how legal certainty is provided regarding ABS rights.²⁹⁶

Finally, it must be noted that only about 16 of the 188 Contracting Parties to the CBD have adopted laws and procedures that actually implement their ABS responsibilities at present. Research indicates that more than 75 other Contracting Parties have attempted to do so at various times, but have dropped the attempt due to other preventing factors. Where laws exist, they may not have been in operation for long enough to provide a full understanding of their effectiveness, strengths and weaknesses. The information gleaned from the available legis-

lation may not provide a comprehensive basis on which to address these issues. In practice, however, most countries have long experience with licensing and contract law frameworks that can provide useful templates for their country's approach to such legal certainty issues as (i) the rights of due process in commercial transactions, (ii) the protection of local communities and individuals in contracting with larger commercial entities, (iii) basic components of contractual law (prior informed consent and materially agreed terms), and (iv) the special duties, responsibilities and liabilities of government officials when giving individual applicants the rights to use national natural resources for private commercial gain.

8.2 Legal certainty for users granted access to genetic resources

The following sections will identify each of the three overall categories, explain the nature of the issue, then

discuss the state of current ABS legislative measures.

8.2.1 Process certainty

In all types of development activities, a major source of legal uncertainty for users arises from the nature of government permit processes. In terms of ABS implementation, legal uncertainty increases where the application process (1) is more complex, (2) takes much longer, and/or (3) requires more additional inputs and compliance than the applicant reasonably predicted at the outset of the process.

As in all issues involving the private utilization of natural and/or patrimonial resources, there are two kinds of concerns that must be balanced – the applicant's desire to minimize cost, complexity and time involved, and the government's desire to ensure that the grant will not create actionable concerns for affected stakeholders, and will properly protect and compensate the source countries, communities and individuals.

In any licensing or permit application process (ABS and other types), the applicant may find it necessary

to invest significant time, effort and money before the government completes the permit process. If the application is denied, however, that investment may be lost. The applicant may also feel the need to begin publicizing (generally or to necessary investors and partners) both its planned activities and other confidential company information in the course of that process. This, too, cannot be undone, if the permit is not granted. Usually done for commercial or business purposes, some or all of these expenditures and disclosures may also be legally required (either in direct legal provisions or as a practical matter) in the course of the permit application. Before investing time, money and reputation to obtain ABS rights, the potential user needs a high level of certainty that (1) he can ultimately satisfy the permitting agencies' requirements²⁹⁷ and (2) he has a reasonable level of confidence regarding the length and expense of the process, and a basis for assessing the possibilities that unexpected requirements will later be imposed.

296 This paper will use the term 'ABS rights' or 'ABS Agreement' to refer to the various types of grants by which users obtain access to (permission to use) genetic resources, including the full suite of access permits, licenses, other contracts or other relevant instruments or legal permissions required within a country in order to collect, study and commercially utilize genetic resources.

297 The applicant does not need to be certain that his initial application satisfies those requirements. However, legal certainty is increased where he knows that he will be able remedy deficiencies. Where there is a significant chance that no approval will ever be given to an applicant in his circumstances, a potential user would be deterred from beginning any process that required the investment of time and money.

Without this kind of certainty, the financial risks of the application process may prevent any attempt to obtain ABS rights.²⁹⁸

Conversely, however, government permits and permissions, once given, are often subject to rather strong protections for the user (as discussed in sections 8.3.2 and 8.3.3 below.) Hence, it is essential for the government official making such a decision to make it carefully, on the basis of all relevant knowledge and information. From the perspective of the source country, an inappropriately granted permit might lead to litigation, might violate key rights or constitutional protections, or be harmful in other ways. A decision maker would have failed in his duty if he granted the permit solely because the applicant had already invested large amounts of money. Rather, such a practice would create an incentive for companies to quickly invest an appropriate sum, as a way of buying the decision maker's objectivity. This precise issue is addressed in part in one subnational law in Australia (*Queensland Biodiscovery Act*), which specifically notes that an application for ABS rights may be denied even where 'a benefit-sharing agreement or approved biodiscovery plan is in force concerning the material subject of the application' (Art. 14(4)).

The need for this balance, of course, means that no government is capable of giving every applicant absolute legal certainty that their application will be successful. The decision maker will always need information and input (on a variety of matters from the scientific activities proposed, the nature of users, the geographic and social conditions of the target area, and other topics) and

will usually require that the applicant cover the costs of obtaining it.²⁹⁹ A decision regarding an ABS application, however, will probably require both in-depth governmental analysis, and public participation,³⁰⁰ before the matter can be decided. It is unavoidable that these processes will require substantial time – during which the applicant may find it necessary or expedient to spend additional money and other resources.

Clearly then 'process certainty' may be best characterized as 'process predictability' – a scale of predictability. The user's willingness to apply for ABS rights will increase where the process is more predictable, enabling him to realistically assess the risks involved. Process certainty cannot be absolute, but can be maximized. Process certainty is usually enhanced where source-country ABS legislation includes measures that:

- Clearly identify and empower competent national authorities (CNAs);
- Clarify the role of other bodies and processes in the ABS decision; and
- Provide clear guidance regarding the steps in the application process, timing and milestones, and the role of other stakeholders during the process.

In addition, countries maximize certainty where they specify (i) the bases on which the decision will be made, (ii) the manner in which it will become 'final' for legal purposes, (iii) the rules relating to appeals, and (iv) the nature of exemptions.

8.2.2 Identification and empowerment of competent national authorities

Predictability is increased by the designation of CNAs and clarification of their roles and mandates. The user is thus able to cut down procedural time, by going immediately to the correct authorities, and to gain from them at an early point in the process, an understanding

of what the procedural rules and requirements are, and (where other ABS applications have been processed in the past) an indication of the usual time and information required. Where the CNA is the primary authority regarding applications and ABS rights, it may also provide

298 Some measures reflect this issue to a limited extent. See, e.g., *Australia: Queensland Biodiscovery Act 2004, which requires the government to refund the application fee in cases of denial of the application* (Art. 15(2)(b)).

299 In the CBD, this process is specifically discussed with regard to ABS; the term 'Prior Informed Consent' (Art. 15.5) relates to the need for the applicant to provide or ensure that the government obtains all relevant information, before it gives its consent to a request to access the country's genetic resources.

300 The CBD does not address sub-national activities such as public participation, and hence all references to participation in Article 15 relate to the involvement of the source country in the activities of the user. The manner in which each country participates (i.e., at sub-national or community level) is a matter of implementation, to be decided by that country (see Art. 5.1 of the *African Model Law*). The Bonn Guidelines recommend public participation at the local level, with regard to all governmental decisions regarding resource and permit matters that affect the public.

a single source of assurance regarding the status of such applications and rights.

8.2.2.1 Designation

Most of the laws examined contained a clear statement designating (or empowering the designation of) specific CNAs for ABS applications within the country. A clear example of a strong CNA designation is found in *Decisión 391* of the Andean Community (CAN Decision 391), which requires designation of a national CNA (in accordance with relevant designation procedures under national law), and delegation to the CNA of comprehensive oversight and decisional authority. *Decisión 391* specifically requires that all access contracts must be executed, on behalf of the government involved, by the CNA, which must be a state agency or public institution.³⁰¹ Other examples of strong direct authorization of CNAs include Australia, *Queensland Biodiscovery Act*, Articles 7, 11 and 24-25; Costa Rica, *ABS Regulations*, Art. 5; India, *Biological Diversity Act* (Articles 8, 18 and 22); and the *Philippines, Executive Order 247*.

In some measures, however, the CNA designation may be more equivocal. For example, the African Model Law identifies the CNA as ‘the entity authorized by the State to supervise and watch over the implementation of one or more of the components of the present law,’ but specifically notes that other agencies may be given some or all of these responsibilities, by provision in other laws (Art. 3.3, and see Articles 7.1-7.2). This less final approach to designation is common in many kinds of legislation, and in this case may arise from the fact that the ABS provisions under the Model Law apply to both

biological resources and genetic resources. Hence, many different governmental bodies, officials and private persons would have at least some direct right to grant access (through, for example, selling biological resources (vegetables) in a local produce market). Regardless of whether it has full responsibility for the application, however, the CNA is required to give prior informed consent to all access agreements (Art. 5.1).

8.2.2.2 Mandate (powers and duties)

Several of the measures examined specifically identify some or all of the powers and duties of the CNA. The extent of such delegation of duties may vary widely as well. In some cases, the designation is nearly pro-forma – to give the applicant a designated starting point. This is the effect, for example, of the above-described provisions in the *African Model Law*. An opposite approach is found in CAN Decision 391, which endows CNAs with many specific responsibilities. The CNA is called upon to ‘receive, evaluate, accept or deny applications for access,’ and to issue the ‘access resolution’ that is required whenever a member country enters into an ABS arrangement. The CNA is also charged with oversight, since it must issue and publish an administrative order when the requirements of that access contract have been fulfilled, and may be required to issue sanctions for violations of the contract (Art. 50.1, and see definitions of ‘CNA,’ ‘access contract,’ and ‘access resolution,’ Articles 32, 35, 40, 43 and 47). In addition, many other national measures (listed in Annex B) currently contain provisions authorizing the future creation of regulations to develop and adopt regulatory measures that will address CNA responsibilities and operations.³⁰²

8.2.3 Integration with other levels and processes

Before examining the nature of the process, however, it is essential to consider the multiplicity of processes that must be undertaken. A key question considered by any potential applicant for ABS rights is how the basic application process integrates with other levels of ABS approval, and with other relevant governmental approvals and processes. The need for this integration was one of the most important problems identified by user corpo-

rations in the negotiation of the Bonn Guidelines (and after) – calling for ‘streamlining’ of these processes. This need can be partially answered by the designation of an ABS CNA or Focal Point. In itself, however, CNA designation does not solve the primary underlying problem – many different stakeholders, groups and offices have direct responsibilities that may be affected by an ABS agreement. Many national measures provide that, in ad-

301 All CAN member countries have formally adopted laws implementing Decision 391, except Ecuador, which has provided a draft law dated 2001 for the CBD database of ABS Measures. It is not clear whether this latter draft is still under consideration. For examples of the various focal point/CNA mechanisms adopted by CAN countries, see *Bolivia, Decision 391 Regulations*, Articles 3 and 4 (CNA’s work to be supplemented by the input of a Technical Assessment Body); and Peru, *ABS & TK Law* (2004).

302 Although a researcher in this project contacted some of these countries, he was not able to obtain any such regulations, apart from those found in the CBD database.

dition to formal approval from the central government, some of the other affected parties must give their own prior informed consent, leaving a situation in which many separate PICs must be obtained. In addition to PIC, however, it may also be true that, under relevant law, the applicant will need additional permits and licenses, that are not governed by the ABS law.

8.2.3.1 Who gives prior informed consent?

The CBD provides that prior informed consent must be obtained from the Contracting Party – that is, from the national government of the source country.³⁰³ In practice, many governments delegate elements of this responsibility to local entities and communities, for two primary reasons. First, the concept of participatory governance strongly indicates the need to involve the people in decisions granting individual rights over sovereign assets. In addition, however, local residents and other affected stakeholders are more knowledgeable about many of the potential impacts and effects of such a decision. Hence, many national measures provide that sub-nationally PIC must be sought from a variety of other persons or groups, including:

- Those who are stakeholders in the genetic resources (local and traditional communities and indigenous groups); and
- Those whose consent is practically necessary in order for the applicant to obtain access (for example, where access includes direct collection of samples, permission from the person or community that has the right to control entrance to or use of the land on which the collection activities will take place).

The manner in which this requirement is expressed is critical, and impacts the user's ability to understand and maximize predictability of the entire process. For example, the *African Model Law*, in addition to requiring PIC from the CNA, mandates the CNA to 'consult with the local communities in order to ascertain that its/their consent is sought and granted' (Articles 5.1, 5.3 and 7.3).³⁰⁴

South Africa's *Biodiversity Act* also places a high level of responsibility on the CNA in this regard, mandating that it 'protect any interest of' individual landholders or rightholders giving access to resources as well as indigenous communities whose knowledge or traditional uses are involved (Art. 82). Both of these provisions essentially require the CNA to serve a coordination and oversight function, confirmed by issuance of the ABS permit.

With regard to sub-national PIC requirements, certainty would be maximized, where legislation clearly states objective criteria, on the basis of which, the applicant can show that he has complied. On the basis of other legislative and administrative experience,³⁰⁵ it would appear that such criteria should include (i) the basis on which one can identify all groups and individuals that must give PIC, (ii) the procedure for notifying these persons that their input and consent has been requested, and (iii) exactly how to determine that a non-corporate group (an unincorporated community or other group of affected-but-unrelated parties) has consented (e.g., What level of participation is necessary? Who may make decisions on behalf of the others where no single elected individual has the right to represent them all? Is unanimous consent is required and if not what level of agreement is needed? etc.). It may also be useful to identify an ombudsman or other official whose duty it is to ensure that the relevant persons are aware of and able to fully exercise their rights.

8.2.3.2 Integration with other required permissions and processes

Other permit requirements, and the administrative framework for integration of other officials, sectors, rightholders and affected parties into the ABS decision-making framework is also a point affecting legal certainty. In all permit processes, developers and applicants prefer a single-permit or 'one-stop shop' approach. This could happen where the permit processes are completely integrated into a single permit or approval, or where the law gives one process priority over all the others. An example of this approach is found in Australia, in the *Biodiscovery*

303 It is important to keep in mind that the CBD's ABS provisions apply to cross-border transactions only. Unlike any other part of the Convention, the provisions of Article 15 and the Convention's third objective do not impose any obligation regarding domestic use of genetic resources in the source country, whether by governmental or other users. Although it is clear that any ABS framework must coordinate with domestic regulation of access and use of genetic resources, that coordination is not specifically addressed in the Convention.

304 Guidance on the process is not extensive, however the law notes that the applicant must 'ensur[e] that women are also involved in [community] decision-making process' (Art. 5.1).

305 Land-use decisions, for example, especially those that designate rural land as a protected area, generally face the same balance of problems.

Act of the Australian state of Queensland. That Act gives absolute priority to ABS, stating that if CNA issues ABS rights, then the applicant is not required to obtain permissions or licenses required under other laws and will not be bound by prohibitions arising under those laws (Sec. 7). This approach may enhance user certainty, but only where the other agencies agree that ABS permission is pre-eminent. National law typically contains a variety of licensing requirements. In some countries, several separate requirements may contain such a statement of pre-eminence, leaving the applicant in some doubt. Agencies typically agree to renounce their authority to another agency, only where the other agency's process calls for in-depth intra-governmental consultation.

Unfortunately, complete integration or administrative pre-eminence is rarely possible due to many factors, including the distribution of authority and expertise within government. Legislation may still enhance legal certainty, by clarifying the relationship between the ABS application process and other government permissions and processes, such as:

- Customs approvals and CITES permits (for trans-boundary movement of samples);
- Legal consents from property owners and communities (for sampling activities on private or community controlled lands);
- Research permits (where controlled by permit); and

8.2.4 Clear and transparent procedures

Process predictability requires that the applicant should know what steps are required in order to complete the application process, and have an idea of how those steps will proceed. Serious difficulties can arise, for both source country and user applicant, where such procedures are not clearly stated in law, or where the law leaves negotiation of an appropriate access agreement entirely to the discretion of a CNA or national ABS focal point. Often,

- Other kinds of permits.

Coordination among other provisions, designations and requirements appear in several measures, some of which specifically provide that ABS decisions pre-empt the decisions of other bodies, while others specifically note that even one who has received final ABS rights must still comply with relevant laws.³⁰⁶

Assuming that national law (possibly supplemented by the negotiations of the international regime) clarifies key factors regarding the nature of ABS rights and instruments, it may be possible to be even clearer and more specific in legal documentation regarding the relationship between ABS and other processes. For example, Brazil's CITES permits, following on provisions from its ABS implementation measures, clearly specify that:

*This permit does not extend to the use of biological material to access genetic information, contained in the whole or parts of plants, fungus, microorganisms or animal specimens; in substances derived from the metabolism of these living beings or from extracts obtained from live or dead specimens, occurring in situ conditions, including domestic ones, or kept in ex situ collections, if obtained in situ conditions, in national territory, the continental shelf or the exclusive economic zone, aiming at prospecting for identification of components of the genetic patrimony and/or information about associated traditional knowledge with potential commercial use.*³⁰⁷

the greatest difficulties encountered involve subsequent requests for additional information, additional public comment or other meetings, and extended deliberations.

For the purposes of this paper, the specific contents of the procedures (and the particular requirements listed) need not be examined, as the nature of the re-

306 See e.g., CITES permit requirements, as to samples collected; Costa Rica, *ABS Regulations*, Articles 18 (integration with other permits relating to exportation of samples) and 26 (integration with law governing environmental impact assessment); Malawi, *Procedures*, Part E.4 and 5; Australia: *Queensland Biodiscovery Act*, Articles 24-25, (ABS rights not altered by the declaration of a protected area, or the alteration of the conservation status of particular species)) Guyana *The Draft Guyana Bio-prospecting Regulations* specifically discussing ABS's relationship to preparation of an Environmental Impact Assessment (see Articles 10, 13 and 14).

307 This is discussed in Bloch, F. 2002. 'The 'Brazilian Clause': A Recent Attempt to Create Linkages Between the CBD and CITES.' *RECIEL* 10(3): 268-270. CITES COP 13 addressed many of the concerns that prompted Brazil's inclusion of this clause, and noted the need for the negotiations of the International ABS regime to be developed in a way that clarified the crossover between ABS rights and CITES permits. See CITES Secretariat website at www.cites.org.

quirements does not affect legal certainty, so long as the requirements are clearly stated. Clarity on these points, however, is essential, as it will enable the user to fairly evaluate his chances and costs of success. There are, however, several qualities that may increase legal certainty in measures that discuss application and approval procedures. In general, legal certainty increases where relevant measures specifically identify activities and milestones, set time limits for various stages in the decision-making process, and provide a clear record of the decision and its finality. Examination of existing ABS laws provides a broad spectrum of approaches.

8.2.4.1 Steps in the process

In most legislative measures reviewed, the application process is defined primarily as ‘prior informed consent.’ There are, however, many other kinds of steps in the application process, which are necessary for a variety of reasons – especially, to maintain a record of the information and activities in the application process, and to ensure that records are complete and defensible.

The specific approach to documenting and gaining relevant consent from all required parties varies greatly among the laws examined for this paper. Some laws contain unspecific provisions, mandating and authorizing the CNA to control access, but not specifying procedures. This kind of legislation may be wildly unpredictable for users and for source countries. At the other end of the spectrum are laws creating many very detailed procedures to address all contingencies and issues. While these measures may possibly be more predictable, they are frequently much more time-consuming.

Typically, a licensing procedure involves seven general steps: (1) submission of an application; (2) initial evaluation; (3) determination/notification that the application is complete; (4) consultation; (5) public notice and participation; (6) final evaluation; (7) notification (and publication) of decision; and (8) appeal. In the case of ABS rights, additional steps may be necessary, in drawing up the relevant documents in contractual form.³⁰⁸ Legal certainty is enhanced, where each of these steps is formally described in legislative measures. Several of the

measures reviewed have addressed some of these steps, however in most cases, the process is controlled by a combination of CNA discretion, administrative law, and licensing and contractual practices within the country.

8.2.4.2 Timing and milestones

It is indisputable that consideration of an application for ABS rights will consume a significant amount of time. The predictability of the length and nature of the time involved, however, is one of the key elements of the user’s decision to apply. This timing depends on many factors. Delays may be caused by the applicant’s failure to provide a complete application, by the need for additional information, by challenges from stakeholders and others, by changes of government or vacancies in key positions, and many other factors. It should be noted that strict time limits, while increasing user certainty, may also increase the chances of denial, which is required where the agency cannot be sure of all relevant factors in time to make its decision. In addition, although detailed milestones increase certainty, they may also increase the time and complication of the process.

The simplest approach to this element is to provide simply that ‘decisions will be made on all applications within XX days after they are submitted’ (see, e.g., Vanuatu, *Environmental Management Act*, Art. 34 (CNA must decide applications 21 days from receipt)). This kind of provision can achieve the balance between governance and certainty only where it is fully iterative – that is, when there is no restriction on the number of times an application may be resubmitted. Clearly, such a provision would result in an increase in denial of applications by officials who cannot, due to lack of information, unresolved challenges, or lack of time, confidently grant a permit or finalize its conditions and terms within the time allowed. Thus, when applied conscientiously, this approach will not be significantly shorter than other measures which create a more detailed process. A variant on this approach requires a decision within a specified period, but allows extensions of that time for particular purposes (see, Colombia, *Scientific Investigation*, Art. 9; Costa Rica, *ABS Regulations*, Art. 10).

308 Different expositions of the steps in acquiring ABS rights often focus on specific components of these steps and their substantive content, rather than the step itself. See, e.g., Costa Rica, *Biodiversity Act*, Articles 63-68 and *ABS Regulations*, Articles 7-9.

Another approach is to rely on national administrative laws and other instruments governing licensing processes and governmental responsibilities, providing special ABS procedures and milestones, only where they vary from these general rules (see, e.g., South Africa, *Biodiversity Act*, Cap. 7 Articles 87-96 (using general procedures applicable to all environmental permits), and Cap. 6, Articles 81 et seq. (special additional disclosure and local right-holder protection provisions for ABS permits);³⁰⁹ Costa Rica, *Biodiversity Act*, Art. 64). Similarly, Colombia's *Scientific Investigation* incorporates ABS permits generally into the structure for obtaining all permissions for scientific research (including exportation) relating to Colombia's biodiversity.

CAN Decision 391 and the various national laws implementing it provide a fairly complete set of examples of ABS-specific milestones and timelines (Ch. II, Articles 26(2d)-31).³¹⁰ Many other laws provide time lines for some specific components of the process (see, e.g., India, *Biological Diversity Act* and *Rules* six-month deadline for the initial application, and 90 days for applications to apply for intellectual property rights, Rule 14(3), and Act Art. 6(1); Australia: the Queensland *Biodiscovery Act*, Articles 13-14 (20-day limit on the ability of government to request additional material from the applicant) and Art. 19 (final decision must be made within 40 days following the CNA's receipt of the application); Columbia, *Scientific Research*, Articles 6-7. Only one law reviewed (Colombia, *Scientific Investigation*) specifically allows an expedited review, in cases of environment-related emergencies (Art. 5).

8.2.4.3 Additional requests and in-process stakeholder participation

The primary factor affecting both the cost and timing of the ABS application process relates to additional requests necessitated by either:

- The CNA (or other official, agency or authorized stakeholder group) discovering that it needs addi-

tional information before it can make a responsible decision; or

- Formal third-party and/or stakeholder requests, comments, complaints or queries.

It is not generally possible to eliminate all possibility of additional requirements from national law, particularly in the ABS context where informational requirements depend on a constantly shifting frontier of new scientific development and discovery. However, legal certainty is enhanced where the laws specifies 'reasonable controls' on such requests, giving the applicant some level of predictability. For example, the *Queensland Biodiscovery Act* empowers the CNA to ask for 'any further information or document [the CNA] reasonably requires,' but limits such requests to the first 20 days after the application was received (Art. 13).³¹¹ By contrast, in South Africa, *Biodiversity Act*, the issuing authority's power to request 'all information concerning the proposed bioprospecting and the ...resources to be used that is relevant' is not specifically limited in time (Art. 81(2)).

8.2.4.4 Bases for decision

Although the specific identified bases for the CNA's decision may not affect legal certainty, the manner in which the law specifies them can have a significant impact on certainty. Where the decision criteria are very subjective, they provide much less certainty for the user/applicant.

Greater certainty is provided where the law specifies objective criteria and specifications. In the context of ABS, however, objective decision criteria may be difficult. Many subjective factors (scientific, social and other impacts, policies and concerns) must be considered. In such cases, the applicant may have little basis for assessing the chances that his application will be approved. For example, the Brazil *Provisional Act* states an unequivocal prohibition on 'practices that are harmful to the environment and human health and for the development of biological or chemical weapons' (Art.5). There remains

309 It should be noted that the cited elements of South African Law do not address all aspects of process certainty.

310 A number of the Andean Member Countries have adopted legislation implementing ABS and *Decisión 391* (see, e.g., Bolivia: *Decision 391 Regulations* (Articles 17-29); Peru: *ABS & TK Law*; Colombia: *Scientific Investigation*; and Venezuela: *Biodiversity Act*, considered in this analysis). Although these give particular attention to the designation and empowerment of their country's CNA, few of the legislative measures provide significant additional detail regarding the procedures and processes. This may imply that the basic provisions of *Decisión 391* govern procedural matters. Alternatively, it may simply mean that administrative procedures are sufficiently covered by other relevant national laws in these countries.

311 The law does not explain what happens if the need for such information is not found until after the 20-day deadline (i.e., whether the application is automatically denied, in such cases).

within this provision, some room for debate over what specific practices would violate it. Laws implementing CAN Decision 391 typically identify several conservation-related factors (species endemism and vulnerability, impacts on human health and the environment, biosafety, etc.) as limitations of access, as well as matters of national security (see, e.g., Venezuela: *Biodiversity Act*, Art. 75). Similar criteria are identified in the Costa Rican ABS Regulations, Art. 14.

By contrast, the Indian *Biodiversity Rules* bases for decision include only the criteria that ‘the Authority is satisfied with the merit of the application’ (Sec. 14(4)).

The *African Model Law* recognizes public participation as a separate final decision – that is, not an input into the governmental decision, but a potential veto if the government approves. It specifically states the right of local communities to refuse access ‘where such access will be detrimental to the integrity of their natural or cultural heritage,’ or to impose additional conditions and restrictions in certain situations (Articles 19 and 20). Other useful examples of legislative measures governing the bases for decision include the Queensland *Biodiscovery Act*, Art. 14, (evaluation based on the objectives of the Act); the South Africa *Biodiversity Act*, Art. 89(3), (requiring consistency with various national enactments); the Vanuatu *Environmental Management Act*, Art. 34(5), (setting some clear minimum requirements that must be confirmed before the decision can be made, as well as some subjective criteria for consistency with other acts); the Brazil *Provisional Act*, Art. 12, (generally).³¹²

8.2.4.5 Clear record of the decision and its finality

Clarity regarding the final decision is usually promoted where there is a clear moment at which the decision will be considered final, and where the law describes the manner in which that decision is memorialized, recorded and communicated to the applicant. Both the CNA and the applicant have an interest in clarifying the moment of final decision. The process for communication of the decision can provide a clear means of documenting the timing of the decision, and informing the applicant and

public about their options, in two ways:

- Making it less easy for the government to subsequently alter or adjust the decision; and
- Opening a definite statutory period for challenges to the decision, after which the decision is final for most purposes.

This kind of legal certainty often depends more on general national laws regarding government contracts and regulatory decision making.

[a] Evidence of final decision

The manner in which the decision is made and documented can affect legal certainty. Options may vary from a simple decision (written in a file or noted on the application) at one extreme, to a formally adopted legislative decision at the other. Plainly, a more formal and public decision may offer greater legal certainty (by decreasing the possibility of casual alteration), but it may also increase the level of public knowledge, and possibly of controversy, surrounding the decision.

CAN Decision 391 addresses the finality issue, by specifically including formal public procedures to memorialize all ABS decisions in a written statement, which must be reflected in a governmental instrument (‘resolution’), adopted and published at the time the access contract is completed (Articles 1 and 16). By contrast, the *African Model Law* provides somewhat less documentation to help establish or clarify the moment of the final decision, although it does require that all access permits be confirmed in a signed written agreement, between the CNA, the concerned local community and the applicant or collector (Articles 7.2 and 7.3). The issuance of this approval operates as a final governmental statement that all requirements under the legislation have been met, including that the concerned local community has been consulted by the prospective users and that its consent was in fact granted (Articles 5.3 and 10). Most measures reviewed stated that a written instrument at least is required (see, e.g., Indian *Biodiversity Rules*, 14(5), 19(6),

312 Another possibility is demonstrated by the Guyana (*Draft*) *Bio-Prospecting Regulations*, which give broad latitude of discretion to the decision maker. The agency is directly called upon to approve only those applications in which, ‘the environmental or social impact of the research are not detrimental, the terms for benefit-sharing are in keeping with national development goals.’ Some of the listed factors in this decision include several relatively concrete matters (environmental impact assessment, public comments, and the need to protect certain species from over-exploitation). Others give broad discretion – e.g., ‘preservation of the character of the environment, including indigenous or local communities’ (Art. 15(1)).

et passim; the Queensland *Biodiscovery Act*, Art. 15; the South African *Biodiversity Act*, Art. 88(5); the Vanuatu *Environmental Management Act*, Art. 34(5)).

[b] Communicating the final decision

The method by which the decision is communicated, may increase certainty, both directly (communication with the applicant), and indirectly, by ensuring that all relevant stakeholders are made aware of the decision, and thus have only a limited period during which they may challenge the decision. Of course, in many countries, these matters are covered by other laws (those addressing administrative, licensing, and interpretation law, for example). However, in some of the laws examined, special provisions address communications of ABS rights decisions. A detailed communication mechanism is found in CAN Decision 391 which specifically requires that a formal Resolution be issued, and then be published together with an extract of the contract. The Decision specifically states, that '[a]s of that moment, the access shall be considered to have been granted' (Art. 38) (see also, Costa Rica, *Biodiversity Act*, Art. 62 and *ABS Regulations* Articles 13 and 15, which specifically note that publication of such dispositions should be undertaken for the benefit of third parties). Slightly less specific, the Indian *Biodiversity Rules* require the Authority to take steps to 'widely publicize the approvals granted, through print or electronic media and shall periodically monitor compliance of conditions on which the approval was accorded' (Articles 14(10), and see 19(4), 20(4), *et passim*)).

[c] Record of decision

The record-keeping process can be useful, as a way of minimizing appeals, and by providing a clear roadmap for the applicant, if he wishes to revise and resubmit his application. This process also sets a clear record for challengers who may later seek to appeal or overturn the decision (see Section 8.3, below). The record-keeping process increases legal certainty by ensuring that the full range of information supplied by the applicant is considered in the decision. It provides government with a way of proving that they have complied with legal requirements, and gives the applicant a basis for confirming and ensuring this consideration. Often, the record-keeping responsibilities of government agencies are covered by

other national laws. However, some ABS laws specify them.

While most ABS measures require the keeping of substantive records regarding scientific developments from the access itself (see, e.g., Brazil's *Provisional Act*, Art. 8 (III) and (IV)), a few require records of the application process (see, e.g., CAN Decision 391, Art. 18, and Articles 6, 19 and 21). CNA must maintain a public file,³¹³ preserving a broad selection of relevant documents, communications and instruments, including the CNA's final resolutions; see also South Africa's *Biodiversity Act*, Articles 94-96).

8.2.4.6 Appeals

The possibility of an appeal after the completion of the application/decision process necessarily injects a note of uncertainty for users. However, it is generally felt that administrative processes operate most effectively and predictably when they include a full right of public oversight, including by giving both the applicant and the affected stakeholders some power to challenge the decision. User certainty is increased where appeal rights and time limits are clearly specified in legislation, and where the bases and standards on which an appeal will be decided are clearly stated.

A rather detailed provision for appeals to the Magistrates Court by 'dissatisfied persons' is contained in the Queensland *Biodiscovery Act* (Articles 103-106). The *African Model Law's* provision for appeals focuses only on the appeal by the applicant or permit-holder in the case of the disapproval or cancellation of his permit (Art. 68). Such appeal shall be 'through appropriate administrative channels' with recourse to the courts only 'after exhaustion of all administrative remedies.' A similar appeal right is granted to those who challenge the approval of a permit (see Brazil's *Provisional Act*, Art. 11, Para.1).

8.2.4.7 Exemptions

Legislative measures providing for exemptions from the need to obtain an ABS right may also be sources of uncertainty, in some cases. Where an exemption is not clearly defined, the user relying on it may later find himself charged with legal violation. In many cases, exemp-

313 Open to consultation by any person, per Article 6.

tions may depend on terms that are subject to interpretation – without clarity, the user may not know whether it is better incur the expense and difficulty of applying, or to simply rely on the possibility of exemption.³¹⁴ User certainty is increased where exemptions are specific and objective, and/or where the law provides an avenue for confirming the applicability of specific exemptions, in cases of doubt.

For example, the Indian *Biodiversity Act* includes exceptions for ‘local people... who have been practicing indigenous medicine’ (Art. 7) and another authorizing the central government to exempt ‘any items, including biological resources normally traded as commodities’ (Sec. 40). These exemptions are to be clarified in regula-

tions, to minimize uncertainty in the user. In another exemption, however, the same act provides a different and potentially more certain basis for resolving doubts. The Act exempts ‘collaborative research projects involving an exchange of biological resources and related information between institutions,’ on the basis of *inter alia*, approval by the Central Government (Articles 3, 4 and 5(3)). This approval provision may operate in a way that resolves all doubts, if the approval is conditioned on governmental oversight of policy conformance.

To some extent, the scope of an exemption will often depend on interpretation of primary ABS concepts, such as genetic resources, as discussed in the following section.

8.3 Scope and nature of the grant

The second broad category of legal certainty issues revolves around the question of what, precisely, is granted in the ABS Agreement, and how that grant may be limited or controlled in normal operations. These matters must necessarily be addressed in binding legal provisions, if the user is to have certainty regarding the rights he has obtained. Even where the law calls for separate negotiation of an ABS Contract or other legal instrument, legal certainty (as well as many other factors)³¹⁵ is enhanced where legislative measures give reliable information regarding critical issues, including:

- What rights may be granted;
- What rights may not be granted;
- What limitations must always be imposed; and

- What rights and limitations may be granted or imposed in the discretion of the authority.

The participants in the development of the Bonn Guidelines noted an essential need for clear and simple contractual provisions. The most efficient way to provide such simplicity is through legislative measures that clearly and comprehensibly describe the rights and duties granted by the ABS decision. This will ensure that courts, agencies, officials and members of the public share a clear common understanding of the nature of the right granted and/or the user’s contingent duties and performances, including how it is applied, protected, transferred, or otherwise used. This will improved user certainty indirectly by giving relevant officials confidence that their simplified contract language will not result in negative or unexpected decisions, if the contracts are construed by a court or other expert.

8.3.1 The nature of the right granted

One of the key requirements of user certainty is that the user and the granting agency or source should share a mutual understanding of the exact nature of the basic right that is granted by the ABS Agreement. In this con-

text, certainty is primarily dependent on the clarity of the grant instrument and on the legislative measures describing the rights that are transferred.

314 The consequences of misconception of a stated exemption may be dire. As provided in Brazil’s *Provisional Act*, at any time that an agreement that is found to relate to genetic resources, and to be undertaken in violation of the Act, that agreement will be ‘null and void, without any legal standing’ (Art. 29 Sole). See also, Costa Rica: *ABS Regulations*, Art. 28, full legal sanctions applicable to those who access genetic resources without permission.

315 Governments and government officials generally prefer clearer and more specifically limited laws and legislative instructions, as this provides a barrier against requests for special treatment, and also gives them protection against claims that, by signing or approving such agreement, they have violated their fiduciary duties – become bio-pirates themselves.

In this connection, it is interesting to note that none of the measures examined describes or considers ABS rights from the perspective of the user (i.e., by stating, in effect ‘the grant of ABS rights entitles the user to undertake the following: XXX’). In general, the nature of the positive right granted by the ABS decision is expressed in terms of limits (geographical boundaries, specific numbers of samples, etc.). Apart from these, the nature of the grant is somewhat determinable by considering the activities that are strictly prohibited unless an ABS right is obtained (see, e.g., the Philippines *EO 247*, Art. 2; the Vanuatu *Environmental Management Act*, Art. 32; and the Indian *Biodiversity Act*, Articles 3(1) and 19). These provisions do not specify that the issuance of any ABS right will automatically allow the user to engage in the full range of prohibited activities, however. Hence, the particular scope of the ABS right is typically a matter of individual contract negotiation (and often not memorialized there either).

A critical element of user certainty in the context of the nature of the right granted relates to the question of whether additional permits or permissions will be necessary at later stages in the process of accessing and utilizing the genetic resources. For example, under the Indian *Biodiversity Act*, the initial permission received does not convey permission to obtain intellectual property rights for any invention based on research or information on a biological resource obtained from India. Hence, a second approval from the CNA will be required at this point, contemporaneously with the IPR application (Art. 6(1); and see *Rules 18 and 19*). A number of other laws also require additional negotiations after the initial grant of ABS rights (see the Venezuelan *Biodiversity Act*, Articles 79-83; the Colombian *Scientific Investigation*, Articles 16-17, 21; the Queensland *Biodiscovery Act*, Articles 36-40, (procedural provisions in addressing other instruments (ABS plan and contracts) that must be negotiated separately from the application for the initial ABS right); the *African Model Law*, Art. 13.1.

To some extent, the question of what is granted underlies many recent well-publicized controversies over ABS, such as where a user has obtained biological samples through conventional means (at a vegetable market) and then indicated an intent to utilize its genetic resources (genetic or biochemical properties) in less conventional ways. This issue is complicated by basic questions currently troubling ABS implementation and the current negotiations. Specifically, uncertainties may be tied to the current lack of clarity regarding whether and how genetic resources differ from biological resources.³¹⁶ Although it is clear that the convention perceives genetic resources to be different from (possibly a subset of) biological resources, it has so far proven difficult or impossible to describe this difference with legislative clarity – needed in order to apply the CBD through national legislation:

In some countries and measures, the lack of certainty is preserved in national legislation, thereby making it difficult for any potential user to know if he plans to utilize a genetic resource (an activity that requires ABS compliance), or simply to use a biological resource (already governed by other laws); see, e.g., the Vanuatu *Environmental Management Act* (incorporating the CBD definitions verbatim, without additional legislative provision).

In a few countries, to avoid these uncertainties, the law focuses instead on the use of biological resources (see, e.g., the *African Model Law*, Art. 3, et seq.; and the South African *Biodiversity Act*, Art. 1, (definitions of ‘bioprospecting’ and ‘indigenous biological resource’)³¹⁷ and Articles 80-86). This choice can lead to significant uncertainty – because commercial development and other transactions involving *biological* resources (in vegetable markets for example) may not, as a practical matter, be subject to ABS requirements. User certainty will only be enhanced where a consistent rule identifies the dividing line between transactions that are covered and those that are not.

316 The question of the distinction between genetic resources and biological resources, and the impact of that distinction on effective ABS implementation is being addressed by other work under CBD COP Decision VII/19. In the months since COP VII, this issue has been examined by experts in a number of ways. Some critical papers on this issue can be found at www.canmexworkshop.com

317 The South African *Act* focuses primarily on ‘indigenous biological resources’ – a term that includes genetic material. It contains a special definition of the term ‘genetic resource’ – ‘any genetic material or the genetic potential and characteristics of any species’ (Art. 1). That term, however, does not appear anywhere in the *Act’s* ABS provisions (Cap. 6) or in its definitions of the terms that are used in those sections (‘bioprospecting’, ‘indigenous biological resource’ and ‘genetic material’).

A few measures recognize genetic resources to be something different from biological resources (that they are genetic and/or biochemical information, for example, or a right to engage in a specific use), but still control movement and use of those resources by controlling the movement and use of biological material (see, e.g., Brazil's *Provisional Act*, Art. 8; and Malawi's *Environmental Management Act*, Art. 36). Here also, some mechanism for exempting conventional trade in biological materials may become necessary, and difficult to integrate into a consistent legislative framework.

Finally, it should be noted that many of the laws examined require the user to share all information acquired

through the access and analytical processes relating to resources collected under the ABS rights (see, e.g., Colombia: *Scientific Investigation*, Art. 23). Although, in itself, this does not affect intellectual property rights acquired by the user (so long as they are consistent with relevant ABS measures), it may have the impact of compromising the user's ability to protect its un-patented research as a trade secret. Here also, interests on both sides suggest that such requirements and needs will continue to come into conflict. Hence legal certainty is maximized when the nature and extent of these requirements is clearly specified in relevant law.

8.3.2 Clarity on materially agreed terms – the user's obligations

Materially Agreed Terms (MAT) are a primary mechanism by which the ABS instrument imposes duties on the user. 'Mutually-agreed terms' is generally an identical concept to 'clear contractual provisions' – a prerequisite of any binding instrument. In the context of ABS, MAT has a slightly different implication, however, suggesting a combination of legislative terms, license provisions and conditions, and individually negotiated elements. The clearer and more definite national legislative measures (and the mandate regarding license provisions and conditions) are, the greater will be the user's certainty of the exact nature of the responsibilities that he must comply with in order to maintain and use these rights. This type of legal certainty is usually expressed legislatively by listing several provisions that are mandatory (to be applied to all ABS rights within a given category), some conditions that must be considered and specifically negotiated in the ABS rights and contract, some optional provisions (that may be applied at the CNA's discretion), as well as provisions not permitted.

8.3.3 Restrictions on transfer and other rights

One range of issues that may affect user certainty, but which has not been addressed in most existing ABS measures, relates to the possibility that the successful applicant will subsequently transfer his ABS rights, and the procedures by which such transfer may be undertaken. In Australia, Queensland *Biodiscovery Act*, it appears that the holder of ABS rights is not allowed to transfer those rights, even in the case that he transfers physical samples collected in accordance with those rights (Art. 31). In In-

India, apart from certain very basic limitations, for example, the *African Model Law* does not clarify the contents of the grant, noting only that all conditions agreed by the CNA must be incorporated in the written permit (Art. 10). CAN Decision 391 includes a fairly detailed list of the sort of conditions that the applications for access and access contracts must include (Art. 17). This list generally emphasizes the applicant's duties and responsibilities (both in the application and in the subsequent access and use of the material). The Decision specifically notes that 'ancillary contracts' relating to sourcing – i.e., contracts with the owner of land from which the samples will be collected, or with *ex-situ* collections to be tapped – must be considered and protected in the same way, only if they are signed by the legal owner of the physical resource from which the genetic material will be taken, etc. (Art. 41).

India's *Biodiversity Act*, a separate approval from the CNA will be required for any transfer of 'the results of any research relating to any biological resources occurring in or obtained from India' (Articles 4, 20; and see *Rule 16*). It is not clear in other legislation (where no statement about transfer is included) whether the ABS rights (or information and other matters derived under them) are transferable.

8.3.4 Legitimate expectations and vested rights

The third area of user certainty in ABS includes perhaps the most publicized limitation on user certainty – the possibility that, even after he has obtained an ABS Agreement, the user may find his right rescinded or changed. Possible avenues for such retroactive change may include:

- Legal challenges to the issuance of the ABS agreement;
- New information or concerns on the part of the government; or
- Claims that the user is not in compliance with the agreement.

These concerns are critical to user certainty, given that they affect the user's expectations. From some point (usually at the expiration of the appeal period following issuance of the final decision) the user needs to have sufficient confidence in his ABS rights that he will invest significant time and effort in them.

One critical element of user certainty in the case of any such revision or rescission is the right to know of, participate in or provide input into the governmental decision-making process regarding alteration of his ABS rights. The following discussion is broken into analysis of changes, based on whether they are motivated by third-party action, user violation, or response to the country's environmental and other needs. Relevant to all three categories, it should be noted that only two of the measures examined specifically discuss procedures for giving the holder notice and opportunity to participate in consideration of the alteration (see the Australia, Queensland *Biodiscovery Act*, Articles 21–22; and Costa Rica, *ABS Regulations*, Art.16).

8.3.4.1 Third-party impacts on the ABS agreement

Few ABS laws specifically include provisions giving affected citizens or others the right to formally challenge an ABS agreement after it has become final and the basic procedural limitations period on appeal has expired (this suggests that third-party rights are probably addressed in other law in the other countries). However, several laws do give some rights to affected parties to challenge later government decisions, including licenses, permits, agreements and other exercise of administrative powers.

One example of this is found in the *African Model Law*, which specifically mentions the right of local communities to impose additional conditions and restrictions in certain situations (Articles 19 and 20). Since the *Model Law*, does not place any procedural or time limits on these rights, this provision may authorize withdrawal or further conditioning of local assent *after* the permit has been granted. This is balanced by a provision which spells out rights of appeal in the case of post-issuance cancellation of the permit (Art. 68).

The concept of good governance would seem to require that the public, particularly affected stakeholders, must be given full rights to challenge individual actions that do not appear to have been properly made and to ensure that the government meets its obligation of protecting its citizens and obtaining suitable return when it grants or sells the country's rights or resources to a single user. National legislation cannot be expected to eliminate or abridge these rights in the cause of increasing user certainty. Rather, it must promote certainty through clear and specific statutory requirements and limitations regarding the bases on which stakeholders may subsequently challenge the user's activities after receiving ABS rights or seek rescission of those rights. In addition, interested parties presumably have the right to report apparent violations to the government, and expect formal enforcement, as discussed below.

8.3.4.2 Claims of non-compliance

A user that fails to comply with the terms and conditions of his ABS rights, typically risks the loss or cancellation of those rights. This result of non-compliance may be based on other law, which may explain why these provisions are not always included explicitly in ABS measures. User certainty in such cases is increased where legal measures clarify what kinds of violations can result in revocation of the ABS rights, whether and when the overseeing agency must first give notice and an opportunity to correct the fault, whether the process of addressing non-compliance is administrative only (or may involve the courts), whether there is an appeal against such decisions, and other information.

In a number of countries, ABS measures specifically discuss the responsibilities of the CNA to oversee and monitor the user's activities under the ABS agreement, and address possible sanctions. CAN Decision 391 pro-

vides a short list of the bases for sanctions against users (including, *inter alia* Articles 22–26, 46 and 47). This is not, apparently, an exhaustive list. The CNA appears to be charged with oversight, since it must issue an administrative order when the requirements of that access contract have been fulfilled, and may be required to issue sanctions for violations of the contract (Art. 50.1, and see definitions of ‘competent national authority,’ ‘access contract,’ and ‘access resolution,’ Articles 32, 35, 40, 43 and 47).

Under Brazil: *Provisional Act*, in the event of any violation of ‘relevant legal provisions,’ the penalties include suspension or cancellation of the ABS rights, as well as seizures, embargos on sales and other activities, and even the loss of the right to contract with any public agency for up to five years. (Art. 30.) Since the *Act* does not set a formal application process and procedure, and since in many cases, the ABS rights appear to be granted by private landholders and others, it would appear that the individual ABS contracts, licenses, etc., may be considered ‘other relevant legal provisions’ for these purposes. See also Colombia: *Scientific Investigation*, Art. 22).

In the *African Model Law* the possibility of cancellation for non-compliance is addressed in several provisions. For example, ‘[a]ny access carried out without the prior consent of the State and the local indigenous community will be deemed invalid by the authorities’ (Art. 5.2). Similarly, the CNA is authorized to ‘withdraw consent and repossess the written permit’ (after consulting with the ‘concerned local community’ in cases of, *inter alia*, violation of the access legislation; or failure to comply with agreed terms or conditions’ (Art. 14(1)(i) and (ii), and 14(2)).

Similar provisions are found in India, *Biological Diversity Rules* (Art. 15 (1) (i)–(iii), (revocation where the CNA reasonably believes that the user was in violation of the relevant law, rules or conditions on which the approval was granted); Australia, *Queensland Biodiscovery Act*, Art. 20, (discovery of violation or failure to report as required, or that the original application was incorrect or misleading);

South Africa, *Biodiversity Act*, Art. 93, (and see Articles 94–96 regarding appeals from such decisions); and Costa Rica: *ABS Regulations*, Articles 20 and 27.

In a few instances, although the measures discuss possible sanctions in the event of violation, they do not include any specific mention of rescission as a sanction. In the Malawi *Procedures*, for example, sanctions for violation include ‘fine, imprisonment or both,’ but not suspension or termination of the ABS rights (Part G.2); (as noted below, however, the *Procedures* include a more general power of the CNA to alter or withdraw the rights without cause).

8.3.4.3 Government rescission or alteration for other causes – the loss of a vested right

Governmental powers of rescission or alteration of the ABS rights, after they have been granted, obviously have a very direct impact on legal certainty. The user generally expects that at some point, the ABS rights granted to him will be legally protected, and thereafter cannot be rescinded or altered, retroactively, except for cause or in specific exceptional, legally defined circumstances. From the source country’s perspective, however, some power to reconsider the grant may be necessary for a variety of reasons, including changes (developments) in scientific understanding, conditions of conservation status, and other factors.

This kind of legal certainty can be supported by:

- Clear and specific procedures and notice requirements applicable any time a governmental agency considers changing an existing permit;
- Clear statement of the permissible bases that can underlie a governmental decision to alter, cancel, or suspend an ABS right, once it has been received; and
- Determination whether, in any situation, the right-holder will be entitled to compensation, for alteration amounting to ‘taking’ a vested right³¹⁸ from the holder.

318 In general, a ‘vested right’ is an entitlement. One may operate under general law allowing particular activities, incurring the risk that the law will be changed, resulting in the cancellation of that general right. However, some kinds of activities may be the subject of vested rights. This means that, if one takes appropriate steps (licensing, installing improvements, etc.), he will acquire a right that is similar to a property right. Even if the government repeals the relevant laws (so that no other person can acquire such a right), the rights of a holder who has already vested will not be taken away by this action, without compensation as a ‘taking’ of property.

A strong statement of a government's right to alter ABS rights it has granted is found in Brazil's *Provisional Act*, providing that such alteration may occur 'at any moment, in the light of scientific evidence denoting the risk of serious and irreparable damage to biological diversity, arising from activities carried out in the terms of this Provisional Act, the Government...shall determine measures intended to prevent such damage and may even stop the activity' (Art. 6). Similar provisions in other laws state that justifications must be given, alluding to general law of the country (see, e.g., Nicaragua's *General Environmental Law*, Art. 58).

In CAN Decision 391, the source country's sovereign ability to penalize violations in the exercise of ABS rights is specifically recognized, and includes the 'temporary or definitive closing-down of establishments and disqualification of the violator from applying for new access' (Art. 47). Although the Decision specifically considers genetic resources to be a property right, it provides that the penalties will apply without any requirement of compensation. A separate provision specifically states that contracts, even if signed by the CNA, may be nullified if it is later found that the right was granted in violation of required procedures (Art. 39). The Decision does not limit the right to challenge a contract on these grounds, although such a limitation may already apply through existing administrative law of the Member Countries.

A broader approach is found in the *African Model Law* which appears to authorize rescission or cancellation 'in cases of... overriding public interest;' or 'for the protection of the environment and biological diversity' (Art. 14(1) (iii) and (iv), and 14(2)). The effect of this provision in decreasing certainty is balanced by a provision which clearly spells out rights of appeal in the case of post-issuance cancellation of the permit (Art. 68).

The CNA is also authorized to adopt specific legislation or other instruments regarding general conservation-based and health-and-welfare-based restrictions

on access (Art. 15). As written, these provisions suggest that the adoption of such legislation may impact earlier-acquired ABS rights.

In Malawi: *Procedures*, the CNA specifically 'reserves the right to withdraw any certification without notice or giving reasons to the [holder of an ABS right]' (Part G.1).

India's *Biological Diversity Act* specifies that relevant activities under pre-enactment ABS agreements may be considered void, to the extent that they are inconsistent with the act (Art. 5(2)). As to ABS rights concluded since the Act entered into force, the CNA is authorized to revoke ABS rights on account of overriding public interest or for protection of environment and conservation of biological diversity (*Biological Diversity Rules*, Art. 15 (1)(iv)). In the exercise of these provisions, the government is required to, inter alia, 'assess the damage [to the environment], if any, caused by the ABS activities, and take steps to recover the damage' (Art. 15(2)). In addition, a somewhat ambiguous provision gives the CNA the right 'if it deems necessary... [to] take the steps to restrict or prohibit the request for access to biological resources' where it would affect endangered and rare taxa, create 'the possibility of genetic erosion, or have negative environmental, social or political impacts' (Art. 16).³¹⁹ These provisions do not require assessment or compensation relating to the taking of the user's vested right.

Under Australia: *Queensland Biodiscovery Act*, ABS rights may be altered without compensation to the holder, where necessary due to an emergency or natural disaster, but alteration is not allowed where the area covered by the agreement later becomes a protected area, or where the conservation status of an affected species is changed to a higher level of concern (Articles 20 and 24). Detailed procedures are set out for giving the holder notice and opportunity to participate in consideration of the alteration (Articles 21–22).

319 This provision is somewhat unclear. The language 'take the steps to restrict or prohibit the request for access' suggests that this provision applies only prior to decision on ABS applications. Placement and other factors, however, suggest that it might apply after approval.

8.4 Summary conclusion

There are many ways in which source-country ABS measures may enhance legal certainty for those who obtain rights to utilize genetic resources. These measures cannot give absolute or near-absolute certainty, however, given that governments must balance the user's desire for certainty against their sovereign obligations – to protect their rights and interests, and to ensure that the State or other holders of its collective and sovereign rights in genetic resources are properly compensated by individuals seeking permission to use those rights and resources for private benefit.

This need for balance, coupled with principles of good governance suggest that it will not be possible to simply assure users that their rights will be protected. Thus, the best way to enhance user certainty appears to be through clarity, including clarification of key elements of the application process, such as:

- The rights and duties of Competent National Authorities;
- The relationship between ABS application and other approvals and processes;
- Milestones and the timing of the various steps in the process;

- The extent to which the CNA may request additional information and performances;
- The bases on which the decision will be made;
- Rights of appeal; and
- The objective factors that will determine whether an applicant is exempt from the need to obtain ABS permits.

Once the right is obtained, certainty is increased where the law rather definitely explains to the user both the positive rights granted and the terms, conditions and limitations on which those rights are contingent. Perhaps the most important way to maximize certainty is to clarify the legal status of the rights granted – whether it is a property right or vested interest. A user can determine what he can legitimately expect, whether it is worth his investment, and what procedures and protections of law apply.

In sum, the concept of 'user certainty' does not require complete assurance that the user may do anything it chooses. Rather, certainty involves clearer information about the rules and processes that apply, and clear understanding about what the user may expect.

ANNEX A to Chapter 8: List of laws considered in this analysis

These laws are available from the *CBD 'Database on ABS Measures'* located online at www.biodiv.org/programmes/socio-eco/benefit/measures.aspx

Regional instruments

African Model Law African Union Model Legislation for the Protection of the Right of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources, formally endorsed by all African Union States.

CAN Decision 391 *Comunidad Andina Decisión 391: Régimen Común sobre Acceso a los Recursos Genéticos* (adopted 2 July 1996). Note: Quotations from this decision are taken from the English translation provided by the Comunidad Andina, rather than direct translation.

National instruments

Australia: Queensland Biodiscovery Act *Queensland Biodiscovery Act 2004* (N° 19/2004).

Bolivia: Decision 391 Regulations *Reglamento de Decisión 391* (N° 2012/1997).

Brazil: Provisional Act *Provisional Act N° 2,186-16* (August 23, 2001).

Colombia: Scientific Investigation *Decreto por el cual reglamenta la investigación científica sobre diversidad biológica* (N° 309/2000). Refers to regulations on ABS, not found in the CBD database. Art. 15. Note: this Decree specifically refers in detail, operative language, to specific provisions of other laws (including N° 13/1990, N° 165/1994, 99/1993), codes (Administrative Code), decrees (including 302/2003 (modified)) and other legal instruments (Unified National Parks Administration), which are not available on the CBD database, and which were not reviewed for purposes of this paper.

Costa Rica: Biodiversity Act *Ley de Biodiversidad* (N° 7788, 1998).

Costa Rica: ABS Regulations *Normas Generales para el Acceso a los Elementos y Recursos Genéticos y Bioquímicos de la Biodiversidad* (Decreto N° 31 514, 2003).

India: Biodiversity Act *The Biological Diversity Act, 2002* (N° 18 of 2003).

India: Biodiversity Rules *Biological Diversity Rules 2004* (GSR 261 E, published April 25, 2004, India Gazette, Extraordinary, Part II, Section 3, subsection (i)).

Malawi: Environmental Management *Environmental Management Act (1996)* (N° 23/1996).

Malawi: Procedures *Procedures and Guidelines for Access and Collection of Genetic Resources in Malawi*.

Nicaragua: General Environmental and Natural Resource Law *Ley general del medio ambiente y los recursos naturales* (N° 217/1996). Articles 54–71 (some provisions adopted). Other procedures, regulatory measures and process to be set by regulation (Articles 64 and 70)).

Peru: ABS & TK Law (2004) *Ley de protección al acceso a la diversidad biológica peruana y los conocimientos colectivos de los pueblos indígenas* (N° 28216 (2004)).

Peru: Conservation Law (1997) *Ley sobre la conservación y el aprovechamiento sostenible de la diversidad biológica* (N° 26839 (1997)).

Philippines: EO 247 *Executive Order N° 247 Prescribing Guidelines and Establishing a Regulatory Framework for the Prospecting of Biological and Genetic Resources, their By-products and Derivatives, for Scientific and Commercial Purposes and for other Purposes* (1995).

Philippines: Joint Implementing Rules *Joint Implementing Rules and Regulations pursuant to Republic Act N° 9147* (Admin. Order No. 01/2004) Art. 14-15.

Philippines: Wildlife Act *Wildlife Resources Conservation and Protection Act* (N° 9147/2001) Art. 14-15.

South Africa: Biodiversity Act *National Environmental Management: Biodiversity Act 2004* (N° 10/2004) Articles 1, 80–96.

Vanuatu: Environmental Management *Environmental Management and Conservation Act* (N° 12/2002).

Venezuela: Biodiversity Act *Ley de diversidad biológica* (2000).

ANNEX B to Chapter 8: National legal measures containing general provisions on ABS

Australia: Environmental Protection and Biodiversity Conservation Act of 1999 (N° 91/1999). Art. 301. This omnibus (443-page) conservation law was not studied in detail. From initial examination, it appeared that only Article 301 was directly relevant to ABS.

Bulgaria: Biological Diversity Act (State Gazette N° 77/9-08-2002). See Art. 66, and Articles 61-65.

Cameroon: Loi portant loi-cadre relative à la gestion de l'environnement (N° 96/12, 1996). See Art. 65

Cuba: Ley del Medio Ambiente (N° 81/1997, Gaz 7, p. 47). Regulations to be developed per Articles 87(c) and 88(n).

Kenya: Environmental Management and Coordination Act (N° 8 of 1999). See Art. 53.

Mexico: General Law of Ecological Balance and Environmental Protection. Gazetted 28 Jan 1988, as amended 7 January 2000 (provided to the CBD Database in English). Regulations ('mechanisms') to be developed per Art. 87 bis.

Panama: Ley General de Ambiente de la Republica de Panama (No. 41). Generally addressing natural resources and their use and development.

Peru: Conservation Regulations *Reglamento de la Ley Sobre la Conservación y el Aprovechamiento Sostenible de la Diversidad Biológica.* Regulations under Law 26839, adopted by Decreto Supremo N° 068-2001-PCM. See Tercera Disposición (calls for the adoption of ABS regulations within 30 days of the publication of these regulations).

Peru: Indigenous Knowledge Law (2004) *Ley de protección al acceso a la diversidad biológica peruana y los conocimientos colectivos de los pueblos indígenas* (Ley N° 28215) (2004). This law is directed at traditional knowledge related to access to biological resources. As such it is only indirectly relevant to ABS.

Peru: Indigenous Knowledge Protection Procedures Law (2002) *Ley que Establece el Régimen de Protección de los Conocimientos Colectivos de los Pueblos Indígenas Vinculados a los recursos biológicos* (Ley N° 27811 (2002)) The authors have not attempted to address the relationship between this law (which remains in the CBD database) and Peru: Indigenous Knowledge Law (2004).

Portugal: Decree-Law N° 118/2002 (April 20, 2002). Calling for the establishment of (but not establishing or setting formal procedures for) a mechanism for the legal registration of 'local varieties,' and 'plant material of agrarian, agroforest and landscape interest' as well as 'spontaneously occurring autochthonous material.'

Uganda: National Environment Statute (N° 4/1995) Art. 45. Calling for the development of regulations addressing ABS.

9 Analysis of Claims of ‘Unauthorized Access and Misappropriation of Genetic Resources and Associated Traditional Knowledge’*

** This study was undertaken by The ABS Project in conjunction with IUCN-Canada and the Secretariat of the Convention on Biological Diversity, with funding and support from Environment Canada. It is reprinted here with permission from (and gratitude to) these sponsors. The lead author (T.R. Young) acknowledges the valuable contributions of Marc-Andre Lafrance (author/compiler of an excellent and detailed summary of cases reported to or unearthed by the SCBD Secretariat regarding ‘the extent and level of unauthorized access and misappropriation of genetic resources and associated traditional knowledge’), and the following individuals, who provided advice, assistance, peer review and analysis: Channa Banbaradeniya, Jorge Cabrera Medaglia, Leif Christoffersen, Kate Davis, Ute Feit, José Carlos Fernández Ugalde, Jagath Gunawaredena, John Herity, Timothy Hodges, Olivier Jalbert, Ted James, Nancy Kgegengyane, Robert Lettington, Patricia Moore, Kent Nnadozie, Valerie Normand, Dan Ogolla, Alberto Parenti, François Pythoud, Pimolwan Singhawong and Seizo Sumida. This list includes only persons whose contribution was in the form of advice and research. Persons who provided specific information on case studies have not been listed here, in recognition of the desire of several such contributors for confidentiality.*

9.1 Introduction and Background

The lack of widespread and effective implementation of access and benefit sharing (or ABS), despite its role as the third objective³²⁰ of the Convention presents an important challenge to the CBD COP. Within the past five years, efforts to address this challenge have occupied an ever-increasing amount of the time and resources of the SCBD, COP, Parties and observers. The impetus of this increase arises from two sources:

- The importance of the ABS objective; and
- The need to implement numerous firm commitments in the CBD relating to ABS.³²¹

The matrix of policy decisions and practical implementation mechanisms needed in order to enable and foster the creation of a functional ABS regime is recognized to be one of the most complex and demanding elements that remains in order to implement the Convention. In its seventh meeting, the CBD-COP identified a number of important issues for further study, as a primary step in addressing that implementation challenge. One of the specific studies required in that decision is ‘further analysis...of the extent and level of unauthorized access and misappropriation³²² of genetic resources and associated traditional knowledge.’³²³ This report provides the results of the first phase of inquiry into this issue.

320 The third objective is ‘the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding’ (CBD, Art. 1).

321 The primary ABS-related commitments of the Parties are found in Articles 15 (all), 16.3, 17.1 and 2, 19.1 and 2, 20.1 and 3, and 21.4. A well-constructed functional ABS system may support and further a great many CBD objectives (see Young, T.R. 2004. Options and Processes for the Development of an International Regime on Access and Benefit Sharing, at 5 and 20–21. IUCN/BMZ).

322 For purposes of saving paper, the author will use the single word ‘misappropriation’ as shorthand for ‘unauthorized access and misappropriation of genetic resources and associated traditional knowledge.’ As noted in Tables 1 and 3 (and note 329), this chapter interprets those terms very broadly. Where more specific terminology is needed, it will be so noted in text.

323 CBD COP Decision VII/19, Clause E.9(c).

9.1.1 Objective of this study

Examination of the extent and level of misappropriation of genetic resources (GR) is essential both:

- To clarify the nature and potential value of those resources; and
- To provide a clearer understanding of some of the contractual, implementation and enforcement obstacles that currently inhibit development and full functioning of the ABS system.

9.1.2 Methodology of this study

It is probably impossible to undertake a comprehensive, quantifiable analysis of ‘the extent and level of unauthorized access and misappropriation of genetic resources and associated traditional knowledge,’ because such an analysis would require the researcher to come to a conclusion about each controversial situation, deciding whether or not it constitutes an actual misappropriation or unauthorized access. Only a court can make such a finding, and many courts, when faced with such questions choose to decide the case on the basis of other issues, without deciding the ‘misappropriation’ point.³²⁴

To provide maximum information relating to the underlying objective of supporting the development of the ABS regime, this paper has researched and addresses claims of misappropriation, rather than being limited to those areas in which a finding of misappropriation has been made. It examines both formal and informal claims, and considers the various allegations and differences in interpretation that are the primary sources from which claims arise, rather than focusing solely on legal claims and the specific points of law on which they have been asserted. In other words, it focuses on claims themselves rather than on giving opinions regarding whether the claims will be upheld. These basic decisions are explained in this section, followed by a short description of the methodology for the collection of information concerning claims of misappropriation, and a description of follow-up research already being undertaken.

As explained in the next section, a comprehensive survey resulting in a quantifiable analysis of the extent and level of misappropriation is simply not possible. Consequently, this report does not attempt such an inquiry, but reflects an examination of the extent and level of *claims* of misappropriation, and the various ways in which they are asserted. It will not come to any conclusion regarding whether any claim described herein represents an actual example of misappropriation.

In this study, however, the author has been restricted by the lack of commonly accepted terminology for discussion of critical concepts.³²⁵ Given the imprecision and controversial nature of these definitional questions, the author has made no attempt to identify and use specific definitions of the term ‘misappropriation of genetic resources,’ ‘unauthorized access to genetic resources’ or any other term that might be used to describe ABS violations. While limiting the immediate conclusions and recommendations of the study (which are all conditional on the parties agreeing on the meaning of ABS and its key legal elements), this choice has somewhat broadened the discussions of various events and claims, many of which would not be considered to be a part of ABS under the definitional presumptions used by some parties and users. This article has not considered claims of biopiracy that did not include a clear allegation that the user made scientific use of a species for some other purpose than the conventional purchase/sourcing of ingredients (which does not seem to involve genetic resources under any serious claim so far asserted). Feeling that it was not appropriate to choose one among the currently supported views of what ABS is, what genetic resources are and what activities constitute their utilization, the author has included a rather broad panoply of other claims, extending from patenting through middlemen to actual scientific use.³²⁶ Accordingly, this paper considers all claims that are alleged to be related to unauthorized or inappropriate utilization of genetic resources, and offers discussions and distinctions among such claims.

324 A private individual or organization making statements that a specific action is ‘misappropriation,’ in a public forum such as the CBD, might potentially be subject to legal action.

325 In recent years, the terminology issue has become increasingly controversial, with initial pejorative terms such as ‘biopiracy’ being replaced by terms like ‘unauthorized access’ and ‘misappropriation’ which are also becoming controversial. Recently, less evaluative terminology has been proposed – Robert Lettington has coined the term ‘irregular access,’ as a descriptive that does not carry any suggestion of fault or liability, but only the existence of questions which must be reviewed.

326 The literature is replete with discussions, particularly of the journalistic term ‘biopiracy.’ Perhaps most interesting, and one of the few official, of these

9.1.2.1 Impact of perceived/claimed misappropriation

Although in formal legal analysis a claim or perception carries less weight than a judicial finding or final decision, in practical terms the impact of a claim of misappropriation, may often be of greater concern than that of actual misappropriation.

The weight given to formal legal processes is a function of the objective of legal analysis – the attempt to find all of the factual and legal factors (including legislation and prior court decisions) that tell the lawyer how his client's case should be argued or will be decided. For this purpose, only final decisions can be thought to indicate whether a defendant is liable or not. In addition, it is often only final formal decisions that can have a legal impact on how subsequent cases will be decided. When looking at the impact of law on normal commercial behavior, however, the situation is quite different. Perceptions and claims themselves very often have the same impact as a court's decision. The assertion or the threat of such a claim, whether in formal venues or through the media, can often delay and interfere with commercial and other utilization of genetic resources. In this respect, it often does not matter whether those claims are ultimately proven to be groundless – they will still have an impact on the transaction or ultimate utilization of the resource.

In terms of their effect on the functioning of national ABS systems then, the number and nature of claims of misappropriation or unauthorized access is at least as important as their validity and final decision. As noted below, the focus on claims enables this paper to concentrate on the impact of misappropriation, rather than looking simply at the merits of a few legal actions. Hence, the report provides input into the primary underlying question – how have misappropriation *and*

claims of misappropriation affected national and private attempts to implement ABS procedures and objectives?

9.1.2.2 Claim evaluation v. standard legal analysis

In terms of its content, a standard legal analysis will not address the ultimate needs for which this study is conducted. Typically, a legal analysis focuses on (i) decisions, (ii) pending cases, (iii) formally asserted claims, and (iv) informal claims and negotiations, in that order of priority. This approach is based on the manner in which legal issues are addressed in society, and the fact that formal cases carry greater weight in judicial decisions than pending cases, while pending cases carry more weight than formal claims, and so on.

Standard legal analyses also generally focus on analyzing the particular legal points ('causes of action') on which the case or claim is based, to determine their validity and usefulness, and to clarify the exact factors within each cause of action that must be proven in order for the plaintiff to succeed. These decision-making processes form the *legal analysis*, undertaken by parties, lawyers, judges and/or mediators to enable the development of a legal strategy, to prepare the final decision, or to decide whether it will be better to negotiate with a claimant or allow him to bring suit. In each case, these particular causes of action to be asserted are selected based on the legal strategy of the parties asserting the case. They are chosen on the basis of the lawyers' estimation of the chance of success, and rely particularly on matters such as the specific text of national laws, the wording of relevant decisions in other cases, known preferences of the assigned judge, and other matters.

The current paper is not intended to provide an estimate of the strength of a legal case in a particular factual situation for purposes of a future lawsuit. Rather it has the very different objective of informing the Ad-hoc

is the Africa Group's submission to the WTO's TRIPS Council (available online at <http://docsonline.wto.org/DDFDocuments/t/IP/C/W404.doc>). See also, Gollin, M.A. 1999. 'Biopiracy: The Legal Perspective.' *Nature Biotechnology* 17 (September), and presented to the American Society of Pharmacognosy in 1998. Washington DC: American Institute of Biological Sciences (available online at <http://www.actionbioscience.org/biodiversity/gollin.html#Primer>); Dutfield, G. 2004. 'What is Biopiracy.' Proceedings of the International Expert Workshop on Access to Genetic Resource and Benefit sharing (Canada/México, 2004). Dutfield generally concludes that biopiracy remains 'an impressive term for which most actors have their own definition.' Legally focused definitions of 'misappropriation of genetic resources' are found in Nnadozie, K. and R. Lettington. 'A Review of the Intergovernmental Committee on Genetic Resources, Traditional Knowledge and Folklore at WIPO.' (http://www.ciel.org/Publications/Occasional_SouthCentre_Dec03.pdf). T.R.A.D.E. Occasional Paper No. 12. South Centre/CIEL. See also 'Taking Forward the Review of Article 27.3(b) of the TRIPS Agreement,' a Joint Communication from the African Group, submitted by the Permanent Mission of Morocco to the TRIPS Council meeting on 4–5 June 2003 (available at http://docsonline.wto.org/gen_home.asp?language=1&c_1=1 – choose 'search for document' and search for 'document symbol' IP/C/W/404), noting that 'such misappropriation has taken the form of obtaining patents in developed countries inconsistent with the will of the communities and countries that have sovereignty over the resources.' These definitions and discussions, while perhaps of value academically, do not clarify the issue examined in this paper.

Open-ended Working Group on ABS (AHWG-ABS) regarding the extent to which misappropriation poses a problem for the functioning of the ABS regime. As such, the paper is addressed to the ‘meta’ level of legal issues – focusing on the disagreements and uncertainties that underlay claims of misappropriation/unauthorized access. By understanding this, the Parties can better understand the particular gaps that exist in the current ABS regime, and the areas in which clearer principles and provisions are needed to eliminate uncertainties and minimize claims.

9.1.2.3 Design of this analysis

This paper presents the following information:

- An overview of the information provided and collected, and the approach taken to its collection;
- An analytical summary of the information collected, at three levels of analysis:
 - Overall information regarding the claims and cases studied;
 - Categorical analysis of various types of claims; and

– Specific information on particular claims or sets of claims, focusing on the following specific questions:

- How did the claim arise, and especially, how did the claimant come to know of it?
 - What kinds of uses were involved?
 - At what stage in the process was the claim first asserted?
 - What defences or other statements have been made opposing the claim?
 - What is the current status (or outcome) of the situation?
- A substantive summary of the information collected, addressed to the question of their relationship to and impact on ABS implementation.

This initial analysis has been limited to material: compiled from the internet and other available public descriptions of cases and claims; obtained through direct connections and telephone inquiries; and obtained via initial inquiries through some of IUCN’s regional offices.

9.2 Information sample

This section provides an overview of the methods used to gather information on cases and claims analyzed in this report, including both the primary information-gathering processes (material available in websites, public fil-

ings and other publicly available sources) and secondary processes, designed to obtain information through other sources.

9.2.1 Information submitted to SCBD and other public sources

The initial data for this study was compiled by the CBD Secretariat, using publicly available resources, including primarily the internet. This information was supplemented by additional direct research through a variety of public sources of information. Although extensive research resulted in numerous discussions of claimed misappropriation, the vast majority of these documents were eventually found to refer to the same 20–30 formally filed or widely publicized claims (included in the list in Table 1).

While some of the information obtained in this study came from official records in the country in which a claim was filed (usually limited to patent actions), access to these records has been difficult, and usually depends on knowing significant information about the claim (including names of parties and specific courts or other bodies in which the claim was filed). Hence, it was necessary to initiate a study of less official records – newspapers and web-based, including websites of governmental agencies, NGOs, universities and commercial

bodies. Often, these sources were able to provide significant information, but did not include the data necessary to locate official records of cases, patents, and other relevant information.

Hence, while it was possible to obtain information about the existence of controversies, it was generally dif-

ficult to obtain a systematic set of underlying facts to serve as a basis for comparative analysis.³²⁷ Table 1 describes the current state of knowledge, with empty boxes indicating those points on which it was not possible to obtain reliable information.

Table 1. Public claims identified (initial study)³²⁸

Genetic resource and other identifiers	Source countries	Type of claim	Current status
Ayahuasca <i>Banisteriopsis Caapi</i>	Ecuador	Formal case/claim	No longer active
Basmati	India	Formal case/claim	No longer active
Cunani and Tipir	Brazil	Formal case/claim	Closed
Endod or Soapberry <i>Phytolacca dodecandra</i>	Ethiopia	Public outcry	No longer active
Yellow Bean (product 'Enola bean')	Mexico	Formal case/claim	Pending
Tricolor Frog	Ecuador	Threatened case	Unresolved
Kalahari Hoodia <i>Hoodia gordonii</i>	Namibia, RSA	Threatened case	In negotiations
Extremophiles	Kenya	Threatened case	In negotiations
Maca <i>Lepidium meyenii</i>	Peru	Public outcry	
Nap Hal (wheat variety used in chapatis)	India	Formal case/claim	Decided 2004
Neem Tree	India	Formal case/claim	Decided 2002
Pozol	Mexico	Public disclosure at minimum. Precise data on nature/status of claim not yet discovered.	
Selva Viva: General claims re prospecting	Brazil	Formal case/claim	Decided
<i>Swartzia Madagascariensis</i>	Zimbabwe	Demand	No longer active
Turmeric <i>Curcuma longa</i>	India	Formal case/claim	Decided 1998
Acai <i>Euterpe precatoria</i>	Amazon region	Public disclosure at minimum. Precise data on nature/status of claim not yet discovered.	
Traditional plant medicines (AMMA corp.)	Peru	Public disclosure	
J'oublie Berry (patented product name 'Brazzein')	West Africa (Gabon)	Public disclosure	

continued on next page

327 As noted above, this study is still in its initial phase, and has been funded to continue work in greater detail. Additional research and confirmation of current status of all claims will be undertaken.

328 A more detailed table is included as Annex 1 to this Chapter. For this paper, standard legal details (which court, legal theory etc.) are not relevant. This table identifies instead the form of each claim – a formal case (filed legal action), a threatened case, a regulatory challenge (governmental processes), a demand (informal assertion), or a public outcry (public statement), or public disclosure of the existence of a patent of possible concern.

Table 1. Public claims identified (initial study) *continued*

Genetic resource and other identifiers	Source countries	Type of claim	Current status
Philippine Snail <i>Conus magnus</i>	Philippines	Regulatory challenge	
Copaiba <i>Copaifera</i> sp.	Amazon region	Demand	
Cupuacu <i>Theobroma grandiflorum</i>	Amazon region	Formal claim/case	
Jamun <i>Syzygium cuminii</i> , Karela <i>Momordica charantia</i> Lin and Brinjal <i>Solanum melongena</i> L.	India	Public disclosure	
Bitter Melon	Thailand	Public disclosure +?	
Hom Mali (Jasmine Rice)	Thailand	Demand	
Kemukus <i>Piper cubeba</i> and Sambiloto <i>Andrographis panicurata</i>	Indonesia	Public disclosure	
General seeds collection (Millennium Seed Bank)	Kenya	Regulatory challenge	Resolved
Nuna Bean	Andean region	Public disclosure	
Kaw Krew (compound 'Pueraria mirifica')	Thailand	Public outcry	
Plao-Noi	Thailand	Public disclosure	
Quinoa	Andean region	Public outcry	User rights abandoned
Snake Gourd	China	Public disclosure +?	
Teff	Ethiopia and Eritrea	Public disclosure +?	
General prospecting for species and compounds	Venezuela – Yanomami land	Public outcry and possible demand	
'Junk' DNA from all living species	All	Public outcry against patent (on one hand), and patent defense actions (on the other)	
Other: Cat's Claw, Sangre de Drago, Quebra Pedras and Wormseed	Amazon region	Public disclosure	
Other: tamarind, haldi, ginger, anar, pepper, amla	India	Public disclosure	

The initial process of obtaining information illustrates a more general problem relating to ABS – the manner in which information on ABS issues and GR use can be found. The basic mechanism for finding this information was an iterative search process. The first step was to search generic key words, such as 'genetic resources' and 'biopiracy' through public search engines (Google, Altavista, Yahoo) as well as closed legal and official databases (governmental sites containing, for example, patent information and national laws and cases). This search produced a list of cases, including information on the names of species and varieties, products, and actors.

The second step is to run a series of specific searches of the terms and names discovered in step 1. The third step was to evaluate the information on each case, to determine whether it involved a claim of misappropriation of genetic resources (thereby belonging in this study) as opposed to a claim based on utilization of biological resources, non-genetic-related TK or other matters.

However, the limitations of this approach become obvious rather quickly. For example, this multi-level iterative process is very long and can be expensive when it involves closed or fee-based databases. Consequently, it

was not possible to search all terms discerned by step1³²⁹ in the databases available to the authors. In addition, it was not possible to use these tools to uncover information on less public claims, unless they used a particular suite of critical terms.³³⁰

The need to base searches on a comprehensive list of key terms, however, is the most critical limitation. The only way to find relevant public filings electronically is to search for specific words and concepts. It is nearly always possible, however, to complete relevant filings without ever using such terms. Applicants are rapidly learning to take special care to avoid 'hot button' words ('genetic resources,' 'traditional') or any reference to the location from which the components were derived. The required level of detail can be satisfied by naming the specific species, or even less searchably, by including chemical formulas and other scientific descriptions, or developing product names for identified compounds and sequences. It is virtually impossible to develop a key-term list that includes all scientific and common names of a country's indigenous or endemic species as well as all of the chemical compounds and other scientific descriptions of their usable characteristics, and virtually impossible to search them all in all relevant databases.³³¹ In other words, if you do not have specific information about a particular claim of misappropriation, it may not be possible to find it.

While problematic in terms of the research for this study, this report's underlying task is to demonstrate areas for development, rather than to bemoan the lack of

appropriate tools. To that end, the fact that modern research methods provide only a random chance of finding users (unless they disclose themselves) is worth noting. It suggests that the only effective way to approach the problem is to form the ABS regime in a way that creates significant and worthwhile incentives for users to self-report and to comply with ABS requirements. Presumably, the current negotiations can address this need as a part of their mandate to make the ABS regime functional and effective.

The third step in the analysis – evaluation of each claim to determine whether it alleges misappropriation of genetic resources – was only minimally possible given the lack of reliable sources of complete information.³³² This element has not been completely possible at present funding levels. Many of the identified claims (especially those that were informally asserted in the public media) simply disclose the existence of a patent or patent application which names or refers to a particular country, species or remedy. Without review of the patent documents and additional information about the country, species or remedy, one cannot determine whether any formal patent action is warranted. Moreover, it is necessary to fully analyze this information, in order to identify the nature of the claim and whether it actually addresses any CBD-related issues (GR use or GR-related traditional knowledge (GRTK), misappropriation of genetic resources, invalid or non-existent rights of access, etc.) rather than more conventional claims based on existing legislation and legal theories.

9.2.2 Data obtained through secondary research

Beyond the use of advanced electronic tools, however, a further information-gathering phase of this analysis was carried out by the author of this paper using telephone,

e-mail and other direct contacts. This work, too, is ongoing, as additional sources and issues have been identified throughout the course of this study.

329 Most of the terms being searched can be found in the columns labelled 'Genetic resource and other identifiers,' 'Primary user information' and 'Claimants' in Annex 1.

330 A similar problem arises for source countries seeking information on use of genetic resources. Even in patent databases, one might have to search each species individually (by common and scientific name) to see if it appears in a patent application, and even this cannot catch all uses. A good analysis of the methodology needed for use of patent databases as sources of information on genetic resource use, and the unavoidable limitations of such a methodology is found in Oldham, P. 2004. 'Global Status and Trends in Intellectual Property Claims: Genomics, Proteomics and Biotechnology.' Global Status and Trends in Intellectual Property Claims 1. Available at www.cesagen.lancs.ac.uk/staff/oldham.htm

331 Although key information can be found in public filings and other separate databases (such as those recording patent applications, and governmental databases of court filings and cases), these sites, if reliable and comprehensive, are priced in a way that prevents the necessary levels of sampling.

332 It has been difficult to identify and locate specific representatives working on particular claims.

The main objective of this process has been the development of information regarding non-public claims. For a variety of reasons, relatively little information regarding such claims is available, except through direct contact with individuals from all sides involved in those activities. This process also acquired further data on the various publicized cases and claims discerned through the electronic search, providing significant additional information regarding the facts that gave rise to the claim and the manner in which they became known.

From the outset, this component of the study demonstrated several key obstacles that frequently arise in ABS research and development – facts and factors that would tend to prevent disclosure. While the users and providers (both national and private) have stated their collective desire to maximize the information available to AHWG-ABS and to the COP, these desires often conflict with more specific national, institutional or commercial objectives. Few motivations induce companies, governments or other stakeholders to provide information, while several strong disincentives obstruct disclosure, including the following:

- *Providers:* Contractual limits of disclosure. Many ABS agreements are marked as “Confidential” or contain specific provisions limiting the right of one or both parties to disclose the terms of the document.³³³ The legal effect of these contractual provisions requiring confidentiality is often limited and may not be entirely clear. However, the primary objective of confidentiality of the contract’s contents is often supported by the courts. Hence, public disclosure of the agreement’s terms to a public body for purposes not directly connected with the execution of the document may be an actionable violation of that agreement.
- *Users:* Desire to avoid disclosures leading to negative perceptions. Companies and countries usually prefer that biopiracy claims and other claims of irregularities should not be publicly asserted, even where the company is confident that its actions are equitable and legally defensible. Even if its position has been formally upheld by the courts or other deciding bodies, public discussion of the issue is undesirable.³³⁴
- *Users and providers:* Desire to avoid potential libel or other court action.³³⁵ There is a further concern relating to unproven claims of misappropriation – the possibility that, by describing a claim, the party providing the report will be open to accusations of libel, slander or other damage. For example, a public claim that a company does not have appropriate title to valuable assets may cause a disruption of that company’s commercial opportunities. If the claim is later ruled to be unfounded, these lost commercial opportunities could become the basis of a lawsuit. Hence, it may be preferable to avoid making such statements until they have been fully researched and proven, and especially until all options for negotiated settlement have been exhausted.
- *Providers:* Desire to protect bargaining position. This can be a strong disincentive, applicable to a significant number of claims relating to possible misappropriation. As discussed in Part III of this paper, the promise of confidentiality can be a major incentive that brings opposing parties to the table in benefit-sharing negotiations.

To address these challenges, this analysis has been conducted by an independent organization (IUCN) which can receive information with the promise of confidentiality.

333 Several ABS contracts have been provided in confidence to The ABS Project, a project being implemented by IUCN ELC with funding from the German Ministry for Development Assistance (BMZ); additional information has been provided in interviews. In addition, numerous form agreements have been provided which significantly omit any provision limiting the Parties’ rights to disclose the contents or terms of the agreement. The ABS Project is preparing a detailed analysis of existing ABS Contracts, with the goal of providing a guide to the legal issues arising in the negotiation and documentation of ABS contracts. This information will be published in a forthcoming book: Carrizosa, S., S. Bhatti et al., Contracting Science – Examining the Contractual and Scientific Issues Relevant to ABS Contracts and Legislative Development (IUCN, expected 2008). Additional information regarding The ABS Project and its forthcoming publications may be found at www.iucn.org/themes/law or by contacting the Project manager at tomme.young@googlemail.com

334 As one industry representative noted, ‘the less we say about these issues, the better. In many cases, even if we have strong and credible information that combats a claim, we don’t present it in the media, because it will just keep us in the middle of public attention, and discussions of ‘biopiracy’ in the news media always present the industry as a ‘bad actor,’ no matter what the facts are.’

335 Libel is normally defined as ‘defamation by written or printed works, pictures, or in any form other than by spoken words or gestures’ or ‘the crime of publishing [statements that constitute libel as previously defined].’ Webster’s Encyclopaedic Unabridged Dictionary. Further relevant legal concepts address situations in which an unfounded claim causes the loss of a legitimate commercial opportunity.

ality. Approximately 70 people were contacted seeking information about claims of misappropriation. Nearly 45 of these persons have replied with some level of substantive information. Statistically, this level of response indicates that the inquiries were well targeted and that respondents had an appropriate level of confidence in the confidentiality of their responses.³³⁶ (All responses received in this portion of the analysis will be kept confi-

dential for purposes of this initial analysis. In subsequent processes, efforts will be made to find a non-biasing way to provide the names of those who specifically allow such disclosure). The study has found that there is a wealth of relevant information available, both regarding claims and the manner in which they have been addressed and resolved.

Table 2. Participants in confidential interviews (to date)

Government	Industry	NGOs and indigenous groups	Research facilities	Other ³³⁷
40%	21%	19%	14%	6%

In general, it was less easy to compile the responses to the secondary investigation in tabular form than the public cases identified in Table 1. Interviews tended to focus on categories of claims, and where specific information was provided it was often given with strong restrictions relating to confidentiality. Information received is not de-

scribed in a way that will violate those restrictions, however, it is fully integrated into the discussions in sections 9.3 and 9.4 of this paper. The following table describes the primary information obtained through the secondary information-gathering process:

Table 3. Less public and non-public claims identified

Type of claim	% Respondents ³³⁸
Formal lawsuit	13
Administrative appeal	20
Denial or dismissal of ABS or other permit application	27
Opposition in ABS processes	47
Claim of other legal violations in obtaining or using specimens	16
Allegations asserted in other ways, without formal complaint or process	73

Similar to the public process, most of these interviews indicated a very high level of non-formal actions and claims (parallel to those referred to in Table 1 as 'Public disclosure' and 'Public outcry'), and only a very small number referred to formal legal action (generally focusing on some of the actions described in Table 1).

However, the private interviews discerned a high level of administrative action – spanning a range from formal participation in (or objection to) ABS negotiations to public statements of disapproval expressed at local or national level, including requests for government action against purported misappropriation.

336 Note that this table identifies the percentage of respondents who discussed or described experiences involving each type of claim. Obviously, many respondents had experience with more than one claim.

337 Some of those who did not formally respond noted a need for more time to compile their response, but several indicated a need for a clearer idea of the nature of the inquiry and of the manner in which it will be used. It is hoped that this report will answer some of those questions. Following its completion, it is intended that IUCN-Canada will undertake a survey of relevant stakeholder groups (government, NGO and user) to develop a more robust body of data on these issues.

338 The 'Other' category includes primarily cataloging projects and specimen collections (botanical gardens, zoos, herbaria, and seed collections). All persons interviewed had direct experience with claims involving ABS transactions.

9.3 Nature, source and objectives regarding claims

This section presents and analyzes the underlying information regarding the actual claims identified through this study. It provides a general overview of the nature of claims described in section 9.2. Although not analyzing the specific legal theories or facts alleged in the various claims, this section considers five primary elements that are of particular importance to the analysis of the nature of claims and responses to claims, as well as the underlying motivations that drive them:

- Who is making the claims and against whom;
- The manner in which the claimant became aware of the underlying facts;
- The nature of the injury or loss that prompted the claimant to assert a claim;
- The apparent objectives underlying the claim; and

9.3.1 The parties (claimant and subject of the claim)

As a preliminary matter, it is useful to consider the categories of entities and individuals involved in claims of misappropriation of genetic resources. In general, claimants fall into three categories:

- Directly affected individuals/communities/ stakeholder groups;
- NGOs; and
- Governments.

The claims are typically made against some combination of the following:

- A commercial entity or developer of commercial uses;
- A source-country government issuing permission;
- The original collector; or
- A middleman or information peddler.

- The deciding body or governing principles on which the claim is based.

These factors provide some useful information about the ways in which claims arise, and the reasons they are asserted, which will be considered in more depth in section 9.4.

This discussion will not delve deeply into the actual uses or other underlying facts, except as illustrations, and/or to note that in a majority of the cases and claims studied for this paper, the value of the rights being challenged was generally unknown and incapable of estimation at the time the claim was asserted. In several cases, claims have been asserted and publicized well before any samples or information were collected, while in others the first assertion was based on information found in public advertisements and marketing materials for an internationally marketed GR-based product.

To date, although claims are often brought seeking rescission of decisions made by the user country's governmental bodies, few claims have been made directly against any user country calling on it to implement Article 15 or equitable principles concerning genetic resources.

Private and NGO claimants

In the overwhelming number of claims, regardless of who brings or promotes the claim initially, NGOs have taken a major role in providing legal services and publicizing claims through the news media, internet and other forums (Table 1). For example, in about 88% of the cases identified in Table 1, NGOs had a very early role in publicizing the claim. All of the eight formal legal actions reported in that table involved action by or with assistance from NGOs in researching and presenting the claim.

Governments as claimants or defendants

One key factor in the manner in which claims are brought relates to whether governmental entities (or any group of them) are claimants or defendants. Of the public claims listed in Table 1, only four included any direct action calls against government for failure to complete appro-

priate ABS procedures, or alleging other particular errors in those procedures. These claims focused on public notice questions and response to public objections (asserted during or after the government/user negotiation processes). In only one of the reviewed claims,³³⁹ has a formal allegation been made that the benefits received from the user were not distributed appropriately.

The confidential interviews disclosed a much higher level of claims against government arising in the form of regulatory challenges within the ABS agreement process. More than half of the government representatives responding, and all industry interviewees stated that ABS-related processes should always be expected to raise some public objections, potentially leading to protracted discussions. As one government representative stated, 'in some people's minds, any ABS agreement is biopiracy.'

Where the source-country government is not being complained against, however, it is often either a claimant or supporter of the claim. Most government representatives interviewed indicated a strong preference for informal processes and negotiations, where possible. In several cases, however, the government took a primary role in negotiations with the user, often working in coordination with NGOs, indigenous groups and others.

CGIAR international agricultural research centers

Research indicates another potential category of claimants – the CGIAR Centers. Their mandate is to 'collect, characterize and conserve agricultural genetic resources' as part of a larger mandate to 'mobilize agricultural science to reduce poverty, foster human well-being, promote agricultural growth and protect the environment' through:

- Promotion of sustainable production;
- Enhancement of national agricultural research systems;
- Germplasm improvement;

- Germplasm collection; and
- Policy.³⁴⁰

The CGIAR clearly views its mandate as providing public resources for publicly beneficial purposes, stating that it 'generates global public goods that are available to all.' As such it strictly limits the ability of any recipient of material from any of its International Agricultural Research Centres to patent or otherwise restrict the use of the variety involved.

Much of the seed transfer system through the international agricultural research centers (IARCs) that are aligned under the CGIAR has been carried on under Material Transfer Agreements, which are contracts in form, but often evaluated under general CGIAR experience rather than individual contract law of particular countries.³⁴¹ These evaluations generally turn on existing law relating to the hybridization and other development of agricultural varieties, suggesting that they may be matters of conventional uses.

In general, based on a very limited set of interviews, it appears that the IARCs are able to resolve violations of material transfer agreements contractually, although no information has yet been provided regarding the frequency with which such resolution is needed. The IARCs have been somewhat directly involved in at least three of the publicized cases reviewed for this paper. For example, in one instance, a CGIAR centre resorted to asserting legal or public claims against a user (the 'Yellow Bean' case). In another case (Acai), local claimants have publicly sought involvement and policy development by the relevant CGIAR centre, and a higher level of ongoing responsibility controlling and overseeing intellectual property claims. Regarding jasmine rice, the user claims a CGIAR centre as the source of his original samples of the variety. In this connection, it should be noted that CGIAR has a Central Advisory Service (CAS) on intellectual property issues, which examines these matters.³⁴²

339 Recognizing that no official documents have been available for many of these claims, and not all possible avenues of information have yet been completely reviewed.

340 As described in the CGIAR website at www.cgiar.org/who/index.html.

341 See, Moore, G. and Tymowsky, W. 2005, Explanatory Guide to the International Treaty on Plant Genetic Resources (IUCN/IPGRI), at 90.

342 The service (or at least its outreach component) appears to be managed by IPGRI. Information on the CAS can be found at www.ipgri.cgiar.org/cas/Default.asp

Claims against users, researchers, collectors and middlemen

Most commonly, claims have been made against the commercial user of GR and/or the applicant or holder of a patent referring to natural or traditional varieties, traditional remedies, or traditional sources of information. Only four of the specifically listed public claims do not include a commercial user within the claim. In some well publicized instances, claims have been made

9.3.2 Claim mechanisms

As with all legal and policy-related issues, claims relating to misappropriation of genetic resources typically use one or more of the following eight mechanisms:

- *Lawsuits and formal legal processes:* In the context of this study, relatively few claims utilized formal legal process. Most of these claims were filed in national patent agencies, either opposing patent issuance or calling for revocation of an existing patent.
- *Administrative citation, penalty or license revocation:* In a few cases, direct administrative action in the form of a formal citation or penalty or the revocation of a license or other permission to collect or utilize specimens have been undertaken. In some cases, these administrative processes are a required prerequisite to litigation (i.e., the government must ‘exhaust administrative remedies’ before a case may go to court).
- *Objections filed in administrative processes:* A number of claims have been filed in administrative processes by members of the public, including NGOs, indigenous groups and others.³⁴³ In general, these claims arise when an applicant sought a non-ABS permit or agreement (permit to conduct research in protected areas, CITES export permit, etc.) and claimants challenged the process as an attempt to evade the operation of ABS law.
- *Administrative objections to the issuance of ABS or other permissions:* In a number of instances, public

against persons who marketed knowledge or samples to other companies or commercial organizations. The claims were based on allegations that a collector or cataloger had failed to disclose his contract or other intent to share genetic resources, samples and knowledge with commercial entities after collection. These claims represent the only criminal penalties or proceedings identified in the research to date.

objections and other claims have been asserted after an ABS agreement or other permit or license has been obtained, seeking its rescission. These objections generally claim that the issuing process was invalid, and that due to this invalidity the resulting permit enables a misappropriation of genetic resources.

- *Formal request on government to take action against a purported misappropriation:* In a few cases, members of the public, including NGOs and indigenous groups, have issued formal requests to government agencies calling for action against a user for violation of ABS requirements. This kind of request may sometimes be required or recommended as a preliminary step before bringing a lawsuit against the government agency.
- *Public disclosure or outcry:* Many of the claims use completely informal mechanisms – public media and awareness tools. While the full breadth of this kind of opposition has not been studied, it is clearly a major mechanism for raising ABS claims at present.
- *Direct request or demand on user:* Another informal mechanism (primarily described in interviews) is direct contact with the user. This contact usually takes the form of a request or demand that the user can alleviate the potential claim by ceasing certain activities, or agreeing to meet benefit-sharing obligations.³⁴⁴

³⁴³ Such objections are relatively common in ABS negotiation processes, however, the objective of such a process is to ensure that the applicant does not engage in misappropriation and that his access is authorized. Hence, these are not claims of misappropriation for the purposes of this study.

³⁴⁴ As noted below, many users are not aware of any obligation to obtain access having acquired the genetic material from researchers and others within the users’ own country. Hence, further negotiation over access requirements is often unproductive, however, direct negotiation relating to benefit sharing may be useful.

- *Direct request or demand on the government with jurisdiction over the user:* Another mechanism, which has been reported rather infrequently, is direct contact with the user's government, asking it to take action to ensure that the user meets his benefit-sharing obligations under the CBD. This mechanism has been considered by source countries and other claimants, when addressing user countries that have not adopted 'legislative, administrative

or policy measures... with the aim of sharing in a fair and equitable way ... the benefits arising from the commercial and other utilization of genetic resources.'³⁴⁵

As further noted below, the selection and use of these mechanisms is strongly affected by existing uncertainties relating to ABS law and compliance.

9.3.3 Claims involving traditional knowledge

One critical concern in this analysis relates to claims relating to traditional knowledge. As noted in many documents addressing a wide variety of aspects of CBD practice, the concept of traditional knowledge, and the rights of indigenous people and communities embodying traditional lifestyles are much more extensive than the entire scope of the Convention, and even within the CBD are discussed in contexts other than ABS. Typically, however, ABS discussions have recognized that a subset of TK issues – those involving GRTK – appear to be included within Article 15.

The concept of GRTK, however, remains somewhat undefined. Hence, while a great many cases and claims involving traditional knowledge issues have been discerned in this analysis, it has been difficult to deter-

mine which of them actually involve access to genetic resources.

In cases of doubt, this analysis has generally erred on the side of greater inclusion. Where a claim focuses solely on the use or patenting of biological material or existing traditional remedies, such claims have been excluded from this study, based on the belief that ABS is not intended to address normal commercial markets in biological materials. Where it was not clear, however, whether a claim also included the use of traditional information for purposes of genetic manipulation, utilization/replication of a genetic sequence, or replication of a biochemical formula, the claim was included in this study.

9.3.4 Discovery of the facts underlying the claim

In general, there have been only a small number of potential avenues by which the claimants discovered the use or activity that formed the basis of their claim. Many of the public claims (and some of the less public claims) have arisen where a member of an affected group or an NGO has happened to find references to a species, variety, remedy, country, geographic area, cultural group, or particular compound in:

- Patent databases;
- Corporate (public) annual filings and reports; or
- Notices of royalties.

Claims based on these discoveries have often taken the form of 'public outcry' against the patent or product use.

In some cases, after discussion with relevant government offices (to determine whether a permit or other approval has been given), the discovery has been the basis for direct initiation of negotiations with the user. Several government officials, however, reported first hearing of claims when NGOs publicized them.

It should be noted, however, that these discovery mechanisms are very general in content. Often, the claimant is unable to view or review the relevant documents (patent or patent application), or to obtain complete information regarding the relevant facts from these sources. As a consequence, in the context of patents, for example, it may not yet be possible to know whether a patent is actually invalid or involves any actual misappropriation or not.

³⁴⁵ Art. 15.7.

Other modes of discovery have included statements in product packaging and other promotional materials, local advertisements seeking samples or sample collectors, and telephone calls from interviewers asking for details about a reported agreement. At present, no information has been collected (in interviews or elsewhere) in which discovery of facts suggesting misappropriation has occurred through the interception of material in customs, or through the apprehension of collectors in the field. This may not be unexpected, given that it is not possible to determine objectively whether biological material (in transit or being collected) was taken for

the utilization of genetic resources, or simply for (legally permissible) conventional sale of biological material.

In some cases, the discovery of the potential claim occurred through required public notices given under national ABS legislation, including announcements of domestic requirements for public participation. This fact was cited by all industrial sources and most governmental sources, as an indicator that current uncertainties regarding ABS concepts have resulted in a high level of targeting against compliant industries.

9.3.5 Kinds of harm/loss alleged

Although the legal theory or argument alleged in each claim is not precisely relevant to this study, it is important to consider the nature of the motivating force behind them – i.e., the underlying injury, damage, harm,

expectation or loss that prompts claimants to take action. The nature of the primary harm perceived by the claimant, and the nature of the remedy expected, are key issues determining the level and nature of claims.

Table 4. Nature of loss alleged

General harm claimed	% of respondents and assessed situations
Direct harm to commercial/livelihood interests	36
Potential harm to commercial/livelihood interests and expectations	73
Inequitable actions – gaining a benefit from GR obtained, without sharing with source, pursuant to Art. 15 and/or national law and other legal principles	96
Failure to comply with primary ABS requirements	83
Unpermitted publishing or transfer of genetic or biochemical information	68
Damages or lack of rights in specimen collection	11

In general, this study found that there were six categories of loss or damage that were asserted by those claiming that a misappropriation, unauthorized use or similar action³⁴⁶ had occurred.

In many of the interviews and situations assessed, the claimants alleged more than one type of loss or harm, although typically one underlying injury or concern was predominant.

In connection with this discussion, it is important to note that most public claims (Annex 1) include many different allegations, often including more than one of these elements. Thus, for example, nearly all patent-based claims also include specific allegations of genetic

resource use without ABS compliance, unpermitted transfer of GR rights, and the failure to share benefits. This overlap is the predominant approach, so that one can assume that all claims allege more than one type of harm, and most allege at least four of those listed above.

9.3.5.1 Direct harm to commercial/livelihood interests

By far the most compelling claims arise where the user has directly taken or caused a diminution in the rights of farmers and other persons in the source country to use and market varieties and rights which form the basis of their existing livelihoods. A few powerful examples of this involve a user who patented an agricultural variety

³⁴⁶ In recent years, the terminology issue has become increasingly controversial, with initial pejorative terms such as ‘biopiracy’ being replaced in CBD discussions by terms like ‘unauthorized access’ and ‘misappropriation.’ Unfortunately, although intended to be less prejudicial, these terms too are sometimes sometimes objected to as controversial. Recently, even less evaluative terminology has been proposed – Robert Lettington has coined the term ‘irregular access,’ as a descriptive that does not carry any suggestion of fault or liability, but only the existence of questions which must be reviewed.

that is virtually identical to a traditional variety being cultivated and marketed by farmers and **others in the source country**.³⁴⁷ In one case (the Yellow Bean case), the patent holder then claimed a royalty from traditional farmers. Similar situations have arisen, in which the patent application was challenged before any attempt had yet been made to **assess farmers using the traditional product, or otherwise limit their rights**.³⁴⁸ In general, these cases have focused on the patent of a traditional variety (or conventional variant on such a variety), rather than on the creation of new varieties based on the **traditional variety using genetic (non-conventional) technologies**.

9.3.5.2 Potential harm to commercial/livelihood interests and expectations

A large number of the publicized claims, as well as many of the claims discussed with individual contacts related to the impact of unauthorized use on the future commercial interests and expectations of a source country or a community or group within it. Many, but not all, of these cases involve the use of GRTK.³⁴⁹ For the purposes of this paper, GRTK includes those instances in which knowledge of a particular traditional use or remedy provided a clue for researchers who then isolated and used genetic or biochemical information from one or subspecies/variety used.³⁵⁰

In this category, a large number of claims have been asserted, primarily through the public media (by 'public outcry'), but also some patent-related actions. These claims generally focus on traditional remedies and other products. The harm involved was generally described in two ways:

- Equity-based harm – claiming that some organization or individual was obtaining a commercial benefit from information or genetic resources within the sovereign rights or other authority of a country

or indigenous community (further discussed below).

- Harm to future interests – stating that the patent will prevent the source group (holder of the traditional knowledge) or country (holder of sovereign rights over the genetic resources) from developing knowledge, remedies or resources and marketing them.

As with the prior discussion, this denial is made more serious by the fact that under the application of internationally accepted principles of patent law, the users and traditional holders within the source country could not patent the product themselves (because one can only patent a new innovation that is not generally known). In light of globalization, however, patenting anywhere essentially denies the source/origin countries, communities and individuals the ability to develop and obtain commercial value from these products of their biological and genetic material and of their cultural and traditional knowledge.

Instances of this kind of harm are identified in nearly all of the public claims, which have overwhelmingly focused on patents, both as a basis of discovery and as the mode by which particular harm was alleged. Of the public claims identified in Table 1, only nine – specifically the Hoodia, Kenyan extremophiles, Selva Viva, Amma Corporation, Millennium Seed Bank, Philippine Coral, Plao-Noi, Yanomami Land and Coco-de-mer – did not appear to arise out of a patent. The claims arose in a variety of ways. In three (Kenyan extremophiles, Hoodia, coco-de-mer), the claim arose from discovery that a product had been developed. Four of these cases (Amma Corporation, Philippine Coral, Selva Viva and Yanomami) alleged intentional efforts to obtain information or access without full disclosure of the intent to sell the information/genetic material obtained, or to use

347 The Yellow Bean and Ayahuasca cases, described in Annex 1, are examples of these situations.

348 See for example the Neem Tree, basmati rice, jasmine rice, and Nap Hal claims described in Annex 1.

349 As with all other ABS issues, the relationship between ABS cases and traditional knowledge cases involves difficulties of legal analysis not present in other ABS matters. It is also noted that the patent issues relating to traditional knowledge cover a wide range of matters far outside of the scope of ABS, and that the legal basis for TK actions is significantly different from that relevant to ABS claims (see for example the significant differences in wording of articles 8(j) and 10(c), as well as articles 17.2 and 18.4). Hence, although ABS law and TK law will frequently overlap, in terms of framework development and legislative/judicial implementation, they must be thought of and addressed as two separate legal theories. For the purposes of this paper, the instances in which the two issues clearly overlap and must be addressed together are referred to as 'genetic-resource-related traditional knowledge.'

350 By contrast, situations in which the subspecies/variety or remedy was directly used or marketed fall within the broader category of 'utilization of traditional knowledge,' but may not be GRTK.

it commercially. One case, the Millennium Seed Bank, arose out of the public knowledge of ongoing negotiations for the creation of a non-commercial collection. At least one of these (Amma Corporation) resulted in a criminal case, and at least one other (Philippine Coral) in the revocation of the permit for sample collection. Only one other (Millennium Seed Bank) has since been resolved. The other claims are either still under negotiation or abandoned.

By contrast, most of the confidential interviews disclosed a much broader scope of claims, and indicated that there are many more claims relating to ABS violations which have nothing to do with patents granted or applied for. Thus, for example, a large number of claims appear to allege that the public consultation processes were incomplete, or that the public group giving consent (where required by law) was not authorized to take action on behalf of the community or stakeholder group in question. Challenges to the scope of the rights granted in an ABS permit, the agreed amount of benefits, and the manner in which they are to be distributed

within the source country are also relatively common. In a number of cases, public concerns focused around the fear that users who receive some kind of permission (ABS or other) to collect specimens or catalog information will later use that information commercially without sharing benefits, unless they are legally prevented from doing so.

9.3.5.3 Inequitable actions – using GR without sharing the benefits

The harm involved in many misappropriation cases is one of expectation – that others should not be allowed to profit from the source country’s resources and historic conservation of those resources without sharing those benefits equitably. This is a very different kind of harm, which goes to the heart of the ABS issue. These claims find their basis in a primary concept in common-law countries where they are referred to as ‘equity’ – the legal notion of fairness extending beyond the contents of contracts and the strict interpretation of contractual rights.

Box 1. Equity

For example, consider the situation in which Mr. Y gets permission from Mrs. X to pick roses from her garden to decorate his dinner table. After they are picked, Mr. Y enters the roses in a flower show where they win a prize.

The right given by Mrs. X may be both a kind of contract and a property right (the right to trespass on Mrs. X’s property). Is Mr. Y’s decision to use the roses in a different way a breach of contract? Principles of contract law would probably not decide this, because under contractual law there is no direct measurable harm to Mrs. X – she had agreed to give away the flowers, anyway, hence there is no damage to her.

Principles of equity, however, also apply. These principles provide a different result. Mr. Y has obtained a benefit from Mrs. X’s excellent gardening and from her development or preservation of a unique variety. Even though Mrs. X would not enter the flower show herself, principles of equity would hold that Mr. Y must, at least, share the prize money, give her credit for development and cultivation of the roses, and recognize her ownership rights.

Most of the publicly asserted claims examined for this report, although mentioning these equity issues as a supporting point, have not sought equitable remedies (a share of benefits, or a promise to share them in future), but rather call for invalidation of patents or similar rights. Although not yet applied by any court, equity principles have been raised in non-public discussions and negotiations, and the use of GR without benefit sharing has often been the specific and primary basis for the claim.

Equitable principles have been most prominent in civil and criminal actions against middlemen and collectors. In several instances, the source country took action based on the (equitable) collector/middleman’s obligation to disclose his intent to sell the information and samples for purposes of commercial development. Three such claims have been publicized, resulting in fines, rescission of permits, and (in one case) expulsion from the country.

More than 65% of the individuals interviewed had been involved in some ABS challenge based on fears that the collector would be able to transfer the material to a commercial user after the samples were removed from the country without any payment or even notice to the source country. These claims are based on equity issues.

9.3.5.4 Failure to comply with other primary ABS requirements

Misappropriation claims sometimes suggest that a particular user or applicant has not complied with the primary requirements of ABS law. These claims span a rather large spectrum from, at one end, allegations that the ABS-legal compliance was insufficient to comply with specific legal requirements,³⁵¹ to, at the other end, allegations that ABS obligations were completely ignored and no ABS agreement obtained. Records of administrative claims have been difficult to acquire, however. Interviews with individuals from governments, industry, academic/research institutions, NGOs and indigenous groups have provided informal descriptions of their experience with formal objections to ABS applications and permit processes, as well as other government permissions, such as CITES export permits and permits for research/cataloging and sample collection in protected areas.

The most basic allegation, of course, is that the user simply omitted any effort to obtain a right to utilize the genetic resources, so that his activities constitute a misappropriation of genetic resources or GRTK. In some instances, where an ABS agreement has been negotiated, flaws in the procedures (especially public participation and consent requirements under national law) have been asserted as bases for declaring that the agreement is invalid and activities under it are misappropriation. In other cases, the claim alleges that the government negotiators have not exercised due care in protecting the country's sovereign rights and property interests with regard to its genetic resources. In essence, these claims allege that the grant of access or other rights was illegal or represented a violation of government's obligations to obtain the maximum return on natural resources and sovereign properties.

In these cases, there was a significant difference between the claims mentioned by source-country governments and those by private individuals, NGOs and others. Governmentally asserted claims generally focus on the entire failure or refusal of a user to obtain or comply with ABS agreements. For governments generally, particular errors or omissions within such agreements are generally considered to be remediable problems except where the applicant intentionally made some misrepresentation. It should be noted that, apart from patent claims in which ABS omission is stated as a supplementary basis for the claim, there have been relatively few claims raised by source-country governments alleging ABS violations.

At the level of individual and NGO claims, however, a greater proportion appear to focus on governmental authority to issue permits, and more particularly on issues of specific compliance with national and/or sub-national law, including:

- Sufficiency of compliance with public participation requirements;
- Acceptability of financial provisions in agreements; and
- Distribution or arrangements for distribution of benefits at the sub-national level.

Approximately 33% of NGO representatives discussed such claims, and most of the government and industry representatives had experienced them at some level, however few of the public claims listed in Table 1 were based on this kind of issue. Although persons asserting claims of this type generally desired publicity for their claim, they were rarely publicized widely (although sometimes receiving detailed coverage at the most local level), and have been difficult to locate through online or other research.

Many of these claims focused on users who did not believe that their activities utilized genetic resources.

³⁵¹ For purposes of this study, direct participation in public consultation processes in ABS negotiations, even where opposed to the issuance of an ABS permit, are not considered to be 'claims of misappropriation or unauthorized access,' since these processes are designed to ensure that whatever access occurs is authorized, and to prevent misappropriation. However, requests for rescission of an ABS permission after it has been issued have been included in this study, as such requests are generally based on the allegation that the permission should not have been granted and that action taken under that permission is therefore misappropriation.

For example, the Millennium Seed Bank claims arose in the context of a governmental permit enabling the creation of a conservation collection, with no known intent to use the collected materials for any commercial purpose. Claims were based on an underlying concern that once the material was removed from the source country, that country would have no right or ability to maintain awareness of the transfer of the material and/or utilization of its genetic or biochemical information. Several similar claims involving collections, taxonomic surveys and comparable proposals were identified in individual interviews, in all of which the applicant did not request (and the government did not grant) any right to commercial use of the genetic resources.

9.3.5.5 Publishing or transferring information without a right to do so

A number of claims focused on the transfer of other rights, such as the right to engage in research, contracts for the collection of taxonomic data, or contracts for the development of specimen collections and herbariums. Although these arrangements do not specifically grant any right to utilize genetic resources, as conceived by Article 15, the contracts raised questions regarding the future use of the material and information obtained, after the contracting party had collected and removed the data or material from the country of origin.

Here also, the claims generally related to users who did not believe that their activities utilized genetic resources, such as the Millennium Seed Bank claims arose in the context of a governmental permit enabling the creation of a conservation collection, with no stated intent to utilize the collected materials for commercial purposes. Similar claims and comparable proposals were identified in individual interviews. In all of these cases, the applicant did not request (and the government did not grant) any right to commercial utilization of the genetic resources. The primary expressed motivation underlying the claims was the fact that after removal of the material, the source country would have neither the right or ability to maintain know of or monitor transfer of the material or its genetic/biochemical information.

These claims are fuelled by the existence of another category of allegations – transfer of biological material and research results from someone who does not himself have specific authorization to utilize genetic resources to another entity for patent or other commercial utilization. In more than half of the publicized claims (most specifically discussed in the Endod, extremophiles, Selva Viva, AMMA Corporation and Millennium Seed Bank cases, but mentioned in many of the other claims),³⁵² the issue raised was whether a researcher with specific authorization to collect samples or undertake research also had the right to authorize others to utilize the genetic resources, biochemical formulas and other results obtained from the samples. Typically, such transfers happened with no inquiry into use rights. Thereafter, sometimes through many years, this research continued without information to the source country. Later, a patent was obtained or sought based on the material or the research results from the original researcher. This patent or application was then challenged because the original permission did not include any specific right of commercial use of the genetic and biochemical information. In at least seven of the publicized claims (Ayahuasca, Endod (Soapberry), Tricolor Frog, extremophiles, Nap Hal (chapati), Selva Viva, Plao-Noi),³⁵³ the researcher/collector's activity occurred prior to 1992, and in three claims, some product development had occurred before that date.

9.3.5.6 Damages or lack of rights of entry or access for specimen collection

Although frequently identified as a possible basis for claims, relatively few specific claims alleged that the user's action in collecting specimens was not permitted, or that these actions violated the law. In several cases, access issues arose under other law, including:

- Claims generally alleging a violation of normal property rights, such as:
 - trespassing;
 - interference with another person's rights to collect or control specific biological material; or

352 Several industry representatives noted that this issue has arisen more commonly in claims that have not been publicized.

353 Information regarding the date of collection was not clear in several other public claims (Nuna Bean, Yellow Bean, Pozol, Hoodia, Cunani and Tipir), but suggested the possibility of pre-1992 collection and other activities.

- violation of the terms of a concession agreement or license.
- Potential violation of wildlife laws, i.e., claims that it was not legal to capture, kill, uproot, or otherwise gather samples of the biological material collected;³⁵⁴ and
- Claims based on the special rules regarding crown lands, national patrimony or sovereign property (including national parks, specially protected species, and other particular sovereign rights) and the procedures and documents required.

Among the publicly asserted claims, there have been two primary access-oriented bases asserted – that the lands and species held or used by traditional people have been appropriated without permission or compensation; and that, even where the application of ABS requirements is unclear, illegal specimen collection practices should invalidate the rights of the user. This latter type of claim is illustrated by the extremophiles situation (Kenya). In that claim, the direct application of ABS principles was unclear, due to several factors. Instead, the government's claims focus on the fact that the collector, who obtained the samples in a protected area, cannot produce any evidence that he had government permission to take biological material from that protected area.

9.3.6 Objectives of asserting the claim

Consideration of the claimants' apparent objectives underlying their claims provides a valuable basis for analysis of the current level and extent of ABS-related claims. In general, the primary objective and secondary objectives asserted in claims reviewed may be very different, and the selection of the means of asserting the claim can be thought of as the most important method of determining these underlying objectives.

In 28 of the public claims listed in Table 1, for example, the primary claim was based on patent invalidity and sought patent revocation, although genetic resource misappropriation was often asserted as a supporting point. In some of these cases, a final decision has been reached (either invalidating or upholding the patent). Even where the patent decision has gone against the claimants, none have so far indicated any intent to pursue a claim for ABS-related violations.

9.3.7 Deciding body or governing law

As a final point in this section, the choice among particular legal bases for the claim and the choice of deciding body can be significant in choosing the kind of claim to bring, and evaluating the chances of success of such

claims. Selection of governing law and deciding body typically dictates both the objectives that the claim can achieve, and the rights and remedies that should be asserted. As noted above, several of the public claims, and a large percentage of the interviews, focus on equity issues, including especially the equitable obligation of a collector or researcher to disclose his intent or decision to transfer the specimens, research results, and other information to a third party after he has undertaken collection and/or research under an appropriate license. A relatively small percentage of public claims and some negotiations and other discussions examined in this study have involved direct attempts to obtain benefits from users of genetic resources. To date, as noted below, uncertainties regarding ABS issues have been perceived as obstacles to direct claims for benefit sharing in courts and formal forums. Consequently, most claimants have focused on other bases for their actions or threatened actions against misappropriators.

³⁵⁴ A converse of this kind of claim has been suggested in another forum. In the implementation of the Convention on International Trade in Endangered Species of Fauna and Flora (CITES) (Washington, DC, 1973, entered into force, 1975), several countries have expressed concern that a user will interpret a CITES export permit or "introduction-from-the-sea certificate" (Articles III.2, III.5, IV.2, IV.6, V.2, and VI) to be a governmental permission to utilize the specimen, including its genetic resources. (See Proceedings of COPs 11 and 13, and of the IUCN/BMZ//TRAFFIC/UNEP Expert Workshop Promoting CITES-CBD Cooperation and Synergy, International Academy for Nature Conservation, Isle of Vilm, Germany, 20–24 April 2004).

For example, as noted above, more than 75% of the public claims examined were directed at national patent agencies, and were described in terms of that country's patent law. Given that patent law does not generally include any legal mechanism for benefit sharing,³⁵⁵ the final decision of these cases has not yielded any direct judicial analysis or finding regarding whether benefit sharing was required, what standards should be applied, and how they should be enforced.

It is usually necessary to bring any action against a user in the country in which the user lives or operates its

primary facilities. A source country or other claimant often cannot obtain legal jurisdiction to bring a lawsuit in any other place. The claimant in such cases, however, is handicapped by the lack of so-called 'user measures' promoting, enabling or even encouraging benefit sharing. This lack of judicial mandate may be another reason that no other court or legislative body in a developed country has specifically addressed the right to utilize genetic resources, or provided decisional support or clarification of benefit-sharing obligations in ABS contracts or under broader principles of equity.

9.4 Extent and impact of misappropriation claims

A variety of different factors underlie each of the claims examined for this report. In many claims, the primary focus of asserted claims has been directed at increasing awareness at all levels. Another group of claims challenge the legality and validity of patents, and others more directly focus on seeking equity and fair utilization of genetic resources. In many instances these allegations have been made together.

This section briefly analyzes:

- Legal and practical issues affecting direct claims of misappropriation;
- The extent to which the results or remedies obtained resolve ABS violations; and
- Claimants' strategic choices in bringing their claim.

9.4.1 Legal and practical aspects of ABS-related misappropriation claims

Claims of misappropriation, whether asserted through a judicial action, administrative process, private negotiations, or a media campaign, can be very costly in time, money and redirection of energy. The effort and cost involved provide an important indicator that stakeholder expectations are so strongly held that they prompt various actions or claims. Where such costs and efforts are to be expended, however, potential claimants must first analyze the chances of particular outcomes, and the value of those outcomes, before finally deciding to go forward with a claim. A number of factors may affect this evaluation. At present, owing to uncertainties regarding ABS law, a claimants' chance of success in ABS claims remains extremely uncertain – a fact that may deter stakeholders from bringing claims. This section considers four areas of uncertainty and their impact on misappropriation claims:

- Uncertainty of legal claims ('grey areas' of ABS and its implementation by national legislation and courts);
- Inconsistency in objective (remedies such as patent invalidation may not be consistent with the benefit-sharing objective of ABS claims);
- Questions regarding scale of alleged actions and reactions (while some cases may involve or allege clear and intentional violations or usurpations of rights, others may arise from misunderstanding or reasonable misinterpretation, leading to a choice of options in the level of the claimants' reaction); and
- The manner in which the above uncertainties impact the claimants' expectations and motivations of their actions.

³⁵⁵ In some instances, one who infringes a patent may be required to pay royalties and other penalties to the patent holder. However, rarely if ever is the holder of an invalidated patent required to pay in this way.

These uncertainties have a direct impact on the extent and nature of claims that have been brought, to date, relating to unauthorized access and misappropriation of genetic resources.

9.4.1.1 Legal uncertainty regarding resolution of ABS claims

One key factor affecting analysis of the objectives of the various claims reviewed is claimants' ability to take legal action if necessary to protect his/its rights under the existing ABS regime. If the legal system is not predictable, then it will often provide an insufficient basis for a judge's decision. As a result, either the judge will not use the law for decision-making or the decisions will not be replicable or defensible, increasing the number of appeals, and also decreasing future claimants' ability to make a reasonable assessment about the probability of success on their claims – to determine whether it is 'worth the effort' to bring a formal claim, or even to commence informal negotiations, with regard to ABS compliance. Presently, there are gaping areas of legal uncertainty within the ABS regime that make such analysis either difficult or impossible.

This report considers five uncertainties that have been the source of difficulty in resolving claims of misappropriation: (1) the nature of genetic resources; (2) the nature of access; (3) the activities that constitute utilization of genetic resources; (4) general inability to reliably detect misappropriation; and (5) the lack of legal provisions in user countries that bind or encourage users to engage in benefit sharing.

[a] Uncertainties regarding the nature of genetic resources

One area of uncertainty regarding the application of ABS principles to a particular claim relates to whether the claim is, in fact, addressing ABS, rather than some other kind of legal concern. Formal legal processes as well as administrative actions both operate through the application of specific laws and principles. In order to issue a ruling or take other legal action, the court or government officer must begin with the legal issue itself, usually as expressed in a law, decree, act, ordinance, regulation, directive, rule, contract, permit, license or other written legal document. It must then apply this document, in a step-by-step fashion, to the facts of the claim. Hence, the first task of both the claimant and the court will be to determine which law applies to a given

claim. ABS law will apply only to claims that involve genetic resources, suggesting that the first question to be answered is 'Does this claim involve genetic resources?' If the answer is no, then the claim is not relevant to this study, and the claimant will have to find other legal bases for his proposed action.

Unfortunately, it is not a simple matter to determine whether a claim involves genetic resources because it is not currently possible to know with legal certainty what a genetic resource is. This question arose during the course of this analysis, given that more than half of the public cases examined involved direct use of either:

- Natural products and essences and/or remedies using such products and essences; or
- Naturally or traditionally derived varieties already being used for conventional agricultural purposes (seed trade, agricultural cultivation, marketing of agricultural products, conventional plant breeding and other activities).

A majority of these claims were based on the fact that an individual or company was seeking a patent on a natural or traditional variety or on the use of conventionally derived extracts from plants, animals, microbes or fungi in commercial products. Although clearly valid claims, these allegations did not address ABS or the CBD requirements, instead relying on an entirely separate legal basis – internationally accepted principles of IP law. This body of law will apply to all patent cases, whether they involve genetic resources or not.

Although not using ABS as a basis of their legal action, all of the claims listed in Table 1 identified ABS and the lack of benefit sharing under Article 15 as another possible basis for objection. In interviews, several claimants stated that they did not raise ABS issues more forcefully because they were not certain whether and how ABS principles would apply, or whether their claim involved genetic resources.

This question goes to the heart of the current ABS discussions. From the earliest CBD negotiations, it was clearly expected that ABS should not alter existing functional markets and market activities in biological resources. Farmers, fishermen and forest producers were never expected to share the benefits of the sale of their produce

(even though marine products, timber, and agricultural varieties are specifically included within the broad ambit of biological diversity, and all contain genetic resources). Transactions in marine products, animals, forest products, textiles and other commodities containing biological materials in refined form are adequately addressed by long established markets, practices and legal principles. Even the bulk sale of herbal products and extracts collected in wild areas is a conventional type of commerce, adequately addressed by existing contractual and commercial legal systems. These activities are, for the most part, entirely legal and often do not require any kind of government permit or oversight.

To create ABS without disrupting conventional markets in biological products, it was necessary that the CBD must separate the concept of ‘biological resources’ (traditional biological commodities of all types) from ‘genetic resources’ (the genetic and biochemical information of each sub-species or variety, which can become the basis for non-conventional utilization). Therefore, commercial trade in biological material is not subject to ABS, unless the purchasing party intends to utilize the genetic resources of the species without sharing the benefits arising from that use. This final (‘unless’) clause, however, cannot be observed objectively, and is very difficult to prove in law.

Few concrete mechanisms have been suggested for determining which activities are normal commercial use of biological material and which are uses of genetic resources. For example, before the CBD was created there were already existing markets in seeds, and systems for the conventional development of agricultural varieties. The relationship between these markets and ABS is somewhat unclear, because it is not certain when activities cease to be sales of biological resources and become the utilization of genetic resources. Some have suggested that GR law applies to new and unconventional uses of biodiversity, in which a user may often need only a relatively small amount of biological material.³⁵⁶ Once the material has been brought into the user country, it can usually³⁵⁷ be reproduced whether chemically (in labora-

tories), or biologically (in captive breeding or cultivation systems).

As a consequence, it is not possible to control the movement of genetic resources from the source country – the only way to prove a violation of ABS principles is to prove that someone utilized genetic resources. This proof can only be made in the country of use. Legal certainty and binding enforcement of ABS arrangements will depend on whether the distinction between biological and genetic resources is clear, unambiguous and instantly recognizable by governments and other involved parties in all countries – whether a court can make replicable decisions on these matters in a variety of factual situations.

While greater clarity would have enabled claimants to use ABS more actively, this does not mean that it would have increased the number of ABS-related claims. Rather, this kind of clarity would be one step toward enabling all parties (users, governments, communities and NGOs) as well as courts to know when and how to apply ABS to their commercial activities.

[b] **Uncertainties about access**

Similar doubts arise regarding when and by what action one obtains access to genetic resources. In every legal case or claim relating to misappropriation, one critical question – whether the user has legally obtained access to genetic resources – has been raised. Several questions illustrate this issue:

- *What level of permission is required for access?*

In several of the informal interviews, it was noted that there is confusion among parties to particular claims (including users, government officials, particularly communities, and private landowners) regarding whose permission is required for access to genetic resources. In many cases, the right to physical access to a particular ecosystem has been confused with the right to the utilization of genetic resources found in that ecosystem. Thus, for exam-

356 The minimal payment required for obtaining this amount of biological material cannot provide a commercial incentive for conservation and sustainable use as envisioned by the convention (Art. 11), nor can it equitably compensate the source country for the value obtained.

357 There remain some highly complex and delicate species that cannot be cultured *ex situ*. In some cases, this will mean that these species will need to be continually collected in large quantities, even when products are in commercial production. The control of these collecting processes, like all collection or harvesting of natural resources, must be governed by natural resource management institutions and practices, and by sustainable use principles.

ple, a private landholder or an agency managing a national park believed that it had the power to grant the right to use the genetic resources from specimens collected on that particular property. In most countries and claims, however, the right to control entry into a particular geographic area is thought to be legally separate from the right to control the utilization of genetic material from samples collected.³⁵⁸

- *What happens when the intention of the user changes after the resources have left the source country?*

In more than half of the public cases, species samples were collected by researchers, collectors and others who had no direct commercial intent. Many claims involve samples collected 'for purposes of research.' Under some national ABS legislative proposals, there is a specific exemption for such activities. In these instances, claimants allege that permission to collect samples for research did not convey a right to utilize genetic resources in a way that would produce benefits to be shared.

When the users went on to commercialize the GR-based discoveries, they did so assuming that their possession of the samples gave them the right to utilize the genetic resources. In at least seven of the public cases, the ultimate user obtained the specimens and research results from the original collector or researcher, who was based in the user's country or region. The user alleges that he acquired the resources 'in good faith' – that is, that he reasonably believed that the person who provided the resources had the right to utilize the genetic resources and was legally able to transfer that right to third parties.

In some cases, resources were taken for non-commercial purposes, such as specimens taken for preservation in a zoo, botanical garden or research institution. If such specimens or their progeny were later obtained by a commercial user, the change in use would raise a similar question – was it necessary to obtain ABS permission for the original collection or only at the time of the transfer or change of use? Concerns about this possibility have been the basis of several public and non-public claims asserted

against such non-commercial collections.

- *At what point does access to genetic resources occur?*

In at least seven of the public cases, samples appear to have been collected well before the adoption of the CBD. In these cases, as well, the question arises whether the researcher obtained the right to utilize genetic resources (a concept that did not exist in law at the time) in a manner that produces commercial or other valuable benefits, or only the right to possess the samples or to undertake research on them.

- *Can the user's right of access be rescinded after the user has collected and removed the specimens, if some person later challenges the government's decision?*

In one public claim (Philippine Coral), as well as numerous situations described in individual interviews, users, collectors and catalogers have received formal governmental permission, which was later rescinded or challenged. In nearly all of these cases, the rescission or challenge was based on either (i) concerns that the collector would retransfer the material to a commercial user which would not share the benefits of this use or (ii) claims that the permit process did not adequately comply with national laws regarding public consultation and community consent.

In many of these questions, a basic divergence of understanding is apparent. To many users, the term 'access' refers to legal ownership of the biological specimens used in research. A person can legally acquire this kind of access by getting permission from the owner of land to collect specimens on his property, by purchasing specimens from a collector or on the market, or by cultivating or breeding specimens in his own lands. In the ABS context, however, access refers to 'access to genetic resources' and its meaning is less clear. Article 15.2's provisions about facilitating access to genetic resources appear to refer to the development of source-country law that ensures that access (the right to use genetic resources of the country) can be obtained through compliance with reasonable procedures.

358 It should be noted that the landowner, community or national park agency still has a full right to control physical entry into their property, including requiring payment for this entry, in accordance with national law.

Many national laws and commentators assume that access is a prerequisite of benefit sharing, although the relationship between the two is not specified in the Convention. One question that arises from the review of claims asserted is whether and how they apply to a person who was not required to obtain access to genetic resources in order to obtain samples and/or to begin research. This may have occurred where samples were obtained from an ex-situ collection outside of the source country, or where they were collected prior to the Convention, or bought from an individual who brought samples as biological resources³⁵⁹ into the user country. Will this user still have to share benefits from utilization of the GR?

At present, there are no clear legal answers in any jurisdiction regarding these questions. As noted earlier, however, no formal decisions by courts or formal administrative hearings have been identified which actually consider whether a user had lawfully obtained access to genetic resources prior to use. In the few cases where a formal body has been called to consider ABS questions, the case was ultimately resolved on the basis of other issues (patent, criminal or other law). It generally appears that courts lack sufficient information, either in the CBD or in any national law, to enable them to directly decide these issues.

[c] Uncertainties about utilization of genetic resources

Another area of uncertainty relates to identification of the activities constituting utilization of genetic resources. This issue is, of course, closely tied to the concept of genetic resources themselves, however it focuses on the activities involved. As noted above, numerous claims have been based on the direct use of oils, flours, grains or other extracts milled or taken from naturally occurring or traditionally derived subspecies or varieties. These actions use the properties of the variety (in the same way that commercial trade in fruit juice uses the properties of the fruit), but do not appear to use its genetic resources. Other claims focus on normal kinds of plant breeding (cross-pollination, hybridization, etc.) and animal breeding, which have existed as commercial activities for centuries. Many such claims are adequately regulated under other law, suggesting that they may not need to be covered by ABS law.

The difficulty for purposes of misappropriation claims, relates to finding the point at which a use of the qualities of a biological specimen becomes a utilization of genetic resources. This distinction is difficult. First, in many kinds of GR utilization the relationship between the biological specimen and the ultimate product is becoming less clear. For example, genetic researchers confirm that it is already possible to construct DNA chains from the genetic sequence (the biological notation describing the species genetic make-up) without a reference sample. At present, this process is still expensive, and lack of understanding of the role of other proteins in genetic processes means that a reference sample is still necessary in most cases. However, it is expected that these obstacles will be overcome relatively quickly. It is also already possible to reproduce biochemical properties from many species solely on the basis of their chemical formulas. This capacity is still limited in the case of highly complex formulas, but the threshold of this ability is rapidly changing.

One particular problem relating to the utilization of genetic resources arises from the fact that the original genetic material is generally long gone, by the time a product is created. In many modern GR utilization technologies, genetic resources are used in the creation of the product, but leave no trace within that product. The relationship between the resources and the product in these cases may be difficult to describe in law.

Often, the development of new products is an iterative process. If particular genetic resources are utilized in an early iteration, the user may believe that subsequent stages of development do not utilize genetic resources, and thus do not give rise to benefit-sharing obligations.

In a number of individual interviews, even more difficult claims were described, in which no direct use of genetic or biochemical material or of GRTK was actually involved. Rather, these claims were directed at users who observed the way a particular remedy or natural compound reacted when introduced in humans, animals, and ecosystems, and derived their own compounds to have a similar approach. The resulting compound does not use any genetic or biochemical element of the original species or remedy, but was inspired by research into how

359 That is, with no intent to utilize their genetic resources.

biological processes occur within that species. This type of claim, although not formally promulgated at present was mentioned as a potential basis of future claims by nearly 25% of individual interviewees. Its prevalence is evidence of the need for greater clarity about what constitutes the utilization of genetic resources.

ABS enforcement, as currently envisioned, can function only where a source country knows whether utilization of genetic resources has occurred and also what benefits have arisen which the user will be called to share. Only then can the CBD and related national law and legal principles consider whether an equitable share of benefits must be given, and to whom.

[d] Uncertainties about detection of violations and misappropriation

Beyond the problems of definition, there are practical problems of detection. In practice, it is difficult or impossible to identify the biological components of a commercial product by analysis of that final product. In many products of genetic manipulation, more than one biological source material may have been involved. Even if these components can be identified, it is completely impossible to determine where that material has come from.

Consequently, in most situations, only the user will know whether he is using genetic resources, where those resources were obtained, and whether benefits have been derived from them. This inability to recognize misappropriation or unauthorized access by objective evidence has had two impacts on the claims brought relating to genetic resources:

- Source countries and communities have indicated a strong desire to control genetic resource utilization by strictly limiting the 'access' end of the transaction, owing to fears that they will not be able to detect unauthorized utilization of genetic resources; and
- Most attention has focused on those compliant users (i.e., those who comply with ABS requirements and/or disclose source of genetic material in pat-

ent applications). As further explained in section 9.4.1.3[b] below, these persons and companies are the easiest to identify as potential users of GR (having clearly identified themselves by seeking formal ABS permission, and often by holding public hearings or other public consultation processes to obtain the informed consent of local people). By contrast, as noted in section 9.2.1 above, users who do not comply with ABS requirements are often difficult or impossible to identify. Consequently, claims directly focused on ABS processes are often directed against compliant companies, creating what is virtually a penalty for compliance in some cases.

These two reactions describe virtually all of the claims analyzed in this report.

[e] Lack of legal rules binding users

Finally, it is useful to recall that ABS focuses on two national commitments:

- On the one hand, source countries commit to:

*creat[ing] conditions to facilitate access to genetic resources for environmentally sound uses by other Contracting Parties.*³⁶⁰

- The corresponding commitment from countries in which genetic resources are used is to promote fair and equitable sharing of the benefits arising out of the utilization of genetic resources³⁶¹ by:

*tak[ing] legislative, administrative or policy measures, ... with the aim of sharing in a fair and equitable way the results of research and development and the benefits arising from the commercial and other utilization of genetic resources with the Contracting Party providing such resources.*³⁶²

Claims of misappropriation of genetic resources under ABS principles, when asserted against a user of genetic resources, necessarily focus on two questions: Whether the user has complied with any relevant access-related requirements (i.e., whether he acquired the genetic resources legally); and whether he has fairly and equitably

360 Art. 15.2.

361 Art. 1.

362 Art. 15.7.

shared the benefits he obtained from use of the genetic resources with the source country.

As to both of these questions, however, the entire onus of responsibility has rested with source countries, despite the fact that, as noted above, source countries have no legal right or ability to oversee the actions of users once the resources have left the source country's jurisdiction. Although the CBD has clearly recognised that the responsibilities of ABS rested with both user and source countries, to date, however, each country's national legislation (both in developed and developing countries) place their emphasis almost exclusively on access to the genetic resources of that country.³⁶³ Although many efforts (studies and initial processes for the development of voluntary guidelines) are ongoing, little relevant user legislation has yet been adopted, and most relates solely to enabling voluntary compliance and, more strongly, to controlling utilization of genetic resources that were acquired in the legislating country. At present, developed-country legislation does not appear to address the separate requirement of the adoption of legislation or other measures 'with the aim of sharing in a fair and equitable way ... the benefits arising from the commercial and other utilization of genetic resources,' as required in Article 15.7.³⁶⁴ It is certainly perceived not to support any attempt to enforce ABS requirements of source countries. Claimants seeking remedies or enforcement of ABS principles in these countries, would be forced to use basic provisions of contract and property law, which evolved centuries before any concept of genetic resources as property, and which do not provide any legal basis for ABS actions.

With regard to bringing claims, it is typically necessary in bringing an ABS-related action against a user, to use the law and courts of the country in which the user lives or operates his primary facilities.

This remains a barrier to the use of the legal process to effectuate and enforce ABS commitments, owing to limited user-country legislation directly addressing ABS

issues. So far, none of the cases, and none of the interviewed individuals have involved or identified any situation in which a user country has enabled, encouraged or assisted a (different) source country, community or other involved group in obtaining knowledge regarding the utilization of genetic resources, or taken any measures to promote or facilitate benefit sharing. While some cases have been asserted under user-country law, the claimants have not been able to assert these claims under ABS law, given that no user country has adopted legislation clarifying ABS principles, or enabling their application in the countries' courts.

9.4.1.2 Inconsistent objectives: Invalidating patents v. sharing benefits

It is common in law for an initial claim (whether formal or informal) to describe a variety of violations and potential remedies. The claimant will generally begin by presenting the full panoply of possible claims, and then narrow his actual claims and demands over time, in order to eventually come to a final and agreed resolution of the problem. Often, the various claims support one another. However, in some cases, the possible options are inconsistent with one another. Then, the claimant will have to choose one theory to carry forward.

More than 75% of the public claims listed in Table 1 included such a potential inconsistency. This inconsistency pitted the ABS objective (ensuring that where benefits arise, they are equitably shared) against the desire for patent invalidation (which will, in effect, diminish the chance that the user will earn a benefit to share). In essence, rather than asking for a share of the value obtained by the user (the ABS objective), these claims seek to eliminate that user's benefit entirely, for the purpose of protecting existing national markets and market expectations.

This is an important objective, but not directly an application of ABS. Where the user is actually developing a new product based on genetic resources (using new technology), arguably the issuance of a patent will be

363 See UNEP/CBD/WG-ABS/3/5, section II. A few countries have adopted some level of measures applicable to users in their country, however these are countries that are primarily thought of as "source countries." Id. A full analysis of substantive national ABS laws can be found in Cabrera, J. 2004. A Comparative Analysis on the Legislation and Practices on Access to Genetic Resources and Benefit Sharing (ABS): Critical Aspects for Implementation and Interpretation. IUCN, The ABS Project.

364 In recent discussions, representatives of several user countries have indicated their position that Article 15.7 requires only that the user country's law must allow foreign countries or citizens to bring lawsuits. See, e.g., Presentation of L. Hirsch at the ABS International Expert Workshop on Access to Genetic Resources and Benefit Sharing, (20–23 September 2005, Cape Town, co-hosted by Norway and South Africa).

seen as positive, in that it creates a sharable benefit arising from the utilization of genetic resources, or indicates that one is imminent.

Specifically, such claims differ from ABS in three particular ways:

1. *Subject matter addressed:* As detailed above, many listed on Table 1 do not involve any application of modern scientific principles for the utilization of GR. In fact, where genetic research and development has been involved, patent claims have generally not been brought.³⁶⁵ As noted above, the utilization of genetic resources is a specific and necessary component of any claim of ABS violation.
2. *Harm addressed:* Where ABS allegations generally focus on the user's failure to obtain permission (access) and/or the failure to share benefits, patent claims affirmatively allege financial harm to farmers or indigenous groups or other communities.³⁶⁶
3. *Remedy sought:* Perhaps most important, this question of objective is the single factor most determinative of the success of an ABS-related claim. In patent cases, a finding of the invalidity of the patent must be supported by a general public awareness, so that the market share or potential is regained. Hence, significant public awareness activities often start even before the patent action is commenced. By contrast, for purposes of asserting an ABS claim by a source country (or other claimant) against a particular user, the most effective bargaining chip in the hands of the source country is the GR-user's interest in avoiding publicity regarding the claim. Given that the ABS remedy is a share in the benefits arising from the use of the GR, the source country or other claimant also has an interest in

ensuring that the product is positively received by the market. Consequently, the most productive process will often be a non-public negotiation.

This difference affects more than the choice of theories to be used in promoting the claim. For example, although strategies focused on enhancing awareness effectively use a broad base of NGOs and other members of the public, in a few cases, the role of members of the public has been problematic. In the cases involving the Hoodia, Kenyan extremophiles and University of Lausanne, the publicity may have had an unintended result – restricting the users' incentive to resolve the claim. In each of these cases, the user was initially contacted, and negotiations commenced before there was significant publicity regarding the issue. Arguably, the user might have viewed these negotiations as an opportunity. Any benefit-sharing payments made could be reflected in the user's advertizing materials, corporate reports, and other public statements as a demonstration of social responsibility and cooperation with ABS requirements. After the claim became publicly known, however, this opportunity may have been diminished. The user's remaining objective was simply to quell the protest.

Once claims start circulating, users sometimes feel that 'the damage is already done,' and that efforts to resolve the claim will ultimately lead only to more harmful publicity.³⁶⁷ Hence, where the claimant's object is to obtain a share of proceeds, then, a more discreet opening strategy may yield better results. By contrast, in claims seeking the invalidation of a patent (which would mean that there was no benefit to be shared), greater public outcry may be a more effective choice.

Although raised in public statements, and occasionally in formally filed claims, ABS allegations have not been the factor driving the claim and benefit sharing. As noted above, the legal uncertainties of ABS, compared with the relatively clear and internationally acknowl-

365 In general, patent-related claims have been based on lack of "novelty" and "innovation," two primary requirements for a valid patent. Both of these components would arguably be satisfied in a patent of a new variety developed through genetic manipulation.

366 The most compelling motivation arises in cases in which the patent-holder asserts his patent by charging or threatening to charge a royalty – insisting that farmers using the traditional variety which he has patented must pay him in the future, if they intend to continue to market the produce. It would have been impossible for these farmers to patent the variety themselves, as there was no innovation involved – the varieties such as basmati and jasmine rice, and several others mentioned in Table 1 were already in general use in the manner described in the patent. Once patented there was no way to distinguish between the patented variety and the traditional varieties already being marketed. (These facts are based on the Yellow Bean (Enola Bean) patent case, and are the subject of a pending action for revocation of the US patent granted in the case).

367 This sentiment was echoed in detail by all industry representatives interviewed in the course of confidential interviews (Table 2).

edged principles of patent law (or other law)³⁶⁸ may explain why claimants have preferred patent actions, rather than ABS legislation, as the basis for their legal efforts.

9.4.1.3 Scale of reactions and responses

Two additional points should be noted regarding the nature and scope of claims reviewed for this analysis. First, these claims cover a very broad spectrum from allegations of procedural violations in obtaining or issuing ABS permission (flawed compliance) to allegations of intentional usurpation of the existing rights, varieties, commodities and markets of source countries and local/traditional communities and users. A single broad-brush analysis cannot appropriately consider the significant variations across this scale. Second, however, it is noted that users' reactions to claimants and claims have varied from prompt and productive discussions to rather extreme censure of the claimants. Only a few of the claims examined or described have resulted in a negotiated settlement which enabled the user to go forward with bio-prospecting for, and utilization of, genetic resources.

This section considers the scale of reactions on both sides, and the various levels of the claims and claimants' reactions when compared with the particular harm alleged – the scale of user responses desired in comparison with the particular kinds of claim asserted.

[a] Recognizing different levels of violation

Up to this point, this study has not closely considered the general standard for misappropriation of, and unauthorized access to, genetic resources, looking instead at how various claims have been asserted and how they relate to the ABS process. With regard to the severity of claimed violations involving GR, it is necessary to examine the level of response to each kind of violation.

For example, a user may obtain a permit in compliance with procedures identified in law and regulations, but some local communities may later assert a claim against the government agency issuing the permit, claiming that it did not fully comply with public participation requirements under the law. Arguably, in most such situations, a claim against the user or issuing agency is not usually a claim of misappropriation, but of the procedur-

al violations and other issues to be addressed. However, where procedures were ignored, or intentionally omitted critically interested stakeholders, the 'misappropriation' label may be correct.

None of the publicly asserted claims listed in Table 1 is directed at procedural violations of ABS; however, most individual interviewees from government and industry indicated that fear of procedural irregularities and challenges is a major source of delays in ABS processes.

Perhaps because there are no generally recognized and accepted legal standards for reviewing and deciding ABS claims, the type and severity of the claim has often been determined by the resources (financial, human and other) available to the claimant. Where significant public relations tools are available, claims are asserted through media and public presentations. This result is enhanced where there is some public interest in the species, or a general public dislike or distrust of the user, even if the claim itself is not strong. Where legal services are available to the claimant and where filing fees can be accessed, lawsuits may be filed or threatened. As a result, however, cases which are legally weaker may be filed and stronger ones not, due solely to the availability or lack of opportunity and resources. In some situations, as noted above, claims which might have been more profitably resolved through private mechanisms reached public media through well-meaning 'word-of-mouth' campaigns.

[b] Punishing the compliant

One concern frequently asserted by source-country governments, user-country officials and users relates to the 'automatic penalty' for complying companies. Most of the individuals interviewed indicated that a key tool for locating possible misappropriation are the filings of companies seeking ABS permits, or disclosing the source of materials used in patented products. In other words, companies that have made a good faith effort to comply with the source country's ABS requirements are easy targets for ABS claims, whereas those that have not done so may be harder to identify, even if their violations are much more severe.³⁶⁹

It has been alleged in interviews and other prelimi-

368 In cases such as the extremophiles claim involving Kenya, the claimants have chosen to avoid this question, by focusing on whether the user had obtained the necessary permission to collect the biological specimens (which were taken from a protected area).

nary discussions in this study, that certain companies (not participating in this study) have adopted specific corporate practices under which they have decided to ignore ABS requirements, because those requirements are generally unenforceable and violations undetectable. While it is possible that some of these companies' violations will be detected, this is not statistically certain. Moreover, given the issues of legal uncertainty expressed

above, these companies often feel safe in ignoring claims asserted against them, even where their use of source-country GR is known or admitted. One objective of the second phase of this study will be to gain a better understanding of corporate compliance programmes, and corporate approaches to misappropriation claims.

9.4.2 Results of claims

The most problematic element of this analysis relates to the results of claims of misappropriation of GR, given that many claims are informal, and that records of claims, even in courts, are often unavailable to international researchers. Hence, it is not possible to provide statistical analysis, or systematic conclusions on the basis of detailed review of the cases and claims involved. This section draws a few basic points from the analysis of the reactions of parties and the results that claims have achieved to date.

9.4.2.1 Formal resolution of claims

Only a few of the claims analyzed or discussed in the course of this research have yet been resolved in any final way. Of the claims that have been resolved:

- Most have been resolved 'by attrition' – that is, the patent or permit or other instrument that was subject of the claim was allowed to expire or not renewed.
- In three instances, an apparently final judicial decision was entered, however none of these decisions addressed the question misappropriation of genetic resources in any way.³⁷⁰ In several other cases, a decision was entered addressing some or all of the claim, after which the claimant indicated the intent to appeal the decision or to continue with the as-yet undecided portions of the claim.
- In two public cases, the authority granting a collec-

tor the right to obtain samples, undertake taxonomic work, or catalog traditional knowledge rescinded that right. However, in all of these instances, the rescission was based on the concern that the right-holder would transfer the samples or information to others. These are the primary situations in which misappropriation or potential misappropriation was clearly the reason underlying the final resolution of the claim.

- A small number of claims have been resolved through negotiations.

It should be noted however, that information on the resolution of public claims (especially those identified as 'public outcry,' 'public disclosure,' 'threatened case/claim,' 'demand,' etc.) is sometimes difficult to obtain. Users are often unwilling to say anything, fearing to reopen a dormant issue, and in many cases the primary focal points acting on behalf of the claimants have not been located. Only a few of the claims identified in this study are specifically known to be still active in courts or private negotiations. In some of these, although private negotiations are officially ongoing, participants indicate that the talks have basically ceased.

9.4.2.2 Claimants' reactions

As noted above, there is a relatively high level of uncertainty in asserting a claim of misappropriation. In addition, claims are generally quite costly, whether in money or in the commitment necessary to assert a claim either

369 Similar phenomena have been seen in the field of corporate social responsibility (CSR), where companies that have made positive public commitments to promote CSR are more likely to be the targets of publicly asserted CSR complaints for small concerns, than are companies that have refused to consider CSR, even when the latter are charged with serious violations. See, e.g., Christiansen, A.C. 2002. "Beyond Petroleum: Can BP Deliver?" (FNI Report 6/2002, available online from FNI website at www.fni.no/publ/energy.html); Skjærseth, J.B. 2003. "Exxon Mobil: Tiger or Turtle on Social Responsibility?" (FNI Report 7/2003, available online from FNI website at www.fni.no/publ/energy.html).

370 As noted, most of the direct claims were resolved under patent law. The deciding body either concluded that the patent was invalid (due to lack of novelty or inventive step) or allowed it to stand. There is no legal authority under patent law to evaluate whether the patent holder's other actions (aside from filing his patent) were legal or not. Hence, misappropriation issues could not be decided in a patent claim.

legally or through active publicity. These factors suggest that claimants asserting ABS violations and other related harms are highly motivated in this endeavor. The range of claimants identified in this study includes governments, indigenous communities, local residents, landowners, NGOs, and in a few cases industrial users complaining against other users. Their motivations and expectations are another critical factor that must be considered in this analysis.

Leaving aside the claims that are brought under internationally accepted principles of patent law, the range of expectations motivating persons to assert claims of misappropriation and other ABS violations generally include:

- Financial motivations – the receipt of an equitable share of benefits arising from the use of GR;
- Promotion of the interests of traditional and rural people, and source countries with limited resources; and
- Promotion of the CBD objective that the benefits from utilizing genetic resources can provide a resource base to finance the necessary actions described in the convention, as well as an incentive to conserve and sustainably use biological diversity.

The strength of these commitments can often mean that claimants alleging misappropriation are much less pliant than the types of claimants normally encountered in commercial operations. Where they are acting on behalf of the environment, indigenous groups, and future generations, claimants often feel that compromise is not an option.

9.4.2.3 Users' reactions

In comparing the public claims (Table 1) and the individual interviews, the most significant difference is in the level of information available regarding users and collectors. The publicly available information regarding claims is almost entirely offered from the claimants' point of view. Where any public information is available from the users regarding a particular claim, it is usually very brief, and limited in content.

The individual interviews generally suggest that this lack of public information is based on a belief that the publicity will die down more quickly, if the user remains silent. In individual interviews, many representatives of user companies indicated that they would rather keep silent than present evidence of the propriety of their actions, because they felt that any public statement would continue the controversy. Similar to their belief that ABS compliance often made them a target of claims, more than half of those interviewed felt that responding in good faith to public claims only increased the amount of negative publicity they received.

As noted earlier, companies indicated that they are much more likely to negotiate regarding a misappropriation claim, before negative publicity has begun. One incentive for a commercial company to engage in ABS negotiations arises from the company's expectation that it can describe the ultimate resolution as 'social responsibility' in its corporate reports and other public statements.

One of the most important user reactions to claims of misappropriation has been a collective reaction – the desire to develop a generally accepted standard of behaviour for companies engaging in bioprospecting and other utilization of genetic resources. In some cases, these industry-based endeavors have begun to fill the gap created by user countries which have not adopted legislative, administrative or policy measures for benefit sharing. One example of this is the work of the Japan Bio-industry Association, in conjunction with the Bio-industry Division of Japan's Ministry of Economy, Trade and Industry, in the development of Guidelines on Access to and Benefit Sharing of Genetic Resources.³⁷¹ These guidelines are specifically intended to help eliminate misunderstandings leading to claims of misappropriation. This document offers a concrete first step toward effective user measures, given its provision stating that, if a user, researcher or collector complies with all of these guidelines and still encounters claims of misappropriation, unauthorized access or biopiracy, the Japanese government will use informal and diplomatic means to seek a solution to the problem. This assurance of user-country government as-

371 Presented in JBA/UNU Roundtable on ABS, 11 March 2005. Available in Japanese at www.meti.go.jp/policy/bio/index.html and soon to become available in English.

sistance in resolving ABS-related claims offers real value to the user companies, and may become a primary in-

centive, encouraging compliance with these (voluntary) guidelines.

9.5 Summary and conclusion

As noted at the beginning of this article, it would be inappropriate and unproductive for a single author or even team of authors to attempt to characterize any unadjudicated claim as misappropriation or unauthorized access (or some other conclusion), based on its own review. Instead, this study has examined the extent to which claims of misappropriation of genetic resources or unauthorized access have arisen, and their relationship to ABS activities and legislation. This concluding sec-

tion of this analysis begins by summarizing the objective results of the study. It follows with an analysis of the two primary questions posed by COP Decision VII/19 – the extent and level of claims of misappropriation.³⁷² Finally, it presents a brief suggestion of lessons learnt, based on information received to date, in terms of direct strategies for resolution of ABS claims, the impact of such claims on ABS practice, and the relevance of this study to the negotiation of the international regime.

9.5.1 Claims and cases reviewed

The claims analyzed by this report include formal legal proceedings, claims asserted administratively, and claims asserted informally (through media, direct demand on users and user governments, and in other ways). Information concerning these claims was discerned through publicly available (primarily electronic/internet) sources and through interviews with individuals from government, industrial and commercial entities, research institutions, NGOs and groups representing indigenous communities.

In general, interviewees indicated that such claims frequently allege that the user's activities constitute a misappropriation of genetic resources or GRTK. Many of these claims may be based on a requirement in national law, which mandates public consultation, holding that if this law is not complied with correctly, the resulting permission is not valid. In other cases, the claim alleges that the government negotiators have not exercised due care in protecting the sovereign rights and property interests.

Formal judicial cases and decisions: Most of the claims identified through this research have not been adjudicated. Many will never be. Of those that have been before the courts, none has been expressly decided on the basis of ABS. To date, no case has been found that has actually decided issues clarifying the right of the user to utilize genetic resources or GRTK and/or the right of the source country or indigenous group to receive a share of benefits from that use, primarily because claimants have not attempted to bring actions under ABS legal theories, which are currently very indefinite in legal terms.

Informal claims and results: The majority of claims discerned in this study have not been formally presented in courts, and many of them have not been submitted as formal objections or interventions in national administrative procedures either. Two informal mechanisms for asserting claims of misappropriation were found to be key:

Formal administrative processes: Records of administrative claims have been difficult to acquire; however, in the course of this study, numerous individuals from governments, industry, academic/research institutions, NGOs and indigenous representatives have provided informal descriptions of their experience with formal objections to ABS applications and permit processes.

- *Use of news media and other public awareness tools:* This study has not been able to investigate these activities at local levels, but has discussed their use through informal interviews. In many instances, public disclosure of particular activities and, more specifically, public outcry against those activities have been reviewed and discussed.
- *Direct demand/request:* Another mechanism has been direct appeal to the user, cataloger, researcher or other person against whom a claim of misappropriation is contemplated. Typically, this mechanism

³⁷² Clause E.9(c), as noted at the beginning of this report.

is most effective when it is not publicized. Hence, in this analysis most discussion of this kind of claim has been through individual interviews. This mechanism is the least used of the mechanisms examined in this report. It has primarily been used by govern-

ments and indigenous groups, in cases in which no ABS compliance has occurred, where some violation of the terms of ABS permissions has been alleged, or where there is a misunderstanding about whether ABS and other laws apply to a given activity.

9.5.2 Analysis: Extent and level of claims

Given the manner in which information was collected, numerical analysis of the extent of claims is somewhat difficult, and possibly not productive.³⁷³ More broadly, reliable information on the number of ABS agreements that exist or have been negotiated to date is not available, and it is nearly impossible to determine how many instances of commercialization or other informal use or access to genetic resources have occurred.³⁷⁴ Consequently, even if numerical analyses were possible regarding the number of claims, it would be difficult to convert them into usable statistics, given the need to relate them to the frequency and nature of other ABS activities. Comments on the extent of claims must therefore remain somewhat subjective at this stage in the analysis, although it may be possible to develop more focused analytical samples in the second phase of this study, from which a limited form of statistical evaluation may be possible.

9.5.2.1 Extent

Regarding the extent of claims, several persons have suggested that there are very few claims.³⁷⁵ Upon investigation, this comment is usually addressed at claims asserted in formal lawsuits before courts, patent agencies and similar bodies, and as such, tallies with the results of this study's inquiry into public claims, of which only a small number of formal claims were discerned and, relatively speaking, only a small number of informal public claims, as well. In general, however, the number of informal claims and complaints that have not been broadly publicized at national and international levels, as well as claims asserted through source-country administrative agencies and processes, appear to be relatively numerous in all developing countries in which ABS processes are

authorized. It has also been suggested that the number of claims increases proportionally with the increased awareness of NGOs, indigenous groups and others with regard to ABS issues and genetic resources.

A significant number of cases and claims examined or discussed in this study involve very basic disputes – that is, the person or entity that is the subject of the claim does not believe that the claim is true or applicable. This suggests that the number of claims may diminish if a set of objectively determinable standards for ABS compliance (including for determining when ABS compliance is required) can be agreed at international and/or national levels.

9.5.2.2 Level

The level of claims identified in this study raises a few very interesting points. Most notably, few claims are formally asserted in courts, despite a relatively high level of effort that is directed toward public disclosure, public outcry and informal challenges. This suggests that the current lack of specific objective rules, standards, definitions and procedures is raising high levels of concern, while also decreasing the level of certainty among claimants regarding whether and how their claims will be addressed by courts and formal processes.

This conclusion is buttressed by the facts discerned in this study. Nearly all formal claims asserted have chosen to challenge patents and patent applications, rather than to address ABS compliance issues. Given that well settled international principles exist with regard to patents, claimants find it easier to assess their chances and

373 Even where some interim decision or other result has been obtained, it is not clear from review of the literature, interviews of parties and other factors, whether additional action or results are expected.

374 Another factor that makes it difficult to gauge the benefits and impacts of the results of claims on ABS compliance is time. In general, with few claims having been formally asserted, and mostly in the slowest of judicial processes (patent agencies), the only results received to date have been very recent (by legal reckoning). Similarly, ABS is a process governed by legislation and contract law, both of which are relatively slow to change and in both the ultimate result of such changes are generally slow to be seen, given that contracts and other activities must pass through their entire legal existence before their impacts can be fairly evaluated.

375 This point is based on discussions of ABS issues in COP 7, including Working Group 1, and the ABS Contact Group meetings throughout that Conference. A review of recent literature will turn up numerous articles regarding the paucity of actual ABS-related claims.

evaluate whether it is worth the effort to bring a formal patent claim (as compared with bringing an ABS claim, on which little or no concrete law exists, and no prior claims can be used as a basis for evaluation).

In terms of impact, many corporate representatives and researchers interviewed indicated that the impact of an informally asserted claim (through news, internet and other media) can have a very serious impact, which can be very long-lived. Negative publicity impacts (being la-

9.5.3 Analysis: Lessons learnt

The lessons learnt from this initial analysis are somewhat diverse, and not yet fully documented, however some key points have become clear that may have relevance for the resolution of ABS claims and for the international regime negotiations.

9.5.3.1 Strategies for resolution of ABS claims

It is not yet possible to consistently or defensibly analyze the interconnection between the claims asserted and the achievement of ABS objectives. Some common issues and concepts suggest two possible lessons relating to resolving of claims of misappropriation of genetic resources.

First, most claims reviewed arise in part from uncertainty about ABS requirements and the lack of objective standards for determining whether a user is authorized to utilize genetic resources. Many users question whether they are responsible under the source-country's ABS regime at all, given that they obtained access to the genetic material from a researcher or other person who was based in the user's country. These basic unresolved questions stand at the centre of many disputes and claims relating to misappropriation, suggesting that such claims could be more easily resolved and addressed by resolving the existing uncertainties, and developing a set of legally clear, objective and replicable standards for evaluating ABS compliance. While such a standard would be of value in courts and other legal cases, its greatest value would be outside of such processes, where it would enable all parties (government, industry, and citizens/indigenous people/NGOs) to know more clearly where issues and concerns exist that are valid and need to be addressed and resolved.

Second, it appears that most negotiations between commercial users and ABS claimants have been unpro-

belled a 'biopirate') are difficult to repair, even after the company has altered its behaviour. News stories rarely address such actions, or promote them with the same intensity as the original claim. Although indicating a high potential impact of some claims, this point also raises a concern. Companies which might have been willing to resolve ABS claims through benefit-sharing negotiations are less inclined to do so where claims have been made public.

ductive. Even where negotiations are ongoing, the parties have been very negative regarding the prospects for solution. Based on this initial study, it appears that this lack of results arises because the two sides of the claim are operating on very different levels:

- Most commercial users view ABS as a mechanism of commercial law. A legal analysis of its contents (in the CBD, national law and contracts) indicates its role as a legal tool that applies in transactions involving genetic resources from a source country. Negotiation of ABS claims is seen as a normal commercial negotiation.
- By contrast, many claimants alleging misappropriation of genetic resources may view ABS as a tool for achieving social and environmental equity, and for ensuring the rights of future generations to a healthy and biologically diverse world. Others see their claims as a way of ensuring that the government's ABS decisions are taken at the highest level of fiduciary responsibility – that stewardship of its sovereign rights in natural and genetic resources protects the rights of all citizens, present and future. Here also, the CBD and ABS-related COP decisions indicate a clear intent that ABS should operate as an incentive mechanism promoting conservation and sustainable use of biological resources by promoting equity among user and source countries.

Hence, where the user may perceive a particular claim to be a single negotiation over a single asset or activity, the claimant may see it as a cornerstone of a much larger social system. This point is underscored by numerous interviews in which users complained about the claimants' unwillingness to conform to basic standards of commercial negotiations, while claimants objected to the users'

expectation of a prompt commercial compromise of key social issues. Consequently, it seems important for the discussions and developments relating to ABS and GR use to move beyond generalities, clarifying both sets of issues and integrating them into a reasonable operating structure.

9.5.3.2 Relevance for the negotiation of an international regime

Remembering that the international community is in the midst of extended discussions aimed at negotiation of an international regime on access and benefit sharing under the CBD, it seems particularly important to underscore the manner in which the lessons learnt from this study could be useful to those negotiations:

Lesson 1: While a full range of policy-related issues are being considered in the negotiations, in practice, utilization of genetic resources is ongoing. The level of utilization generally seems to be cyclical. As recently as 2001, in AHWG-ABS-1, industry participants and others were strongly claiming that bioprospecting and GR utilization was declining. Throughout this study, these same groups have stated that it appears to be increasing. *This suggests that, in addition to addressing overarching policy issues in detail, priority could be given to development of a technical annex, which can resolve confusion by, for example, re-stating existing ABS provisions as legally certain and objective standards, definitions and processes. (This may also indicate the need for capacity building with a view to assisting in the development of national ABS regimes).*

Lesson 2: In general, claims of misappropriation and unauthorized access often proliferate as a result of uncertainties and basic disagreements about whether it is necessary to comply with and negotiate regarding ABS requirements, in particular addressing the questions regarding the acquisition of genetic material through a secondary transaction (from a researcher, cataloger, or collection outside the source country). *An agreed set of step-by-step procedures for use at the national level would provide certainty for both user and provider regarding whether the use was authorized. While such procedures should be adopted at the national level, the international*

regime negotiations can address the existing grey areas (including the nature of access and the responsibilities of those who have acquired research and collection rights without acquiring the right to utilize genetic resources – i.e., by transfer of samples and research results from third parties who may not have acquired the right to utilize the genetic resources involved).

Lesson 3: Although many developed countries are addressing access to their own genetic resources, and some have begun to evaluate ‘administrative and judicial remedies available [regarding] users under their jurisdiction,’³⁷⁶ relatively few have adopted any “legislative, administrative or policy measures, as appropriate ... with the aim of sharing in a fair and equitable way ... the benefits arising from the commercial and other utilization of genetic resources,” as required under Article 15.7. *In concert with measures adopted in source countries, user-country measures are a primary necessity in order to enable ABS to function. Such measures could provide a primary source of clarification for source countries in negotiating ABS agreements, thereby eliminating another source of the uncertainty which encourages the public filing, publicization and non-public assertion of claims of misappropriation.*

Lesson 4: A significant problem arises out of the perception that ABS, in effect, penalizes compliant companies (as more clearly explained in section 9.4.1.3[b] above). As both a consequence and indicator of this, it appears from this research that companies which comply with ABS and other government requirements bear a much higher burden of non-patent-law misappropriation claims coupled with the industry reaction that public outcry and disclosure eliminate all remaining desire to resolve ABS complaints. This problem is the lack of real commercial/practical incentives to encourage users to comply with ABS requirements. The difficulties for all parties involved in bringing claims and negotiating their resolution can never be fully addressed through a command and control system. *The international regime can best address problems of non-compliance in conjunction with claims of misappropriation through (stepwise) development of incentive measures (actions and objectives that have a real impact on users).*

376 An issue being addressed under CBD-COP Decision VII/19, at paragraph E.10.e.

ANNEX 1 to Chapter 9 – Public claims identified (additional detail) ³⁷⁷

Info level	Genetic resource and other identifiers – traditional/common name of spp. scientific name of spp. (name of isolated compounds; products, comm'l or research use)	Source country	Primary user information – Entity name (user country)	Claimants	Traditional Knowledge (D=direct G=GRTK) ³⁷⁸	Type of claim	Time period	Current status
High	Ayahuasca Banisteriopsis Caapi (product name "Da Vine")	Ecuador	Loren S. Miller; International Plant Medicine Corporation (USA)	NGOs representing indigenous inter-ests (ILC, COICA, Amazon Coalition, CIEL and a coalition of 18 Amazon region NGOs)	D	Formal case/claim	1974 – samples collected 1986 – patent filed 1999 – case filed 2002 – patent expired according to its terms	No longer active
High	Basmati	India	RiceTec Inc. (USA)	Gov. of India through Agricultural and Processed Food and Products Export Development Authority (APEDA); and three individuals representing Indian NGOs	D	Formal case/claim	Product marketed around the world for many years – no specific collection date 1997 – patent filed 2000 – case filed 2002 – claims withdrawn	No longer active
High	Cunani and Tipir (product name: "Cunaniol")	Brazil	Conrad Gorinsky, researcher (UK); Biolink Ltd, Corp. (Canada)	Wapishana (indigenous) community	D	Formal case/claim	Early 1990s – samples collected 1994–2000 – patents filed Post 2000 – case filed	Closed
High	Endod or Soapberry, Phytolacca dodecandra	Ethiopia	University of Toledo (USA)	ETC Group; Coalition Against Biopiracy (international NGOs)	G	Public outcry	1964 – sample collection 1993 – patent obtained 1993 – initial public outcry 2001 – patent expired according to its terms	No longer active

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³⁷⁷ Note that this table is based on descriptions and interviews. The authors had little ability to review actual documents relating to these claims. All information is provided to the best knowledge of the authors, with blanks indicating issues on which no information or conflicting information was found.

³⁷⁸ The letter inserted in this column refers to the points made in the available documentation of the claim. It is not clear whether other TK-related claims may have been asserted that were not identified in the particular documents available for review. In many instances, direct use of TK may be a primary assertion with GR uses not yet fully known.

Info level	Genetic resource and other identifiers – traditional/common name of spp. scientific name of spp. (name of isolated compounds; products, comm'l or research use)	Source country	Primary user information (user country)	Claimants	Traditional Knowledge (D=direct G=GRTK)	Type of claim	Time period	Current status
High	Yellow Bean, including varieties "Azufrado" and "Mayocoba" (product name "Enola bean")	México	Larry Proctor, Pod-Ners Inc. (USA)	Gov. of México; Int'l Ctr for Tropical Agriculture (CIAT); ETC Group	D	Formal case/claim	1990s – sample collected; 1999 – patent granted 2000 – case filed	Pending
High	Tricolor Frog (active compound – alkaloid 208/210, product names "the ABT-594," "Epidat")	Ecuador	US National Institute of Health; Abbott Laboratories (USA)	Acción Ecológica (local NGO)	G	Threatened case	1974 – compound isolated 1995 and ?? – patents obtained 1998 – claims publicly asserted	Unresolved
High	Kalahari Hoodia, Hoodia gordonii (product name "P57")	Namibia, RSA, Zimbabwe	Council Scientific and Industrial Affairs (Rep. of South Africa) Successor corp; Pfizer Corp.; Phytopharm Corp.	SA lawyer acting for the San People, ILC; Action Aid (local NGO)	G	Threatened case	1990s – domestic research in RSA 1995 – patent obtained 1997 – patent sold 2001 – claims asserted	In negotiations
Med.	Extremophiles (product names "IndiAge Neutra" and "Puradax")	Kenya	University of Leicester (UK); Dr William Grant, researcher (UK); Genecor.	Gov. of Kenya through Kenya Wildlife Services	None	Threatened case	1992 – sample collection 2002 – commercial product described in corporate annual report	In negotiations
High	Maca Lepidium meyenii (product name "MacaPure" and others)	Peru	Pure World Botanicals; and Biotics Research Corporation, (USA)	Gov. of Peru through the National Working Group; Peruvian Coalition Against Biopiracy (coalition of local indigenous and farmer NGOs)	D	Public outcry	No information on date or kind of access/sample collection; 2000 and 2001 – patents issued on two compounds	No resolution yet
High	Nap Hal wheat variety used in chapatis (product name "Galatea")	India	Unilever/Monsanto Corp. (Multinational, EU patent)	Research Foundation for Science, Technology and Ecology (local NGO); Greenpeace (international NGO)	D	Formal case/claim	No info on date of access (from ex-situ collections) 1991 – patent application 2003 – patent obtained 2004 – claim filed	Decided 2004 patent invalidated

Info level	Genetic resource and other identifiers – traditional/common name of spp. scientific name of spp. (name of isolated compounds; products, comm'l or research use)	Source country	Primary user information – Entity name (user country)	Claimants	Traditional Knowledge (D=direct G=GRTK)	Type of claim	Time period	Current status
High	Neem Tree	India	W.R. Grace Corp. (USA); US Department of Agriculture	RFSTE (local NGO); Green Party (EU Parliament); IFOAM (international NGO)	G	Formal case/claim	No info on date/type access 1994 – patent granted and claim asserted 2002 – patent revoked	Decided 2002
High	Pozol (isolated compound; Bacillus subtilis)	México	Quest International Corp.; Univ. Minnesota (USA)	Global Exchange (international NGO); ETC Group	D	Disclosure Possible other action	1990s – access to TK and GR 1999 – patent granted 2003 – patent expired	No longer active
Med.	General prospecting for species or compounds	Brazil	Selva Viva (Switzerland), and successor (multinational) corporations – Ciba-Geigy, Hoechst, Sandoz, Lilly, and Johnson & Johnson.	Gov. of Brazil, through Deputy Edvaldo Magalhaes, Acre (province) Public interested groups, from Acre (including Roman Catholic Church officials, Indigenous Missionary Council (CIMD); and Indigenous Nations Union (UNI-AC))	G	Formal case/claim	1980–1996 (approximately) – biological prospecting activities commenced 1996 – case filed	Apparently resolved
High	Swartzia madagascariensis (isolated compound “antimicrobial diterpenes”)	Zimbabwe	Univ. Lausanne (Switzerland)	Community Tech. Dev't Trust; and Zimbabwe Traditional Healers Ass'n (Zinatha) (local NGOs); Berne Declaration (Swiss NGO)	G	Demand	1995 – access through research agreement 1999 – patent granted (USA) 2003 – patent expired according to its terms	No longer active
High	Turmeric Curcuma longa	India	Univ. Mississippi Medical Centre (USA)	Gov. of India through Center for Scientific and Industrial Research, Dept. Science & Tech.	D	Formal case/claim	No specific date of access 1995 – patent granted 1996 – claim filed 1998 – patent invalidated	Decided 1998

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Info level	Genetic resource and other identifiers – traditional/common name of spp. scientific name of spp. (name of isolated compounds; products, comm'l or research use)	Source country	Primary user information – Entity name (user country)	Claimants	Traditional Knowledge (D=direct G=GRTK)	Type of claim	Time period	Current status
Med.	Acai Euterpe precatoria (multiple product names such as "Acai Power")	Amazon region	Unspecified holders of "Trademarks in North America and Europe"	Acción Ecológica	D	Public outcry? Or formal?	2001 – trademark protected EU and US 2002 – US trademark abandoned	Unresolved
Low	Traditional plant medicines	Peru	AMMA Corporation	Coalition Against Biopiracy, on behalf of Suni-Mirano people	D,G	Public disclosure of patent	1994 – ethnopharmacological study published Before 2004 – patent application 2004 – public statement	Unresolved
Low	Andiroba <i>Carapa guianensis</i> Aubl.	Amazon region	Unspecified holders of "patents registered in North America, Europe and Japan"	Various sources, including Amazon-link.org (Brazilian NGO)	Public disclosure of patent			
Low	J'oublie berry (patented product name "Brazzein")	Gabon (and West Africa generally)	University of Wisconsin (USA)	Unspecified countries of origin	G	Public disclosure of patent	1994–1998 – four patents granted 2000 – public statements published	
Med.	Philippine Snail <i>Conus magnus</i> (compound known as "SNX 111")	Philippines	Neurex Inc., (US); Univ. Philippines, Marine Science Inst.; and Univ. Utah	Civil society organizations		Regulatory challenge	Patents granted (US patent numbers 5189,020; 5559,095; and 5587,454)	
Med.	Unspecified bioactive coral	Philippines	Bristol-Meyer Squibb	Government	None	Formal claim/case	Samples obtained/removed 1999 – penalties assessed, permit obtained, permit cancelled	
Low	<i>Copaiba</i> <i>Copaifera</i> sp.	Amazon region	Unspecified holders of patents [that] have been obtained	Various sources including Amazon-link.org (Brazilian NGO)	D	Demand	Public demonstrations	
	<i>Cupuacu</i> <i>Theobroma Grandiflorum</i>	Amazon region	Unspecified holders of patents in Japan (Japanese trademark number 4126269 CUPUAÇU) and Europe (patent request EP1219698A1 on Cupuacu oils and chocolate at the European Patent Office)	Various sources including Amazon-link.org	D	Formal claim/case		

Info level	Genetic resource and other identifiers – traditional/common name of spp. scientific name of spp. (name of isolated compounds; products, comm'l or research use)	Source country	Primary user information – Entity name (user country)	Claimants	Traditional Knowledge (D=direct G=GRTK)	Type of claim	Time period	Current status
Low	Jamun <i>Syzygium cumini</i> , Karela (Bitter Melon) <i>Momordica charantia</i> Lin and Brinjal (Indian Aubergine/eggplant) <i>Solanum melongena</i> L	India	Cromak Research Inc. (USA) and three individuals	Various sources including Vedana Shiva	Various	Public disclosure of patent	[Prior to 1999] – patents granted (US Patent No. 5,900,240)	
Low	Bitter Gourd - called "Bird Droppings Gourd" in Thai (isolated compound "MAP-30")	Thailand			G		[Patent in the US]	
Low	Hom Mali (Jasmine Rice) (product name "Jasmati")	Thailand	US Dept. Agric.; RiceTec	Thai farmers, lawyers, NGOs (calling for Thai Govt involvement)	D, G	Threatened claim/case Demand	1997 – trademark approved "Jasmati" 2001 – protests against USDA research activities	
Low	Kemukus Piper cubeba and Sambiloto <i>Andrographis panicurata</i>	Indonesia	Shiseido corp., (Japan)	A group of (undisclosed) NGOs	D	Public disclosure of patents	Prior to 2000	
Low	General collection of seeds (Millennium Seed Bank Project)	Kenya	Royal Botanical Garden – Kew	Various local NGOs and others	Unspecified	'Regulatory' challenge	1999 – negotiations opened 1999 – public concerns expressed	Resolved
Low	Nuna Bean	Andean region	Appropriate Engineering and Manufacturing		D			
Low	Other patents noted: Cat's Claw <i>Uncaria tomentosa</i> , Maca <i>Lepidium meyenii</i> , Sangre de Drago <i>Croton lechleri</i> , Quebra Pedras <i>Phyllanthus niruri</i> , and Wormseed <i>Chenopodium ambrosioides</i>	Amazon region		Various sources including Amazon-link.org	D	Public disclosure of patent		
Low	Other patents: tamarind, haldi, ginger, anar, pepper, and amla have all been patented.	India		Various sources including Vedana Shiva	D			

10 Administrative and Judicial Remedies Available in Countries with Users under their Jurisdiction and in International Agreements

Tomme Rosanne Young*

** This study was undertaken by The ABS Project in conjunction IUCN-Canada and with the Secretariat of the Convention on Biological Diversity, with funding and support from the CBD Secretariat. It is reprinted here with permission from (and gratitude to) these sponsors. It was submitted as an information document to the fifth meeting of the Ad-hoc Working Group on ABS (WG-ABS-5), where it appeared as UNEP/CBD/WG-ABS/5/INF/3. The author is an independent consultant on international and domestic environmental law and policy, based in Bonn, Germany. Some of the discussions in this paper have been developed while working with co-author Morten Walloe Tvedt (Fridtjof Nansen Institute) on Beyond Access: Exploring Implementation of the Fair and Equitable Sharing Commitment in the CBD (IUCN ELC, 2007), Book 2 in The ABS Series. The author is grateful for those discussions and their contribution to this work.*

In addition, this paper was one of many in this book which owes its existence to the insight and commitment of John Herity, director of IUCN-Canada, whose knowledge of ABS and traditional knowledge issues and support for their development and solution has been nearly unending.

10.1 Introductory discussion

In 2002, the Conference of Parties to the CBD called upon the Convention's Secretariat to:

gather information, with the assistance of Parties, Governments and relevant international organizations, and undertake further analysis relating to... [a] dministrative and judicial remedies available in countries with users under their jurisdiction and in international agreements regarding non-compliance with the prior informed consent requirements and mutually agreed terms. (CBD COP Decision VII/19, Annex, Part E.10(e))

Such information is critically important for the Parties seeking to address a key challenge for the ABS system: how can source countries and providers obtain legal certainty that users operating in another country will share the benefits arising from the utilization of genetic resources?

Seen in this way, this analysis is the next logical step in a series of analyses undertaken by IUCN-Canada into the underlying causes of current difficulties in the implementation of ABS. That series began with an investigation of the various factors affecting legal certainty for users of genetic resources,³⁷⁹ followed by a detailed analysis of claims that have been asserted regarding unauthorized access to genetic resources.³⁸⁰ This article rounds out these two initial studies, by considering the role of a particular kind of user measures – administrative and judicial remedies in user countries – in protecting the rights of the source country.

The author believes that a better understanding of these measures will be an essential and positive contribution to the ABS regime discussions – that increased certainty of their own rights will enable the source countries to engage in actions and decisions that will increase certainty for users as well as streamlining the ABS proc-

379 IUCN-Canada. 2005. 'Summary Analysis: Legal Certainty for Users of Genetic Resources under Existing Access and Benefit-sharing (ABS) Legislation and Policy.' Distributed at AHWG-ABS-3 as UNEP/CBD/WGABS/3/INF/10.

380 IUCN-Canada. 2005. 'An Analysis of Claims of 'Unauthorized Access and Misappropriation of Genetic Resources and Associated Traditional Knowledge'.' Distributed at AHWG-ABS-4 as UNEP/CBD/WG-ABS/4/INF/6.

esses in source countries. Such knowledge and the resulting legislative cooperation and integration it fosters may encourage countries to coordinate measures to that will

encourage users to comply with source-country law and protect these compliant users from unwarranted claims of biopiracy.

10.1.1 Basis for this study

This study is based on four primary sources. First, following the COP 7 decision, quoted above, the Secretariat issued a notification to Parties, Governments, relevant organizations and other relevant stakeholders, inviting them to provide information in relation to the points raised in paragraph 10 of Decision VII/19, including by providing information on administrative and judicial remedies relative to non-compliance with PIC and MAT. That request was fully or partially met by seven submissions, documented in the Note by the Executive Secretary circulated to the third meeting of the Ad-hoc Working Group on ABS.³⁸¹

Second, the CBD's ABS database includes a variety of laws connected in some way to ABS. All measures included in this database have been examined to determine if they include administrative or judicial remedies that are applied to users who are utilizing foreign-origin genetic resources within the legislating countries. This analysis found no measures that are clearly aimed at providing remedies for foreign claimants (source countries and other providers) in any country, but did identify some domestic provisions that might be useful in this context. As further discussed below, nearly all legal provisions in the database that apply to non-compliance with ABS are focused only on penalizing users of the country's own resources. In a few cases, general law of some countries has been cited which could allow it to impose penalties on users, but none that allow foreign ABS claimants to seek remedies in those cases.

Third, the law of remedies is not usually sectorally specialized. In nearly all countries, administrative and

judicial remedies are provided in general national law, applicable to all legal issues and structures. A sectoral law will adopt specialized remedies laws only where a gap or other problem exists in the country's general remedial framework, which prevents basic remedies from being fully effective in that sector. Consequently, in analyzing remedies available to address ABS claims, it was necessary to focus on general remedies, and to consider how they apply to ABS issues. Obviously, it was not possible within the relatively limited time and financial resources of this analysis to review and analyze each country's remedies law. This report therefore considers the overarching principles of administrative and judicial remedies, that are common to many countries. This analysis is based on the author's background and experience with the administrative and judicial laws of numerous countries,³⁸² as well as general comparative law studies and other research sources (see References section, below).

Fourth, the author has examined questions regarding the international law of remedies, and the international instruments and bodies through which ABS-relevant remedies may be available. Her sources for this work were the international instruments themselves, and the broad body of legal analysis of those instruments and the basic principles on which they operate. Very little of the available sources are focused on remedies issues, however; so the author's analysis of these issues represents a first inquiry, rather than a complete study of all relevant law at national and international levels.

381 Note by the Executive Secretary., 2004. 'Analysis of Measures to Ensure Compliance with Prior Informed Consent of the Contracting Party Providing Genetic Resources and Mutually Agreed Terms on which Access Was Granted, and of Other Approaches, Including an International Certificate of Origin/Source/Legal Provenance.' UNEP/CBD/WG-ABS/3/5, section II, D., (herein 'Note by the Executive Secretary'). The submissions that responded to the question about 'administrative and judicial remedies' (beginning at page 10 of the summary) are Denmark, Norway, Sweden, the EC, France, Spain and Colombia. The full text of all of the submissions was also provided to AHWG-ABS-3 as 'Submission to the CBD, in preparation for the third meeting of the CBD Ad-Hoc Working Group on ABS,' reproduced as UNEP/CBD-WG/ABS/INF/3/1, (herein 'National Submissions').

382 Including the USA (in which the author was trained), Germany, Canada, Australia, France, Costa Rica, Brazil, Tanzania, Mauritius, Tonga, Trinidad & Tobago and, in a more limited analysis: South Africa, Cyprus, Indonesia, Slovakia, Seychelles, Lao PDR, Mongolia, and others. The author also made use of the ECOLEX database, in an attempt to obtain a broader range of legislation. Language difficulties (and limitations of time and funding) prevented the review of laws not available in English, Spanish or French.

10.1.2 Organization of this analysis

This analysis is organized as follows: The next two sections will focus on the nature of ‘remedies.’ Section 10.2 provides a brief (by legal standards) summary describing what a remedy is, including the role of administration and judicial remedies in legal and political regimes, the relevant concepts and sources of remedies and arbitration, and how remedies operate to protect the rights of persons, countries and other entities. This summary is a necessary part of the overall analysis, because administrative and judicial remedies are, by definition, legal issues. As such, it may be difficult for non-lawyers to understand them without some background information.³⁸³ This analysis is continued in Section 10.3 which extends the remedy question to international law, including both public and private international law.

The question of remedies in ABS is not answered simply by identifying remedy provisions. It is essential also to determine whether remedies are available in the ABS context – to consider practical situations in which an ABS remedy would be needed, and determine which remedies may apply to those situations. This evaluation has three steps – identifying particular remedies that apply or may apply to ABS situations, considering when and whether they are available and examining their potential effectiveness in terms of the ABS regime.

10.2 The nature and role of remedies

‘Administrative and judicial remedies’ is a legal concept with immense practical importance in the ABS negotiations. The existence of effective legal remedies in the user country is the primary means by which all ABS Parties (especially source countries and other providers) obtain certainty about their rights and how they will be protected and applied. The CBD’s provisions and the

Accordingly, the next three sections of this chapter examine the role of remedies in the ABS system, as it is currently envisioned. identifies particular remedies that have been or could be considered to apply within ABS. 10.5 identifies a few issues that may impact the actual availability of these remedies in countries with users under their jurisdiction, and 10.6 provides some observations about the overall effectiveness of existing remedies in addressing the needs of the ABS regime, and makes some observations about how the international negotiations might address problems relating to the need for remedies within the ABS regime. 10.7 provides a very brief summary of conclusions that can be drawn from this study.

Before beginning, however, the author offers the following caveat: Private remedies are created, applied, and enforced by national law, and particular remedial rules and practices are as varied as the many different existing systems of law. Readers seeking to obtain a remedy (or apply national remedial law) in a particular country should use this article as a way to understand the primary underlying principles, but realize that each country will reflect these principles in their own unique terms, processes and categories.³⁸⁴

ABS regime negotiations have created certain concepts (new sovereign legal rights) and all CBD Parties have committed to adopting legislative and administrative measures to recognize and apply those concepts. Legal remedies are the tools for ensuring that these commitments and their underlying objectives are achieved in practice.

383 The author apologises to the many readers who are already fully aware of these basic facts, but has noted in the course of previous work (supra notes 399 and 400) that many readers were grateful for this step-by-step approach, which they felt was useful in ensuring that all parties to discussions are ‘starting on the same page.’

384 This report attempts to summarize a very complex legal issue in a short description with a minimum of ‘legalese’. The simplification of these principles is intended to make them useful to non-lawyers who are involved in ABS negotiations, but not as an input for pre-litigation discussions or other legal analysis. The author assumes full responsibility for any errors arising from this simplification process.

10.2.1 What are administrative and judicial remedies?

When used in law, the word ‘remedy’ has a meaning that is very different from its normal dictionary definition.³⁸⁵ This legal meaning of remedy is much more detailed and specialized; however, it clearly arises from the conventional definition. In normal usage, remedy means a cure or action by which problems and illnesses are addressed. In legal language, the term ‘remedy’ refers to the use of laws, courts and administrative agencies to cure a legal problem. Legal cures generally occur in several ways:

- By bringing a non-complying situation into compliance;
- By compensating (with money or other benefits) losses suffered, including by the failure to receive a legally vested payment or other expectation;
- By issuing an order mandating required actions, or prohibiting those that are illegal or do not comply with legal requirements; and
- Other legal prescriptions.

Remedies are created and applied by law. In some situations, a national or subnational law on a particular top-

10.2.2 Remedies v. penalties

The most important definitional point about remedies is that they are different from penalties. The purpose of a penalty is to identify the violator and punish him in some way; whereas the purpose of a remedy is to fix or cure the person/entity/etc. who has, as a consequence of the violation, been injured or damaged or suffered a financial loss.

The primary difference between a remedy and a penalty relates to who collects any funds that are awarded. In a penalty, any financial amounts assessed (fines) are paid to the government of the country (or sub-national jurisdiction) in which the action is brought. A financial remedy, by contrast, produces an amount that is paid to the person or persons who have suffered a loss caused by the violation. Similarly, a penalty may result in im-

prisonment, a term of public service, loss of permits, or other means of punishing violators. By contrast, a non-financial remedy may include an order requiring the defendant to comply with terms of a contract (e.g., to provide reports, give access to records, etc.), sharing non-financial benefits (e.g., data, contacts, etc.) and other actions that directly cure the situation for the complaining party (source country or other provider).

ic may specify the remedy exactly, by stating a precise amount that must be paid or action that must be taken in a particular situation. Often, however, the law cannot specify all of the variables in the situation. In that case, a law will authorize particular courts, agencies or other officials to declare and enforce a remedy – providing specific guidance (called a ‘legal standard for decision making’) to ensure that those decisions are legal and fair. In these remedy decisions, agencies and judges sometimes have wide discretion, but are still held to legal standards of fairness, equity and due process of law. In nearly all countries, remedy decisions are subject to oversight or appeal rights, which ensure that other agencies or higher levels of government will protect against improper decisions and secure the rights of all parties and the ‘rule of law.’

The following sections explain three critical points: (i) the difference between remedies and penalties; (ii) the kinds of remedy that can be obtained in law; and (iii) the legal conditions (pre-requisites) that must be met by a party seeking a remedy.

A second important difference is the fact that, in the context of remedies, the claimant controls the claim. He brings the action, and he determines whether to continue or drop it. The only way that his claim will be dismissed is by his decision, or by the court’s conclusion that the claim may not be prosecuted. By contrast, penalties are assessed/prosecuted by decision of the government and

385 In law many terms have special meanings – people sometimes speak of a separate language of law – ‘legalese.’ Unfortunately, ‘legal’ words often also have very different ‘ordinary’ meanings (usages in daily conversation). This can create confusion for non-lawyers who are not aware of the special meaning, leading to a situation in which, unknowingly, legal experts are speaking of one issue while in the same discussion persons of non-legal expertise are addressing a very different point.

its prosecuting officers. These officials have complete discretion as to whether to devote limited human resources (time and expertise) and expend other costs necessary to amass a case against the violator, and whether that case has a high enough probability of success to be worth the effort. This control has a downside, however. In most cases, the party who controls the legal action is also the party that pays for it. Governments do not normally take action to provide remedies to injured parties – they create legal systems and institutions that enable the injured party to seek a remedy.

In some cases, the remedy-penalty distinction is blurred. For example, in some countries, it may be possible to increase the amount of a remedy, as a way to

punish the violator. This practice is often called ‘exemplary damages’ or ‘punitive damages.’ Their purpose is basically to protect against repetition by the defendant. Absent the possibility of punitive damages, very wealthy defendants might feel that they can commit the same actions tomorrow, so long as they are willing to pay the remedy. The claimant (not to the government) receives the added funds, as a sort of bonus.

More rarely, in some penalty laws, the court may require the defendant to recompense the victim, as one part of the final judgement. In many countries, however, the rights of the victim to receive a remedy are tried in a separate process (civil court), usually after the penal claims have been adjudicated.

10.2.3 Available remedies

Another important characteristic of remedies is that they must be created in law. Over the 3000 years since King Solomon’s decision to cut a baby in half as a means of resolving a dispute over parental rights,³⁸⁶ the concept of governance has become more rigorous, and the list of remedies that may be awarded has been very clearly defined. Even with this limitation, there are many different types of remedies that may be awarded. It is important to remember that all remedies are not available in all situations. Whether a particular remedy is authorized in a particular case will depend on (i) the nature of the basic legal right involved, and (ii) the legal and institutional source of the remedy.

10.2.3.1 Kinds of remedies

Some of the kinds of remedies that may be relevant to claims based on ABS agreements or obligations include the following:

- Compliance orders, (legal writs mandating or prohibiting certain actions);
- Compensation for harms caused (payment of damages or restitution, calculated based on the value of the injury, damage or financial loss suffered by the claimant), including:
 - compensatory remedies (i.e., the direct value of the harm suffered), and

- punitive remedies (discussed above);
- Rescission, cancellation, revision or termination of permits, licenses or other government instruments;
- Reformation or invalidation of a contract or other agreement;
- Declaratory decisions (the court’s binding determination of questions regarding rights under certain kinds of relationships. In some countries, the rights to obtain declaratory remedies is only available in a limited number of situations);
- Contractual remedies, including, among others:
 - ‘specific performance’ – i.e., ordering a party to perform his responsibility under a contract;
 - accounting (calling on a party to provide a record of relevant matters within his sole knowledge);
 - lien rights (in cases where the law enables the creation of a lien against certain properties for certain purposes – especially where the claimant gave property or services that are incorporated into a valuable property);

³⁸⁶ This story is recounted in one of the historical books of the Judeo-Christian Bible, at 1 Kings 3:25.

- other special rights (sometimes called ‘constructive trusts’) in property, where the property of the claimant is later legally exchanged for other property.³⁸⁷
- Estoppel (an order which prevents a party from taking certain actions in future.)

While there are other types of remedies,³⁸⁸ the above list includes those that appear to be the most useful in ABS situations.

10.2.3.2 Sources of remedies

The existence of a particular remedy or group of remedies in the laws of the user country does not necessarily mean that a source country or other provider will be able to use those remedies to obtain redress under ABS laws. Thus, after determining the existence of a legal remedy, the second step in determining whether that remedy is available is to consider the path by which the remedy is obtained – to ask ‘Where (from what law or legal category) is the remedy obtained?’ ‘Through what institution or system can I seek the remedy?’ and ‘What limits or restrictions apply when seeking remedies through this path?’ The nature of the remedies available, the processes of seeking them, and many other factors depend on the source of the remedy. This paper considers four basic sources of remedy – judicial institutions, administrative bodies, direct contract mechanisms, and arbitration/mediation panels. Despite their various names, each of these sources represents a component of administrative and judicial remedies since all must be founded in and compliant with national law and administrative regulation in order to be applied.

[a] Remedies available from judicial institutions

The term ‘judicial remedies’ refers to the range of actions that may be taken by a court, judge, appellate panel, magistrate or other judicial official (or in some cases the

legal bodies of traditional communities)³⁸⁹ when acting formally in that capacity. In most countries, these officials may act in a variety of specified ways, to suit the needs of the situation. For example, in very urgent cases, a judge may often issue an emergency writ or other order, in a short *ex parte* process (that is, a hearing where the defendant is not present). The fairness of these procedures is ensured by requiring that they be reviewed in a formal legal process at a later date. Most judicial decisions, however, are given through a more complete judicial process, where both parties are present and able to argue on their own behalf.

The powers of the judiciary are not unlimited. Each court may only act within its jurisdiction – that is, it may only decide cases that (i) occur within geographical boundaries and involve specified financial levels, (ii) are assigned to the court’s judicial level and division, and (iii) (sometimes) that address the particular kinds of law or subject matter of the particular court’s portfolio. Most important, courts are authorized to act only as to matters governed by law – including both written laws, and in some countries broader concepts of law that are recognized in practical terms, but may not be memorialized in legislation. This last category of authority may include concepts such as negligence, endangerment, breach of contract, and other matters, in countries where these issues are decided on the basis of accumulated legal decisions in the courts.

One problem that is particularly difficult in using judicial remedies is the rigidity of the procedures that apply. By filing the first papers bringing a lawsuit, the complaining party is inadvertently ‘sculpting’ his claim – that is, the contents of his initial filing may limit the remedies available. Consequently, if the source country does not have access to adequate legal advice, he may file a claim under which the desired remedies are not possible. This is particularly problematic in the case of

387 For example, other contractual remedies may include rescission (un-creating a contract, and returning the parties to their pre-contract state), and rectification (correcting the terms of a contract that are written in error or do not reflect the true agreement of the parties).

388 Apart from this footnote, this report will not discuss traditional law and its institutions. In general, judicial bodies and decisions of traditional communities cannot have a significant legal impact outside of the traditional community in question, unless the national law of the country in which the decision is made specially provides – either treating them as subsidiary or sub-national courts, or as a special form of arbitration. If authorized under national law, of course, the traditional courts and their remedies would be bound by the same rules and issues applicable to governments, courts and arbitrators.

389 Apart from this footnote, this report will not discuss traditional law and its institutions. In general, judicial bodies and decisions of traditional communities cannot have a significant legal impact outside of the traditional community in question, unless the national law of the country in which the decision is made specially provides – either treating them as subsidiary or sub-national courts, or as a special form of arbitration. If authorized under national law, of course, the traditional courts and their remedies would be bound by the same rules and issues applicable to governments, courts and arbitrators.

ABS, where the central issues – the nature of genetic resources, the meaning of utilization of genetic resources, the determination of which countries have ABS rights with regard to a particular species, and the question of what constitutes equitable sharing of the benefits in these cases – are all completely new and cannot be reliably answered under prior law. As further discussed in 10.3, current law does not include sufficient legal basis to enable the use of judicial remedies to address ABS claims.

[b] Remedies available through administrative agencies

A second general category of remedy is administrative – that is remedies that are available through government ministries, agencies and other bodies that are not formal courts. Most countries authorize administrative bodies to undertake some administrative decision processes in response to claims.³⁹⁰ In some countries the justification for administrative remedial processes is that they might reduce demands on the formal court system. These countries might call on a claimant to exhaust his administrative remedies (i.e., to attempt to resolve his problems through administrative processes) before bringing an action in the courts.

In other countries, the opposite justification applies – citizens do not normally want to take the difficult and confrontational approach of bringing an action in court. Instead, they prefer to act informally and personally by speaking directly to an agency official. Through these requests for personal attention, individuals sometimes attempt to pressure individual administrative officials to make a particular decision or grant an exception for them.

In both of these situations, government agencies and officials need to have clear administrative regulatory standards to guide their judgement. These tools enable the agency to control and manage claims, and to ensure that fair and replicable decision making is happening throughout the agency. They also assist the individual decision maker, who can point to the specific standard

as a reason that they cannot respond to individual pressure for special treatment. National administrative processes are designed to help regularize and control both the process and the impact of personal contacts, while providing a comfortable avenue for legitimate claims.

An administrative body's powers to hear and resolve claims is limited in several ways. First, only specific types of claims can be raised before an administrative agency, and only within the specific substantive area of the agency's mandate. For example, conservation agencies may act only in conservation-related matters, pollution control agencies to pollution-related matters, etc. More important, direct administrative remedies are usually tied to very particular decisions or authorization of the agency. For example, an agency that has the power to grant a concession or permit will often have the right to adjudicate appeals from applicants who have been denied, and challenges by others who oppose the issuance of a permit that has been granted. They may also have the right to review claims that the permit-holder is violating the permit. But they may not have the power to award a remedy to neighboring landowners who are injured by the concession-holder's actions. Similarly, an agency that has the power to conduct inspections, issue citations or compound penalties will often have the administrative authority to hear appeals related to these actions.

[c] Direct contractual remedies

A contract contains a direct contractual remedy where it specifies a particular remedy that will apply in cases in which one party breaches the contract, and gives the other party the authority to apply the remedy directly. Up to now, in ABS, the discussion of remedies has not separately considered direct contractual remedies. The apparent reason for this is that during the first 8–10 years of negotiation and implementation of the CBD, contract law was the only legal avenue considered or addressed in ABS discussions. Many commentators appear to have assumed that only contract remedies would apply in ABS.³⁹¹ Consequently, where ABS remedies have been discussed at all (very rarely), they have not sepa-

390 In Anglo-legalese, these are sometimes called 'quasi judicial processes'.

391 Nearly all discussions of enforcement of ABS obligations since the beginning of the ABS negotiations have focused solely on the ABS contract, apparently presuming that there would be no need of national legislative measures and remedies to enable those contracts to be overseen, implemented and enforced. See, e.g., Glowka et al., *supra* note 97, at 82–83, which phrases all discussion of rights and remedies in the context of negotiated ABS agreements.

rated contractual remedies from remedies that are more broadly applicable – both to contracts and to situations in which the ABS user did not comply with ABS law and/or did not obtain any contract.

There are two common types of direct contractual remedies: liquidated damages and guarantees. A liquidated damages clause in a contract between X and Y states that, if Party X defaults on his obligations, then Party Y shall receive a specified remedy, as liquidated damages.³⁹² Then if X does not comply with the contract, Y automatically takes the liquidated damage amount, and no lawsuit or other action is needed. A liquidated damages clause will be most effective where there is a specific bank account, escrow account or other fund from which the liquidated damages can be taken.

Although they can limit the need for courts, liquidated damages clauses do not eliminate the possibility of a formal action (lawsuit or arbitration). If the parties do not create a sequestered account, then Y must request the payment from X, and may have to file a lawsuit if X refuses to pay. In addition, if X and Y disagree about whether the liquidated damage clause has been triggered, they may have to go to court. In most other cases, however, a liquidated damages clause operates as a simple and more direct remedy.

A guaranty clause in a contract operates in a very similar way, but focuses on ensuring the ability of one party to pay sums that will come due, or to take other action that is required under the contract. Such a clause will generally require the Party to provide some financial assurance of his ability to pay or to afford the costs of other requirements. That assurance must continue to be in force until the party has fulfilled the guaranteed obligation or until the other party agrees to release the surety. Guaranty clauses may be satisfied by the creation

of a fund or other set-aside of resources, or by hiring a guarantor or surety who will, for a fee, agree to back up the party's promise to pay or to take other action.³⁹³ As with liquidated damages, a guaranty clause may sometimes result in a legal action (lawsuit or arbitration) if the parties disagree about whether the clause has been triggered, but where it operates according to the contract, it provides a simple, direct and quick remedy.

[d] Arbitration and other dispute resolution processes

Finally, another possible source of remedy is increasingly relevant – arbitration and alternative dispute resolution (ADR). Over the past few decades these special processes have been developing, creating less formal procedures, and offering a possibility to shorten the time between initiation of the claim and final decision, and possibly to decrease costs. Although they are not limited to commercial issues and contracts, arbitration processes are usually applied to contract dispute,³⁹⁴ especially where the contracts or commercial relationships are international.³⁹⁵ Arbitration and mediation may be used by governments, agencies, private persons, corporations, NGOs and other types of entities.

The primary alternative mechanism is private arbitration, which is defined, for purposes of this article,³⁹⁶ as a non-judicial (and usually non-governmental) process that uses alternative processes to resolve non-penal legal disputes. Arbitration is a set of formalized rules (less strict and detailed than most national judicial requirements, but still formal procedures) for obtaining binding resolution of a claim or problem. The use of arbitration enables all sides of a claim to be resolved less formally, but still results in a final decision that is binding between the parties. Typically, arbitration is used where all of the persons involved in the legal claim specifically consent to be bound by the decision.³⁹⁷

392 The UNIDROIT Principles of International Commercial Contracts include some specific types of liquidated damages clauses. See, e.g., Art. 7.4.13 (Agreed payment for non-performance.) See also, UNCITRAL Uniform Rules on Contract Clauses for an Agreed Sum Due upon Failure of Performance (A/38/17, annex I). Both of these codes are directed at assisting parties to transnational transactions.

393 Guaranty and warranty aspects of contract law are sometimes quite intricate and confusing. A relatively simplified discussion of their use in international commercial contracts is found in DiMatteo, L.A. 2000. *The Law of International Contracting*. Kluwer Law International.

394 In some countries, the court may order parties in a lawsuit to participate in a governmentally sponsored process called 'mandatory arbitration.' This process may not resemble commercial arbitration.

395 Obviously, arbitration processes cannot be used in criminal cases, and other situations in which a government decision is needed. In particular, arbitration cannot be used to resolve patent infringement claims or to invalidate an IPR.

396 Arbitration is another word that may be used differently from country to country. In some cases, the word arbitration is used to refer to a formal court. For example, the name of the commercial courts in Russia is normally translated into English as 'Supreme Court of Arbitration.' For the purposes of this analysis, those courts would be considered judicial bodies rather than arbitration.

397 In some cases, the Parties may specifically agree that the arbitration is non-binding. In that event, the arbitration will essentially operate as a formal

An even less formal process, mediation, is also used with increasing frequency. Ideally, mediation operates in a non-adversarial manner. Mediation processes are generally defined as ‘an attempt to reach a common middle ground through an independent mediator as a basis for a binding settlement.’ Mediation is thus different from arbitration, which operates like a court, where the parties are adversaries, each seeking to be declared the winner in relation to the claim. Mediation emphasizes the use of dialogue between the parties in order to find a solution, which might be described as ‘the best compromise.’ Mediation is often conducted in a non-binding format – that is, the parties do not begin by agreeing to be bound to the results. Rather, they may wait until the final compromise is achieved, if it is, and have the option then to agree to be bound. The success of mediation usually depends on the quality, abilities, and impartiality of the mediator, and the good faith of the parties in desiring a mutually acceptable solution.

The ADR process may allow Parties to ‘sculpt’ their arbitration in whatever way they can agree on. Arbitration panels and processes are usually based on particular pre-existing rules and principles, such as the UNCITRAL Model Law on Commercial Arbitration,³⁹⁸ and the International Chamber of Commerce’s Rules and Guidelines on arbitration.³⁹⁹ While some of these systems provide a platform of actual arbitrating services, it is not necessary to use that platform in order for an arbitration to be conducted under those rules. There are many other sets of primary rules on arbitration, and the first task in any arbitration (often decided in the contract or elsewhere, before the claim arises) is to determine which rules and guidelines apply. Beyond this, however, most arbitrations begin by setting any special ground rules that the Parties might choose. For exam-

ple, the parties may agree that the financial award may not be less than a specified minimum, nor more than a specified maximum.

There are two primary limitations to arbitration and other ADR, however. First, these mechanisms cannot be forced on either party. ADR mechanisms can only be used where both parties agree to their use.⁴⁰⁰ In some cases, this consent may be given long before any claim has arisen. For example, a contract may include an arbitration clause in which the parties agree to use arbitration rather than the courts, in the event of a future claim or controversy, relating to the contract. In the ABS area, for example, the ITPGRFA’s Standard Material Transfer Agreement (SMTA) includes a provision requiring arbitration.⁴⁰¹ That clause specifies that in the event negotiation and mediation are not effective in resolving a disagreement among the parties to the Agreement, then binding arbitration will be required.

If a disagreement is not contractual (for example, if a source country is seeking benefit sharing against a user who never obtained an ABS agreement or complied with other relevant law), the parties may agree to submit their dispute to binding arbitration. If they do not agree, however, then independent arbitration or mediation will normally not be possible.⁴⁰²

It is generally recognized that arbitration clauses may favor one party over another in different situations. To non-lawyers signing the agreement, arbitration clauses often seem to be innocuous ‘boilerplate.’ At a later point, some parties may discover that the arbitration clause limits their rights and remedies in some way.⁴⁰³ Having signed the contract, they will have no ability to change their mind at this point.

and adversarial version of a mediation.

398 Adopted in 1994, available online at www.uncitral.org/pdf/english/texts/arbitration/ml-arb/06-54671_Ebook.pdf

399 Found online at www.iccwbo.org/policy/arbitration/id2882/index.html, these rules are applied by the International Court of Arbitration.

400 Any limitations or special arbitral rules must also be agreed by the parties to the arbitration.

401 SMTA, Art. 8.

402 Some countries have judicial arbitration processes that are not actually arbitration but pre-litigation requirements, presided over by officials of the court. It may be possible to require these processes under national law of countries which use this system.

403 Pre-adopted arbitration clauses do not always result in mandatory arbitration, however. For example, in the case of *Graham v. Scissor-Tail, Inc.*, (28 Cal.3d 807 (Cal. 1981)), the US state of California invalidated an arbitration clause, where the circumstances indicated that the clause would be unfair in its impact on one party to the contract. (It is for this reason that the author cautions readers who are non-lawyers never to trust a lawyer who tells you ‘you don’t have to worry about that, it’s just boilerplate’). Such cases are diminishing however, as arbitration processes increasingly include protections for disadvantaged parties, results improve and courts’ interest in promoting arbitration increases. Folsom, R.H., M.W. Gordon and J.A. Spanogle. 2004. *International Business Transactions in a Nutshell*. 7th Ed. St Paul, MN: Thomson West.

10.2.4 Prerequisites for claiming remedies

The third step in determining whether a particular remedy will be effective to address a particular legal issue is to consider the primary conditions that must be met, in order for the remedies to be sought or applied. Since remedies are created and applied through national law, any person seeking remedy within a country must research and comply with the prerequisites established under that national law. For purposes of this analysis, there are several essential prerequisites that must be met in order to obtain a legal remedy on any claim. The three that seem most directly relevant in the current report are (i) a law which forms the basis of the claim; (ii) standing of the claimant to bring the claim under that law; and (iii) jurisdiction over the defendant, his actions, or some of his property.

These questions form the most critical aspect, in determining whether a remedy is available and effective in a given situation. If examined in detail, they are very technical questions on which many long legal debates may be required in any case. They are also, however, extremely difficult to generalize across many different countries, except by limiting the discussion to the broadest description of the concepts. It must be noted (discussed in more detail below) that even where a remedy is available, it may not operate to redress the harm in question.

10.2.4.1 Legal basis for claiming a remedy

In order for a person to seek redress for harm, damage or financial loss to a particular right, interest or property, the law must:

- (i) recognize the right, interest or property as worthy of remedy; and
- (ii) have a basis for determining that the action that caused the harm, damage or loss was wrongful or inequitable.

If the law does not include these basic concepts, then the courts cannot award a remedy. Where the concepts exist, but are unclear at law, many courts will not award a remedy due to ambiguity. Many kinds of right or interest have been clear in law for many millennia. For example, the legal rights of individuals to own land, plants and animals, and to seek redress when they are taken or used without permission or payment has been recognized for nearly 4000 years.⁴⁰⁴ Hence, the courts are generally comfortable making decisions in such cases.

By contrast, the law has only recently recognized the distinction between the rights to own a computer program, and the right to reproduce that program and sell it commercially. These rights must generally be spelled out carefully in national law, and contracts often include special provisions and clarifications, if the parties do not feel that the law is clear enough on a particular point, or if they want to apply it in a different way.⁴⁰⁵

In some cases, a law may state that a particular activity is illegal without providing a private remedy. For example, a law may prohibit any person from bringing any item into the legislating country if that item was illegally obtained in the source country.⁴⁰⁶

Such a law would give rise to action for penalty – to fine or imprison the smuggler – but the source-country's rights are not addressed. To obtain redress, the source country would have to make a claim under the property-based tort laws of the legislating country.

10.2.4.2 Standing to seek redress

A second element determining whether a particular claimant may seek a remedy is whether he has standing before the court – that is, whether the court or agency will allow a particular person to bring a particular type of claim. For example, if one party to a contract brings an action based on his fear that the other party will vio-

404 The Code of Hammurabi, created in about 1800 years BCE (i.e., about 3800 years ago) devotes far more than half of its provisions to the rights of owners of land and agricultural commodities, including setting the value of such commodities when another person takes them without payment or permission.

405 In writing a contract, Parties may agree that 'XXX (standard provision or law or principle) does not apply to this contract.' Unless XXX is an ethical principle or other issue that the government specially protects, the court will usually apply the contract's provisions, rather than the law, where there is a conflict between them. See UNIDROIT Principles of International Commercial Contracts, Art. 2.19–2.22.

406 Two US federal laws, the Lacey Act and The Stolen Property Act, see notes 511 and 512 below, are examples of such laws, which are often cited as user measures under Article 15.7.

late the contract in the future, the question of standing arises, because there has not been any violation of the contract yet. In most countries, a claimant may not bring an action for violation until that violation has occurred, except in very special circumstances. In standard contract law, the possibility that a contract party will not perform in future, is sometimes a basis for terminating the contract.⁴⁰⁷ Other pre-emptive claims (seeking protection against future violation) may be allowed in some countries where the defendant appears to be planning to defraud the claimant. Similarly, some countries allow courts to consider some matters in advance, issuing advisory decisions regarding, for example, the interpretation of a particular clause of a contract.

Another aspect of standing is the nature of the party bringing the action. Normally, in an action for redress of an injury or wrong, the injured or wronged person must bring the action, or it must be brought on his behalf. Often, it is necessary to describe the nature of the injury or wrong, and demonstrate that a legal remedy exists that is capable of redressing the injury.

10.2.4.3 Jurisdiction over the defendant or his property

Perhaps the most important element determining the effectiveness of a remedy is whether it is possible to obtain legal jurisdiction over the defendant, over the actions that form the basis of the lawsuit or over some of his property. Where the court has jurisdiction over the defendant, he must participate in the lawsuit. If he does not do so, the judgement will be entered against him in default and he will still be obligated to abide by the judgement (to pay any remedy that the court or other decision maker assesses).

If the court cannot assert jurisdiction over the defendant, it may still be able to assert jurisdiction over some property or assets of the defendant that are within the country. In that case, if the defendant does not participate in the lawsuit, the assets may be used to satisfy the judgement. If neither of these is possible, however – i.e., if the defendant is not present in the country, his actions do not create local jurisdiction, and he does not have any assets within the country – then the source country's law cannot provide an enforceable remedy.

10.2.4.4 Action in the source country

Another option may be to bring the action against the user in the source country. This can be effective in providing remedies in two ways. First, if any assets or property of the defendant are located in the source country, it may be possible under national law to use those assets to satisfy the judgement, as described above. Second, if other countries recognize the validity of the judgement, it will be possible under basic principles and instruments of private international law to call on the country in which the user is based or is conducting obligations, and ask that country to enforce the judgement against the user.

Special rules may apply where the court does not have direct jurisdiction over the defendant. In those cases, the claim may still be possible, if the court has jurisdiction over the defendant's actions. For example, if he injures someone in the country, and then leaves the country, the court may still have jurisdiction over a claim to redress the injury he caused. If he wins the lawsuit, however, the claimant faces another challenge – how to enforce the judgement. He may have to go to another place – where the defendant is located or has assets – and ask the courts of that country to compel payment. Enforcement of foreign judgements is one aspect of private international law described in 10.3.3, and can be both legally complex and expensive. If there are doubts about the country's jurisdiction over the defendant's actions, the ultimate remedy may be uncertain.

One of the problems in using this mechanism to seek remedies for ABS violations arises when the user's utilization of genetic resources occurs outside of the source country. Since it is impossible to look at a particular specimen or product and determine whether it is a genetic resource or simply biological material, it is not practically possible to adopt or enforce a law against possessing genetic resources. This means that a collector who acquired the specimen in the source country and then removed it to another country did not break the law of the source country. The source country or other provider will only have a claim for remedy if the user's subsequent actions involved the utilization of genetic resources without sharing the benefits from that utilization.

⁴⁰⁷ For example, UNIDROIT Principles of International Commercial Contracts, Art. 7.3.3 notes that 'Where prior to the date for performance by one of the parties it is clear that there will be a fundamental non-performance by that party, the other party may terminate the contract.'

Legally, this suggests that the user's violation did not occur in the source country. Since no country's law may regulate actions by foreign citizens in foreign countries, there would be a legal basis for making an ABS claim against the user. This is particularly true where the user acquired the genetic resources through a middleman. Consequently, the possibility of using source-country remedies, and enforcing them in other countries seems somewhat doubtful legally.

10.2.4.5 Arbitration and remedies

One last comment in this section must clarify the question of remedies in connection with arbitration and other ADR mechanisms. In 10.2.3.2[d] this article noted two critical facts: (i) ADR is primarily a non-governmental mechanism; and (ii) arbitration provides only a path to a remedy – the remedy itself is created through the application of law (including the legally binding nature of a contract). Since law can only be created by government, it follows that ADR does not produce remedies, it is only a tool to facilitate the pre-remedial process – to make it easier for the parties to get to the point of agreeing on, awarding and/or paying a remedy.

In essence, when parties have a dispute, the dispute can only go to ADR if the parties agree (either by earlier contractual agreement, as described above, or by agreement at the time of the dispute). That agreement, like any other contract, can then be the basis for a legal remedy in at the point where the arbitration produces a final binding award, or when the parties agree to apply the ADR result. At that point, the arbitration or ADR result becomes, in essence, a new contract, although it is a type of contract which is given special treatment in the courts.⁴⁰⁸

Like a contract, however, arbitration awards can only be enforced under state law, once the panel has decided. This means that:

- (i) if the Parties willingly comply, the result need not be examined by any country's courts; but
- (ii) if either party does not comply then the other party's only options are (a) to give up and allow noncompliance; or (b) to formally demand compliance. In the latter case, the arbitration panel has no power to compel anything. It is only a panel. The only way to compel a party to comply with an arbitration award is to ask a court with jurisdiction to execute the award, under the national law of some country. Consequently, its terms may only be applied through the remedy structure of that country. Often, this means that the courts or other enforcement officials will review to determine that the arbitration procedure was fair, and that the results do not violate basic standards in the country, before formal enforcement.⁴⁰⁹

Countries normally allow a great deal of flexibility in arbitration awards,⁴¹⁰ and general conventions and international procedural standards regarding the enforcement of foreign arbitration awards are very well accepted. In fact, it is often easier to enforce foreign arbitration awards than foreign court judgements in most countries.⁴¹¹ Consequently, it appears that ADR offers a broader range of possible remedies, since the deciding body is not governmental, and has more flexibility than a court or agency would. Some users view arbitration and other ADR clauses as a means of avoiding national law entirely.⁴¹² In fact, however, arbitration is not an

408 In general, arbitration agreements of this type are given special treatment in courts, since many countries and processes prefer arbitration, and seek to promote the use of arbitration rather than other legal remedies. One example of this is found in the ITPGRFA as described in Section 11.2.3.

409 Thus, although the arbitrator is less rigidly bound by the strict construction of the law, he is not entirely free to make any choice he wants. Mediation processes are even more flexible, since they allow the parties to agree or drop the negotiation at any time. They, too, may be revisited by the courts under a normal contract law case, however. See, e.g., Norway: *Avtaleloven 31 Mai 1918 No. 4 § 36*.

410 One commonly cited case of long standing that demonstrates this principle is *Norske Atlas Insurance Co v. London General Insurance Co* (1927) 28 *Lloyds List Rep* 104 (holding that the duty of the arbitrator is "not necessarily to judge according to the strict law but, as a general rule, ought chiefly to consider the principles of practical business").

411 It is generally recognized that the United Nations Convention on the Recognition and Enforcement of Foreign Arbitral Awards (New York, 10 June 1958) is so widely accepted (it has 141 parties) that an award issued by a contracting state can generally be freely enforced in other contracting states. Enforcement requirements are subject only to certain very limited defences. The treaty can be viewed online at www.jus.uio.no/lm/un.arbitration.recognition.and.enforcement.convention.new.york.1958/doc.html. See also Saltzman, N.J. 2005. "The Recognition and Enforcement of Foreign Awards in New York State," which is available online at <http://lawfirminternational.com/enforceart.aspx>

412 This is apparently the view of the drafters of the ITPGRFA and its Standard Material Transfer Agreement, which do not include any reference to the governing law issue, but do include rather strong arbitration clauses.

alternative legal system, but an alternative tool, and in any situations of doubt the only recourse is to the law, not only the principles of law, but also an implementing authority. Internationally, there is no body or authority responsible for private contracts. The only governing law is national.

In addition, the general statement that arbitration awards are easier to enforce in foreign countries may not be true if the subject matter of the arbitration is not recognized by the country's laws or otherwise subject to question. If enforcement of an ABS award must be compelled, one must do this through national courts with ju-

10.3 International remedies

The next question that is usually asked is 'What additional remedies are available to the parties to a multinational contract under international law?' Unfortunately, unless and until the CBD creates them under the ABS regime (or other international processes do so),⁴¹³ there is no direct remedy available to contract parties in international law. So-called 'private international law' does not create remedies nor provide forums for decision. It only provides rules and other tools that make it easier for private claimants from one country to bring action in another country. The concepts of international law can be critically important to remedial discussions, however, so they should not be dismissed. Thus, a brief

10.3.1 Applicability of international law

Many people, when considering international law, assume one of two things – (i) that it is basically the same as domestic law, but applied on a global or multinational scale or (ii) that it is not law at all, because it cannot impose its requirements directly on any country. Both of these assumptions are generally incorrect. International law and its enforcement and other operations are completely different from domestic law, and their effective-

ness cannot be measured on the same terms for a very basic and important reason – national sovereignty. That is, with very few exceptions, every country has a basic right to govern the territory, persons, actions, property and rights within its jurisdiction as it sees fit. National sovereignty can only give way to international law where two or more countries enter into a specific agreement under which they voluntarily commit to limiting or to

jurisdiction over the user. If these courts do not recognize genetic resources as a protectable legal interest, or if they feel that the contract or its operation were unfair in some way, the arbitration result may ultimately not be paid.

In general, arbitration is more likely to focus on awarding a specific amount (damages or restitution), while mediation is more likely to include a requirement of specific action (fulfilment or revision of the contract, for example, or a declaration of how the contract shall be interpreted and applied in future). Both types of processes may give greater flexibility to apply principles of fairness, equity and common practice than courts.

overview of what international law is, and how it works is a necessary element of this report.

International law is highly complex and detailed.⁴¹⁴ A full discussion of the rights of parties (both governmental and non-governmental) in international commercial law is much too detailed for this paper. Instead, the following discussion will provide a very basic explanation of the nature of international law (based on three basic subcategories – public, private, and commercial), and including the limited meaning of the concept 'international remedies' as discussed in the initial mandate of this paper.

ness cannot be measured on the same terms for a very basic and important reason – national sovereignty. That is, with very few exceptions, every country has a basic right to govern the territory, persons, actions, property and rights within its jurisdiction as it sees fit. National sovereignty can only give way to international law where two or more countries enter into a specific agreement under which they voluntarily commit to limiting or to

413 One current issue under discussion – the efforts to create a 'universal patent' – would also appear to require the creation of a direct international remedy for private non-governmental actors (individuals, NGOs commercial entities, etc.). The likelihood of such a development in that context too, is unclear. See, Tvedt, M.W. 2007. 'The Path to One Universal Patent.' *Environmental Policy and Law* 37(4): 297–305.

414 These issues are infinitely entertaining to lawyers, however. Anyone wishing to obtain a more detailed understanding of these issues is referred to Allott, P. 1999. 'The Concept of International Law.' *European Journal of International Law* 10; Shany, Y. 2003. *The Competing Jurisdictions of International Courts and Tribunals*. Oxford University Press; McClean, D. 2002. *International Cooperation in Civil and Criminal Matters*. Oxford University Press; Brownlie, I. 1990. *Principles of Public International Law*, 4th Ed. Oxford: Clarendon Press; Collins, L., 1994. *Essays in International Litigation and Conflict of Laws*, at 352–392 and 409–456, Oxford: Clarendon Press; Abi-Saab, G. 1987. 'Cours Général de Droit International Public,' *Recueil des Cours* 207 : 9, 93; and Romano, C.P.R. 1999. 'The Proliferation of International Judicial Bodies: The Pieces of the Puzzle.' *NYU Journal of International Law & Policy* 31: 709, 728–9. For a lighter treatment of private international law in the context of commercial transactions across national boundaries, see Folsom et al., supra note 420.

taking particular actions or agree to apply specific norms, standards or legal principles. In practice, international law operates as follows:

- (i) every person, and all his actions, as well as all lands or waters and resources within national territorial boundaries, are governed by the law of a particular country (although in some cases more than one country's law may be relevant to a person, action or situation);
- (ii) each country may be bound by specific agreement to comply with certain international laws and commitments which it is obligated to implement; and
- (iii) these commitments are implemented by passing laws⁴¹⁵ that are binding on the persons, lands and resources under their jurisdiction. Without those national implementing laws, international law cannot be applied to individual action.

10.3.2 Public international law

Public international law is often described as the 'law of nations.' It focuses entirely on the requirements imposed on each country to adopt and implement laws, or to take other actions in response to its obligations under international law.

10.3.2.1 Sources of public international law

The primary components of public international law are the international conventions; however, there are other recognized sources, as codified in the Statute of the International Court of Justice:

[In deciding disputes before it,] the Court shall apply:

In order to understand most questions of international law, it is necessary to recognize either three subcategories under that general heading:

- Public international law;
- Private international law; and
- International commercial law.

The third category may be considered by some to be an element of private international law,' but in some ways it is easier to consider it separately. The following brief definitions do not consider any of the complicating factors, but merely provide a basis for consideration of international law issues, when discussing remedies available in 10.4. In some ways, they oversimplify the issue, and should not be relied on beyond the scope of this paper.

- (a) *international conventions, whether general or particular, establishing rules expressly recognized by the contesting states;*
- (b) *international custom, as evidence of a general practice accepted as law;*
- (c) *the general principles of law recognized by civilized nations;*
- (d) *...judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law.*⁴¹⁶

415 As further discussed in Section 10.3.4, a few international laws are called 'self-executing' – meaning that the international instrument itself contains very detailed provisions about specific actions or standards – provisions, in short, which can be directly applied at the individual level. This does not eliminate the need for national law – each country must still ratify the convention, which usually happens by the adoption of a specific national law or other instrument. Rather, a self-executing law makes the creation of a national implementing law infinitely easier to draft. For most international agreements, the national ratification instrument is only the first step in a long process of creating and adopting laws and regulations to implement the agreement. A self-executing convention eliminates all later steps – they can be simply inserted in the ratification – i.e., 'This country ratifies Convention X, and adopts Articles Y-YY of that Convention as binding law under the ZZZ (Code or Ministry).'

416 Statute of the International Court of Justice, Article 38. A more detailed discussion of the way that these elements apply in the interpretation of treaties is found in the Vienna Convention on the Law of Treaties, 1969, which sets out eight components of interpretation, in order of their legal effect:

- (i) Direct application of the language of the Convention under consideration (Vienna Art. 31.1 and 31.2).
- (ii) Direct application of the language of other documents that are part of the same treaty (Vienna, Art. 31.2 and 31.3.) In the case of the CBD – the Cartagena Protocol and/or relevant annexes.
- (iii) Direct application of the language of other instruments between the same parties 'which establishes the agreement of the parties regarding its interpretation.' (Vienna, Art. 31.3(b)). Such 'agreed interpretations' have not yet been used in the CBD, where COP decisions are not executed by national plenipotentiaries.

In the context of ABS, these primary sources can be summarized as follows:

(i) International conventions:

(a) *Treaties and bilateral agreements:* Most ABS occurs through private contracts, in which only one sovereign government (or none) is directly included as a party.⁴¹⁷ If, in a given case, the source country and the user country (country with jurisdiction over the user) had taken the rare step of creating a direct bilateral treaty to memorialize the ABS-related agreement (or to clarify any specific elements of it), that treaty would constitute the first (strongest) basis for resolving the case. Recently, the government of Japan has begun efforts to negotiate clearer relationships regarding access to and utilization of genetic resources with individual countries. These measures are primarily intended as a way to eliminate some of the challenges and controversies that have prevented companies from obtaining legal certainty regarding ABS compliance. In addition, however, depending on how they are phrased, they may provide a basis for easier resolution of any disputes that may arise at international law.

(b) *Multinational agreements:* At present, the primary multinational ABS agreement is CBD. As to plant genetic resources that are included in the multilateral system (MLS) of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), two multinational agreements would have to be considered

– the CBD and the ITPGRFA. As noted below, however, more significant work in the ITPGRFA has focused on the issues of private international law – in particular through the development of the ITPGRFA's SMTA. (A significant body of other work has been done in international meetings considering ABS issues, including the Bonn Guidelines and other COP decisions and declarations providing guidance to Parties regarding ABS. It is not clear what standing these instruments have in international law. As non-plenipotentiary instruments, they probably fit in the fourth tier – subsidiary determinations).

(ii) International customary law

There is no indication that any international customary law on ABS exists. In the CBD's database, only 19 countries and one regional body have submitted specific ABS measures that have been adopted into their written law.⁴¹⁸ This figure represents 10% of CBD Parties.

In addition, the measures adopted to date address only one aspect of the Parties obligations. Specifically, they are focused only on the use of the legislating country's own genetic resources (provider-side measures). At present, although all countries are recognized to be both users and providers, no country has adopted any user-side measures – i.e., measures which require (or provide incentives to) users of foreign-origin genetic resources to pay benefits to other countries which are the source of those genetic resources.⁴¹⁹ Of the national ABS laws that

(iv) Subsequent practices which help to establish the agreement of the parties (Vienna, Art. 31.3 (b).) In the context of the CBD, this category describes 'COP decisions.'

(v) International customary law (included by generic reference in Vienna Art. 31.3; defined by Statutes of the International Court of Justice Article 38.1 b).

(vi) Information gleaned from study of 'the preparatory work of the treaty and the circumstances of its conclusion' (Vienna, Art. 32).

(vii) Broader analysis of the objectives or intention of the instrument (authorized under Vienna, Art. 32).

(viii) Determination of the meaning from contemporaneous information regarding the intention of the parties (Vienna, Art. 32).

The order of precedence is clearly set by Article 32.

417 It is possible in some countries (e.g., Australia) for some ABS agreements to be entered into between an individual provider (usually either the owner of land on which biological specimens were collected, or a non-governmental ex-situ collection) and a commercial or non-commercial user. More rarely, an ABS agreement may occur between two governments, in their capacity as governments. Usually, when an agency or institute of the user country enters into an ABS agreement with a source country, however, that agency/institute enters into the contract as a private contract governed by ordinary contract law, and does not make a plenipotentiary commitment on behalf of the user country.

418 An additional nine countries and two regional bodies have submitted documents. In two countries, the documents submitted are unadopted draft laws, and in all the others, they are non-binding policy or strategy documents.

419 The only user measures adopted to date are the so-called 'disclosure of origin' provisions in national law governing patent applications. Six such measures have been adopted – in Norway, Denmark, the Andean Pact, India, Peru and Venezuela. (Some reports indicate that Egypt has also adopted such a measure, however, it is not currently included in the ABS database, and the author has not been able to obtain a copy of it). None of these imposes any direct requirements on the user to comply with benefit-sharing obligations.

have been adopted, several are only general statements which may require the adoption of specific regulations to be implementable. To date, no case or controversy relating misappropriation of genetic resources (i.e., utilization without permission and/or without benefit sharing) has been decided (either in public international forums or in national courts applying private international legal principles) on the basis of ABS issues.⁴²⁰

(iii) *General principles of law*

General principles of law have not yet been applied to ABS. Many very general principles (those that forbid fraud and abuse of superior position in contracts, for example)⁴²¹ clearly apply; however, it is difficult or impossible to apply general contract law where the nature of the main subject matter of the contract (genetic resources and their utilization) remains legally ambiguous.⁴²²

(iv) *Subsidiary determinations of law*

This category is normally focused on case-law, in the form of decisions by the highest court in one or more countries, and/or decisions in international forums. As noted above, however, COP Decisions and other non-binding guidance documents could be considered under this heading. Subsidiary determinations are generally considered as evidence or indicators of international law, not law itself.

10.3.2.2 Remedies under public international law

As noted, public international law is focused on each country's governmental actions. Its role is to help countries determine what they must do, what they must not do, and any limits on what they are permitted to do, under international instruments and international customary law. Consequently, public international law provides a remedy only where one country sues another.

In terms of their implementation of Article 15.7, the strongest of these is the Norwegian law (NORWAY: Implementation of EU Directive on Patents in Biotechnology (EC/98/44), cited and quoted in unofficial translation in the 'National Submissions' documents (supra note 403) at page 66), Article 8(b) of which calls for disclosure of 'the country from where the inventor received or collected the material' whenever invention 'concerns or uses biological material.' Where the material was not collected by the inventor, or was not received by the inventor in the source country, this disclosure cannot promote ABS. Moreover, the amount of disclosure involved may be significant, since a very large number of products and inventions use biological material. The remaining patent disclosure measures do not function as user measures in terms of achieving the results required under Article 15.7. The Danish law reportedly calls for disclosures relating to genetic resources, but such disclosures are voluntary (completely within the applicant's discretion).

The remaining laws identified from the database are all focused only on the provider side of the issue. That is, they require that no person may use genetic resources from the legislating country in a way that does not pay benefits to the legislating country, and specifically include a limitation on patenting any innovation or other results that are based on the genetic resources of the legislating country. Thus for example, India's Biodiversity law provides that no person may apply for intellectual property rights 'in or outside India' for an innovation that uses the biological resources of India, without approval from India's National Biodiversity Authority. India: Biological Diversity Act, 2002 (No. 18 of 2003) at § 6, see also § 20.

Similarly, the Andean Community's 'Common Intellectual Property Regime' provides at Article 3, that the Andean countries' intellectual property laws and practices must 'ensure that the protection granted to intellectual property elements shall be accorded while safeguarding and respecting their biological and genetic heritage, together with the traditional knowledge of their indigenous, African American, or local communities,' but does not require any effort to protect the rights of other countries whose material is used in IPR-protected innovations in the APC, nor to determine the origin of such resources. Andean Community: Decision 486, at § 3, and see also §§ 26(h) and 26(i).

Peru: Ley No 27811, Ley Que Establece El Régimen de Protección de los Conocimientos Colectivos de los Pueblos Indígenas Vinculados a los Recursos Biológicos provides in its final 'disposiciones complementarias' that one who uses local traditional knowledge in an invention and seeks to patent that invention must provide the license authorizing his use, as a part of his application, and that the failure to do this will invalidate the patent. ('Presentación del contrato de licencia como requisito para obtener una patente de invención. En caso de que se solicite una patente de invención relacionada con productos o procesos obtenidos o desarrollados a partir de un conocimiento colectivo, el solicitante estará obligado a presentar una copia del contrato de licencia [Contrato de licencia de uso de conocimientos colectivos], como requisito previo para la concesión del respectivo derecho, a menos de que se trate de un conocimiento colectivo que se encuentra en el dominio público. El incumplimiento de esta obligación será causal de denegación o, en su caso, de nulidad de la patente en cuestión'). See also Venezuela: Ley de diversidad biológica (2000), at Art. 82.

The 'African Model Legislation for the Protection of the Rights of Local Communities, Farmers, Breeders and for the Regulation of Access to Biological Resources' similarly focuses only on the country's rights (and rights of community and farmers within the country) as a provider. It does not provide any requirements applicable to domestic users of foreign genetic resources. The author notes, however, that all countries utilize genetic resources, at minimum in the course of agricultural variety development.

420 Several claims and cases have been alleged, however, in all cases, either the matter has not been formally resolved, or it was resolved under completely different legal theories (primarily patent law). See, IUCN-Canada. 2005. 'An Analysis of Claims of Unauthorized Access and Misappropriation of Genetic Resources and Associated Traditional Knowledge.' Distributed at AHWG-ABS-4 as UNEP/CBD/WG-ABS/4/INF/6.

421 See, e.g., the UNIDROIT Principles on International Commercial Contracts, for a restatement of many of these principles.

422 The basic ambiguity in the term 'genetic resources' has been noted since at least 2001. See, e.g., IUCN Policy Recommendations to the First Ad-hoc Working Group on ABS (Bonn, 2001), 'Achieving the Benefit-Sharing Objective of the Convention on Biological Diversity.' The problem generally recognized throughout CBD expert contributions today. See, e.g., Cabrera Medaglia, J. and C. Lopez Silva. 2007. Addressing the Problems of Access: Protecting Sources, While Giving Users Certainty. EPLP 67/1. Gland and Bonn: IUCN in collaboration with IUCN ELC; Cassas, F. 2004. 'Limits to Rights over Genetic Resources: the Issues of Derivatives. Defining the Line between Tangible and Intangible Property Rights' and 'Genetic Resources and Property Rights. Tangible and Intangible Property Rights. The Issue of Derivatives.' Both in Record of Discussions (Canada/Mexico Workshop

In environmental areas, public environmental legal actions usually involve either (i) a claim that a country which has made a commitment to regulate has failed to do so; (ii) a claim that a country has failed to implement laws or other governmental measures required under international law;⁴²³ or (iii) a claim that a particular governmental decision or permit violates international law.⁴²⁴ In those cases, the available remedies are usually declaratory – that is, the court declares that one of the countries is (or is not) obligated to take a particular action.

As noted by many critics, national sovereignty principles may limit the effectiveness of public international law and the decisions of the international tribunals, since a country which receives such an order is still a sovereign nation, and has discretion with regard to its regulations.⁴²⁵ The primary forces that compel countries to comply with international decisions are (i) reciprocity – the knowledge that international governance only works if all countries commit to it and comply with it; (ii) the fact that countries usually only make international commitments on matters about which they are willing to obey international legal judgments; and (iii) the possibility that other countries will (formally, informally or individually) accord them fewer rights, or take other actions against a country that refuses to comply with such decisions.

In other words, the remedy of public international law is a determination that a State must take a certain kind of action (adopt a law, enforce a law, cooperate in accordance with international agreement, etc.). Public international law will normally not lead to any kind of judgement or order calling for an individual or other private party to take any action (such as to pay benefits in accordance with the CBD).

10.3.2.3 Forums of public international law

International courts provide remedies only in the form of judgements for or against the States that are parties to the action. This limitation has not prevented further steps toward the development of this aspect of the international rule of law. There are presently 12 permanent international courts operating, comprising the International Court of Justice, Court of Justice of the European Communities, Andean Community Court of Justice, Benelux Court of Justice, European Court of Human Rights, Court of the European Economic Area, Inter-American Court of Human Rights, International Tribunal for the Law of the Sea, the Appellate Body of the World Trade Organization, the Central American Court of Justice, the Economic Court of the Commonwealth of Independent States, and the Court of Justice of the Common Market of Eastern and Southern Africa. The rapidity of development is shown by the fact that the last seven courts listed above have only been operating since 1993, and all seven of them involve at least some mandatory jurisdiction (provisions under which member countries are required to submit to jurisdiction).⁴²⁶ In a few instances, the international court's jurisdiction is mandatory on a much broader scale.⁴²⁷ It seems likely that international forums, both formal and informal, will continue to develop and will play a greater part in ABS implementation in future than is possible immediately.

10.3.2.4 Action and remedies under the MEAs

Public international law also provides several narrower forums through which countries can seek redress. Under a number of the multilateral environmental agreements (MEAs), for example, remedies are available, but narrowed to address the particular issues specified in the MEA. The MEAs design remedies in a variety of ways. Although they cannot completely eliminate any options

on ABS, Oct. 2004). As noted elsewhere in this article, drafters of national ABS measures seem to have had some difficulty with the concept of genetic resources, resulting in a variety of different approaches. For example, Costa Rican law governs 'genetic and biochemical resources' (undefined), and Norway's patent disclosure law applies to all 'biological material.' One of the primary requirements, without which a contract cannot be enforced, is legally definite subject matter. Discussed in Bhatti, S. et al. 2007 Contracting for ABS: The Legal and Scientific Implications of Bioprospecting Contracts. EPLP 67/4. Gland and Bonn: IUCN in collaboration with IUCN ELC; and Tvedt and Young, *supra*.

423 Southern Bluefin Tuna cases (New Zealand v. Japan; Australia v. Japan), International Tribunal for the Law of the Sea, filed 30 July, 1999.

424 An example of this kind of claim is found in a current International Court of Justice (ICJ) case concerning pulp mills on the River Uruguay (Argentina v. Uruguay), known as the 'Pulp Mills' case, under which Argentina originally brought suit alleging that Uruguay violated obligations under the Statute of the River Uruguay (a treaty signed by the two States in 1975) when it allowed the construction of mills on that River.

425 See, e.g., *The Lotus* (France v. Turkey) 1927 PCIJ (Ser. A) no 10.

426 See, for example, UN Convention on Law of the Sea (10 Dec. 1982), Articles 187, 287, 290, 292 (further discussed below).

427 The broadest example of this is the Appellate Board of the WTO, which is invested with very broad subject matter jurisdiction over all of its parties. 'Understanding on Rules and Procedures Governing the Settlement of Disputes,' Annex II to the Marrakesh Agreement Establishing the World Trade Organization (1994).

of the Parties, they focus the remedial structures in a manner that limits or places restrictions on those options. The instruments most relevant to ABS (the CBD and the ITPGRFA) take two different approaches to remedy, with the ITPGRFA focusing most of its attention on issues of private international law.

The CBD offers essentially a public international law remedy – that is, dispute-resolution mechanisms (international court, arbitration and conciliation) available for disputes between States. In the event of such a dispute, Article 27 (‘Settlement of Disputes’) provides simply that, where any two or more Contracting Parties cannot find a solution to their dispute by negotiation, they may ‘jointly seek the good offices of, or request mediation by, a third party.’ The Convention allows (but does not require) each Contracting Party to submit a written declaration that it will accept one or both of the following, as a means of settling any dispute that cannot

be resolved through negotiation:

(a) Arbitration in accordance with the procedure laid down in Part 1 of Annex II; [or] (b) Submission of the dispute to the International Court of Justice.

Where either Party to a dispute has not submitted this declaration, then their dispute:

shall be submitted to conciliation in accordance with Part 2 of Annex II unless the parties otherwise agree.

The ITPGRFA contains provisions for inter-Party dispute resolution,⁴²⁸ which are basically similar to CBD Article 27 in impacts. It focuses more of its attention on individual contracts for the use of plant germplasm, discussed in the next section, in a groundbreaking approach that appears to merge the public and private aspects of remedies.

10.3.3 Private international law – the conflict of laws

National laws and sovereignty directly address every person on the planet, most of the planets’ land area (except Antarctica), and the most intensively utilized parts of the oceans (oceans landward of the boundary of national exclusive economic zones (EEZs) and outer continental shelves (OCSs)). This means that nearly all regulation of territory, persons, actions, property and individual or entity rights is governed by a particular country.⁴²⁹ There is no international forum, law or system that legislates, oversees, enforces or provides remedies with regard to private action (including private-public actions such as contracts between private actors (individuals, companies, institutions) and the government of any country).⁴³⁰ In other words, direct legal actions by private individuals, companies, and other institutions seeking remedies are governed by national law – always. Individuals have no direct access to the international forums described in 10.3.2.3, but must ask their government or an inter-governmental body to bring any action that they feel

must be brought in those forums.⁴³¹ There are only a few very specific situations (such as for international crimes against humanity – including especially war crimes) in which broader rights against individuals form a legal basis for direct international litigation. As a legal matter, these too are addressed through national law.⁴³²

This raises a question – ‘If no international law applies directly to private action, then what is private international law?’ The following brief discussion provides a summary answer to that question.

10.3.3.1 The nature and sources of private international law

As noted, all private actions (even actions brought by a private individual/entity against a government) are national for purposes of law and procedure, that is, they are governed by and brought under national law. At the same time, in practical terms a constantly increasing

428 ITPGRFA, Art. 22.

429 International law has even extended this principle to enable countries to take action against actions by persons not under their jurisdiction when taken in areas not under any country’s jurisdiction (Antarctica or the high seas). See, e.g., *Naim Molvan v. A.G. for Palestine*, AC 531 (UK, 1948). To do otherwise would mean that there is no forum for taking these actions.

430 A very limited exception to this is sometimes put forward – the contracts between the UN itself and private individuals/companies/agencies. At present, however, there is no clear system for addressing these issues, apart from an arbitration mechanism set up within the UN, which external parties usually accept and comply with, given the lack of any clear international or choice-of-law mechanisms.

431 A good summary of the role of international forums in protecting individual rights and natural resources is found in Brownlie, I. 1990. *Principles of Public International Law*, 4th Ed., at Part IX. Oxford University Press.

432 Brownlie, *supra*, summarizes the unusual status of criminal actions of this type at 300–311.

percentage of commercial and other activities are international in the sense that they involve persons, property, actions and rights from or relating to more than one country.

In governing and protecting the rights of the persons or entities involved in such activities, national courts can face significant difficulties. For example, if a contract is entered in one country, but a contract violation occurs in another country, it may be procedurally necessary to bring action on the violation in the second country. The contractual laws and expectations in the first country may be different in critical ways in the second country, similarly the procedural and practical laws governing bringing lawsuits on contractual issues may be very different. Both of these differences (and many others) may operate as obstacles that prevent one party from seeking or protecting his rights under the contract. They may also create serious legal complications for a court in the second country in deciding which country's law to apply, and in finding and interpreting the law of the first country (where that law applies). Even if the case can be brought in the first country, it may be necessary to use the governmental processes of the second country in enforcing the judgement – i.e., compelling the losing party to pay the amount awarded or to provide information, records, rights, etc.

Historically, where a country's legal system was operating in a way that impacted the rights of foreign citizens and entities, diplomatic processes (public international law) would be commenced. Although these actions helped in individual cases, and began to build a body of internationally accepted practices, the situation remained somewhat confusing and problematic. Eventually, various international instruments were developed to help clarify:

- (i) the rights that litigants from one country will have in the courts of another country;
- (ii) a number of common principles that can be applied where a contract is international (in the sense that at least one party, property, action or resource

occurs in another country from that in which the contract is created, implemented or enforced);

- (iii) rules of civil and criminal procedure (that is, the procedures by which cases are filed, evidence is gathered, jurisdiction is determined, responsibility is analyzed, and judicial and arbitral awards are collected or enforced) which apply to particular claims involving parties, property, actions, etc., in more than one country;
- (iv) rules on enforcement of foreign judgements.

These concepts, which we now know as private international law, originated under the legal name 'conflict of laws.' Conflict of law principles are applied through a complex interrelationship of national law and the application of internationally recognized rules and principles for determining which country's law will apply, and if necessary, providing guidance to national courts. In some cases, international codes are developed which can be used directly, in transboundary transactions or other situations to avoid creating a conflict of law in the first place. Private international law embodies a number of issues that are either unresolved or incompletely resolved to this day, and form the basis of a thriving professional services market for international lawyers.

10.3.3.2 Forums for private international law

To repeat for clarity, the forums for private international law are (only) the same forums that are available under national law. The difference is not in the forums themselves, but in the paths by which one gets to those forums, and the tools that are used to decide on whether remedies should be awarded and what remedies are appropriate.

In the commercial arena, private international law is increasingly conducted using arbitration. For this purpose, the number of international arbitration agencies is growing,⁴³³ and a great many firms are offering their services as arbitrators, mediators, and other ADR providers. No matter who conducts the arbitration, how-

433 See, for example, the Permanent Court of Arbitration – a freestanding (not attached to another legal forum) international arbitration processes, which 'provides full registry services and legal and administrative support to tribunals and commissions. Its caseload reflects the breadth of PCA involvement in international dispute resolution, encompassing territorial, treaty, and human rights disputes between states, as well as commercial and investment disputes, including disputes arising under bilateral and multilateral investment treaties.' (See PCA website at www.pca-cpa.org/showpage.asp?pag_id=363).

ever, its results can be binding only by virtue of meeting the jurisdictional and other requirements of the national forum, as described in 10.2.4.

The primary advantage of using an international arbitrator or other international provider is that those persons, forums and entities are more familiar with problems of international commerce and claims, and may be able to accommodate the needs of private international claimants and claims more effectively as a result of this experience. At the national level, however, arbitrators and other ADR providers often have specialized in other ways, including some which offer specialized expertise and experience with environmental matters. In some cases, this scientific/technical qualification may be more important than the international one. It is important to consider these questions in selecting ADR providers, and also in deciding whether to agree to an arbitration clause in your contract, and how to phrase that clause.

10.3.3.3 Remedies in private international law

Similarly, the remedies in private international law are (only) the remedies available in national law. This basic premise also applies to arbitration and other ADR, whether the arbitrator/mediator/panel was an international arbitrator/mediator/panel or was operating at the national level. Either way, as noted above, the award of a private arbitration or other ADR outcome can be enforced only in accordance with either (i) consensus by the parties to the arbitration or (ii) application of national law, in generally the same way as any contract or other agreement would be enforced.

One interesting development with regard to private international remedies is found in the ITPGRFA. Un-

like most international instruments, the Treaty includes long and detailed terms relating to private commercial instruments, including the adoption of one such instrument – the SMTA. In an unusual move, the Treaty does not call on Parties and other affected institutions (the international agricultural research centers (IARCs))⁴³⁴ to adopt particular laws or regulations implementing the Treaty. It also does not make these rules a part of the Treaty (although this would have made these provisions ‘self-executing’⁴³⁵ it would probably have prevented many countries from ratifying the Treaty due to issues of national sovereignty). Rather, it takes a third path, discussing the contracts as if they were entirely separate from any country’s law, and designates that they will be subject to arbitration.⁴³⁶ Article 8 of the Treaty includes a specific provision which allows ‘any party’ (including the Governing Body of the Treaty, which is considered a ‘third-party beneficiary’ of all SMTAs) to:

submit the dispute for arbitration under the Arbitration Rules of an international body as agreed by the parties to the dispute. Failing such agreement, the dispute shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce, by one or more arbitrators appointed in accordance with the said Rules.

To avoid reference to national law, the SMTA specifically adopts the UNIDROIT Principles of International Commercial Contracts 2004, for interpretation purposes.⁴³⁷ On the other hand, however, the Note by the Treaty’s Secretary stated that ‘Contractual disputes arising under the standard MTA will be determined under normal national contract law, or in such other way as may be specified in the standard MTA.’

10.3.4 Special concerns: Development of international commercial law

Since the middle of the 20th century, the growth in international commerce and trade has caused many experts to consider international commercial law as a

particular category of law. International commercial law includes some elements of public international law, such as the WTO processes and global trade issues, which are

434 Much of the work in creating the Treaty was intended to help regularize and promote the operation of the IARCs, (including the 15 CGIAR Centers, described in detail at <http://www.cgiar.org/centers/index.html>).

435 See note 437.

436 The Treaty does not discuss the need for national law.

437 ITPGRFA, SMTA, Art. 7.

addressed directly between governments, even where the problems arise in specific individual transactions.⁴³⁸ In addition, however, international commercial law focuses on some specific international instruments and principles relating to many aspects of private international law. For purposes of the current discussion, one of the most important developments is a combination of public/private international law – the development of international commercial codes.

Conflict of laws creates difficult challenges in the area of commerce and trade, because the locales and situation of each element of a contract may be different in ways that alter the application of law.

The provision of goods and services may occur in one country, the receipt of those goods/services may happen in another country, financial assurances (guarantees and sureties) may be provided through an entity in another country. The contract may state particular provisions regarding the law governing the contract, but the national court must still use its own laws to determine whether it has jurisdiction over the defendant, actions and properties involved. Many other aspects of the intersection of potentially relevant national laws add other complications.

The only options that seemed to offer a long-term solution to these challenges was to negotiate a Convention that includes a specific and detailed international code applicable to the transactions in question, which allows the national court to bypass many of the most difficult problems. These codes are self-executing – that is, if a country becomes a party to the international convention, then it automatically agrees to apply the international code to all specified transactions. For example, countries that are party to UNCITRAL's Convention on Contracts for the International Sale of Goods⁴³⁹ agree that the code contained in that Convention shall be applied to all international contracts for the sale of goods.

The code does not solve all conflict of laws issues in those cases, but it makes them a lot simpler.

Normally, countries become party to such self-executing conventions with difficulty, owing to the underlying sovereignty problem of allowing foreign governments to dictate laws binding within their jurisdictions. For example, the UNCITRAL Convention mentioned above has only 70 parties, and a similar earlier attempt – the UNIDROIT system of contracts – currently lists five or fewer parties to its various instruments.

Despite this low number of direct participants, both systems have a broader role in international commerce, since they provide a common ground for parties to contracts. It is possible for such parties to use either system by specifying it in the their contract. This can make it much easier to enforce the contract, even where the countries involved are not Parties to the convention. For example, although it has very few remaining parties, the UNIDROIT series of instruments remains particularly interesting to ABS negotiations, because the FAO negotiators, in adopting the ITPGRFA's Standard Material Transfer Agreement, chose to apply the UNIDROIT system, for purposes of interpreting or enforcing the individual agreements that are entered into using the SMTA.

It is important to remember, however, that these are just codes which enable contracts to be interpreted and enforced and, if necessary, also enable remedies to be awarded. They cannot exist as binding codes or provide remedies, unless they are applied through a national legal system to interpret, enforce or remedy them. Similarly, these international documents do not provide any basis for addressing violations of a foreign-country's administrative documents (permits and licenses), and they do not apply to actions for failure to comply with domestic law.

438 For example the recent WTO cases involving invasive species controls imposed by Japan (apples) and Australia (salmon) were commenced by countries whose citizens and companies complained to their government that these foreign controls were altering the global market/profitability of their produce. On the Japanese apples case, see, Kiritani, K. 1999. *Invasive Pests and Plant Quarantine in Japan*. National Institute of Agro-Environmental Sciences; Japan Ministry of Agriculture, Forestry and Fisheries. March 2002. Report on Agriculture, Forestry and Fisheries Trades in 2002, at 20; and WTO. 2002. 'Request for the Establishment of a Panel by the United States,' May 8 (WT/DS245/2). On the Australian salmon case, see WTO Australia. 1998. 'Measures Affecting Importation of Salmon' (WT/DS18/AB/R), Report of the Appellate Body, October 20.

439 Vienna, 1980.

10.4 Remedies available in ABS

The next step in this analysis is to marshal a list of particular remedies that apply or may apply to ABS situations. In doing this, it is necessary to look at the laws relevant to actions and remedies in the user country.

This part of the analysis must begin by being clear about what user-country law (or more correctly, user-side law) means. Every ABS situation involves at least two countries, one which is the source or provider of the genetic resources in question, and one (or more) in which the genetic resources will be ‘utilized’ (used in a way that might generate commercial and/or non-commercial benefits.) However, each ABS situation involves a different combination of countries. In some situations, Country A will be the user of resources from Country B, while in others Country B will be the user and Country A the source.

Which country is the ‘user country’ in a given transaction. Currently, it is not always clear which activities constitute the utilization of genetic resources, however most countries seem to agree that this term includes both the manipulation of DNA in the laboratory and the development of new varieties of domesticated plants and animals through more conventional methods. If that is agreed, then it is clear that every country is a user country in at least some situations, since all countries obtain and use plant germplasm to develop new plant varieties.

For this reason, this study has analyzed all ABS legislation available through the CHM’s Database of ABS Measures, as well as other laws and mechanisms, from

10.4.1 ABS situations in which remedies may apply

As usual in ABS discussions, when considering ABS remedies, it is necessary to must separately consider two primary situations – where the user has obtained an ABS agreement or permission, and where he has ‘utilized genetic resources’ (the activity governed by the CBD) without any formal contact with the source country. In many instances (but not all) a user’s compliance with the national ABS requirements of the source country will result in an agreement which can be interpreted, overseen, enforced and remedied under the contract law. By contrast, if the user obtains and uses genetic resources without permission, the source country or other provider must seek redress through other legal theories.

both developed and developing countries. In this analysis, it was looking for user-side measures – that is, laws that authorize foreign source countries and other providers to seek remedies against users in the legislating country. Very few ABS provisions appear to meet this criteria, or even to discuss in any way the ABS responsibilities of the users under their jurisdiction. Accordingly this report includes many provisions which are not user-side measures, but which might be relevant in some way.

As a practical matter, however, the question of available administrative and judicial measures is largely a question of obtaining redress from situations in which significant benefits have arisen in the user country, which cannot be replicated in the source country. This prevention of replication happens primarily in two situations – where user-side patent laws prevent replication, and/or where the source country does not possess the technological or other capacity to replicate the benefits. Consequently, most current remedy situations arise in the context of users from highly developed countries.

In short, although recognizing that all countries may be user countries at some times, and considering all countries’ laws, this study has attempted to provide a better understanding of the laws and legal needs of countries with large numbers of users under their jurisdiction – that is, highly developed countries. The author wishes to underscore that all countries must comply with Article 15.7’s requirements, and that so far no country appears to have done so.

10.4.1.1 Where the user has obtained an ABS contract or permission

Where a user has obtained an ABS Agreement, remedy issues are significantly influenced by the law of the user country, since many of the user’s ABS-related activities occur after he has left the source country, and is no longer subject to its jurisdiction. Obviously, source countries cannot draft laws that govern the actions of persons or entities in another country.⁴⁴⁰ This means that the source country’s rights will largely depend on two sources, the ABS contract and the law and remedies available to it in the user country for enforcing that contract. Even where the contract specifically states that the law of the source

country will govern the agreement, the user country's law will apply to key determinations, such as whether there is jurisdiction over the user, whether the source country has a sufficient legal basis for bringing an action, and what remedies, if any, are available.

One unanswered question that may be critical is the difference between an ABS permit/license and an ABS contract. This question may be highly relevant in the remedies issue, but has less noticeable impact where remedies are not involved. Within the source country, there is little difference between an 'ABS permit' and an 'ABS contract.' Both have essentially the same impact, when they are negotiated, signed, and implemented solely within the jurisdictional boundaries of the source country. Beyond those boundaries, however, there may be a significant difference. While most countries include at least some law enabling foreign claimants to bring actions in their courts with regard to contracts, it is less common for a country to have laws that say that domestic administrative documents (permits, licenses and other governmental instruments) of foreign countries can be enforced in the legislating country. These documents are creations of the issuing country, designed for domestic application and intended to be implemented and enforced by its processes.

Consequently, it may be much easier to obtain remedies in the user country, where the source country has granted PIC and MAT through a contract or similar instrument, rather than through an administrative instrument such as a permit or license. This is another issue that could be resolved simply, if countries adopted user-side measures – that is, specific laws stating that anyone within their jurisdiction who is using foreign genetic resources must comply with PIC and MAT as set forth in the CBD. Without such legislation, however, source countries should consider whether their (non-contract) rights under their ABS law are enforceable under inter-

nationally recognized principles of contract law and civil procedure.

10.4.1.2 Where the user has no ABS agreement or permission

More difficult questions are raised by the possibility that a user might utilize genetic resources without an ABS agreement and without sharing benefits. Here also, if the user (and the genetic resources being utilized) are outside of the source country, they are not directly subject to the laws and legal processes of that source country.⁴⁴¹ The source country or other provider will have a remedy only if one of the user countries involved⁴⁴² has adopted laws and practices that enable and support the rights of the source country.

Situations in which a user is utilizing genetic resources without permission may occur intentionally or unintentionally, wherever the user has obtained and utilized genetic resources of foreign origin indirectly – that is, without direct contact with the source country. For example a specimen collector (who did not obtain an ABS agreement, because he did not intend to use the specimen's genetic resources) might later sell or give the specimens to the user. In such cases, many users assume that they are not bound by ABS requirements, since they did not directly obtain the resources directly from the source country.⁴⁴³ If this were true, it would create an un-mendable loophole in ABS – any user could avoid ABS simply by using resources collected by some other person, whether recently or in the past, without complying with ABS processes. The later transfer of the specimens to a user of genetic resources would happen outside the jurisdiction of the source country. Consequently, for the system to make sense rationally/legally, it must apply to indirect acquisition, such as where the user obtains specimens or genetic information from some other person or entity (user, collection or middleman).

440 An absurd example makes this clear. If countries could regulate outside their borders, then most governments would prefer to impose taxes on persons from other countries (who could not vote them out of office) than raising taxes on their own citizens.

441 See 11.2.4.4, above.

442 As noted above, a country is characterized a user country or a source country on a case-by-case basis. Since a user country is not necessarily (or only) the country of the user's citizenship (or where he pays taxes), there may be more than one user country involved in a given ABS claim. In many cases a company or institution may have operations ongoing in more than one location. Hence, if a company based in the USA collects resources in Tanzania and then engages in R&D in a facility in India, it is possible to consider both the USA and India as potentially being the user country for that particular claim.

443 Henkel, T. 2007. 'A Perspective from Pharmaceutical Industry.' Presentation to High-level Experts Meeting – Addressing the Access and Benefit-Sharing (ABS) Challenges in the Context of the Convention on Biological Diversity (Tokyo, 8–9 February 2007).

There are many different possible frameworks that might be used to achieve the basic ABS objectives. The current framework, involving specific permission from the source country to the user for each access to genetic resources and benefit sharing directly from the user to the particular source country whenever benefits arise from the utilization of genetic resources, appears to be generally accepted by the Parties to the negotiations. So long as this type of framework is used, however, there is a need for care in framework creation. It is important to develop the system in a way that creates and controls carefully planned exceptions (that enable the system to function while recognizing special cases and situations) rather than allowing loopholes of this type to develop.

At minimum, it must be noted that Article 15 does

10.4.2 Contractual remedies in ABS agreements

The first type of remedy to be considered in ABS situations is a private remedy – remedies agreed between the parties to the contract. These have been described by a great many commenters as the primary method of addressing the remedy question in ABS. As noted, a well drafted and legally unambiguous contract will normally provide a sufficient basis in itself for remedying any uncertainties that arise between the parties to the instrument. If its terms serve this function, it is possible that the parties to the contract will not need to use any legal, administrative or alternative process.

Normally, where the national law which governs the contract is clear and its application to the subject matter is legally certain, it will not be necessary to restate these legal matters in the contract itself. The contract will express the unique facts of the contract, but will usually not specify the underlying law or remedies in detail, instead relying on the basic remedies available at law. While special kinds of contractual remedies, such as liquidated damages clauses, guaranties and arbitration clauses, are often specified in contracts, other basic contractual remedies (rights of parties in the case of non-

not limit the user's benefit-sharing obligation to situations in which he collected the specimens directly.⁴⁴⁴ On the contrary, it simply requires countries to legislate some provision that results in sharing the benefits with the source country, whenever benefits arise from the utilization of genetic resources. It further requires that such benefit sharing must occur on the basis of terms that have been mutually agreed with that country. This provision is entirely separate from the PIC/MAT requirements relating to access.⁴⁴⁵ As the ABS concept is currently framed, in order to provide a remedy for source countries or other providers of genetic resources, it is essential for the law in the user country to specifically recognize a duty of users to share benefits and/or take other steps to comply with the source country's requirements.

performance, and other rights) may not be specified, or may be mentioned only in minimum references to legal remedies.

For a variety of reasons, however, the normal rules governing ABS contracts are not clear. Ambiguities and other doubts cloud questions of how national law in other jurisdictions applies to genetic resources. Consequently, ABS parties cannot make assumptions about the application of contractual law. Instead, they must specify many legal details, rights, and remedies, as well as the obligations of the parties, benefit-sharing formulas and other matters.

The result of this approach, however, is that ABS contract negotiations sometimes become protracted and difficult. In 2002, this fact led to calls for streamlining ABS processes – one of the points recommended by the Bonn Guidelines. Such streamlining is not practical, however, until the basic ABS concepts and laws are clearer, so that the parties and courts would have a consistent basis for interpreting and applying ABS contracts.

444 Such a loophole would effectively eliminate ABS entirely, except as to users who offer benefits as a matter of individual charity. Even direct collection would be uncontrolled, so long as the user asked others (non-users) to collect biological specimens and later (after bringing the specimens legally into the user country) to sell or give them to the user.

445 Early on, some commenters assumed a necessary link between access and benefit sharing, implying that benefit sharing was only necessary if one obtained the resources directly from the source country. See, e.g., Ten Kate, K. and S. Laird. 2002. *The Commercial Use of Biodiversity*, at 319. London: Earthscan. This presumption arose from the failure to recognize the difference between genetic resources and biological samples, and the lack of experience with attempting to regulate this new kind of legal right.

10.4.3 Legal remedies specifically directed at ABS and compliance with PIC and MAT

The following discussion describes and analyzes provisions submitted by countries in response to the Secretariat's request for information. Responses were provided only by a few countries. To confirm this list of relevant provisions, the author also examined the legislation in the ABS database, and from other sources.

For each provision, this study will usually consider three specific points: (i) description of the law or remedy; (ii) conditions under which it can be asserted; and (iii) special issues relevant to ABS compliance. Except where noted, this study does not analyze measures that are not adopted in law or are not currently available in national courts or administrative processes.

10.4.3.1 Civil remedies at law

[a] Submission by Denmark

In response to the Secretariat's request, Denmark provided information on its patent law.

Description of the law or remedy

As the Secretariat noted regarding Denmark's submission:

Denmark has revised its Patent law with a provision requiring patent applicants provide information on the origin of the genetic resources used in the invention for which a patent is applied for. In cases of non-compliance, no sanctions are provided in the patent system. However, under criminal law sanctions are established regarding the provision of false information to public authorities.

Although not a remedy, this provision might give additional information to the source country, and may allow the source country or provider to ask Denmark to bring a criminal action against the patent-holder.

Conditions under which the remedy can be asserted

Patent disclosure provisions are not actually remedies, but pre-remedy information tools. If a user makes such a disclosure, then the source country can possibly become aware of his utilization of genetic resources or of the fact that this utilization has produced a patent (either a non-commercial or pre-commercial benefit).

The penalty provision described above appears to increase the amount of information available to a source

country or other provider. Such information may improve the source country's ability to take formal or informal action to ensure compliance or seek remedies in cases of non-compliance.

Additionally, the law allows the source country to ask the government of Denmark to take criminal action against the user, if the source country knows that this patented innovation 'arises out of the utilization of [the source country's] genetic resources.' Admittedly, few source countries will have information enabling them to make this request, however, other interested parties (including NGOs for example) may also be able to make such a request.

As further discussed in 10.4.6 and 11.4.4, however, the penalty element of this provision may have an indirect impact on compliance, but will not offer a remedy. In addition to the other limitations on the remedial impact of penalties, it should be noted that the above provision applies only to patent disclosure, not to the user's failure to comply with the laws of the source country. A user who properly discloses the country of origin of his materials, or states without fraud that he does not know the country of origin, is not subject to any legal action in Denmark for failure to comply with PIC and MAT of the source country.

Special issues relevant to ABS compliance

The international attention directed at 'disclosure of origin in patent applications' is based on the idea that the patent application can provide information to the source country or other provider, who may then use that information to compel the user's performance with PIC and MAT. This presupposes that there is other law in existence under which such compulsion can be enforced. Like most other CBD parties, Denmark has not submitted any measures for inclusion in the CBD's database of ABS measures. The author lacks the linguistic capacity to review Danish law, and so cannot determine if this means that there are no such measures in Denmark, or only that Denmark has not submitted them yet. Tentatively, however, it appears that there is no direct ability of the source country or other provider to bring an action in Denmark against a user who has utilized genetic resources without complying with the source country's ABS legislation.

In addition, as noted in the Danish submission, the disclosure requirement is not tied to patent validity. This means that if the patent holder violated the disclosure requirement, the patent cannot be revoked or invalidated.⁴⁴⁶

[b] Submission by Sweden

In response to the Secretariat's request, Sweden, too, provided information on its patent law.

Description of the law or remedy

As the Secretariat noted regarding Sweden's submission:

In Sweden, a new provision on the disclosure of origin of biological material of plant or animal origin in patent applications came into force on 1 May 2004, in accordance with article 5 of the Patents Regulations (SFS 2004:162) under the Patent Act. The article provides that if the origin is unknown, it shall be stated. It is also provided that 'lack of information on the geographical origin or on the knowledge of the applicant regarding the origin is without prejudice to the processing of the patent application or the validity of rights arising from a granted patent.'

This provision invokes the same analysis as the Danish provision (above).

[c] Submission by Norway

In response to the Secretariat's request, Norway, too, provided information on its patent law.

Description of the law or remedy

As the Secretariat noted regarding Norway's submission:

In Norway, the new paragraph 8(b) of the Patent Act

is to support compliance with prior informed consent of the Contracting Party providing the resources. Infringement of the duty to provide information is subject to penalty in accordance with the General Civil Penal Code §166. The duty to provide information is however without prejudice to the processing of patent applications or the validity of granted patents. The General Civil Penal Code §166 reads as follows:

'Any person shall be liable to fines or imprisonment for a term not exceeding two years who gives false testimony in court or before a notary public or in any statement presented to the court by him as a party to or legal representative in a case, or who orally or in writing gives false testimony to any public authority in a case in which he is obliged to give such testimony, or where the testimony is intended to serve as proof.

'The same penalty shall apply to any person who causes or is accessory to causing testimony known to him to be false to be given by another person in any of the above-mentioned cases.'

This provision invokes much of the same analysis as the Danish provision (above). Norway's submission gives greater information regarding the penalties that may be asserted against one who violates the disclosure law, emphasizing the lack of any right of the source country or provider to invoke this law directly.

Conditions under which the remedy can be asserted

The conditions and concerns relating to this provision are, for the most part, the same as those described in the Danish provision. In addition, the Norwegian provision applies to 'biological material' rather than genetic resources⁴⁴⁷ suggesting that the breadth of the disclo-

⁴⁴⁶ As noted in detail in 'An Analysis of Claims...' (note 402, above), ABS would not call for invalidation of the patent, but rather the sharing of benefits arising from it. However, if the patenting country does not have a law enabling the source country to compel benefit sharing, then the invalidation of the patent might at least enable that country to support the development of the innovation either directly or through a user who would share benefits.

⁴⁴⁷ As noted in detail in 'An Analysis of Claims...' (note 402, above), ABS would not call for invalidation of the patent, but rather the sharing of benefits arising from it. However, if the patenting country does not have a law enabling the source country to compel benefit sharing, then the invalidation of the patent might at least enable that country to support the development of the innovation either directly or through a user who would share benefits.

The unofficial translation of the Norwegian patent disclosure provision (NORWAY: National Patent Law, § 8b) reads as follows:

If an invention concerns or uses biological material, the patent application shall include information regarding the country from where the inventor received or collected the material (providing country). If it follows from national law in the providing country that access to biological material shall be subject to prior consent, the application shall inform on whether such consent has been obtained.

Norwegian Submission to the CBD, in preparation for the third meeting of the CBD Ad-Hoc Working Group on ABS, reproduced in UNEP/CBD-WG/ABS/INF/3/1, at 66–67.

sure will be greater, possibly providing source countries and other providers with a very large body of information.⁴⁴⁸

Special issues relevant to ABS compliance

As noted in connection with the Danish submission, Norway's law currently does not include any specific provision requiring users within its jurisdiction to comply with source country law and/or PIC and MAT. It has taken some steps to resolve some of the deficiencies in its law, relating to source countries. Most notable, Norway has publicized ongoing proposals for a specific requirement⁴⁴⁹ that calls for compliance with source-country law:

*Import for the purpose of utilising genetic material from a country which requires prior informed consent for either the utilization or for the export can only happen in compliance with such prior informed consent. The entity with the genetic material in hand is bound by the conditions imposed on the use of the material. The Norwegian government can, by court case, enforce the said conditions.*⁴⁵⁰

As this proposal is not in force as yet (and some sources indicate that a new draft is being prepared that will replace it), it will not be separately evaluated as a remedy. However, it is worth noting that this provision satisfies one of the problems described above, since it specifically addresses compliance with PIC and MAT in the source country. It does not, however, enable the source country or other provider to bring an action to enforce these requirements.

[d] Submission by the European Community

Although specifically noting the possible relevance of intellectual-property-based approaches (such as those described in the Danish, Swedish and Norwegian submissions), the European Community's submission focused on four elements: (i) clarification and enhancement of the role of the national ABS focal point;⁴⁵¹ (ii) the application of the dispute resolution provisions of the Convention; (iii) measures to create alternative dispute resolution systems, and (iv) need for further study, analysis and legal development in the area of 'enforcement of foreign judgements.' The following discussion addresses points (i) and (ii) – which involve solutions that are strictly directed at ABS matters. Points (iii) and (iv) relate to general remedy questions, and are discussed in 10.4.4.

(i) Integration through national ABS focal points or the CBD

Description of the law or remedy

The Note by the Executive Secretary quoted the following from the EC's submission:

Another problem that could arise in relation to access and benefit-sharing disputes concerns the possibility for providers to obtain information and access to justice in the countries where the users are located. In this respect, countries' access and benefit-sharing focal point could play a facilitator role by providing information, including on the legal system of their country.

448 Oldham (see supra, note 334) notes that nearly 500,000 of the patent applications filed between 1990 and 2003, that are listed in the Worldwide Database, include genetic-related keywords (protein, gene, DNA, amino acid, nucleic acid, enzyme, polypeptide, peptide, nucleotide, RNA, micro-organism, human gene, genome, plant gene, animal gene, microbe, deoxyribonucleic, ribonucleic, proteome) in their abstracts of publication.

449 NORWAY: first draft Nature Diversity Act, NOU 2004:28 <http://www.regjeringen.no/nb/dep/md/NOU-2004-28.html?id=388846>, the relevant provision is § 60.

450 That section also notes that:

If the providing country is another than the country of origin, information about the country of origin shall also be given. Country of origin means where the material was found in natural conditions (in situ). If the country of origin requires prior informed consent, information of whether such prior informed consent is in place shall be given. If such information is not known, the user shall give information about the lack of information.

Naturmangfoldloven 2004: 28, § 60, at 636–637 (unofficial translation by M.W. Tvedt). To date, however, the author is not aware of any country which is not a country of origin of the genetic resources in question, which has 'acquired the genetic resources in accordance with this Convention' as specified in CBD Article 15.3 (that is, which has obtained from that country the right to grant ABS rights (PIC/MAT) to other users with regard to the genetic resources within a particular specimen or species. If this provision applies to other countries (which have not obtained such rights from the country of origin), it would not appear to alter the user-country's responsibility to the actual source country.

451 The European submission also discussed the possible role of voluntary certification measures, but noted that 'Such a scheme would serve the purpose of helping users to improve their overall environmental performance, including in relation to access and benefit sharing but would not alter their legal obligations.' See 'Note by the Executive Secretary,' supra note 401, at para. 30.

These comments constitute a suggestion for resolving ABS issues without the need for legal remedies, rather than a definite remedial measure.

Conditions under which the remedy can be asserted

Unless the specific countries in question agree to use their respective ABS focal points as mediators/facilitators of such disputes, the use of this suggestion in lieu of a remedy will require two elements. First, the parties to the particular ABS contract or other instrument will have to agree, either in the instrument or at the time of the dispute, to turn the matter over to this resolution process and to abide by its result. Second, the ABS focal points (or at least one of them) will have to be willing to take on this responsibility. In many countries, government officials who take on extra responsibilities of this type, without specific legal authorization, may risk being liable to one of the parties, or to third parties who oppose or challenge the decision. Consequently, before this approach can become functional, it may be necessary for Parties to adopt appropriate legislation authorizing ABS focal points to take this action, including measures for oversight and appeal (to ensure that the ABS focal points' decision is legal and fair) and protecting the focal point from liability, so long as the mediation or facilitation is conducted in accordance with those legal requirements.

Special issues relevant to ABS compliance

Assuming that either the user or the user country was willing to recognize the ABS claim of the source country or other provider, it may be possible to use national ABS focal points, or to develop COP-based mechanisms for resolving ABS disputes, without the need for formal remedies in user-country law. Remedies would still be needed where the user was unwilling to recognize an ABS claim, however.

(ii) Utilization of CBD Articles 23 and 27

Description of the law or remedy

Another suggestion made by the EC submission was the possibility of direct use of the CBD's COP and dispute-resolution mechanisms to address these problems:

Moreover, controversies between providers and users located in different countries could be presented to the Conference of the Parties on access and benefit-sharing and mediated by national authorities.

As noted earlier in this study, CBD Article 15 applies only to trans-border genetic resource issues. The CBD does not require any country to control or address purely domestic access or benefit sharing (i.e., where the user and provider/source are both within the same country), so that all ABS matters would be 'between providers and users located in different countries.'⁴⁵²

The suggestion of using the CBD Conference of the Parties as a mediating body in ABS disputes must be guided by the contents of the Convention itself. The most relevant provisions to consider are Articles 23 ('Conference of the Parties'), 31 ('Right to Vote'), 27 ('Settlement of Disputes') and the two parts of Annex II to the Convention (addressing 'Arbitration' and 'Conciliation'). In this connection, the first question that must be addressed is what steps must be taken to enable the COP to serve as a forum for the presentation of disputes 'on access and benefit-sharing and mediated by national authorities,' as suggested in the EC submission. In general, Article 23 empowers the COP to take two actions that might lead to such a forum, specifically:

The Conference of the Parties shall keep under review the implementation of this Convention, and, for this purpose, shall

(g) Establish such subsidiary bodies, particularly to provide scientific and technical advice, as are deemed necessary for the implementation of this Convention; [and]

(i) Consider and undertake any additional action that may be required for the achievement of the purposes of this Convention in the light of experience gained in its operation.

⁴⁵² Domestic utilization of a country's own genetic resources is a matter entirely within the national sovereignty of the source country. Thus, although the CBD may provide guidance, there is no reason for the source country to follow that guidance, except its own discretion and desire. This means that, for purposes of the CBD, the only genetic resource access and use issues that are included in Article 15 are international issues (at least one user or utilization outside the source country).

Both of these options would appear to require the development of special procedures before the COP could operate as a quasi-judicial forum for reviewing and protecting the rights of parties in situations in which ABS compliance is in dispute.

One of the most important obstacles to the use of the COP in this way relates to the right to vote in COP meetings, as expressed in Article 31, and the ongoing open question regarding the rules of procedure in the COP. Article 31 basically gives every Contracting Party one vote in all decisions, however, this right is significantly impacted by the Rules of Procedure of the CBD, which determine how voting shall be conducted. Currently, with regard to voting the Rules of Procedure and the Convention provide that:

- Decisions regarding the financing of the Convention or COP shall be taken pursuant to rules that may be separately agreed by the parties;⁴⁵³
- Decisions establishing the Rules of Procedure of the Convention must be unanimous;⁴⁵⁴
- Decisions on other procedural matters may be made by a vote of a majority (one more than half) of the members present and voting (that is, not abstaining);⁴⁵⁵ and
- The COP has been unable to resolve disagreement over the manner in which decisions on ‘matters of substance’ shall be made.⁴⁵⁶ The relevant section of the Rules of Procedure (Rule 40.2) remains bracketed. Unless/until those brackets are removed, the COP can act only by consensus.

Unless/until the controversy over Rule 40.2 is resolved, this means that the COP can only take action by consensus. Under the current bracketed rule, any Party placing an ABS dispute before the COP could pre-control the

decision, by choosing how the dispute was phrased, and any country which wished to prevent the COP from deciding need only vote against the consensus.

A second possibility for using the Convention in settlement of ABS-related disputes would be the use of Article 27 and the Annexes governing arbitration and conciliation under the Convention. These provisions, however, only apply to disputes between Parties to the CBD, and are generally not available to private or non-governmental litigants. That is, any ABS dispute addressed under Article 27 must be characterized as a dispute between countries. In some cases, this will be true from the outset – where a government or governmental agency formally obtains genetic resources and an ABS contract or permission directly from another country or some other authorized provider. In general, however, ABS arrangements involve private users or users who are not acting as representations of the user-country government. In those cases, Article 27 will only be available where the user country is willing to take on the role and responsibilities of the user (private company or other non-governmental user) in order to bring the dispute. In that case, the dispute can be resolved under primary principles of public international law, whether through the International Court of Justice, or in accordance with the provisions of Annex II, which provides some basic principles for arbitration and conciliation (the public international law equivalent of mediation).

A less problematic statement of the role of the CBD in dispute resolution is found in Decision 391 of the Andean Community, which notes that ‘Any disputes that arise with third countries (not members of the Andean Community) must be settled according to the provisions of this Decision. If a dispute arises with a third country that is a party to the CBD, the solution adopted must also abide by the principles established in that agreement.’⁴⁵⁷

453 CBD, Art. 23.3.

454 CBD, Art. 23.3

455 CBD, Rules of Procedure, Rule 40.2.

456 CBD, Rules of Procedure, Rule 40.1. The rule for determining whether a particular decision is ‘procedural’ or a ‘matter of substance’ is not bracketed. That question will be decided in the first instance by the COP President, but his decision may be appealed in which case it will be upheld unless a majority, (at least one more than half) of the Contracting Parties present and voting, vote to overturn that decision. CBD, Rules of Procedure, Rule 40.3.

457 Comunidad Andina, Decision 391, final provisions, ‘first’ (unofficially translated by the author of this study).

Special issues relevant to ABS compliance

As noted in literally hundreds of books, articles and presentations on ABS, there is little current agreement on the legal issues and concepts that create the ABS system. Any process facilitated by the national ABS focal points will have to be based on principles of equity and willingness of both parties to participate in development of a satisfactory solution. At present, there is little basis to enable the COP to take action in these cases, suggesting that a COP-based remedy framework would require significant negotiation and development.

[e] African Model Law

The African Model Law⁴⁵⁸ offers an example of the inclusion of special provisions for arbitration as a possible remedy, in the context of ‘plant breeders rights.’ Since the author is not aware of any country which has yet adopted the model law, however, this report will not further discuss it.

10.4.3.2 Penalty measures

As noted above, penalty provisions are not normally considered to provide remedies, however, many national submissions and other documents suggest that, for many countries, the primary (and sometimes the only) legal measures that can be used in the case of an ABS violation may be penalties. Where penalty provisions appear in existing legislation, it appears to be focused only on penalties against users of the genetic resources of the

legislating country. This means that if the user, some of the resources being used, or other property is found in the source country, or some other basis for jurisdiction is claimed, a penalty may be sought. Although, as discussed in 10.2.2, penalties are not remedies or compensation to the claimant, there are some remedial consequences to the use of these penalties, as discussed below.

In addition, draft legislation in Norway offers the first and only example of a specific user measure – that is, a law which requires users under the jurisdiction of the legislating country to share benefits when they utilize genetic resources of foreign origin. Although this law does not provide remedies, its penalty provisions offer another kind of possible remedial impact.

[a] Source-country penalties for use of source-country resources

Description of the law or remedy

Legislation recorded in, and available from, the CBD’s Database of ABS Measures includes a number of penalty provisions that can operate to provide some return to the source country, although only applicable within the source country’s courts and agencies. These are found in the laws of Australia (Commonwealth⁴⁵⁹ and State of Queensland⁴⁶⁰), Afghanistan,⁴⁶¹ Bulgaria,⁴⁶² Costa Rica,⁴⁶³ El Salvador,⁴⁶⁴ Ethiopia,⁴⁶⁵ The Gambia,⁴⁶⁶ India,⁴⁶⁷ Kenya,⁴⁶⁸ Malawi,⁴⁶⁹ Mexico,⁴⁷⁰ Philippines,⁴⁷¹

458 African Model Legislation for the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources, § 36. This model is available from the CBD Database of ABS Measures.

459 Australia, Environment Protection and Biodiversity Conservation Act 1999 (Act No. 91 of 1999 as amended), Chap. 6, Part 17. Supporting regulations (not directly discussing penalties or remedies) are found in Australia, Environment Protection and Biodiversity Conservation Regulations 2000 (Statutory Rules 2000 No. 181 as amended).

460 Queensland Biodiscovery Act, at §§ 50–60, 68–69, 74, 78–87.

461 Afghanistan Environment Act, Art. 73.

462 Bulgaria, Biological Diversity Act, No. 77/9.08.2002, at Ch. 7, Articles 121–124 (administrative measures other than fine); 129 (confiscation). Specific penalties relating to the law’s ABS provisions (Art. 66) are not in place. Possibly these will be addressed in regulations, called for by Articles 66(6) and transitional provision § 3.

463 Costa Rica, Ley de biodiversidad (No. 7788), Art. 112, and also Articles 110–111 and 113. At Cap. III, the law also gives the possible option of requiring guaranty arrangements if the country determines that misuse or misappropriation of genetic resources (or other violation of relevant requirements) could constitute a potential threat to the present or future integrity of, inter alia, ecosystems (‘daños o perjuicios, presentes o futuros, a la salud humana, animal o vegetal o a la integridad de los ecosistemas’). Costa Rica, Decreto No. 31 514 (‘Normas Generales para el Acceso a los Elementos y Recursos Genéticos y Bioquímicos de la Biodiversidad’), Articles 20, 28.

464 El Salvador, Ley del Medio Ambiente, Decreto No. 233, 1998, at Tit. XII, Articles 85–90, 96–106. Sections 100–104 address civil responsibility, but again are limited to harms to resources, persons, etc. within El Salvador.

465 Ethiopia, Institute of Biodiversity Conservation and Research Establishment Proclamation (No. 120/1998), Art. 13; Ethiopia, Access to Genetic Resources and Community Knowledge, and Community Rights Proclamation (No. 482/2006), Articles 20–21, 34–35.

466 The Gambia, National Environmental Management Act, No. 13/1994, Articles 41–47 and 51.

467 India, The Biological Diversity Act (No. 18 of 2003) §§ 55–57, 61.

468 Kenya, Environmental Management and Co-ordination Act (No. 8 of 1999), § 144–146; Kenya, Environmental Management and Coordination (Conservation of Biological Diversity and Resources, Access to Genetic Resources and Benefit Sharing) Regulations, 2006 (L.N. No. 160), § 24.

469 Malawi, Environment Management Act, 1996 (Gazette, No. 7(c), 16 Aug. 1996) § 61.

Portugal,⁴⁷² Republic of South Africa,⁴⁷³ Uganda,⁴⁷⁴ and Vanuatu,⁴⁷⁵ as well as in the African Model Law.⁴⁷⁶ These provisions include a range of direct penalties (fines and imprisonment), as well as powers to inspect, seize, confiscate and, in some cases, retain and sell specimens, equipment and other material and property. A few other countries, which have adopted general ABS penalty legislation have phrased those provisions in a way that might allow them to be applied to illegal use of foreign genetic resources in the source country, including the Draft Central American Agreement on ABS,⁴⁷⁷ and the Andean Community Decision 391.⁴⁷⁸ All of these provisions operate in a remedy-like fashion, when the country applying the remedy is the party that would be entitled to a remedy under the ABS arrangement.

Conditions under which the remedy can be asserted

In limited circumstances, penalty provisions and other rights may operate as a remedy for a source country. For example, consider a source country that is seeking remedies in its own courts against a user who has used that country's genetic resources in violation of the source country's ABS law. If that source country can get jurisdiction over the user or some assets of the user – i.e., if the user is operating or owning property within the borders of the source country – it may be possible to bring a criminal action against the user in source-country courts.

That action could result in fines and confiscation of equipment, in addition to other possible penalties.⁴⁷⁹ Since these fines and confiscated properties are paid to the source country, the net effect of these financial penalties would be very similar to a financial remedy. The primary differences would be:

- (i) the amount of the fine may be different (penalties are often calculated differently from remedies, or the value of seize-able property may not be significant);
- (ii) most criminal/penalty actions are brought at a single point in time, so that the fine will not satisfy the longer-term benefit-sharing obligation, if any;
- (iii) penalties are generally paid to different accounts – hence where ABS payments (and remedies) might be owed to a specific agency or ministry or subject to specific distribution rules, a penalty will typically be paid into the country's general fund and allocated under national budget processes;⁴⁸⁰ and
- (iv) courts deciding penalty and criminal actions often are not empowered to order the non-compliant user to comply in future, especially a user operating in another country. Their decisions are not as easily enforced across borders as civil and arbitration awards (see below).

470 Mexico, General Law of Ecological Balance and Environmental Protection (28 Jan., 1988) 171–175, 182, 188. Mexico, *Ley General de Vida Silvestre*, (last amended 10/1/2002) 104–109, et seq.

471 Philippines, Wildlife Resources Conservation and Protection Act, §§ 27–28 (No. 10622, 2001); Philippines, Joint Implementing Rules and Regulations (IRR), (Adm. Order No. 1/2004).

472 Portugal, Decree-Law No. 118/2002, Articles 13–15.

473 South Africa, National Environmental Management: Biodiversity Act (No. 10 of 2004).

474 Uganda, National Environment Statute (No. 4 of 1995), § 103; Uganda, National Environment (Access to Genetic Resources and Benefit Sharing) Regulations, 2005, §§26–29.

475 Vanuatu, Environmental Management and Conservation Act (No. 12 of 2002) § 41–42 (specifically includes enhanced penalties for offences that continue over a period of time).

476 See supra note 480, at § 67.

477 Acuerdo Centroamericano de Acceso a Recursos Genéticos y Bioquímicos y al Conocimiento Tradicional Asociado, (draft), Art. 27 ('Sanciones'). 'Los Estados miembros crearán los mecanismos jurídicos necesarios para impedir la biopiratería de recursos genéticos y bioquímicos y conocimientos asociados y para aplicar las respectivas sanciones administrativas, civiles y penales.' This law is available from the CBD Database of ABS Measures.

478 Comunidad Andina, Decisión 391 'Decision 391: Common Regime on Access to Genetic Resources,' Title VIII, Articles 46–47. This law is available in English from the CBD Database of ABS Measures.

479 In a limited number of situations, government action that results in fines and penalties may operate as a remedy as well as a punishment. In addition, this category is included owing to the fact that many governments that submitted responses to the CBD's request for information (see supra note 403) include government laws assessing penalties and fines among the administrative and judicial measures they have submitted on this topic.

480 In some cases, private parties may have the right to petition the government to exercise these powers. For example, where a facility is violating rules for the control of environmental pollution, neighbors may petition the government to cancel the facility's operating permit. If the government fines the user, however, the private parties injured by the violation usually do not have a right to sums received.

At most, however, these provisions provide a ‘pseudo-remedy’ only for the legislating country itself, as to its own resources.

Special issues relevant to ABS compliance

The remedy aspect of these laws is limited to the situation in which the source country brings a domestic action against a foreign user of the source country’s own genetic resources. As these laws are phrased, if a domestic company or researcher is utilizing the genetic resources of another country, this law will not provide any remedy or other return to that other country or provider.

[b] Penalties for use of foreign genetic resources without PIC and MAT

Although not yet adopted, proposed legislation in Norway (the ‘draft Nature Diversity Act’)⁴⁸¹ offers a much stronger legislative base for using penalties as a means of

detering ABS violations (a negative incentive that might encourage users to comply with ABS requirements). The Norwegian draft legislation represents the only publicized legislative proposal to squarely attempt to meet the primary obligation of Article 15.7. It specifically states that the utilization in Norway of genetic resources from other countries of origin or providers may only happen if the user has complied with the requirements of those other countries – specifically with the requirement of PIC and the contents of any MAT. At present, no country has adopted such a provision.

The adoption of this provision would not actually create a remedy for source countries and other providers, since the draft Act only considers penalty. It could, however, create a possible basis for them to seek remedies under Norwegian civil law, by clearly stating that benefit sharing is required of all users.

10.4.4 General remedies and other relevant provisions

An obvious conclusion of the analysis in Section 11.4.2 is that national ABS legislation does not authorize direct remedies in the user country, although a few countries have adopted measures that may be partially relevant to the protection of the rights of the source country or other provider.

This suggests that countries expect or hope that general law on remedies, contracts and other relevant issues will be sufficient to address ABS issues. From the earliest negotiations, and in the early years following the adoption of the CBD, it was stated, emphatically and repeatedly, that ABS implementation would occur through national contract law. This assumption continues to be held by many today.

As noted in Section 10.2.3, however, general remedies are broadly available only when a claimant is able to bring a legal action in the courts of the user country. This means that to obtain a remedy:

(i) the claim (whether it is brought through a court, in an administrative agency, as an arbitration award, or using some other path) must meet the substantive requirements of law of the country in which the claim is filed or enforced;

- (ii) the claimant must comply with that country’s procedural and jurisdictional rules;
- (iii) the claim must be supported by evidence and arguments in a form and content that is recognized and usable in those courts;
- (iv) the claim must seek one of the above remedies, and that remedy must be authorized for use with the particular kind of claim involved.

These four factors are generally not a problem for litigants who are based or operate within the country in which the claim is brought. They have access to lawyers trained to use that system, legal assistance programs (where they lack funds or experience necessary) and a general awareness of how law, courts, litigation and alternative processes fit into their society.

ABS complicates the picture in that most claims for remedies will be brought by foreign claimants. In addition ABS necessarily involves a re-conceptualization of several critical aspects of conventional law. As a legal matter, it creates a special legal interest or right in the genetic resources of a species, which is not automatically obtained by legal possession of a specimen of that spe-

481 Norway: NOU 2004:28 www.regjeringen.no/nb/dep/md/NOU-2004-28.html?id=388846

cies. In other words, one may legally own the biological specimen, but not have a right to utilize its genetic resources.

The full impact of these legal ambiguities is discussed in 10.5, below. In identifying national remedy legislation, it is important to remember that we currently have not developed an understanding about how each country's standard forms of law (civil and equitable court claims, administrative actions, arbitrations, etc.) should apply to ABS. It is likely that, should such cases be brought, they will be decided in very diverse ways. Since every ABS claim or remedy involves transboundary litigation, this diversity of approaches suggests that additional principles of private international law may be needed to help clarify the precise nature of these claims and the procedures and processes that apply.

So long as the law has not clarified the critical concepts underlying the ABS framework, it may be very dif-

ficult to know whether/how an ABS claim can fit within the normal substantive requirements of contract law, tort law or other laws (see 10.2.4) to meet the basic requirement of point (i). In ABS, the existing ambiguities have generally prevented claimants from seeking legal remedies under ABS authority. As a consequence, more acrimonious claims of biopiracy are prosecuted in the 'court of public opinion' (through the news media and internet), from which no legal solutions can evolve. In order to regularize this situation, it is necessary to clarify national law regarding genetic resources and its application to those users within the country's jurisdiction who are utilizing genetic resources of other countries.

A few of the submissions to the Note by the Executive Secretary suggested or discussed the applicability of general commercial and other remedies. In addition, other submissions as well as presentations in other ABS meetings discussed the application of general penalty laws (those not directly written about ABS situations).

10.4.5 Commercial and other remedies in national and private international law

The following sections discuss the application of national and private international law in the commercial and procedural fields to ABS claims. The EU and two other countries included some of these laws and issues in their submissions, as included in the Note by the Executive Secretary. In addition, Costa Rica's ABS legislation offers a potential step towards clarifying the relationship of ABS to these more general provisions of private international law.

It is likely that these procedural issues will have a significant impact on ABS, by enabling courts to consider and decide ABS cases. Over time, the body of relevant solutions will provide guidance for future decisions, which may evolve into primary principles.

10.4.5.1 Submission by the European Community

In addition to the CBD-specific measures discussed in 10.4.3.1[d], the EC submission discussed the relevance of two more general bodies of law: alternative dispute resolution systems, and enforcement of foreign judgments.

[a] Alternative dispute resolution

Description of the law or remedy

The Secretariat's Report quoted the following from the EC's submission:

One alternative dispute resolution system that could help addressing these problems is arbitration. For instance, it could prove helpful, under the terms of a MTA, for parties to agree to submit their disputes to a specific arbitration system available under international law whose decisions would be enforceable in a great number of States. Arbitration procedures are normally faster and less expensive than court proceedings and could therefore prove more attractive than court proceedings.

These comments do not reflect an existing measure in the European Community, but rather a suggestion regarding a direction in which the Parties might look for further assistance.⁴⁸²

482 Given the relatively limited response available, and the fact that the issue is of particular interest to the topic of this study, it has been included in the study, under the 'consultant's rule,' which reads (or would if it were ever written down or acknowledged) as follows: Where it is hard to find anything directly on the point of the study, include whatever you can find that is close. This is also known as the 'take-any-port-in-a-storm' rule.

Conditions under which the remedy can be asserted

As noted above, ADR mechanisms provide a pathway to obtaining a remedy where the parties to the ADR process (source country and the user) have agreed to be bound by their outcomes. This may happen where an ABS contract or other instrument contains an arbitration clause, for example, or where the parties agree to binding dispute resolution at the time of the dispute.

Special issues relevant to ABS compliance

To enforce a binding arbitration award in any country, one must first determine whether the laws of that country will enforce this particular type of award, and then bring an appropriate action that complies with the relevant national requirements. Other types of alternative dispute resolution are non-binding – that is, the parties must later agree to the result, and if they do, that agreement may constitute a separate (enforceable) contract.

Arbitration and other ADR processes can provide a good and final result where there is a controversy over whether a user is complying with his ABS contract or other instrument, if the user has agreed to arbitration. It offers no particular remedial option in cases in which there is no ABS contract, unless the user voluntarily submits to binding arbitration.

[b] Enforcement of foreign judgements

Description of the law or remedy

The Note by the Executive Secretary quoted the following from the EC's submission:

Enforcement problems in relation to access and benefit-sharing national laws and agreements can arise. Possibilities to prevent these situations need to be further studied on the basis of experience gained under international law in the enforcement of foreign judgements. Experiences in the field of intellectual property, in relation to the issue of entitlement to apply for or be granted a patent, could also provide inputs to solve enforcement problems.

This comment does not describe any particular remedy available. It does, however, provide an illustration of the basic problem with current efforts to require or permit of 'disclosure of origin in patent applications.' As discussed in Section 10.5 below, problems can arise from over-reliance on patent law, especially where one party

controls the entitlement to use a commodity, and grants this right on the basis of a contract or agreement which cannot be monitored by objective control on the movement or transfer of physical goods.

In this connection, it is useful to note that patent law (considered by some to be a primary model on which regulation of genetic resources should be based) places all of the cost and responsibility for overseeing controlling the use of the patented invention or discovery on the holder of the patent. This apportionment is very appropriate in the patent context, since that holder is presumably engaged in promotion or moving toward commercialization of the innovation or discovery – and therefore has the best financial and technical ability to undertake such oversight and control. Even so, it has proven nearly impossible for large multinational companies that are patent holders to prevent commercial piracy and unauthorized reproduction and sale of patented products. Smaller entities with fewer resources available for oversight, litigation and other enforcement are essentially unable to prevent patent infringements of this type.

If the patent model were used in the context of genetic resources, it would repose all responsibility and cost of protecting the source country's interests on the source country, rather than on the entity that is commercializing/utilizing the genetic resource. This burden could effectively prevent most developing countries from taking any action to enforce their rights under this model.

10.4.5.2 Submission by France

Description of the law or remedy

The French submission identified a number of provisions in response to the inquiry about administrative and judicial remedies, focused primarily on a number of international instruments enabling or facilitating foreign claimants seeking redress in French courts (described in Section 10.3.3 above). Amid these international instruments, however, this submission noted the following national remedial measures:

The New Civil Code of Procedure governs international arbitration in its articles 1492 to 1507;... [and] judicial cooperation at the different procedural stages, [listing three international instruments relating to the procedural ability of foreign parties to bring legal actions in courts of another country] is completed by a re-

*gime of judicial assistance defined by law no 91-1266, 18 December 1991.*⁴⁸³

The submission's list of international agreements designed to enable or facilitate access to the courts in transboundary commercial disputes, includes the European Community Convention on the Law Applicable to Contractual Obligations (Rome, 1980); Convention on the Law Applicable to Agency (The Hague, 1978); UNGA resolution 57/18 (which seeks to promote the use of international conciliation mechanisms in public international law disputes); the Convention on the Taking Evidence Abroad in Civil or Commercial Matters (The Hague, 1970); the Convention on the Service Abroad of Judicial and Extrajudicial Documents in Civil or Commercial Matters (The Hague, 1965); and the UN Convention on the Recognition and Enforcement of Foreign Arbitral Awards (New York, 1965). Some of these documents have regional application, but many are global in scope. Their use in the context of ABS Contracts will be enhanced if (i) such contracts are drawn in the expectation of being interpreted under a consistent international system such as those represented in this list, and (ii) the courts in the country of the user apply such a system.

Conditions under which the remedy can be asserted

As noted above, civil procedure, arbitration and related international instruments do not provide or constitute remedies, but rather facilitate access to remedies by the foreign claimants in the courts of the legislating country. Without this facilitation, remedies could not be made available to anyone. This submission provides a good overview of the possible sources of such procedural assistance in bringing an action seeking remedy.

Special issues relevant to ABS compliance

As noted in the French submission, 'Legislative and administrative provisions therefore exist in France for the different aspects of the settlement of economic disputes concerning private entities.' This clearly demonstrates that ABS remedies in France are expected to be those remedies that can be asserted using the country's general commercial law.

10.4.5.3 Submission by Spain

Description of the law or remedy

The Secretariat's note quoted the following, from the Spanish submission:

In Spain it is clear that institutions from and/or countries party to the Convention on Biological Diversity could use all the judicial remedies under civil law to redress a situation of non compliance with article 15 of the Convention. Under article 96 of the Spanish Constitution article 15 would be self executing (direct effect) and there is no doubt that Spanish courts could hear and remedy any case in which article 15 has not been respected whenever anybody having enough standing (and the law on standing is very open) might bring a case under contract law (if there is evidence of disregarding an MTA) or under general civil actions (civil damage caused by somebody's conduct) whenever the use of the genetic resource has not been subject to any MTA, or PIC.

Conditions under which the remedy can be asserted

The submission suggests that an action will lie for any claim against a user, whether having obtained an ABS contract or not.

Special issues relevant to ABS compliance

The statement that Article 15 is self-executing, although clearly demonstrating the strength of the Spanish government commitment to promote ABS, is somewhat confusing when applied in the context of administrative and judicial remedies under Article 15.7, which calls for each country to 'adopt legislative, administrative and other measures...' rather than suggesting any specific controls or requirements of private actors that could be self-executing. Since Article 15.7 does not specify the nature or contents of the measures (only the results that must be obtained), either Spain or the EC or the international regime will need to provide more specificity to enable Article 15.7 to be directly used as law in countries that consider the CBD to be self-executing.⁴⁸⁴

483 French submission to the CBD, in preparation for the third meeting of the CBD Ad-Hoc Working Group on ABS, reproduced in UNEP/CBD/WG-ABS/3/INF/1, at 30. SCBD translation.

484 A number of countries assume that international law can be implemented in their country without national implementing legislation. See, e.g., Iran, Iranian Civil Code, at Article 9, which stipulates that provisions of treaties between the Iranian government and other governments in accordance with the Constitution shall have the effect of law. See also Taheri Shemirani, S. 2006. 'Review of the Iranian Legislation Relating to Alien Invasive Species.' UNEP. Taheri Shemirani continues 'Usually in such cases, I mean after ratification, the convention becomes enforceable and therefore

10.4.5.4 Costa Rica

Although not specifically submitted on this point, one provision of the Costa Rican Biodiversity Law is worthy of note. The law includes a specific statement that the State has the duty to engage in international cooperation with other countries in connection with the conservation, use, development and exchange of elements of biodiversity.⁴⁸⁵ Although this provision focuses on

neighboring countries and those that share transborder ecosystems or other common interests with Costa Rica, it is possible that a general provision regarding a duty to cooperate might constitute a useful first step enabling countries to adopt frameworks for regulation or oversight of users of foreign-origin genetic resources who are active in the country.

10.4.6 Penalties for the illegal importation of biological resources

As noted above, some countries have adopted penalty provisions in their provider-side ABS measures that may have some remedial impact with regard to claims by that country against users who are still operating in that country. In a similar fashion, some countries' general penalty legislation may operate in a similar way. Such general provisions would also apply in countries without ABS laws, as all countries are clearly authorized to protect their sovereign rights in their own resources.⁴⁸⁶ In addition, a few countries have indicated that penalties under other specific laws (i.e., laws not directly mentioning ABS issues) can operate to penalize users under their jurisdiction who do not comply with the ABS requirements of the source country.

sources, will be sentenced to imprisonment of two (2) to five (5) years and a fine of up to ten thousand (10,000) times the current monthly minimum wage.'

The author has not been able to review this provision directly, and so cannot determine whether the phrase 'the existing legislation' refers only to Colombian legislation or includes legislation of other countries. It seems clear (due to the references to 'threatened species or species in danger of extinction') that this provision is intended to address more than just ABS-related legislation (possibly including legislation on endangered species protection and protected areas).

Conditions under which the remedy can be asserted

In general, it appears that this provision will provide Colombia with the same kind of partial remedy as is described in 10.4.2 above, where it is seeking remedies against users of its own genetic resources, but does not address the obligations of Colombian users of foreign genetic resources. As noted there, these penalty provisions currently provide the clearest source of any redress available to source countries, although they have certain limitations with regard to jurisdiction over foreign users, and also with regard to the recipient and distribution of any moneys received. They may have some potential use as deterrents or negative incentives encouraging compliance.

10.4.6.1 General penalty law: Submission by Colombia

Description of the law or remedy

The Secretariat quoted Colombia's submission, as follows:

The Criminal (Penal) Code (Law 599 of 2000), in article 328 establishes that: 'Everyone who through breach of the existing legislation introduces, exploits, transports, deals illegally, trades, takes advantage or profits from the specimens, products or parts of fauna, forest, flora, hydro-biological resources of threatened species or species in danger of extinction or of genetic re-

mandatory for all authorities in the Country. In most cases, in the Act has been stipulated which Ministry or body has main responsibility for their implementation.'

485 Costa Rica, Ley de biodiversidad (No. 7788), Art. 12. ('Cooperación Internacional. Es deber del Estado promover, planificar y orientar las actividades nacionales, las relaciones exteriores y la cooperación con naciones vecinas, respecto de la conservación, el uso, el aprovechamiento y el intercambio de los elementos de la biodiversidad presentes en el territorio nacional y en ecosistemas transfronterizos de interés común. Asimismo, deberá regular el ingreso y salida del país de los recursos bióticos.') This law is available in the CBD Database of ABS Measures.

486 In this connection, it should be noted that CBD Article 15.5 notes that each country's sovereign rights mean that PIC must be obtained from every country with regard to their genetic resources 'unless otherwise determined by that Party.' The quoted phrase indicates that a country which has not adopted specific ABS law, but has not said that no PIC is required is entitled to protect its genetic resources, and to expect protection from other countries in accordance with Article 15.7.

10.4.6.2 Other penalty measures: Illegal importation of wildlife and other property

In previous public meetings and presentations, the use of environmental penalty measures relating to the illegal importation or possession of wildlife, have been offered as a possible legal solution for enforcement of ABS. These proposals can be divided into two categories:

- Legislative measures implementing CITES; and
- Other controls on the smuggling or importation of wildlife.

As noted above, neither category of measure actually provides a remedy for the source country or other provider. Such penalties may, however, if applied to issues of ABS compliance, constitute one more disincentive to those considering non-compliance, and encourage users of genetic resources to seek ABS permission.

[a] CITES implementation laws and ABS

In general, the limitation of CITES to a specific list of (endangered and threatened) species forms the primary limitation on the use of CITES to address ABS needs, since ABS issues cover many species that are not listed, and thus would not fall under CITES regulation. In addition, CITES regulations, which focus on the movement of and trade in products containing species or parts of them, would need to be modified in some detail to address the issues of GR utilization and rights. A variety of other differences between CITES and ABS have been listed.⁴⁸⁷ For example, CITES permits focus only on the moment of transborder transportation. Normally, after a specimen has entered a country legally, CITES concerns are ended. By contrast, ABS violations occur through utilization (rather than movement or sale of resources) – an activity that occurs over a period of years after the species has been collected and transported.

The relationship between CITES and ABS has been examined in some detail in a variety of contexts.⁴⁸⁸ Nor-

mally, these international evaluations of the CITES-ABS relationship have concluded that CITES mechanisms cannot provide a direct solution to any of the ABS implementation problems. Recommendations generally can be summarized as follows:

- CITES agencies may need to consider the ABS impact of their permits (stating specifically that a CITES permit or certificate does not necessarily constitute an ABS permit nor grant the right to utilize the genetic resources of the species); and
- ABS permits should not be granted for CITES-listed species without ensuring that the user complies with CITES permit requirements as well.

CITES penalty provisions are normally relatively explicit – limited to activities involving the import, export, introduction from the sea or re-export of CITES-listed specimens without the relevant permit or certificate, and to other CITES offences such as falsifying or falsely obtaining CITES permits or certificates. These provisions would normally not be useful in addressing ABS issues. In some countries, CITES penalties may be encompassed in broader wildlife penalty provisions, as discussed in the next section.

[b] Other controls on possession and importation of wildlife

Where controls on wildlife importation or possession are broader in scope, they may in some cases enable the government to assess penalties for the transportation of specimens for purposes of the utilization of genetic resources. As described in 10.2.2, these penalty provisions do not provide any basis for source countries and other providers to seek remedies (compensation, performance of non-financial obligations, etc.) from those who are utilizing genetic resources without sharing benefits. If they can be applied to ABS violations, however, such penalties can provide incentives to users to comply with ABS requirements.

487 Fernández-Ugalde, J.C. 2003. 'El papel de los Certificados de Legal Procedencia en la política global de recursos genéticos: Consideraciones prácticas y económicas.' Presentation in the Workshop on Synergies between the CBD's Provisions for Access to Resources and Benefit sharing and CITES, Lima, 17–18 November 2003.

488 See, e.g., Promoting CITES-CBD Synergy and Cooperation, BfN Skriptum 116, at 20–21.

Two examples, mentioned in a variety of meetings and other communications, are the Lacey Act⁴⁸⁹ and the Stolen Property Act,⁴⁹⁰ which have been cited as the USA measures that will address Article 15.7.⁴⁹¹ Both Acts are criminal statutes, enabling US officials to take actions against persons who have either (i) transported, transmitted, or transferred goods; or (ii) imported, exported, transported, sold, received, acquired, or purchased fish or wildlife⁴⁹² in violation of foreign law. Consequently, their use as penalties against ABS violators would face several obstacles.

First, no law in the US recognizes genetic resources as a legal interest. Consequently, these two laws will be triggered only if the biological specimens were obtained

illegally. In most countries which have adopted ABS legislation, however, the rights related to the utilization of genetic resources are usually separate from the right to take or use biological resources. One might legally obtain biological specimens, but still not be legally permitted to utilize their genetic resources. In addition, enforcement may depend on the market value of the items taken, rather than their use value. The Stolen Property Act sets a minimum market value of the stolen goods at US\$5000. Often, however biological samples with low or non-existent market value have significant potential use value. These factors suggest that penalties and controls on smuggling and the importation of wildlife would appear to require amendment or detailed interpretation before they can operate as penalties for ABS violations.

10.5 Determining whether a remedy is available to ABS claimants

Ultimately, the most important factor that determines whether a remedy is available to a particular claimant is the substance of his claim. As the ABS regime stands currently, this factor, more than any other, appears to present the most significant obstacle, preventing source countries and other providers from obtaining remedies under the laws of any other country.

Up to now, however, ABS parties have little experience with the application of ABS by courts, agencies and other bodies capable of granting remedies. Consequently, it is not possible to provide clear indications of key issues or prerequisites to legislation, or particular factors that have prevented a court, agency or arbitrator from awarding a remedy in ABS cases. Instead, one can only examine the existing legal issues and uncertainties, and describe the choices that would appear necessary

in considering action to enforce an ABS obligation or obtain a remedy. In general, one whose rights have been infringed will be unwilling to invest additional money and time needed to seek redress or remedy if he is not relatively certain of the result of that action. The potential costs of an action seeking remedy, when coupled with these uncertainties, often motivates source countries and other providers to be cautious, and choose not to take action. Until some of these issues can be addressed, however, greater certainty will not be possible, and source countries of limited means will continue to be unwilling to seek ABS remedies.

The following are some of the issues most relevant to remedies issues. If the ABS system is to provide dependable remedies for source countries and other providers, it will be important to resolve these open questions.

489 Officially known as the 'Lacey Act Amendments of 1981,' (replacing the original Lacey Act) enacted as Pub. L. 97-79, Sec. 3, Nov. 16, 1981 (last amended 2003), codified in the US Code at 16 USC §§ 3371–3378.

490 Included in the United States Code (federal law) as 18 US Code §§ 2314 and 2315. The Stolen Property Act was originally enacted in 1949 and has been amended at least seven times since its original adoption.

491 These documents were so identified in presentations (e.g., oral presentation in International Expert Workshop on Access to Genetic Resources and Benefit sharing, Capetown, 20 September 2005) and personal communications (2006) by Leonard Hirsch, (Smithsonian Institute), US delegate to the CBD, who specifically stated that the USA has determined that they are sufficient to satisfy Article 15.7. The author has not yet found any publicly available US document confirming this conclusion.

492 The former requirement comes from the NSPA, the latter from the Lacey Act. That second provision probably does not apply to plants (other Lacey Act provisions make it illegal to take 'fish, wildlife or plants,' suggesting that plants are intentionally omitted from the international provisions). No provisions of the Act make any mention of micro-organisms.

10.5.1 Availability of remedies for violation of ABS contracts

As noted, most commentators have assumed that ABS implementation, enforcement and remedies will be based on the law of contract, and related concepts of property law. This assumption is partially correct:

- Contract law will provide a remedy where the terms of the contract are ‘unambiguous and enforceable.’
- Even where some parts of the contract are ambiguous, contract law may still provide a remedy, if the remedy is specified in the contract, and the conditions that trigger the remedy are unambiguous and have occurred.
- Even where some parts of the contract are ambiguous, the contract may provide a remedy directly where it binds the parties to arbitration or other ADR, and the arbitrator or mediator feels that the situation is clear enough to enable resolution.

In all of these cases, however, the ambiguities in the ABS system (as described in the next section) may render the contractual remedy uncertain. Courts obviously can-

not enforce contracts if it is not clear what the contract means. Even arbitrators and mediators are obliged to refuse to enforce a contract if they feel that the parties were not in agreement at the time that they executed the contract.

ABS Contracts often include very uncertain concepts (genetic resources, utilization of genetic resources, and benefits arising from the utilization of genetic resources, as described below), without fully clarifying their practical meaning. As the contract progresses, questions arise which cannot be interpreted in a mutually agreed way, as a result of uncertainties about these terms. If these questions are not clearly answerable, then the contract may be considered to be too ambiguous and therefore unenforceable. The courts will deem that the contract was incomplete or invalid because the parties never reached agreement about the meanings of these essential terms. In addition, as noted above, some countries place other limits on the enforceability of contracts, based on constitutional principles and other legal standards.

10.5.2 Broader issues of availability of remedies

Where remedies are based on questions of compliance with the source country’s ABS law, rather than on the specific terms of an ABS contract, the availability of remedies may be even more dubious. In most countries the rights of persons governed by the law include the right to know the laws that will apply to them. Concepts of ‘due process of law’ and ‘equal protection under the law’ require that the law must not only be written, but must be clear and unambiguous. One cannot know if he is in compliance with a law, if he cannot understand what it means in practical terms.

As applied to commercial laws, these principles ensure that each person can determine exactly what is required in order to comply with the law, and can have legal certainty as to whether his actions meet the require-

ments of law.⁴⁹³ Most important, clear and unambiguous laws are necessary to ensure that all applicants for a permit are subject to the same standards – to prevent the situation where officers can issue or deny permits on a personal basis.

The key factor that determines whether a claimant can find a remedy for a violation of law is whether the law enables such a remedy, and whether the law is unambiguous. In the ABS context, this can be complicated, because the law under consideration is the law of another country. The following sections briefly describe three basic obstacles – (i) where the availability of a remedy is impacted by general ambiguities of the current ABS regime; (ii) where there are differences in coverage (and other legal factors) between the user country and

493 Often the permit applicant will try to find the dividing line between acceptance and denial. For example, if the law requires specific costly actions in order to obtain the permit, the applicant will often try to determine the minimum actions that he must take to get the permit. Similarly, there may be many details to be complied with, and standards to be balanced by the issuing agency, in the permit application process. Many of these, too, will affect approval. Consequently, it is not always a ‘sure bet’ that an applicant will obtain the permit on the first try, even where the statute is considered to be unambiguous. However, so long as the language is unambiguous, and standards are clear, a law will usually be thought to be unambiguous if it provides a basis for impartial and replicable decisions by the court, in case the parties file an appeal or seek judicial reconsideration of the decision.

the source country in a given ABS situation; and (iii) where the actions being complained of are illegal in the source country, but legal in the user country. Obviously (given that there have been no ABS remedy cases up to now) there may be many other possible obstacles that did not occur to the author while writing this chapter.

10.5.2.1 Ambiguities and other regime enforceability problems

Ambiguities in the ABS regime are generally recognized. There is a possibility that each of the 190 countries that are Parties to the CBD has a different interpretation of the key terms in Article 15. From the perspective of courts and other bodies attempting to interpret ABS obligations and/or to provide ABS remedies, these ambiguities are crippling.

It is not necessary to fully discuss these ambiguities here (they have been canvassed in many articles and discussions), but only to provide an example of their impact on legal processes. The most ready example of this problem is the term ‘genetic resources.’ Confusion over the meaning of this term is apparent in the international negotiations themselves, where many disagreements, although discussing on some other point, actually arise out of the fact that, for example, one negotiator assumes that genetic resources are recognizable physical commodities, and another perceives them as intangible genetic information.

This uncertainty is reflected in national legislation as well. A great many countries have chosen not to use the term ‘genetic resources’ in their legislation. Some of them have identified another term (e.g., Brazil uses ‘genetic heritage,’⁴⁹⁴ for example, Costa Rica speaks of ‘genetic and biochemical resources,’⁴⁹⁵ and Malawi of ‘plant germplasm’).⁴⁹⁶ Others apply their ABS require-

ments to all biological resources,⁴⁹⁷ sometimes including exceptions or other clauses to limit its scope.⁴⁹⁸ In some countries, the terminology is even farther from any current understanding of genetic resources – simply addressing ‘the collection of research samples.’⁴⁹⁹ Many countries’ laws include additional language regarding the intent, nationality, or other characteristics of the user and/or the activities (utilization) that he undertakes with regard to the resources. A number of countries have adopted general provisions using nearly the exact CBD terms and definitions, but with no attempt to clarify their meaning or explain how they will be implemented administratively.

In normal circumstances, it is perfectly reasonable (and even considered good legislative practice) for a country to use a term different from the international term, and to define that term in very clear terms for purposes of national implementation. Then, when another country’s court is considering a case involving that term, it can begin its analysis by comparing the term to the international requirements (i.e., Is the term stricter or more lenient than the international concept? Is it more inclusive or less so? etc.). This comparison allows each country to understand its own role in the process, and also, in cases of uncertainty, to understand how broader international concepts regarding the obligation should be applied.

Unfortunately, since the ABS concept of genetic resources is unclear, it would be difficult for anyone, even the legislators that adopted the various national laws described above, to know which of these laws (if any) fully includes all genetic resources, and which is broader in coverage or less broad. This kind of uncertainty would make it difficult for most courts to apply principles or national laws based on the GR concept. In

494 Brazil, Provisional Act N°2, 186-16, implementing CBD Articles 1, 8j, 10c, 15 and 16, Act. No 2,186-16, (Aug. 23, 2001).

495 Costa Rica, Normas Generales para el Acceso a los Elementos y Recursos Genéticos y Bioquímicos de la Biodiversidad, Decreto No. 31 514, 2003, issued pursuant to the Organic Law on the Environment (No. 7554 of 4 Oct. 1995) §§ 46–47; and the Biodiversity Law (No. 7788 of 30 April 1998), § 62.

496 Malawi, Environmental Management Act, Art. 36.

497 See, e.g., African Union Model Legislation for the Protection of the Right of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources (formally endorsed by all African Union States), applying benefit-sharing concepts to all biological resources.

498 See, e.g., Bhutan, Biodiversity Act, Art 4.a. ABS provisions apply to biological resources, but not ‘[w]here the biological material is used as a commodity for the purpose of direct use or consumption as determined by the Competent Authority, based on the processes and end use of genetic resources, in accordance with the provisions of the Act.’

499 For example, the proposed US measures on benefit sharing with regard to National Parks, would apply to ‘research projects involving research specimens collected from units of the NPS that subsequently resulted in useful discoveries or inventions with some valuable commercial application.’ US NPS, 2006, Draft EIS, presented as Alternative B.

many countries, where a law or contract is too ambiguous for a court to understand and apply, it is deemed to be unenforceable. In that case, no matter what remedy exists and applies to ABS issues, that remedy would be unavailable through the courts and arbitration. The only remedy that could apply in such a case would be for the parties to the controversy to mutually agree to a particular solution.

10.5.2.2 Disconnections regarding coverage of ABS laws

For the purposes of this report, we should also consider the possibility that the Parties will find a way to adopt the measures required under Article 15.7. Even in that case, remedies may be problematic, unless certain factors are consistent among all countries.

One such example is coverage. As noted in the previous section, some countries' ABS laws and requirements apply to genetic resources, while others apply to genetic and biochemical resources, to genetic material or even in some cases to all biological resources. Even if the international definition of genetic resources is agreed and unambiguous, countries will have a full right to use other terms, or to adopt laws which cover more than what is covered by the international regime.

This creates a difficult situation – one that is currently preventing adoption of user-side ABS measures: How can a user-side measure address the variety of provider-side coverage? Consider this example: A country has adopted a user-side law that states:

'users in this country must comply with national law of the 'source country' and share benefits with that source country when they utilize genetic material whose origin is from that source country.'

A user who is not using genetic material as defined in the user country's law will not be required to comply with this provision. However, under the law of the source country, he might be required to share benefits if he is utilizing the biochemical resources of species from that country. It is possible that genetic material defined in the user country's law may be different from biochemical resources in the source country's law, and both may be different from genetic resources as defined in the international regime. As a result of these ('minor') differences, the source country or provider may have no

remedy at all in the user country.

The only way to avoid this result would be for user-country laws to require every user who is utilizing biological material of any kind to (1) determine if it has a foreign origin, (2) determine which country is the source country of that material's genetic resources, and (3) determine what is covered under that source country's law, and so on. This is probably unreasonable, and in practice most countries do not require their citizens (or officials) to know or have access to foreign laws. Even judges and government officials cannot be required to read, understand or comply with laws or other instruments that are not available in official translations to the legislating country's national language.

10.5.2.3 Activities that are legal in the user country

Where there is no ABS legislation in the country at all, the situation is even more dubious. If the user country does not have a law which recognizes genetic resources as a separate type of legal right/interest/property, then it may be difficult for any party to obtain redress. It will not matter that the country has formally committed to adopting legislative, administrative and other measures necessary to implement the benefit-sharing objective. That failure can only be determined in a suit between countries (public international law) – if there is no national law that provides or defines a legal right/interests/property called genetic resources, then the country's courts and agencies cannot provide remedies on the basis of such a right.

With ABS laws in effect in only about 20 countries, approximately 160 CBD parties do not have any law creating or describing rights over genetic resources. In the few countries that have adopted ABS legislation, none has adopted any provision requiring users under their jurisdiction to comply with the ABS requirements and/or PIC and MAT, of the country that is the source of the genetic resources. The reasons for this lack of performance are design problems such as the problem described in 10.5.2. Regime-wide ambiguities currently make it virtually impossible to draft user-side provisions that would be enforceable and unambiguous and provide clear legal certainty for users, the user government, and the source country or other provider.

No matter why it arises, this legislative paralysis means that a user who has legal possession of biological

material and is operating outside of the source country currently has no legal limits on his use of the genetic resources of that material. Although the user country (like all other countries) is in breach of its Article 15.7 obligations, this does not alter the fact that the user is not in violation of law.

In order to seek a remedy in a user country for the misappropriation of genetic resources, the source country must be able to state a claim under that user country's law. If there is no ABS contract, then currently no such

claim is available in any country. Unless he has signed an ABS contract, no legal and administrative remedies are available. Consequently, the lack of legislation implementing Article 15.7 is probably the most significant obstacle to functional ABS. This is even more serious when one remembers that all countries are both users and providers of genetic resources, but no countries have so far adopted legislation which requires users under their jurisdiction to comply with the ABS requirements of the source country.

10.6 Current and future effectiveness of administrative and judicial remedies in addressing ABS needs

If it is limited solely to the current ABS situation, any discussion of remedies will end with the factors described in 10.5. The combination of ambiguity and the failure of all countries to adopt legal measures that clarify the obligations of users under their own jurisdiction may prevent any remedies from being effectively used in ABS contractual or permit-based claims. It also eliminates any chance of successfully obtaining such remedies where the user did not obtain PIC or MAT.

For purposes of the international regime negotiations, however, it is critical to take a further step:

Assuming that the international regime resolves the various ambiguities sufficiently to enable national legislation under Article 15.7, how can existing remedies

be incorporated into that regime, and what other remedies are needed?

The following brief discussion:

- Compares the remedial needs of the ABS regime with the remedies that are normally available under existing law;
- Asks whether additional or special ABS remedies are needed; and
- Considers the legislative and political elements of the regime and implementing legislation that might be needed in order to ensure that appropriate remedies will be available to ABS claims.

10.6.1 What remedies are needed in the ABS regime?

In order for any legal regime to be complete and effective, it is essential to know how it will address controversies, non-compliance, mistakes, and other operational uncertainties. These are questions of enforcement – remedies and penalties. This study has focused on the question of remedies, although considering some aspects of penalties. Lacking any cases or real life examples, this evaluation is based on legal experience in other contexts. Remedies that could be needed in ABS claims might include:

- An order or other judgement clarifying or interpreting the ABS contract or other ABS legislation, as applied to the facts that have developed through the R&D process;
- An order or other judgement compelling the user to share benefits or take other actions required in

the ABS contract or required under source-country law;

- Basic contractual remedies (specific performance of contract obligations, an audited or other verified accounting of activities, income, costs, etc.);
- A lien, performance bond, or other control that provides some external guarantee of the user's performance of his benefit-sharing and other obligations;
- An order imposing certain limits on one party, without specific notice to and/or permission from the other;
- An award (damages) where the user's unpermitted action has caused financial harm to the interests

of the source country or the value of its genetic resources;

- ‘Punitive’ or ‘exemplary’ damages, where there is a possibility that the user (or other users similarly situated) would violate ABS permissions again in future;
- Rescission, cancellation, reformation, revision, etc., of an agreement, permit, MoU, letter of agreement or other document allowing access or use of genetic resources, if the source or provider can prove that the parties entered into the agreement on the basis of a mistake, or that one party’s consent was obtained under duress or on the basis of a misrepresentation or concealment;
- Finally, where the user country has not adopted legislation that enables the source country or other provider to seek an appropriate remedy against the user (in user-country agencies and courts), the source country may seek an order or decision requiring the country to adopt relevant legislation.

10.6.2 Can ABS remedial needs be satisfied by existing remedies?

All of the remedial needs described above can easily be satisfied by existing national remedies, if the ABS regime can be designed to enable the use of those remedies in ABS cases.⁵⁰⁰ The author has attempted, unsuccessfully, to identify remedial needs of the ABS system that could not be satisfied by existing remedies. Consequently, she concludes that sufficient remedies exist, so long as:

- ABS claimants are able to obtain access to these remedies; and

10.6.3 Enabling the use of existing remedies for ABS claims

The only way to enable the use of remedies in ABS claims will be through legislation. The most important legislative needs in order to make ABS remedies effective are:

Currently, none of these remedies is reliably available in the ABS context; however, all are in existence. In most countries, courts, agencies and arbitrators have experience with applying them to any commercial, contractual or other situation in which the underlying rights, interests and instruments are clear and enforceable.

In addition, the CBD’s goal of equity would appear to require that user-side measures should include measures to minimize the costs of litigation and other obstacles which, as a practical matter, might prevent appropriate action by the source country or other provider (often the party with the fewest financial and legal resources, and sometimes located very far from the user country). Countries may already give assistance and protection to domestic litigants who are prevented from pressing their claims due to social and other factors that limit their practical access to courts, arbitration and other remedial options. These measures could be the starting point for the development of provisions for equitable access to the courts and legal processes of the user country.

- ABS questions are sufficiently unambiguous, that courts, agencies and arbitrators can come to final enforceable decisions granting or denying remedies in ABS cases.

To quote José Carlos Fernández Ugalde, however, ‘the devil is in the detail,’ which may be true, but very difficult to satisfy.

- Adoption by all countries of measures addressing the ‘user side’ of the country’s national obligations (requirements imposed on users under the country’s jurisdiction):

⁵⁰⁰ Obviously, not all of these remedies will be granted in all cases. Some will be most useful in ABS agreement cases, and others in no-agreement situations. Usually, only the first of the outcomes listed in 10.6.1 will be sought or granted – a declaration of the meaning of the contract or ABS law, when applied to the specific facts that develop through the bioprospecting, R&D, development, transfer, and/or commercialization processes, and an order to comply with that interpretation.

In many cases, the most important remedy may be reports and accounts, some assurance that benefits will be shared in future, or some control on actions that might harm the interests of the source country or provider (transfer of the user’s data, results, and other genetic resources, without appropriate measures to protect the right of the source or provider). In some cases, the only remedy that will be granted is the right to bring a civil action, and get a fair and impartial hearing. If the court, agency or arbitrator does not find in favour of the claimant, no other remedy will be granted.

- to ensure that the country’s users who do not comply with ABS requirements of the source country are subject to remedial claims in courts, agencies and other forums in the user country; and/or
 - to clarify the manner in which the country’s rules and procedures regarding enforcement of foreign judgements apply to ABS claims.
- Amendment (or adoption) of the country’s provider-side legislation (provisions governing access to the country’s own genetic resources, the benefit-sharing requirements imposed by the country through PIC and MAT procedures or in other ways):
 - to enable direct action on ABS compliance issues in the source country, even as to users whose connection with the source country is only the fact that they are using its genetic resources (under a theory that ensures that the judgement could be enforced in the user country, as above); and
 - to maximize the ability of the country (or other provider) to bring action directly in the user country (i.e., by ensuring that all ABS permits, licenses and other instruments are enforceable as private contracts).
 - Development of relevant international understandings or instruments which:
 - eliminate some of the most serious ambiguities in the ABS process (such as the definitions of ‘genetic resources,’ ‘utilization of genetic resources,’ ‘benefits arising from the utilization of genetic resources,’ ‘country providing genetic resources’ (especially in cases where the user does not have an ABS contract or other compliance with the ABS requirements of a particular country), etc.);
 - provide guidance on the kinds of assistance that should be made available to source countries and other providers, to ensure that their lack of funding, experience with user-country law and other

factors do not prevent them from asserting their rights; and

- provide international standards of procedure, evidence and interpretation to minimize the obstacles and impediments faced by the source country or other provider in seeking remedies in the user country.

The particular contents and operation of these legislative provisions are neither easy to draft nor easy to understand. Unattractive as the idea may be to many ABS negotiators and focal points, it may be necessary to find legal help in determining how to accomplish any of these tasks, and even these experts will probably need to engage in serious analysis and collegial discussion to find effective solutions.

In this connection, it is important to learn one final lesson from the national and institutional submissions response to the Secretariat’s request, reflected in the ‘Note by the Executive Secretary’ submitted to the third meeting of the ABS Working Group.⁵⁰¹ Relatively little information on remedies was provided to the Secretariat in that process. Responses relating to ABS remedies comprised only 10 paragraphs of that report (Paras 53–62 – a total of two pages of text). Many essential elements necessary to provide a remedy for non-compliance with PIC and MAT requirements of source countries have not been addressed at all. It is tempting to conclude from this that there are only a very few, partial remedies available to source countries under national law, addressing only one small aspect of the overall remedial needs of ABS. Other possible interpretations are possible, however. As noted by the Secretariat on this point:

*a number of countries with users under their jurisdiction are still at the preliminary stages of raising the awareness of potential users of genetic resources. Based on the information made available to the Secretariat, administrative and judicial remedies available in countries with users under their jurisdiction regarding non-compliance with prior informed consent and mutually agreed terms, have been limited to those which apply in cases of non-compliance with disclosure requirements in patent applications.*⁵⁰²

501 See Note by the Executive Secretary, supra note 403, at section II, D.

502 Ibid., at paragraph 53.

The narrow focus of many experts and parties, looking for a single action that will solve the ABS problem may be a major obstacle to finding a solution. It is essential, for example, to recognize that patent disclosure provisions are not ABS remedies, but rather paths to remedy,

and that the larger remedies questions must be addressed in order to make these disclosures serve their purpose of alerting source countries or other providers regarding the utilization of genetic resources and the existence or imminent creation of benefits to be shared.

10.7 Conclusion: A balance of certainties

The basic question presented by this study – the remedies available to source countries and other providers against users of genetic resources (in countries with users under their jurisdiction) – is uni-directional in several respects.

First, it looks at the concerns of only one side of the ABS situation – the source country or provider. As such, it must be read in conjunction with other studies which consider the needs and legal position of users. Systemically, the question of remedies – legal certainty for providers – is integrally connected to the question of legal certainty for users. Neither type of certainty can be provided independently of the other. For example, it is much harder for a source country to create national processes that make PIC and MAT binding and unchallengeable, when those countries have no practical ability to enforce PIC and MAT or obtain remedies for violation. The knowledge that these rights are universally addressed in national legislation and elsewhere will remove the need to specially negotiate and document them in the ABS contract, and lead to streamlining of ABS-related negotiations and processes.

In addition, the ABS aspects of the problems underlying current claims of biopiracy and misappropriation of genetic resources are, to a large extent, a function of the lack of available, effective remedies. Users cannot rely on the courts to provide a final method of clear and fair enforcement if their ABS rights, expectations and instruments are not recognized, and clearly defined and understood, in the law of the country in which the action is taken. When such rights are clear and usable, they will not only constitute a factor motivating compliance, but will also provide a level of assurance of fair dealing that may diminish motivations to assert claims of biopiracy in the media and other non-legal forums.

For both sides of the transaction, a clear legal framework of rights and remedies will enable the development

of realistic expectations regarding both the costs and benefits of involvement in ABS transactions. As such, it may enable countries to more competently address the underlying goal of the ABS regime – to provide a basis in equitable terms which is an incentive for all countries to conserve and sustainably use biodiversity.

Although the foregoing constitutes the primary conclusions of this study, the author recognizes that many readers will have skipped the long discussion contained in 10.2-10.6 of this paper, and come straight to this section. For their convenience, the following summarizes the findings of this study. First, national law in user countries contains a variety of remedial options that might function well in addressing ABS claims by source countries and other providers; however, there is a basic functional gap which prevents their application. At present, no country has adopted any law which requires users of foreign-origin genetic resources to comply with source-country ABS requirements, including PIC and MAT. This means that a user will not be subject to legal action in the user country, unless he has obtained an ABS contract, and the source country or other provider takes action in the user country to enforce that contract.

Where a contract exists, the source country will face two primary challenges: (i) the challenges of costs, access to information and evidence gathering which are common to all commercial parties who are not located in the country in which the action is being taken; and (ii) the challenge of making certain that the contract is sufficiently clear and specific to enable a court, arbitration or other remedial action to come to an unambiguous decision. There are many factors relating to ABS which suggest that the Parties may need to have access to special measures and protections in order to use national remedial laws and processes, including the fact that many source countries and traditional communities will lack the funds, expertise and ability to engage in a protracted action in another country seeking redress from an entity

which is probably better funded, more familiar with the relevant legal system, and better positioned to participate in a legal action.

Where no contract exists, there is at present no legal basis on which a claim for a remedy could be asserted in the courts, agencies or other adjudicating institutions in any country. The only exception occurs where the source country still has jurisdiction over the user (because the user or some of his assets or activities remain in the source country).

It is critical to remember that the objective of administrative and judicial remedies is to cure the situation which gives rise to the action for redress. If the source country or other provider should receive a share

of benefits, but the user is not providing that share, then a criminal action which punishes the user in the user country will not provide any remedy to the source country or provider.

Finally, one point must be mentioned as a counterpoint to the discussion of legal remedies – the need to compel payment of any claim. In many countries, the courts are not directly responsible to collect the amounts that are assessed in deciding private claims. The court determines the nature and amount of the remedy, but it is up to the successful claimant to ensure that the losing party pays. If that party does not or cannot pay, the claimant must begin a separate action to collect this amount, and must pay the costs of sheriffs or other officials whose services may be needed in the process.

References for Chapter 10

This list provides a sampling of useful international and comparative treatises only. Specific international instruments and national laws and publications are omitted here. As the issue under study is relatively new, no specific single sources can be referenced that deal with it directly.

ALI/UNIDROIT. 2006. *Principles of Transnational Civil Procedure*. Cambridge University Press.

Beatson, J. and E. Schrage. 2003. *Cases, Materials and Texts on Unjustified Enrichment*. Oxford: Hart Publishing.

Carnwath, R. 2000. 'EHCR: Human Rights Remedies from a Common Law Perspective.' *International and Comparative Law Quarterly* 49(3): 517–527.

Cohen, N., and E. McKendrick. 2005. *Comparative Remedies for Breach of Contract*. Oxford: Hart Publishing.

Damaška, M.R. 1986. *The Faces of Justice and State Authority*. New Haven, CT: Yale University.

Dickinson, A. 2004. 'Review of 'Jurisdiction and Enforcement of Judgements in Civil and Commercial Matters'.' *International and Comparative Law Quarterly* 53(3): 778–779.

Faure, M. and G. Heine. 2005. *Criminal Enforcement of Environmental Law in the European Union*. Kluwer Law International.

Fiorini, A. 2005. 'The Codification of Private International Law: The Belgian Experience.' *International and Comparative Law Quarterly* 54(2): 499–519.

Folsom, R.H, M.W Gordon and J.A. Spanogle. 2004. *International Business Transactions in a Nutshell*. St Paul, MN: Thomson-West.

Goodnow, F.J. 2000. *Comparative Administrative Law*. Beard Books (reprint).

Menski, W.F. 2006. *Comparative Law in a Global Context*. Cambridge University Press.

Owsia, P. 2004. *Formation of Contract: A Comparative Study under English, French, Islamic, and Iranian Law*. Multi-volume series.

Saunier, R.E. and R.A. Meganck. 2007. *Dictionary of Global International Law Governance*. London: Earthscan.

Schlesinger, R.B. 1968. *Formation of Contracts: A Study of the Common Core of Legal Systems*. 2 Volumes. Dobbs Ferry, NY: Oceana.

UNIDROIT. *Principles of International Commercial Contracts* (and other instruments, articles and resources available at www.unidroit.org/).

UNCITRAL. *Uniform Rules on Contract Clauses for an Agreed Sum Due upon Failure of Performance*. A/38/17, Annex I (and other instruments, articles and resources available at www.uncitral.org/uncitral/en/index.html).

Part V Summation: ABS and the International Regime

11

Final Thoughts: Critical Areas for Further Work

The primary conclusion of The ABS Project is that many legal and practical questions that are critical to the success of the regime are still unanswered and cannot be answered without further analysis, even after 16 years of ABS, and untold hundreds of ABS-focused books, articles, case studies, presentations, guides and guidance documents. It is clear that further international discussions are necessary to resolve these questions. The Parties' ability to take and defend policy positions in these negotiations is seriously compromised by the lack of comprehensive legal and policy analysis of these issues and the various options and approaches available.

11.1 Regime legal/legislative issues

A number of critical unanswered questions obstruct national implementation of ABS. The failure of the Parties to specify or develop an international consensus on these topics places heavy burdens on each legislating country. To create a regime that functions through the legal systems of 189 countries, even when issues, contracts and resources cross national boundaries, it will be important to answer a series of critical questions, including the following:

1. *How does access link to benefit sharing?* There remain many questions and controversies regarding whether ABS applies only to users who engage in in-country bioprospecting, or also includes other persons who use or obtain benefits from genetic resources of foreign origin that were acquired in some indirect way.
2. *What is the agreed coverage of ABS and how can it be clarified through and coordinated with definitions and descriptions of key concepts?* Terms of concern include 'genetic resources,' 'utilization of genetic resources,' 'benefits arising from the...utilization of genetic resources,'⁵⁰³ 'access,'⁵⁰⁴ and other terms not found in

The ABS Project and this book are intended to identify some of the areas in which further study, analysis and explanation are needed, both to support the negotiations and to enable legally functional implementation of ABS at national and international levels.

Accordingly, this final Chapter provides a brief list of the most critical issues for further intensive analysis in preparation for the international regime negotiations.

Article 15, such as 'misappropriation of genetic resources,' 'derivative of genetic resources,' 'transfer of genetic resources' and such other terms as might be used to clarify the coverage of the system.

3. *Can the experience of the ITPGREFA (the use of a separate agreement for specific subject matter or specific activities) be reasonably applied to other sectors?* This asks whether it will be possible for the Parties to divide all genetic resources and GR-related activities into functional categories, carving out some resources for special treatment; and explain which of the CBD's ABS principles continue to apply to a subject-specific instrument of this type, and how they are integrated with that instrument.
4. *Is it possible to build a system based on the identification and tracking of particular genetic resources from its source?* Problems of tracking genetic resources and/or linking them to particular products and benefits arising from them are particularly difficult. In order for the current paradigm to be legally effective, it will be essential to overcome this particular obstacle in a manner that can be externally verified.

503 For a possible approach to interpreting these first three terms, see Tvedt and Young, *supra* note 11, at section 4.1.

504 This term is not defined in the CBD. It has been given many different meanings in discussion, however, the parties generally do not note this divergence as any part of the difference or controversy among them.

Apart from these, a number of other mechanism and system issues, discussed in greater detail in Book 2 of this Series, should also be decided:

- *What kind of ABS mechanism should apply when the source country is not known or disclosed?*
- *What standard or mechanism can be used to determine whether a user has complied with the law of the source country?*
- *What mechanism can be used to facilitate coordination and communication between the user country and source country vis-à-vis the access to and use of genetic resources and the oversight and enforcement of benefit-sharing obligations?*
- *How will the regime deal with the transfer of resources?*
- *How can the ABS framework be responsive to changes in the fast-growing field of biotechnology that may affect it?*
- *How can the regime address the governmental need for transparency without compromising the commercial entities' and researchers' needs for confidentiality regarding their commercial dealings, research, trade secrets, and other matters?*
- *Where there is doubt about a transaction, what is fair and equitable benefit sharing?*

11.2 Choosing a practical approach: Mandatory and incentive concepts

Once it is clear what ABS will cover, its success will depend on the ability of the regime developers to ensure that the regime takes advantage of and is compatible with (or at least does not clash with) the practical factors, motivations and incentives that underlie the activities of the users, user countries, researchers, providers, source countries and international entities directly involved in the ABS contract system. It must also coordinate or use the objectives and desires that can motivate communities, NGOs, activists and others to support and promote legitimate, permitted use of genetic resources.

To date, nearly all discussions of ABS focus on compelling compliance, by adopting legal provisions requiring the user (and private provider, if any) to take certain actions. As discussed in other parts of this Series, legislative approaches imposing direct mandatory requirements on users who do not have a strong desire to comply can be effective only where it is possible (i) to closely oversee the regulated users, (ii) to identify violations and potential violations and compel violators to comply with their responsibilities, or (iii) to obtain clear documentation of purported violations (evidence must be of a type that is appropriate and sufficient to enable a fair decision by a court, agency or alternative dispute resolution process).

If the government(s) cannot oversee regulated entities and actions, and document/act against violators, then a direct mandatory system cannot work without assistance. In that case, success will depend on provid-

ing regulated entities with some desire to comply. This desire, if it exists, will operate as a complement with the mandatory provisions. The balance between mandatory and motivational elements of a regime can cover a wide range of options – from mostly mandatory to completely voluntary. In all cases, however, the extent of regime functionality will depend on the strength of the motivations involved.

To date, a great many of the proposals that have been discussed for ABS either do not consider the motivational element or identify very weak motivations as a reason for ABS compliance. For example, many proposals suggest that the primary motivation which will cause users to comply with ABS is the ability to gain access to genetic resources and/or traditional knowledge. Unfortunately, this is a very weak incentive, given that nearly all biological samples can be collected legally, giving the collector the ability to obtain and study their genetic information. Similarly, it is not possible to control ideas – no matter how many people hold a trade secret or a piece of traditional knowledge or a bit of research data, it will take only one person to break the secrecy. Once an idea or a bit of genetic information is known outside the control group, its commercial value is lost.

Another type of motivation that has been proposed is that of goodwill – that is, the public (consumers of the user's product, donors and others) will view the user in a more positive way, because the user is known to comply

with ABS requirements. Given that the ABS concept has proven to be extremely difficult to understand, goodwill seems unlikely to provide sufficient motivation to encourage users to comply with a requirement, when they know that the requirement cannot be enforced and that violations cannot normally be documented or proven in any way legally.

As it is currently envisioned, then, the ABS regime provides only three motivations for user compliance:

- Users and user companies that believe that ABS compliance will enhance relationships with their suppliers of raw material will be motivated to comply. Some companies have stated that this is a significant motivation for them; however, many of these companies have specifically noted (in the same communication) that they do not believe that ABS procedural requirements apply to them and do not comply with such requirements.
- Users and user companies that are inspired to promote ABS objectives, to do as they are told (whether told by law, regulation or guideline) or to support social equity and goodwill will comply. Fortunately, a great many users appear to be sincerely desirous of complying with national and other guidelines on ABS.
- Some users and user companies fear that they may be publicly accused of biopiracy. For these users, the desire to avoid this accusation may provide a motivation to comply.

The value of these motivations may not, for many companies, balance the costs of ABS compliance, particularly in light of the fact that ABS permits and contracts generally do not provide the user with any legal certainty regarding the rights and resources obtained.

As a consequence, it is increasingly apparent that an ABS regime will only be functional and effective if it creates specific incentives and other motivations for users. For this purpose, the most effective incentives are usually financial benefits (e.g., tax deductions, rebates, and other rights), opportunities (e.g., special priority for

other filings, permits or opportunities, access to special materials or programs that cannot be accessed by others) and positive publicity. Such incentives will be effective only if they:

- Are inexorably tied to compliance: Only users who comply with ABS requirements are able to obtain the incentive;
- Encourage desirable behavior: Incentives must be designed in such a way that the actions that the user must take in order to obtain the incentive must directly result in positive ABS situations; and
- Are sufficiently valuable: The (monetary and non-monetary) value of the incentive must balance the costs (including the risks and costs incurred due to time delays, and the losses of goodwill arising out of potential claims of misappropriation).

It is essential for qualified commercially knowledgeable lawyers, economists and administrators to conduct an expert analysis of commercial, economic, legal and practical elements and analysis of their interlinkage. Such work would be a primary and necessary input to enable the Parties to design and implement the elements of an incentive-based ABS system.

Beyond these incentives however, it is necessary for the ABS regime to consider what motivates governments to adopt and implement user-side measures.⁵⁰⁵ This incentive element is sometimes unrecognized in ABS discussions. The governmental reasons for adopting provider-side measures are relatively simple and indisputable – the desire to protect the country's valuable resources from exploitation that does not comply with national policy and/or compensate the country or some of its citizens. As a result, a number of countries with users under their jurisdiction are in the process of adopting measures protecting and governing access to and use of their own genetic resources, but none have adopted measures ensuring that those users share benefits with source countries, when they use genetic resources from other places. It may be much more difficult to link ABS to benefits and incentives that are sufficient to inspire countries to comply with their primary user-side obligations, given

505 The terminology 'user-side measures' and 'provider-side measures' is discussed in detail in Tvedt and Young, *supra*, at Chapters 2 and 3.

that those obligations would compel payments to and other sharing of benefits with foreign countries and their citizens, communities and agencies (a process that will be politically difficult for many elected officials).

One of the major conclusions of the entire ABS project is the need for detailed and effective incentives.

11.3 Analytical support on primary regime issues

The Parties are already engaged in discussion of some of the questions listed in the previous sections; however, to date, many critical background studies continue to be needed.⁵⁰⁶ Without that information, it is possible that Parties' may not take the most effective positions to support their national needs and approaches. There are a great many such points on which legal/factual and policy analysis could provide a solid legal basis on which these questions could be decided. Some of them include:

- *Types of instruments that may be used in an international regime and the impact of selecting them.*⁵⁰⁷

Some of the instrument options to be analyzed could include (i) technical decisions, (ii) voluntary documents; (iii) political statements; (iv) 'agreed interpretations' and other clarification instruments; (v) binding or voluntary standards; (vi) forms and models; and (vii) protocols. For each of these options, it is essential to ask several key questions:

- As a practical matter, can the proposed instrument resolve the key issues?
- What is the advantage of this type of instrument over others?

There are many potential inputs and approaches to the design of a regime wholly or partially operating through incentives. It is necessary to develop credible, documented, concrete (non-speculative) data regarding the costs of ABS, the amount and nature of benefits and value to be received depending on the specific mechanisms chosen, and other key results of the system.

- To achieve its objectives, would the instrument have to create institutions or mandate a transnational processes? Can it do so?
- Will it need to be enforced? Can it do so?

- *The legal nature and legal status of genetic resources under national law.*

Current studies have limited their analysis to national law governing real (immovable) property.⁵⁰⁸ It is doubtful, however, that national law on real property will govern the ownership of and rights to genetic resources in most countries. This is an issue requiring intensive research and analysis.

- *Application of trade law and terminology to ABS.*

In a few cases, standard trade-law terminology continues to be used in ABS negotiations, including most specifically the call on countries to 'not discriminate against foreign users of genetic resources.' This (major) development indicates the possibility that, in future it would be made illegal for any country to refuse a request for access to genetic resources. Among trade experts, the so-called 'ABS-Uruguay Round linkage' has generally been disregarded,

506 A partial list of specific issues that the Parties need to understand in order to complete the ABS regime can be generated by addressing, for example, the issues listed in CBD COP Decision VII/19: *Access and benefit-sharing as related to genetic resources* (Article 15), and specifically, paragraphs C and E/10(g).

507 These categories may have many different titles. 'Technical Decisions and Voluntary Statements' encompasses most COP decisions, workplans, 'guidelines', 'guiding principles' and voluntary standards. 'Political statements' include declarations, some COP decisions, etc. An example of an 'agreed interpretation' can be found at <ftp://ftp.fao.org/ag/cgrfa/Res/C4-89E.pdf> (FAO Conference Resolution 4/89) – the agreed interpretation was used by FAO to clarify the meaning of the International Undertaking on Plant Genetic Resources, following the adoption of the CBD. The rules relevant to a Protocol include CBD Articles 28, 32 and 29; and the Vienna Convention on the Law of Treaties, 1969.

508 That is, the law on the ownership of lands and structures. The most recent study referred to in this section is the 2007 report to the CBD's AHWG-ABS-5 entitled 'Legal status of genetic resources in national law, including property law, where applicable, in a selection of countries' (UNEP/CBD/WG-ABS/5/5). Given its superficial coverage of the issue (limiting its discussion to laws governing the ownership of real property) this is probably intended as an initial study, rather than a final analysis.

because it is relatively clear that ABS is not in fact linked or linkable to the current international trade regime. Preliminary research under The ABS Project

indicates some potential ways to reconsider this linkage, however this research was not complete enough to be included in this volume.⁵⁰⁹

11.4 Mechanisms and legal craftsmanship

The functionality of ABS operation will depend on the creation of new legal tools – the building blocks for a new regime. Many years of research and legal practice have indicated that (i) existing legal tools cannot be applied to serve ABS-regime needs in their current form, and (ii) there is no parallel between ABS and any other functional legal/commercial system that is sufficiently robust to become a model for effective ABS implementation.⁵¹⁰

Consequently, the books in The ABS Series have focused on examination of the tools and components of commercial and environmental legislation and the manner in which they can (or cannot) be applied to ABS situations. In the course of the Project's research and analysis, the following issues were identified as key next steps requiring impartial professional legal/practical/policy analysis and research.

11.4.1 Commercial tools for protecting the Parties and overseeing PIC and MAT

Following on Chapters 9, 10 and 11 above, the next level of inquiry will be to examine the practical legislation and mechanisms so that ABS contracts can meet the needs of both user and provider. In particular, it will be essential to

determine how various legal tools (guarantees, security, insurance, rights of inspection, etc.) can create certainty and confidence between the Parties to ABS contracts.

11.4.2 A mechanism for separate treatment of research

One of the most problematic elements of ABS has been its impact and perceived impact on academic and conservation research. Many researchers report substantial delays and in some cases the termination of their activities due to administrative complications and demands imposed by national efforts to implement ABS. These requirements are primarily oriented to the countries' desire to protect their long-term interest in preserving the value of their genetic resources and ensuring that their country and its people receive due and equitable compensation for the use of biodiverse genetic resources once scientific results have been made public, their commercial value as potential products and/or patentable discoveries is compromised, and may have disappeared for all practical purposes.

Many academic and other research institutions are increasingly funded by commercial contracts under which information developed may be transferred to and developed by commercial entities. In addition, research results, especially from conservation work, are often thought of as 'not producing a concrete 'product' but rather a combination of actions, attitudes, and regulations that promote the protection of a given area or species within that area.'⁵¹¹

Accordingly, the development of a research mechanism must identify a mechanism by which non-commercial researchers can be seen as middlemen between the provider and user, and can protect the rights of the source country and provider, with regard to subsequent users both of the material obtained and of any data and research results. Initial processes to develop such a delineation have been identified,⁵¹² and this issue should be an urgent priority for the ABS regime.

Within this framework, special provisions for researchers are not as simple as one might think. It is necessary to create a clear line distinguishing academic and conservation researchers from commercial researchers.

509 This research will be completed and published separately, following the final conclusion of The ABS Project, by primary researcher T.R. Young.

510 As mentioned elsewhere, ongoing work, to be completed under other support, is examining the possibility that the antitrust system might provide a basis or example on which ABS implementation could be developed.

511 Capson, T.L. 2008. 'Biodiscovery Research in Panama: Linking Science, Technology, Human Health, and Conservation in the Host-Country Context.' In: Bhatti et al., *Contracting for ABS: The Legal and Scientific Implications of Bioprospecting Contracts*, EPLP 67/4.

512 Fernandez, J.C. 2007. 'Tracking and Monitoring International Flows of Genetic Resources: Why, How and Is it worth the Effort?' In: Ruiz and Lapeña, *A Moving Target: Genetic Resources and Options for Tracking their International Flows*. EPLP 67/3.

11.4.3 Possible uses of certificate and registry tools, and the form and content of such certificate(s)

Normally, the tools to be used to implement a legal requirement are not decided until the nature and process of the legal requirement are clear. In ABS, this approach has been partially altered, with initial studies and discussions of one of the possible mechanisms – the certificate of source, origin or legal provenance – commencing relatively early in the process. To date, however, due to the early stage of negotiations, these discussions have not been able to touch on the most difficult and important issues. Because the certificate discussions were unable to agree at that stage on what the certificate's role in the process would be, the discussions provide a list of a number of possible facts that might be included in a certificate. Almost certainly, the precise list of contents of a certificate will depend on the nature and purpose of that certificate and will not include all of the information in this list.

With the certificate issue already on the table, however, it will be important to provide additional information about the types of certificates that may be used in the ABS regime. Legislative experts with experience in the creation and implementation of certificate-based legal regimes should help to identify the consequences of the various decisions relevant to the use of certificates within the regime. In this analysis, it may be useful to prepare a typology of the various types of certificates that might be relevant to the ABS regime. Such a typology could include, for example, certificates for the following:

- Verification of which species, variety or subspecies the material comes from;
- Verification of the origin of genetic resources;
- Verification of the source country (provider country) from which the genetic resources were originally taken from in-situ conditions;
- Verification that a country has 'acquired genetic resources in accordance with the CBD' (CBD, Art. 15.3);

- Verification that standards for PIC and MAT have been complied with, and/or that the persons granting PIC were legally authorized to do so;
- Verification or registration of the user, of the nature of user's activities, or of the user's research objective;
- Proof or registration of the status of middleman or other holders of biological specimens, regarding the genetic resources of those species;
- Verification that the collector, middleman or user has complied with ABS application requirements: (certificate of legal provenance);
- Documentation of the collector's, middleman's or user's full compliance with source-country law (certificate of compliance) and/or current compliance with ABS contract (status certificate);
- Documentation of the legal capacity and authority of person or entity contracting as provider;
- Verification that user engaged in benefit sharing; and
- Proof of amount and nature of benefits paid.

Obviously, some of these certificate purposes can be combined, but many of them are so different and separate that they cannot be unified, in content or in process. For each type of certificate, and for each possible use of a certificate, it is important to ask six questions: (i) What does it certify/why is it needed? (ii) Who would issue it/who would receive it? (iii) What would be needed by the system (standards and procedures for verification, etc.) in order for the certificate to function? (iv) What other⁵¹³ information should the certificate contain? (v) What procedures would be used vis-à-vis the certificate process? and (vi) What functional limitations and challenges must be addressed?

513 It is assumed that all certificates will contain (i) the name of the party asking for the certificate; (ii) the name of the party owning/possessing/using the material if different; (iii) the name and authority of the issuer; (iv) the qualifications of the person signing the certificate; (v) the standard/legal authority/institutional rule under which the certificate was issued; (vi) a list of all testing or other processes undertaken in order to issue the certificate

Although current discussions of certificate options may be premature, they have underscored the very different perspectives of various parties on particular tools and processes that might be used in the ABS regime. They include (i) disclosure of origin in patent applications; (ii) proof that product, research or other activity does not utilize genetic resources; (iii) proof that genetic resources are not misappropriated; (iv) compliance with the ABS component of the social responsibility standard; (v) qualification for tax or other incentives in user country; (vi) qualification for incentive or other benefit in source country or other countries; (vii) database or registry of users who comply with ABS law and principles of equity relating to genetic resources; and (viii) the development of a database of genetic resources that have been acquired and are being used. Although initial research has given The ABS Project some very strong

opinions on the pros and cons of those options, it is clear that all of them should be examined in order to enable progress in the regime.

Options for the possible roles of disclosure and certificates in the ABS system must be analyzed as a priority issue, to ensure that, if a premature decision is made on certificates, that it does not pre-empt further more useful decisions at a later stage. Hence, as a follow-up to the work already done by the Expert Group on certificates, it might be valuable to develop a list of the various ways that a certificate could be used in ABS, and for each one discuss how the choice of use will affect the differences in certificate content. This discussion could include patent-disclosure as another certificate-like process to be designed when its purpose is clearly decided.

11.4.4 Other work directed at national implementation

Most important, the last decade has seen a great deal of effort spent on national implementation of ABS and direct support (with or without national implementing laws and practices) to the development and implementation of ABS contracts and permits. These activities have been only partially successful, at best, with many resulting in undoubted failure.

failure as long as one can learn from it. In the context of international technical assistance and policy development, however, there is a strong preference for discussing only best practices and success stories. If it is possible to collect lessons from all ABS activities (both successful and not), the advantages for the regime development process could be significant.

Experience with national and international programmatic work has demonstrated that no project is a

11.5 Implementation through sectoral issues

As noted in Chapters 2 and 3, and the introduction to Part I, one of the most important and under-studied issues in this field relates to the sectoral aspects of ABS – that is, the manner in which ABS and GR issues are addressed in sectoral governance and activities. Two primary sectors have been subjected to some level of attention up to now. Agriculture, especially the sharing of agricultural collections and efforts to conserve on-farm diversity, have been relatively intensively studied, through work by Bioversity International, FAO and especially ITPGRFA. The other area in which some initial research has begun is marine genetic resources. At national and regional levels, additional work has been undertaken in the forest, freshwater and protected areas sectors.

While The ABS Project has examined sectoral issues in some detail, it has not had the funding or access necessary to engage in in-depth research at national levels in many continents. Such research will be essential for two reasons. First, when the ABS regime's basic functional and operational paradigm is being agreed, this research will help to enable that paradigm to be more easily applied across the sectors, and may help identify particular sectoral elements that can be addressed separately, in the way that the ITPGRFA and its SMTA have identified and addressed a very particular group of ABS transactions – the acquisition of agricultural germplasm from international collections and other participating collections for the purposes of agricultural variety develop-

(and/or any other certificates, documents or statements on which it was based); and (vii) a list of any other external information, data, material, etc. used in issuing the certificate.

ment. It may be possible to identify particular elements of other sectors for similar simplified treatment.

Second, it might help the Parties avoid the possibil-

11.5.1 Lessons from the marine sector

Based on initial research, the marine sector offers positive and negative examples. As detailed in Part I of this book, there are a number of issues which are currently gaining attention and scrutiny by the marine-law-and-policy community under the heading ‘marine genetic resources.’ In general, these discussions focus not on genetic resources but on marine biodiversity (the unique and possibly endangered species of oceans), and marine sustainable development/sustainable use (the possibility that the activities of the fishing industry, marine scientists, marine geological/mining interests and others might be further endangering marine resources, even causing their extinction before they are even discovered and/or before their basic taxonomic and ecosystemic nature is known or exploited). Thus, under the heading ‘marine genetic resources,’ international, regional and national law and policy forums for oceans are discussing the adoption of conservation measures for insufficiently explored or understood parts of the oceans in the high seas.

There is no doubt about the necessity of these discussions, nor about the long and difficult process that will be necessary to make headway in this field. What is problematic is the possibility that, by labelling them ‘marine genetic resources’ in these discussions, they will prevent the Parties in those processes from addressing key questions about real marine genetic resources. In general, for the ABS system to integrate with the oceans regime, it will be essential to know, for example (i) who (what countries, agencies or other bodies) has the right, authority and/or mandate to grant access to and permit utilization of the genetic resource of the oceans beyond national jurisdiction (i.e., the high seas); (ii) how the user, provider and others will know which resources are from the high seas and which are from areas within national jurisdiction; (iii) how the ‘benefit-share’ from genetic resources of the high seas (and those whose origins are not known or disclosed) shall be shared; and (iv) how the ABS regime can best integrate with equity/sharing components of the international regime on oceans.

ity that sectors may, at national level, adopt ‘Sector X Genetic Resources’ laws, which could potentially conflict with national and international ABS laws and agreements.

With regard to this fourth element, it is important to remember what the UN Convention on the Law of the Sea (UNCLOS) was intended to be:

*The UN Convention on Law of the Sea (UNCLOS) gives as its basic objective the establishment of a ‘legal order’ for oceans, including the use and conservation of marine resources.*⁵¹⁴

As such, it rather clearly provides a layer of governance of oceans that must be complied with as to all oceanic activities. This must go forth with full respect for the three apparent reasons behind the completely different approach taken by maritime law and forums, when addressing environmental issues. These differences have had a similar impact on the relationship between environmental forums and the international law of oceans in a great many areas.

- *Internationality of UNCLOS v. National approaches under the MEAs*

The first underlying reason is historical. Maritime law is unlike other international environmental law in that it has always been international in scope. Virtually all countries have utilized oceans in some way for many millennia. As a result, it has always been essential that the primary legal issues of oceans should be developed as international principles or based on agreed standards. Thus, maritime law has evolved entirely separately.

By contrast, apart from climate change, virtually all environmental issues have first developed as law at the national level. International action on these matters has usually been attempted where some gap or variation among countries has raised environmental concerns and required countries to work together or to agree on standards for action.⁵¹⁵ At that point, a new international agreement is proposed. Since they

514 Johnson, L. 2004. *Coastal State Regulation of International Shipping*. Oceana Publications (citing the fourth preambular paragraph of UNCLOS).

515 There are a number of examples in the environmental field alone. Pollution agencies at national level eventually found that the effectiveness of national

are built on national/domestic law foundations, MEAs are generally designed to be implemented by individual national law. In most cases, the form and content of that national law is unspecified. The international agreement focuses on the results and outcomes that the law must attain.

In this respect, ABS bears some important similarities to UNCLOS. Like UNCLOS, the ABS concept is international in focus. The CBD does not regulate or even discuss a country's domestic utilization of its own genetic resources. Instead, its full attention is focused on situations in which one country (or a citizen/entity under its jurisdiction) is utilizing the genetic resources of a different country. For this reason, the ABS approach is increasingly focusing on its international aspects.

- *Institutional separateness (UNCLOS) v. Integrated management and functionality (MEAs)*

Second, the two expertises (marine/ocean law and environmental/conservation law) have been, for the most part, entirely separate, particularly at the international level, but also at national level. Although there is no apparent conflict between them, there is very little overlap, even in scientific areas and implementation. The overwhelming majority of marine scientists do not work address terrestrial issues, and vice versa – far less than the level of crossover between freshwater and terrestrial issues. The evolution of maritime law has resulted in a near total separation between maritime lawyers and those addressing terrestrial matters. As maritime law has begun to address environmental and conservation issues, this distinction continues. Maritime conservation law, for example, is addressed by a different body of lawyers from those dealing with terrestrial and freshwater conservation. Even when dealing with and discussing shared ideas, the two sectors

only describe themselves across the marine-terrestrial chasm, but do not seek to integrate their work or approaches.⁵¹⁶

This fact, however, is completely justifiable in light of the internationality of UNCLOS and the principle that most ocean areas are beyond the jurisdiction of any one state. Although it is impossible for any legal regime to operate entirely separately from other legal regimes, the marine framework, given that it is based on internationality, must find ways to ensure that its internally harmonious provisions are not effectively invalidated by national measures. In the MEAs, by contrast, coordination is an essential principle, most clearly enunciated in the 1992 UN Conference on Environment and Development:

*In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.*⁵¹⁷

Supported by other principles which call for impact assessment, cooperation and notification, and most essentially by Agenda 21's strong emphasis on integrated environmental planning and management, this principle has been widely recognized through inter-instrument cooperation and recognition, well beyond the individual scope of any MEA, and specifically in the CBD's development and promotion of general principles and mechanisms (such as the Ecosystem Approach, the Principles of Sustainable Use, the Cartagena Protocol on Biosafety, and the ongoing process of developing an international regime on ABS) to assist with such integration. Environmental law and governance has recognized and promoted a goal of inter-sectoral cooperation and integration far longer than that, however, through the general approach which recognizes that environmental and sectoral concerns, although different,

pollution laws was compromised by transboundary factors leading to the Vienna Convention for the Protection of the Ozone Layer, its Montréal Protocol on Substances That Deplete the Ozone Layer, the Convention on Long-Range Transboundary Air Pollutants (LRTAP), Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (the Basel Convention), the Stockholm Convention on Persistent Organic Pollutants (the POPs Convention), and many others. A wide range of national, species conservation laws facing similar concerns led to the adoption of the Convention on International Trade In Endangered Species of Fauna and Flora (CITES) and The World Heritage Convention (WHC), among others. Ecosystem/biodiversity conservation more broadly, encompassing both national and international experiences led to the CBD in a very similar way, as experiences with food variety development needs led to the ITPGRFA.

516 See, e.g., Gjerde, K. 2002. *Report of the Vilm Expert Workshop on Managing Risks to Biodiversity and the Environment on the High Sea, Including Tools such as Marine Protected Areas – Scientific Requirements and Legal Aspects*. BMZ, Isle of Vilm, Germany, 27 February–4 March 2001.

517 Rio Declaration on Environment and Development (Rio, 1992) Principle 4.

normally apply to the same areas, actors and activities. If sectoral activities are to avoid undue environmental destruction, and environmental controls are to avoid commercial/practical damage to sectoral systems and objectives, it is essential for countries and international processes to develop means of co-ordinating action.

Ultimately, even in the marine sector, there is a need for multiple objectives to be reflected in national and international action. Although not perfectly implemented,⁵¹⁸ the concept of sectoral integration is very strongly supported at both national and international levels, including through cooperation in the establishment and integrated application of principles and decisions.

- *Operational approach: Limiting national action v. Compelling national action*

Finally, the most critical reason for the divergence between maritime law and international environmental law arises at the most basic policy level. Maritime law is founded on a critical principle known as the ‘freedoms of the high seas.’ These freedoms are variously described, but are currently seen to include the right of all nations to navigate, fly over, fish, lay cables and pipelines, and conduct scientific investigations freely on the high seas.⁵¹⁹ Although this listing of high-seas freedoms seems clearly to be open-ended, many marine commenters and institutions appear to take the position that UNCLOS has closed and codified it. They recognize only the first four (navigation, flying over, fishing, and laying ca-

bles and pipelines) as ‘high-seas freedoms.’⁵²⁰ Nearly all marine negotiations and discussions revolve in some way around the protection of these freedoms, clarifying what limits or restrictions may be placed on these activities and specifying where, how and by whom. Operationally, UNCLOS can be described as an agreement among its States Parties specifying the limits one State, or the body of States Parties, may place on other States, their citizens, entities under their jurisdiction or ships flying their flag.⁵²¹

By contrast, the MEAs’ approach is more pro-active – that is, they specify kinds of actions that must or should be taken, or kinds of action that the Parties will try to take, to achieve collective objectives. The CBD, for example, focuses overwhelmingly on the goals of conserving biological diversity and ensuring that its commercial and other utilization is sustainable. It is also oriented around an equity component – the equitable sharing of the benefits arising from the utilization of genetic resources. These objectives are described expansively. The commitments of the parties are thus stated in terms of specific actions and their results, such as ‘Establish a system of protected areas,’⁵²² ‘Rehabilitate and restore degraded ecosystems and promote the recovery of threatened species,’⁵²³ and (most relevant to this book) ‘take legislative, administrative or policy measures, ... with the aim of sharing in a fair and equitable way the results of research and development and the benefits arising from the commercial and other utilization of genetic resources with the Contracting Party providing such resources.’⁵²⁴

518 See, e.g., CITES documents accompanying the Workshop on ‘Introduction from the Sea Issues,’ 30 November–2 December 2005, Geneva, Switzerland, at <http://www.cites.org/eng/news/meetings/ifs-05/ifs05.shtml>

519 See, for example, the 1958 Convention on the High Seas, at Article 2 which lists navigation, fishing, flyover, pipelines and ‘other freedoms which are recognized by the general principles of international law.’

520 See Mwenda, K. 2000. ‘Deep Sea-Bed Mining Under Customary International Law.’ *Murdoch University Electronic Journal of Law* 7(2). This presumption that UNCLOS’s express terms define the international marine legal framework seems a bit presumptuous to the terrestrial lawyer, based on (i) the fact that UNCLOS is much shorter in duration than any national code covering even one topic (mining, wildlife, commercial use of natural resources, etc.) among the dozens that UNCLOS addresses; (ii) the extreme size of the area covered and variability among its physical, biological, political and other elements; and (iii) (especially) the fact that it is, by its own definition, a ‘framework’ setting out general political/legal objectives and codifying some matters already recognized as international law, but primarily intending that some objectives shall be further clarified and codified in other instruments.

521 The right to impose such limits is specified in great detail, to ensure that limits cannot be applied beyond their immediate and agreed purpose, imposing impermissibly on one or more of the high-seas freedoms. In essence, international maritime laws are, like the WTO and many other types of laws, essentially ‘agreed limits’ on the measures that any State can or must adopt with respect to certain activities by other States’ citizens.

522 CBD, Art. 8(a).

523 CBD, Art. 8(f).

524 CBD, Art. 15.7. The benefit-sharing side of ABS operates in the classic style of MEA functionality. The CBD obligates the Parties to adopt measures that achieve stated results – sharing of the benefits and research results arising from utilization of genetic resources. In essence, countries have agreed

11.5.2 Suggestions for urgent analysis of sectoral issues

Within the range of sectoral concerns, there are two primary paths of inquiry that seem most important at present:

- *Integration of key sectoral processes with the CBD*

The marine genetic resources work has so far not intensively considered the most important sectoral questions – that is, the specific relationship between particular marine law requirements and ABS, with one important exception. Monserrat Gorina-Ysern has undertaken a useful and comprehensive study of one of the most important relationships – between ABS and the UNCLOS’s regime for ‘marine scientific research.’⁵²⁵ Obviously, this work cannot be completely concluded until the ABS regime’s requirements and processes are more clearly elucidated; however, the work of integrating these two international regimes could provide essential lessons for other sectors’ integration with ABS.

- *ABS and natural resources management*

The concept of natural resource management (NRM), although very separate in nature and content from ABS, is frequently discussed as if it were ABS. For example, most marine and forest legislation and guidelines involving genetic resources actually addresses practices of licensing collection of species, fishing, forest harvesting, and the use of other ecosystem components. It is essential for ABS to coordinate with and support NRM, but it is also clear that the two are not identical concepts. It will be both interesting and important to the future development and implementation of ABS to identify both disconnections (the sometimes difficult relationship between ABS and NRM) and potential coordination and mutual support.

11.6 ABS as support to conservation and sustainable use

One of the most difficult challenges of the ABS regime arises out of the primary reasons behind its creation: ABS is intended to provide support to and be supported by the other two objectives of the CBD – ‘the conservation of biological diversity [and] the sustainable use of its components.’⁵²⁶ The many challenges of creating the ABS system, described in the five books of this Series, seem like child’s play, when compared to the task of inexorably linking that system to conservation and sustainable use.

During the negotiations, and in the years immediately following, the linkage between the third objective and the other objectives (conservation and sustainable use) was relatively explicit, in that nearly all contemporaneous accounts identify them as three pillars which hold up the convention. The succeeding 15 years, however, have raised serious questions about whether this is a reasonable expectation. As noted in the introduction to this book, negative experiences with incentives and other regulatory efforts has led to a level of pessimism

to a good faith obligation to find measures that work. If the first attempt does not work, then a new approach must be found and attempted, but in no case is a specific provision required or specific contents described. It is not even specifically necessary to adopt a law or regulation, if the measures adopted meet the stated objectives. By contrast, Article 15.2 does not *require* any country to adopt national measures for access to genetic resources, noting only that they ‘shall endeavour to create conditions to facilitate access to genetic resources for environmentally sound uses by other Contracting Parties.’ The only reference to national legislative measures on access is the requirement that countries shall ‘not impose restrictions that run counter to the objectives of this Convention.’ This limit-based approach occurs as a result of the fact that the CBD has defined genetic resources as a part of each country’s sovereign rights (Art. 15.1), but recognizes that there are other important international interests (commercial, industrial, research, health, development, etc.) which depend on the ability to gain access to this kind of asset. In this respect, access provisions are similar to the provisions of UNCLOS which limit each coastal State’s rights to exclude or place restrictions on foreign shipping, fishing, pipeline-laying and scientific research in ocean areas – based on the need to balance national rights against other countries’ interests in preserving and utilizing their high-seas freedoms. a large body of significant and valuable work.

525 Gorina-Ysern, M. 2003. *An International Regime for Marine Scientific Research*, at 353 et seq. Ardsley, NY: Transnational Publishers Inc. The legal principles requiring the sharing of marine scientific research are set forth under UNCLOS at Part XIII (Articles 238–265).

526 CBD, Art. 1.

regarding the effectiveness of international negotiations in achieving social objectives. Consequently, the linkage between ABS and the conservation/sustainable use objectives has become controversial as developing countries, traditional communities, NGOs and others have expressed growing concern that their equitable interests in their genetic resources may be compromised if those rights are dependent on or tied to the conservation and sustainability objectives.

At the same time, international interest, especially of industrialized countries, in promoting conservation and sustainability was one of the primary reasons underlying the creation of ABS in the first place, and remains a key element of their concern. As noted by Capson:

It is widely recognized that there are insufficient funds necessary to protect all of the world's threatened species, in either terrestrial or marine habitats (Myers et al., 2000; Roberts et al., 2002). Accordingly it is crucial to explore mechanisms whereby funds available for complementary activities, such as biodiscovery research, can promote biodiversity conservation.

Biodiscovery research is one of several vehicles through which a biodiverse country can capitalize upon its natural heritage, using it as a comparative advantage to attract funds to strengthen host-country research programs. When employment and educational opportunities are linked to biodiversity, an ineluctable consequence is an enhanced appreciation for biodiversity. Under appropriate circumstances a direct link between human health and biodiversity can be made... The fraction of money earned from drug discovery is significantly less than that derived from tourism activities. But ecotourism does not train scientists, provide investments for scientific infrastructure, or provide future

treatments for diseases whose impact is greatest in the developing world. In any event, ... both enterprises are compatible if not complementary. To dismiss the potential impact of biodiscovery research on biodiversity conservation by virtue of a 'pharmaceutical researcher's willingness to pay for biodiversity as an input into commercial products' (Simpson et al., 1996) assumes that the role of the host country is limited to providing biological resources as a commodity and ignores the potential benefits to be gained by its participating as a partner in biodiscovery research.⁵²⁷

Clarification of the relationship between ABS and the other two CBD objectives is essential to the ABS regime. Among the issues that can be addressed include:

- ABS and climate change;
- ABS and forests;
- ABS and oceans;
- ABS and protected areas;
- ABS and illegality;
- ABS and sustainability; and
- ABS and the promise that the CBD would provide equity.

This analysis is not only important in enabling ABS to ensure that the CBD's objectives and operations are promoted, but also in developing the mix of incentives, motivations and benefits on which the ABS regime will be built.

527 Capson, T.L. 2008 "Biodiscovery Research in Panama: Linking Science, Technology, Human Health, and Conservation in the Host-Country Context" in Bhatti, et al., 2008, Contracting for ABS: The Legal and Scientific Implications of Bioprospecting Contracts, Book 4 of this Series, at Chapter 7.

11.7 The end of The Project

After five years, seven books, 35 articles, 22 presentations, five workshops and numerous other activities, *The ABS Project* can safely, albeit sadly, state with confidence that the ABS concept remains extremely complex and unclear and that the Parties and other primary actors are all viewing the concept and its various components in very different ways. Until some specific choices are made to concretize what is included in and excluded from ABS, and what specific approaches and mechanisms will be required, it is premature to attempt to satisfy all positions, and to cover all possible interpretations of what genetic resources are, and what ABS is intended to do.

It seems clear that, in the end, one particular ABS interpretation and one interlocking set of mechanisms will need to be adopted addressing the international elements of the regime. The goal of *The ABS Project* was to provide technical (law and policy) input into this process to enable regime completion and implementation. Within the limits of what can be done while the basic concept remains in disarray, the project has done this, but recognizes that further work will be necessary after the conceptual elements have been clarified. It is hoped that the books in *The ABS Series* will provide substantive assistance at that point.

Publications of the ABS Project

EPLP N° 54

Accessing Biodiversity and Sharing the Benefits : Lessons from Implementing the Convention on Biological Diversity
Edited by Santiago Carrizosa, Stephen B. Brush, Brian D. Wright and Patrick E. McGuire, 2004
Also available in Chinese (2006)

EPLP N° 57

Explanatory Guide to the International Treaty on Plant Genetic Resources for Food and Agriculture
Gerald Moore and Witold Tymowski, 2005
Also available in French (2008) and in Spanish (2008)

The ABS Series

EPLP 67, N° 1

Addressing the Problem of Access: Protecting Sources while Giving Users Certainty
Jorge Cabrera Medaglia and Christian López Silva, 2007
Also available in French (2008) and in Spanish (2008)

EPLP 67, N° 2

Beyond Access: Exploring Implementation of the Fair and Equitable Sharing Commitment in the CBD
Morten Walløe Tvedt and Tomme Young, 2007
Also available in French (2009) and in Spanish (2008)

EPLP 67, N° 3

A Moving Target: Genetic Resources and Options for Tracking and Monitoring their International Flows
Manuel Ruiz and Isabel Lapeña, editors 2007
Also available in French (2009) and in Spanish (2009)

EPLP 67, N° 4

Contracting for ABS: the Legal and Scientific Implications of Bioprospecting Contracts
Shakeel Bhatti, Santiago Carrizosa, Patrick McGuire and Tomme Young, editors, 2009

EPLP 67, N° 5

Covering ABS: Addressing the Need for Sectoral, Geographical, Legal and International Integration in the ABS Regime
Tomme Young editor, 2009

Translations of *The ABS Series* into French and Spanish are forthcoming. The project continues to seek funds and other support for translation of the books into other languages. Interested persons and organizations may contact the Environmental Law Centre for more information:

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