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■ ensuring that protected areas are placed at the forefront of contemporary environmental issues such as biodiversity conservation and ecologically sustainable development.

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Editorial

SUE STOLTON, JAMISON ERVIN AND NIGEL DUDLEY
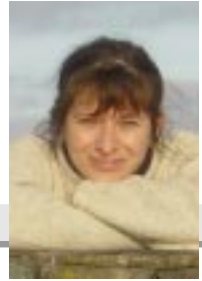
THE CONVENTION ON BIOLOGICAL DIVERSITY'S (CBD) Programme of Work on Protected Areas is doubtlessly the most ambitious global commitment yet made by governments to completing a protected areas network.

The Programme, or PoWPA to give its rather tortuous acronym, is also one of the strongest reflections of the policies of IUCN and its members. Originally agreed in February 2004, the PoWPA draws heavily on the *Durban Action Plan* that emerged six months earlier at the end of IUCN's Vth World Parks Congress (WPC). The WPC also sent a 'Message to the CBD' which gave specific recommendations on the PoWPA, and held a meeting of government and NGO experts in Durban after the Congress to provide further input. Many elements, references and wording stem from discussions in South Africa and from the activities of governmental and non-governmental actors in the two-year period leading up to the Congress.

Influence brings responsibility; the PoWPA is, perhaps more than any other current round of international environmental commitments, one that IUCN and its members are obliged to do their utmost to see implemented.

Most readers of *Parks* will know the PoWPA, but to remind you, it aims to support the establishment and maintenance of comprehensive, effectively managed and ecologically representative national and regional systems of protected areas, with a deadline of 2010 for terrestrial and 2012 for marine areas. It was agreed by the 188 Parties to the CBD at the VIIth Conference of the Parties to the Convention (CoP) in Kuala Lumpur. The PoWPA identifies four programme elements, 16 goals (each with a more specific target) and 92 activities for Parties, many with timetables for suggested implementation[1].

The four main themes (and associated elements are):

1. **Direct actions for planning, selecting, establishing, strengthening and managing, protected area systems and sites:**
   - building protected area networks and the ecosystem approach;
   - site-based protected area planning and management;
   - addressing threats to protected areas.
2. **Governance, participation, equity and benefit sharing:**
   - improving the social benefits of protected areas.
3. **Enabling activities:**
   - creating an enabling policy environment;
   - capacity building;
   - ensuring financial sustainability.
4. **Standards, assessment, and monitoring:**
   - management standards and effective management;
   - using science.

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1. The PoPWA and the CBD Technical Series, *Towards effective protected area systems: an action guide to implement the Convention on Biological Diversity's Programme of Work on Protected Areas*, which gives guidance on interpretation and implementation can be downloaded from www.biodiv.org

In a nutshell, the essence of the PoWPA is a commitment that countries develop participatory, ecologically representative and effectively managed national and regional systems of protected areas, stretching where necessary across national boundaries, integrated into other land uses and contributing to human wellbeing.

The PoWPA differs from earlier conservation agreements in several respects. The term 'ecologically-representative' implies a scientific rigour and a commitment to completeness that has been absent in the past. Assurances that creating protected areas will not carry high social costs means that local communities have to be far more closely involved with, and supportive of, new protected areas, than in the past. Recognition of different governance types in protected areas suggests that national systems will be much more varied than before, including more private protected areas, community conserved areas, and indigenous protected areas. And finally, the prominence given to management effectiveness and multiple benefits shows that the debate has moved beyond simply the creation of protected areas, towards a more careful consideration of what they deliver.

The PoWPA is four years old – and several of its ambitious deadlines have passed. We set out in this issue of *Parks* primarily to recognise and celebrate the success in implementation. And there have been successes – in a decade where *in situ* biodiversity conservation has arguably been eclipsed by issues relating to poverty alleviation and climate change, the PoWPA has re-focused attention on protected areas and provided the most comprehensive global plan for effective implementation (from designation through to on-going and effective management) ever documented.

It is hardly a new observation – but the PoWPA in its entirety is complex and demanding. Along with the successes there remain many challenges, and implementation in some areas is relatively slow. The subsidiary aim of this issue is to discuss some of these challenges and highlight activities which are in train to speed up the process.

We start with an overview of implementation to date drawn from work by the CBD Secretariat, The Nature Conservancy (TNC), WWF and other organisations. We then look at each of the four themes, starting with a good news story. Madagascar is one of the world's mega-biodiversity countries, with commitment at the highest political levels to trebling protected area coverage. The paper describes implementation of a gap analysis to help plan where new protected areas will be located.

A review on governance from South Asia provides an opportunity to discuss the challenges posed by enlarging protected areas to include a wider variety of governance models and considers possible mechanisms that can aid implementation.

Two articles look specifically at one of the greatest challenges: sustainable financing. The first reviews the current gaps between protected area financing needs and availability and discusses possible mechanisms to increase financial sustainability. The second looks specifically at experiences from Peru (another mega-biodiversity country) in trying to overcome lack of funding and an unsustainable reliance on donor funding for its growing protected area system.

The final overarching theme is monitoring and assessment; here we include an article which looks at the eight types of assessment called for in the PoWPA and at some tools and methodologies currently available to implement assessments.

After a slow start, mechanisms are being put in place to help countries undertake the activities in the programme – and two specific mechanisms are discussed here. The UNDP-managed GEF Early Action Grants is an exemplary model of an easily accessible and PoWPA-focused grant, which is already having measurable impacts. Similarly, the capacity building workshops recommended by CoP-8 in Curitiba and organised by the CBD Secretariat and partners have raised awareness and support for the PoWPA worldwide. They have also promoted sharing experiences, identifying any gaps in knowledge, and disseminating tools that can aid implementation.

Finally we complete this issue with a forward looking article on future challenges.

The CBD *Programme of Work on Protected Areas* is more than just a set of demands. It is a framework for co-operation between governments, donors, NGOs and local people. Over 50 countries are involved in multi-stakeholder co-ordination mechanisms to support PoWPA implementation. Whether this co-operation takes places at the national or regional level is probably less important than the fact that co-operation is taking place at all. Although there is still a huge amount to be done, our review suggests that despite emerging at a fairly inauspicious time for conservation, PoWPA has indeed galvanised action and co-operation on protected areas throughout the world.

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The PoWPA – a review of global implementation

JAMISON ERVIN, SARAT BABU GIDDA, ROLLA SALEM AND JESSE MOHR

The article reviews progress on the four main elements of the Programme of Work on Protected Areas (PoWPA) after four years. Element 1: assessing, improving and managing protected area networks is the area with most information available. A compilation of new protected areas is given and many countries have carried out gap analyses and become involved in planning larger protected area networks. However, some biomes remain seriously under-represented and less than a third of protected areas have a management plan. Data on the next two elements, on governance and the policy environment, are much sparser, only a handful of countries have carried out an assessment of financial needs. Finally, Element 4 on management effectiveness has been relatively successful, with a rapid increase in the number of assessments carried out, although this still only covers a small proportion of the world's protected area estate.

THE PROGRAMME OF WORK ON PROTECTED AREAS (PoWPA) is divided into four elements:
1. planning, selecting, establishing, strengthening, and managing, protected area systems and sites;
2. governance, participation, equity and benefit sharing;
3. enabling activities; and
4. standards, assessment, and monitoring.

This article identifies broad trends in achieving some of the major targets within each of these elements.

The data for this article come from several sources. First, the secretariat of the CBD prepared a background document for the second meeting of the Ad Hoc Working Group on Protected Areas in February 2008 reviewing the implementation of the PoWPA (CBD 2007a). Second, a coalition of non-governmental organisations, in partnership with the CBD secretariat, hosted a series of eight regional workshops (see article by Spensley *et al.*, this issue), and gathered data from each participating country. Third, the CBD secretariat compiled existing studies and reports on progress with the PoWPA from non-governmental organisations such as TNC and WWF. The result is a compilation of qualitative progress (including qualitative thresholds of 'substantial,' 'good,' 'reasonably good,' 'some progress,' 'just initiated,' and 'no progress') from 92 countries.

Element 1. Assessing, improving and managing national protected area networks

The map below (Figure 1) provides an overall snapshot on progress and trends in improving national protected area networks, and Table 1 provides a few examples of the types of progress that have been made since 2004.

Despite the rapid pace and scope of protected area expansion, there are two discouraging trends within this element. The first is that countries reported that less than a third of their protected areas have complete management plans in place. This news is particularly unwelcome in that a strong management plan is the very basis of effective protected area management.

The second discouraging trend is that although the global extent of protection has reached more than 12% (WCMC, 2007), there is still much variation in the overall level of protection within each country: the extent of reported protected area coverage ranges from 0.65–16%. Furthermore, there are persistent ecological gaps across the world's protected areas, including,

Figure 1. *Global snapshot of establishing and strengthening protected area networks.*

Legend

- Substantial (60% or above)
- Good (50%)
- Reasonably good (40%)
- Some progress (15%)
- Just initiated
- No progress
- No information

Table 1. *Examples of newly created protected areas since 2004.*

Country	Protected area (s)
Albania	Two new managed nature reserves, one new protected landscape
Australia	43 Marine Protected Areas covering 14.8 million ha 1,700 new terrestrial protected areas covering 7.6 million ha
Algeria	Two national parks covering 27,284 ha
Brazil	11.9 m ha of new protected areas
Belgium	Sixty-six reserve areas covering 5,843 ha; six Natura 2000 Sites covering 42,570 ha and five wetlands covering 57 ha
Bosnia and Herzegovina	Two new natural monuments covering 615 ha
Colombia	Four new national parks and extension of one sanctuary 11.8 million ha
Ecuador	Two new protected areas
Egypt	Three new protected areas covering 5.3 million ha
France	Twelve nature reserves and two national parks
Germany	588 nature conservation areas (138,039 ha), two national parks (16,424 ha); 152 landscape reserves (82,453 ha), seven nature parks (536,574 ha)
India	Fourteen new protected areas covering 0.55 million ha
Indonesia	Thirteen new protected areas covering 3 million ha and seven new MPAs
Lebanon	Two new Biosphere Reserves, three new sites are being declared
Mexico	Twenty-four new protected areas covering 9.8 million ha
Montenegro	Two new protected areas
Niger	One new protected area covering 5 million ha, under consideration
Norway	234 new protected areas covering 1.2 million ha
Peru	One new national park covering 0.75 million ha
Poland	Twenty-two landscape parks, 34 nature reserves, three protected landscape areas, 28 documentary sites, 160 ecological lands, three nature landscape complexes
Romania	Two national parks; seven natural areas, 77 natural reserves, three natural monuments and two scientific reserves
Sao Tome and Principe	Three new protected areas
Spain	257 new protected areas and 1,168 areas of community importance
Sweden	Fourteen new wetland reserves
Ukraine	54 new protected areas (totalling 50,762 ha); nine protected areas were enlarged, adding 1,382 ha altogether

among others, freshwater, coastal and marine areas, temperate grasslands, tropical coniferous forests and Mediterranean forests (Hoekstra *et al.*, 2005).

There are, however, three encouraging trends in this PoWPA element. The first is the extent to which countries have declared ambitious protection goals. China, for example, has committed to increasing its level of coverage to 10% by 2010 and 18% by 2050; the Bahamas and Indonesia have committed to 20% coverage of marine protected areas by 2020; and Palau and the Federated States of Micronesia have committed to 30% marine coverage and 20% terrestrial coverage by 2020. Such ambitious goals are increasingly sparking regional protection 'challenges', in which neighbouring countries create regional peer pressure to commit to protection goals.

The second encouraging trend is the extent to which countries have scientifically assessed the ecological gaps within their protected area networks. Such assessments imply that future protection efforts will target under-represented species and ecosystems. Across Central and South America and the Caribbean, for example, more than two dozen countries have completed an ecological gap assessment.

The third encouraging trend is how many countries are integrating protected areas into the broader landscape and seascape. Techniques include the creation of broad ecological corridors, the creation of trans-boundary protected areas, and the establishment of regional protected area networks. Some examples of these initiatives include:

- Australian Alps to Atherton (A2A conservation corridor) initiative;
- Greater Mekong biodiversity conservation corridor in Vietnam;
- Ecological green corridors in Hungary;
- Meso-America Regional Network;
- Alpine Protected Area Network;
- Pan-European Ecological Network;
- Central Africa Network of Protected Areas;
- Marine Protected Areas Network for the Western Indian Ocean Countries;
- Trans-national River Basin Districts on the eastern side of the Baltic Sea Network;
- ZIMOZA (Zimbabwe, Mozambique and Zambia) Trans-boundary initiative;
- KAZA (Namibia, Botswana, Zimbabwe and Zambia) Trans-boundary initiative;
- Trans-frontier marine conservation between Tanzania and Mozambique;
- Lower Danube Green Corridor initiative between Romania, Bulgaria, Ukraine and Moldova;
- Eastern Carpathian migratory corridor (Polish-Slovak-Ukrainian Biosphere Reserve);
- Trans-boundary protected areas between Eritrea, Djibouti and Somalia; and
- the East-Asian Australasian Flyway.

Element 2. Governance, participation, equity and benefit sharing

There are two main targets in this second element – promoting equitable distribution of protected area costs and benefits, and ensuring indigenous and community participation. Almost all countries reported having legislative and policy frameworks in place for equitable sharing of costs and benefits of their protected area system. However, very few countries provided any specific details on these frameworks in their reports, and the large majority of reporting countries have not yet conducted an assessment of the costs and benefits of their protected area systems (see article on the implementation of Element 2 in South Asia in this issue).

While a majority of reporting countries indicated that they have laws and policies in place for involving stakeholder participation, the actual implementation of these laws is unclear. Evidence from regional and global cross-cutting studies on protected area management effectiveness have consistently identified inadequate community participation and relations as one of the most pervasive weaknesses (Leverington *et al.*, forthcoming, Dudley *et al.*, forthcoming).

Figure 2. *Global snapshot of promoting equity and benefits sharing.*
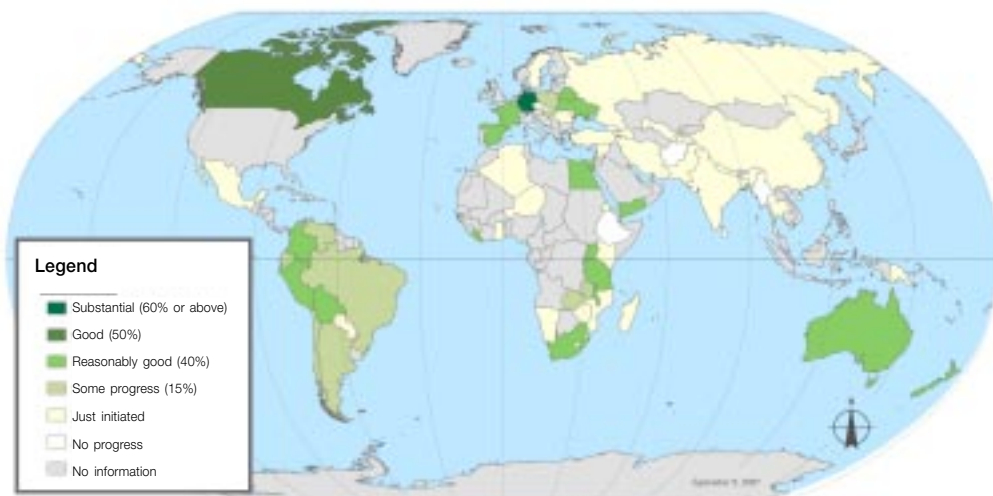
Figure 3. *Global snapshot of indigenous and community involvement.*

The summary maps of the two targets related to this element – enhancing indigenous and community involvement (Figure 2) and promoting equity and benefits sharing (Figure 3) – illustrate the relatively low levels of global progress.

As a whole, countries in Central and South America have made the greatest progress on issues related to participation, equity and benefits sharing, with perhaps Mexico advancing the most globally.

Element 3. Creation of enabling activities

This programme element is the most comprehensive of the four, containing five targets and 33 recommended actions. Of the many recommended actions, three stand out as being particularly important for improving the protected area enabling environment: 1. creating an enabling policy, social and institutional environment; 2. assessing and strengthening protected area capacity; and 3. ensuring financial sustainability.

Figure 4. Global snapshot of progress in developing and enabling protected area environment.

Legend

- Substantial (60% or above)
- Good (50%)
- Reasonably good (40%)
- Some progress (15%)
- Just initiated
- No progress
- No information
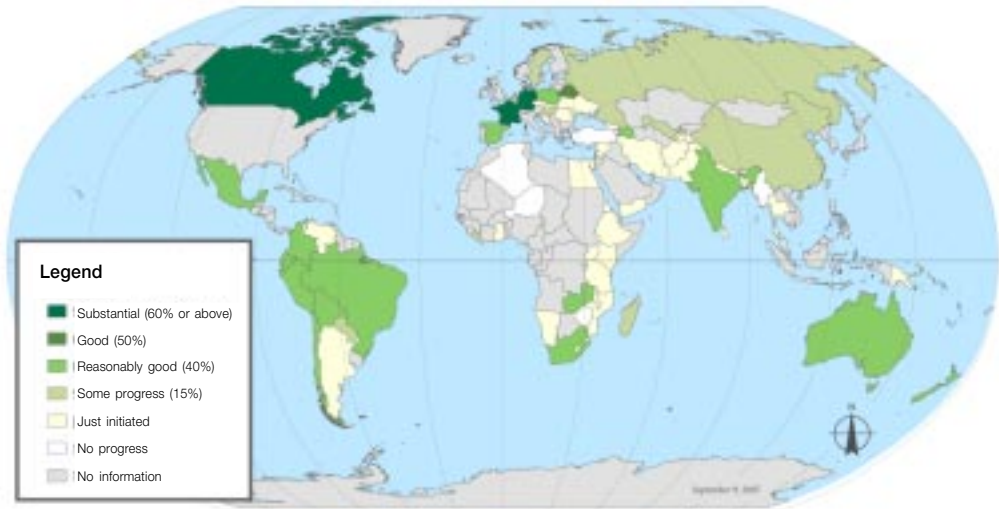
Only a very small proportion of reporting countries – less than 5% – had assessed the appropriateness of their policy environments for creating and managing their protected area system. Numerous assessments of protected area management effectiveness (Leverington *et al.*, in prep.) indicate that conflicting protected area policies and ambiguous jurisdictions (e.g. between park and forest ministries) are among the main constraints to effective management of protected area systems.

Furthermore, most reporting countries indicated that they had not assessed the full contributions of their protected area systems to their national economies, citing lack of expertise and capacity in valuing protected area goods and services. While there have been several recent studies that assess the value of one or more ecosystem services (see article Jamison Ervin and Nigel Dudley in this issue), such studies provide only a glimpse of the potential contribution that protected areas are making to national and global economies. One area that seems of particular importance, yet has received scant focus to date, is the benefit of a robust protected area system in buffering a country from the effects of global climate change. Perhaps the single most critical need to advance progress on this target is the development of a simple methodology that allows policy makers to quickly and easily assess the benefits of their protected area system to their national economies. Such a tool would encourage more open and well-informed discussions about the value of expanding the existing protected area system.

The second major target is the assessment and strengthening of protected area capacity. All but three of the reporting countries have conducted some kind of capacity assessment, and capacity-development plans are an integral part of management plans in a majority of the reporting countries. However, given that less than a third of protected areas have a management plan, and that many capacity assessments have typically focused on pre-determined checklists rather than on critical needs and challenges, progress on this target may be less satisfactory than the reporting data indicate.

The third target is the establishment of a national sustainable finance plan. Aside from the establishment of a network of representative and well-managed protected areas, this target is arguably one of the most important of the PoWPA. Only a handful of countries have completed an assessment of financial needs, or estimated the costs of fully implementing the PoWPA. Furthermore, a majority of countries reported that their major source of funding for protected

areas was national and sub-national (e.g. provincial) budgets, rather than a balanced portfolio of public and private funding. This problem is likely to continue to grow, as countries increase their protected area network, without proportionally increasing their revenue. The current costs for maintaining a global reserve system are estimated at US$ 30 billion per year, while current expenditures are estimated at only US$ 6.5 billion per year (Quintela *et al.*, 2003). Large countries such as Brazil, for example, have an annual gap of as much as US$ 140 million (CBD 2007b, see also article by Kalemani Jo Mulongoy, Sarat Babu Gidda, Lisa Janishevski and Annie Cung in this issue).

Element 4. Standards, assessment and monitoring

The fourth element addresses evaluation of protected area management effectiveness, and monitoring overall status and trends of the protected area system. Management effectiveness assessment is one of the most significantly advanced targets of the PoWPA. Such assessments have been widely implemented – a recent study by the University of Queensland (Leverington *et al.*, forthcoming), identified over 6,000 assessments of protected area management effectiveness across 80 countries (see Table 2).

Although this number may seem small in relation to the more than 120,000 existing protected areas, it is likely that the actual geographic coverage of protected areas is much higher. For example, a recent management effectiveness assessment of Bolivia's protected area system covers only 23 of the 64 protected areas listed in the World Database on Protected Areas, or 40% of the country's total, but this accounts for close to 38 million hectares, or 81% of the area under protection. Since the overwhelming majority of protected area management effectiveness assessments have focused on national parks, which tend to be larger than other types of protected areas, it is very likely that the existing 6,000 assessments cover a significant portion of the geographic coverage of the world's protected areas.

The other main goal of this element is to assess and monitor protected area status and trends, including of biodiversity itself, as well as of national progress in implementing the PoWPA. It is clear from the sporadic, qualitative and highly variable reporting data that countries have neither comprehensive processes for monitoring the status of biodiversity within or beyond their protected area systems, nor do they have systems for monitoring their own progress in implementing the PoWPA.

Conclusions and recommendations

The data for this article revealed three major issues – priorities for future implementation, role of national co-ordination mechanisms, and challenges in reporting progress on national PoWPA implementation.

Table 2. *Summary of management effectiveness assessments conducted to date.*

Region	Number of assessments
Africa	580
Asia	875
Europe	735
Latin America and the Caribbean	2,425
Northern America	26
Oceania	1,642
Total	**6,283**

Priorities for implementation

The deadline for some actions came and went in 2006 (e.g. assessing ecological gaps, assessing governance types, improving marine and freshwater representation). The deadline for others looms in 2008 (e.g. promoting equity and benefits sharing, providing an enabling policy environment, ensuring financial sustainability). Others are due in the next two years (e.g. building protected area capacity, filling ecological gaps, establishing transboundary protected areas). However, full implementation on any of the targets of the PoWPA rests on solid progress in conducting a basic suite of assessments (see article by Ervin and Dudley in this issue).

Therefore, early and substantive progress on assessing ecological gaps, threats, sustainable finance, management effectiveness, capacity, governance, protected area benefits and policy environment, will be critical. In addition, the most urgent actions include:

■ continuing to fill ecological gaps, focusing particularly on the most under-represented and vulnerable ecosystems;

■ developing management plans for protected areas, and sustainable finance plans for protected area systems;

■ addressing issues related to local communities, including equity, benefits sharing and participation; and

■ developing and implementing tools for assessing and improving the protected area enabling policy environment.

Role of multi-stakeholder co-ordination mechanisms in advancing implementation

One of the trends that emerged from evaluating the reporting data was the important role that multi-stakeholder national co-ordination groups play in advancing progress in implementation of the PoWPA. In the 23 such co-ordination groups that TNC supports across Latin America and Asia Pacific, for example, 21 countries have completed or nearly completed an ecological gap assessment, 23 a management effectiveness assessment, 19 a sustainable finance assessment, and 13 a protected area system master plan that ties these assessments together (Salem, 2007). WWF's Protected Areas for a Living Planet programme supported by MAVA *Fondation pour la Protection de la Nature* has worked with 28 governments to establish transboundary multi-stakeholder

The Paraiba do Sul River Basin Project, Brazil. Large countries such as Brazil, have an annual gap of as much as US$ 140 million (CBD 2007b). Photo: © WWF-Canon / Edward Parker.

co-ordination mechanisms in five ecoregions. These mechanisms build on existing regional fora such as the Carpathian Convention or the Caucasus Biodiversity Council and are promoting transboundary implementation of the PoWPA. These fora bring together stakeholders to assist governments in meeting priority PoWPA targets such as sustainable financing, capacity building and gap assessment as well as monitoring PoWPA implementation and promoting benefit sharing with local people.

Issues in reporting progress on national PoWPA implementation

Sources of data for this report varied considerably in their depth and reliability. Although the CBD secretariat has developed an official questionnaire for tracking progress in implementing the PoWPA, this questionnaire is highly detailed, covers each of the 92 actions, and has highly subjective response categories. The CBD questionnaire also had a very low response rate. Because of their institutional interests in supporting countries' efforts in implementing the PoWPA, several NGOs have also developed tracking systems, including TNC and IUCN. The result is a plethora of tracking systems and great quantities of opinions, but very little reliable data. The variability in data becomes even more of a problem when trying to aggregate results globally. With no clear thresholds, scores of 'mostly' and 'somewhat' are subjective at best, misleading at worst.

The following recommendations would alleviate many of these problems:

■ Create a single system for tracking progress that governments and NGOs alike can support, housed within the UNEP World Conservation Monitoring Centre.

■ Create a system that includes the major themes of the PoWPA and select headline indicators, rather than all 92 actions.

■ Focus on both assessment and direct actions – both are important for demonstrating progress.

■ Create a system that allows both formal reporting from designated CBD focal points, as well as non-formal reporting from NGOs and other stakeholders.

■ Create clear thresholds for achieving actions and targets, with clearly understandable guidance notes on what the thresholds mean.

■ Create a web-based mechanism whereby major assessment reports, such as ecological gap assessments, can be uploaded and shared with others.

■ Encourage the designation of a single focal point for the PoWPA for each country, rather than a single focal point for the entire Convention on Biological Diversity. This will not only help in co-ordinating implementation efforts and communication, but also in effective reporting.

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Conducting an ecological gap analysis for the new Madagascar protected area system

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The pledge by Madagascar's President Ravalomanana at the Vth IUCN World Parks Congress in 2003 to triple the coverage of protected areas in the country means that Madagascar is already well placed to fulfil its PoWPA targets. This article documents the process put in place to ensure that this massive increase in protected area coverage would be targeted to conserve the most important habitats and species. It discusses the challenges of data gathering and verification through the use of expert groups and various protected area modelling programs, and finally, reports on implementation. Madagascar's experiences provide a case study for any country wishing to expand its protected area coverage and carry out an ecological gap analysis to ensure key biodiversity areas are protected. It stresses the importance of collaboration amongst biodiversity specialists working in-country (i.e. scientists and NGOs) and of having good data on key species and the current and potential threats to them on which to base the gap analysis.

IN SEPTEMBER 2003, at the Vth IUCN World Parks Congress, the President of the Republic of Madagascar His Excellency Marc Ravalomanana made a pledge to triple the coverage of Madagascar's protected areas: "*we cannot allow further loss of our forests, drying up of the lakes, marshes and ponds that are found throughout our country and the depletion of our marine resources. Today, I want to share with you our resolution to increase the protected area coverage (of Madagascar) from 1.7 million hectares to six million hectares within the next five years and in reference to the IUCN protected area categories*".

Madagascar is well known as a biodiversity hotspot. The island is home to a quarter of the world's primate species, is the fourth most important global amphibian region and boasts levels of plant endemism around 90%. Madagascar ratified the Convention on Biological Diversity (CBD) in 1995. The planned six million ha pledged by President Ravalomanana roughly corresponds to 10% of the country's total land area. This so-called 'Durban Vision' therefore directly contributes to the goals and objectives of the PoWPA.

Overview of the evolving protected areas system in Madagascar

Although the first Malagasy reserves were set up during the French colonial period, the concept of forests as an inalienable common good, and social norms prohibiting destructive tree-cutting and fires, have existed for much longer. In 1881, the Malagasy Code of 305 Articles, the first legal document in the history of the country, included six articles on forests, including one forbidding *tavy* (slash-and-burn agriculture) and stipulating that "forests were the fortress of the kingdom". In 1927, the first protected areas were created and their number steadily increased between 1960 and 1997 to 46 areas designated as either Strict Nature Reserves (IUCN Category I), Special Reserves (IUCN Category IV) or National Parks (IUCN Category II). In 1990, the Madagascar 15-year National Environmental Action Plan was developed and a first five-year phase of implementation focused on the creation of the *Association National pour la Gestion des Aires Protégées* (*ANGA*) which was mandated to manage the network of protected areas that then covered a total area of 1.7 million ha – roughly 3% of the territory. In 2004, a Protected Area Act was passed that set up the legal framework for the management of this network by ANGA.

Following President Ravalomanana's pledge in 2003, a Durban Vision group was created under the leadership of the Ministry of the Environment, Water and Forests (MEWF) in order to

One of the existing forest reserves in northern Madagascar. Photo: Nigel Dudley.

implement the pledge. With support from IUCN, the Durban Vision group decided in March 2004 that the implementation of the pledge would be best undertaken through the establishment of a Madagascar Protected Area System (or SAPM) that would offer a wider range of options for conservation by looking at the whole range of IUCN categories and new governance types including: governance by decentralised governments (regions, communes); the private sector; local communities; civil society and shared governance between the State and multiple actors. The ultimate goal is to conserve biodiversity while contributing to poverty reduction and specific objectives are to conserve the full array of Madagascar's biodiversity and the Malagasy cultural heritage associated with biodiversity as well as to maintain ecological services and support wise use of resources.

Ecological gap analysis

The idea of undertaking a state-of-the-art ecological gap analysis for the SAPM was motivated by the target of protecting six million ha within five years. The Durban Vision group had to address the key question of: how do we ensure that we capture the best and most important part of Madagascar's biodiversity within these six million ha and that conservation is maximised?

Gap analysis is a useful and well-known method for assessing the effectiveness of protected areas, and can highlight species that are completely unprotected on the one hand and fully protected on the other. Gap analysis allows the comparison between existing and proposed protected areas with species distributions in order to report the amount of each species contained in each protected area proposal.

In 2004, a Prioritisation Sub-Group of the Durban Vision Group was created. This group gathered scientists and GIS experts from the Ministry of the Environment, Water and Forests, CI, WCS, WWF, Missouri Botanical Garden (MBG), BirdLife International and several other research institutes and programmes possessing data on Madagascan biodiversity with the mandate to complete a national-level priority-setting exercise. The group started by undertaking a preliminary analysis of priorities, based on the spatial congruence between numerous existing national-level priority-setting exercises. These individual prioritisation results were overlaid to

produce a 'composite map', with areas given a higher priority depending on the number of times an area had been prioritised.

Around the same time (early 2004), WWF completed a three-year analysis and series of workshops that culminated in a 'Biodiversity Vision' for the Humid Forest ecoregion (known locally as *Ala Atsinanana*). In early April 2004, the MEWF decided to adopt this approach to identify the priority areas for the implementation of the Durban Vision and mandated the Prioritisation Sub-Group to lead this process. The Prioritisation Sub-Group started by receiving training on conservation planning and the use of 'Generalised Dissimilarity Modelling' (GDM), learning methods for refining range map data, the use of Marxan to set priorities, distribution data modelling using Maxnet and priority-setting using Zonation (see Box 1 for details of software programs). The group also discussed the technical requirements for putting in place the expanded SAPM.

The steps in undertaking the assessment included:
1. Identifying goals
The overall purpose of the ecological gap analysis and priority-setting was to state the broad principles that would guide the collection of data, development of biodiversity conservation plans, and identification of priorities for implementation. The priority setting exercise sought to address the following key questions:

Box 1. Software used for conservation planning

Marxan (see: http://www.ecology.uq.edu.au/index.html?page=27710) is a reserve design software tool which selects efficient sets of areas (or planning units) to meet user-defined biodiversity targets, while minimising 'conservation cost' across the planning region. Marxan has several key requirements to run. The first is to divide the region of interest into a set of planning units of any size or shape. For this exercise, we used a grid of 2.5 x 2.5 km^2 (see text). The next requirement is to have information on the presence or absence of each species of interest in each planning unit; in our case this was provided by the presence-absence range maps for threatened vertebrates (AOO). Next, each included species must have a conservation target, typically expressed as a proportion of the species full distribution (e.g. 10%, 25%, etc., of a given species range). Finally, each planning unit can have a 'cost' associated with it.

Zonation (http://www.helsinki.fi/science/metapop/english/Software.htm) was also used for analyses in Madagascar. This software was introduced by the WCS Réseau de la Biodiversité de Madagascar (REBIOMA) project. Zonation is a new conservation planning computer program that can: represent all species and prioritise the rarest; prioritise species according to the level of threat they face; target the best habitats for each species; maintain as much as possible connectivity between priority areas; and allow detailed analysis, priority-setting and evaluation.

Maxent (http://homepages.inf.ed.ac.uk/s0450736/maxent.html) takes as input a set of layers or environmental variables (such as elevation, precipitation, etc.), as well as a set of geo-referenced occurrence locations, and produces a model of the range of the given species. Maxent aims to estimate a target probability distribution by finding the probability distribution of maximum entropy (i.e. that is most spread out, or closest to uniform).

Domain (http://www.springerlink.com/content/pk788x7lw2u76618/) is a modelling approach used to create a Spiral Process Model (SPM), thereby capturing the similarities and variations among a family of process models. Domain is used to generate project-specific process models, consisting of an Aggregation Hierarchy, Object Communication Diagram, Generalisation / Specialisation Hierarchy, and Feature/Object Dependencies.

- How much of each species is represented within existing protected areas?
- How much of each biodiversity feature needs to be within protected areas (species, habitat types, etc.)?
- How and where can we fill the gaps?

2. Compiling data

The aim was to produce the most comprehensive possible picture of biodiversity, its requirements for persistence, and threats and factors that influence planning decisions. Expert opinion estimates of Extents of Occurrence (EOO) polygons were available for species listed in Table 1. Collecting data on rare and threatened species was an obvious priority but, as far as possible, data were also obtained for other species. If these were not included, there was a risk that they would become threatened because they had *not* been considered in the planning for the Durban Vision.

For plants, data were available for 1,200 species selected according to criteria including taxonomic certainty, narrow endemism, representative of endemic families and threat. Domain (see Box 1) was used to model the distribution of around 600 species which have sufficient distribution points for modelling. Expert opinion estimates of Area of Occupancy (AOO) and provisional threat ratings for all species were also produced. AOO is a more accurate estimate of the area occupied by species and is defined within the EOO by the species habitat dependency if that is known and the elevation range of the species.

A Marxan analysis of the gap in plant species was completed using expert estimates of AOO. This analysis will be repeated as more data is verified. The aim is to be able to use model distributions for all species for both Marxan and Zonation analyses. The data used by for the Zonation analysis was different from that used for the Marxan analysis (see Table 2).

Environmental surrogates for the remainder of biodiversity (ideally reflecting both environment and history) were also used, such as the MBG classification, subdivisions of ecoregions, GDM and new environmental classifications for freshwater and marine environments. It was also important to compile data on the threats to biodiversity. The task of planners and managers is to respond to these threats by preventing or mitigating their effects. This can be achieved more effectively if the sources, distributions and rates of spread of various threats are understood. Other types of data that can be useful to planners and managers include costs of conservation and the 'quality' or 'condition' of areas of remaining habitat.

Table 1. *Species assessed for Extents of Occurrence (EOO).*

Group	No. of species included	Data source
Lemurs	62	Global Mammal Assessment
Birds	31	BirdLife International – Important Bird Areas
Reptiles	50	Various sources collected by Dr Achille Raselimanana
Amphibians	52	Global Amphibian Assessment
Freshwater fish	53	Various sources including IUCN Red List

Table 2. *Species assessed in the Zonation analysis.*

Taxon	Number of modelled species used
Lemurs	31
Geckos	22
Frogs	20
Butterflies	171
Ants	73
Plants	512

3. Planning the expanded PA system

Conservation priorities in Madagascar, like those of other biodiversity hotspots, have been the subject of multiple expert workshops. One of the motivations for these workshops was the lack of consistent data on biodiversity on which to base systematic methods as well as the importance of capturing information that has not been recorded, and might never be recorded, in accessible databases for use in systematic methods. This includes a wealth of personal experience not just about individual species and their life histories, but also about threats, conditions on the ground and opportunities for implementing conservation management.

Using systematic methods does not preclude the use of information from expert workshops or other previous approaches, such as key biodiversity areas, for setting conservation priorities in Madagascar. There is great potential to combine software analyses with previous assessments. This is all the more important because the two main limitations of expert assessments as a sole approach are the lack of consistency and the impossibility of updating priorities as new information becomes available. In the case of Madagascar, systematic methods were applied and reinforced by expert opinion at all stages of the planning process.

The outcome of the analysis was to develop a series of planning units and quantitative targets to guide implementation:

- **Planning units** are the building blocks for expanding protected area systems. For very large areas, they are typically square grids or hexagons. Biodiversity and other data are recorded for planning units as a basis for constructing plans and deciding on priorities for implementation. Key decisions about planning units for the Durban Vision group concerned the size and shape of planning units and whether to exclude planning units without biodiversity values. Square grids had already been used as planning units for Marxan analyses. These were 2.5 x 2.5 km (6.25 km²) grids of which about 61,000 contained some remaining native vegetation. This size also corresponded to the size of the mining permit blocks used by the Ministry of Mining and Energy and thus allowed an analysis of the identified priority areas and mining blocks in order to anticipate conflicts.

- **Quantitative targets** are a fundamental aspect of systematic conservation planning. They are statements about how much of each biodiversity feature needs to be within protected areas. Targets are explicit, but not absolute. They are interpretations of the conservation requirements of species, environmental classes and other features based on the best available information. As interpretations, they are subject to challenge and refinement. The process of setting targets can be improved greatly with the involvement of experts on taxonomic groups and conservation planning. A workshop was convened in May 2006 specifically to help with the identification of an interim set of conservation targets (see below) for the protected area's expansion. At this workshop, taxonomic experts were asked to a) review distribution maps for threatened vertebrates; and b) specify the minimum 'representation target' indicating the minimum proportion of each species range necessary to include in the eventual system of protected areas. Following the identification of an interim set of conservation targets for the expansion of the protected area system, the Prioritisation Sub-Group used Marxan reserve design software to identify efficient sets of areas to meet the representation targets for each species.

4. Identifying priorities for implementation

Since the area required to achieve all the goals was likely to be larger than the area target of the Durban Vision, one of the key tasks of implementation was to choose which areas would be protected as part of the Durban Vision. When considering the scheduling of protected area expansion, the level of irreplaceability and potential threats to individual areas was assessed. Areas that scored highly in both categories were accorded the highest priority for designation.

Gap analysis results

The results of the gap analysis showed that the conservation value of the existing and proposed protected areas, while significant and improving, still left a number of threatened vertebrate species unprotected or without adequate protection. The gap analysis showed 14 of the close to 200 terrestrial species analysed are not included at all in existing protected areas, and this number climbed to over 40 species when freshwater fish were included.

A set of conservation targets for the protected area's expansion were thus developed. In this context, targets referred both to a) the species, habitat types and other biological features to include in the expanded protected areas, and b) how much of each species (habitat type, etc.) to include, expressed in terms of total area or proportion of total distribution. To date, the Prioritisation Sub-Group has focused on two main groups of species and two main data types: expert derived presence-absence range maps for threatened vertebrates, and for plants and invertebrates, point-based data subjected to statistical modelling to predict presence or absence, or in some cases, probability of occurrence.

An expert workshop to consider and provide feedback on a) the set of species under consideration, b) their expert-mapped or (in certain cases) modelled distribution, and c) a target for each species took place in May 2006. Although the workshops were useful, there were two clear drawbacks:

1. Only vertebrate distributions were reviewed, as plant distribution data available to the Sub-Group were limited, and what was available had already been reviewed and to some extent prioritised by MBG; likewise invertebrate data consisted primarily of butterfly and ant data which had also undergone extensive review. Unfortunately, this also meant that plant and invertebrate targets were not discussed.

2. More work was needed to solicit workable representation targets from experts. Generally speaking, experts fell into one of three camps when it came to setting targets: they set all targets at 100% (the full range of every species under review must be included in protected areas), or they did not feel comfortable or had no interest in target setting, or they did not understand what we were asking for.

The results were considered in a preliminary Marxan analysis for a full set of threatened amphibians, birds, fish, mammals and reptiles (according to the IUCN Red Data List). After the configuration and congruence of the species distributions themselves, the two most important drivers of the various potential Marxan solutions were:

1. the presence of forest; and

2. the target species. A comparison between the results obtained from Marxan with those obtained using Zonation revealed a high level of similarity even though the data used for each analysis was different (Figure 1, *over*). This is a good way of cross-checking the biodiversity priority areas. However, the slight differences that did exist should be analysed at a finer scale by experts in the future.

Out of the available data on 1,200 species of plants selected on the basis of precise criteria, 600 species with sufficient distribution point data were modelled using Domain. Data on butterflies and ants were also available. CI also had data from the identification of Key Biodiversity Areas based on the following criteria: globally threatened species, restricted-range species, globally significant congregations and bioregionally-restricted species assemblages.

By integrating the results of these priority-setting processes, a final set of biodiversity priority areas covering a total surface of 4,155,000 ha was identified as potential future protected areas that would maximise the conservation of biodiversity within the Madagascar protected area system (Figure 2, *over*).
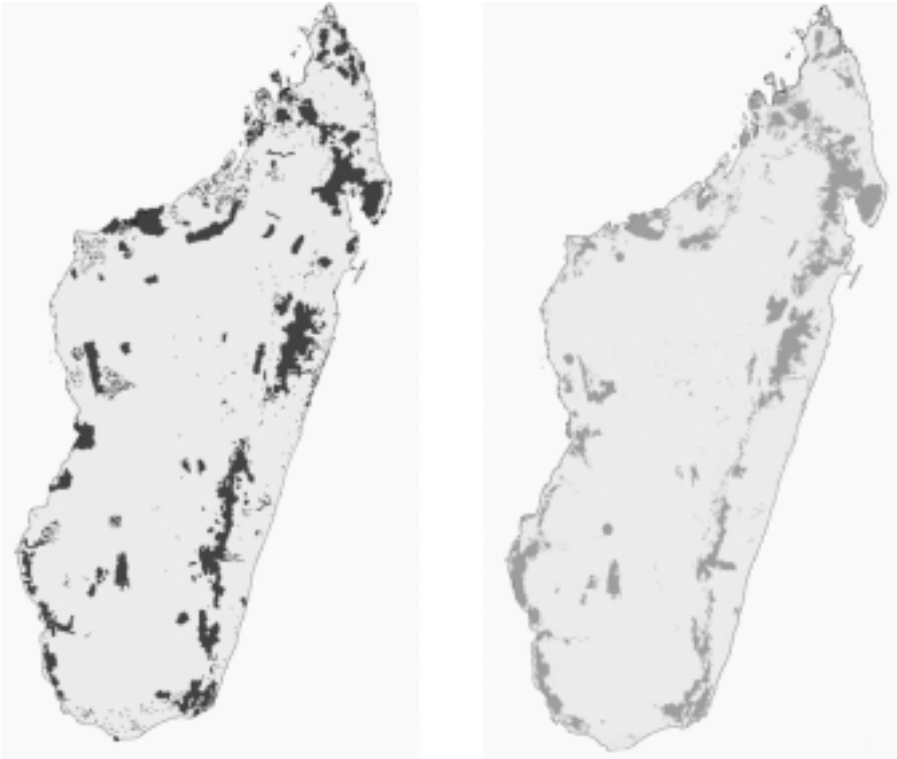
Figure 1. *Comparison of results from Marxan (left) and Zonation (right) analyses of biodiversity priority areas.*

Lessons and results

Some of the main constraints we faced were:

- The process was long and took about three years in total. It took time to collect, compile and clean the data, as well as build local capacity. For instance, the process started in 2004 with intensive training on conservation planning and the use of Marxan for local experts and GIS specialists from a broad range of research institutions, universities, NGOs, and government agencies.

- The process itself was as important as the content. Because this was a national-level exercise, it was important to involve all stakeholders from the beginning and establish close collaboration between biologists, GIS technicians and decision-makers.

- There has to be an infrastructure such as an institution that inherits the tools, data and process. We are still working out how this will be handled in Madagascar.

- Finally, being able to compare results from various tools and processes was very useful as this improves decision-making.

The results of the ecological gap analysis and priority-setting process were used in several ways. They helped solve urgent conflicts with mining activities and the map of priority areas was used to suspend the issue of new mining permits for a period of four years in areas identified as potential protected areas. In 2004 an inter-ministerial by-law between the Ministry of the Environment and the Ministry of Mines was issued. It was renewed in 2006 and is valid until

Figure 2. *Final priority areas map for the Madagascar Protected Area System (SAPM).*

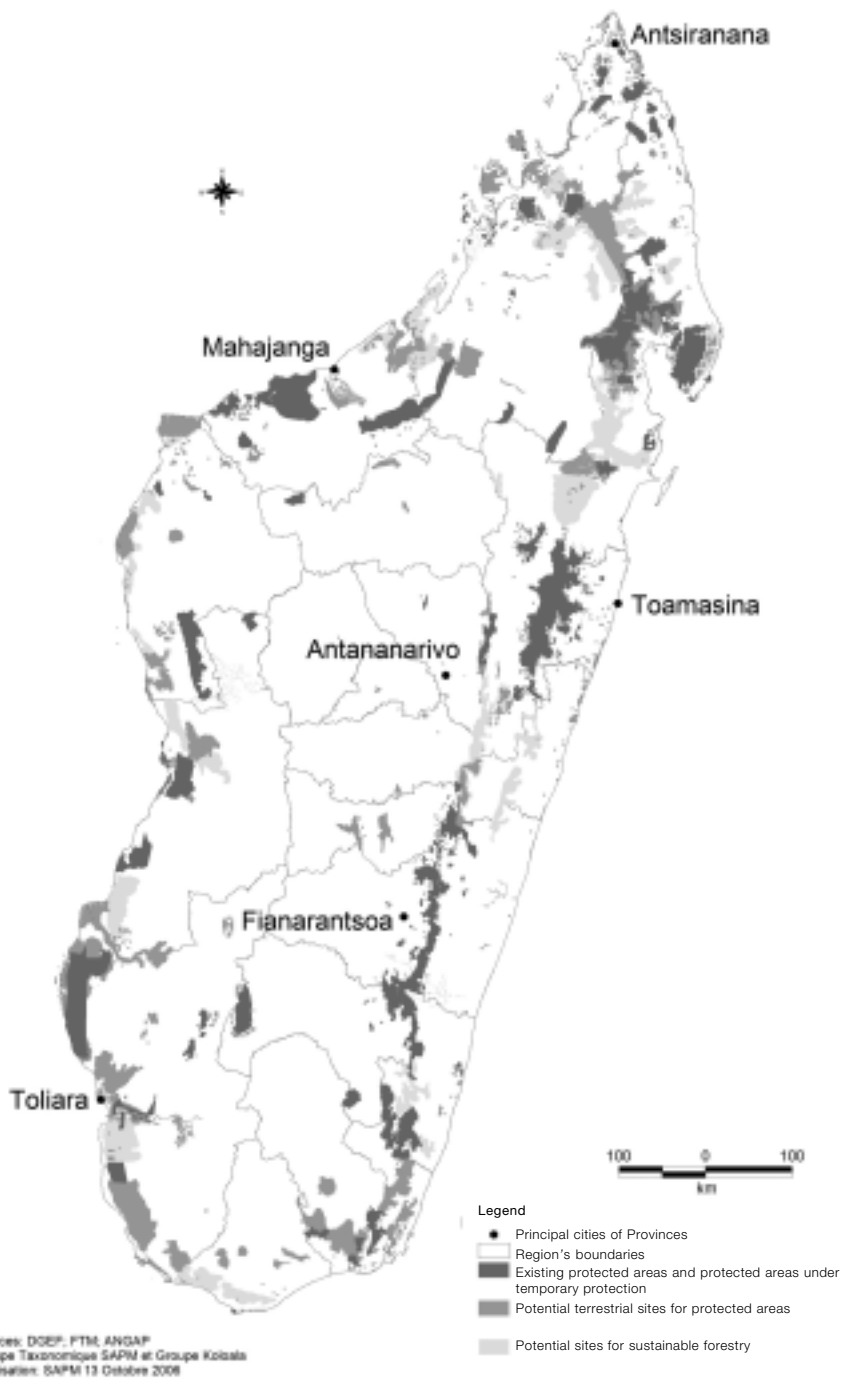October 2008. In the case of the Mikea forest, one of the last remaining dry forests on sandy soils in Madagascar and a top priority for biodiversity conservation, the priority-setting results were used to negotiate the boundaries of the future protected areas with mining companies, local communities and regional and local authorities. This area received legal protection status in May 2007. In the longer term because the extractive industries sector is growing in Madagascar, trade-offs will have to be made for conservation. The priority-setting process allows us to develop alternative scenarios for biodiversity conservation that we can use to develop biodiversity offsets for the mining industry.

The process, of course, helped create support for the designation of new protected areas and the map of priority areas has helped orient the investments of conservation donors and NGOs towards them. And finally, the processes has helped support decision-making for regional forest zoning: this is a process that the Malagasy government is undertaking in order to support improved forest use planning at regional and local levels. The map of priority conservation areas was integrated in the information used for such planning and helped to identify priority forests for biodiversity conservation at local and regional levels.

Challenges and next steps

The data available for terrestrial and freshwater biodiversity in Madagascar allowed a comprehensive analysis of gaps and priorities. However, this was not the case for marine biodiversity data. Future efforts should thus focus on improving the knowledge of marine and coastal biodiversity and compiling data that already exist. More generally, priority-setting can be improved by integrating socio-economic factors and the costs of undertaking conservation, and thus reduce potential conflicts with other activities. Finally, the analysis needs to be undertaken at a finer scale as a tool to support the integration of protected areas into landscape planning and support site-based planning.

Community consultation, Morondava, Madagascar. Photo: Nigel Dudley.

Baobab tree, Madagascar. Madagascar is home to six of the world's eight species of baobob tree. Photo: Nigel Dudley.

These are the next steps we plan to take. Of course, the priority-setting and gap analysis can be refined, and for instance take into consideration ecological processes and ecosystem services. However, the current results are already sufficient to make informed decisions on where the next million hectares of new protected areas should be created in order to maximise biodiversity conservation.

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Protected area governance in South Asia: how far has it progressed?

TASNEEM BALASINORWALA, ASHISH KOTHARI AND HANNA JAIRETH

This article reports on an assessment of the implementation of Element 2 of the PoWPA, which focuses on governance, participation, equity and benefit sharing, in South Asia. The results show that whilst there has been some progress in implementing Element 2 in the region, much more needs to be done both to change legislation and policies, and to translate such changes into concrete outcomes. Among the government managed protected areas, mountain areas in Nepal, forests in Bangladesh, coastal areas in Sri Lanka and wildlife sanctuaries in India, are tending towards more participatory governance than previously (though often more on paper than on the ground). Of community conserved areas, wetland sites in Bangladesh and community/private lands in India are beginning to be recognised and supported in conservation laws and programmes. Across the region, much more also needs to be done to ensure that the costs and benefits of protected areas and decision-making are shared equitably. The article concludes with recommendations on how countries in South Asia could move more pro-actively towards implementing this element of the PoWPA.

SOUTH ASIA, a region comprising seven countries (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka) contains some of the world's most important terrestrial and marine biodiversity 'hotspots'. It also contains one-fourth of the world's human population. Complex inter-relations between humans and nature have characterised the region for tens of thousand of years, evolving diverse, sophisticated cultures and knowledge systems. While poverty remains a key feature of the region, the last couple of decades have witnessed an explosion of economic growth. Combined with high demographic growth and industrialisation, biodiversity conservation is significantly threatened in the region. Appropriate laws and policies for effective conservation are therefore critical for future ecological security.

Implementing the PoWPA in South Asia

The effective implementation of the PoWPA is particularly important in South Asia. Historically, protected areas and buffer zones across the region were established by government decrees without prior, free, informed consent by resident indigenous peoples and other local communities. Although local communities were sometimes consulted in the process of protected areas establishment and development through the convening of village meetings, this should not be regarded as prior consent. Today, millions of people in the region live in or near protected areas, and many are dependent on local natural resources for their livelihoods and cultural sustenance. Unless protected areas and buffer areas are governed effectively, sustainably and equitably, biodiversity and human security is threatened.

Element 2 of the PoWPA elaborates goals and targets for "Governance, Equity, Participation, and Benefit-sharing". These include:

Goal 2.1. To promote equity and benefit-sharing
   Target: Establish by 2008 mechanisms for the equitable sharing of both costs and benefits arising from the establishment and management of protected areas.

Goal 2.2. To enhance and secure involvement of indigenous and local communities and relevant stakeholders
   Target: Full and effective participation by 2008, of indigenous and local communities, in full respect of their rights and recognition of their responsibilities, consistent with national law and applicable international obligations, and the participation of relevant stakeholders, in the management of existing, and the establishment and management of new, protected areas.

Actions listed under these goals include, amongst others, the assessment of the economic and socio-cultural costs, benefits and impacts of protected areas and strengthening of benefit sharing

policies (Action 2.1.1 and 2.1.6); recognition (including by law) and effectively manage protected areas of various governance types (2.1.2 and 2.13); the use of conservation benefits to alleviate poverty (2.1.4); engagement of stakeholders in participatory planning and governance (2.1.5); plans and initiatives to effectively involve indigenous and local communities in protected area planning, establishment, governance and management (2.2.2); ensuring legislative, policy, capacity building and resource support for the involvement of indigenous and local communities and relevant stakeholders in the establishment and management of protected areas, including Community Conserved Areas (CCAs) and private protected areas (PPAs) (2.2.4); and ensuring that indigenous communities give their prior informed consent to any resettlement resulting from protected area establishment or management (2.2.5).

In the sections below the implementation of Element 2 in South Asia is reviewed and analysed country by country. The sources drawn on for this assessment include the periodic national reports submitted by South Asian countries to the CBD and a regional implementation report, reports produced by the Global Environment Facility, commentary by civil society, material produced within the IUCN, including an international NGO survey of community conservation area law and policy and various articles (these sources are listed at the end of this article). Of the seven countries in the region, information has not been available for Maldives, which is therefore not included in this review.

Villagers of Srimangala, a community-managed wetland in Bangladesh, show their resource and conservation map. Photo: Ashish Kothari.

Country performance

Bangladesh

Bangladesh is one of the world's most densely populated countries, with 75–85% of rural households dependent on fisheries for their livelihoods. Bangladesh has been making progress in implementing the PoWPA in relation to co-management of wetlands and fisheries, and five hill ecosystem protected areas.

Bangladesh's third CBD national report (2005) states that there were 18 protected areas in Bangladesh classed as either a Wildlife Sanctuary, National Park or Game Park under the *Bangladesh Wildlife Preservation (Amendment) Act, 1974*. The national report refers to several community-based wetland and fisheries conservation projects, where local institutions are established to allow local community participation in decision making, planning and sustainable management of these resources. Using such participatory mechanisms, some fish sanctuaries have been established, and traditional fishing management practices are being encouraged. Community driven projects also aim for poverty reduction through restoration of degraded ecosystems.

A *Biodiversity and Community Knowledge Protection Act* has been drafted to offer protection and support the rights, knowledge, innovations and practices of local and indigenous communities. Nishorgo, a Forest Department protected area management programme initiated in Bangladesh in 2004 supported by USAID, represents a significant departure from the traditional top-down conservation policy. This programme is implementing co-management in five protected areas covering more than 22,000 ha of core conservation area, in a surrounding landscape of more than 100,000 ha. The programme promotes livelihood security and biodiversity protection, involving more than 250,000 low-income people living near protected areas. Co-management councils and executive committees, comprising local stakeholders, were recognised in 2006.

Bangladesh has been criticised for the continuation of top-down and heavy-handed governance by the Forest Department in some areas, such as the Sundarbans, where an NGO survey (Anon, 2007) noted a lack of participatory decision-making and management. While some legal instruments are being revised to favour community participation and co-management, NGOs report there is still a long way to go before participatory and equitable protected areas management will be achieved. Bangladesh has also yet to grant recognition and support to CCAs or PPAs, other than in the case of a few inland wetlands.

Bhutan

Bhutan has the highest proportion of land area designated for conservation in South Asia, with nine protected areas covering 26% of the total land plus another 9% of land designated as biological corridors. It also has the highest proportion of forest cover (64.5%) of any Asian country.

The Royal Government of Bhutan has reported under the CBD that a common feature among protected areas is the presence of local communities living in and around them, whose agricultural practices, livestock rearing and extraction of resources often negatively impact on protected areas. An integrated conservation and development approach is therefore used to manage the impacts on biodiversity of protected areas resource use by local communities, making resource use more sustainable and improving the living conditions of local communities. Bhutan's third national report to the CBD recognises poverty, the loss of traditional knowledge, insufficient scientific research and financial, human and technical resources, the need for capacity building amongst communities, and institutional strengthening as posing significant challenges for biodiversity conservation in Bhutan. The report also mentions that the lack of awareness among the local communities, who are the custodians of natural resources, is a major issue. Ironically there is no mention about the steps taken to incorporate their participation through co-management in protected areas; or recognising the areas that are being already conserved by them. However, one of their future activities, the report notes, will be to ensure the participation of stakeholders and collaboration with partners, where possible, in protected areas.

A village assembly meeting in Mendha, India, discussing their community managed forest. Photo: *Vivek Gour Broome.*

The *Forest and Nature Conservation Act of Bhutan 1995* requires management plans for government-owned forests, wildlife and related natural resources. People or entities managing CCAs and PPAs are required to prepare management plans for these areas. Some local communities also manage rotational grazing rights on pastoral lands. The *Biodiversity Act of Bhutan 2003* aims to implement the access and benefit sharing provisions of the CBD, including the protection of the rights of indigenous and local communities over traditional knowledge.

India

India has 94 national parks and 501 wildlife sanctuaries; and is the only country in South Asia to include CCAs and PPAs as a separate category of PA (termed 'Community Reserves') following the amendment in 2002 of the *Wild Life (Protection) Act, 1972*. Community Reserves can be declared over community or private lands. Conservation Reserves can also be declared on government lands, and would include representatives from local communities on their management committees. Since 2002, however, only three Conservation Reserves and three Community Reserves have been declared. The provisions relevant to the latter are such that most communities are unlikely to opt for this designation, for they specify a uniform management committee (including a forest officer) which would be unsuitable for most CCAs, and are being interpreted to not include governments lands, which is where most CCAs are located given that most common lands in India are publicly owned.

The Biological Diversity Act, 2002 provides for the creation of Biodiversity Management Committees (BMC) at the village level for conservation and other functions and also for the declaration of Biodiversity Heritage Sites. This is a potential vehicle for providing legal and other backing to CCAs. But in 2007 the rules for Heritage Sites were yet to be notified, and the rules relevant to BMCs did not adequately empower them to perform conservation actions. Similarly the National Wildlife Action Plan (2002) and the draft National Biodiversity Strategy and Action Plan (2003) both recommend recognition of and support for community conservation initiatives. However, the former's provisions are yet to be implemented, and the latter was a draft which the government had not yet finalised as of October 2007.

According to TILCEPA (2007)[1], the actual implementation of the PoWPA provisions on CCAs is yet to happen, even though there is now evidence of the existence of thousands of such sites[2]. In a review of GEF projects in India, Taylor and Griffiths (2007) note that although there

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1. IUCN WCPA/CEESP Strategic Direction on Communities, Equity and Livelihoods in Relation to Protected Areas (TILCEPA)
2. See: www.kalpavriksh.org, and http://www.iucn.org/themes/ceesp/Wkg_grp/TILCEPA/CCA%20India%20brochure%20(2).pdf

were signs of gradual progress towards co-management in India, ecodevelopment initiatives remain state-centred. The only mechanism in place to involve communities is Sanctuary Advisory Committees under the Wild Life Act. Coming into place in 2002 not a single such committee has been set up yet. The review concluded that "more innovative approaches (e.g. greater use of CCAs) are required in order to properly integrate indigenous peoples' rights and perspectives".

Two recent legislative measures could help to reverse some of the negative impacts of protected areas on people, and provide them with rights and a voice in decision-making. One is the *Scheduled Tribes and Other Traditional Forest-Dwellers (Recognition of Forest Rights) Act 2006*, and the other is the *Wild Life Amendment Act 2006* which establishes a National Tiger Conservation Authority. In both cases, people's rights need to be established first, and relocation from within protected areas can happen only after due process and with informed consent. There is a stress on co-existence in the first of these Acts which, if meaningfully applied, could lead to forms of co-management and to greater livelihood security than is currently the case.

Nepal

Over 19% of Nepal has been designated as protected areas, representing all ecological regions (Terai, Mid-hills, High Mountains and Himalayas). Nepal has nine national parks, three wildlife reserves, three conservation areas, one hunting reserve and nine buffer zones. State-owned forests in Nepal can be designated as community, leasehold, religious or protected forests. Others are managed by the Ministry of Forests and Soil Conservation or as private forests. More than 25% of national forests (1.1 million ha) and 1.2 million households are benefiting from community forestry programmes.

A survey conducted by TILCEPA[3] on the legislative status on community participation found that Nepal does not legally recognise CCAs as protected areas. Yet, since 1992, Nepal has created several new state-initiated types of local administration of terrestrial management which, in effect, may be considered to be CCAs. For example, there are new state-initiated 'community' conservation institutions in conservation areas[4], national park and wildlife refuge buffer zones and the national forest.

Nepal's three conservation areas have traditionally been co-managed by NGOs and the national Government. In Kangchenjunga Conservation Area, however, management authority was handed over to a 12-member Conservation Area Management Council which included nine elected indigenous representatives in September 2006. This is considered to be the first time in Nepal (and perhaps South Asia) that the management of a national government-recognised protected area has been devolved to its indigenous residents.

Nepal also has a policy of returning annually up to 50% of the total revenue generated in protected areas to the buffer zone communities for community development investments. The GEF has also been supporting the development of protected areas co-management and equitable benefit sharing. Between 2000 and 2006, the GEF contributed to the conservation of natural and cultural diversity and poverty alleviation in Nepal's Upper Mustang area, including support for seven conservation area management committees and 68 sub-committees; establishment of biodiversity and management information systems to inform the area's management plan; improvement of the area's grazing lands; restoration of monasteries; and creation of a Community Trust Fund to finance environmentally-friendly income generation and savings and credit groups. Nepal agreed in July 2006 to return 60% of the US$ 700-a-day per person entry fees to the Upper Mustang area for local conservation and social development activities.

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3. See: www.iucn.org/themes/ceesp/CCAlegislations.htm
4. "Conservation Area" is a type of protected area authorised by Nepal national government legislation dedicated to conservation and "balanced utilisation " of natural resources. Conservation areas are co-managed by the state and NGOs or communities and do not have rangers, game scouts, and an army "protection unit" typical in the country's national parks and wildlife reserves.

Despite these advances there remain important shortcomings with regard to the acknowledgement of the rights of indigenous peoples and customary community-based conservation even in the most progressive protected areas in Nepal (the three conservation areas and the buffer zones) and the Community Forest User Group-managed areas of the national forest. These shortcomings are even more pronounced in the national parks and wildlife reserves.

Pakistan

Pakistan spans a remarkable number of the world's broad ecoregions, including the desert, temperate grassland, tropical seasonal forest and mountain biomes. Protected areas cover 12% of the total land surface area of the country.

Pakistan has tried co-management with some innovative benefit-sharing arrangements in some protected areas. The Mountain Area Conservancy Project (MACP), for instance, aims to protect the rich biological heritage of the Karakuram, Hindukush and the Western Himalayan Mountain Ranges through a community-based conservation approach. The project focuses on empowering local communities to manage the ecosystem and natural resources and making them accountable for the quality of their stewardship. MACP is based on the premise that conservation activities are unlikely to be sustainable over the long term unless local communities are actively involved. Village, valley and district level conservation committees are organised and take all key decisions at local levels. There are also community controlled hunting areas in the North West Frontier Province where communities receive 80% of the hunting fees.

Sri Lanka

In 2003, Sri Lanka had a total of 501 protected areas across six classifications. Protected areas accounted for 26.5% of the country's land area. But CCAs and PPAs have been relatively slow to be recognised in Sri Lanka because 98% of the country's natural forests and forest plantations belong to the state, and civil conflict continues to consume significant governance resources. Community engagement in forest management and sustainable use of non-wood forest products in buffer zones are only permitted in designated multiple-use forests that fall under the jurisdiction of the Conservator General of Forests.

Fisherman at Rekawa lagoon, Sri Lanka, an early attempt at community based conservation. Photo: Ashish Kothari.

Various projects in Sri Lanka have encouraged participatory protected area management and more sustainable livelihoods. The GEF supported the establishment of a Protected Area Conservation Trust and Protected Area Conservation Fund to finance, on a pilot basis, community and participatory benefits from conservation and protected areas. GEF also supported micro capital grant projects in various nature and forest reserves, and buffer areas, funding participatory forest biodiversity conservation and sustainable management and use, alternative livelihood initiatives, and capacity building in local communities and sustainable forest management. Other projects have focused on protected area management and integrated collaborative management of biodiversity, including marine turtle conservation activities in the Rekawa, Ussangoda and Kalametiya coastal zones.

Synthesis: status of implementation of Element 2 in South Asia

The consolidated status of the implementation of Element 2 of the PoWPA in South Asia is summarised in Table 1.

Further insights can be obtained from the report of the South and West Asia Sub Regional Workshop on the implementation of the PoWPA held in India in April 2007. Organised by the CBD Secretariat, this workshop was attended by all countries except Bhutan. The report summarises the issues identified by country representatives behind the lack of implementation of Goal 2.1 in Bangladesh, India and Sri Lanka as including:

■ processes initiated are government driven and controlled;
■ lack of shared decision making;
■ inequity in social situations leads to inequitable sharing; and
■ lack of accountability.

for Nepal and Pakistan as:

■ subject matter is complicated, hard to communicate and digest;
■ actions are difficult to co-ordinate;
■ subject demands multiple laws and policies, and their integration;
■ NGOs have no capacity in access and benefit-sharing arrangements;
■ lack of acceptance of some definitions (e.g. that of indigenous communities); and
■ lack of trained government staff, funds and experts.

In relation to Goal 2.2, Bangladesh, India and Sri Lanka stated the following challenges:

■ Government dominates proceedings;
■ gender discrimination;
■ meetings are generally unplanned;
■ ineffective communication, especially feedback, hampers implementation; and
■ lack of adequately and institutionally engaged community and social organisations.

Table 1. *Overview of Element 2 implementation in South Asia.*

PoW Action	Bangladesh	Bhutan	India	Nepal	Pakistan	Sri Lanka
2.1.2 and 2.1.3	*	*	***	**	**	NA
2.1.4	**	*	**	***	**	**
2.2.4	**	**	***	***	**	**
2.2.2	*	*	**	***	**	*
2.2.5	**	NA	**	**	NA	NA

Key:
*   = No or negligible action   *** = Substantial action
** = Some action   NA = Information not available

and for Nepal and Pakistan:
- ■ general condition of poverty and illiteracy;
- ■ lack of resources, funds and expertise; and
- ■ geographical zoning makes it difficult to attend meetings and participate.

Conclusions: how can South Asia improve Element 2 implementation?

While it is difficult to accurately assess the extent of substantive implementation of Element 2 of the PoWPA in a brief overview, it is clear that apart from a few notable initiatives in some countries, the paradigm shift that is embodied in the PoWPA, and in Element 2 in particular, is far from being realised in this region. This situation partly arises from a general weakness of the CBD process. Unlike other multilateral environmental agreements such as CITES and the WTO agreements, the CBD lacks a strong implementation mechanism. There is virtually nothing within the CBD structure that can bind countries to implement what they have committed to do. Many countries also hide their inadequacies, and often only independent civil society reports provide credible reviews of underperformance.

So what can be done to encourage governments in this region to fulfil their commitments? We think that at least the following steps are needed:

1. *Orientation*: A number of aspects of Element 2 are relatively new to formal conservation managers and planners in the region. Concepts and processes of co-management, for instance, are only now beginning to be learnt; however generally the law does not yet fully mandate such management approaches. An understanding of other governance types, such as CCAs and PPAs, is even less developed. There is therefore an urgent need for orientation, education and training on these and other aspects of Element 2. Protected area-related training and educational institutions in each of the countries need to urgently take these aspects on board, and make them central components of their curricula.

2. *Documentation***:** The few progressive initiatives in government-designated protected areas are not well documented. This is particularly true of the processes by which they managed to achieve success (or the processes leading to failure). Secondly, other than for India and to some extent Nepal, CCAs remain largely undocumented and thus are rarely part of the conservation discussion and decision-making process. A widespread process of such documentation is urgently needed.

3. *Mutual learning:* Though not widespread, the few significant initiatives towards participatory conservation in the region can be learnt from by others. A programme of exchanging personnel (protected area managers, local communities, NGOs, others) and case studies needs to be encouraged amongst countries of the region.

4. *Civil society advocacy:* In recent years, through participation in CBD processes, and with sustained advocacy and commentary by civil society, scientists and academics, governments are beginning to recognise the rights and responsibilities of indigenous and local communities in relation to protected areas. Yet entrenched mindsets and institutions that perpetuate conventional conservation regimes will not change on their own. Civil society pressure and lobbying, combined with constructive assistance, is absolutely necessary to make this happen. Unfortunately very few civil society organisations in these countries have focused on the PoWPA, despite its tremendous potential to change the face of conservation for the better.

5. *Funds:* While this is the one common demand that all countries in the region always have, we do not consider this to be the major constraint to the recognition of CCAs and PPAs which is initially dependent on recognition in law and policy. Nevertheless, to the extent that funding is important, the GEF's Early Action Grant is a good source of funds for the implementation of the PoWPA. The provision of financial assistance can contribute, especially in the poorest countries of the region, to the delivery of on-the-ground biodiversity restoration

activities, the provision of alternative livelihoods, enlisting community participation in difficult and time-consuming tasks, and others.

To conclude, the CBD PoWPA has the potential to revolutionise conservation policy and practice in South Asia (as elsewhere in the world). However, there are severe constraints to making this happen, not least of which is resistance from governmental bureaucracies and from some powerful conservationists. These will need to be urgently overcome if the region is to get anywhere near meeting its international and national obligations to its citizens and biodiversity.

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Current funding shortfalls and innovative funding mechanisms to implement the PoWPA

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The CBD Secretariat has compiled information on estimates of financial needs to implement the PoWPA for 20 countries, which shows consistent government funding shortfalls. Four key reasons for financial shortfalls are discussed: lack of government commitment; legislative, policy and institutional constraints; managers being poorly equipped to deal with fund-raising, and limited technical knowledge within protected area agencies relating to new funding mechanisms. A long-term decline in state support increases the need for innovative funding mechanisms and this paper summarises information on 39 different funding mechanisms for protected areas, ranging from state support through to public-private partnerships. The latter are discussed in greater detail and some enabling conditions are summarised.

SINCE THE CBD came into force in 1993, the world's protected areas have grown by almost 100% in number and 60% in area, yet in the same period, international financing for biodiversity conservation grew by only 38%.

Financial needs assessment

In order to get an idea of the levels of funding required, the CBD secretariat has been compiling information on financial needs assessments associated with implementation of the PoWPA (CBD 2007). The Nature Conservancy also submitted information on system level financial plans in six South American countries where a financial gap analysis has been completed. A summary is given in Table 1.

Table 1. Overview of financial needs, available resources and funding gaps in some countries for implementing the PoWPA (million US$).

Country	Financial needs estimates	Available financial resources	Funding gaps
Least developed countries			
Liberia	7.00	NA[1]	NA
Small island developing states			
Bahamas	30.20	2.11	28.09
Cuba	32.00	3.00	29.00
Palau	2.50	NA	NA
Trinidad and Tobago	42.32	4.21	39.26
Other developing countries			
Brazil	NA	NA	142.25
Bolivia	NA	NA	10.73
Chile	NA	NA	40.47
China	60.00	NA	NA
Colombia	NA	NA	11.80
Ecuador	NA	NA	3.50
Ecuador Galapagos	NA	NA	NA
India	840.00	NA	NA
Indonesia	40.50	5.50	35.00
Panama	36.00	NA	NA
Peru	NA	NA	34.35
Philippines	110.40	24.90	85.50
Countries with economies in transition			
Belarus	4.42	1.14	3.28
Russian Federation	95.00	62.00	33.00

[1] Not Available

Information on financial needs assessment for implementing the PoWPA is available for only 19 least developed countries, small island developing states, other developing countries and countries with economies in transition. The estimated annual funding gap for implementing the PoWPA in these countries ranges from US$ 3.28 to 142.25 million.

Problems facing protected area financing

Today, national systems of protected areas are confronted by a set of inter-connected barriers to achieving financial viability. The common denominator is over-dependence on government subventions that are below estimated financial needs. Four major barriers were identified in an assessment by UNDP of six countries – Panama, Ecuador, Bulgaria, Vietnam, Thailand and Gabon (UNDP, 2006) – as follows:

■ Government budget allocations that are below estimates of need. The environmental sector is generally in a weak bargaining position relative to other sectors.

■ Legislative, political, or institutional constraints to innovation and cost-effective operations. Protected areas are poorly integrated into national development policies, and are prevented or discouraged from generating or retaining revenues from alternative sources.

■ Managers are ill-equipped and poorly-motivated to diversify funding sources. In most cases, protected areas have not developed strategic financial plans and even management plans are often not in place. Over-reliance on a few funding mechanisms leaves protected areas vulnerable.

■ Limited technical knowledge on screening, assessment, formulation and implementation of new mechanisms to improve protected area financing. Information, knowledge, and expertise on payment for ecosystem services and other mechanisms are not available.

Options for innovative financing mechanisms

The CoP, conscious of these shortfalls, called for increased financing and integration of protected area objectives into development strategies. It also called for the development of strategies for innovative funding mechanisms. These should involve a creative idea for mobilising and channelling financial resources, which could take the form of new products, policies and

The many funding sources credited at the Gharial Conservation Project, Royal Chitwan National Park, Nepal. Photo:© WWF-Canon / Michel Gunther.

programmes, approaches and processes. Proposals range from reforms of the international monetary system (which currently looks highly improbable), to voluntary mechanisms (e.g. joint implementation, charity lotteries, or voluntary offsets) that may need only the interest of a few parties to get them started.

WWF recently published a report (Gutman and Davidson 2007) that discussed 60 mechanisms, both traditional and innovative, ranging from overhauls of the world's financial system to using cell phones to elicit donations from the public. These are classified in terms of their importance as a current source of funding, recent trends, future prospects and suitability. From this, 39 innovative mechanisms, which have either never been or only seldom been attempted, are presented in Table 2.

Thus, a wide range of innovative financial mechanisms with considerable potential for raising protected area finances is available. The majority of innovative mechanisms are yet to be

Table 2. *Innovative financial mechanisms (modified from Gutman and Davidson, 2007).*

Financial Mechanism	Comments
High income countries budgetary allocation 1. Contributions to a global environmental fund, or bilateral investment based on the donor global ecological impact. 2. Joint implementation of the PoWPA in which high and low income countries, agree to jointly implement the PoWPA	**Main actors:** Governments **Current importance:** None or minimal **Recent trend:** Technical and policy discussions stage **Future prospect:** Moderately good **Suitable for:** Protected areas / Buffer Zones
Specific taxes as a source of revenue 3. A tax on international aviation 4. A tax on international navigation 5. A tax on the use of the stratosphere 6. A tax on trade on tropical woods 7. A tax on the use of oceans (fisheries and ocean bed) 8. A tax on greenhouse gases 9. National (or international) auction of (some) carbon credits or other cap-and-trade permits.	**Main actors:** Governments **Current Importance:** Low **Recent trends:** France has recently implemented mechanism 3 to pay for health aid[2] **Future prospect:** Slow progress. Some (e.g. mechanism 7) are mentioned in international treaties, but information on implementation is not available. Others (e.g. mechanisms 3 and 8) have been tabled many times. Mechanism 9 has made medium progress. **Suitable for:** Protected areas / Buffer Zones
Sharing the costs with future generations 10. A long-term Green Bond	**Main actors:** Governments **Current Importance:** None **Recent trends:** Technical and policy discussions stage **Future prospect:** Moderately good. **Suitable for:** Protected areas / Buffer Zones / Production landscape
Lotteries 11. Green lotteries	**Main actors:** Governments, Non-Profit organisations, Business (voluntary) **Current Importance:** Low **Recent trends:** Growing **Future prospect:** Large opportunities **Suitable for:** Protected areas / Buffer Zones / Production landscape
Newer goodwill fund-raising instruments 12. Sister Parks (North/South or South/South) 13. Adopt a Park 14. Round ups 15. Internet charity shopping 16. Affinity credit cards 17. Cellphone-based donations	**Main actors:** Non-Profit organisations, Business (voluntary) **Current Importance:** Low **Recent trends:** Growing **Future prospect:** Good **Suitable for:** Protected areas / Buffer Zones

[2] www.rfi.fr/francais/actu/articles/092/article_55734.asp *Continued over*

Table 2 cont'd. *Innovative financial mechanisms (modified from Gutman and Davidson, 2007).*

Financial Mechanism	Comments
Businesses initiatives 18. International businesses good will environmental investments 19. Businesses' codes of conduct and voluntary standards 20. Private-Public Partnerships 21. Private-NGOs Partnerships	**Main actors:** Non-Profit organisations, Business **Current Importance:** Medium **Recent trends:** Growing **Future prospect:** Good **Suitable for:** Production landscape
Green markets 22. Eco-labelling schemes 23. Promotion of green consumption and production 24. International trade in organic, fair trade, sustainable products 25. International green investment funds	**Main actors:** Non-Profit organisations, Business **Current Importance:** Medium **Recent trends:** Growing **Future prospect:** Mechanisms 22 and 23 very large opportunities, mechanism 24 slow growth outside the clean energy sector **Suitable for:** Production landscape
Payments for Ecosystem Services 26. Regulated International market for bio-carbon offsets 27. Voluntary International market for bio-carbon offsets 28. Voluntary payment for ecosystem services (PES) for watershed protection 29. Voluntary households environmental offsets 30. GEF payments for global biodiversity conservation 31. Voluntary international business biodiversity offsets 32. Regulated international business biodiversity offsets	**Main actors:** Non-Profit organisations, Business **Current Importance:** Mechanisms 26 to 30 medium to low; 31 Low and 32 None **Recent trends:** Mechanisms 26 to 31 Growing; 32 None **Future prospect:** Mechanisms 26, 27, and 28 very large opportunities; 29 and 31 moderate; 30 and 32 Low **Suitable for:** Protected areas / Buffer Zones / Production landscape

Long-term ODA Commitments
33. An International Financial Facility
International Taxes
  34. A tax on currency transactions (CTT/Tobin tax)
  35. A tax on international trade
  36. A tax on international arms trade
  37. A surcharge on international post and telecommunication
  38. A tax on the internet or bit tax
  39. Charges for exploration in or exploitation of Antarctica
	Main actors: Governments
	Current Importance: None
	Recent trends: Discussions in the UN. Some European country governments have at times endorsed some mechanisms. Academic and technical discussions.
	Future prospect: Very improbable
	Suitable for: Protected areas / Buffer Zones / Production landscape

institutionalised, so time is needed for their development, pilot implementation, adoption and scaling up. There is a need, and better opportunities exist, to raise funds for protected areas by pursuing innovative financial mechanisms that mix regulatory, voluntary and market-type initiatives. At the same time there is a need to strengthen and augment the traditional mechanisms.

Traditional funding mechanisms like national government budgets, bilateral and multilateral aid, tourism, contributions from NGOs and charity foundations account for the bulk of the protected area funding and will probably remain so for many years to come. It is now increasingly recognised that in order to generate sufficient funding to protected areas, it is critical to move from the "site-level approach" (focusing on individual protected areas) to the "system-level approach" (focusing on the entire system of protected areas), assessing financial needs and gaps as well as financial viability and diversifying financial mechanisms, in accordance with country level sustainable financing plans. There is a need for addressing problems related to financial management capacity, and developing the enabling finance-related governance framework to stimulate generation and retention of revenue for protected areas. There is no one-size-fits-all

solution for raising protected area financing. However, by combining sound financial planning, improved financial management capacity, transparency, accountability and a diversified financial portfolio (traditional and new financial mechanisms), funding for protected areas can be improved.

Public-private partnerships

One area receiving increasing attention is the development of public-private partnerships. Protected areas are generally managed by public institutions. However they provide space for interaction between the public and private sector. The current insufficiency of public funding makes a case for responsible commercialisation through public-private partnership.

There already successful public-private partnerships in protected areas such as in ecotourism, watershed services, drinking water provision, production of forest produce and shade-grown coffee. Three categories of public-private partnerships in protected areas can be identified with different levels of responsibility and risk for the private partner (Anon 2006):

■ public-private partnerships with conservation organisations or local communities or NGOs (in this partnership, the private partner performs a public function on behalf of the Government, such as conservation of biological diversity through management of protected areas.);

■ public-private partnerships with corporations; and

■ with financing institutions (in these partnerships the private partner uses the public natural assets to provide services and generate income.)

Conclusion

For the implementation of the PoWPA, adequate funding alone is not sufficient, it should be backed with adequate and focused technical support including availability of tools, methods and

Ecotourism guesthouse, near Wanglang Panda Reserve, China. Photo: © WWF-Canon / Bernard De Wetter.

approaches, for efficient use of available funds. Experiences from sub-regional workshops have clearly demonstrated that funding incentives may have greatest impact when they are reinforced by mechanisms that facilitate technical support. In those countries that have established national coalitions or partnership agreements with NGOs, progress in the implementation of the programme of work is more pronounced. These partnerships provided technical support on implementation of various activities, besides helping leveraging funds.

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Natural protected areas in Peru: valuing benefits and developing sustainable financing

FERNANDO LEÓN AND JUAN CHANG

Peru is a country of extraordinary biodiversity value, and with a rapidly expanding protected areas system. Financial and resource security for protected area management has however has not increased at the same pace, leaving the country's system of protected areas massively dependent on external donors. Prompted by this mismatch in management requirements and resource availability, as well as the targets set by the PoWPA for financial sustainability, Peru has begun to develop a financial plan for its protected areas system. This article discusses the current situation regarding sustainable financing of protected areas in Peru, and the development of the financial plan. In particular the article stresses the need for the recognition and integration in the investments made in national budgets of the values and benefits from biodiversity conservation, particularly conservation in protected areas and their integration into the investments made in national budgets.

PERU IS ONE OF THE FIVE COUNTRIES with the highest biodiversity in the world, thanks to its range of ecosystems from coastal deserts, to high altitude mountains and the rainforests of the Amazon. This biological richness is protected under the National System of Natural Protected Areas (SINANPE) which covers around 14% of the Peruvian territory in 62 protected areas under direct and indirect use categories.

During the last 20 years, the area protected by the SINANPE has increased dramatically, from 4.4 million ha in 20 protected areas in the 1980s to more than 18 million ha in 2007. However, this progress in terms of geographic coverage and biological representativeness has not been

Huascaran National Park, the source of several important rivers in Peru. Photo: © W. Huggard-Caine.

Water from protected areas in Peru is vital resource for hydroelectric energy generation and crop irrigation; Rio Abiseo National Park, Peru. Photo: © F. Murrugarra.

matched by an increase in personnel or infrastructure and financial resources needed for the management of a bigger and more complex system.

Accordingly, Peru has faced a challenge which may be common to many countries that are attempting to develop a more comprehensive, effectively managed and ecologically representative national system of protected areas: how to ensure that resources available keep pace with the demands of a growing number of protected areas.

Planning for sustainable financing

Goal 3.4 of the PoWPA aims "to ensure financial sustainability of protected areas and national and regional systems of protected areas", and has a target that "by 2008, sufficient financial, technical and other resources to meet the costs to effectively implement and manage national and regional systems of protected areas are secured, including both from national and international sources, particularly to support the needs of developing countries and countries with economies in transition and small island developing States". Sustainable financing can be defined as the legal, administrative and financial capacity of a protected area system to generate its own economic resources to be used in the management of the protected areas system.

Sustainable financing is one of the major challenges currently facing the SINANPE. For many decades, especially during the 1970s, 80s and 90s, most of Peru's protected areas received economic resources from external donors, i.e. bilateral and multilateral assistance, international NGOs and philanthropic institutions. During the period 2002–2005, the structure of the funding on average was 73% from donations, 17% from direct revenues (e.g. entrance fees) and 10% from the Peruvian Government. Clearly, there was a high dependency on external sources of funding. Today, however, these resources are becoming scarcer.

Future sustainability of biodiversity conservation requires not only the sustainable use of natural resources and the protection of the rural environment, but the maintenance of stable financing which can support both urgent management needs and provide funds for the future of the protected area system.

In order to address this situation, the Intendancy of Natural Protected Areas from the National Institute of Natural Resources (INRENA) has been designing a financial plan for the SINANPE with the financial support of the PAN Project (Protección de Áreas Naturales Protegidas) and GPAN Project (Gestión Participativa de Áreas Naturales Protegidas) with financial support from German Co-operation (KfW) and Global Environmental Facility (GEF).

The preparation of the financial plan started with the identification of the long term financial needs of the SINANPE. This analysis showed that in 2005, the budget for management of the SINANPE was US$ 18 million, while the financial requirement for the optimum scenario, i.e. when all the requirements for having an effectively management of the protected area system are fulfilled, was US$ 38 million; thus indicating a financial gap of US$ 20 million. Furthermore the financial gap for the period 2005–2014 (see Figure 1) was estimated at some US$ 31.8 per year (GPAN, 2006).

The strategic requirements for the elaboration of the financial plan focused on balancing the budget for the system, which as mentioned, is highly dependent on external resources, as well as reducing the long term funding gap. The strategies developed focused on:

- positioning of natural protected areas on the political agenda and on plans for national development;
- prospects for finding new financial resources for protected areas;
- sustainable tourism;
- payment for environmental services schemes;
- alliances with the private sector; and
- joint projects with local and regional governments.

Valuing conservation

The development of an awareness of the values and benefits of biological diversity is a very important challenge for the SINANPE. Getting people to know the values and services of protected areas to the national economy can be a very powerful and effective element for promoting more resources from the government to the conservation of biological diversity.

A recent publication on "The support of the Natural Protected Areas to the National Economy" shows that natural protected areas not only protect *in situ* biological diversity, but are

Figure 1. *Predicted financial gap for implementing the National System of Natural Protected Areas (SINANPE).*
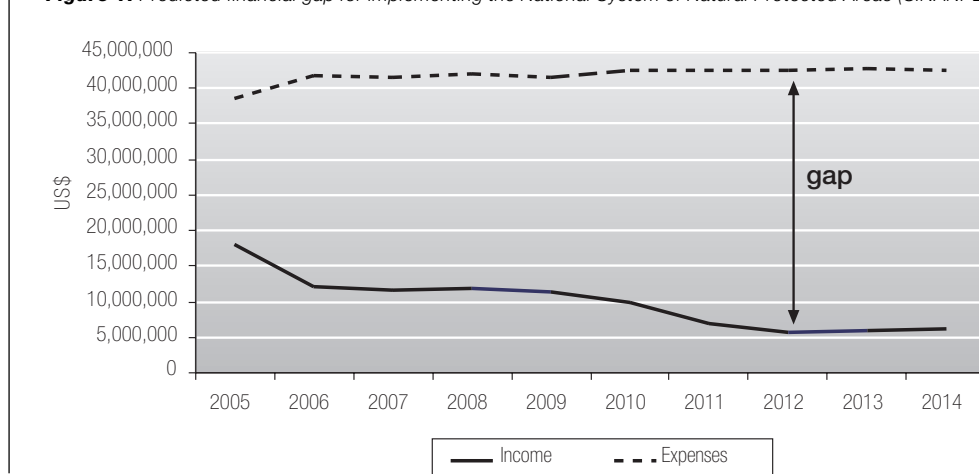
The tourism industry is thriving in Peru particularly in areas such as the Paracas National Reserve. Photo: © F. Murrugarra.

also, centres for the permanent supply of goods and environmental services for sustaining economic activities at local, regional and national scales. It is estimated that the actual and potential direct and indirect benefits provided by the natural protected areas provide more than US$ 1,000 million per year to the economy of Peru (León , 2007). For example, more than 60% of the hydroelectric energy generated in the country (which raises some US$ 320 million a year in profits) uses water from protected areas, and more than 400,000 ha of agricultural crops, which have a production value of more than US$ 500 millions per year, are irrigated with water provided by protected areas. Additionally, the tourism industry is thriving in Peru, attracted by the country's rich biological and cultural diversity and this rapidly growing sector provides more than US$ 1,500 million per year to the national economy. This tourism is sustained mostly by the conservation of natural resources, considering that 13 of the 17 most visited places by foreign tourists in Peru are protected areas or closely related to them. These are just some examples of the benefits provided by protected areas; however their continuing ability to provide such benefits depends greatly on adequate financing for effective management.

Effective management
In Latin America it is very common to hear calls for the efficient management of the State budget and more effective use of public funds. In that sense, an investment in biodiversity conservation is a good option for the public budget with not only social and environmental impacts, but economic benefits as well. Clearly a relationship between the investment of US$ 1.7 million of the public budget for the management of the SINANPE could be made with the income of US$ 1,000 million or so per year in environmental benefits.

However, it is important to emphasise two issues: firstly the current relationship between investment and the threats to the sustainability of the ecosystems, and secondly that if more resources were allocated for the effective management of the SINAPE, the benefits would increase in favour of the Peruvian society and economy as a whole. For example, each dollar invested in tourism management in protected areas will have a multiplying effect of at least US$ 146 to the national economy (Léon 2007).

Further studies and analysis of the financial gaps of the protected area systems worldwide and of the value of the benefits of the natural protected areas, have shown the importance of the role played by governments and international co-operation for help in sustainable financing of

biological diversity. The role played by industries which benefit from the environmental services provided by the ecosystems, in particular those services which are protected by conservation areas, are also vital.

The conservation of biological diversity, the sustainable use of its components and the fair sharing of benefits derived from its utilisation depend on sustainable financing and the awareness, understanding and public appreciation of the values of the benefits provided by the natural protected areas.

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parks

Protected area standards and assessment: tools and resources

JAMISON ERVIN AND NIGEL DUDLEY

Three assessment categories exist in the PoWPA relating to protected area design, management and enabling environment. Within these there are eight major assessment themes – ecological gaps, threats, management effectiveness, capacity, benefits, governance, sustainable finance and policy environment – and these are inter-related in many ways. This article looks at each in turn, reviews current assessment methodologies and identifies where further work is needed on developing tools and guidance.

THE PROGRAMME OF WORK ON PROTECTED AREAS contains 16 targets and 92 specific actions. Many specify or imply that governments undertake some kind of assessment prior to taking action. The 92 actions of the PoWPA can be broken into three major assessment categories:

- assessing and improving the design of the protected area network;
- management of protected areas at site and system levels; and
- enabling environment.

Within these categories there are eight assessment themes: ecological gaps, threats, management effectiveness, capacity, benefits, governance, sustainable finance, and policy environment (Table 1).

In practice there are many interrelations between assessments with the results of one often contributing to others (e.g. an assessment of protected area governance helps in assessing protected area gaps). This article identifies the suite of assessments embedded within the PoWPA, and describes the status of existing assessment tools and guidance materials.

Gap assessment

A national gap assessment looks at the extent to which a protected area network fully represents and is likely to sustain the biodiversity within a country. A gap assessment typically has three components: 1: an assessment of the distribution, condition, threat status and viability goals of a suite of key species, habitats and ecological systems; 2: an assessment of the status of the protected area system, including boundaries, governance types and management effectiveness; and 3: an assessment of the ecological and management gaps within the current system (Dudley and Parrish, 2006).

Table 1. *Major assessment themes and their relationship with activities of the Programme of Work on Protected Areas.*

Assess design of protected area network	Assess management of protected area system	Assess protected area enabling environment
Assess ecological gaps (Activity 1.1.5)	Assess management effectiveness (Activity 4.2.2, 1.4.3, 2.2.1)	Assess protected area governance (Activity 1.1.4)
Assess ecological networks (implied by Activity 1.1.5)	Assess capacity needs (Activity 3.2.1)	Assess sustainable finance (Activity 3.4.1)
	Assess management of threats (Activity 1.5.5)	Assess gaps in policy environment (Activity 3.1.1)
	Assess protected area benefits (Activity 2.1.1)	
	Assess management gaps (Activity 1.1.4)	

While there is no single, comprehensive gap assessment tool that has been widely adopted globally, there are numerous software packages commonly used to identify efficient configurations of protected areas to meet the protection goals for species and ecological systems, such as Spot and Marxan (Allnutt, 2005). There is also guidance material available (e.g. Dudley and Parrish, 2006) and case studies that illustrate the process (e.g. Day and Roff, 2000). The article from Madagascar in this issue of *Parks* (Rasoavahiny *et al.*) provides an overview of the realities of undertaking a gap analysis in 'real life'.

Threat assessment

Threat assessments are a component of both gap analysis and management effectiveness assessments. For the former, knowledge of the overall degree and distribution of threats across a broad landscape can facilitate a comprehensive gap assessment, typically using existing data on pressures (such as population, roads, infrastructure) with GIS software and modelling to predict the impact of pressures on biodiversity. Methods abound, as do case studies and guidance materials (e.g. Gori and Enquist, 2003).

The aim is to assess the degree and distribution of threats, and their impacts on biodiversity, within or adjacent to the protected areas. To a limited extent, the tools and techniques for conducting a broad-scale threats assessment described above can be used within an individual protected area, but such assessments typically focus on constraints and pressures (e.g. roads) rather than on activities that can respond to management (e.g. illegal logging). Many existing threat assessments are part of broader methodologies, such as management effectiveness (e.g. Ervin, 2003) or conservation planning (e.g. Groves et al., 2002). These identify the range of threats and their relative intensity, but do not enable detailed monitoring of the spatial distribution of threats, or of their impacts. The absence of systematic threat assessments is a major weakness of protected area systems, underscoring the need for simple but effective assessment tools.

Invasive water hyacinth Eichhornia *sp. being dredged from wetlands in Keoladeo National Park, India.*
Photo: © Nigel Dudley.

A broadly accepted taxonomy of threats exists (CMP, 2006). Although this does not give a consistent scoring and measuring system, it does provide a consistent way of naming threats, and is enabling regional and global analyses of threats found in protected areas (Leverington and Hockings, 2007).

Protected area management effectiveness

After over a decade of concerted governmental and non-governmental efforts, 75 countries have implemented over 6,000 management effectiveness assessments (Leverington and Hockings, 2007). While most of these use a small number of assessment tools (e.g. RAPPAM, World Bank/ WWF Tracking Tool and ProArca), there are at least 36 management effectiveness assessment tools. These use different approaches, e.g. in-depth, evidence-based assessments; system-level peer-based assessments; site-level expert-based scorecard assessments; and categorical, assumption-based assessments (Ervin, 2007) but most are based around the framework for assessing management effectiveness developed by WCPA (Hockings *et al.*, 2006). The WCPA framework on management effectiveness includes guidance on carrying out assessments and case studies on implementation; numerous other case study material exists (e.g. Goodman, 2003). The WCPA framework suggests that assessments are based around a management cycle (see Figure 1); which identifies three main themes to effectiveness assessment:

- design issues relating to both individual sites and protected area systems;
- adequacy and appropriateness of management systems and processes; and
- delivery of protected area objectives including conservation of values.

Despite the variety of tools, there is hope for a common reporting platform. A consortium of organisations has proposed a global set of reporting indicators, based on existing methodologies. Assessments can be aggregated and analysed and global trends are emerging. The most frequently cited weaknesses in protected area management, for example, include visitor impacts, inadequate management planning, unsustainable resource use, inadequate community benefits, inadequate research and monitoring, and low law enforcement (Leverington and Hockings, 2007).

Figure 1. *The WCPA management effectiveness framework.*

Capacity assessments

When applied to a protected areas system, capacity can be defined at three levels – individual (do protected area staff have the necessary skills and resources?); institutional (does a protected area institution have adequate internal and external structures and processes?); and societal (do societal norms enable effective management?) (Hough, 2007; Booth *et al.*, 2003). Many past capacity needs assessments for protected areas started from a predetermined checklist of potential needs, rather than from assessments of threats and management weaknesses. More recently, several countries (e.g. Mexico, Guatemala, Jamaica, Bahamas) have started with a management effectiveness assessment, and used this to identify specific capacity needs. While a detailed methodology does not yet exist, there are guidance materials (Ervin *et al.*, 2007) and case studies (Hayman, 2007).

Steps in the capacity assessment process include:
1. Identifying key management weaknesses and critical threats through a management effectiveness assessment.
2. Developing and prioritising strategies to improve management weaknesses and abate threats.
3. Identifying actions and capacities needed to implement these strategies, including individual, institutional and societal capacities.
4. Developing a detailed action plan that includes responsible actors and agencies, timelines, priority actions, likely costs, and indicators of success. (Hayman, 2007).

Although there is no system for reporting protected area capacity needs globally, studies have analysed regional capacity needs (e.g. Carrabias, 2003). Some persistent and widespread needs emerge e.g. visitor management, management planning, natural resource management, monitoring and law enforcement.

Benefits assessments

The PoWPA calls on countries to "assess the economic and socio-cultural costs, benefits and impacts arising from the establishment and maintenance of protected areas". Governments have focused mainly on equity and benefits-sharing issues with local communities, including compensation from economic uses of traditional knowledge; sharing access to and benefits from genetic resources; and sharing benefits derived from economic enterprises (e.g. ecotourism) (González and Martin, 2006).

More recently, NGOs and governments have begun to focus on the overall benefits of a healthy protected area system to broader society, including: studies that demonstrate how water from protected areas affects municipal water supplies (Dudley and Stolton, 2003); how protected areas can conserve agrobiodiversity (Stolton *et al.*, 2006) and fisheries (Gell and Roberts, 2003); links between protected areas and major faiths (Dudley *et al.*, 2006); the relationship between protected areas and disaster mitigation (Stolton and Dudley, 2008), the role of protected areas in poverty reduction strategies (Dudley *et al.*, in prep.) and how forests in protected areas sequester carbon (see for example Swingland 2002).

In order to maintain and increase financial investments needed for protected areas, many national agencies are interested in documenting the benefits of their protected area system. Methodologies for assessing benefits are generally tailored to specific sectors – no single, comprehensive tool to rapidly assess the benefits of a protected area system has yet been widely used, although several are now beginning to be implemented. WWF has developed a Protected Areas Benefits Assessment Tool (Dudley *et al.*, 2008), which helps collect and categorise information on benefits but does not provide a detailed economic analysis. The Nature Conservancy is working on several more detailed country-level assessments.

Governance assessment

The PoWPA calls for an assessment of both the types and quality of protected governance. The first is a relatively simple technical exercise and primarily provides information which can feed into a protected area gap assessment. A general construct for assessing the type of protected area governance exists, which includes:

■ government-managed protected areas, including federal, local and government-delegated management;

■ co-operatively managed protected areas, including trans-boundary management, collaborative management with multiple parties;

■ private protected areas, including those run by individuals, corporations and non-profits; and

■ community protected areas, including those declared and run by indigenous groups and local communities (Borrini-Feyerabend *et al.*, 2007).

Borrini-Feyerabend *et al.* (2004) have proposed a matrix of protected area governance types on one axis, and the six IUCN protected area management categories on the other, thus creating at least 24 different management and governance options. An existing protected area system can easily be mapped against the relevant cells in the matrix.

Assessing the other quality of governance is more complex. While there is not yet a widely used methodology for assessing good governance, there is a draft assessment framework (Abrams *et al.*, 2003) and some general principles were drawn up by Parks Canada. These include:

■ Legitimacy and voice in protected area management.

■ Accountability of the protected area management to local communities, the public and other key stakeholders.

■ Performance of protected area management, including responsiveness, efficiency, effectiveness and efficacy.

■ Fairness in decision making, including equitable benefits sharing among key stakeholders.

■ Leadership of protected area policy makers based on the ecological, historical and socio-cultural complexities of protected areas (Borrini Feyerabend *et al.*, 2007, Graham *et al.*, 2003).

Consultation with villagers at the edge of Djoudj National Park, Senegal. Photo: Nigel Dudley.

Given that there are widely recognised principles of good governance, a simple assessment tool would be relatively easy to develop and useful in advancing a consistent approach toward assessing this aspect of PoWPA.

Sustainable finance assessment

The Conservation Finance Alliance – an NGO consortium interested in advancing various mechanisms for funding conservation – has developed a comprehensive set of materials to explain the suite of possible approaches (see Gidda, in this issue, for a summary of many of these). In addition, there is a comprehensive manual for assessing sustainable finance needs and options (Flores, 2007), and a simple scorecard for assessing a country's overall financial sustainability (Bovarnick, 2007).

Basic steps in assessing sustainable finance needs of a protected area system include:

■ Conducting a financial gap analysis of current income versus expenditures, differentiating between basic and optimal costs, and including the costs of improving management.

■ Assessing protected area management and capacity needs to address key threats and management weaknesses.

■ Developing cost estimates for the creation and management needs over a ten-year time horizon, including various scenarios.

■ Screening and assessing funding mechanisms to address financial gaps, including an assessment of fiscal and management reforms.

■ Formulating financial plans at system and site levels, with multi-year action plans, including strategic funding mechanisms, resource allocations, fiscal and management reform opportunities, management and capacity needs, and the implementation plan (Flores, 2007).

Policy environment assessment

Perhaps the most complex of all protected area assessments is a policy environment assessment, which would likely need to include at least the following issues:

■ Policy co-ordination and communication (e.g. mechanisms for local dialogue, co-operation with neighbouring countries, co-ordination with natural resource sectors, rational budgeting process).

■ Land use planning laws, policies and practices (e.g. buffer zones, growth centres, incentives, land tenure policies).

■ Economic development and resource use policies (e.g. forestry and agriculture, customary uses of protected areas).

■ Legal and judiciary environment (e.g. societal laws, judicial system for enforcement).

■ National environmental leadership (e.g. biodiversity vision and goals, environmental awareness, political will).

■ Protected area policies (e.g. commitment for viable and representative protected area network, restoration targets, periodic review of ecological gaps, and staff training and capacity programmes). (Ervin *et al.*, 2007).

While some management effectiveness methodologies include several of these policy aspects (e.g. ProArca, RAPPAM), there is no single, comprehensive policy assessment tool. As governments move towards implementation of PoWPA, it will be increasingly important to gauge the degree to which a country's policy environment can sustain the funding and commitments necessary to fully implement the results of the various assessments.

Recommendations and conclusions

It is clear that despite a great deal of effort over the past decade, several important assessment approaches, already identified by the CBD, are either missing or incomplete, including in

Developing management effectiveness assessments. Serengeti National Park, Tanzania. Photo: Sue Stolton.

particular assessment of capacity needs, overall benefits, governance quality and the overall policy environment. It is clear from the foregoing that most assessments are interlinked in some ways, and draw on each other, and in addition to development of tools more work is needed in integrating these and in developing common reporting frameworks. Many of the tools, guidance and case study materials are only available in English; and whilst some documents are available in French and Spanish there is clearly a great need for this material to be translated into many additional languages. Finally, assessments are only worth carrying out if they lead to action and in general greater work is needed in building understanding of how assessments can be turned into practical and viable strategies.

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UNDP/GEF support for implementation of critical PoWPA activities

ADRIANA DINU AND MAXIM VERGEICHIK

By 2005 there was international consensus that a modest-sized and relatively fast-moving small-grant scheme could make a critically important contribution in helping countries develop capacity and partnerships to enable implementation of the PoWPA. By early 2007, the GEF had endorsed the "Supporting Country Action on the CBD Programme of Work on Protected Areas" project, providing US$ 9.4 million in financing which will be managed by UNDP. TNC and other big international NGOs committed over US$ 4 million in co-financing. This article discusses the development of the fund, the 13 critical PoWPA activities it supports and provides a brief overview of the countries it is supporting following the first round of applications. More information on the project can be found at: www.protectedareas.org.

FOR MANY COUNTRIES the PoWPA presents a major challenge and initially its implementation rate was relatively unsatisfactory. Even though international financial assistance for protected areas remains fairly constant, there is increasing competition for these funds as protected area numbers increase. The slow implementation rate was attributed, among other things, to governments' apprehension of the complexity and competition associated with the traditional international funding mechanisms, such as the GEF-funded full-size and medium-size projects. In March 2005 therefore a group of experts suggested that a modest-sized, flexible and relatively fast-moving PoWPA small grant scheme could make an important contribution to helping countries develop capacity and partnerships. Such a scheme would facilitate coverage of critical PoWPA activities which had received little support from countries and donors so far (Wells, 2005).

Developing an enabling environment

By late 2005, there was agreement among international conservation NGOs, UN agencies including the CBD Secretariat and the GEF on the need for a rapid-disbursement international funding mechanism. The PoWPA, however, is extensive and it would be impossible to cover all of its 92 activities in one project. Thus, a first step was to develop a list of eligible PoWPA activities to be funded. A scoping study found that very few countries had taken steps to address some of the critical PoWPA activities with 2006/2007 deadlines and that some of the activities with a 'foundation-laying' character were not being implemented; without these it would be hard to complete many of the later PoWPA deadlines (the best example being Activity 1.1.5 Ecological Gap Analysis). An assessment of funding gaps and needs for each of the PoWPA Activity was thus made and those which had received least funding identified. Using the results of the study, 13 PoWPA activities (see Table 1) were determined to be suitable for support under a potential project to be submitted for GEF for funding.

In early 2007, the GEF endorsed the "Supporting Country Action on the CBD Programme of Work on Protected Areas" project, with a total value of US$ 9.4 million. TNC and other big international NGOs committed over US$ 4 million in co-financing. The project considers applications from countries in need of assistance to undertake one or more of the 13 PoWPA activities. At least 50% of the grant pool aims to focus on Least Developed Countries (LDCs) and Small Island Developing State (SIDS). The project was officially launched in July 2007 and the project's electronic platform is www.protectedareas.org. This website provides information on the eligibility criteria; application templates and guidance notes; application review procedures; monitoring, evaluation and reporting. The first round for applications was

Table 1. *Funding priorities.*

Activity 1.1.1	PA target setting
Activity 1.1.4	Review the forms of conservation
Activity 1.1.5	Ecological gap assessment for PAs and interim action for highly threatened sites
Activity 1.2.1	Lessons learning on landscape integration
Activity 2.1.2	Promoting broader set of PA governance types
Activity 3.1.1	Tackling legal and institutional gaps
Activity 3.1.2	Assessing PA contribution to national economy and MDGs
Activity 3.1.5	Tackling perverse PA incentives
Activity 3.1.6	Establishing positive PA incentives
Activity 3.2.1	Capacity needs assessment, development of training curricular and programs
Activity 3.4.1	Study effectiveness of current PA financing, and setting new financing mechanisms
Activity 4.1.2	Monitoring system for PoWPA
Activity 4.2.1	Monitoring of PA management effectiveness

announced in July and closed in September 2007. The second round of applications closes in late February 2008.

UNDP is the implementing agency, building on its experience in strengthening protected areas around the world, and the project is managed by the UNDP Regional Support Centre in Bratislava. The UNDP/GEF protected area projects portfolio is worth almost US$ 500 million, with GEF financing of US$ 200 million and the remaining represented by co-financing. Making the best use of its country offices, UNDP/GEF works on protected areas in 60 countries, providing support to over 1,000 sites covering some 80 million ha. In 2006, UNDP/GEF projects contributed to the establishment of 154 new protected areas covering 9.95 million ha and, in existing protected areas, 68% of UNDP projects reported improvements in policies and legislative environment for protected areas and 57% of the portfolio has successfully engaged indigenous communities in protected area development and management.

The decision-making body of the project is its International Technical Review Committee (ITRC). The ITRC is composed of volunteer members from the GEF Secretariat, CBD, UNDP, UNEP/WCMC, World Bank, TNC, WWF, IUCN-WCPA and the GEF Scientific and Technical Advisory Panel. The UNDP/GEF is the chair of the ITRC. Thus, the ITRC is composed of skilled non-partisan representatives from key stakeholders in PoWPA, while at the same time ensuring coverage of all regions. In assessing applications, the ITRC is guided by the following 11 criteria:

1. Risk of duplication. Have the actions proposed for support received funding from other sources?
2. Is the application based on an initial PoWPA analysis and priority setting?
3. Availability of confirmed co-financing, in-cash, and/or in-kind.
4. The degree to which proposed activities emphasise concrete actions towards implementation of specific PoWPA activities, and achieving effective and sustainable national protected area systems, including those directly and indirectly resulting in the creation of new protected areas and improved management for existing protected areas.
5. Clarity of articulation and degree of commitment and realism in the objective, outcomes and outputs (where relevant).
6. Clarity of activities, including assessment of the chances for the activities' completion in two years. Assessment of clarity of the link between outcomes/activities and budget lines.
7. Clarity and realism of outcome/output indicators. Also includes assessment of whether management arrangements and monitoring and evaluation plans will allow verification of the outcome indicators.
8. To what extent do activities include partnerships with other organisations, and especially non-governmental stakeholders?

9. Clarity of linkages of the proposed actions with country priorities re protected area management.
10. Degree of the contribution to poverty reduction and other key Millennium Development Goals.
11. Is the country a LDC and/or SIDS?

Project achievements so far and emerging lessons to share

Since July 2007, the project has awarded preparatory grants (up to US$ 15,000 each) to 13 LDCs and SIDS for carrying out the initial analysis of the PoWPA, developing links with the national protected area and biodiversity strategies and plans, prioritising the urgent protected area problems and formulating applications for subsequent support from the *PoWPA Country Action* grant scheme.

In October 2007 the ITRC approved the first applications for specific projects. As a result, projects with a GEF-financed budget up to US$ 150,000 started in a number of countries before the end of 2007. More than half of the approved countries are LDCs and/or SIDS. For US$ 1.5 million of approved GEF funds, the project applicants leveraged almost as much (US$ 1.35 million) in co-financing from government and non-government agencies.

As shown in Table 2 below, the PoWPA activity which has received most funding is Activity 3.2.1 (capacity needs assessment, training curricular and programmes), followed by Activity 3.4.1 (analysis of existing and elaboration of new PA financing mechanisms). Interestingly, no country has requested assistance in addressing legislative and institutional gaps (Activity 3.1.1). Although the number of countries the project has worked in so far is small, and it may be premature to make any judgments, the 'problem' with Activity 3.1.1 may be explained either by the assumption that the countries make about their current policies and institutional environment (i.e. they assume they are well suited for the strengthening and maintenance of their national protected area networks), or the formulation of this particular PoWPA activity is too broad for countries to be handled separately by a project with a small budget and short time-limit.

Of the 16 applications submitted in the first round, four were rejected either because they failed to meet the basic eligibility criteria, or their design left too many questions about the applicant's degree of appreciation and/or commitment to the PoWPA. Within the group of approved applications, only one application was formulated and advocated solely by a government; others were based on strong NGO-government partnerships. It seems therefore, that the appreciation for the PoWPA, as well as the clarity of the objectives and needs in the national protected area sector, is much higher in those cases where governments collaborate with NGOs and academia.

Table 2. *Number of countries addressing various PoWPA activities in proposals to ITRC.*

Activities monitor		Countries (n=13)
Act. 1.1.1	PA target setting	1
Act. 1.1.4	Review forms of conservation	1
Act. 1.1.5	PA gap assessment	5
Act. 1.2.1	Review lessons on landscape integration	1
Act. 2.1.2	Integrate indigenous communities and private sector into management	3
Act. 3.1.1	Remove legislative barriers	0
Act. 3.1.2	Economic and social valuation of PA resources	4
Act. 3.1.5	Remove perverse incentives	1
Act. 3.1.6	Create positive incentives	1
Act. 3.2.1	Building capacity and curricular	7
Act. 3.4.1	New financing mechanisms	4
Act. 4.1.2	Monitor PoWPA	4
Act. 4.2.1	Management effectiveness	3

Brief summary of projects approved in the first round

- **Bahamas** (PoWPA Activities 3.1.2, 3.2.1, 4.2.1, and 4.1.2): supporting an assessment of protected areas contribution to the national economy; training for government and protected area staff in the application of economic tools; launching vocational training courses for park officers; developing a database and software to measure protected areas' management effectiveness and designing a system to monitor the country's progress in the implementation of PoWPA. The project will be embedded within the National Implementation Support Partnership (NISP) and will be implemented in co-operation with TNC.

- **Dominican Republic** (PoWPA Activities 1.1.5, 3.2.1, 3.4.1, and 4.1.2): formulating a protected area system master plan for the national protected area network; undertaking a comprehensive protected area gap analysis; developing a national capacity building plan and conducting a series of thematic workshops; helping identify innovative financing mechanisms and design a monitoring system to track country's progress in PoWPA implementation.

- **Guatemala** (PoWPA Activities 2.1.2 ; 3.2.1 and 3.1.6): under the auspices of a NISP and in collaboration with international NGOs, funding will facilitate establishment of locally managed conservation areas; launch a capacity building action plan for the protected area system; test payment-for-ecosystem services mechanism in at least two protected areas and introduce a scorecard to measure the financial sustainability of the whole protected area system.

- **Honduras** (PoWPA Activities 2.1.2; 3.1.2; 3.4.1): funding will aid the establishment of legal mechanisms to promote private, indigenous and community protected areas and processes for assigning community and private reserves; undertake an economic valuation of natural resources of protected areas and study their contribution to the MDGs, and promote financial mechanisms for the sustainability of the protected areas system. The project will be implemented under the supervision of the country's NISP Political and Technical Committees, in close collaboration with TNC.

- **Liberia** (PoWPA Activity 1.2.1): the project will review the integration of protected areas into the country's poverty reduction plans and policies; develop mechanisms for biodiversity-friendly coexistence of the poor residing close to protected areas and identify opportunities for alternative income generation. The project will be implemented by the Government in partnership with UNDP.

- **Federated States of Micronesia** (PoWPA Activities 4.1.2, 4.2.1, 1.1.5, 3.2.1, and 3.4.1): building on strong technical and financial support from the participating Governments and NGOs, funding will help the four states develop and adopt national standards and criteria for protected area planning and management to achieve the goals of the Micronesia Challenge; assist in the completion of a pan-Micronesia comprehensive protected area gap analysis; launch a protected area capacity building plan; develop a financial sustainability plan for the protected area system and launch a fund-raising strategy for Micronesia's protected areas.

Protected areas information centre at Lake Uvs Basin, Mongolia. Photo: © WWF-Canon / Anton Vorauer.

- **Mongolia** (PoWPA Activities 1.1.1, 1.1.5, 3.2.1 and 3.4.1): implemented in partnership with WWF and TNC, this project will focus on a countrywide protected area representative and ecological gap analysis; a national protected area capacity building programme; testing financing mechanisms for protected areas and aligning the National Programme on Protected Areas with PoWPA.

- **Panama:** the project will focus solely on a protected area gap analysis (PoWPA Activity 1.1.5). The analysis will provide recommendations for prioritised action to protect highly threatened or highly valued areas taking into account regionally and nationally relevant criteria (i.e. ecological representation, integrity and connectivity). The project will complement the ongoing PoWPA activities under a NISP agreement.
- **Samoa**: the first phase of the project will concentrate on developing scientific knowledge, which will help development of a comprehensive up-to-date ecological gap analysis (Activity 1.1.5), and capacity development (PoWPA Activity 3.2.1), following the launch of a permanent protected area training curriculum. In parallel, a second-phase proposal will be finalised, as more knowledge and capacity is gained from Phase 1. Phase 2 will focus on the critical issue of conflicts between customary and government land ownership and conservation objectives, exacerbated by too few (as yet, untapped) rural economic development opportunities. The project will be implemented with support from the local scientific community and Conservation International.
- **Tajikistan** (PoWPA Activities 3.1.2, 3.1.5, 3.2.1, and 4.1.2): funding will focus on the economic valuation of protected area resources; identification and removal of perverse sectoral incentives which are putting pressures on protected areas; launching a curriculum and training courses on protected areas and putting in place an electronic system for monitoring PoWPA implementation.
- **Gambia** (PoWPA Activities 1.1.4, 2.1.2, 3.1.6, and 4.2.1): implemented by the Government in partnership with WWF, the project will concentrate on: reviewing conservation models in the country and supporting the establishment of a countrywide coalition for protected areas; facilitating the development of new country-tailored protected area governance types, including community engagement mechanisms; helping to launch an ecotourism programme and launching tools to track the management effectiveness of protected areas.

The future

Only a few months after the project's inception, 36 countries expressed interest in receiving support for critical PoWPA assistance, in addition to the approved applications. Over 76% of requests are coming from LDCs and SIDS. If implemented, this would fully utilise the project's grant pool in a few years' time. This is probably the best evidence of the demand for speedy PoWPA assistance.

However, questions remain about the 'quality' of this demand: about the real awareness and understanding of the value of the PoWPA, its integration into national protected area priorities and plans, about the commitment of country governments not only to develop applications, but to be prepared to set higher goals for the national protected area system, and to allocate the national resources and political motivation to achieve them. Apart from just disbursing the funds, the role of the UNDP management unit, the ITRC and its partners is to use this opportunity to 'convert' as many countries as possible from being unaware and uncommitted to PoWPA to being appreciative and committed. In a way, this is a global learning-by-doing model, which we all believe will prove successful.

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parks

Working together to strengthen national and regional capacity for implementation

JASON SPENSLEY, JAMISON ERVIN, SARAT BABU GIDDA, ROLF HOGAN AND STEVE WATKINS WITH TILMAN JAEGER (RE MONGOLIA)

The lack of implementation and the capacity-building constraints for developing countries in implementing the PoWPA was assessed at the eighth meeting of CBD CoP in March 2006. One positive response was the support given to the CBD Secretariat by a number of international conservation NGOs (TNC, WWF, Conservation International, BirdLife International, Wildlife Conservation Society), the IUCN–World Commission on Protected Areas, the European Commission and the German Federal Ministry of Environment and Nature Conservation to strengthen countries capacity to implement their commitments to the PoWPA. The group supported the Secretariat in organising eight sub-regional workshops to address activities identified by the CoP and review implementation of the PoWPA. The outcomes of these workshops are discussed, along with lessons learned which can be applied to future activities. The need to follow up workshops with clear plans for implementation is stressed and an example of a multi-stakeholder process being developed in Mongolia is outlined.

IMPLEMENTATION OF THE PROGRAMME OF WORK ON PROTECTED AREAS between 2004–2006 was assessed at the VIIIth meeting of CBD's Conference of Parties (CoP) in March 2006. Decision VIII/24 noted the lack of implementation and existence of capacity-building constraints for developing countries; accordingly, it encouraged Parties to support and implement capacity-building activities. In response, the CBD Secretariat held an informal planning meeting in November of that year with members of international conservation NGOs (The Nature Conservancy, WWF, Conservation International, BirdLife International, Wildlife Conservation Society), IUCN–World Commission on Protected Areas, the European Commission and the German Federal Ministry of Environment and Nature Conservation. The participants agreed to support the efforts of the CBD Secretariat to strengthen countries capacity to implement their commitments to the PoWPA. The group worked with the CBD Secretariat to organise a series of workshops at sub-regional level to address activities identified by the CoP and review implementation of the PoWPA.

Eight sub-regional workshops (see Table 1, *over*) were held covering the Caribbean, East Caribbean States, Latin America, South and West Asia, ASEAN, Eastern Europe, Anglophone Africa and Central Asia and Caucasus sub-regions. The final workshop in this series was held in Libreville, Gabon in January 2008 for francophone African countries. To date the workshops have been attended by some 500 protected area practitioners and policy makers from 80 countries.

Workshop outcomes

The regional workshops provided an important platform for countries to identify challenges and obstacles in the implementation of the PoWPA as well as practical ways and means to address implementation. In particular, the workshops helped to:

- generate a dialogue towards understanding the benefits, obstacles and implementation requirements of the PoWPA;
- develop a comprehensive set of learning materials and case studies;
- provide a forum for regional level discussion, co-operation and future collaboration; and
- present an introduction and overview to policy makers on key issues in order to improve motivation towards taking in-country actions.

Table 1. *Sub-regional workshop details.*

Sub-region, location/dates	Participating countries	Lead institutions	Themes covered
Caribbean Miami, Florida 20–22 June 2006	13 countries: Antigua& Barbuda, Bahamas, British Virgin Island, Commonwealth of Dominica, Dominican Republic, Grenada, Jamaica, Montserrat, Puerto Rico, St Kitts and Nevis, St Lucia, and St Vincent and the Grenadines	TNC, in collaboration with SCBD, IUCN-WCPA, USAID, Parks in Peril	Gap analysis, SF plans, PAME and Capacity building
South America Quito, Ecuador 24–26 July 2006	10 countries: Brazil, Ecuador, Bolivia, Colombia, Costa Rica, Guatemala, Honduras, Panama, Peru and Venezuela	as above	as above
East Caribbean States St Lucia 5–7 December 2006	7 countries: Antigua & Barbuda, British Virgin Islands, Dominican Republic, Grenada, St Kitts and Nevis, St Lucia, and St Vincent and the Grenadines	as above	as above
South and West Asia Dehradun, India 2–4 April 2007	10 countries: Afghanistan, Bangladesh, India, Iran, Maldives, Nepal, Pakistan, Sri Lanka, Syria and Yemen	SCBD with financial support from EC, Government of India and in collaboration with IUCN-WCPA, TNC, WWF and WCS	Gap analysis, SF plans, PAME and review of implementation of the POW and inputs to WG second meeting
ASEAN Kota Kinabalu, Sabah, Malaysia 23–27 April 2007	10 countries: Brunei, Cambodia, Malaysia, Myanmar, Singapore, Philippines, Lao PDR, Vietnam, Indonesia, Thailand	IUCN-WCPA SEA, BirdLife International and WWF	Gap analysis, PAME and review of implementation of the POW
Eastern Europe Isle of Vilm, Germany 17–21 June 2007	11 countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Macedonia, Montenegro, Romania, Slovakia, Serbia, Ukraine	German Federal Agency for Nature Conservation/WWF in collaboration with SCBD, TNC and IUCN	Gap analysis, SF plans, PAME and review of implementation of the POW and inputs to WG second meeting
Anglophone Africa Cape Town, South Africa 13–15 August 2007	20 countries: Botswana, Egypt, Ethiopia, Gambia, Ghana, Kenya, Lesotho, Liberia, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, South Africa, Swaziland, Uganda, the United Republic of Tanzania, Zambia and Zimbabwe	SCBD with financial support from EC, and WWF and in collaboration with IUCN-WCPA, TNC, WWF, BirdLife International, CI and Government of South Africa	Gap analysis, SF plans, PAME and review of implementation of the POW and inputs to WG second meeting
Central Asia and Caucases Isle of Vilm, Germany 20–23 August 2007	12 countries: Armenia, Azerbaijan, Belarus, China, Georgia, Kyrgyzstan, Magnolia, Moldavia, Russian Federation, Turkey, Turkmenistan and Uzbekistan	German Federal Agency for Nature Conservation/WWF in collaboration with SCBD, and TNC	Gap analysis, SF plans, PAME and review of implementation of the POW and inputs to WG second meeting
Francophone Africa Libreville, Gabon 7–10 January 2008	25 countries: Angola, Algeria, Benin, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo-Democratic Republic of, Congo-Republic of, Cote d'Ivoire, Djibouti, Equatorial Guinea, Gabon, Guinea, Madagascar, Mali, Morocco, Niger, Sao Tome and Principe, Senegal, Togo and Tunisia	SCBD with financial support from Germany, GTZ, Canada	Gap analysis, SF plans, PAME and review of implementation of the POW and inputs to WG second meeting

Although the workshops achievements will ultimately be measured by the progress towards implementing the PoWPA over the coming years, initial outcomes and observations include:

- In many cases participants arrived with little awareness of the PoWPA, but left with a plan of action and idea of what it will take to implement the activities needed to complete a protected area system master plan.

- Many of the tools and methods are currently only available in English and some themes do not have tools and guidance that directly relate to PoWPA activities at all; there is thus a major need for translated texts and for some additional tools and guidance to help implement the PoWPA.

- With some exceptions, the workshops have not been well embedded in ongoing regional initiatives and have not systematically catalysed ongoing expertise for PoWPA implementation; however systematically using the PoWPA as a framework with tools and guidance targeted directly to implementation of specific PoWPA activities has helped align activities and support with government priorities.

- To date, the workshops have focused on a narrow set of themes within the PoWPA. While these are crucial as a basis for implementation, it is critical to expand the focus to key implementation commitments.

- The fact that methods have been conveyed as 'ecumenical', i.e. they are not owned by any one institution, in workshops convened by several different partners has served to improve the quality of content, present a less complex panorama of tools, and build an inter-institutional team.

- While the CBD Secretariat has done a good job in engaging stakeholders to support the workshops, and more activities planned for the second phase, there is limited central staffing to ensure consistent communication, co-ordination and logistics.

- The workshops have provided a good opportunity to ensure countries report on PoWPA implementation progress; however, the framework for measuring PoWPA implementation could be made more user-friendly and used more strategically within workshops as a mechanism to identify knowledge exchange opportunities.

Participants at a regional workshop to advance the PoWPA and discuss national progress. Photo: Jamison Ervin.

It is not possible to fully assess the long-term contribution of these capacity development activities towards PoWPA implementation at this stage as they have only been underway for a relatively short period. However, there are several indications of their significant value. The Miami workshop, for example, provided the necessary impetus for further developing the Caribbean challenge. The Anglophone Africa workshop facilitated organisation of a regional protected areas technical clinic being held in Antananarivo, Madagascar in January 2008.

The timing of the regional workshops also coincided with the launching of the UNDP/GEF early action project and in the Anglophone Africa and Central Asia and the Caucasus workshops the global project co-ordinator conducted training sessions on the preparation of project proposals. As a result, out of the 14 approved proposals in the first round of applications 12 have a connection with the regional workshops.

The workshops have also helped generate the development of a set of learning materials and case studies. Altogether 46 case studies covering gap assessment, sustainable finance plans and protected area management effectiveness assessment have been presented at the workshops. Detailed presentations on these topics, a quick guide series to various elements of the PoWPA and CDs with available tools and guidelines have also been produced[1].

Recommendations for future activities – an example from Mongolia

Further regional workshops are clearly necessary to support the implementation of the PoWPA and the lessons learned over the last two years suggest that a number of activities should be developed such as further development of tools for implementation and plans to help strengthen the CBD Secretariat's capacity to convene future workshops as well as the WCPA's capacity to ensure strong participation and ongoing knowledge sharing through its practitioner network.

In particular it is important to ensure that future workshops are linked to ongoing national or regional initiatives on protected areas so that outcomes are adequately followed up and that action plans are developed into activities on the ground. With this in mind, the CBD CoP 8 called for 'regional donor round tables' immediately following each regional workshop to discuss progress and priorities to support implementation. So far only one such meeting has taken place and it was held for only one country – Mongolia.

Although more such initiatives are clearly needed, this workshop illustrated the power of the PoWPA to bring partners together and provide a framework for protected area activities in a country or region. Many donors and NGOs have supported the government of Mongolia on biodiversity conservation for many years. Despite important progress and a wealth of activities and experience, the need for improved co-ordination and co-operation became increasingly obvious. Clearly, increased effectiveness and efficiency in delivering conservation results were in the best interest of the entire "conservation community" in Mongolia. In response, the Mongolian Ministry for Nature and the Environment (MNE) supported by GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit), WWF's Protected Areas for a Living Planet programme and WWF Mongolia organised a co-ordination workshop on the implementation of the PoWPA in Mongolia. The unprecedented two-day event brought together representatives of the Mongolian Government, donors, agencies, international and national NGOs and academia. The workshop was well-received and is expected to pave the way for more coherent and concerted efforts by all parties involved. Participants identified priority activities from the PoWPA which MNE will develop into an action plan for future collaboration.

The PoWPA has provided a comprehensive and well-structured umbrella to guide future work in Mongolia and follow-up will be ensured by a joint working group established through the workshop. Of course, the PoWPA as such will not address the many challenges facing

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1. Much of the information on these CDs can be found at: conserveonline.org/workspaces/protectedareas; www.cbd.int/protected/resources.shtml; protectedareas.org/

biodiversity conservation in Mongolia and elsewhere. It was however recognised at this workshop as probably the most promising instrument to establish a highly needed common denominator for a wide range of actors with divergent institutional realities. Mongolia has thus started to realise this as the great potential of PoWPA. As the introduction to PoWPA highlights, "parties are encouraged to apply where appropriate the objectives and activities from these thematic work programmes and the work on cross-cutting issues". In other words, every country is explicitly encouraged to finds its own way by adapting PoWPA to its specific context. It is important to communicate this flexibility so as to communicate PoWPA as a unique opportunity for countries rather than a – sometimes overwhelming – external obligation. While much remains to be done, the workshop marks an important new approach to joint efforts beyond statements of intention. It will contribute to improved conservation in Mongolia and should be considered as a model elsewhere[2].

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2. For further information please refer to the workshop proceedings available at http://econet.mn/en/index.php?id=55. The proceedings include the contact details of the organisers and participants.

Looking ahead: the PoWPA to CoP-10 and beyond

JASON SPENSLEY

As we have seen in this issue of *Parks,* the PoWPA has been the driver behind significant advances in protected area implementation and management; but it is also clear that gaps in implementation remain and that in many cases the timelines associated with the activities outlined were overly optimistic. So how can the progress that has been made so far be built upon and the lessons learned from implementation to date direct future activities? This article reviews the national 'ingredients' which seem to be a prerequisite for successful implementation of the PoWPA (i.e. developing capacity, capital, co-ordination and commitment) and discusses in detail support mechanisms which can help put them in place. Looking ahead to the coming years, the timetable of important policy forums taking place in 2008 is discussed. A framework approach is suggested which, if promoted at these international forums, could ensure that major progress in implementation of the PoWPA is reported by the time of the review of the programme at the CBD Conference of Parties in 2010.

PROGRESS MADE in implementing the PoWPA in the last four years offers valuable lessons on how it is becoming a framework to strengthen protected areas systems across the 190 signatory nations to the CBD. As this issue of *Parks* has illustrated, a new level of collaboration between regional governments and the fostering of new levels of participation between the governmental and non-governmental community is emerging.

The opportunity
The PoWPA commits CBD Parties to a global network of protected area systems that not only conserves the biodiversity on which all life depends, but also provides resilience and adaptation to the effects of climate change, as well as providing a range of valuable ecosystem services and income sources for local communities and national economies. To date, the world's governments have created nearly 130,000 protected areas, covering nearly 13% of the earth's terrestrial surface. When commitment, resources and support have been available, nations have shown remarkable accomplishments in strengthening these protected area systems through implementation of the PoWPA. But even with this remarkable progress where systematic support has been provided, globally protected area networks still fall short of achieving the goals and aspirations of the PoWPA. For a variety of reasons such as ambitious time lines, the lack of clear methods and tools, and insufficient leadership and political will, there are many regional and national gaps in habitat representation, management capacity and funding of national protected area systems. Substantial implementation of the PoWPA offers the prospect of significantly addressing these issues.

Enabling national ingredients of success
Implementation of the PoWPA is often highly variable within a single country. For example, some actions such as terrestrial ecological gap assessments of national protected areas systems have proceeded quickly, while others such as marine gap assessments are lagging. There is also variability within a region (some countries are advancing faster than others), and across multiple regions (some regions are lagging behind others). Despite these significant differences among countries, experience over the first four years of the PoWPA implementation indicates a clear set of national ingredients for successful implementation.

Four overarching 'prerequisites for success' are given below along with suggested support mechanisms which are then discussed more fully.

1. **Developing capacity:** The PoWPA represents the 'state of the art' in terms of protected area design and management; often, therefore, the skills and knowledge of staff and other people involved in protected areas needs to be developed before activities can be planned and implemented. *Suggested support mechanism: Regionally-led PoWPA implementation workshops and follow-on learning activities.*

2. **Capital:** Clearly many of the activities in the PoWPA require inputs in terms of research, monitoring or adapting management – all of which require resources. There is a need therefore for funding incentives for governments to focus on PoWPA activities, particularly given the multitude of international commitments and priorities currently being developed. *Suggested support mechanism: Early Action Grants for initial POWPA activities, evolving towards implementation of diverse, sustainable funding mechanisms for protected area systems.*

3. **Co-ordination:** The sheer breadth of the PoWPA means that national mechanisms need to take an inter-institutional and multi-stakeholder priority setting, resource leverage, implementation and adaptive management approach; which in many cases will not have been developed around protected areas before. *Suggested support mechanisms: National PoWPA Implementation Coalitions.*

4. **Commitment:** The voluntary and sincere commitment of governments and support institutions to implement the PoWPA as a means to achieve broader objectives for the long-term well-being of society is crucial to ensure effective progress in implementation. *Suggested support mechanisms: investment in establishing and communicating the broader economic, social and spiritual benefits protected area systems can provide, and establishment of Regional Voluntary Government-led Challenges.*

Support mechanisms

As suggested above, a number of support mechanisms are already proving to be highly effective in enabling the successful national level implementation of the PoWPA. International organisations and NGOs have invested technical and financial resources in these and other mechanisms. These efforts are illustrative of the type of support that needs to be continued and increased for widespread national implementation of the PoWPA on a scale that is crucial to achieve the biodiversity targets the international community has set for itself.

■ **Regionally-led PoWPA implementation workshops and follow-on learning activities**: Based on progress and lessons learned from an initial set of regional PoWPA implementation workshops a series of regionally-led PoWPA implementation capacity development activities are proposed for different regions from now through to CoP10 (see previous article).

These capacity development activities will be provided on a demand-driven basis, with support of donors, NGOs and the WCPA, within the informal framework of the PoWPA Support Coalition and will aim to include a range of activities detailed in the PoWPA including:

– assessing and improving the protected area network;
  - ecological gaps;
  - landscape and seascape integration;
  - transboundary protected areas;
  - restoration;
– assessing and improving protected area management;
  - management of threats;
  - management planning;
  - monitoring and adaptive management;
  - management effectiveness;
  - capacity;
  - participatory planning;
  - communication and education;

Table 1. *Menu of regionally-led capacity development activities to catalyse PoWPA implementation.*

Type	Characteristics

1. **Regional catalysing workshop**
Objective:
Awareness and commitment of key government leaders
	• Numerous countries
	• Attendee profile
	• Regional Donor round tables on last days
	• Capacity development for three days with:
	  - Overview of PoWPA, half day each on a number of themes
	  - Introductory technical information and case studies
	  - Senior to mid-level government officials and NGOs
	  - Overview to Action Grant opportunities
	• CBD Secretariat presence, PoWPA progress reporting

2. **Technical clinic** Objective: *Kick-start capacity and work plan for national implementation*	• One or two themes • Two to five countries • Technical level practitioners • Technical guidance, knowledge sharing, exercises
3. **Technical knowledge exchanges and technical assistance** Objective: *Ongoing support*	• One theme • Provided by peer country staff, consultant or NGO • Added benefit of regional ownership and synergy • Co-ordinated by in-region/country staff • Focused on practical solutions to common problems • Important to be embedded in broad capacity development programme

  - sustainable finance plan;
– assessing and improving the protected area enabling environment;
  - protected area system master planning;
  - policy environment;
  - sustainable finance mechanisms;
  - protected area governance; and
  - protected area benefits.

■ **Early Action Grants**
As has been discussed in other articles in this issue of *Parks* funding for protected areas activities remains a major challenge. The UNDP/GEF support for implementation of critical PoWPA activities (Dinu and Vergeichik, this issue) provides a great example of the demand and impact relatively small and easy-to-access grants can have in stimulating PoWPA related activities. However, given the challenges posed by the PoWPA and the urgent need to conserve global biodiversity and manage environmental threats much more of this type of funding is required. Full implementation of the PoWPA requires that the international community find ways of supporting the development of diverse, sustainable domestic protected area funding mechanisms (such as fee systems, payments for ecosystem services and development of ecotourism) as well as project-based funding.

■ **National PoWPA Implementation Coalitions**
Political will, technical support and adequate funding are critical for successful implementation of the overall PoWPA. Through the course of 2005 to 2007, over 30 countries established national implementation support partnerships or coalitions. These partnerships have proven instrumental for ongoing implementation in a number of ways, including:
– increasing the profile of commitments among government agencies and NGOs;
– providing a venue for collaborative planning and implementation; and
– leveraging resources for shared priorities and packaging funding proposals.

There are two crucial similarities among all national coalitions: firstly, they are all led by a government agency, and secondly all have identified PoWPA targets that are highest priority for their country to focus on. PoWPA national implementation coalitions also differ significantly in many respects among countries. Some were created after CoP-7 with the explicit purpose of strengthening the priority and co-ordination for implementing the PoWPA; this is the case with all "National Implementation Support Partnerships" (NISPs) such as in Mexico and Ecuador. Others were in operation well before CoP-7 and merely absorbed PoWPA implementation co-ordination as part of their existing mandates for collaboration on protected areas design and management. This is the case, for example, with Madagascar. Other significant differences among national PoWPA implementation coalitions include the number of institutional members (Brazil includes over 25, while Palau includes less than five), the number of PoWPA targets they focus on and the frequency of meetings.

■ **Regional Voluntary Government-led Challenges**
One of the key strengths of the PoWPA is that it provides a shared agenda around which various stakeholders in protected areas systems can gather. This is demonstrated throughout this issue of *Parks* through implementation at the national level. One of the most interesting developments to emerge around the PoWPA in the last three years is how, in offering a shared agenda between countries, it has proven to be a compelling framework for collaboration and co-operation across national boundaries. One example of this has been the so-called 'Micronesia Challenge' – whereby three sovereign and two territorial governments of neighbouring islands committed to protect 30% of their in-shore marine and 20% of their terrestrial areas by 2020. The PoWPA provided both the shared basis for this commitment and the joint roadmap for achieving it. Around the world – in the Caribbean, areas of the Mediterranean and South America for example – other neighbouring countries and municipalities are discussing the possibility of making similarly shared expressions of joint commitment and co-operation.

The road to CoP-10
The CBD's 10th Conference of the Parties (CoP-10) in 2010 will provide a crucial opportunity for protected areas, and progress on the PoWPA will be a major agenda item. The CoP will provide an opportunity to review the effectiveness of the PoWPA global framework, and potentially consider means to improve it.

Drawing on the discussion above a conceptual framework summarising a range of approaches to support national implementation of the PoWPA is illustrated in Figure 1, *over*. Putting in place the steps outlined in the framework is a major task; however a series of policy fora following the CBD's 2nd Open-Ended Working Group on Protected Areas (WGPA-2) in February 2008 occur before the CoP-10. If these fora can be used to develop the framework presented here, they can shape the way the international community orients the fate of protected areas for decades to come. The most important of these fora are:
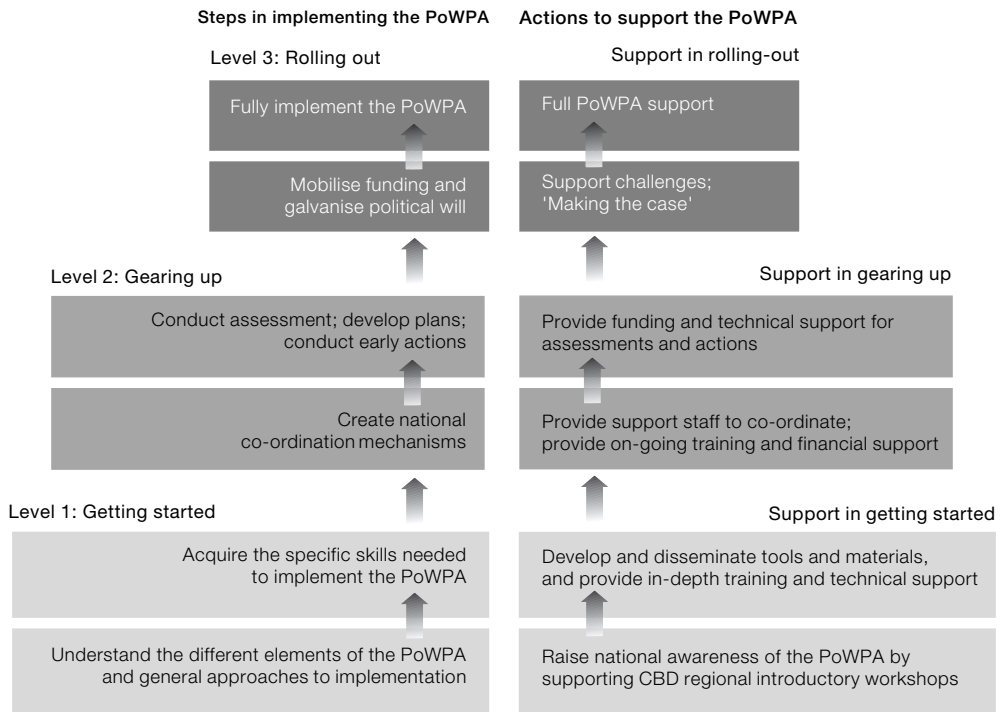
■ **Durban+5: South Africa, 11–17 April 2008**
Durban+5 will be hosted by the Government of South Africa and organised by the IUCN World Commission on Protected Areas. This meeting will review progress since the 2003 Durban World Parks Congress and define priorities for the next five years, including advancing implementation and renewal of the PoWPA.

■ **CoP-9: Germany, 19–30 May 2008**
CoP-9 will approve decisions from WGPA-2. It will also provide a crucial venue to launch initiatives and voluntary commitments that are critical to catalysing implementation of the PoWPA. Links for implementation and funding need to be increasingly articulated between protected areas and the PoWPA. Other issues on the CoP-9 agenda include island biodiversity, invasive alien species, agriculture and forests.

Figure 1. *Conceptual framework to support national implementation of the PoWPA.*

Steps in implementing the PoWPA

Actions to support the PoWPA

Level 3: Rolling out

Support in rolling-out

Fully implement the PoWPA

Full PoWPA support

Mobilise funding and galvanise political will

Support challenges; 'Making the case'

Level 2: Gearing up

Support in gearing up

Conduct assessment; develop plans; conduct early actions

Provide funding and technical support for assessments and actions

Create national co-ordination mechanisms

Provide support staff to co-ordinate; provide on-going training and financial support

Level 1: Getting started

Support in getting started

Acquire the specific skills needed to implement the PoWPA

Develop and disseminate tools and materials, and provide in-depth training and technical support

Understand the different elements of the PoWPA and general approaches to implementation

Raise national awareness of the PoWPA by supporting CBD regional introductory workshops

■ **World Conservation Congress (WCC), October 2008**
This will be the biggest conservation congress to date, and 10,000 participants are expected to attend; already some 20% of the member session submissions directly relate to protected areas, which is the highest amount for any thematic area. The WCC will provide an opportunity to develop a broadly shared vision of the contribution of protected areas beyond 2010. The synergies between protected areas and both health and climate change will feature prominently at WCC. It is important that WCC provide ideas and a certain level of consensus about how the PoWPA can and should catalyse a renewed framework to 2020.

■ **CoP-10: Japan 2010**
The PoWPA is scheduled for review at CoP-10. While it is clear the timeline for PoWPA is ambitious and should perhaps be adjusted, the set of targets and activities it comprises has proven to be an comprehensive framework that, in many countries, has been extraordinarily useful for catalysing action, identifying priorities and linking a supply of support with government-led demand. CoP-10 provides an opportunity for renewing the PoWPA, with increased articulation of links to climate change and livelihood dimensions. CoP-10 also provides an opportunity to more explicitly align implementation support mechanisms with national ingredients of success.

Conclusions

For the PoWPA to achieve a significant degree of implementation in a critical mass of countries by the time it is reviewed at CoP-10, dramatically increased investment needs to be made to supporting countries through the range of PoWPA activities. The options, action and opportunities discussed in this article provide one way to ensure that by using the PoWPA effectively,

Ancient Japanese cedars protected on Yakushima, Japan. In 2010 Japan will host CoP 10 of the CBD where the PoWPA will be reviewed. Photo: Sue Stolton.

protected areas can fulfil their crucial role in protecting the world's biodiversity and ensuring ecosystem functions remain viable.

Where the national ingredients and support elements outlined in this article are present, we tend to see significant progress in the strengthening of national systems of protected areas – whether expressed through the strength of collaboration between national protected area stakeholders, the development of clear roadmaps for developing the protected area system, the declaration of goals to expand a protected area system or the creation of new protected areas. If the proposed 'ingredients' for success are supported and established on a more systematic and widespread basis, then in 2010 and 2012 we will look back on a much greater shared legacy through the PoWPA.

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Résumés

Programme de travail sur les aires protégées – passage en revue de la mise en œuvre du programme au plan mondial

JAMISON ERVIN, SARAT BABU GIDDA, ROLLA SALEM ET JESSE MOHR

L'article résume les progrés effectués ces quatre dernières années dans les quatre principaux éléments du Programme de travail sur les aires protégées. L'élément 1, l'évaluation, l'amélioration et la gestion des réseaux d'aires protégées, est le secteur pour lequel le plus de renseignements sont disponibles. Les auteurs présentent une compilation des nouvelles aires protégées, et de nombreux pays ont effectué des analyses d'écart et s'impliquent dans la planification de réseaux d'aires protégées à plus grande échelle. Cependant, certains biomes restent gravement sous-représentés et moins d'un tiers des aires protégées disposent d'un plan de gestion. Les données disponibles sur les deux éléments suivants, la gouvernance et l'environnement politique, sont plus disparates : seule une poignée de pays ont effectué une évaluation des besoins financiers. Enfin, l'élément 4 sur l'efficacité de la gestion connaît une réussite relative, avec un accroissement rapide du nombre d'évaluations menées à bien, bien que ceci ne couvre qu'une petite proportion de l'état des aires protégées dans le monde.

Réalisation d'une analyse d'écart écologique pour le nouveau système d'aires protégées de Madagascar

LAURETTE RASOAVAHINY, MICHÈLE ANDRIANARISATA, ANDRIAMANDIMBISOA RAZAFIMPAHANANA ET ANITRY N. RATSIFANDRIHAMANANA

L'engagement pris lors du Vième Congrès Mondial des Parcs de l'UICN en 2003 par M. Ravalomanana, Président de Madagascar, de tripler la couverture en aires protégées du pays signifie que Madagascar est déjà bien placée pour atteindre ses objectifs dans le cadre du Programme de travail sur les aires protégées. Cet article décrit le processus mis en place pour veiller à ce que cette augmentation massive de la couverture en aires protégées soit ciblée de manière à conserver les habitats et espèces les plus importants. Il discute des défis de la collecte et de la vérification des données à travers le recours à des groupes d'experts ainsi que de divers programmes de modélisation des aires protégées, et présente enfin un compte-rendu sur la mise en œuvre du programme. Les expériences de Madagascar constituent un cas d'étude pour tout pays désireux d'étendre sa couverture en aires protégées et d'effectuer une analyse d'écart écologique afin d'assurer la protection des aires de biodiversité essentielles. L'article souligne l'importance d'une collaboration entre les spécialistes de la biodiversité intervenant dans le pays (c'est-à-dire les scientifiques et les ONG) et de disposer de données fiables sur les espèces clés ainsi que sur les menaces actuelles et potentielles qui pèsent sur elles, afin de constituer la base de l'analyse d'écart.

Gouvernance des aires protégées en Asie du Sud : quels progrès ?

TASNEEM BALASINORWALA, ASHISH KOTHARI ET HANNA JAIRETH

Cet article dresse le compte-rendu d'une évaluation de la mise en œuvre en Asie du Sud de l'élément 2 du Programme de travail sur les aires protégées, axé sur la gouvernance, la participation, l'équité et le partage des avantages. Bien que certains progrès aient été accomplis dans la mise en œuvre de l'élément 2 dans cette région, l'examen montre qu'il reste encore bien plus à faire à la fois pour modifier la législation et les politiques et pour traduire ces changements en résultats concrets. Parmi les aires protégées gérées par les gouvernements, les aires de montagne au Népal, les forêts au Bangladesh, les aires côtières au Sri Lanka et les sanctuaires de faune sauvage en Inde tendent à s'orienter vers une gouvernance plus participative qu'auparavant (bien que cela reste souvent plus sur le papier que sur le terrain). En ce qui concerne les aires conservées par des communautés, les sites de zones humides du Bangladesh et les terres communautaires ou privées en Inde commencent à être reconnues et soutenues dans les lois et programmes de conservation. Dans la région, il reste également encore beaucoup de chemin à parcourir pour faire en sorte que les coûts et les avantages des aires protégées et la prise de décision soient partagés équitablement. L'article conclut par des recommandations sur la façon dont les pays d'Asie du Sud pourraient avancer de manière plus proactive vers la mise en œuvre de cet élément du Programme de travail sur les aires protégées.

Déficits de financement actuels et mécanismes innovants de financement pour mettre en œuvre le Programme de travail sur les aires protégées

KALEMANI JO MULONGOY, SARAT BABU GIDDA, LISA JANISHEVSKI ET ANNIE CUNG

Le Secrétariat de la CBD a réuni des informations sur les estimations des besoins financiers liés à la mise en œuvre du Programme de travail sur les aires protégées pour 20 pays, ces estimations montrent des déficits de financement gouvernemental constants. Quatre raisons principales à ces défauts de financements sont abordées : le manque d'engagement des gouvernements, les contraintes législatives, politiques et institutionnelles, des gestionnaires mal armés pour s'occuper de la collecte de fonds et des connaissances techniques limitées au sein des agences en charge des aires protégées en ce qui concerne les nouveaux mécanismes de financement. Un déclin à long terme du soutien des états accroît le besoin de mécanismes innovants de financement et l'article fait la synthèse des informations disponibles sur 39 mécanismes différents de financement pour les aires protégées, allant du soutien des états jusqu'aux partenariats public-privé. Ces derniers font l'objet d'une discussion plus détaillée et les auteurs résument quelques-unes des conditions à remplir.

Aires naturelles protégées au Pérou : valeur des avantages et financement durable

FERNANDO LEÓN ET JUAN CHANG

Le Pérou est un pays d'une extraordinaire valeur en termes de biodiversité, et son système d'aires protégées s'étend rapidement. La sécurité des finances et des ressources pour la gestion des aires protégées n'a cependant pas connu le même rythme de croissance, laissant le système d'aires protégées du pays massivement dépendant de donateurs extérieurs. Poussé par cette discordance entre les besoins de gestion et la disponibilité des ressources, ainsi que par les cibles de durabilité financière définies par le Programme de travail sur les aires protégées, le Pérou a commencé à élaborer un plan de financement pour son système d'aires protégées. Cet article décrit la situation actuelle concernant le financement durable des aires protégées au Pérou et discute de l'élaboration du plan de financement. Il insiste en particulier sur la nécessité de reconnaître et d'intégrer dans les investissements qui leurs sont consacrés dans les budgets nationaux les valeurs et les avantages issus de la conservation de la biodiversité, et plus particulièrement la conservation dans les aires protégées et leur intégration dans les investissements qui leur sont consacrés dans les budgets nationaux.

Aires protégées normes et évaluation : outils et ressources

JAMISON ERVIN ET NIGEL DUDLEY

Il existe trois catégories d'évaluation dans le Programme de travail sur les aires protégées en ce qui concerne la conception des aires protégées, leur gestion et l'environnement propice à leur création. Au sein de ces catégories, on compte huit thèmes majeurs d'évaluation - les écarts écologiques, les menaces, l'efficacité de la gestion, la capacité, les avantages, la gouvernance, le financement durable et l'environnement politique – lesquels sont par bien des manières interdépendants. Cet article se penche tour à tour sur chacun de ces thèmes, passe en revue les méthodologies actuelles d'évaluation et identifie les endroits où d'autres travaux sont nécessaires en vue de développer des outils et des conseils.

Soutien du PNUD/GEF pour la mise en œuvre d'activités cruciales du Programme de travail sur les aires protégées

ADRIANA DINU ET MAXIM VERGEICHIK

Dès 2005, il existait un consensus international qu'un programme de microfinancement de taille modeste et évoluant relativement rapidement pouvait apporter une contribution d'une importance cruciale pour aider les pays à développer de la capacité et des partenariats afin de permettre la mise en œuvre du Programme de travail sur les aires protégées. Début 2007, le GEF (le fonds mondial pour l'environnement) a avalisé le projet de " Soutien de l'action des pays sur le Programme de travail sur les aires protégées de la CBD ", apportant 9,4 millions de dollars de financement, gérés par le PNUD. TNC et d'autres grandes ONG internationales se sont engagées à hauteur de plus de 4 millions de dollars US de cofinancement. Cet article discute de la construction du financement, des 13 activités cruciales du Programme de travail

sur les aires protégées qu'il soutient, et procure une brève vue d'ensemble des pays qui en bénéficient après la première tranche de mises en application. On trouvera davantage d'informations sur le projet à l'adresse suivante : www.protectedareas.org

Travailler ensemble pour renforcer la capacité nationale et régional en matière de mise en œuvre des engagements

JASON SPENSLEY, JAMISON ERVIN, SARAT BABU GIDDA, ROLF HOGAN ET STEVE WATKINS, AVEC LA PARTICIPATION DE TILMAN JAEGER (CONCERNANT LA MONGOLIE)

Le défaut de mise en œuvre des engagements et les contraintes de construction de capacité pour les pays en développement dans la mise en œuvre du Programme de travail sur les aires protégées ont été évalués lors de la huitième assemblée de la Conférence des parties (CdP) à la Convention sur la biodiversité en mars 2006. L'une des réponses positives a été le soutien donné au Secrétariat de la CBD par la CMAP (la Commission mondiale des aires protégées), la Commission Européenne, le ministère fédéral allemand de l'Environnement et de la Conservation de la Nature, et par un certain nombre d'ONG œuvrant dans le domaine de la conservation internationale (TNC, WWF, Conservation International, BirdLife International et la Wildlife Conservation Society) pour renforcer la capacité de ces pays à mettre en œuvre leurs engagements dans le cadre du Programme de travail sur les aires protégées. Ce groupe a apporté son soutien au Secrétariat dans l'organisation de huit ateliers régionaux afin d'aborder les activités identifiées par la CdP et de passer en revue la mise en œuvre du Programme de travail sur les aires protégées. L'article discute des conclusions de ces ateliers ainsi que des leçons à retenir pour les activités futures. Les auteurs mettent en avant la nécessité d'ateliers de suivi avec des plans de mise en œuvre clairs et décrivent un exemple de processus à plusieurs parties prenantes élaboré en Mongolie.

Perspectives : le Programme de travail sur les aires protégées à la CdP-10 et au-delà

JASON SPENSLEY

Comme nous l'avons vu dans ce numéro de Parks, le Programme de travail sur les aires protégées a été le moteur des avancées significatives constatées dans la mise en œuvre et la gestion des aires protégées ; mais il est également clair que des écarts subsistent dans cette mise en œuvre et que dans de nombreux cas, les prévisions associées aux activités planifiées se sont avérées exagérément optimistes. Alors comment peut-on s'appuyer sur les progrès déjà accomplis, et sur les leçons à retenir de la mise en œuvre réalisée à ce jour, pour orienter les activités futures ? Cet article passe en revue les " ingrédients " nationaux qui semblent être une condition préalable à une mise en œuvre réussie du Programme de travail sur les aires protégées (c'est-à-dire le développement de la capacité, le capital, la co-ordination et l'engagement) et traite en détail des mécanismes de soutien qui peuvent aider à les mettre en place. En ce qui concerne les perspectives pour les années à venir, l'article aborde le calendrier des réunions politiques importantes qui doivent se tenir en 2008. Il suggère une approche cadre qui, si elle est promue lors de ces réunions internationales, pourrait permettre de faire état de progrès majeurs dans la mise en œuvre du Programme de travail sur les aires protégées au moment de la révision du programme à la Conférence des parties à la Convention sur la biodiversité en 2010.

Resúmenes

El programa de trabajo sobre áreas protegidas – una revisión de su implementación global

JAMISON ERVIN, SARAT BABU GIDDA, ROLLA SALEM Y JESSE MOHR

El artículo examina los avances en los cuatro elementos principales que componen el Programa de trabajo sobre áreas protegidas de la CDB (PdTAPs) después de cuatro años. Elemento 1: el sector que cuenta con más información disponible es la evaluación, mejoramiento y gestión de las redes de áreas protegidas. Se presenta una compilación de nuevas áreas protegidas así como los análisis de vacíos desarrollados por muchos países que se han involucrado en la planificación de extensas redes de áreas protegidas. Sin embargo, algunos biomas continúan muy mal representados y menos de un tercio de las áreas protegidas cuentan con un plan de gestión. Los datos sobre los dos elementos siguientes, gobernabilidad y política ambiental, son mucho más escasos: sólo un pequeño grupo de países ha desarrollado una evaluación de las necesidades financieras. Para finalizar, el Elemento 4 sobre eficacia de la gestión ha tenido un éxito relativo, con un rápido aumento en el número de evaluaciones realizadas, aunque éstas todavía cubren sólo una pequeña parte del total de áreas protegidas del mundo.

Desarrollando un estudio de vacíos ecológicos para el nuevo sistema de áreas protegidas de Madagascar

LAURETTE RASOAVAHINY, MICHÈLE ANDRIANARISATA, ANDRIAMANDIMBISOA RAZAFIMPAHANANA Y ANITRY N. RATSIFANDRIHAMANANA

La promesa del presidente Ravalomanana de Madagascar en el V Congreso Mundial de Parques en 2003, de triplicar la cobertura de áreas protegidas en el país es prueba de que Madagascar está ya bien ubicado para cumplir con las metas de PoWPA. En este artículo se documenta el proceso utilizado para garantizar que este aumento significativo en la cobertura de áreas protegidas tenga como objetivo la conservación de los hábitats y especies claves. Se analizan los desafíos enfrentados para reunir y verificar los datos a través del uso de grupos de expertos y varios programas de modelación de áreas protegidas y para finalizar, se presentan los informes de implementación. Las experiencias de Madagascar constituyen un estudio de caso para cualquier país que desee ampliar su cobertura de áreas protegidas y que desee llevar a cabo un análisis de vacíos ecológicos para garantizar que se protejan las áreas claves de biodiversidad. Destaca la importancia de la colaboración entre los especialistas en biodiversidad que trabajan en un país (por ejemplo, científicos y ONGs) y también la importancia de contar con datos fiables sobre las especies principales y las amenazas actuales y potenciales a las que están sometidas, lo que sirve como base para los análisis de vacíos.

Gobernabilidad de las áreas protegidas en Asia Meridional: ¿Cuánto se ha avanzado?

TASNEEM BALASINORWALA, ASHISH KOTHARI Y HANNA JAIRETH

Este artículo informa sobre la evaluación de la implementación del Elemento 2 del PdTAPs, cuyo objetivo es la gobernabilidad, participación, equidad y beneficios compartidos en Asia Meridional. Los resultados indican que si bien ha habido progresos en la implementación del Elemento 2 en la región, todavía se necesita hacer mucho más, tanto para cambiar la legislación y las políticas, como para traducir esos cambios en resultados concretos. Entre las áreas protegidas por los gobiernos, áreas montañosas en Nepal, bosques en Bangladesh, áreas costeras en Sri Lanka, santuarios de vida silvestre en la India, hay una tendencia hacia una gobernabilidad más participativa de lo que existía anteriormente (aunque con frecuencia esto ocurre más en la teoría que en la práctica). En cuanto a las áreas comunitarias protegidas, se ha comenzado a reconocer y apoyar con leyes y programas de conservación los humedales en Bangladesh y tierras privadas/ comunes en la India. En la región, mucho queda por hacer para garantizar que los costos y beneficios de las áreas protegidas, así como la toma de decisiones, se comparta de manera equitativa. El artículo concluye con recomendaciones sobre cómo los países de Asia Meridional pueden avanzar de manera más proactiva hacia la implementación de este elemento del PtAPs.

Déficit actual de financiamiento y mecanismos innovadores de financiamiento para implementar el PtAPs

KALEMANI JO MULONGOY, SARAT BABU GIDDA, LISA JANISHEVSKI Y ANNIE CUNG

El secretariado de la CDB ha recopilado información sobre estimaciones de las necesidades financieras para implementar el PtAPs en 20 países, lo que muestra un constante déficit en el financiamiento por parte de los gobiernos. Se analizan las cuatro causas fundamentales del déficit financiero: falta de compromiso gubernamental; limitaciones legislativas, normativas e institucionales; falta de capacitación de los directivos para recaudar fondos y falta de conocimiento técnico por parte de las agencias de áreas protegidas sobre los nuevos mecanismos de financiamiento. La disminución a largo plazo en el apoyo del estado aumenta la necesidad de buscar mecanismos innovadores de financiamiento. Este trabajo resume la información de 39 diferentes mecanismos de financiamiento para las áreas protegidas, los que abarcan desde el apoyo estatal hasta asociaciones entre los sectores públicos y privados. Este último mecanismo se presenta de manera más detallada y se resumen las condiciones necesarias para su aplicación.

Áreas naturales protegidas en Perú: evaluando beneficios y desarrollando el financiamiento sostenible

FERNANDO LEÓN Y JUAN CHANG

Perú es un país con una biodiversidad de valor extraordinario y cuenta con un sistema de áreas protegidas que se desarrolla rápidamente. Sin embargo, la seguridad financiera y de recursos para la gestión de áreas protegidas no ha aumentado al mismo paso, lo que ha hecho que el sistema de áreas protegidas del país dependa en gran medida de donantes externos. Como resultado del desequilibrio entre los requerimientos para la gestión y la disponibilidad de recursos, así como los objetivos trazados por el PtAPs para la sostenibilidad financiera, Perú ha comenzado a desarrollar un plan financiero para su sistema de áreas protegidas. Este artículo analiza la situación actual en cuanto al financiamiento sostenible de las áreas protegidas en Perú y el desarrollo del plan financiero. En particular, el artículo destaca la necesidad del reconocimiento y la integración en las inversiones de los presupuestos nacionales de los valores y beneficios derivados de la protección de la biodiversidad, en especial la conservación de las áreas protegidas y su integración en las inversiones realizadas en los presupuestos nacionales.

Estándares y evaluación de áreas protegidas: herramientas y recursos

JAMISON ERVIN Y NIGEL DUDLEY

Existen tres categorías de evaluación en el PtAPs relacionadas con el diseño, gestión y condiciones que faciliten las actuaciones en las áreas protegidas. Dentro de estos tres hay ocho temas principales de evaluación – vacíos ecológicos, amenazas, eficacia en la gestión, capacidad, beneficios, gobernabilidad, finanzas sostenibles y política ambiental – y estas se interrelacionan de muchas formas. Este artículo analiza cada una por separado, revisa las metodologías actuales sobre evaluación e identifica dónde es necesario seguir trabajando para el desarrollo de herramientas y orientación.

Apoyo del PNUD/FAG para la implementación de las actividades principales del PtAPs

ADRIANA DINU Y MAXIM VERGEICHIK

En el año 2005 existía un consenso internacional de que un modesto plan de subvenciones relativamente pequeñas y rápidas sería una contribución importante para ayudar a los países en el desarrollo de capacidades y asociaciones que permitieran la implementación del PtAPs. A principios de 2007, el FAG había aprobado el proyecto "Apoyo a la acción nacional en el marco del programa de trabajo del CBD sobre zonas protegidas", con un financiamiento de US$ 9,4 millones que serían administrados por el PNUD. TNC y otras ONGs internacionales se comprometieron a aportar US$ 4 millones en co-financiación. Este artículo trata sobre el desarrollo del fondo, las 13 actividades del PtPAs que apoya, y proporciona una breve panorámica de los países que reciben ayuda del fondo a partir de la primera ronda de solicitudes. Para más información, visite: www.protectedareas.org.

El trabajo conjunto para fortalecer la capacidad nacional y regional de implementación

JASON SPENSLEY, JAMISON ERVIN, SARAT BABU GIDDA, ROLF HOGAN Y STEVE WATKINS CON TILMAN JAEGER (EN RELACIÓN A MONGOLIA)

En marzo de 2003, en la octava reunión de la Conferencia de las Partes (CoP) de CDB se evaluó la falta de implementación y las limitaciones para el desarrollo de capacidades para que los países en vías de desarrollo puedan implementar el PtPAs. Una respuesta positiva fue el apoyo brindado al Secretariado de CDB por parte de la CMAP (Comisión mundial de áreas protegidas) – la Comisión Europea, el Ministerio Federal Alemán para la Conservación de la Naturaleza y el medio Ambiente, y un número de ONGs internacionales para la preservación de la naturaleza (TNC, WWF, Conservation International, BirdLife International y la Wildlife Conservation Society) para fortalecer la capacidad de los países en la implementación de sus compromisos con el PtPAs. El grupo apoyó al secretariado en la organización de ocho talleres sub-regionales para analizar las actividades identificadas por la CoP y revisar la implementación del PtAPs. Se presentan los resultados de estos talleres junto con las lecciones aprendidas, las que se pueden aplicar a actividades futuras. Se destaca la necesidad de talleres de seguimiento con planes claros de implementación y se ilustra el ejemplo de un proceso con la participación de todas las partes interesadas desarrollado en Mongolia.

Una mirada hacia el futuro: el PtAPs hacia la CoP-10 y más allá

JASON SPENSLEY

Como hemos visto en este número de Parks, el PtAPs ha sido el conductor de los avances significativos logrados en la implementación y gestión de las áreas protegidas; sin embargo, también es evidente que todavía existen vacíos en cuanto a su implementación y, en muchos casos, los plazos fijados para las actividades descritas eran demasiado optimistas. Entonces ¿Cómo podemos avanzar hacia actividades futuras a partir de lo logrado hasta el momento, y a partir de las lecciones aprendidas en la implementación? Este artículo presenta los "ingredientes" nacionales que constituyen requisitos previos para la implementación exitosa del PtAPs (por ejemplo, el desarrollo de capacidades, capital, coordinación y compromiso) y analiza en detalle los mecanismos de apoyo necesarios para ejecutarlos. Como mirada al futuro, se presenta el cronograma de foros importantes para el diseño de políticas que se celebrarán en 2008. Se sugiere un enfoque marco que, de ser promovido en estos foros internacionales, podría garantizar que se reporten mayores progresos en la implementación del PtAPs cuando se revise el programa en la Conferencia de las Partes de CDB en 2010.

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La Unión Mundial para la Naturaleza fortalece el trabajo de sus miembros, redes y asociados, con el propósito de realizar sus capacidades y apoyar el establecimiento de alianzas globales para salvaguardar los recursos naturales a nivel local, regional y global.

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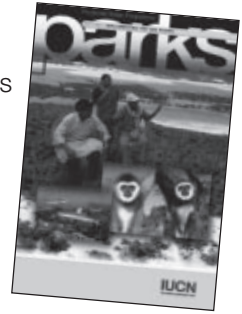
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