

IUCN

The World Conservation Union

BULLETIN



*Economics for conservation:
the burning questions*

IUCN

The World Conservation Union

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**Cover photo: Is this the way to
save elephants? Tusks are readied
for burning in Kenya, but the
impact of the practice on elephant
conservation has been questioned.
The Special Report beginning on
page 13 addresses how to make
the best economic use of natural
resources. IUCN/Frank Vorhies**

Speaking economically. . .

We conservationists *must* get economically literate.

Resources available globally from donors for conservation and sustainable development are declining. Many publics are still voting green but politicians and other decision-makers are not voting the funds needed to move towards a sustainable future. Conservationists are losing the arguments inside most governments of the North at least.

We have to shift our grounds – or rather expand them. Conservationists must get better at mobilising the economic case for investing in natural resources management and conservation. The case is a very powerful one. But how often are the biologists, the ecosystems managers, the conflict resolvers in the field – and environmental bureaucrats in capitals – sufficiently versed in broad economic theory to argue with Finance and Trade Ministries and other resource-allocators in their own jargon?

The issue goes beyond fund allocation. The prospect is that economic tools will be used increasingly as the governmental instruments to foster rational use of natural resources. So, for example, the trend already apparent towards using economic incentives or market mechanisms to foster development will accelerate. The ecological underpinning to ensure sustainable development has to be impressed repeatedly on capitals.

Professor Herman Daly brought all this home to the IUCN Council meeting in a forceful address last May. It is also a central thesis in a discussion paper drafted recently by IUCN Chief Scientist Jeff McNeely on the prospects for conservation in the next century (see page 14). A preliminary discussion of the subject amongst IUCN staff worldwide concluded that economic literacy was a vital tool for those endeavouring to influence environmental policies and trade, financial and resource flows.

The Union has begun to adapt to this relatively new world. The new Assistant Director General on the Conservation Policy and Programmes side – a former Minister of Development Planning and Agriculture in Ethiopia, Mersie Ejigu – is not a biologist or a resource manager. He is an economist. A month ago the IUCN Secretariat brought into Headquarters the first full-time economist ever to be employed by the Union – Dr Frank Vorhies. We are discussing with our nearby partner WWF the advantages of combining our growing economic expertise with their own economic team. We sponsored, with WWF and the World Bank in October, a seminar on green accounting. So the message is being heard and acted upon.

But the word must go out well beyond the headquarters of conservation organisations. To win the resource allocation, trade and sustainability battles of the future a high proportion of conservationists worldwide must learn the language and the arguments of the economists.

Environmental economists can demonstrate that conservation investment gives value for money. That is a case which must be put before decision-makers constantly. In this issue of the *Bulletin* various authors make the case from a variety of viewpoints. This is only the beginning of a sustained campaign to provide argumentation for those of us (all of us!) who need these tools in the ongoing dialogue with the public and private sectors about sustainability.

Do you think this will be an uphill battle? Don't despair. Remember the environmentally illiterate World Bank of the 'eighties and earlier? Now read some of the recent speeches by the new President James D. Wolfensohn and Vice President Ismail M. Serageldin. They could have been written by a green NGO speech-writer. The word is spreading. Let's spread it further!

DAVID McDOWELL,
DIRECTOR GENERAL, IUCN

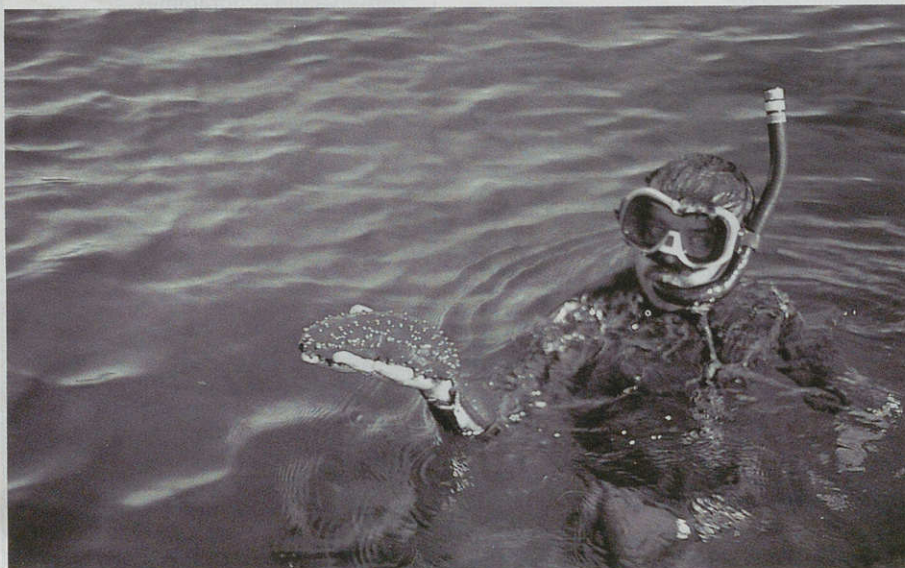
Galapagos threatened

On the afternoon of Friday, 1 September 1995, Ecuadorian President Sixto Duran Ballen vetoed a law passed by the Ecuadorian National Congress which would have given management authority over the Galapagos Islands to local politicians and special interest groups. A few days later, machete-wielding protesters seized the Charles Darwin Research Station and the national park headquarters. Troops were sent in to calm the scene, but protesters are still issuing threats and demanding control over the islands' resources – including the sea cucumber and shark fisheries, recently closed by the Government because of poor management (for background, see *Bulletin* 3/94).

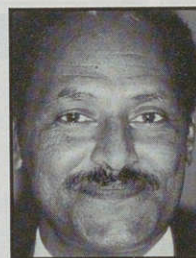
"The islands have suffered a major decline in their ecological integrity, especially over the past few years," says Jim Thorsell, IUCN's Senior Advisor, Natural Heritage. "Giant tortoises have been butchered, marine resources overexploited, and alien species introduced. But things could get much worse. The irony is that the Galapagos Islands, if wisely managed, could bring enormous economic benefits to their human inhabitants for the foreseeable future. We must all do what we can to support the Government of Ecuador in its efforts to manage human presence and use of natural resources in and around the islands with minimal impact on natural systems."

"For now, we have to do what we can to encourage corrective action. IUCN will recommend to the World Heritage Committee meeting in December that the Galapagos be added to its list of World Heritage in Danger," states Thorsell.

Also at this critical time, the Charles Darwin Foundation for the Galapagos Islands, an IUCN member, is searching for a new Director for its international research, conservation and education centre, the CDRS. For a complete job description, contact Dr Craig MacFarland, President CDF, 836 Mabelle, Moscow, ID 83843 USA. Tel: +(1208) 883 4876; Fax: +(1208) 883 0653; E-mail: cmacfarl@uidaho.edu or Julian Fitter, Galapagos Conservation Trust, P.O. Box 50, Shaftesbury, Dorset SP7 8SB, UK; Tel: +(44 1) 747 853 380; Fax: +(44 1) 747 855 131; E-mail: 100427.3012@compuserve.com.



One of the 14 species of sea cucumber found in the Galapagos has been overharvested and extirpated from large areas of the marine reserve. IUCN/Jim Thorsell



Mersie Ejigu



George Greene

Top team named

Ethiopian Mersie Ejigu and Canadian George Greene are the Union's new Assistant Directors General for Conservation Policy and Constituency Development, respectively.

"The three of us will make up the Secretariat's Executive Team", said David McDowell. "As such we will work with the decentralised Secretariat's Regional Directors to manage the programme and activities of the Union in collaboration with the members and Commissions."

Mersie Ejigu, a former Minister of Agriculture and Natural Resources and Minister of Planning and National Development in Ethiopia, was the IUCN's Regional Representative for Eastern Africa based in Nairobi, Kenya (see *Bulletin* 1/95).

George Greene has over twenty years' experience in environmental management and sustainable development, working with non-governmental, governmental, private sector and academic communities in Canada and internationally. Most recently he was Director General of Policy Development with the Canadian International Development Agency (CIDA).

Moving on

With these appointments, Per Rydén, who has been serving as ADG-Conservation Policy, will become Head of the Budget and Financial Planning Unit. Per's extensive experience in programme development and donor relations will be put to good use in this newly created senior position. Per has been associated with the recent radical re-formulation of IUCN programming and priority setting, and with major improvements in reporting to donors and members.

Tributes have meanwhile been pouring in to Mike Cockerell, ADG-Management, who leaves IUCN at the end of the year after some 14 years of dedicated service. Mike joined the Secretariat in 1981, and spent the first few years setting up the Conservation for Development Centre (CDC), the field operations side of the Union. Under Mike's guidance, the IUCN budget has increased more than sevenfold, and he has led the development and implementation of sophisticated management tracking systems, controls and procedures.



"Women Weaving the World Together" was an international initiative at the Beijing Conference which linked women around the world through the creation of a 20 km ribbon from thousands of pieces of woven cloth. The women of IUCN created a ribbon of their own, measuring approximately 12 metres in length. The double sided banner combined pieces of fabric from Regional and Country Offices around the globe with those gathered by people at Headquarters. Its message was "IUCN Women Caring for the Earth". Left: Meghan Golay begins putting the pieces together. IUCN/Nikki Meith

The Union at Beijing

IUCN's delegation to the World Conference on Women, held in Beijing, China (4-15 September 1995), was made up of Khawar Mumtaz, our Regional Councillor from Pakistan; Akiko Domoto, Co-opted Councillor from Japan; Lorena Aguilar of the Office for MesoAmerica (ORMA); Josephine Ouedraogo, a consultant for IUCN from Burkina Faso; and Meghan Golay from the Social Policy Group at Headquarters.

"We had a common mission – to listen and learn, to ensure that IUCN had a presence in relevant discussions, and to bring what indirect influence we could on the final text of the Platform for Action," reported Meghan Golay. "But we each had our own goals as well, and attended different events and meetings."

The delegation participated in many of the workshops at the NGO Forum, and had a strong presence at the Latin American and Asian regional tents. At the Conference itself, team members worked together with NGOs, primarily through the environment caucus, to support the actions and objectives of the Women's Linkage Caucus. The latter, comprised of NGOs from more than 70 countries, is focused on furthering the gains made by women at prior UN Conferences.

Towards the end of the second week, IUCN organised a short discussion workshop on gender and environment. "The meeting went very well," said Golay, "and participants were pleased to be able to meet and discuss their concerns, as the questions of environment received a very low profile at the Conference." The IUCN delegation also held several meetings outside their daily encounters at the NGO briefing session and the Environment Caucus, to touch base and plan further action. "Although the Chapter of the Platform for Action of primary interest to IUCN was Chapter K on Environment, we were also involved in discussions on reproductive health, education, economic structures, unremunerated work, and the role of women in decision making," notes Golay. "One clear implication of the Conference for IUCN is the call in the platform document for the mainstreaming of a gender perspective into all environmental programmes." IUCN Councillor Khawar Mumtaz has prepared a paper for Council with some key questions concerning how the Union can approach this task.

New marine team

Magnus Ngoile succeeds Graeme Kelleher as Coordinator of Marine and Coastal Activities. A Tanzanian, Dr Ngoile has a BSc from the University of Dar es Salaam, an MSc from Humboldt State University in California and a PhD from the University of Aberdeen, Scotland. In 1979 he began work at the University of Dar es Salaam where he worked on coordination and promotion of marine science and resource management issues in Tanzania and elsewhere in Eastern Africa. He was closely involved in development of marine protected areas and integrated coastal zone management in the region, and played a key role in establishing the Western Indian Ocean Marine Science Association.



Magnus Ngoile

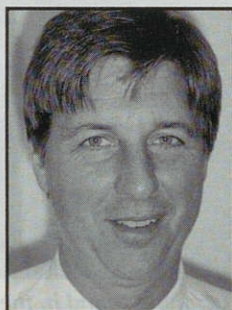


Paul Holthus

Paul Holthus, a US citizen with an MA from the University of Hawaii, will work with Magnus as Coastal/Marine Programme Officer. Paul has worked with Asia/Pacific Programme of the Nature Conservancy, developing its programme for coastal and marine biodiversity conservation. Before that he served for seven years as Scientific Officer for the South Pacific Regional Environment Programme (SPREP) developing a range of regional environment and conservation programmes.

In-house economist

Frank Vorhies will be the Union's first in-house Environmental Economist. Dr Vorhies has a BA in History, an MA and PhD in Economics from the University of Colorado, and a Diploma in Integrated Environmental Management from the University of Cape Town. He recently worked as Resource Economist for the African Wildlife Foundation in Nairobi, where he worked to build capacity in the use of economics for conservation in Africa, especially through a contract with the GEF East African Biodiversity Project and also by assisting projects for the Kenya Wildlife Service.



Frank Vorhies

Congress closes in

In 10 months we will be in Montreal at the First World Conservation Congress.

The Registration Brochure produced by our Canadian hosts is now available, and is being sent, along with official invitations from the Director General, to all Commission members, collaborating organisations, and selected individuals. The invitation package also contains the draft timetable and agenda, the draft Statutes, Regulations and users' guide, as well as a user-friendly guide to tabling Resolutions being prepared by IUCN Regional Councillor Richard Sandbrook. A selected cross-section of members – NGOs, governments and government agencies – are being approached with a request for financial assistance for various aspects of the Congress, in particular to provide financial assistance to meet the costs of members who might otherwise be unable to attend.

Zambezi River agreement signed

Four wetlands in the Zambezi River Basin are the focus of a major conservation agreement between the Canadian International Development Agency (CIDA) and IUCN.

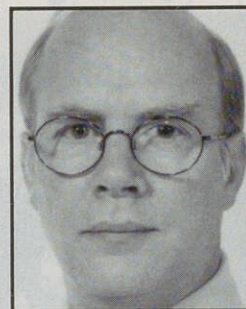
The Zambezi River Basin Wetlands Conservation and Development Project was announced by Canadian Minister for Foreign Affairs André Ouellet in August. The project will improve health and education services through rehabilitation of schools and clinics in the Basin, and help local communities to measure the value of wetland resources and services, ensure the availability of clean water, and improve flood control. The critical wetlands involved are the Barotse floodplain in Zambia, the Chobe/Linyanti wetlands in Namibia, the Shire/Ndinde wetlands in Malawi, and the Zambezi Delta in Mozambique. The project will be managed by IUCN through its Canadian office, supported by US\$7.6 million in funding by CIDA.



At the signing ceremony of the Zambezi River agreement, Canada's Minister of Foreign Affairs, Hon. André Ouellet (left), greets His Excellency Bright Msaka, High Commissioner of Malawi (to Canada). Looking on is Her Excellency Lillie Chitauru, High Commissioner for Zimbabwe (to Canada). IUCN Canada



Bertrand Tétreault



Timothy Lash

The Union's new team in Canada

Bertrand Tétreault, a biologist and senior career civil servant, is the new head of IUCN's Canadian Office. He has served in a number of ministries and organisations, both in Quebec and at the federal level, and has been involved particularly with issues related to wildlife conservation and nature protection. His work has frequently involved him at the international level, where he has chaired working groups and represented Canada on various environment-related governmental missions. He succeeds Raymond Perrier, who is retiring.

Timothy Lash has been appointed Assistant Director of the Canadian Office. A specialist in the conservation of wildlife and biological diversity, Tim also brings to the post his wide experience in natural resource policy, planning and management. He was formerly Director of Fish & Wildlife for the province of Prince Edward Island, before which he was a division chief with Environment Canada, a teacher in Malawi, and Director of the Canadian Council on Ecological Areas.

Congress committee starts work

Alain Dufresne of Parks Canada has been named chair of the Congress organising committee. Alan is head of natural resource conservation for the Quebec region. Other members of the Congress team are:

Jacques Prescott from the Quebec Ministry of Wildlife and the Environment; Gérard Szaraz representing l'Union québécoise pour la conservation de la nature (UQCN); Michel Lamontagne of Environment Canada; Michael Cloghesy, president of the Centre patronal de l'environnement; Serge Boisseau from Canadian Heritage; and Peter Jacobs of the Université de Montréal.

A representative of the city of Montréal will also be included on the committee.



The Director General signs the Italy-IUCN agreement in the presence of the Italian delegation and senior Headquarters staff. IUCN/Nikki Meith

Italy and IUCN to cooperate in developing countries

The Italian Government and IUCN will work together to address environmental issues in developing countries, including joint implementation of environmental assessment activities, according to the terms of a cooperation agreement signed on 10 November between a delegation from the Directorate General for Development Cooperation (Direzione Generale Della Cooperazione allo Sviluppo) of the Italian Ministry of Foreign Affairs and David McDowell. The agreement was signed in Rome the previous week by the Director General of the Italian Aid Administration, Mr Francesco Aloisi.

At the signing ceremony at IUCN Headquarters, the Italian Government was represented by Mr Corrado Milesi and Professor Filippo Menzinger from the Permanent Mission of Italy in Geneva, and Dr Alfredo Guillet, Referee for Environment at the Italian Ministry of Foreign Affairs.

In assessing the importance of the agreement, Mr David McDowell said: "IUCN is an organisation whose unique structure, mandate and range of services and expertise could help further the environmental dimension of Italy's development programme, within both its bilateral and multilateral channels".

Union deplores French nuclear testing

By way of a letter addressed to French President Jacques Chirac, Director General David McDowell expressed the Union's concern with the decision of the French President to resume nuclear testing in the South Pacific. He pointed to Recommendation 19.32 of the Buenos Aires General Assembly in which members urge all States to adopt a moratorium on nuclear weapons testing (this same Recommendation congratulated France on its – then – recent suspension of nuclear weapons tests). The Director General's letter stressed possible harmful effects to the environment and France's breach of international respect and collaboration in the post-Rio era.

A response was received from the Director of the French Cabinet, who explained the French position on holding the eight nuclear tests before the end of May 1996. France, the letter stated, is entitled under international regulations to finalise nuclear testing before the end of 1996. The tests in the South Pacific, the letter suggested, will give France the scientific and technical information it needs in order to carry out future simulation tests under the nuclear test ban treaty.

For further information please contact Patrick Blandin, President of the French IUCN National Committee, 4 rue de Bel Air, 37400 Amboise, France. Tel: +(33) 4757 3023; Fax: +(33) 4723 1280.

Deaths announced

The IUCN family has learned with sorrow of the deaths of two of its eminent leaders.



Jean-Paul Harroy

Professor Jean-Paul Harroy, a pioneer of ecology, conservation and environmental research in Africa, died on 8 July, aged 86. He was the first Secretary General of IUCN (IUPN at that time) from 1948-1956, and Chair of CNPPA from 1966 to 1972. Between 1935 and 1955 he was also Secretary of the Steering Committee of the Institute of National Parks of what was then the Belgian Congo, and Secretary General of IRSAC, the Institute for Scientific Research in Central Africa. In 1955 his career took a political turn when he was appointed Vice-Governor General and then Resident General of Rwanda-Burundi until their independence in 1962. Working in these countries entailed striving for sustainable development, although his efforts were blocked by the tragic events which overtook the two countries after 1959.

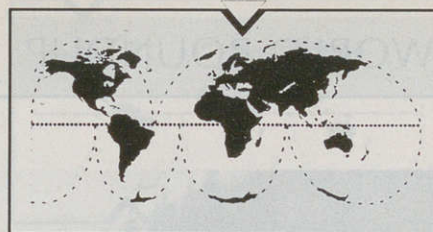
He was an Honorary Member of IUCN and WWF International, President of the European Committee for the Environment of the Council of Europe, a Chevalier de la Légion d'honneur and Officer of the Golden Ark. His major published work was *Afrique, Terre Qui Meurt* (1944).

Donald J. Kuenen



Donald J. Kuenen

Professor Dr Donald J. Kuenen, a Dutch zoologist, was President of IUCN from 1972 to 1978. Prior to that he was a member of the Union's Executive Board and Chair of the Commission on Ecology (1971-73). He was a professor of zoology and then of environmental biology at Leiden University in The Netherlands, where he specialised in ecology, and particularly the insect pests of fruit. From 1969 to 1977 he was General Director of the Research Institute for Nature Management in Arnhem.



A first for European members

More than 120 IUCN members from 28 European countries gathered in Bristol, UK, on 20-22 July to meet, exchange news and ideas, and discuss areas of mutual concern. This was the first Pan-European meeting of IUCN members; its overall objective was for participants to return to their countries with a clearer vision of IUCN's potential in the region, a better understanding of the ways in which belonging to the Union can add value to their work, and with specific ideas for collaborative action.

Director General David McDowell addressed the meeting, pointing out that "the Union was established by a group of Europeans, driven by a vision well ahead of its time: if governments and NGOs, enthusiastic professionals and enthusiastic amateurs, joined together they could influence conservation on a global scale much more effectively than either operating in isolation. That was a radical idea then."

He then described the need for European members to decide what kind of Union they want in the next century, especially since "the Union's potential is far from being realised in Europe."

The meeting paid tribute to the initiative of Richard Sandbrook, a Regional

Councillor for West Europe, and to the UK Department of Environment for making the meeting happen and seeing it through to a successful conclusion.

Major agenda items included:

- the role of IUCN in Europe and Europe in the world: direction and guidance for the future;
- the activities of the Union's voluntary networks;
- the European Environment Ministers' meeting in Sofia, October 1995, and in particular how the Union's membership – government and NGO – could contribute constructively to the event with a focus on the Pan-European Strategy for Biological and Landscape Diversity;
- preparations for the World Conservation Congress, to be held in Montreal in 1996, including the Statutes changes;
- the Sustainable Use Initiative in Europe.

Plenary and working groups also discussed the role and mission of IUCN in Europe, how members should communicate and work together; and future priorities. "The meeting stressed the importance of thinking on a Pan-European level while being sensitive to

sub-regional issues," reports Zbig Karpowicz, IUCN's European Programme Coordinator. "The Union's key role was seen as a neutral forum and an independent voice in Europe. In order to strengthen our regional presence, two things were deemed crucial: a regional Programme mandated by the membership, and a strong regional Secretariat to help implement it with input from members and the voluntary networks. Specifically, the group thought that more national committees should be formed and Commissions should develop their regional capacity."

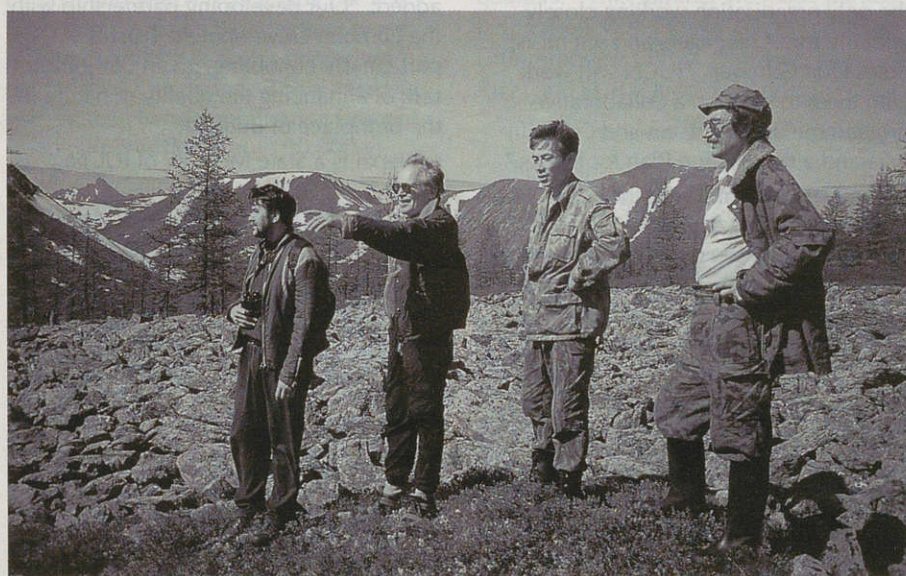
"IUCN's role in Europe is evolving into that of a neutral forum with a policy agenda of relevance to Europe," Karpowicz notes. "Its job is to see that biodiversity is integrated into all policy sectors, and to link the members into strong coalitions of interest in support of this."

The nature of cities

On 24-25 October, Chief Scientist Jeffrey A. McNeely attended the II Symposium on Natural Areas in Conurbations and on City Outskirts, held at the Museum of Science in Barcelona. He gave the inaugural address, titled 'Cities, Nature, and Protected Areas: A General Introduction'.

"The meeting involved a number of IUCN members in Spain, and was moderated by Professor Francisco Diaz Pineda, from the Universidad Complutense de Madrid, who has been working with IUCN's Forest Programme on biodiversity outside protected areas," reports McNeely. "It is apparent that Spain is taking environmental issues very seriously. The meeting was attended by senior government officials from many of the leading Spanish cities, as well as academics, planners, architects, and lawyers. Spain is seeking to ensure that its current period of economic growth is sustainable, which it believes requires significant investments in environmental amenities."

"This was primarily a Spanish meeting, though among the 250 participants were Koreans, Americans, Peruvians, Ecuadorians, British, and French," he notes. "It was apparent that our Spanish colleagues considered the Union's contribution to be an important indication of international support for efforts to incorporate biodiversity concerns in city planning."



World Heritage evaluation of Komi forests

This June, Jim Thorsell, IUCN's Senior Advisor, Natural Heritage (centre left), and Zbig Karpowicz, European Programme Coordinator (far left), visited the Northern Urals in the Komi Republic (Russian Federation) as part of a World Heritage evaluation. The Komi forests, a tract of virgin taiga, cover 3.3 million hectares on the extreme margin of Europe. The team included Greenpeace International and Greenpeace Russia, and was accompanied by park managers from Russia and the Komi Republic. Activity in boreal forests is one of a series of IUCN projects focusing on forest management in Russia. IUCN/Jim Thorsell



The IUCN team visits Arslanbob Park with Park and Forestry Department officials of Kyrgyzstan. IUCN/Eduardo Fernandez

Opportunity knocks in Central Asia

A two-week, three-person IUCN mission has laid the groundwork for a Forest Conservation Strategy for the Central Asian Republics.

It also built new links with members and partners, helped to clarify IUCN's emerging role in the region, and helped launch a programme to save the walnut forests of Kyrgyzstan.

In September, Don Gilmour (IUCN Forest Programme), Eduardo Fernandez (Social Policy), and Francis Parakatil (North Africa, Central and West Asia) attended a workshop on "Biodiversity and Sustainable Use of the Walnut-Fruit Forests in Kyrgyzstan" organised jointly by the Swiss aid agency Intercooperation, the Kyrgyzstan Government and IUCN. The workshop was aimed at raising international awareness of the importance of and threats to the natural walnut-fruit forests in Kyrgyzstan and other Central Asian countries. It was attended by 80 experts from all Central Asian countries; representatives of international organisations such as the World Bank, UNESCO and IUCN; international biologists, regional and national experts in conservation and sustainable development; representatives of Intercooperation; and the Swiss Consul General on behalf of the Government.

After the general presentations, the workshop divided into working groups. These produced recommendations outlining measures for the conservation and sustainable use of the walnut-fruit forests, including a national action plan,

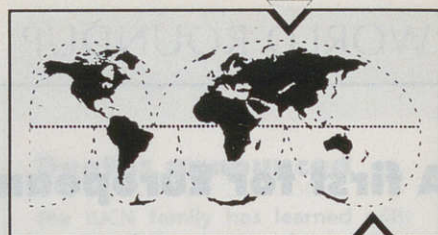
and stressed the need to include all interested groups – forest managers, researchers, industry representatives and people who use the forests – in decision making and management of the forests.

"Intercooperation of Switzerland, an IUCN member, has been actively involved in the forestry sector in Kyrgyzstan for the last three years, and is the only organisation working closely with the forest managers and scientists," notes Don Gilmour. "IUCN will work with them to develop a collaborative programme in Kyrgyzstan and Central Asia and a new Action Plan for forests."

The team also met with the Forest Department of Kazakhstan to discuss development of the regional Action Plan for forests and other management issues, and with members in that country to discuss conservation issues, coordination between members, and establishment of national committees and focal points.

"The region is young in IUCN terms, and we have a long way to go," comments Francis Parakatil. "We have been ensuring continuous contacts with our Central Asian members by developing networks and providing technical support as needed. Our approach is low-profile, focused on providing guidance and policy advice in sustainable forest management."

"Central Asia is wealthy in terms of biodiversity, and is today undergoing rapid changes in all respects. We have been asked to play an important role in the initial stages of Central Asia's



environmental policy development at a time when the eyes of the world are on this region," Parakatil says. "It's a golden opportunity we can't afford to miss."

Viet Nam coordinator

Jacques Lecup has been appointed Programme Coordinator, IUCN Viet Nam, with effect from 1 July 1995. Jacques worked with IUCN as Coordinator/Terrestrial Ecologist for the Biodiversity Action Plan of Viet Nam since August 1993, before becoming Projects Coordinator in July 1994.

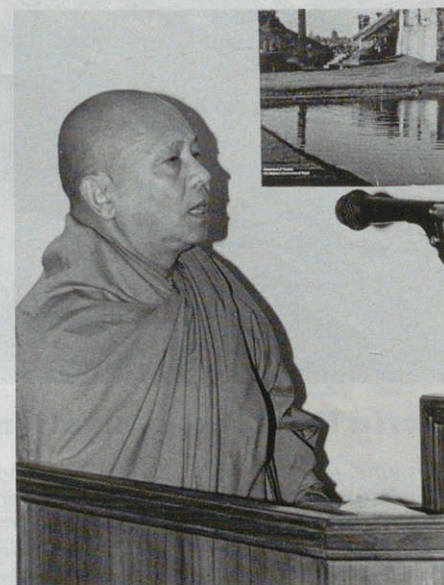
Restoring nature at the birthplace of Buddha

In September an agreement was signed between IUCN and the Lumbini Development Trust of Nepal to help restore a natural wetland in the Lumbini region, birthplace of Buddha.

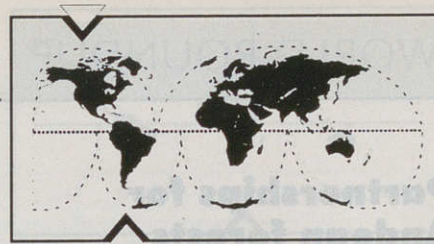
"Lord Buddha was born under a tree, attained enlightenment under a tree, preached to mankind from under a tree, and departed from the world under a tree," pointed out venerable Bhikshu Aswo Ghosh, vice-chair of the Trust.

IUCN Senior Advisor John McEachern added: "Our developing partnership with the Lumbini Development Trust is particularly ennobling, given our joint task of enhancing the quality of nature in the birthplace of Buddha."

Nepal is a State Member of IUCN.



Venerable Bhikshu Aswo Ghosh addressing the audience at the signing ceremony in Kathmandu. IUCN Nepal



Nicaraguan army to defend nature

Environmental conservation will now be one of the Nicaraguan army's priority objectives, according to the terms of an agreement signed recently between the Nicaraguan military high command and IUCN, following the demobilisation of a large proportion of the armed forces in this Central American country.

"The Nicaraguan army is a green army, not because of the colour of its uniforms, but thanks to its commitment to natural resource conservation in our country," said General Joaquín Lacayo, Commander-in-Chief of the Nicaraguan armed forces, following the signing on 6 September of a Memorandum of Understanding on cooperation between the army and IUCN.

Enrique Lahmann, who initialed the agreement as director of ORMA (IUCN's Regional Office for MesoAmerica), said: "This is probably the first time that an army and an international environmental organisation have ever signed a cooperation agreement! ORMA is ready to work with all groups and institutions in the region which want to take an active part in defending our rich natural heritage."

"Army participation in conserving the natural environment will also be of major assistance in bringing peace to Central America: the enemy which we must combat and which is attacking our villages and depriving them of their water resources and fertile soil is ecosystem degradation," he added. The agreement was signed after demobilisation brought troop numbers down from 90,000 to 17,000.

This environmental initiative of the military high command, backed by the Military Organisation, Jurisdiction and Planning Code (adopted in September 1994), was launched by the Nicaraguan Congressional Commission on Natural Resources and the Environment under the chairship of congressman José León Talavera.

The agreement provides for training of officers and soldiers in various sustainable management methods and techniques for flora and fauna. A military unit will be set up to combat forest fires, one of the most serious threats to Nicaragua's environment.

Various sources have estimated that if present trends continue half of Nicaragua's forests may have disappeared in the next ten years. The latest World Resources Institute (WRI) report states that in Nicaragua the principal factors

causing deforestation are indiscriminate felling, wood use (as the main source of fuel), and the extension of grazing land.

Active participation by Nicaragua's armed forces in environmental conservation will be organised in close cooperation with other State bodies, particularly the Ministry for the Environment and Natural Resources (MARENA), a member of IUCN. At the end of March, the army and the ministry also concluded an inter-agency agreement, reflecting "their will to help to conserve natural resources in the Republic of Nicaragua."

Communicating in Latin America

Over the summer, IUCN members and Headquarters staff held a series of meetings to work on a generalised approach to communications in Latin America.

"As part of a global effort, the Communications Division has been putting into place a process to help our field offices and members – especially those with little communications experience – to develop their own communications strategies using a common approach and standardised tools," says Constantino de Miguel, Media Relations Officer at Headquarters. "This summer we made particular progress with the two IUCN offices in Latin America: ORMA (San José, Costa Rica) and SUR (Quito, Ecuador).

"IUCN's presence in the Spanish- and Portuguese-speaking Americas has seen a remarkable growth in recent years,"

notes de Miguel. "We now have 167 member institutions in Latin America – 54 in Meso-America and 113 in South America. This is over 20% of the total IUCN membership!"

The Division has put together a communications planning form to help familiarise members with the 'basics' – **what** they wish to achieve, **who** they want to reach, **what** they need to say, and then **how** they most effectively deliver the key messages.

Having just completed their work planning exercises for 1996, both ORMA and SUR will now begin work on communication strategies with members from Costa Rica, Panama, Guatemala, El Salvador, Peru, Bolivia and Venezuela. "The Bolivian Members Committee is already designing a communication strategy focusing on the Hemispheric Summit of American Presidents to be held in Santa Cruz (Bolivia) next year," reports de Miguel.

"The process is also under way in North America, Africa, West Asia and the Asia/Pacific region," adds John Burke, Director of Communications. "In addition to the basic functions of production of press releases and information materials, this strategic approach will allow our offices and members to get to grips with 'communications for behavioural change' more effectively."

The communications planning frameworks are available from the Communication Division, IUCN Headquarters.



The Peruvian National Committee discusses how to develop a communications strategy. IUCN/C. de Miguel

Partnerships for Andean forests

In June, two representatives of IUCN's Ecosystem Management Group undertook a three-week mission to Bolivia and Ecuador. Their main goals were to look at IUCN's forest conservation activities, particularly in the Andean region; to review the activities of PROBONA (Programme for conservation of native Andean forests) with a view to developing better coordination through the Quito office; and to help develop the IUCN/SUR forest conservation strategy.

"The native Andean forests are extremely important ecosystems in the region," explains Don Gilmour, Head of Forest Conservation for IUCN.

"Numerous human communities depend on these ecosystems to obtain basic necessities – wood for cooking and construction, pasture for their animals, medicine and other nontimber products. PROBONA was founded in 1993 as a joint venture of IUCN and Intercooperation of Switzerland to stabilise the remnant Andean forests through demonstration projects, consultation and dialogue between the numerous interests, building forest conservation capacity mainly in community-based organisations, research and the design of strategies for Andean forest conservation.

"In its short life, PROBONA has accomplished a great deal," comments Gilmour. "It has carried out an assessment of the state of the Andean forests in Bolivia and Ecuador, issued technical reports on timber, nontimber forest products and ecotourism, established a number of demonstration projects – five in Bolivia and six in Ecuador, and prepared Andean Forest Maps for Bolivia and Ecuador."

The mission team also met with Project Amazonia (Conservation and management of Amazonia in Ecuador) to discuss implementation of the Strategy for the conservation and sustainable use of natural resources.

The mission was supported by Dutch Cooperation, with Fundación Natura, an NGO member of IUCN, as the project's executing organisation and INEFAN (the Forest and Natural Resources Institute) as the governmental coordinating agency.

CMC's coastal cleanup

Within the conservation movement today, there is an increase in partnerships. This trend is reflective of the understanding that conservation is only going to be achieved by maximising resources, especially due to the rate at which both financial and natural resources are being depleted and degraded.

One unique partnership effort is being spearheaded by the Center for Marine Conservation (CMC), an IUCN member since 1981 based in the United States. CMC has over 60 countries as partners in what is known as the International Coastal Cleanup, an integral part of CMC's Clean Ocean Campaign.

The Cleanup is the world's largest volunteer, data-gathering effort devoted to conservation of the marine environment. Its mission is to remove debris from the shorelines, waterways and beaches; collect valuable information on the amount and types of debris; educate the public on the issue of marine debris; and use the information collected from the Cleanup to effect policy changes and other measures needed to reduce marine debris and enhance marine conservation.

Annual cleanup efforts began in the Gulf of Mexico along the US Texas beaches in 1986. CMC coordinated its ninth cleanup campaign in 1994, when the Cleanup included 61 countries. The Center coordinates annual Cleanups in cooperation with an extensive network of country-based coordinators.

Last September more than 200,000 volunteers from 61 countries picked up their data cards and bags and scoured more than 7300 miles (11,700 km) of shoreline along streams, rivers, lakes and oceans. They collected and tabulated more than 3.8 million pounds (1900 tonnes) of debris.

The 1994 Cleanup also revealed entanglement in and ingestion of debris by marine life. One hundred and five animals were found entangled in various forms of debris principally made of plastic. Of those 105, volunteers were able to release a sea gull (US) and a sea turtle (Belize).

The expansion of the Cleanup over the past nine years is a path of natural progression, and reflects the interrelationship of the oceans and inland waterways. Tracing marine debris to its sources has shown that much of the debris found on beaches originates further upstream – in rivers, lakes and other drainage systems. This is an important initiative and IUCN endorses the tremendous effort made by CMC.

For information on how to participate in future cleanups, contact IUCN's Washington Office, or CMC directly at (1 800) CMC BEACH (in the United States) or +(1 804) 851 6734 (international). To reach CMC via mail, write to: Atlantic Regional Office, 306A Buckroe Avenue, Hampton, VA 23664, USA.



Waste on the main beach at Puerto Plata in the Dominican Republic. A rapidly expanding cleanup campaign by the Centre for Marine Conservation, an IUCN member, has the Union's enthusiastic support. WWF/Mauri Rautkari

Central Africa: a call for IUCN involvement

The Union's members and partners in Central Africa held their second meeting in Yaounde, Cameroon, on 13-15 September 1995.

"Central Africa, which includes the countries of Burundi, Cameroon, Republic of Central Africa, Congo, Equatorial Guinea, Gabon, Rwanda, Sao Tome and Principe, and Zaire, is an important area for IUCN," notes Assitou Ndinga, the Union's coordinator for the region. "It contains a human population of some 70 million; an unusually rich assemblage of species, many of them endemic; many tropical ecosystems which have remained relatively intact in spite of millennia of human use, including an enormous and unique stretch of dense rainforest; and a store of almost unparalleled biodiversity.

"Today many of these resources are under threat, a fact associated with the tragic upheavals taking place in the heart of the region," Ndinga laments. "A relative lack of national and regional infrastructure and financial resources to deal with these problems makes increased IUCN involvement crucial, yet there are very few IUCN members in the region."

The meeting was attended by about 30 representatives from governmental and non-governmental organisations, and issued several recommendations to guide the Union in its approach to the region. These dealt with a range of issues, including:

- the need to strengthen the role of CNPPA and SSC in the region, by expanding their regional membership; putting into place new national and regional structures including focal points; exploring possibilities for funding CNPPA and SSC development in the region; and promoting information exchange among the region's members;
- the holding in 1996, with IUCN support, of a high-level Conference on Central African rainforests dealing with biodiversity conservation and utilisation of the region's forests;
- reconsideration of the amount and means of payment of membership dues to the Union, in the light of the region's current social and economic crisis;
- the establishment of a regional network for exchanging information on activities related to the sustainable use of wildlife, including development of criteria and principles of such use;

- ways to reinforce the presence and influence of IUCN in the region, including the recruitment of new members; and
- the organisation, given the availability of funding, of a regional and pan-African meeting and other procedures to consider the current revision of the Statutes prior to the World Conservation Congress in Montreal.

New Representative for Southern Africa

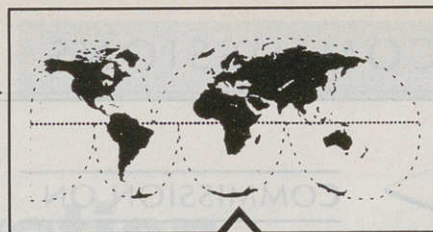


Yemi Katerere is IUCN's new Regional Representative for Southern Africa. A citizen of Zimbabwe, Dr Katerere brings to the Union long experience in environment and development issues. Until March 1995 he held the post of Chief Executive of Zimbabwe's Forestry Commission and has played a major role in promoting community-based approaches to forest resource management in his country and in the region. Educated in agriculture and economics and with degrees from the Universities of Zambia, Southern Illinois and Idaho (USA), Dr Katerere has worked extensively with government and NGOs at national and regional level in southern Africa.

In other appointments:

Ruud Jansen has been appointed Country Representative in Botswana. Ruud had been working with IUCN on a part-time basis in Botswana, where he was also drought coordination consultant with the Botswana Christian Council and a free-lance development consultant specialising in land use and environmental planning. Ruud has been working in the Southern Africa region since 1988. He is Dutch with an MSC in Human and Economic Geography of Developing Countries.

Nelson Dias has been appointed as Head of the IUCN project office in Guinea-Bissau. Nelson, who is from



Guinea-Bissau, has a Major in Agrobusiness from Buffalo University, New York (USA). Prior to joining IUCN, he worked with the Secretary of State for Planning where he was responsible for a public investment programme in Guinea-Bissau and the implementation of programmes with the IMF and World Bank. He is a permanent member of the Economic Council of Guinea-Bissau.

Guy Ramangason, of Malagasy nationality, has been appointed to the position of CTP (Conseiller Technique Principal) for the Dja project in Cameroon. He previously worked for WWF International as Head of its Madagascar Programme. Prior to that, he set up the first biosphere reserve in Madagascar and then provided supervision, coordination and technical assistance to four UNESCO (MAB) projects. He has also worked for some years for the UNESCO/UNDP Conservation and Development programme in Madagascar.

Eastern Africa Coalition advances

The Conservation Coalition in Eastern Africa is taking root. On 14 September the nine-member Regional Advisory Council for Eastern Africa met at the Wasaa Conservation Centre to move ahead with efforts to bring together the region's governments, NGOs, public and private/corporate sectors to address their common conservation issues. The meeting was the first of its kind.

"Eastern Africa is a region of high biological diversity, and IUCN's members in the region need to take the lead in all aspects of its conservation," pointed out Perez Olindo, who chairs the Council.

According to Dr Olindo, who is also an IUCN Vice President and one of three Regional Councillors for Africa, the meeting provided an opportunity for current members to discuss how to recruit new members so as to ensure diversity of representation from within the region. "We have also used this time to plan for our effective participation in the World Conservation Congress next year," he said. "The two-day closed door meeting managed to develop a mechanism for building the Conservation Coalition and strengthening the membership in this region."

COMMISSION ON NATIONAL PARKS AND PROTECTED AREAS

Action Plan for North Eurasia

The first CNPPA Steering Committee Meeting for North Eurasia was held on 17-18 August in the Oksky State Natural Reserve, Russian Federation. It was attended by protected areas specialists from Azerbaijan, Belarus, Kyrgyzstan, Russian Federation, Turkmenistan, and Ukraine.

Among its objectives:

- to establish the CNPPA Steering Committee for North Eurasia, which will promote CNPPA work in the region;
- to evaluate the possibility of preparing a Regional Action Plan for Protected Areas in North Eurasia; and
- to agree on a process and timetable for preparation of the Action Plan.

"The economic crisis faced by the countries of the former Soviet Union has made our work more difficult," says CNPPA Vice-Chair for North Eurasia Natalya Danilina. "It has led to a ten-fold reduction in the budget for environmental protection since 1990. In many republics, protected area specialists have been attracted to better paying jobs in the business and corporate sector. In some, environmental protection is still considered a constraint to economic development. And the entire region continues to suffer from a chronic lack of information on protected areas and sustainable development.

"A regional action plan would give us a mechanism for regional action and cooperation among regional protected area specialists, a growing NGO community, and international institutions," she asserts. "It would build on our substantial existing knowledge, and on the GEF and WWF initiatives already under way here."

The Action Plan will give priority to information and communications; training; strengthening of institutional structures; new concepts and forms of protected areas management; alternative financing mechanisms; research and monitoring; and laws and regulations.

A second draft will be submitted to the next Steering Committee meeting, scheduled for early 1996. Meanwhile, CNPPA will approach potential donors to obtain support for the Action Plan.

New Vice-Chair

CNPPA has welcomed **Dr Joseph Zongo**, Director General for the Environment, Burkina Faso, as its new Vice-Chair for Francophone Africa. He replaces Dr Mankoto ma Mbaelele, who has taken up a post with UNESCO.

Packard awards announced

CNPPA has recently announced two new recipients of the Fred M. Packard International Parks Merit, which honours protected areas professionals:

Inuit Tapirisat of Canada, on behalf of all Canadian Inuit, for their key role in establishing national parks and protected areas within their homelands in Northern Canada. "Canadian Inuit have fulfilled a key role in the establishment through their national, regional and local organisations of national parks and protected areas within their homelands in Northern Canada," announced CNPPA Chair Adrian Phillips, "and they are continuing their stewardship role through the cooperative management of these areas and by pursuing the establishment of additional conservation areas throughout the Canadian Arctic."



H.E. Dr Abdullah Bin Moammar is well-known for his work in directing large scale and effective initiatives to protect land from degradation, preparing legislation and overseeing its translation into realised actions. The results of his influence can be seen in the production of millions of trees and shrubs, their plantation in threatened areas, and measures taken to monitor their ecological impact. In addition he has been closely involved in protection of existing vegetation and

wildlife through establishment of a system of National Parks. As a member of the Board of Directors of the National Commission for Wildlife Conservation and Development (NCWCD) of the Kingdom of Saudi Arabia, he has given vital support to wildlife conservation at all levels. The award was presented at a recent CNPPA Working Session held at Riyadh, Saudi Arabia.

COMMISSION ON ENVIRONMENTAL STRATEGY AND PLANNING

Ethics and policy: getting together

Proponents of sustainable development often call for a new "global ethic". But how will such an ethic be translated into policies and decisions?

A new CESP-organised initiative has brought together IUCN and five NGOs from five continents to help build the sustainability ethic into decision-making. The 'Partnership for a Sustainable World' was formed in mid-1995.

"The Partnership is wasting no time getting starting," says Ted Trzyna, Chair of both CESP and the Partnership's Steering Committee. "Our first activities include encouraging investment of private venture capital in projects that foster sustainable development; helping business executives understand what makes business really sustainable; and providing advice on the ethical foundations of important legal instruments through the IUCN Ethics Working Group.

Partnership members are: IUCN, the California Institute of Public Affairs (Sacramento, California, USA); the Environment Council (London); Fundación Futuro Latinoamericano (Quito); and the Zimbabwe National Environment Trust (Harare).

For a copy of the 20-page working paper describing the Partnership's programme, 'Linking Values and Policy for Sustainable Development: An International Strategy to Build the Sustainability Ethic into Decision-making', write to: Partnership for a Sustainable World, c/o IUCN Commission on Environmental Strategy and Planning, PO Box 189040, Sacramento CA 95818 USA. Tel: +(1 916) 442 2472; Fax: +(1 916) 442 2478; E-mail: cipa@igc.apc.org

Economics for conservation



Virgin primary rainforest in Amazonia. Who benefits? WWF/Anna E. Zuckerman/Eye on the World

Think of a tropical rainforest in Brazil, in Zaire or in Indonesia. Who benefits from the conservation of this forest? Who bears the costs of its conservation? How do the benefits compare to costs and how are these distributed? Can we increase the benefits, reduce the costs and improve the distribution?

Think of conserving this tropical forest as a business. Who are the customers for the forest's supply of conservation goods and services? Think first of neighbouring communities. What goods and services do they demand? Traditional sources of food and medicine? Building materials? Cultural and spiritual services?

Then think of neighbouring communities as a threat as well as customers. They may desire other uses of the forest, such as clearing the land for crop farming. How can we reduce this threat to our conservation business? How can we bring them into our conservation efforts? We need to share benefits: we probably also need to share ownership and control of the tropical forest with its neighbouring communities.

Think of commercial demands for the forest. How can we minimise the negative impacts of extractive demands, such as logging, while increasing returns from these extractive activities? How can we develop non-consumptive demands, such as ecotourism, as well as sustainable consumptive demands, such as butterfly farming? How can we generate

monetary returns for our conservation efforts from our commercial customers?

Think of the national customers for forest conservation. Does the forest, for example, provide watershed services to downstream farmers and ranchers? How can national revenues be raised in return for the national benefits provided by the forest?

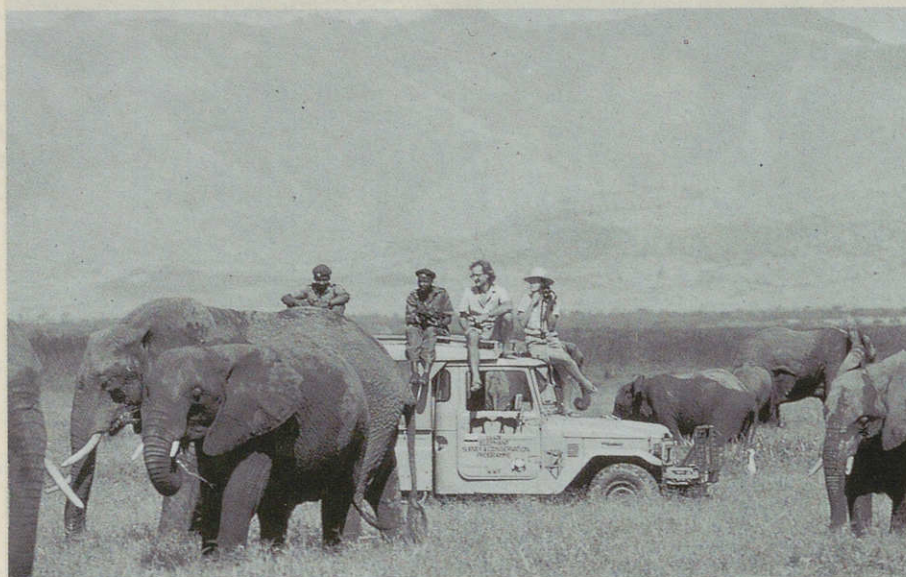
Think of the global customers for conserving this tropical forest. Does it offer carbon sequestration services? Is its very existence as part of the world's portfolio of natural assets demanded by the global community? How can revenues be generated to ensure that such global benefits will continue?

The economics of conservation looks at the benefits and costs of conservation. It is about the equitable sharing of these benefits and costs to encourage conservation and the sustainable use of natural resources. If we are truly going to care for the earth, we must begin to understand the economic dimensions of our mission. Thus IUCN has embarked on a new initiative to further the use of economics as a tool. This special report introduces you to some of the path-breaking thinking and activities on economics taking place within IUCN.

FRANK VORHIES,
ENVIRONMENTAL ECONOMIST, IUCN

Facing the 21st century

The way society functions is changing profoundly, with unknown consequences. Optimists contend that the changes will lead to increased prosperity by 2025, based on new technologies, industries, institutions, and geopolitical configurations. Others warn of social, economic and environmental hazards arising from such configurations. How can IUCN best deal with an uncertain future? In a series of meetings, the Secretariat has been considering the challenge of the future, using as its basis a report by IUCN Chief Scientist Jeffrey McNeely.



Taxing ecotourism is one way being proposed to finance biodiversity, but the administration and enforcement of such measures may be prohibitive. IUCN/Jim Thorsell

Throughout its history IUCN has focused on renewable natural resources. But its approach needs to vary from place to place. In Eastern Europe, for example, pollution is the main threat and must be taken as our point of departure. The Sahel's problems are due to a combination of population growth, outdated production techniques, inappropriate land tenure arrangements and drought. This requires IUCN to work with production systems, migration problems, land tenure problems and so forth.

In many tropical rainforest countries, over-exploitation of the forest is the main issue, leading IUCN to focus on sustainable management of these systems. In Latin America, uneven land distribution underlies many of the natural resource problems, so IUCN must have an effective policy on this issue if we want to be a significant contributor to solving conservation problems in that region.

IUCN also needs to consider whether it will expand into the "brown issues" or

continue to focus almost exclusively on the 'green' issues.

Some predictions for changes in economies over the next 30 years:

- Central governments will grow relatively smaller. Markets will become more global, and global economic factors will become dominant. The private sector, especially multinational enterprises, will become far more powerful.
- The balance of economic activity will continue to shift towards east Asia, while Africa will continue to lag behind.
- Economic tools used more in the coming years will include lowering forest protection costs; using water fees as ecosystem conservation incentives; internalising ecotourism benefits; providing incentives for reforestation; applying differential land-use taxes; requiring environmental performance bonds; agreeing on forest compacts; and

expanding the use of transferable development rights and conservation easements.

- Using market or economic incentive mechanisms in the conduct of environmental policy will accelerate as governments seek to internalise environmental costs.
- Development assistance will decline substantially, while corporate investment may increase. According to a recent United Nations global survey, environment-related investment and lending will triple over the next 15 years, to include well over three-quarters of all investment and commercial banks.
- Tourism, already a dominant economic sector, will continue to grow. Today 212 million people are employed in travel and tourism, a business that earns US\$3,400 billion annually. A decade from now, the global tourism industry is expected to employ 338 million people and have revenues of \$7,200 billion. The overwhelming expansion will be in nature-based tourism, or tourism to the very destinations that IUCN is often working to conserve.

How IUCN can respond

IUCN can respond to these events in a number of ways, and will be considering these over the next triennium. Among the proposals in the field of economics:

- Take active steps to engage the private sector in relation to conservation, seeking to convince private businesses to conduct their affairs in ways that support conservation.
- Become much more actively involved in the economics of conservation, seeking to develop and apply economic tools to address market failures and to improve the distribution of costs and benefits of conservation.
- Develop a technical and policy capacity in green accounting and associated environmental economics issues.
- Establish a training programme for government officials to apply integrated environmental and economic accounting to policy analysis in their respective countries.

JEFFREY A. MCNEELY
CHIEF SCIENTIST, IUCN

Financing biodiversity

The international community has finally agreed with conservationists on the urgent need to protect Earth's biodiversity. But how to pay for the activities demanded? *Caring for the Earth* in 1991 conservatively estimated the cost of minimum action to reduce deforestation and conserve biodiversity at US\$52 billion for the present decade. To look at possible sources of funding for biodiversity conservation, IUCN and CSERGE (the Centre for Social and Economic Research on the Global Environment) convened a meeting of international experts in Zimbabwe on 13-15 September. Their report was presented to the second Conference of the Parties to the Convention on Biological Diversity (CBD), held in Jakarta, Indonesia, in early November.

When we gathered just outside Harare, we looked at three issues of funding biodiversity conservation in particular: mechanisms for attracting external finance to public, NGO, and private agencies conserving biodiversity; opportunities for the agencies to improve their internal financial situation; and funding biodiversity strategies.

The expert group agreed that the world needs a more workable system than one based on the "incremental cost" to countries of taking action – the basis determining much of the financial approach of the Global Environment Facility. Looking at regional mechanisms – such as those already proposed for southern Africa and for the Black Sea region – the experts cautioned that administration might prove cumbersome.

We reviewed national environmental trusts or funds, focusing on the Philippines fund as a case study, and the group pointed to the opportunities to secure bequests from individuals and corporations. In the US such gifts total over US\$100 billion a year. Today only a fraction goes towards conservation. True, private donors will rarely fund government activities. But NGO programmes and projects can relieve some of the pressures on governments to finance biodiversity conservation activities.

Reviewing potential partnerships between the private and public sectors, we considered joint implementation of programmes. For example, carbon emissions produced by new energy-generating facilities fed by fossil fuels could be offset by programmes conserving tropical forests. But the group recommended taking

care to ensure that additional conservation actually results from such efforts.

Looking at private banking, we recognised that government agencies responsible for biodiversity are seldom in a position to receive loan financing from commercial banks. They usually lack the security of property rights and tenure, as well as the independence from arbitrary political influence necessary to attract the interest of the banking community. Nevertheless, the group recommended serious efforts to determine what institutional reforms would be necessary to attract private loan capital.

Still another opportunity for new financing for biodiversity conservation could come through the national and international markets for equity investment. The expert group reviewed two southern Africa initiatives. A tourism company in South Africa is promoting sustainable non-consumptive use of wildlife and direct economic participation by rural communities. This company has succeeded in raising sizable sums in national and international capital markets. In Zimbabwe,

a new venture is seeking to use equity financing to restock a dry savannah and bush ecosystem with shares in the venture for neighbouring communities. In addition to selling ecotourism services, the venture plans to enter the market for trophy and sport hunting and live sales of wildlife.

The expert group recognised that such equity financing schemes may not be appropriate for all biodiversity conservation efforts. Where appropriate, however, they should be considered. Governments need to investigate how they can create investor-friendly environments for biodiversity conservation ventures.

One innovative variant that has been proposed is to purchase landowners' development rights. The expert group wondered whether this approach is feasible where property rights are insecure and ill-defined, and about the equity considerations of a community selling its right to develop its land.

We also looked at using revenue from biodiversity use in general as a source of finance for conserving biological diversity, including taxes or charges on ecotourism, tropical timber exports or imports, airline travel, postage stamps, and visits to protected areas, zoos, and botanical gardens. Because of the complexity of administering and enforcing such schemes, the group was sceptical of this approach. Furthermore, raising revenues in a manner not directly associated with biodiversity conservation breaks an important link in demonstrating its value.

Protected area authorities in some countries are already charging sizable entrance fees to parks and reserves and structuring lucrative lease agreements with hotels and tour operators. In some cases, primarily in Africa, they have set up auction markets for live sales of wildlife. In other cases, they offer hunting concessions and harvesting contracts. The results depend on the institutional structure established. The group commented on the lack of mechanisms to distribute revenues to stakeholders such as local communities that may absorb many of the costs of lost opportunities as a result of biodiversity conservation.



Medicinal herbs on sale at a Brazilian street stall: 'bioprospecting' by pharmaceutical companies can bring quick revenue but may not always be compatible with conservation. WWF/Edward Parker

One innovative method of earning revenue from biological resources discussed by the group was the market for bio-prospecting. Countries may be able to sell rights to international companies in sectors such as pharmaceuticals, cosmetics, and agriculture. The expert group was worried, however, about the divergence of interests between governments, who would like to sell prospecting rights for immediate revenue, and companies, who would like to buy them in exchange for a high risk but potentially high return of future revenue.

We highlighted the need for governments to earn immediate revenue by trading their long-term bio-prospecting contracts to investors willing to wait and take the risk. We pointed out that commercialisation may not always be compatible with conservation.

Ensuring that the existing flows of funds are used effectively and efficiently will give governments a strong basis for raising additional funding. The organisations responsible for biodiversity conservation may need to be restructured as parastatal agencies, or the job turned over to NGOs, to communal and private landowners, and maybe even to private enterprises.

NGOs supporting biodiversity conservation could also be operated more efficiently. They need to incorporate the management skills common in the private sector, including strategic planning, marketing, cost control, and financial management.

The large role that NGOs would like to play in support of biodiversity conservation may depend critically on the NGOs improving their management effectiveness, the experts concluded.

Governments can improve their financial situation by removing distortions which cause a loss of biodiversity (see the accompanying articles by Alain Lambert and Fulai Sheng). Many distortions, however, are well-meaning attempts to support certain income groups or economic sectors or to stimulate economic

growth. Thus, progress will be politically sensitive.

All of these ideas could help countries in financing national strategies. Every national biodiversity strategy and action plan should include a detailed financial strategy, specifying how the various financing options will be incorporated into the plan. Conserving biological diversity, we concluded, requires strategic diversity in sources of financing.

FRANK VORHIES,
ENVIRONMENTAL ECONOMIST, IUCN

Converting debt

Poor nations are looking for ways to reduce the debt burden on their economies. In recent months IUCN has taken several steps towards working out a new relationship between lenders and debtors, to the benefit of conservation.

We have already worked with Zambia and Guinea-Bissau on the two principal forms of debt for conservation swaps: buy-back operations and securities repurchase operations (using debt relief facilities).

In Zambia we used our own limited funds but these were multiplied by 160% over two years. IUCN acquired about US\$2 million of Zambia's private debt at a cash buy-back price of 11%. A 50% premium on this was paid by Zambian authorities in local currency,

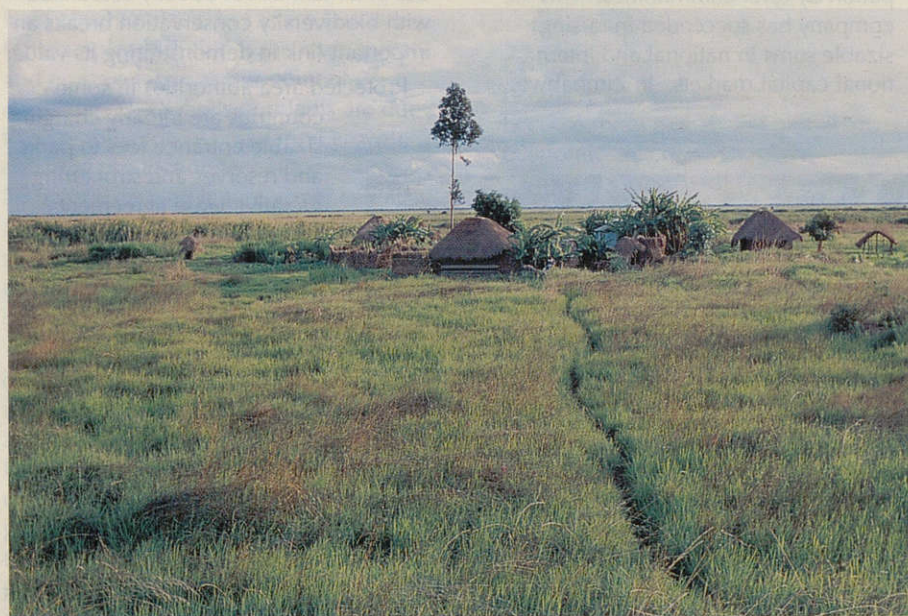
and this is to be used to finance IUCN's activities there.

Guinea-Bissau did not involve any financial investment from IUCN other than the expense of a short mission from IUCN Headquarters to Bissau. The operation financed by the Swiss Debt Relief Facility expunges SFR14 million (over US\$10 million) of Swiss commercial guaranteed debt.

In return, the Government agreed to make a counterpart commitment in local currency, endorse a coastal zone management plan and create a national park and biosphere reserve. IUCN acted as broker (see *IUCN Bulletin* 2/95).

Contrary to popular belief, debt conversion negotiations are not expensive or time-consuming (two months for Zambia, three months for Guinea-Bissau). It is the political decisions that take time. In the Zambian swap, the Debt-for-Development Coalition Inc, a US-based foundation funded by the US Agency for International Development (USAID), provided free services, mediating and negotiating for IUCN.

In both cases, the return on investment was extremely high: in Zambia financially and in both countries politically. In Guinea-Bissau our members benefit from the swap. The Government of Guinea-Bissau expressed its great satisfaction at IUCN's role as an honest broker and technical advisor.



IUCN-brokered debt-for-conservation swaps between Zambia and private banks are bringing benefits to all, and are financing the Union's Zambia programme. Pictured: a fishing village of Zambia's Bisa tribe. WWF/Roger Le Guen

Bilateral donors are beginning to question the way their aid funds are used to pay poor countries' debts to multi-lateral banks. IUCN tries to play an active role in influencing international financial institutions to accept debt for conservation swaps. IUCN can also strengthen its relationship with traditional donors in the field of debt conversion and contribute towards coordinating actions regarding multilateral debt.

We are already moving in this direction. The Council has given the Secretariat a mandate to develop a debt conversion programme as a tool to help finance conservation activities. The Director General sent a letter with our proposal in August 1995 to nearly 30 major donor institutions. It pointed out that our Zambia and Guinea-Bissau operations proved so successful that we now have several requests from severely indebted low-income countries for more conversions.

Several donors, including Canada, Denmark, Germany, Sweden and the UK have replied showing interest in further discussions, though a number will only look at debt swaps case by case.

To help ensure that debt relief facilities benefit environmental conservation that has broad support, IUCN promotes National Environmental Funds as the place to channel money. Such Funds involve a wider decision-making process than the government alone and set clear priorities.

By promoting debt conversion, IUCN is not expecting to solve developing countries' debt problems but more modestly to raise funds for conservation activities. Obviously, we are not in favour of using cooperation funds for debt conversion. We seek additional funding.

Many donor countries have earmarked budget lines for debt conversion within their cooperation budgets. If the facilities are not used, the money is lost. In this case, of course, we agree to use these funds, and our debt-for-conservation swaps offer a secure way of putting the funds to good use.

ALAIN LAMBERT,
DEVELOPMENT OFFICER,
IUCN

Note: IUCN has just completed an analysis of the debt situation using the latest official figures (including 1994). It is now available from IUCN Headquarters.



Sisal plantation in Kenya. Many developing countries depend on commodity exports for foreign currency earnings, to the detriment of nature and traditional agriculture. With several environmental NGOs, IUCN is setting up a resource centre to provide a forum for dialogue with trade negotiators. WWF/Mauri Rautkari

Following the trade debate

NGOs worldwide are concerned that the tidal wave of trade liberalisation will swamp environmental achievement. Most would like to participate more actively in the debate, and have some influence on it. IUCN is taking the lead in establishing an NGO Resource Centre on Trade and Sustainable Development, aimed at promoting more active dialogue between the World Trade Organization on the one hand, and NGOs interested in Trade and Sustainable Development on the other.

There can be little question that international trade is one of the principal motors of economic development. Trade liberalisation has led to the creation of enormous wealth, and is responsible for the growth in economies both North and South.

The Uruguay Round agreements, which led to the establishment of the World Trade Organization last year as the successor to GATT, are likely to further stimulate the economies of

developed and developing countries. This inevitably will have an impact on the environment. While this impact will be both positive and negative, it is important that all efforts be made to ensure that the benefits of trade liberalisation are realised, without an undue price being paid in terms of environmental degradation.

WTO has a mandate, especially through its Committee on Trade and Environment (closed to NGOs) to

monitor the effect of environmental legislation on trade, but there is no clear mandate in WTO or elsewhere to deal with the effects of the new trade regime on the environment. This is a great concern to NGOs – including IUCN members – North and South.

Earlier this year, we decided to do something about it. Through the Neptune Group – a loose coalition of environmental NGOs in the Geneva area, which IUCN currently chairs – we commissioned a feasibility study on a new NGO Resource Centre on Trade and Sustainability. The study was led by Aaron Cosbey, trade specialist at the International Institute for Sustainable Development (IISD). His report was adopted by the Neptune Group in mid-October, and IUCN was asked to take the lead in establishing the Centre.

The Centre will be a service to all NGOs concerned with trade and sustainable development. It will try to enhance the two-way flow of information: to NGOs concerning what is happening at WTO and in the various trade negotiations, and to WTO concerning analysis, policy recommendations and concerns of NGOs. As its core activities, it will seek to ensure that NGOs have the maximum access to information, through direct transmission of documents, analyses, and publications, and through briefing documents, annotated bibliographies, "top ten readings", and one or a series of information bulletins. Beyond that, however, it will seek to expand its services, e.g. organising briefings for the trade diplomatic community, lecture series, training courses, etc. The extent of its mandate will depend to a large extent on the funding raised.

The Centre will not be a lobbying organisation. Indeed, good relations with both the NGOs and the trade community are essential for its success. However, it will seek through its services to make its constituents more effective advocates, and give them a louder voice in the trade debate.

An Establishment Group of four organisations has been formed to see the Centre into existence: IUCN, IISD, the Swiss Coalition of Development Organisations, and the Fundación Futuro Latinoamericano. We expect to inaugurate the Centre in mid-1996.

MARK HALLE, DIRECTOR,
GLOBAL POLICY AND
PARTNERSHIPS GROUP,
IUCN



Forest depletion is one of the threats facing China's forests, but the loss in natural capital is rarely included in national economic accounts. Pictured: logging in Wolong, China. WWF/Soh Koon Chng

Accounting for our future

A key issue in environmental economics is how to incorporate natural values into national accounts. Along with several other organisations (including, most recently, IUCN), WWF – World Wide Fund For Nature has developed an international programme of action to improve the way we put a price tag on the environment. At the same time, we are well aware that this isn't the whole answer.

To generate global momentum for integrating nature's value into our society's economic value system, WWF, the European Parliament, the European Commission, and the Club of Rome jointly sponsored an international conference "Taking Nature into Account," in Brussels in May 1995. Three hundred people from 60 countries attended.

WWF and the Club of Rome launched an action plan calling on the European Union to develop and implement 'integrated national accounting' by the year 2000. The European Parliament and European Commission are currently shaping up a programme on environmental indicators and green accounting as a response to the action plan.

IUCN joined WWF, the National Wildlife Federation, the Bank Information Centre and the World Bank to organise another conference, "Accounting for the Future", in Washington DC on 3 October 1995.

The conference built on the Brussels meeting to promote an international action programme. Basic action points include the establishment of an international working group, a minimum of ten country case studies, training of trainers, further methodological

developments, and application of integrated accounts and indicators in policy analysis, decision-making, and performance evaluation.

The United Nations Statistical Commission and the World Bank are expected to take a strong leadership role in implementing such an action plan in collaboration with other international organisations, national governments, research institutions, and the NGO community.

What do we want for our effort? A fundamental reform of perhaps the most influential economic value system in the modern world – the United Nations System of National Accounts (SNA), conceived in 1947, first adopted in 1953, systematised in 1968, and revised in 1993. The SNA provides a set of guidelines for calculating indicators such as national income or its variation Gross Domestic Product (GDP), i.e. total market value of goods and services produced in an economy in a quarter or a year.

What's wrong with the SNA? Levels of GDP are not merely used to show the magnitude of money flows in an economy, as was originally intended. They are overused as indicators of quality of life, welfare, progress, and development.

As set up, the current SNA provides strong incentives for destroying nature. Revenues made possible through depletion and degradation of the environment are entirely counted as income. Likewise, revenues generated through government and household spending to maintain environmental standards are counted fully as national income without costing the consequences of degradation in the first place. The resulting overestimation of national income encourages pursuit of income growth at the expense of nature. In industrial countries, for example, 70% of economic growth is attributed to the most environmentally damaging activities.

Techniques are now available to correct such imbalances in the current SNA. Both natural resource depletion and environmental degradation can be priced and deducted from national income to give a more accurate picture of true income and to reduce economic incentives for activities that cause environmental problems.

Environmental adjustment of the current SNA can start with a few important resource sectors. This is happening on an experimental basis in a number of countries already. In China, the net depletion of forests was estimated at over US\$1 billion in 1988. In Costa Rica – it has been calculated – the depletion of forests, fisheries, and soil exceeded \$4 billion during 1970-1989, the average of the country's annual GDP. In the UK, the total value of depletion and degradation in the oil and gas sectors alone amounted to £20 billion (some \$35 billion) in 1990. Some 30 countries, from Japan to Mexico and South Africa, are exploring ways to improve the current SNA. In October 1995, the European Parliament passed a resolution requesting the European Commission to implement a system of integrated environmental and economic accounting throughout the European Union by 1999.

The World Bank has recently made an attempt to incorporate the value of natural and human resources into national wealth estimates. This overturns conventional rankings: Australia now ranks first and the USA 12th. "Richer countries are generally those that invest more in human resources," the Bank says. It even declares: "Good environmental policies are good economic policies and vice versa."

The new action plan includes proposals to develop integrated

accounting in a core group of interested countries, and to begin to use such measures in lending and advisory programmes of international financial institutions. The support of other major international institutions, including the International Monetary Fund, the United Nations Statistical Division, the UN Development Programme and the UN Environment Programme, is also being sought in implementing various elements of the action plan.

Environmentally adjusted GDP is popularly known as 'green' accounting but the term is misleading. Many environmental and natural resource problems cannot possibly be captured

by such GDP accounting. Nature has social, cultural, biological, aesthetic, and other values which cannot and should not all be monetarised. Giving money values to nature represents a step towards the correction of imbalances in our society's value system, but it alone is inadequate. Social measures such as education, campaigns, government regulations, and public opinion must all be mobilised to express the non-economic values of nature in decision-making. In any case, we need to reduce the role of GDP – green or otherwise – in our decision-making.

FULAI SHENG,
ECONOMIST, WWF INTERNATIONAL

Abolishing misleading stereotypes

Protected area management applies the visible hand of control over the exploitation of natural resources. Arguments that its benefits have limited economic value are being increasingly countered by detailed estimations of exactly what we gain from nature reserves. A task force of the IUCN Commission for National Parks and Protected Areas is working on a comprehensive report on assessing economic benefits of protected areas. The report proposes a standard method for valuing costs and benefits to provide a common format that will enable comparisons to be made across the world.

The natural features of protected areas offer attractions which in many countries have become a cornerstone of the tourist industry. But this is often not their primary role. Protected areas have the prime purpose of conserving ecosystems and species biodiversity.

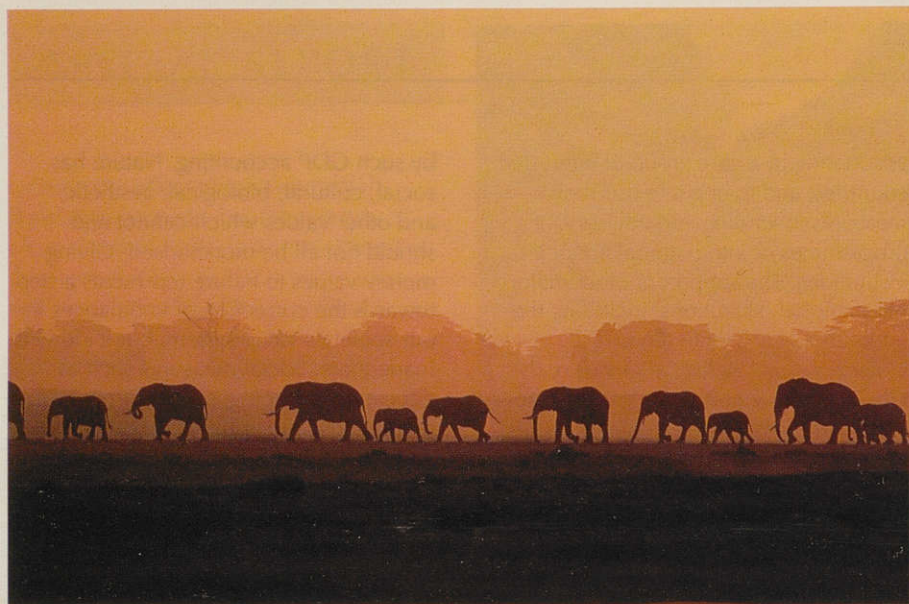
Environmental protection is often couched in terms of trying to achieve a balance between leaving areas in their

natural state and developing or exploiting them – a constrictive and misleading paradigm. In some industry/environmental categories, there are solutions where the environment and the economy can win simultaneously, what we call a 'niche growth' paradigm rather than a 'balance' paradigm.

Protected areas are often significant revenue-earning entities and can make



Tourists at a display in Costa Rica's Tortuguero National Park. The country's national parks bring in more than 27 times what they cost to maintain. WWF/Michèle Dépraz



Left: elephants walk at sunset. Kenya's natural attractions help bring in funds for conservation.

WWF/M.&C.Denis-Huot/BIOS

Below: Bird Cay National Park, Belize. Protected areas can have many indirect benefits: a case study of Belize found that tourism created jobs outside the conservation sector, and that the revenues returned to local people.

WWF/Anthony B. Rath

an important contribution to local economies. For instance, Canada achieves some US\$6.5 billion in annual Gross Domestic Product from the expenditure of participants in natural areas- and wildlife-related activities. This sustains 159,000 jobs and creates \$2.5 billion in tax revenue each year. Australia receives over \$2 billion in expenditure from eight national parks.

Costa Rica spends some \$12 million per annum to maintain its national parks, which attracted 500,000 visitors in 1991 and generated an income of more than \$330 million in foreign exchange. Ecotourism is now the second largest industry in the country.

We can value protected areas in other ways. In Tanzania, poaching and uncontrolled hunting of elephants to the south-east of Tarangire National Park led to an increase in woody plant growth in the Park. In turn this caused an increase in the tsetse fly and a livestock reduction. Conservation of elephants would have substantially assisted the livestock industry in this case.

Protection can also be more valuable than competing uses. In Australia, it was discovered that water production in the catchment area of the Upper Thompson dam in Victoria was more valuable to the local community than timber production from the same land. Removal of the timber and disruption of the runoff would have resulted in a net economic loss. In the Philippines, researchers discovered that tourism and fishing were more economically lucrative than logging.

Another researcher found that Fijian mangroves were more valuable for firewood collection, fishing and sewage disposal than when cleared as agricultural land. The US National Marine and Fisheries Service estimated that the destruction of US coastal estuaries between 1954 and 1978 cost



the US economy \$200 million in fish production on an annual basis.

In each of these cases, the economy is demonstrably receiving a boost from the existence of protected areas and indigenous natural landscapes. Far from being locked up and lost to local users, these areas represent an opportunity for sustainable industries and for the generation of financial returns. With proper management, the 'product' on offer can be sold over and over again without diminishing its value.

The Report identifies ten types of activity related to protected areas which can benefit the economy. These include tourism, natural services, water production, mitigation of natural disasters, breeding habitat, subsistence living, and commercial activities. But there is evidence that many benefits are overlooked, even when a valuation exercise is conducted. This leads to reduced levels of conservation as well as reduced wealth, income and jobs. It is clear that policy mistakes which undersupply

conservation are likely to be very costly and may condemn economies to perpetual poverty.

The Report recommends a standardised valuation methodology be adopted, and this is described fully in the text. The methodology provides sound guidance for those unfamiliar with measuring costs and benefits. Above all, the standard global format enables comparisons and aggregations to be made of studies in different parts of the world.

LEE THOMAS,
CHAIR, CNPPA TASK FORCE

The Report, from which this article is largely extracted, has now been released in draft form. For an evaluation copy, contact David Sheppard at IUCN Headquarters or Lee Thomas, c/o Australian Nature Conservation Agency, GPO Box 636, Canberra ACT 2601, Australia. Fax: +(61 6) 250 0756.

East Africa's biodiversity: innovative capacity building

When we think of conservation in East Africa, we have images of elephants in Amboseli, lions in the Ngorongoro Crater and wildebeest on the plains of the Maasai Mara. Though these magnificent animals and savannas remain a high priority for conservation, East Africa is also home to many other biological resources. These include the cool mountain forests of Uganda, the coral reefs of Zanzibar and the Rift Valley wetlands of Kenya.

To build institutional capacity for conserving such biodiversity, the Global Environment Facility through the United Nations Development Programme established the East African Biodiversity Project. The project, one of the first to be funded by the GEF, is headquartered in Dar es Salaam and managed by the UN Food and Agriculture Organization. It has approximately thirty components spread among government divisions and universities in Kenya, Tanzania and Uganda. The focus is on biodiversity conservation in forests and wetlands with capacity-building activities in environmental awareness, data collection and management, curriculum development and strategic planning.

One innovative and exciting component of the East African Biodiversity Project is known as Forestry Environmental Accounting Services or FEAS. This component focuses on raising interest and technical capacity in the use of economics for biodiversity conservation, particularly of forests, and in the use of environmental or 'green' accounting. The project is working to upgrade the ability of forest departments to manage forests for their environmental values and to increase the understanding of policy-makers and planners of the values of national biological resources. FEAS also is working more broadly to introduce economics as a tool for conserving all aspects of biodiversity in East Africa.

FEAS is administered by the African Wildlife Foundation, an American NGO and IUCN member with many years of experience in East Africa. FEAS is headquartered in the AWF Office of African Operations in Nairobi. It also has national counterparts in the Kenyan National Environment Secretariat, the Ugandan Department of Environment Protection, and the University of Dar es Salaam.

Through the FEAS project, the AWF has taken a leading role in bringing

economics into traditional conservation areas in East Africa, such as the national parks, as well as into new areas, including communal lands, national forests, and coastal marine systems.

FEAS started in 1994 with a series of information-sharing workshops within governments and universities around the region. Though these workshops indicated a lack of technical capacity throughout the region, they also revealed a strong interest in incorporating economic thinking into conservation efforts. East African conservationists are keen to see conservation as a positive part of the development process and not as a cost or a threat to development.

In traditional income *per capita* terms, East Africa is one of the poorest regions in the world. It desperately needs and wants to develop. Many are, of course, interested in the economic potential of exploiting the region's natural resources. But East Africa has been a strong

supporter of non-consumptive uses of natural resources. This is evidenced in its large ecotourism industry. Also, Kenya held its third ivory burn in February of this year to show its continued support for the ban on trade in endangered species. Nevertheless, the economic returns from consumptive use are now being considered seriously. Thus FEAS soon found a role in supporting the emerging discussions on sustainable use of biological resources.

In its first year, FEAS also ran a series of workshops on economic valuation and economic instruments. These attracted a wide range of professionals in governments, universities and NGOs. The Kenyan workshop was held at the new headquarters for the IUCN East Africa Regional Office at the Wasaa Conservation Centre. These workshops stimulated discussions of how the countries could go forward to strengthen their capacity in economics.

At a workshop organised by participants of previous FEAS workshops and supported by the FEAS project, the Ugandans set up the Environmental Economics Society of Uganda. The economics unit of the Kenyan National Environment Secretariat is setting up a data centre on environmental economics and accounting. An *ad-hoc* working group in

Environmentally sustainable development

IUCN showed a high profile at the World Bank's third annual conference in Washington, DC, on 3-6 October. Director General David McDowell was invited to join the concluding panel of what has become a major policy forum for governments, NGOs and international institutions.

"We have a fairly good idea of where in the world and why we are not achieving Environmentally Sustainable Development [ESD]," McDowell told the audience of more than 1200 participants from across the world. "More money alone, while welcome, will not solve the problem. Current policy and institutional constraints render much of the available flows ineffective in the long run. Re-orienting existing patterns of expenditure is the main task." He pointed out that IUCN's global membership and programming "provide the equivalent service of a pre-investment facility and technical advisor" to leverage and monitor funding for ESD.

"The Director General's presentation, which focused on a 'cautionary tale' about a dam project in Africa and its broader implications for ESD, received endorsement from many participants," reports Scott Hajost, IUCN-US Executive Director. "Our active involvement at this event and the invitation to the Director General are strong indications of the growing IUCN-World Bank dialogue initiated during the past twelve months."

Panelists also included IUCN Assistant Director General for Conservation Policy Mersie Ejigu, Senior Policy Advisor Achim Steiner, and the Chair of the IUCN Commission on Environmental Strategy and Planning, Ted Trzyna.

Dar es Salaam has formed to design a training programme for government officials and conservation managers.

The FEAS project has also developed a concept paper on a Post-Graduate Programme on the Use of Economics for Biodiversity Conservation in Africa. The concept is currently being reviewed in the region as well as in the international donor community. FEAS has clearly identified training as a priority.

The GEF East African Biodiversity Project and the African Wildlife Foundation are playing a lead role in

bringing economic theory to on-the-ground reality in Africa. The key to moving forward now is building practical technical capacity in applying economics to the challenges of biodiversity conservation. IUCN sees projects such as FEAS playing an important role in putting economics to work where it matters: by introducing those responsible for biodiversity conservation to the thinking and tools that economics has to offer.

FRANK VORHIES,
ENVIRONMENTAL ECONOMIST



Pesticide spraying in Punjab, Pakistan. Participants in the Green Economics Conference were concerned about the import and use in developing countries of pesticides banned elsewhere. WWF/Mauri Rautkari

Green economics 'round the table

How can environmental issues be incorporated into standard economic policy-making in a developing country? A Green Economics Conference (Islamabad, 12-14 September) brought together experts from within the Asian region and selected participants from Europe with the aim of raising awareness of the policy issues.

Aimed at highlighting the role of environmental issues in the economy, and demonstrating how these can be incorporated into normal policy-making, the conference followed two parallel streams. 'Policy sessions' focused on general issues such as fiscal policy, trade policy, and national income accounts. 'Sectoral sessions' looked at issues such as water, forests, and urban management.

Joint sessions brought people together for an analysis of institutional, social and philosophical dimensions of sustainable development. Finally, the roundtable

and the concluding discussions consolidated the recommendations of each session for endorsement by the participants.

Papers were presented on Bangladesh, India and Thailand as well as Pakistan. The proceedings of the Green Economics Conference, organised by the Sustainable Development Policy Institute (SDPI) – an IUCN member – and the Heinrich Böll Foundation, are to be published after compilation and editing.

Among the recommendations that came out of the roundtable discussions is a proposal for establishment of a

National Council for Sustainable Development (NCSD). This would be a significant gain in institution building, both at home and internationally, since sustainable development is now firmly entrenched on the international agenda, with annual country performance reports being submitted to the United Nations Commission for Sustainable Development (UNCSD).

An NCSD would be a forum where participants from a variety of stakeholder groups would come together to assess and coordinate their efforts at sustainable development. The hope is that, eventually, there would be such councils at the national, provincial and district levels. The importance of such partnerships between stakeholder groups is now widely recognised.

Currently, Pakistan does not have the institutional capacity – at the level of government, of civil society, and in terms of mediating or partnership institutions – to monitor or gauge the country's performance *vis-à-vis* sustainable development.

This institutional vacuum is even more glaring given the challenge of developing sustainable development indicators – a task that is already under way in the 'North' and which, once the indicators are in place, will determine the direction of future policy, both at the national and international levels. The NCSD could also serve as a forum where discussion of adequate indicators could take place.

Beyond its enthusiastic participation in the conference, the government made a commitment to institutionalise the conference. The Secretary of the Environment, Salman Farooqui, said that the conference should be an annual event, and that the government would fund it.

NOMAN NAQVI,
SUSTAINABLE DEVELOPMENT
POLICY INSTITUTE

Created in 1992, SDPI conducts research in 14 core areas of the National Conservation Strategy. It carries out projects, helps build capacity, and in January 1995 established a communications and advocacy unit. Among its achievements: in collaboration with two other bodies, SDPI launched a media campaign against bromocriptine, a lactation suppressant that had been withdrawn in the US, France and South Korea because of its alleged harmful side-effects. Major pharmaceutical companies in Pakistan recently announced plans to withdraw the drug from the market.

Sustainable development: showing that it pays

For programmes on the ground, credible assessments of the economic value of conservation are essential. In Nicaragua, IUCN representative Nestor Windevoxhel demonstrated the benefits to be obtained from sustainable conservation of the mangrove system in a region that plays a key part in obtaining foreign exchange earnings.

The Heroes and Martyrs of Veracruz, Nicaragua, covers some 2000 sq km in a volcanic basin on the Pacific Coast. The region produces cotton, sugar cane and bananas in the Nagraandana Plain, an area of vast agricultural potential between the mountains and coastal mangrove forests. Its population is expected to grow to 560,000 by the year 2000 from 336,000 in the 1980s.

Heroes and Martyrs also suffers from virtually all the conservation problems affecting Central America. As a result of poor resource management, it has been subjected to chronic soil loss, degradation of water supplies, destruction of coastal ecosystems, reductions in essential wood supplies, and an increase in health problems associated with air and water pollution.

Heroes and Martyrs of Veracruz has some 8700ha of mangroves, about a quarter of the country's total, but its losses – almost 397ha in 1990 – represent half the mangroves disappearing from the country's Pacific coast every year. These areas were mainly cleared for salt production and agriculture.

At current rates, this ecosystem could vanish within this decade. But mangroves provide goods and services that are important to the local and regional economy as well as ecological stability: firewood, poles, tannin, shrimp fisheries, and crab and shell production.

My study of the economic value of the mangroves of Heroes and Martyrs established the economic benefits of sustainable management. It showed that, in contrast to most industrialised countries, value comes through direct goods rather than services. It is a factor that must be taken into account when applying evaluation methods and policies in developing countries.

In 1989, firewood produced from mature mangroves in the region was estimated at 18,812 m³. An IUCN/CATIE (International Centre for Tropical Agricultural Training and

Research) study in 1991 estimated use at 26,620 m³ for the 32,000 inhabitants, suggesting the area's mangrove loss was due to cutting of immature trees.

Nicaragua also imports over US\$90,000 of tannin to supply the sandals trade. Tannin extracted from mangrove reeds in Heroes and Martyrs meet double the present demand. It would probably also cost only \$50,000 to satisfy current needs. As it is, local market demand means that tannin is now extracted from mangrove trees themselves, using resources that could otherwise provide fuelwood.

As for shrimp fisheries, the Pacific coast produced an estimated \$2.69 million in earnings at the start of the decade. Heroes and Martyrs accounted for \$664,000 of this. Estimating the net benefit from a pound of de-headed shrimp at \$1.6, this produces a return of \$77 per hectare, compared with \$60 per ha estimated for the US coastal wetlands of Louisiana. However, with the current rate of wetlands loss, by 1997 in Heroes and Martyrs earnings could be down to \$71,700 (of \$2.17 million total for the Nicaraguan Pacific).

Clearly, adding together the known net benefits from direct uses on the basis of present population undervalues the reality. However, estimating the recreational value of a region in Latin America is problematic, and must be sure to take account of local realities. These are that only a small proportion of the population enjoy high salaries; holidays account for approximately three weeks a year; and travel by private vehicle accounts for 66% of trips (complicating valuations of free time according to the cost of travel).

As well as fitting this method to Nicaragua's economic conditions, I also used a survey that employed the contingent valuation method based on 'willingness to pay' for an amenity. The travel cost method produced higher values than contingent valuation. The differences arose because people in the survey expressed a lower willingness to

pay as a strategic response to avoid fees or taxes, given the poor economic conditions in Nicaragua.

In the end, I estimated total net benefits from visitors could reach \$1.5 million. Cahuita National Park in Costa Rica, by contrast, earned \$15 million in 1980, but it has five times as many visitors, and the Nicaraguan region has no service or infrastructure for visitors.

The exercise showed that sustainable management of mangrove resources, based on an optimal extraction of firewood, produces greater benefits than the current use: \$10.98 million as against \$5.74 million at the time of my study in 1992. Even assuming 40% losses of fishery products over one decade because of problems such as cholera, the fishing returns would also be greater.

NESTOR JOSE WINDEVOXHEL LORA,
IUCN REGIONAL OFFICE FOR
MESOAMERICA



Some IUCN publications on environmental economics

From Care to Action: Making a Sustainable World, by Martin Holdgate (in press).

Assessing Economic Benefits of Protected Areas, the report of a CNPPA Task Force (in preparation).

The Economic Value of Biodiversity, by David Pearce and Dominic Moran. IUCN/Earthscan, 1994.

The Hadejia-Nguru Wetlands, by G.E. Hollis et al (eds). IUCN, 1993.

Protected Area Economics and Policy, by Mohan Munasinghe and Jeffrey McNeely (eds). World Bank/IUCN, 1994.

A green thumb for the invisible hand

Australia, a State Member of IUCN, has been a pioneer in adopting policies for ecologically stable development. Within Australia, the New South Wales government has been a leader in implementing novel techniques for environmental management. ENVALUE is one tool that could be useful for other countries.

We are not generally asked to pay for clean air or clean waterways in our day-to-day transactions, but this does not imply that people place no value on these goods. There are many other ways in which people reveal the value that the environment has for them. For example, they will choose to live in areas which have good environmental amenity, and are prepared to pay a premium for homes in such areas.

The Protection of the Environment Act, under which the New South Wales Environment Protection Authority (EPA) operates, provides a very strong case for improved valuation and pricing of environmental resources. The Act states that ecologically sustainable development requires the "effective integration of economic and environmental considerations in decision-making processes".

One of the ways that this integration can be achieved is through improved valuation and pricing of environmental goods and services.

The NSW EPA is undertaking a number of programmes and activities to broaden the range of regulatory tools at its disposal for better environmental protection. Recognising the need for a better information base on benefits of environmental policies, the NSW EPA has been developing ENVALUE, the environmental valuation database – a systematic collection of studies that estimate values for a range of environmental goods and services.

The information held on each study in the database includes a relatively detailed description of the environmental good or service which has been valued, the values that have been estimated, and an assessment of the adequacy of the study methodology employed.

By assembling a range of values relating to a particular environmental good or service in one easily accessible location, the database permits ready comparison of valuations by different researchers. The accompanying manual

provides guidance on how these estimates could be re-used in current analysis.

The present version of the database contains around 260 studies and has been reviewed by an expert panel. It is hoped that the database will encourage incorporation of environmental values in decision-making processes and improve the rigour with which valuation is applied in practice.

Costs of environmental protection usually get the attention, while benefits tend to get ignored. However, for an adequate analysis of the options both sides of the equation need to be looked at.

Environmental valuation exercises are often criticised for being too narrow in their approach, for applying different standards from study to study, or for simply tabulating results rather than providing the necessary background.

Synergies with business

The World Trade Organization (WTO) is prepared to transform the world trading system to a more open and progressive process, but there is as yet no analogous structure for addressing global environmental issues. Trade is increasingly being seen as a potentially effective tool for shaping a world that is environmentally sustainable and socially just.

Synergy 95 provided an opportunity for business, government and environmental leaders to discuss innovative, mutually beneficial solutions to the challenge of reconciling international trade liberalisation and environmental protection.

The 'Synergy' conferences are organised by the Corporate Conservation Council, established by the National Wildlife Federation in 1982 under the leadership of Jay D. Hair. The Council serves as a forum where senior business executives of various industrial sectors engage in off-the-record discussions with Federation leaders to develop innovative and constructive proposals to improve economic productivity and promote environmental quality.



How can we tell how much clean air is worth, when we're not asked to pay? Pictured: cloud over the 'walls of china', New South Wales, Australia.

WWF/Fredy Mercay

ENVALUE answers such complaints. The database is already being used by the EPA in assessing the costs and benefits of policy and regulatory proposals.

DR GÜL IZMIR, DIRECTOR,
ECONOMICS AND
ENVIRONMENTAL REPORTING,
NSW EPA, AUSTRALIA

Council discussions generally focus on environmental issues with a clear corporate connection. The Council has issued policy statements on wetlands conservation (1984), groundwater protection (1986), soil conservation (1987), hazardous waste reduction (1988), and environmental education for business management schools (1991).

The annual conferences focus on an emerging topic of national or international interest. 'Synergy' provides a catalyst for promoting policies and projects emerging from the Council's work advocating sustainable development and environmental protection. The 1995 conference took place in Geneva, co-convened by Dr Hair, Ciba-Geigy President and Chairman

Alex Krauer and IUCN Director General David McDowell.

'Synergy '95 – International Trade and the Environment' included representation by NGOs from developing countries. Daniel C. Esty, professor and director at the Yale Environmental Law and Policy Center of Yale University, prepared a background paper on reforming trade and environmental policies, creating new incentives for North-South and East-West cooperation, and promoting cost internalisation and 'eco-efficiency'.

To highlight a theme of the meeting, Dr Hair presented the Xerox Corporation with an environmental achievement award for its "Design for the Environment" programme, begun in 1991, to reduce the impact of product design, manufacturing, use and disposal. "Xerox has committed itself to producing waste-free products in waste-free factories, with a goal of 90% waste reduction by 1998," Hair pointed out. "This is an example worthy of imitation."

As part of this strategy, the company is focusing on material specification of easy recycling, design for disassembly, energy conservation, product packaging, product re-use and re-manufacturing.

BARBARA HAAS,
DIRECTOR, CORPORATE
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Dialogue with business: obstacles and opportunities

S Synergy '95 is just one example of how IUCN is moving forward in developing its relations with the corporate sector. The Secretariat is committed to bringing the corporate sector, as one of the most powerful influences on the rate of global progress towards a sustainable society, into 'dialogue' with government and the environment movement.

Dialogue, however, is a hazy notion. Obstacles inhibiting closer IUCN cooperation with business are formidable. Among them:

- The corporate sector itself has no recognised single voice which speaks with authority to the environment community.
- IUCN is virtually unknown within the business world.
- Some IUCN members resist offering corporate bodies full IUCN membership.

- IUCN has limited and scattered resources available (and as yet no earmarked or seed funds) to develop a Corporate Programme.
- Near-term economic recession may limit opportunities and corporate response.

IUCN's sporadic contacts with business now need to be put into a more strategic or programmatic form. Exploratory discussions are therefore taking place, in particular with established business/environment groups such as the World Business Council for Sustainable Development (Geneva) and Keidanren (Tokyo). Developments will be reported to the Montreal Congress.

JOHN BURKE, DIRECTOR,
COMMUNICATIONS,
CORPORATE RELATIONS
AND OUTREACH GROUP, IUCN

A new perspective

As the issues covered in this section illustrate, environmental economics and the economic dimension of sustainable development are important for IUCN, and the Union has been active in this field for several years.

First, the Union has gained credibility in its work related to National Conservation Strategies. Our work in economics is also designed to help

countries build the capacity to incorporate conservation issues into their national economic policy.

At the same time, we see our work in environmental economics as enabling conservation to be based on solid ground and helping to ensure that outputs achieved by the NCS exercise are sustainable.

Second, the traditional approach to conservation is changing. IUCN over the past years has been moving away from a protectionist attitude and towards effectively linking human needs and aspirations to nature conservation. This has required considerable work in areas such as economics, particularly in how communities can be beneficiaries of conservation while at the same time being responsible for ensuring that natural resource services are effectively carried out at the ground level.

Third, one of the greatest weaknesses of traditional economic thought is the assumption that natural resources are unlimited. For example, water has been



Environmental economists are helping business discover how to reduce the impact of their product design, manufacturing, use and disposal. WWF/Paul Forster

treated as a God-given resource and consequently as a free commodity. This has resulted in misuse and in severe shortages in many developing countries. The problem is visible throughout southern Africa. Only if economic instruments are used in the management of natural resources will these goods and services be valued and used responsibly. So part of our work is to explore how best to use these tools to further conservation.

Finally, the section also highlights IUCN's involvement in 'green' accounting. With WWF-World Wide Fund For Nature we have been helping develop new methodologies that would reflect changes in the stock of natural resources, helping governments in turn to articulate policies that adequately take these into account.

For all these reasons, IUCN's work in environmental economics will have a profound impact on its future policies.

But IUCN brings another advantage to the environmental economics table. We operate at the level of States, advising governments in policy development. We also operate at the level of communities, in implementing specific projects.

Consequently, IUCN provides an ideal forum for development of environmental economics, of which macro-economic policy is one aspect. Further, our transboundary and State-NGO perspective at the regional level is unique, offering a partnership in support of action at the level of ecosystems.

MERSIE EJIGU,
ASSISTANT DIRECTOR GENERAL,
CONSERVATION POLICY, IUCN



A woman sorts coffee beans in Eastern Java (Indonesia). Conservationists must become economically literate if they are to make sure that natural resources are valued and used responsibly and sustainably. WWF/R.A.Blouch

Related activities

In the coming months, IUCN will pursue several activities related to environmental economics. These include:

- field valuation of wetland functions and benefits in the Komadugu-Yobe basin (Nigeria), with the University of York, and funding from WWF, RSPB and the EU;
- production of a guide to economic valuation of wetlands, with the University of York and the Institute of Hydrology, with funding from the Ramsar Convention Bureau;
- organisation of a technical session on environmental economics at the forthcoming Ramsar Conference in Brisbane;
- publication of a book funded by WWF on "Implementing the Biodiversity Convention: New Opportunities for International Cooperation";
- participation in an ECE Joint Working Group on Environment and Economics and a workshop on economic instruments in January 1996;
- presentation of papers on the economics of biodiversity conservation in Thailand in January;
- presentation of a paper in an OECD workshop in Australia in March;
- hosting a workshop funded by the Swiss Government in April on the economics of biodiversity loss;
- participation in a workshop on economic valuation in Latin America and the Caribbean to be held in April in Santiago, Chile;
- collaboration with WWF in the areas of sustainable development and green accounting;
- publication of a paper on financial mechanisms for biodiversity conservation; and
- organisation of economics workshops at the World Conservation Congress and the next Global Biodiversity Forum (associated with the third Conference of the Parties to the Convention on Biological Diversity).

Red Lists revisited

For the past three decades the former IUCN Red List categories have been used by IUCN and many other organisations to draw attention to species threatened with extinction. The former categories of threat were not clearly defined, however, and inevitably resulted in relatively subjective conservation assessments. Increasing political pressure surrounding the listing process, as well as the need to effectively prioritise conservation efforts, highlighted the need for a more objective process.

Unfortunately, there is no clear line that separates threatened from non-threatened species, which makes the creation of an objective system a challenging task. IUCN began to explore the development of a more objective system in 1989. A process of broad consultation began in 1992, led by Dr Georgina Mace, and in November of 1994 the new IUCN Red List Categories were formally adopted by the IUCN General Assembly.

The new system provides a clear framework from which to evaluate the different factors that affect a species' risk of extinction. Clearly defining each category of threat improves objectivity and thus facilitates greater consistency between different users of the system. The new system uses numerical parameters to provide criteria for assessing species to each category, which are based on rates of decline, area of distribution, and population size. For example, *Endangered A.1.d*, indicates that the species has declined by 50% over the past 10 years or three generations, whichever is longer, and that this decline is based on actual levels of exploitation. Clearly understanding exactly why a species is listed under a specific category of threat aids in determining the validity of a specific conservation assessment, setting of conservation goals, and improving the effectiveness of future re-evaluations.

Currently, SSC Specialist Groups are applying the new IUCN criteria to re-evaluate every species in the 1994 IUCN Red List of Threatened Animals, and evaluate species never assessed before. This information is being collected by Dr Brian Groombridge of WCMC and myself, and assembled to create the 1996 IUCN Red List of Threatened Animals.

Not only will the 1996 IUCN Red List be unique because of the use of new categories and criteria, but it is the first time that

every species of mammal in the world will have its conservation status evaluated. This has only previously been done for birds and the new data will enable insightful comparison between the overall status of birds and mammals. It will also provide an essential reference point from which to evaluate future trends in mammalian biodiversity.

Learning and applying the new IUCN criteria to species for the 1996 IUCN Red List requires a major commitment by members of the various Specialist Groups. The dedication of the Specialist Group members is especially commendable when it is recognised that the Species Survival Commission is a global network of volunteer experts. Many of the members are already dealing with an excessive work load. However, their prompt and helpful responses for the preparation to the 1996 IUCN Red List has demonstrated that the publication of the Red List continues to be viewed as an effective and valuable conservation tool.

Two of the Specialist Group members who have been applying the Red List categories to their groups have agreed to share their experiences in the following pages.

JONATHAN BAILLIE,
SSC INTERN

Another fish story

I was more than happy to take part in re-evaluating sturgeons for the 1996 IUCN Red List of Threatened Animals, since the old list was seriously out-of-date. For instance, the previous list included only nine species and one subspecies. The new list, as proposed by the SSC Sturgeon Specialist Group, includes 23 species (out of a total of 27) and six subspecies of three species.

Classifying sturgeons according to the criteria was a real challenge since the data on population sizes are often sketchy, statistically 'old-fashioned' or based on papers that are now 13-20 years old. Fortunately, Jonathan Baillie was very helpful in explaining how to match the specific conditions of sturgeons to the criteria.

For instance, counting fish is not an easy process and the three main categories, *Critically Endangered*, *Endangered* and *Vulnerable* may require an estimate of percentage of mature individuals within the total population. Modern methods of fish-tagging, and radio and sonar telemetry have only been used over the last couple of decades and are prohibitively expensive. Therefore, estimates of population size must be based on observing commercial and sport fishery catch levels and estimating from these very general figures. The counting of three commercial sturgeon species that has been going on in the lower Volga river for decades is a good example of this.

The population figures for these species are based on counting how many sturgeon are caught by licensed fishermen in one location in the Volga Delta; then statistical calculations are made to estimate the total population of the Volga River and the Caspian Sea. Of course it would be much better to count fish at more than one fishing location, but this is not possible given current economic conditions in Russia. Fortunately, the new Red List Categories take account of this reality and state that the



According to the new criteria, the sturgeon species *Acipenser brevirostrum* is 'Vulnerable'. John Walkman

criteria should be applied on the basis of the best available evidence on taxon numbers and distribution, making due allowance for statistical and other uncertainties.

Another difficult situation is encountered when many sturgeons live in isolated water basins and the status of the species each of these different basins is radically different. For example, *Acipenser nudiiventris*, the ship sturgeon, is *Extinct* in the Aral Sea, *Endangered* in the Black Sea and *Vulnerable* in the Caspian Sea. This runs counter to the way the Red List is organised, in which only one status is listed for each species. Normally this is adequate because geographically separated forms are usually considered to be subspecies.

With many sturgeons, however, the geographically separated populations are members of the same subspecies. When I discussed this with Jonathan, he asked me to list the different populations but also to give a general category for the status of the separate geographically isolated populations. Therefore, when all the geographically isolated populations of the ship sturgeon are assessed together the status is *Endangered*.

Despite these, and other, problems I encountered fitting sturgeon realities into the Red List classification structure, I think the new criteria were flexible enough to give a fairly accurate picture of the status of a groups of animals that cover three continents, two oceans and most of the northern hemisphere's lakes, rivers and seas.

VADIM BIRSTEIN, CHAIR,
IUCN/SSC STURGEON SPECIALIST GROUP

Leaps of faith: applying the Red List categories to antelopes

The Antelope Specialist Group was notified by IUCN Headquarters in June 1995 that we had three months to provide evaluations of more than 100 species using the new Red List categories, as part of IUCN's preparation of the 1996 *IUCN Red List*. Fortunately, our group was well-placed to do this, through the database we have prepared on antelope population and conservation status over the last 10 years. This database is summarised in the Antelope Survey and Regional Action Plans published by IUCN, and in the Antelope Survey Update series. It has also been used by the Conservation Breeding Specialist Group/Antelope Specialist Group working party which has been developing Global Captive Action Recommendations for antelopes during the last three years.

Antelope Specialist Group members Rod East, David Mallon and Steve Kingswood finalised the 1996 *IUCN Red List* evaluations of antelopes, plus several other species including giraffe, okapi, water chevrotain, African buffalo and two recently discovered Southeast Asian ungulates, the saloa and linh-duong.

The information available to us ranged from accurate and detailed knowledge of the current distribution, numbers and population trends for some species to much more fragmentary information for others. We followed IUCN's guidelines that estimation, inference and projection are acceptable, and that the criteria should be applied on the basis of the available evidence on the numbers, trend and distribution of a taxon



The black duiker *Cephalophus niger* remains locally common in the forest zone of West Africa but is categorised as 'Lower Risk/Near Threatened' in view of heavy hunting pressures over most of its range. Rod East

while making due allowance for uncertainties. Generally, we found the new Red List categories straightforward to apply and a major advance over the old, qualitative Red Data Book categories, e.g., in providing greater clarity and consistency in the assessment of extinction risks.

Evaluations of some antelopes were clearcut. For example, surveys have revealed that the population of Hunter's antelope, which is confined to a narrow strip of coastal hinterland in eastern Kenya and adjacent Somalia, has declined from 12-15,000 in the mid-1970s to probably no more than a few hundred in 1995. This species clearly fits the population reduction criterion for *Critically Endangered*.

Evaluations of many other species were less clearcut and involved achieving consensus on the best evaluations from the available evidence. In some cases, this involved lively debate among Antelope Specialist Group members. We generally applied the precautionary principle in cases where the taxon is on the borderline between two categories. The bontebok, for example, which is perhaps the most beautiful of all the world's antelopes, occurs naturally only on the coastal plain of the southern Cape in South Africa. After being almost exterminated by overhunting in the 19th century, the bontebok's population has gradually recovered to the point where total numbers now exceed 1500, mainly in provincial nature reserves and two national parks, Bontebok and West Coast. Arguably, the bontebok could now be assessed as *Lower Risk/Conservation Dependent*, but hybridisation with the conspecific blesbok remains a significant threat. We categorised the bontebok as *Vulnerable* on the criterion that its area of occupancy is still highly restricted and its status could decline rapidly to *Critically Endangered* or even *Extinct* if a major, unforeseen threat to its survival appeared.

We found that the status of even poorly known antelopes could generally be evaluated, at least broadly. There has been no new information about the bilkis or Queen of Sheba's gazelle, for example, since it was first described in 1985 from specimens collected in the southwestern Arabian Peninsula in 1951. The failure of recent surveys to locate this gazelle in the wild, together with general overhunting of wildlife within its region of occurrence, leave little doubt that it is either *Critically Endangered* or already *Extinct in the Wild*. □

FEATURE REPORTS

One issue we considered was whether or not to include captive populations in our assessments. Some threatened antelopes now occur in considerably larger numbers in captivity (mainly in North America and Europe) than in the wild, e.g., addax, Arabian oryx, and scimitar-horned oryx. Consideration of these captive populations as part of the total population would alter the categorisation of these species significantly, but the IUCN Red List Categories are clear that the criteria should be applied to the current status in the wild only.

Overall, we are confident that the group's deliberations have provided consistent and accurate categorisations from the information available. Eighteen of the 25 species evaluated which occur in Asia, the Middle East and North Africa were assessed as threatened (i.e., *Critically Endangered*, *Endangered* or *Vulnerable*) or *Extinct*. This reflects the effects of uncontrolled hunting and degradation of arid and semi-arid rangelands through overgrazing by domestic livestock. In contrast, we found that more than three-quarters of the 78 species (antelopes, plus giraffe, okapi, water chevrotain and African buffalo) which occur in sub-Saharan Africa did not meet the criteria for threatened. These *Lower Risk* species nevertheless required careful assessments between the subcategories of *Conservation Dependent*, *Near Threatened* and *Least Concern*. Our assessments reflect some general differences in status between savanna and forest species.

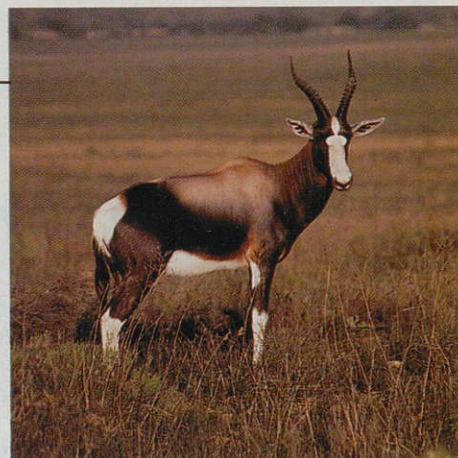
While most savanna species which occur in sub-Saharan Africa currently exist in the wild in substantial numbers over wide areas, we concluded that only a few can be categorised as *Lower Risk/Least Concern*, e.g., bushbuck and grey duiker which are highly secretive antelopes that can persist in viable populations within human-dominated landscapes. We categorised most of the common savanna species as *Lower Risk/Conservation Dependent* since their survival depends on continued protection of natural habitats and management of populations through national parks, game reserves and sustainable consumptive utilisation of wildlife on private and communal lands; e.g., kudu, eland, waterbuck, kob, hartebeest, wildebeest, roan, sable, impala, giraffe and African buffalo.

Quantitative data are much harder to obtain for forest antelopes than for savanna species, but many forest species of West and Central Africa probably still occur in populations of

tens to hundreds of thousands and occupy areas of hundreds of thousands of square kilometres or more; e.g., sitatunga, bongo, water chevrotain and most of the 17 species of forest duikers. The black duiker, for example, adapts well to secondary vegetation and remains common in parts of its range in West Africa, despite heavy hunting pressure throughout almost all of its area of occurrence. As with most forest species, attempts to develop effective protected areas and community-based conservation programmes within the black duiker's range are still at an early stage. Although they often show great resilience to hunting, populations of most forest antelopes are believed to be declining except in areas remote from roads and human settlement. While such areas are still extensive, particularly in Central Africa, they are being increasingly opened up to logging, mining and settlement. If current trends continue, most forest antelope species could conceivably become *Vulnerable* (e.g., 10% probability of extinction within 100 years) in the foreseeable future. Hence we decided to categorise most of these *Lower Risk* forest species as *Near Threatened*.

The Antelope Specialist Group has found this evaluation to be a very useful exercise in clarifying the conservation status of antelopes. The accuracy of our categorisations will improve as more evidence becomes available, and our group has already focused its information gathering on obtaining as much quantitative data as possible on distribution, numbers and population trend for each species throughout its countries of occurrence.

ROD EAST, DEPUTY CHAIR,
IUCN/SSC ANTELOPE SPECIALIST GROUP



The bontebok *Damaliscus dorcas dorcas* has recovered from the brink of extinction as a result of effective protection, but remains *Vulnerable*. Rod East



Species such as the giraffe, okapi and African buffalo of sub-Saharan Africa require careful assessment before being classified in one of the 'lower risk' categories. Top: Okapia johnstoni in Zaire. WWF/Allard Blom Bottom: African buffalo *Syncerus caffer* at a Kenyan waterhole. WWF/M.&C.Denis-Huot/BIOS



Ramsar: progress and challenges

The Convention on Wetlands of International Importance, especially as Waterfowl Habitat, adopted in Ramsar, Iran, in 1971, was the first of the global nature conservation treaties and is still the only one devoted to a particular habitat type. As of 1 November 1995, there are 90 Contracting Parties to the Ramsar Convention with 765 sites totalling more than 52 million hectares designated to the 'List of Wetlands of International Importance'.

In the following interview, Ramsar's recently-appointed Secretary General Delmar Blasco discusses Ramsar's new directions as momentum builds for the Sixth Meeting of the Conference of the Contracting Parties of the Ramsar Convention, to be held in March 1996.

Q: Brisbane has been selected as the site of the next Conference. Why Australia?

Delmar Blasco: This will be Ramsar's 25th anniversary, so Australia, as the very first nation to join the Convention, is an ideal choice. This will be a landmark meeting: as the first major Ramsar Conference in the southern hemisphere, it opens the door more widely into Oceania, and will help build awareness of the Convention in this enormous region.

Brisbane itself is an appropriate choice; it is close to several wetlands representative of the region, from tropical coastal marshes to wetlands in arid areas.

How are preparations for the Conference progressing?

This is a critical time in the life of the Convention. The meeting will attract more than 1000 scientists and government representatives to assess worldwide progress in wetland conservation since our last meeting in Kushiro, Japan, in 1993. We will be charting our course for the next several years. More importantly, we will move ahead on some extremely important and pressing global issues related to the use and management of wetlands.

Such as?

We must further develop the Ramsar concept of 'wise use' – the idea that wetland resources can be used by humans while at the same time conserving the ecological character of the sites so that future generations can continue to benefit from them.

Isn't that an overly-idealistic concept?

Not really. One good example of its successful application is offered by Zambia's Kafue Flats, where two National Parks in the floodplain of the river Kafue – Lochinvar and Blue Lagoon – have been designated as one site for the Ramsar List. When the site



A conservation strategy has to balance economic interests and conservation. Pictured: prawns are cultivated in the Mai Po Marshes of Hong Kong. WWF/H. Jungius

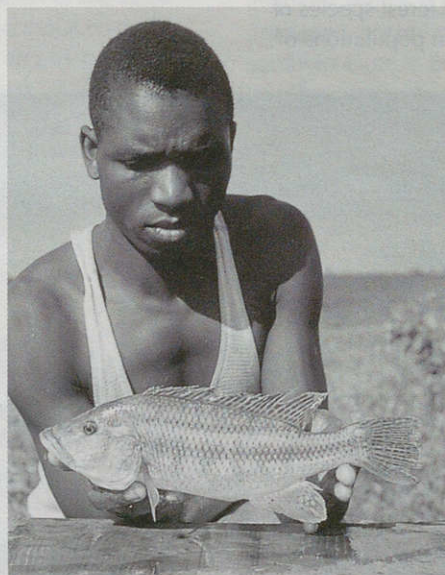
was designated on 28 August 1991, the Kafue Flats had already been the subject of the first phase of an ambitious Wetlands Project undertaken under the auspices of the National Parks and Wildlife Service, with financial support from WWF.

In its Conservation Strategy for Zambia, the Government in Lusaka has given high priority to wetlands, recognising that conservation and effective management of wetland habitats are essential to the well-being of local populations and to the development of the nation. As a result, the WWF-Zambia Wetlands Project began in mid-1986. After the successful conclusion of its first and transitional phases, the project was handed over to the National Parks and Wildlife Service in July 1995.

Pastoralism, agriculture, hunting, trading and fishing are the main activities of local people in the Kafue Flats. The Kafue Flats also provide water resources of major significance for industrial and urban use and for hydro-electric power production. Irrigation, fisheries, agriculture and livestock production, hunting and tourism are also major economic interests in the region.

The Government and the Project team were faced with the challenge of developing natural resource management as a means of community development, taking into account larger industrial and national interests. This was done through a patient effort to integrate local communities in decision-making and management at various administrative levels, always making sure that a multi-disciplinary approach was being taken.

The Project, which links floodplain wetland management with human socio-economic development at the local and supra-local community levels, has gone a long way towards



Bream caught in the Kafue Flats. Zambia's conservation strategy gives priority to effective management of wetlands. WWF/John Hanks

establishing an integrated system of wetland floodplain management. Revenues generated from wildlife use on the Kafue Flats already come close to covering the wildlife management costs, as well as contributing to community development activities. Much remains to be done, however (and additional donor support is required), especially in enhancing the capacity of local communities to make effective use of the benefits arising from their participation in the programme, and in expanding the philosophy of the project to management of other natural resources in the area.

A closely related project, the WWF Bangweulu Wetlands Project (part of the Bangweulu Swamps is also a Ramsar site), is making good progress in pursuing these broader objectives, and the National Parks and Wildlife Service is designing the next phase of activities on the Kafue Flats.

'Wise use' is a relatively new concept; clearly, the world of conservation is changing. How else is the Convention reflecting this change?

We have produced a draft Strategic Plan which will chart the course of wetland conservation by the Contracting Parties over the next six years. This plan will be high on the agenda at Brisbane, and will essentially be a re-examination of the Convention's mission of integrating the conservation of wetland biodiversity with sustainable economic development.

Other changes are of a more technical nature, but they have quite profound and far-reaching effects. For example, we are now evaluating the first three years of the **Wetland Conservation Fund**, and are considering ways to redesign our project review procedures. And we have a new **Scientific and Technical Review Panel (STRP)**, which has already made important progress on new criteria for identifying wetlands of international importance for fish and fisheries, and on a review of the Montreux Record and Monitoring Procedure mechanisms for Ramsar sites whose ecological character has changed, is changing or might be subject to change due to human impacts. The STRP is also helping to define some important terms and concepts embodied in the text of the Convention, such as 'ecological character' and 'change in ecological character';

We are also building and improving our links with our partners, which include the Secretariats of other conventions (the Biodiversity, CITES, Migratory Species, Bern, Barcelona, and World Heritage Conventions); partner organisations such as IUCN, Wetlands International, WWF, and BirdLife International; and the Global Environment Facility and other multilateral funding agencies.

What do you see in Ramsar's crystal ball?

I see a more significant role for the Convention in the broader issue of water resources management. Ramsar shows no signs of slowing down: just since the Kushiro Conference 13 new States have acceded to the Convention and several more are poised to do so. Almost 150 new sites have been designated to the Ramsar List of Wetlands of International Importance, including 32 sites in the Russian Federation, accounting in all for over 14 million additional hectares.



Fishing on Kerinci Lake in Sumatra, Indonesia: effective wetland conservation requires that economic development and biodiversity conservation go hand in hand. WWF/Mauri Rautkari

What is even more important, a significant number of countries are evaluating their wetland resources and policies and making important progress towards adopting national plans to deal in a more holistic way with the conservation and wise use of *all* wetlands in their territories.

What else do you see?

I also see... regionalisation. The number and strength of regional initiatives and linkages, and several important regional meetings in Europe, Asia, Africa and the Neotropics are showing that this might be the best approach for the future.

Our work in the Mediterranean is a fine example of how partnerships can work. The initiative called 'MedWet' aims to arrest and reverse the degradation of Mediterranean wetlands by establishing an informal forum of interested governments, intergovernmental and non-governmental bodies, and specialists. The Ramsar Bureau is responsible for links with governments and is currently Interim Chair of the Steering Committee. Five sub-projects, funded by the Commission of the European Communities, are producing methodologies on inventories and monitoring of Mediterranean wetlands, management, public awareness, training, and effective use of research results.

This is the kind of role Ramsar could usefully play in other areas of the world. As our responsibilities expand and our goals grow increasingly ambitious, we will come to depend more and more on such regional partnerships.



For further information, contact the Ramsar Convention Bureau, Rue Mauverney 28, CH-1196 Gland, Switzerland. Tel: +(41 22) 999 0170; Fax: +(41 22) 999 0169, e-mail: ramsar@hq.iucn.ch.

Delmar Blasco took up the reins as Ramsar Secretary General in August 1995. He is an Argentinean who comes to the Convention from the post of Executive Director of the International Council of Voluntary Agencies in Geneva. From 1985 to 1991 he was with IUCN as Head of the Membership and External Relations Division, and before that served as Executive Director of the Environment Liaison Centre International in Nairobi, Kenya.

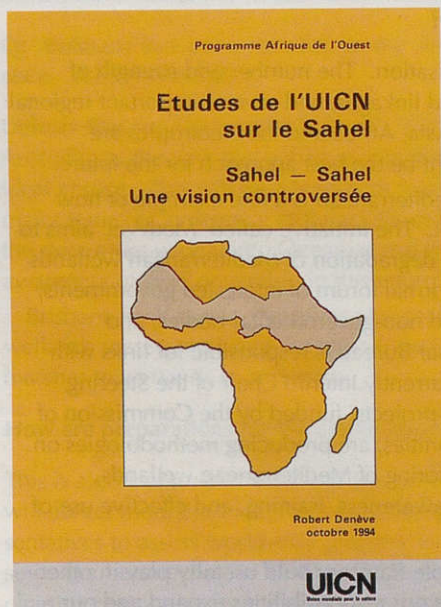
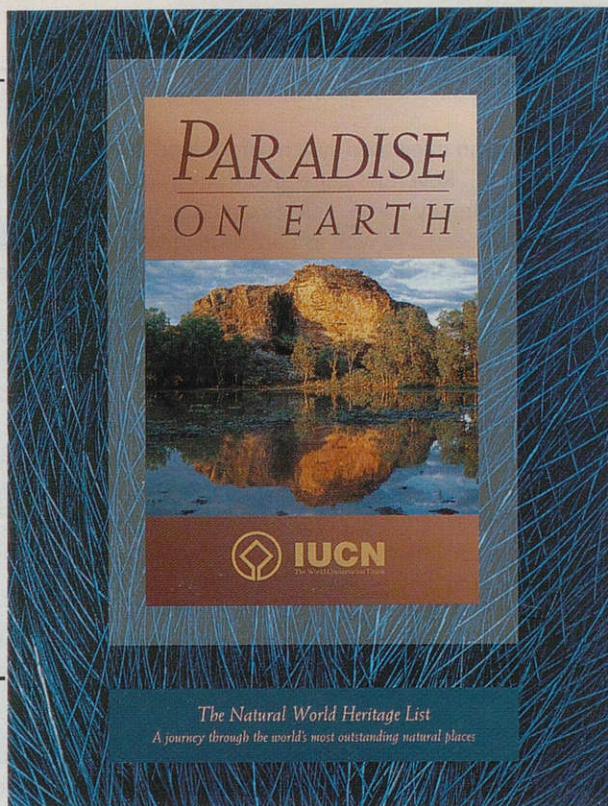
Delmar replaces Dan Navid, who provided invaluable service on behalf of the Convention almost from its inception.

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Environmental Policy and Law Paper 31

Draft International Covenant on Environment and Development.
Commission of Environmental Law of IUCN in cooperation with the International Council of Environmental Law

In the mid-1980s, the IUCN Commission on Environmental Law, in consultation with leading experts from around the world, began to respond to a need later identified by Agenda 21: the preparation of an integrated framework for international environmental law. It did so by elaborating a draft legally-binding global agreement on environmental conservation and sustainable development, in which both codification of existing rules as well as progressive development of the law play important roles.

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point for debate and consideration, by providing expert opinion on the possible content of such an instrument.

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