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The Corbett Action Plan for Protected Areas of the Indomalayan Realm

Prepared during the 25th Working Session of
IUCN's Commission on National Parks and
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Corbett National Park, India



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Cover photograph: Elephants grazing along the Ramganga River in Corbett National Park, India, the first national park in Asia, established in 1935 (Photo - Thorsell).

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THE CORBETT ACTION PLAN FOR PROTECTED

AREAS OF THE INDOMALAYAN REALM

by

IUCN's Commission on National Parks and Protected Areas

INTRODUCTION

The next ten years provide what may be the last chance to achieve significant additions to the world's network of protected areas. For a variety of reasons, the situation is particularly critical in South and East Asia, where rapidly increasing human populations are exerting unprecedented pressures on some of the richest and most diverse living natural resources on earth.

The need for concrete and unified action is very evident. This action plan seeks to address the pressing need for completing the Indomalayan network of protected areas and for more effective management of the existing protected areas in the Realm.

This document was developed to provide a regional overview of actions needed to more effectively plan and manage protected areas of the Indomalayan Realm over the next several years. It is an action plan developed from the "ground up" -- it was prepared by field managers from 16 countries at a working session of IUCN's Commission on National Parks and Protected Areas (CNPPA) held in India's Corbett National Park from 3 to 8 February 1985. The plan is designed by and for countries in the region and spells out both general guidelines for action as well as some specific requirements for each country.

THE APPROACH

It is apparent that effective action on protected areas must be initiated and carried out by the nations directly involved. Therefore, the first set of recommended actions under each objective of the Corbett Action Plan is directed to governments and non-governmental conservation organizations in the nations of the Indomalayan Realm. Together, these actions form a checklist of necessary actions to improve the management of protected areas in any country.

Based on what action is required from governments, priorities are then identified for supporting action by international conservation agencies, including IUCN, WWF, UNEP, UNESCO, FAO, ASEAN, World Bank, bilateral development agencies, and many others. The plan is also addressed to the national parks authorities of the USA, New Zealand, Australia, and other countries which are also making significant contributions to their counterpart agencies in the Indomalayan Realm.



This action plan complements and helps implement the Bali Action Plan and the Action Plan for Biosphere Reserves, with actions designed for the specific conditions in the Indomalayan Realm. Some countries already have national action plans for protected areas and are well advanced with implementation of some of the activities suggested here. But other countries may not have such plans or may face other obstacles. This plan provides the direction and the general guidelines for action, which will then need to be modified for the specific requirements of each country's development planning process.

Activities designed to strengthen management capabilities are fundamental to the effectiveness of any national protected area programme. These activities typically begin with the responsible agency in the central government, which controls the professionally-strong apparatus needed to promote conservation at the field level. Specialization in many different fields -- from education to community relations to anti-poaching to management planning -- is required and training institutions are needed to provide such professionalism.

Research and monitoring capability is essential to document values and check on the functioning and continuing status of the system and the management actions being taken. Research effort has to come from a variety of institutions in a country; all need support and encouragement. Further, this research effort must address real needs, and address its findings to protected area managers, who in turn must increasingly apply research results to their day-to-day requirements.

Ultimately, it is the people of a country who will decide the scope of conservation activities. Conservation measures which are socially unacceptable to a majority of the population will eventually fail, so there is an urgent need to increase education and interpretation programmes, especially in conflict zones. Negative impacts need to be lessened and conservation benefits need promotion. It is perhaps this aspect of conservation planning -- the human dimension -- which requires the greatest thrust in years to come, especially in the Indomalayan Realm, where dense rural populations are still dependent on many living natural resources.

These living natural resources are a common heritage to mankind -- they have values at local, national and international levels. The exploitation of these resources is being greatly accelerated by the process of economic development, often aided by financial support from international sources. Therefore, it is necessary that international cooperation also be directed toward achieving conservation aims. This will be most effective for well-planned projects which clearly emphasize improvement of the quality of human existence as part of protected areas management.

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The first draft of this Plan was prepared by Samar Singh, IUCN Councillor and CNPPA Vice-Chairman for the Indomalayan Realm, in collaboration with Allan Rodgers, FAO Expert at the Wildlife Institute of India. The draft was revised by the IUCN Secretariat to add an international component, then reviewed and revised by members of CNPPA at the Commission's Working Session held in India's Corbett National Park from 3 to 8 February 1985. Results of this review were coordinated by Jeffrey A. McNeely at the IUCN Secretariat, with the revised draft then distributed to all participants of the Corbett meeting, as well as to other experts in the Indomalayan Realm. Written comments were received by: M.K. Appayya, S.R. Arya, S. Attapatu, John Blower, J.C. Daniel, H.K. Eidsvik, Paul D. Goriup, Michael Kavanagh, Mohd. Khan bin Momin Khan, Reza Khan, Jose Lechoncito, John MacKinnon, Vo Quy, M.K. Ranjitsinh, John Sale, Bittu Sahgal, N.M. Sarker, Jeff Sayer, Arjan Singh, Benni H. Sormin, Effendy Sumardja, M.S. Swaminathan, James Thorsell and Ann Wright; these individuals were contributing on a personal basis which does not imply an endorsement of the recommendations in the Plan by any government or government agency.

THE CORBETT ACTION PLAN

Goal 1 THE ESTABLISHMENT OF A REPRESENTATIVE NETWORK OF PROTECTED AREAS WITHIN THE INDOMALAYAN REALM

Objective 1.1. TO USE MODERN BIOGEOGRAPHIC CONCEPTS TO PREPARE REVIEWS OF NATURAL HABITATS AND ECOLOGICAL COMMUNITIES WITHIN EACH NATION AND DETERMINE THE ADEQUACY OF PROTECTED AREA COVERAGE OF THESE HABITATS AND COMMUNITIES.

Activities at the National Level:

- 1.1.1. Using the currently accepted biogeographic zonation for the country, map the major habitats and their faunal communities, including the locations of centres of endemism, pristine habitats, and areas of exceptional species and community diversity.
- 1.1.2. Prepare inventories of key species in each biogeographic unit and in each protected area.
- 1.1.3. Determine whether the habitats and fauna in the country, especially centres of endemism and areas of high diversity, have adequate and viable conservation status, and identify the gaps in the national reserve system.
- 1.1.4. Determine whether existing protected areas are of large enough size and are receiving appropriate management to fulfil their protective role.
- 1.1.5. Determine where additional protected areas are required and take steps to establish such areas; and identify areas where conservation measures need to be implemented or strengthened.

Activities at the International Level:

- 1.1.6. Conduct, prepare, and disseminate widely a protected area systems review for the Indomalayan Realm, linking the distribution of habitats and species, in order to provide a framework for national action. (In preparation by IUCN, to be completed by mid-1986).
- 1.1.7. Provide a realm-based data base on protected areas to compile the information collected by governments and other experts; and publish relevant data as a Directory of Indomalayan Protected Areas. (In preparation by IUCN, to be completed by mid-1986).
- 1.1.8. Provide the necessary information and other forms of support to governments to enable them to assess the adequacy of their protected area coverage. (Action by IUCN, WWF, Unesco, FAO, others).

- 1.1.9. Promote action by governments as a follow-up to the systems review and Realm directory. (Action by IUCN, WWF, ASEAN, UNEP).
- 1.1.10. Promote collaboration by governments in developing a biogeographical classification system which could be used throughout the Realm, at a scale which would be meaningful for assessing national coverage and protecting biological diversity. (Action by IUCN).

Objective 1.2. TO ENSURE ADEQUATE CONSERVATION STATUS FOR PRIORITY BIOLOGICAL COMMUNITIES.

Activities at the National Level:

- 1.2.1. From objective 1.1 above, give priority for on-the-ground action to biomes, habitats, and areas considered fragile and threatened so that suitable areas can be protected. Examples of areas which require urgent attention include:
- St. Martin's Island of Bangladesh (as a marine national park);
 - Kyatthin Wildlife Sanctuary in Burma (needs to be up-graded to Nature Reserve and provided with professional staff);
 - Thamihla Kyun and South Moscos, and Kadonly Kyun in Burma (need to be established as marine reserves);
 - The Batu Apoi Forest Reserve of Brunei (should be upgraded to national park status);
 - Mishmi Hills (especially areas of takin habitat);
 - Distinctive communities of Andaman (especially the virgin forests of the middle Andamans), Nicobar, and Lakshwadeep islands, especially those areas with freshwater lakes;
 - A sanctuary for the Indian Bustard in Andhra Pradesh;
 - The unique ecosystem of Simlipal Tiger Reserve in Orissa;
 - Indravati National Park, Bastar, Madhya Pradesh;
 - The bamboo forests of Saranda, Bihar;
 - Krusadei and Shingle islands of the Rameshwaram coast (India);
 - Logtak Lake in Manipur, India;
 - A marine park in the Gulf of Mannar, India;
 - Neora Valley of West Bengal (as a national park);
 - Higher altitude montane forest areas in west, central and east Himalayas, including the Inner Seraj Pandra, areas of Outer Seraj and Bushahar, and Bharmour area of Chamba in Himachal Pradesh;
 - Cold deserts of Ladakh, Lahul and Spiti in north India;
 - Moist tropical forests of northeast India (Arunachal Pradesh, Assam, Meghalaya);
 - Semi-arid and temperate grasslands in northwest India;
 - Khadir Island and adjacent areas of the Great Rann of Kutch (India);
 - Lower-level moist forest of the Western Ghats, India;
 - Tropical lowland forests of Kalimantan, Indonesia (including appropriate action on Peiraira S. Mahakam, Danau Semagang, Berambai, Kelompok Hutan Kapur, Muara Sebuku, Sungai Kayan-S. Mentarang, Pleihari Martapura, Muara Uya, Hutan Sambas, Gn. Niut/Becapa, and Danau Sentarum);

- Surveys of priority areas of Sumatra, including Tiga Puluh Mountains, Kota Panjang, Torgamba, and Bukit Patah;
- Mangrove forests in Java (Indonesia);
- Coastal and marine habitats in Indonesia, following recommendations made in the Master Plan for Coastal and Marine Protected Areas;
- Improved management of Koulen-Promtep, Lomphan and Phnom Prich reserves in Kampuchea;
- Establishment of suitable area for conservation of kouprey in Champassak (Kampuchea)(an area of 160,000 ha in Muong Moun Lapamok District has been proposed);
- Endau Rompin National Park (Malaysia);
- Establishment of reserve on Kalumpang Island, Perak (Malaysia);
- Limestone forests and heath forests in Sarawak and Sabah (Malaysia)(threatened by logging/expansion of plantation crop areas);
- Lowland peat swamp and mangrove forests in Sarawak;
- The Silabukan-Lumerau Forest Reserves block in Sabah;
- Improved management of the Tabin Wildlife Sanctuary in Sabah;
- Evaluation of Koshi Tappu Wildlife Reserve (Nepal) for its appropriateness to conserve wild water buffalo;
- Mt. Pulong, Luzon as a national park (Philippines);
- Honda Bay, Palawan as a marine park (Philippines);
- Tubataha Reef and San Miguel Island, Palawan (Philippines);
- Apo Reef, Mindoro (Philippines);
- Improved protection of tamaraw habitat in Iglit/Baco National Park (Philippines);
- The waters adjacent to Wilpattu National Park (Sri Lanka)(to be declared national park);
- Knuckles Range (Sri Lanka)(to be declared Strict Nature Reserve);
- Beung Boraphet and Songkhla Lake (Thailand);
- Mangrove forests in Minh Hai (Vietnam);
- Nam Baicattien (Vietnam)(as a national park);
- Tropical forests in High Plateau Tay Nguyen (Vietnam).

1.2.2. Provide particular attention to protecting coastal and marine habitats, including identifying important areas, developing the administrative structures to manage them, and devising appropriate management methodologies for these highly productive areas.

1.2.3. Ensure that delegations to meetings of UNEP Regional Seas Programmes are fully briefed on the role of coastal and marine protected areas, and are prepared to support action in this field.

Activities at the International Level:

1.2.4. Make available to national conservation agencies any concepts, information, and expertise required to provide enhanced protection to key habitats, including islands, coastal and marine habitats, wetlands, and mountains. (Action by IUCN, WWF, Unesco, UNEP.)

- 1.2.5. Provide particular support to the marine conservation needs of the Maldives and Chagos archipelagos.
- 1.2.6. Assemble data on important wetlands in the Indomalayan Realm, to be used to identify key areas for protection. (Action by IUCN, to be completed by end 1986.)
- 1.2.7. Provide a framework for international action on island, coastal and marine protected areas through the UNEP Regional Seas Programme (South Asian and East Asian regional seas.)

Objective 1.3. TO ENSURE THAT RELEVANT CATEGORIES OF PROTECTED AREAS ARE GIVEN LEGAL PROTECTION AT AN APPROPRIATE LEGISLATIVE LEVEL.

Activities at the National Level:

- 1.3.1. Examine national legislation to see if the relevant IUCN Management Categories are mentioned and receive appropriate legal recognition.
- 1.3.2. Give priority to setting up a network of strictly protected areas (Category I -- Strict Nature Reserves) within each major habitat or biotic community, possibly based on zones within existing reserves.
- 1.3.3. Examine the management status and objectives of existing parks, sanctuaries and other reserves to see if their designated category is providing the appropriate level of protection.
- 1.3.4. The governments of Bhutan, Brunei, Burma, China, Indonesia, Laos, Malaysia, Maldives, Philippines, Singapore, Thailand, and Vietnam should consider acceding to the World Heritage Convention and its implementation in their country.
- 1.3.5. Each relevant government agency should select outstanding areas of biological and natural value for nomination to the World Heritage List, taking into account the possibilities for trans-frontier sites.
- 1.3.6. Provide necessary support for Man and the Biosphere (MAB) activities, particularly by forming or activating MAB National Committees, implementing the Biosphere Reserve Action Plan, and establishing Biosphere Reserves which may be included in the international network.

Activities at the International Level:

- 1.3.7. Provide advice to governments on request on legislation, regulations, and other administrative measures to establish the full range of categories of protected areas, including biosphere reserves. (Action by IUCN's Environmental Law Centre and Commission on Environmental Policy, Law, and Administration.)

- 1.3.8. Provide a framework for international cooperation through the World Heritage Convention and the Biosphere Reserve programme, and provide relevant support to governments for preparing indicative inventories and strengthening field action in World Heritage properties and Biosphere Reserves. (Action by Unesco, with support from IUCN.)
- 1.3.9. Assist in the preparation of projects for submission to the World Heritage Committee for funding. (Action by Unesco, CNPPA.)

Goal 2 THE DEVELOPMENT OF MANAGEMENT CAPABILITY FOR PROTECTED AREAS

Objective 2.1. TO ENSURE THAT EACH NATION HAS STRONG AND EFFECTIVE WILDLIFE CONSERVATION AUTHORITIES AT THE CENTRAL AND STATE OR PROVINCIAL LEVELS SO THAT THE NETWORK OF CONSERVATION AREAS CAN BE ADEQUATELY MANAGED.

Activities at the National Level:

- 2.1.1. Develop a strong central authority for conservation/wildlife management at both the administrative and technical levels, including specialist technical officers dealing with management planning, field staff supervision, training, research and monitoring, education/interpretation, wildlife health, and captive breeding and zoos, to ensure adequate inputs at state and field levels.
- 2.1.2. Develop fully independent wildlife/conservation departments with appropriate internal career structures.
- 2.1.3. Recruit dedicated and highly motivated staff at all professional levels within these departments, and provide opportunities for advancement within the system.

Activities at the International Level:

- 2.1.4. Provide support to training efforts, through workshops, fellowships, curriculum development, training manuals, and other means. (Action by FAO, Unesco, WWF, IUCN.)
- 2.1.5. Ensure attendance at the International Seminar on National Parks Management by senior park staff from the Realm. (Action by WWF, Unesco, IUCN, FAO.)
- 2.1.6. Provide support to assessments of regional training needs and manpower planning. (Action by FAO.)

Objective 2.2. TO DEVELOP TRAINING FACILITIES SUFFICIENT TO MEET MANPOWER NEEDS.

Activities at the National Level:

- 2.2.1. Designate a specialized national or regional training institution for senior and middle professional level protected area staff.
- 2.2.2. Encourage and promote the teaching of wildlife management at university or other appropriate level.
- 2.2.3. Develop suitable in-service training programmes with an emphasis on practical field techniques for field and technical staff.

Activities at the International Level:

- 2.2.4. Sponsor workshops on management planning, including the demonstration of management planning methodology based on the Khao Yai National Park (Thailand) experience as a model. (Action by IUCN, WWF.) Priority areas include:
 - Western Himalayan fauna and flora in Sainj-Seraj area of Kullu;
 - Sinharaja Forest Reserve, Sri Lanka (in progress for mid-1985, funded by WWF-IUCN);
 - Tien Teo Reserve, Vietnam;
 - Workshops on management of wetlands, islands, and coastal and marine protected areas.

Objective 2.3. TO DEVELOP SOUND MANAGEMENT POLICIES AND OBJECTIVES FOR PROTECTED AREAS AND TO ENSURE THAT ADEQUATE MANAGEMENT PLANS ARE PREPARED FOR EACH AREA.

Activities at the National Level:

- 2.3.1. Document the values and objectives of each protected area so as to specify clearly the purpose of its protection status.
- 2.3.2. Draw up management plans to protect and perpetuate these specific values.
- 2.3.3. Formulate specific management policies for buffer areas surrounding the protected areas, and for adjacent lands not receiving buffer zone status.
- 2.3.4. Introduce the necessary enabling legislation, if it is not already in existence; or revise existing legislation as required.
- 2.3.5. Develop special programmes for managing livestock around protected areas.

Activities at the International Level:

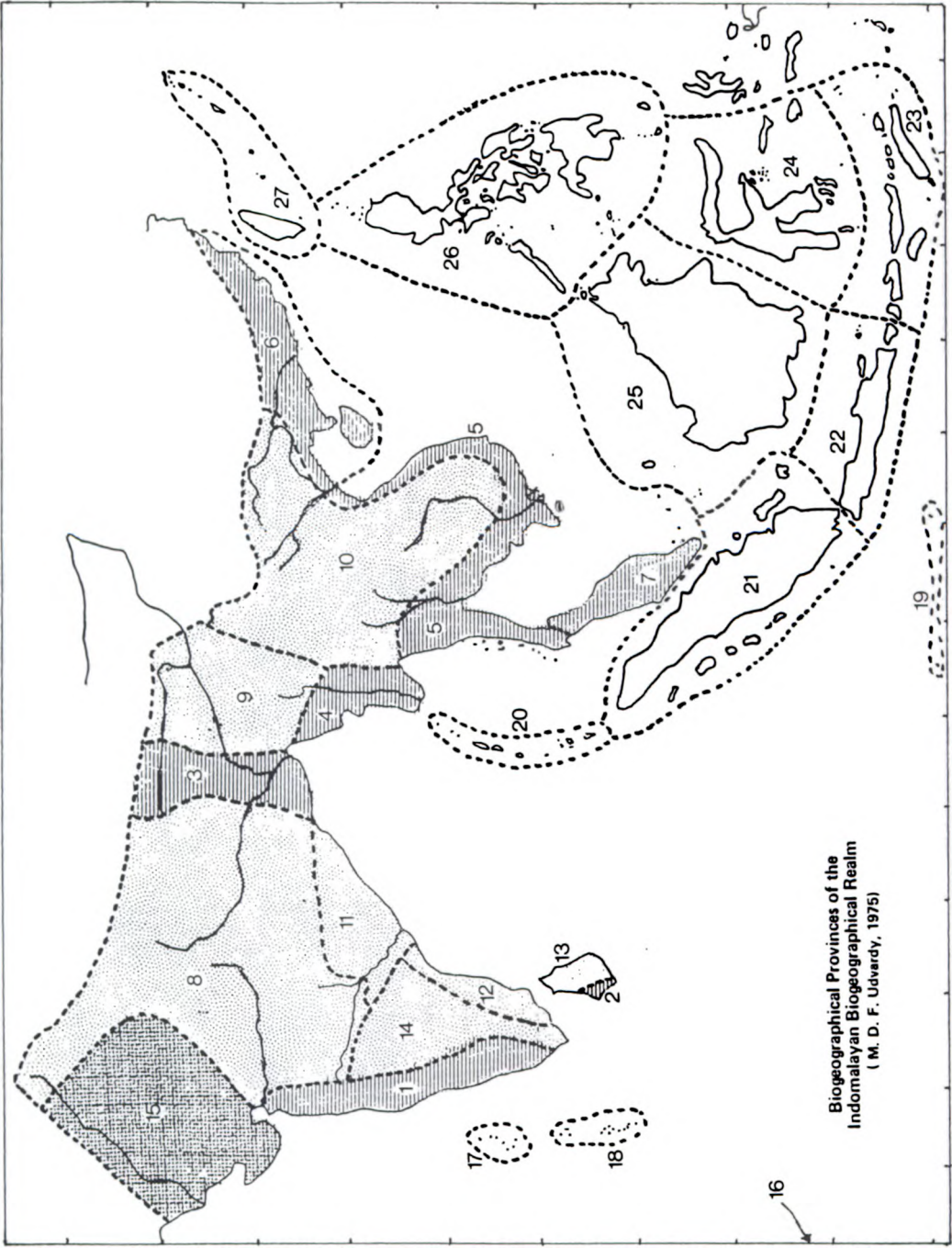
2.3.6. Identify a few protected areas in each country (biogeographic unit) representing a range of management categories as "Demonstration Protected Areas", where special support will be sought for equipment, management, education, training, etc. Possibilities include:

- Game Reserve (Elephant) in Teknaf Region of Cox's Bazar Forests (Bangladesh)
- Sundarbans of Bangladesh
- Manas Wildlife Sanctuary (India, Bhutan)
- Dudhwa National Park (India)
- Gir National Park (India)
- Keibul Lamjao National Park (India)
- Silent Valley National Park (India)
- Desert National Park (India)
- Tirthan Sanctuary in Himachal Pradesh (India)
- Kerinci-Seblat National Park (Indonesia)
- Ujung Kulon National Park (Indonesia)
- Komodo National Park (Indonesia)
- Dumoga-Bone National Park (Indonesia)
- Angkor Wat (Kampuchea)
- Danum Valley (Sabah, Malaysia)
- Gunung Mulu (Sarawak, Malaysia)
- Kirthar National Park (Pakistan)
- Mt. Apo (Philippines)
- Mt. Iglit-Mt. Baco National Park (Philippines)
- Protected areas in Mahaweli (Sri Lanka)
- Sinharaja Forest Reserve (Sri Lanka)
- Huay Kha Khaeng-Thung Yai complex (Thailand)
- Ba Be (Vietnam)
- Cat Ba and Halon Bay (Vietnam)
- Tien Tao (Vietnam)

Objective 2.4. TO PROVIDE EACH MANAGEMENT UNIT WITH SUFFICIENT RESOURCES TO IMPLEMENT MANAGEMENT ACTIVITY IN THE FACE OF INCREASING THREAT TO THESE AREAS.

Activities at the National Level:

- 2.4.1. Provide necessary documentation to persuade planning and finance ministries that conservation areas need adequate staff, funds, equipment and other resources for their long term survival, and to ensure that they are contributing to rural development in appropriate ways.
- 2.4.2. Provide specialized resources -- vehicles, boats, radios, aircraft usage, equipment, staff -- as necessary.
- 2.4.3. Develop specialized teams in such areas for anti-poaching, dealing with wildlife problems, planning, and interpretation at the appropriate local level to assist the limited resources of individual areas.



Biogeographical Provinces of the
Indomalayan Biogeographical Realm
(M. D. F. Uvárdy, 1975)

The Indomalayan Realm (4)

<u>No.</u>	<u>Biogeographic Province</u>	<u>No.</u>	<u>Biogeographic Province</u>
4.1.1	Malabar Rainforest	4.16.13	Seychelles & Amirantes Islands
4.2.1	Ceylonese Rainforest	4.17.13	Laccadives Islands
4.3.1	Bengalian Rainforest	4.18.13	Maldives & Chagos Islands
4.4.1	Burman Rainforest	4.19.13	Cocos-Keeling & Christmas Islands
4.5.1	Indochinese Rainforest	4.20.13	Andaman & Nicobar Islands
4.6.1	South Chinese Rainforest	4.21.13	Sumatra
4.7.1	Malayan Rainforest	4.22.13	Java
4.8.4	Indus-Ganges Monsoon Forest	4.23.13	Lesser Sunda Islands
4.9.4	Burma Monsoon Forest	4.24.13	Celebes
4.10.4	Thalindian Monsoon Forest	4.25.13	Borneo
4.11.4	Mahanadian	4.26.13	Philippines
4.12.4	Coromandel	4.27.13	Taiwan
4.13.4	Ceylonese Monsoon Forest		
4.14.4	Deccan Thorn Forest		
4.15.7	Thar Desert		

Biome Types

	1	Tropical humid forests
	4	Tropical dry or deciduous forests (incl. monsoon forests) or woodlands
	7	Warm deserts and semideserts
	13	Mixed island systems

Activities at the International Level:

- 2.4.4. Promote appropriate means of dissemination of research findings from protected areas in the Indomalayan Realm, including investigating the need for a specialized journal on the subject.
- 2.4.5. Organize workshops on research priorities, planning, and research methodology appropriate to the Indomalayan Realm.
- 2.4.6. Compile and maintain a list of protected areas under special threat. (Action by IUCN.)

Objective 2.5. TO DEVELOP THE CAPABILITY TO CARRY OUT RESEARCH AND MONITORING ACTIVITIES IN PROTECTED AREAS, AND TO APPLY THE RESULTS TO IMPROVING MANAGEMENT.

Activities at the National Level:

- 2.5.1. Create a specialized research coordination post at the central level to actively promote much greater research involvement and the provision of adequate funds for research promotion; or develop other means of promoting research, such as publishing an official "List of Research Priorities in Protected Areas" for the country.
- 2.5.2. Develop strong field-oriented research centres in the ecological and socio-economic sciences, possibly in collaboration with universities, research institutes, etc.
- 2.5.3. Develop appropriate research and monitoring capability directly related to management needs within each major protected area or group of areas, including adequate staff, equipment, funding, career advancement, etc.
- 2.5.4. Ensure that relevant research results are employed in the development of improved management procedures.

Goal 3 DEVELOPMENT OF NATIONAL CONSERVATION POLICIES WHICH ARE SOCIALLY ACCEPTABLE AND INTEGRATED INTO NATIONAL DEVELOPMENT AS A WHOLE

Objective 3.1. TO PROMOTE WILDLIFE CONSERVATION WITHIN THE FRAMEWORK OF ALL NATURAL RESOURCE CONSERVATION (SOIL, AIR, WATER AND BIOLOGICAL VALUES) AT THE NATIONAL AND LOCAL LEVELS AND TO PROMOTE THE CONCEPT OF CONSERVATION AND DEVELOPMENT AS LAID DOWN BY THE WORLD CONSERVATION STRATEGY.

Activities at the National Level:

- 3.1.1. Help formulate and implement a national conservation strategy covering all natural living resources.
- 3.1.2. Promote the concepts and values of conservation at all possible national fora and levels, including increased use of the news media and educational facilities.

- 3.1.3. Organize seminars and workshops for administrators and decision makers in which World Conservation Strategy concepts are discussed and action agreed for their implementation.

Action at the International Level:

- 3.1.4. Document cases where effective management of protected areas has led to tangible benefits for local people and the nation, and disseminate this documentation widely. Examples include:

- Improved natural product (honey and fish) availability after protection and man-eating by tigers reduced in the Sundarbans (India and Bangladesh);
- Lessening of seasonal damage to crops outside the boundry of Dudhwa National Park (India) following erection of anti-deer electric fence along portion of park boundary;
- Improved quality of life for peripheral villages at Gir National Park in Gujarat (India);
- Environmental awareness enhanced at Hingolgarh Nature Education Sanctuary in Gujarat (India);
- Improved dry season stream flow from Kanha and Palamau National Parks (India);
- Indonesian nature reserves (Bantumurung, Sulawesi; Mirapura, Sumatra; Gunung Jagat, Java) as sources of germplasm for national crop improvement programmes;
- Irrigation and protected areas in Dumoga-Bone National Park, Indonesia;
- Tourism development in Komodo National Park, Indonesia;
- Public education at Sepilok Forest Reserve, Sabah;
- Sarawak Forest Dept/WWF-Malaysia study on dependence of local people on forest produce, with implications of conservation management of hunted wildlife for the long-term benefit of the local people;
- Tourism development and conservation awareness at Turtle Islands, Sabah;
- Turtle management in Pakistan;
- Marine resources replenishment in the Philippines;
- Protected areas and dams in the Mahaweli region of Sri Lanka;
- Trekking programme and community development in Khao Yai region, Thailand;
- Protected mangrove forest in Vietnam.

- 3.1.5. Provide expertise and support to NCS activities in Malaysia, Nepal, Pakistan, Philippines, Sri Lanka, and Vietnam, and ensure that protected area elements are fully included in the strategies (action by IUCN and development agencies).

- 3.1.6. Provide international support for national awareness activities, particularly:

- Support to WWF (India) ongoing awareness activities, including nature clubs, nature camps, National Council for Education, Research, and Training (NCERT);

- Preparation of audio-visual packages suitable for decision makers, and for others at different levels (visuals with scripts in local languages which can be communicated by the equipment operators in the local language will be required);
- Provision of sturdy projecting equipment and means of transportation;
- Training of qualified and motivated personnel, particularly operators, to conduct A/V programmes, primarily in rural areas, and in urban areas;
- Supporting the provision of relevant video material from BBC, Survival Anglia, etc. to the Indomalayan Realm, including making scripts available in the local languages.

3.1.7. Support the efforts of the Government of China to prepare a regional land-use management scheme, including a series of protected areas, for the Xishuang Banna area of Yunnan (action: IUCN).

Objective 3.2. TO RECOGNIZE POPULATION GROWTH AND INCREASED PRESSURE ON LAND AS MAJOR FACTORS AFFECTING CONSERVATION AND TO SUPPORT NATIONAL POLICIES AIMED AT REGULATING THESE FACTORS.

Activities at the National Level:

- 3.2.1. Support national population policies by providing data, case histories and ecological arguments to promote population stability and wise land use.
- 3.2.2. Assist government agencies in the planning of areas to accept the new population increases in less environmentally critical areas.
- 3.2.3. Develop sound and convincing arguments which demonstrate that protecting critical natural areas helps support food production outside these areas, through watershed protection, soil formation, micro-climate amelioration, genetic resources, meat production on marginal lands, etc.
- 3.2.4. Develop special training courses on conservation for social workers who deal directly with human welfare, particularly around protected areas.

Activities at the International Level:

- 3.2.5. Maintain a continuous level of support for informed population policies in fora, publications, and discussions dealing with natural resource conservation. (Action by all international agencies);
- 3.2.6. Maintain financial support for international organizations dealing with population issues, such as IPPF, Unicef, World Population Council, etc. (Action by all international agencies and donor governments);

3.2.7. Promote applied research into human ecology in areas of importance for conservation, including such areas as:

- the Himalayas adjacent to protected areas in Himachal Pradesh and Uttar Pradesh, India;
- Keibul Lamjao (India);
- Abuhujmar (India);
- transmigrant populations adjacent to protected areas in Indonesia;
- shifting cultivators adjacent to Kinabalu National Park, Sabah;
- Mt. Apo region of the Philippines;
- areas surrounding the national parks and proposed national parks in the Maduru Oya basin, Sri Lanka;
- the area surrounding Khao Yai National Park in Thailand;
- Cuc Phuong National Park (Vietnam).

Objective 3.3. TO MAKE SUITABLE PARTS OF THE PROTECTED AREAS SYSTEM AVAILABLE TO THE PUBLIC FOR RECREATION AND EDUCATIONAL USES.

Activities at the National Level:

- 3.3.1. Examine the protected areas system and select areas suitable for development as tourist and recreation zones.
- 3.3.2. Develop these zones in an aesthetic manner so as to promote visitors' understanding and enjoyment of nature.
- 3.3.3. Provide relevant educational and interpretation facilities in these zones.

Activities at the International Level:

- 3.3.4. Support government agencies in their efforts to design, promote, and implement a few demonstration projects on making protected areas accessible for local recreation, including such areas as:
 - Bhawal National Park (Bangladesh)
 - Himchari National Park, Cox's Bazar (Bangladesh)
 - Madhupur National Park (Bangladesh)
 - Keoladeo Ghana National Park (Bharatpur, India)
 - Corbett National Park (India)
 - Kanawar Sanctuary in Parvati Valley (Himachal Pradesh, India)
 - Periyar, Van Vihar Bhopal, Shivpuri, and Panna national parks (India)
 - Bali Barat National Park (Indonesia)
 - Gunung Halimun Nature Reserve (Indonesia)
 - Batan Ai (proposed) National Park (Malaysia) for recreational development
 - Kinabalu National Park (Sabah)
 - Taman Negara (Malaysia) for nature tourism
 - Lambir Hills National Park (Malaysia) for local use
 - Tungku Abdul Rahman National Park (Sabah)
 - A marine park in the Maldives

- Yala National Park (Sri Lanka)
- Tarutao National Park (Thailand)
- Cuc Phuong National Park (Vietnam)

3.3.5. Organization of training workshops in wildlife recreation development and management for tourist development corporations, national parks tourist offices, etc. (Action by World Tourism Organization, development agencies, etc.)

Objective 3.4. TO DEVELOP STRATEGIES FOR REDUCING LAND-USE CONFLICTS AT THE INTERFACE BETWEEN AGRICULTURE AND PROTECTED AREAS.

Activities at the National Level:

- 3.4.1. Greatly increase activity in fields of conservation education, extension and human ecological research in areas adjacent to protected reserves.
- 3.4.2. Cooperate with other land use agencies to plan development and resource utilization in such areas.
- 3.4.3. Develop buffer zones with gradients of resource use and resource protection from park to settled areas.
- 3.4.4. Recruit local people into the conservation agency itself, including opportunities for seasonal employment.
- 3.4.5. Implement programmes designed to lessen negative impacts arising from conservation, e.g. control of agricultural pests, stockraiders, man-eaters etc., by direct means or barriers.
- 3.4.6. Develop programmes designed to show benefits from conservation measures: e.g. provision and regulation of water flows, excess product offtake in buffer zones, tourism, and others.
- 3.4.7. Develop automatic procedures and expertise for undertaking environmental impact assessment investigations on all new developments in the areas adjacent to protected areas, as well as other areas of conservation importance.

Activities at the International Level:

- 3.4.1. Support action by government agencies to design, promote, and implement a few demonstration projects dealing with boundary conflict situations, including such areas as:
 - Sundarbans (Bangladesh)
 - Dudhwa National Park (India)
 - Gir Forest (India)
 - Manas Wildlife Sanctuary (India)
 - Potential protected area development and management in areas of community forestry/shifting cultivation/wildlife values in Maghalaya (NE India)

- Proposed Rajaji National Park (India)
- Gunung Gede-Pangrango National Park (Indonesia)
- Kutai National Park (Indonesia)
- Lanjak Entimau Wildlife Sanctuary (Malaysia)
- Mt. Apo National Park (Philippines)
- Mt. Iglit-Mt. Baco and Balbalang Balbalasan National Parks (Philippines)
- Wilpattu National Park (Sri Lanka)
- Khao Yai National Park (Thailand)
- Huay Kha Khaeng (Thailand)
- Minh Hai Bird Sanctuary (Vietnam)

3.4.2. Promote independent environmental impact assessments for all development projects affecting natural ecosystems.

Goal 4 STRENGTHEN COOPERATION IN THE DEVELOPMENT OF CONSERVATION ACTIVITIES IN THE REGION

Objective 4.1. TO PROMOTE COOPERATION AMONG THE COUNTRIES OF THE INDOMALAYAN REALM TO ENSURE MORE EFFECTIVE MANAGEMENT AND PROTECTION OF THEIR NATURAL RESOURCES.

Activities at the National Level:

- 4.1.1. Interchange of ideas, information and expertise in conservation among nations, at senior policy, professional and research levels.
- 4.1.2. Offer frequent study tour and working tour facilities to examine conservation activities within the countries of the region.
- 4.1.3. Interchange expert staff between national management agencies, particularly where expertise is needed to address specific problems, such as:
 - Elephant management in Indonesia (collaboration with Thailand, Burma, India, Sri Lanka);
 - Rhinoceros management in Malaysia and Indonesia (collaboration with India);
 - Crocodile management (expertise available from India on captive rearing and subsequent release);
 - Musk deer farming (experts available in Korea, China);
 - Feral buffalo control;
 - Marine and coastal conservation issues in the region;
 - Exchanges between the Wildlife Institute of India and the Conservation Management Training School of Indonesia;
 - Elephant control and management in Sri Lanka, in collaboration with Burma, India, and Indonesia;
 - Estuarine and tidal swamp conservation issues, including linkages with deforested catchment areas;
 - Identification and management of threatened sites rich in wild relatives of economic plants through expertise from scientists in national biological/agricultural institutes;
 - Use of barriers such as electric fencing in control of nuisance wildlife.

- 4.1.4. Free exchange of data, information and expertise regarding conservation activities.
- 4.1.5. Give support to international conservation agencies and conventions.
- 4.1.6. Ensure that permission to attend seminars, have study leave, and other means of international contact be given to qualified junior- as well as senior-level staff.
- 4.1.7. Ensure that appropriate representatives are provided the necessary support from government budgets to attend major international meetings, including meetings of CITES, IUCN, UNEP, ASEAN, and others.
- 4.1.8. Subscribe to both national and regional publications in the conservation field, and ensure that they are distributed to the appropriate field-level personnel.
- 4.1.9. Encourage conservation officers to contribute to newspapers, magazines, journals, and other media, thereby contributing to increasing awareness of conservation within the country and region.
- 4.1.10. Promote use of specialized training facilities by countries of the region other than the one in which the facilities are located: e.g. post-graduate courses at the Wildlife Institute of India, non-graduate courses at the Conservation Management Training School in Indonesia.

Activities at the International Level:

- 4.1.11. Provide scholarships to regional training institutes such as the Wildlife Institute of India and the Conservation Management Training School in Indonesia for supporting suitable trainees. (Action by Unesco, FAO, WWF, IUCN);
- 4.1.12. Establish a panel of experts from within the region to carry out advisory and consultancy assignments, facilitating exchange of ideas and building confidence in proven management techniques.
- 4.1.13. Support technical exchanges between countries, including training seminars, study tours, working assignments, etc., to provide the spread of good management techniques. (Action by UN system under TCDC programme.)
- 4.1.14. Support the establishment of an institutional focus for the scientific management of wildlife and other living resources within the Indomalayan Realm, with responsibilities for training, research, convening periodic meetings, publishing realm-based conservation reports, etc. (Action by FAO, supported by UNEP, IUCN, UNESCO and bilateral agencies.)

4.1.15. Support specific requirements for training in various aspects of protected area management, including:

- Exotic plant control in protected areas;
- Wildlife capture/translocation and marine survey and inventory in Vietnam;
- Elephant capture in Sri Lanka;
- Establishment of community development programmes around protected areas;
- Marine park management;
- Economic botany of wild crop relatives/medicinal plants in protected areas (including public awareness).

4.1.16. Sponsor seminars, workshops, etc. designed to bring professional managers in the region together on a regular basis. (Action by ASEAN, IUCN/CNPPA, Unesco, FAO), including:

- International Workshop on the Management of National Parks and Protected Areas in the Hindukush-Himalaya. (Action by ICIMOD, IUCN, WWF, King Mahendra Trust, Unesco);
- Convening of regular working sessions of IUCN's Commission on National Parks and Protected Areas in the Indomalayan Realm. (Action by IUCN.)

4.1.17. Promote linkages between university departments and institutions with an applied emphasis on wildlife biology and management and expertise in the wildlife education/interpretation fields.

4.1.18. Provide materials -- including books, journals, etc. -- to the managers of key protected areas.

Objective 4.2. TO DEVELOP BILATERAL/MULTILATERAL AGREEMENTS TO CONSERVE A SHARED FAUNAL OR FLORISTIC RESOURCE.

Activities at the National Level:

4.2.1. Develop, where appropriate, bilateral/multilateral treaties governing the conservation of shared or migratory natural resources.

4.2.2. Establish, where appropriate, joint protected areas along common boundaries to effectively conserve shared resources, possibly using the concept of "International Peace Park" as already implemented in several parts of the world. Indomalayan areas which might be appropriate for such joint action include:

- The Sundarbans of India and Bangladesh;
- The Manas Sanctuaries of India and Bhutan;
- Between Lahaul-Spiti (India) and Tibet (China), to protect species such as Tibetan gazelle, wild ass, and Tibetan wolf;
- Chitwan National Park of Nepal and Valmikinagar Sanctuary of India;
- The Mishmi Hills between China (Tibet) and India;

- Kaj-i-Nag Mountains of India and Pakistan;
- The Rann of Kutch of India and Pakistan;
- Kasalong Reserve Forests in northern Chittagong Hill Tracts of Bangladesh and adjacent regions of Assam, India;
- Lanjak-Entimau Reserve in Sarawak and Gunung Bentuang and Karimau reserves in West Kalimantan, Indonesia;
- A marine reserve between Sabah, Philippines, and Indonesia;
- The dipterocarp forests shared by Vietnam and Kampuchea;
- The Truong Son Range of Vietnam and Laos.

Activities at the International Level:

4.2.3. Provide any necessary coordinating mechanism for promoting inter-governmental cooperation to implement bilateral or multilateral agreements to conserve shared resources, including:

- Cooperation on management of species which migrate across adjacent borders, including elephants and tigers (Burma, Bangladesh, Bhutan, India); kouprey (Laos, Kampuchea, Vietnam, Thailand); and wild ass, wolf and Tibetan gazelle (India, China);
- Management of riverine ecosystems shared by countries (Tsangpo-Brahmaputra between India and China; Indus-Sutlej between China, India and Pakistan; Ganges-Padma and Brahmaputra-Jamuna between India and Bangladesh; River Naaf between Burma and Bangladesh; Mekong between China, Laos, Burma, Kampuchea, Thailand, Vietnam; Salween between Thailand and Burma; Red and Black rivers between China and Vietnam);
- Migratory species conventions, such as the migratory birds treaty between India and the USSR;
- Bilateral cooperation for the conservation of habitats containing relatives of economic plants: e.g. numerous tropical fruit tree species, wild rices, etc. along borders of Sabah and Sarawak and Sabah and Kalimantan;
- ASEAN Experts on the Environment (action by governments);
- Special efforts to develop the capacity to manage living marine resources;
- Coordinated management of World Heritage Sites which cover two countries (Manas, Sundarbans).

Goal 5. MONITOR THE IMPLEMENTATION OF THE CORBETT ACTION PLAN

Objective 5.1. TO REVIEW PROGRESS ON IMPLEMENTATION OF THE CORBETT ACTION PLAN THROUGH CONTINUOUS MONITORING OF RELEVANT ACTIVITIES.

Activities at the National Level:

5.1.1. Promote the implementation of the Corbett Action Plan, through wide publicity among citizen groups and related government departments.

- 5.1.2. Contribute to international coordination through keeping IUCN/CNPPA informed on actions contributing to the Corbett Action Plan.
- 5.1.3. In each country, non-governmental conservation organizations to monitor implementation of the Corbett Action Plan.

Activities at the International Level

- 5.1.4. Promote the implementation of the Corbett Action Plan through wide publicity in the region and internationally. (Action by IUCN.)
- 5.1.5. Monitor the implementation of the Corbett Action Plan and up-date at future Indomalayan working sessions of CNPPA. (Action by IUCN.)

