



# Mobilising Knowledge for Biodiversity

*Amman Congress 2000  
Interactive Session Report*

Commission on Education and Communication

**IUCN**  
The World Conservation Union

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**Report compiled and edited by Wendy Goldstein, IUCN  
Meeting notes : Ana Puyol and Cecilia Nizzola IUCN**

# 1. Introduction

This is a report of the interactive session *Mobilising Knowledge for Biodiversity* at the IUCN Amman Congress October 2000. The session addressed the issue of how IUCN can become more effective in getting the right knowledge to the right people at the right time.

This importance of the issue of knowledge management to IUCN was highlighted by the IUCN external review, which emphasised the key role knowledge played in IUCN's core competence and as a service to its members and Commissions. IUCN has a global niche in being able to draw conservation knowledge from its vast networks, process it and make use of its networks in dissemination. Furthermore the review charged the organisation with focusing on some key knowledge areas and becoming more effective in how it manages knowledge, especially in sharing tacit knowledge.

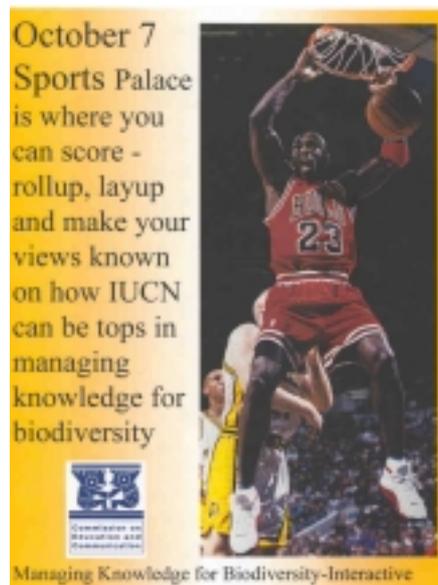
The IUCN Programme features "Knowledge" as part of its strategy for all the Key Result Areas involving generating, processing and disseminating knowledge. This process is fundamental to IUCN's other strategic lines which are "empowering" society and to influencing "governance" so that individuals, systems and institutions support conservation. In addition, the IUCN Programme has a Key Result Area in "Information and Communication Systems" to build an infrastructure to support the gathering, processing, storing and dissemination of knowledge - knowledge management.

Knowledge is fundamental to how IUCN works as a body of conservation organisations. Being even more effective seems to be imperative as species threatened with extinction grow more numerous and ecosystems are degraded so that services to species, people and their economies decline. As a Union of organisations and individuals it is the work we collectively undertake that counts. Appropriate knowledge sharing is the service, the added value of being part of a Union.

In a world where some have too much information, akin to drinking from a fire hose, and in fact a lack of timely and relevant access, others are at risk of being increasingly disadvantaged by poor access to know how.

Importantly we need to consider what is the content of knowledge to be shared or managed. There are two aspects to that content – the "**what**" of conservation and the "**how**" of conservation and of being effective organisations or learning organisations.

## 2. The session



The meeting played on the fact that it was held in a basketball stadium, at the Sports City in Amman, and followed the Sydney Olympics. We took the idea of “the basketball dream team” and started our meet with the presenters running on with a basketball. It was suggested that we want an IUCN dream team in knowledge management to fight the loss of biodiversity and loss of economic and social values of communities dependent on local resources. The ball, knowledge, has to be passed quickly and accurately to score our goals.

The better the team works together the more we will score. The session explored:

- The context for knowledge management and the recommendations of the IUCN external review on knowledge management; and the challenge to manage IUCN’s diversity for maximum benefit;
- what is being done in knowledge management by four of the IUCN Commissions to organise species and environmental law information; to provide a knowledge service to park staff and lessons learnt in knowledge management in the Commission on Education and Communication;
- heard examples of how IUCN members and partners are managing knowledge for their constituencies in succinct 8 minute presentations;
- learnt about trends in corporations and businesses in managing knowledge for their clients and in being competitive;
- discussed what type of organisations we had to become and what type of competencies were required to meet the challenges of the modern world;
- proposed a model for an organising framework – a virtual university;
- discussed in groups some of the key issues that had emerged, the model and what steps could be undertaken by IUCN in the Programme. A video report of the session was prepared for a report back to the Congress.

# 3. IUCN and knowledge management – the background

## 3.1 A vision for IUCN in knowledge management

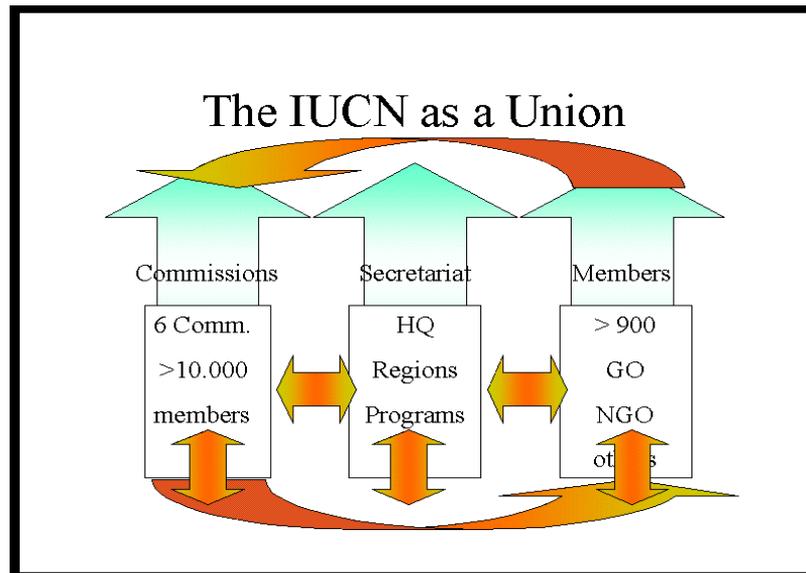
**Bart Romijn**, IUCN external review team, presented an inspiring vision for our work – IUCN the 21<sup>st</sup> Century first Olympic Champion on Knowledge and Learning!

Imagine IUCN.

- as an open, evaluative, reflective but action directed organisation;
- as an organisation which rewards experimenting, action based learning and sharing;
- mastering the application of new media for mobilisation of knowledge and leverage;
- website has been re-designed to become renown as the world's foremost interactive hub on conservation;
- has become an attractive partner for the media and for the private sector because of its ability to generate and disseminate high quality knowledge.
- Then a just world that values and conserves nature might become within reach.

### **IUCN's challenge**

Bart Romijn warned that IUCN's complexity, with a multitude of interactions between the Secretariat, Member organisations and Commissions is both a precious asset and a major liability. While the organisation might seem quite simple when it is seen as Members, Commissions and Secretariat, it is in fact very complex. There are international, regional and national programmes. Member organisations are varied from very small NGOs to major international NGOs. Providing value-added service to over 900 members from governments to NGOs is a difficult challenge along with marshalling and servicing some 10000 volunteers in 6 different Commissions. The challenge is how to manage the diversity.



. The External Review proposed a framework for strategic focus and coherence. In line with the process of decentralisation and regionalisation, it strongly urged that the number of global targeted programmes be limited, while allowing a greater diversity on the regional level. In that context the Review recommended to establish business plans for a limited number or so-called knowledge management areas. Key elements of these plans would be:

- arrangements to maintain and develop the relevant distinctive core competencies of IUCN in collaboration with Commissions and Member organisations;
- plans for synthesis and best practice by the Union;
- deployment of professional expertise from the Secretariat, but also, from Commissions and Member organisations to the projects and programmes of the Union;
- service from the knowledge management areas to global and regional agreements and institutions.

The External Review made recommendations on knowledge management. Importantly the review introduced the notion of knowledge management and underscored the need for knowledge management as a pivotal instrument for maintaining IUCN's position as the world's leading conservation knowledge organisation.

## Towards a common language on knowledge...

Bart Romijn provided definitions of the terms to be used.

**Knowledge** is facts and experiences known by a person or group of people. This includes consciousness and familiarity gained by experience or learning. For strategic considerations it is useful to distinguish two types of knowledge.

**Explicit knowledge** is knowledge that can be recorded in a written form (e.g. books, electronic files, databanks) or codified form (e.g. procedures).

**Implicit, or tacit knowledge** is knowledge that can not be easily recorded. It comprises mental models (e.g. beliefs, perceptions), wisdom, expertise, and even intuition.

Explicit and tacit knowledge require different, but complementary management strategies as explicit knowledge can easily be stored and transferred. However to mobilise implicit knowledge one needs to know *who has it*, requiring much more communication and organisation. To a certain extent one can try to make implicit knowledge explicit, but its transfer is to a large extent dependent on personal interaction.

There exist numerous notions of what knowledge management is. Some only refer to the need to process large amounts of information, others view knowledge management mainly as group and learning processes and yet others have a computing biased view and refer to issues such as data-mining and decision support systems. Instead of entering into semantic debates, I propose a simple working definition, which by the way entails all of the notions just mentioned. *Knowledge management* is the process to maintain, nurture and improve the state of knowledge.

**Knowledge Management** is the process of creating, capturing, storing, sharing, applying and reusing knowledge to enhance the organisation's performance to achieve its mission.

## Why is knowledge management so important to IUCN?

IUCN principally is a knowledge organisation. Knowledge is its most valuable capital. This knowledge is diverse and dispersed. The member organisations, the Commissions, the Secretariat, and their respective networks, are huge knowledge sinks. During the External Review we encountered a wide range of different activities that bear on IUCN's knowledge base. Publications, on-the-job training, mobilisation of inputs by commission members, the use of internet and intranet. However, the Review also encountered many situations that suggest that these processes are being undertaken on a rather ad hoc basis and there is ample space for improvements and better synergies.

This poses several major challenges.

- How to manage the pool of implicit knowledge in an organisation with thousands of knowledgeable people?
- How to combine a strategy for implicit knowledge with a strategy for explicit knowledge?

The most important contribution of the Review was that it proposed a framework which would help IUCN to more strongly focus its activities: a framework of limited global targets, stronger involvement of regions and the knowledge management areas. Such a structural revision of the overall IUCN programme means tough times and great need for leadership.

### **Organisational learning**

This brings us to another aspect of knowledge management, namely organisational learning.

*Organisational learning* is a process that maintains and improves the capability to adapt the organisation and its behaviour in response to internal and external changes, either opportunities or threats, or because the organisation is losing its constituency basis or becoming too bureaucratic to be effective.

Organisational learning and knowledge management are crucial in the pursuit of programmatic and organisational strengthening and alignment. To change from post hoc rationalisation of activities to a coherent and solid programme so a regionalised and decentralised Union works in synergy.

### **Review of the Commission on Education and Communication**

The report of the review of the Commission on Education and Communication was called “*Breaking barriers and bridging gaps*”.

*Breaking barriers* refers to the barriers in communication and co-operation within and between the Commissions, Secretariat and Member Organisations.

*Bridging gaps* refers to establishing partnerships with other actors and sectors, such as the private sector and new media players.

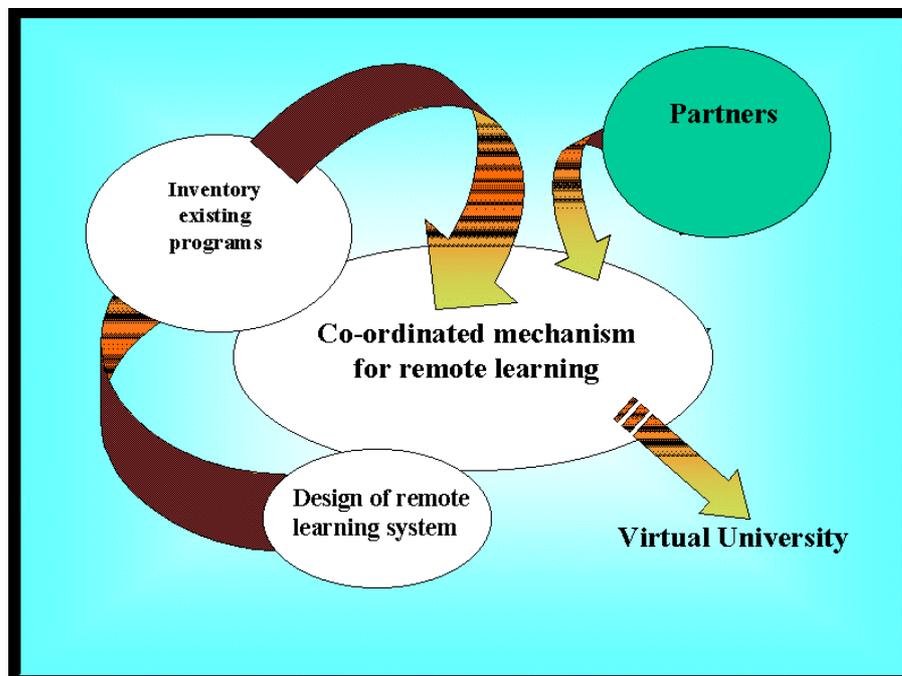
New developments in information and communication technologies and broadcasting provide many opportunities for IUCN to:

- be able to mobilise people to action – as is seen in the use of internet to organise against the WTO;
- provide on line courses (like WWF College for Conservation Leadership);
- provide news on internet.

There is a new paradigm on learning and knowledge: the idea that knowledge is power is replaced by empowerment through sharing knowledge. Increasingly learning is taking place through networks, rather than through formal teaching. For IUCN, and for CEC there is a challenge in further exploring these trends and opportunities in partnership with organisations which are at the cutting edge of new media and learning.

### **A virtual World Conservation University**

One of the recommendations for CEC was to support the establishment of a remote learning discipline in IUCN and to explore the possibilities of a virtual World Conservation University or Campus. This on line campus would function



as a co-ordinating mechanism for existing and new courses of IUCN and partner organisations.

This and many initiatives on knowledge management, organisational learning and Information and Communication Technology have been incorporated in the new IUCN Quadriennial Programme. IUCN definitely is serious about enhancing its

knowledge management and learning. Without communication and no co-operation between the different parts of the Union, then the complex constituency will be its major liability. If IUCN succeeds in creating a positive and enabling environment for Union-wide knowledge management and organisational learning, then this diversity will remain its most precious asset. And IUCN will live its vision.

# 4. IUCN's knowledge management examples

## 4.1 Protected Area Resource Centres PARC -

**Javier Beltran** presented the initiative of the IUCN World Commission on Protected Areas and the World Conservation Monitoring Centre programme to develop networks of Protected Areas Resource Centres –PARC.

**“ Information on the ground for those who need it most...”**

### Objectives

The objectives of PARC are to support protected area managers worldwide through development of an integrated programme that:

- ✓ improves availability of information *resources*;
- ✓ deliver information *services*;
- ✓ increases *networking* between protected area professionals; and
- ✓ provides access to opportunities for *training* in information management and use.

### Justification

Full and equitable access to information resources, services and tools is a major factor limiting the effectiveness of protected area managers world wide. PARC is a strategic programme to provide needed information to protected areas policy makers and decision makers on the ground. The system will be set up to support collaborative exchange of information within the protected areas community and the larger sustainable development community.

### Background

Protected Areas are the core of any effective strategy to sustain the health of the planet and to maintain its landscapes and biological diversity. Since the World Parks Congress in Caracas in 1992, increased attention in the international community has been focused on the information factor within the overall equation for protected area management.

There is much substantial information available to support protected area managers in their work. In recent years the potential to access this information has been greatly increased by the explosive development of computer technology, the Internet and the World Wide Web as media for management, communication and exchange of information.

However there is tremendous variation in ability to access information resources and services, and in particular gross inequities in access to the media of communication. Typically regions most critically in need of support by whatever measure, fall within those areas least well supplied with resources, services and network media.

Building on resources and services that are already in place, PARC seeks to develop a comprehensive system for optimising the existing and for the provision of new information resources and services together with support for networking and requisite training.

### **Programme activities**

1. Develop a clear understanding of information needs at all stages, to ensure that the information resources, services and tools being developed meet real, identified needs.
2. Develop and implement the PARC- International Centre to co-ordinate development of the distributed international network for protected area information resources, services, networking and training.
3. Develop information resources, services, networking, training in a modular way, working in collaboration with a wide range of organisations.
4. Undertake 2-3 pilot implementations of PARC at the regional level, working in close collaboration with appropriate regional organisations. Key actions will include:
  - Comprehensive needs assessment throughout the region;
  - Review regional protected area information resources and programmes;
  - Survey of regional Internet services and existing internet capacity
  - Establishment, staffing and equipping of regional PARC node ( preferably in an existing agency or institution with demonstrated capacity for regional protected area leadership);
  - Implementation of regional resources, services, training and networking modules.
5. Extend the PARC model to all regions of the world, based on the experiences gained during the pilot project, and on the identified needs.

6. Develop networks of local PARCs to provide direct on the ground services, working in collaboration with local organisations, and with regional and international PARC nodes. Key actions will include:
- Identification of suitable hosts for local PARCs, basing decisions on availability of technical infrastructure, commitment to resource sharing and established leadership;
  - Establishment of local PARCS with the technical and staff capacity to serve the interests of protected area managerial and scientific staff as well as local communities.

## Outputs

A clear idea of the information needs of protected area professionals, based on a series of workshops and seminars at local and international levels.

An established PARC International Centre based at the World Conservation Monitoring Centre WCMC, which co-ordinates a distributed network of resources, services and tools. Components could include “train the trainers” best practice guidelines and models for training, virtual workshops; virtual publishing, support for remote Internet and WWW access, document delivery services, directory of protected area expertise, listings of publications, core resource materials on business management and training, and access to maps and GIS files.

## Implementation

PARC will be implemented by IUCN World Commission on Protected Areas WCPA and the World Conservation Monitoring Centre WCMC. Other organisations will be invited to collaborate and qualified individuals to advise in an ad hoc capacity.

To begin a business plan is being developed and proposals in modular form to permit flexibility in seeking funding. Project concepts include amongst many others, PARC Cat- Access to protected areas literature, and Protected Areas Policy and Law Service. Pilot projects for 2 regional pilot implementations are being developed for the Russian Federation and the Pacific Islands.

*Organisation:* UNEP World Conservation Monitoring Centre

*Content:* Name, location, designation, size and year of designation of protected areas of the world, as well as other information about the types of habitats protected, budget, staffing, etc.

*User group:* Protected area managers; Students; Scientists; the Business Sector

*Costs:* some, but depends on the request

*Contact point:* Javier Beltrán, [javier.beltran@unep-wcmc.org](mailto:javier.beltran@unep-wcmc.org)

*URL :* <http://www.unep-wcmc.org>.

## 4.2 Sharing knowledge on environmental law

### The Asia Pacific Centre for Environmental Law APCEL

**Koh Kheng Lian**, Director of APCEL and IUCN Commission on Environmental Law, CEL Vice Chair for Eastern Asia shared the experience of APCEL on gathering, processing, storing and disseminating information for environmental law. The Centre was established in February 1996 by the Faculty of Law of the University of Singapore on the initiative of IUCN CEL and in collaboration with UNEP. The objectives include:

- serving as a regional training centre for the teaching of environmental law;
- serving as a regional centre for research; including multi disciplinary research on international, regional and national environmental law and policy;
- establishing and developing a collection of materials on environmental law and policy and maintaining an electronic database;
- promoting the exchange of information on international, regional and national law and policy;
- publishing studies, reports and course materials on international, regional and national law and policy.

In order to build capacity in environmental law in the Asia-Pacific region, it is important to mobilise knowledge from the region, as there is a dearth of materials in publishable form in the region.

With support from IUCN, UNEP, APCEL has established a database for environmental law comprising international and regional instruments, and national legislation from the ASEAN member states in the region. This is available on Internet as well as in the Law Library, National University of Singapore. The database also serves as a regional centre for IUCN Environmental Law Information System (ELIS), as well as a resource centre for UNEP's NETTLAP programmes. It can be accessed at <http://sunsite.nus.sg/apcel>

Since its establishment, APCEL has collected a vast amount of primary and secondary environmental law materials from a number of countries in the Asia - Pacific region. These publications were donated by participants who attended the two IUCN/APCEL/UNEP training courses on the Teaching of Environmental Law at University Level, held in Singapore, in 1997 and 1998 respectively. Over 65 environmental law professors from some 16 countries attended the two training courses. Members of APCEL have also collected many materials from conferences abroad and have also purchased a number of documents in the Asia Pacific countries. These documents have been catalogued and are being used for the APCEL project on A Study of Environmental Law in the ASEAN Countries, an ongoing research project. One of the problems is that many of the laws in

some of the ASEAN countries, e.g. Cambodia and Laos, are not in the English language. It is also very difficult to get the latest update on the laws in the region, as the subject is so dynamic. Nonetheless, APCEL has a network of environmental lawyers in the region that is able to assist.

APCEL and IUCN are currently in the process of bringing out a book on environmental law materials from the Asia- Pacific region, which can be used for the teaching of environmental law in the universities in the region. This book is based on the materials used for the training course for university professors, mentioned above.

The following are some of APCEL's publications:

Simon Tay, *International Trade and the Environment in Asia: Business and Environmental Cooperation Across Regions*(1996)

Professor KL Koh -- *Selected ASEAN Documents on the Environment* (1996)

RC Beckman & Lal Kurukulasuriya (eds), *Environmental Legislation and Sustainable Development Workshop* ( 1996)

Mr Alan KJ Tan -- *Environmental Laws of the Southeast Asian Countries: A Preliminary Assessment* (1998)

### **The Environmental Law Programme**

**Nattley Williams** from the IUCN Environmental Law Centre in Bonn told us briefly about the IUCN Environmental Law Programme's initiative to provide users with comprehensive, authoritative and up to date information on environmental law. This information service, or ECOLEX, is a joint project developed through partnership by IUCN and UNEP, with the support of the Government of the Netherlands.

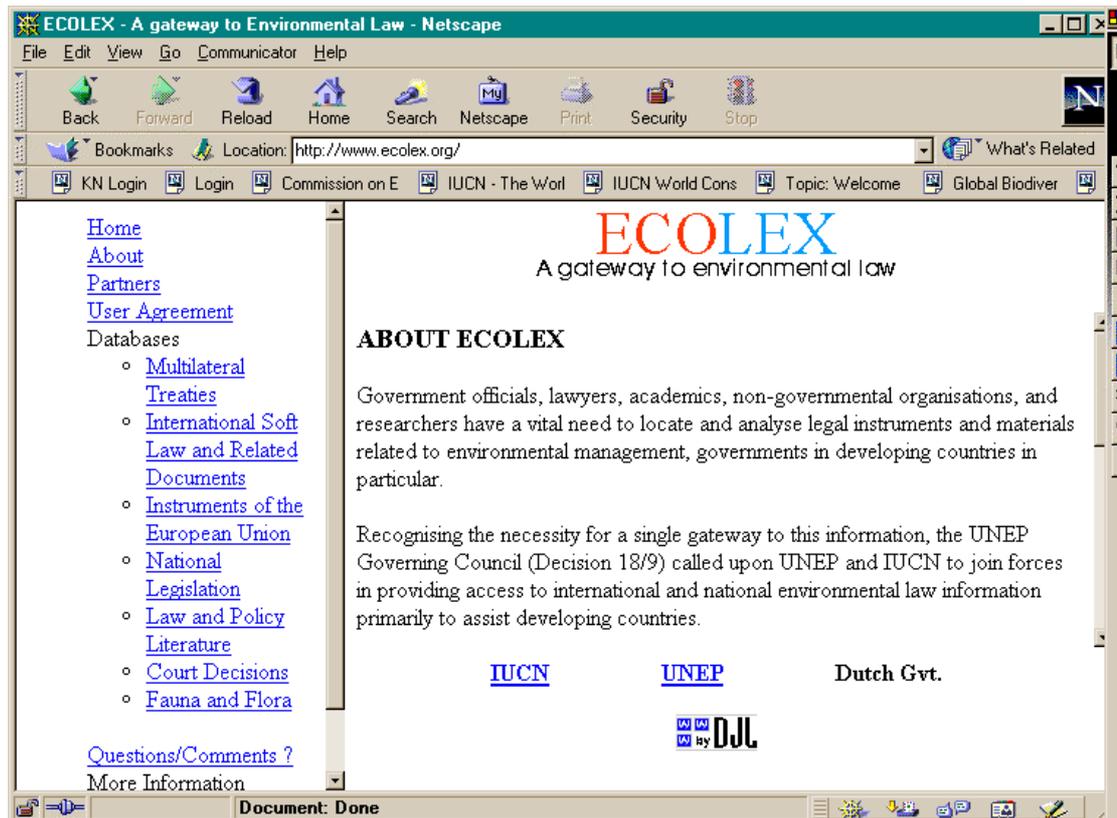
It aims to provide users world-wide with easy access to information on:

- multilateral environmental agreements;
- national legislation;
- “softlaw” documents, such as the Jakarta Mandate;
- law and policy literature;
- major judicial decisions concerning environmental law;
- species protected in international and national law.

Through this user friendly service, users can search and retrieve information on which conventions a country such as Jordan is a party to, including the dates of signature or ratification. They can also obtain national legislation concerning protected areas for Jordan or for example Tanzania. Bibliographic as well as full text of these documents, where possible, will be made available. This service will be available in all the IUCN languages.

The prototype is currently available on the Internet. As Internet access is not easily or cheaply available to everyone, especially users in developing countries, the information will also be available on CD-ROM, hard-copy publication and other emerging technology.

Phase I of the project is almost complete. In Phase II of the project we aim to expand the partnership to include institutions such as the Food and Agriculture Organisation, which maintains an excellent collection of legal instruments on environmental law, Secretariats of environmental agreements, as well as regional



institutions with information on environmental law.

To view the prototype, please visit the web site at <http://www.ECOLEX.ORG>

<p><b>IUCN Environmental Law Centre</b>  <b>ECOLEX: UNEP/IUCN Joint Environmental Law Information System</b>  <i>Content:</i> Environmental Law Information including references and full-texts of multilateral instruments, EU instruments, national legislation, soft law, judicial decisions, species protection, and law and policy literature</p> <p><i>User Groups:</i> International organisations, national governmental agencies, research institutions, legal researchers, NGOs, general public;</p> <p><i>Costs:</i> Prototype currently freely available on the Internet. Being developed to provide free and subscriber options.</p> <p><i>Contact point:</i> Charles Di Leva, IUCN-ELC          Email: <a href="mailto:secretariat@elc.iucn.org">secretariat@elc.iucn.org</a>          URL: <a href="http://www.ecolex.org">http://www.ecolex.org</a></p>
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### 4.3 Sharing knowledge on species

#### The Species Survival Commission SSC

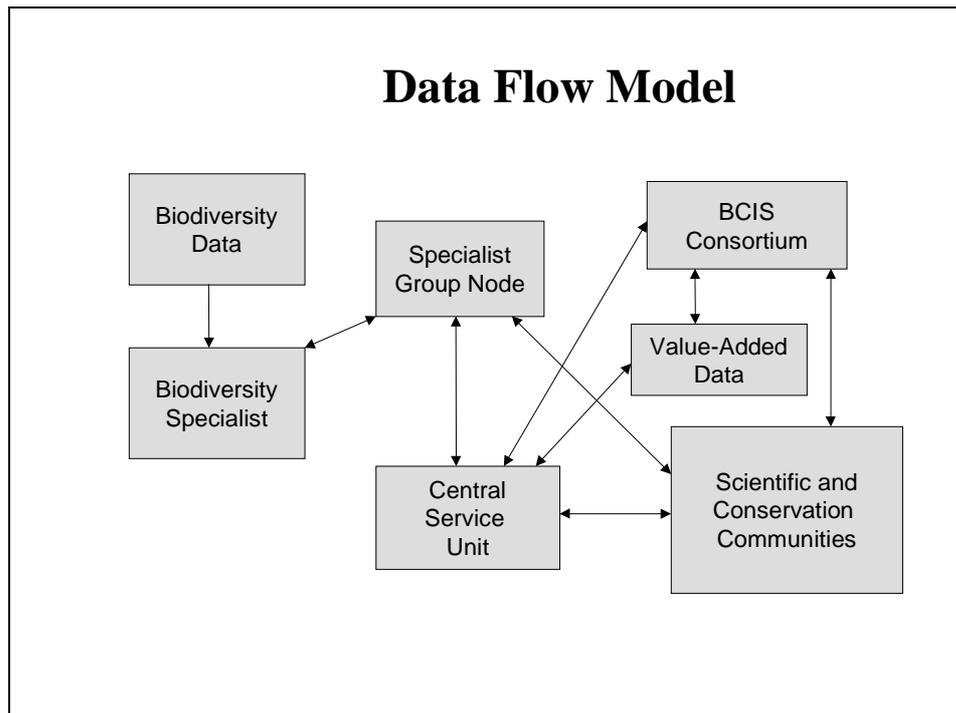
*Andrew Smith* reported on the Species Information System SIS which is SSC's emerging data management initiative to support sound environmental decision-making through efficient collection, management, exchange and promotion of high quality species data and information. Dr Smith highlighted the pressing need for current information on species and the 6 years of work to develop the system so far – largely through volunteer input. The SSC, representing the world's most complete source of scientific and management expertise on species with 7000 plus volunteer members in 120 specialist groups is ideally structured to contribute data through an inter-linked database.

SIS works by:

- comprehensive treatment of species;
- allows analysis at different geographic scales (global, regional, national, sub-national);
- links to relevant databases (for value-added information);
- based on principles of data custodianship (data managed as close to the original sources as possible—specialist group nodes);
- decentralized structure;
- flexible (not a “one size fits all” architecture).

The modular data management system provides:

- taxonomic information
- population status data
- geographic
- resources and documentation
- IUCN Red List conservation actions
  - threats
  - utilisation
  - conservation measures



Dr Smith referred to the links of SIS as a provider of information to the Biodiversity Conservation Information System Consortium BCIS. This Consortium has developed protocols for a system for sharing information amongst some of the major conservation organisations. The Consortium is a joint venture between Conservation International, IUCN ( SSC, CEL, WCPA), WWF etc. For more information on this Consortium see:

The new products from the SIS would add to the current provision of services to conservation organisations and Conventions as shown below.

<b>Outcomes: products and analyses</b>	
<b>Current</b>	<b>New</b>
<ul style="list-style-type: none"> <li>– IUCN Red Lists</li> <li>– action plans</li> <li>– IUCN analyses of the proposals to amend the CITES appendices</li> <li>– CITES significant trade process</li> <li>– informed specialists</li> </ul>	<ul style="list-style-type: none"> <li>– important areas of biodiversity</li> <li>– important conservation areas</li> <li>– species trend information</li> <li>– national level products</li> <li>– resources for conservation action</li> </ul>

Andrew Smith pointed to the work to be done and the way ahead to manage the content, the content providers as well as the users:

- finalise the stand-alone 1.0 version of SIS;
- establish (stabilise) the central service unit;
- develop means for specialist groups to utilise SIS;
  - data entry
  - training
  - capacity-building for specialists
- improve SIS linkages via the internet;
- enhanced sharing/communication of data and information.

#### **Species Information Service**

*Content:* SSC's SIS (Species Information Service) uses a modular data management system for maximum flexibility. Each of the six modules is distinct, but can be linked, where appropriate, to other modules in the system: Taxonomic Information, Population Status Data, Geographic Information, IUCN Red List, Conservation Actions, and Resources and Documentation.

*User group:* Conservation scientists, natural resource managers, educators, decision-makers, international conventions, donors

*Costs:* SIS is designed to be free to users, thus there are significant costs to empower SSC Specialist Groups with the support to collect, enter, and manage their data, as well as to provide for the ongoing operation of a Central Service Unit (staffed with information management specialists) that ensure integration of SIS data, information and products.

*Contact point:* Dr. Mariano Gimenez Dixon

MGD@hq.iucn.org>

c/o SSC Program Office

IUCN Headquarters

Rue Mauverney 28, Gland CH1196

Switzerland

Phone: ++41.22.999 0155

FAX: ++41.22.999 0015

*URL:* <http://www.iucn.org/themes/ssc/programs/sisindex.htm>

## 4.4 Lessons in knowledge management CEC

### The Commission on Education and Communication CEC

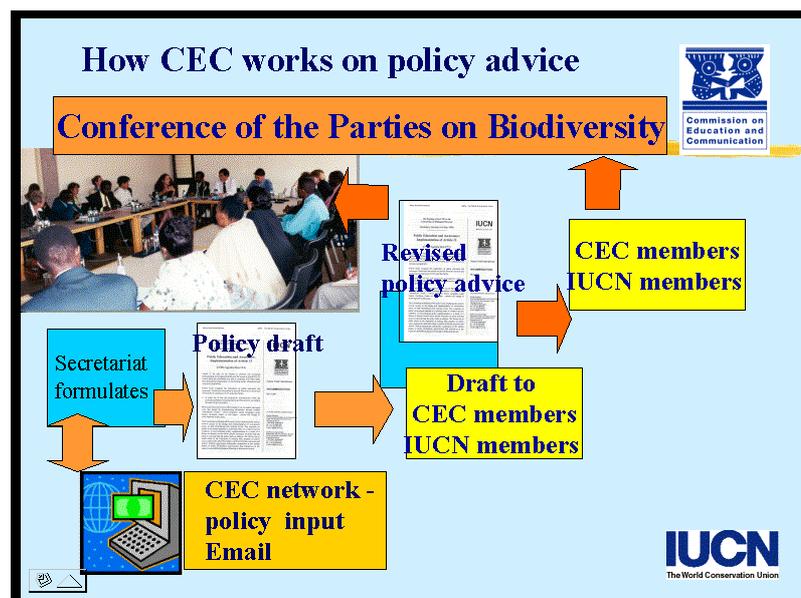
**Frits Hesselink**, the Chair of CEC, reflected on the ways that CEC has managed knowledge about education and communication and presented 3 lessons learnt in CEC.

CEC's knowledge is how to connect conservation to people with different perceptions and ideas, and especially how to take IUCN messages to a wider and not particularly interested audience. CEC was given the mandate to bring this knowledge into IUCN's work.

CEC views managing knowledge as an instrument to realise its mandate so that relevant knowledge can stream between the right actors. Amongst its means to share knowledge on education and communication CEC uses training programmes, workshops, the Internet, website and publications.

### CEC knowledge management examples

Frits Hesselink shared in more detail how CEC managed knowledge to develop policy recommendations on education and awareness for the Convention on Biological Diversity. CEC pulled knowledge from its networks, processed that information at the global level, and then disseminated the results through the CEC and IUCN member networks. In addition more focused discussions were held with the Parties during the Conferences of the Parties and in workshops associated with the Global Biodiversity Forum.



CEC was part of an internet “debate” to help define the thinking on the evolution of environmental education towards sustainable development education – a challenge proposed in Agenda 21 Chapter 36. This debate provided useful lessons to be shared with other parts of the Union, and those lessons are captured in the first chapter of the book summarising the main ideas of the debate. To make the full range of inputs to the debate available to those without internet access, a CD-Rom has been developed to accompany the book.

CEC believes that many meetings can be avoided – or at least the time wasted in meetings reduced, by commencing a web based / email discussion in advance. This would then enable participants to deal with those issues that need face to face interaction more efficiently and effectively.



Success factors in undertaking this Internet debate included interviews to define the method of work, key questions, and incentives for participation. Participants were personally invited and selected. A schedule for the 5 rounds of inputs was shared with the participants to mark in their diaries and reminders sent for contributions. Short closed questions were used to hook the participants into responding. Fast feedback was given on the participants’ input in the form of a summary with links to the full text. A graphical representation was made on the results of the closed questions.

To market the debate, a number of organisations were drawn in as partners and links made to and from their web sites. The web site design was user friendly and pre tested. During the course of the debate the process and issues were adapted to respond to suggestions from participants and observers.

## Lessons learned

When reflecting on the lessons learnt Mr Hesselink focused on three areas:

1. Content
2. Management roles
3. Involving the user in the process

### *Content*

The first challenge in knowledge management is to decide on the content. The guiding questions on content are:

How do you know what is relevant?  
How to collect it?  
How to process it?  
How to administer it?  
How to transfer it? Then you have to decide on what instruments to use to manage that content.

In CEC's work we tend to think the content is about how to undertake education and communication. However if knowledge is decisive in how effectively we undertake our programme then the *content is more than our discipline* – it is also knowledge about our customers, fundraising, the right publicity, policy events, and trends.

In the case of education and communication the content is often tacit knowledge. This provides an added challenge as to how to combine the management of the explicit knowledge with the implicit.

What can CEC do differently on content?	
FROM	TO
<ul style="list-style-type: none"><li>• Web site with education content</li><li>• Membership directory with photo archive</li><li>• Ad hoc relation management</li><li>• Program design in isolation</li><li>• Using only face to face meetings for tacit knowledge</li></ul>	<ul style="list-style-type: none"><li>• Website also with other expertise</li><li>• Data base for PR</li><li>• Integrated system for relation management</li><li>• System for sharing programming expertise</li><li>• Combining knowledge map with email, phone conferences &amp; meetings</li></ul>

### *Management roles*

If knowledge is going to stream optimally to those who need it when they need it, then the Programme Head and the Chair as managers should match supply and demand, provide what is useful, actively sense needs, ideas, trends and coordinate and act as process manager.

This means for CEC that:

Rather than waiting until other programs approach CEC, the IUCN Programme needs to be systematically scanned to see where CEC can add value.

Rather than looking only inside the Commission and inside IUCN, systematically monitor trends and needs, to see who really needs this type of knowledge, publish on the web site, and use the work of members on trends to keep really in touch.

Rather than use CEC instruments as isolated outputs, integrate regular E-mail newsletters, meetings, publications, the web site etc. in a more strategic process.

### *Use the User*

If knowledge has to stream optimally between the actors in CEC and the secretariat, CEC should first analyse the need for certain knowledge and develop the instruments and systems in dialogue with the intended users.

Some improvements CEC could make are:

- CEC Membership Directory to become a CEC Yellow Pages so expertise can be more readily identified and contacts made by network members, and staff;
- Rather than have the web site edited by one person at headquarters, set up an editing group and undertake continuous user surveys to adjust content and means;
- Rather than asking for feedback on a publication, establishing communities of practice using experience from the ESDebate;
- Rather than organising from top down publications and events, use internet to prepare those publications and events;
- From using the CEC Steering Committee meetings to bring in regions and guessing the knowledge, search behaviour, use regular surveys of members' needs and use "virtual user panels".

### *Commission on Education and Communication*

*Content:* How to bring conservation to people with different perceptions – the professional disciplines of education and communication

*User group:* Educators, communicators, project managers, government and NGO

*Costs:* Free

*Contact point:* Wendy Goldstein / Cecilia Nizzola

IUCN Rue Mauverney 28

Gland CH1196 Switzerland [Wjg@hq.iucn.org](mailto:Wjg@hq.iucn.org) / [ctn@hq.iucn.org](mailto:ctn@hq.iucn.org) Tel: 41 22 9990282 Fax 41 22 999 0025 [URL:http://iucn.org/cec](http://iucn.org/cec)

#### 4.5 Discussion on IUCN's knowledge management

*Question:* If IUCN CEC develops a virtual university, is this only going to create a worse situation as each one goes in their own direction? Clearly there is no knowledge management strategy. It will not work to build a virtual university.

*Answer:* A strategy is required. The IUCN more coherent programme is a good start. You need a vision as sometimes initiatives are driven by a few members of the organisation. Without good knowledge management there is a constraint for communications in IUCN. There are problems to get to the private sector, this is a big issue for knowledge management.

Others agreed with the idea of the virtual university. However, the Commissions must be linked to it.

The panel members felt that there is coordination among the members and partners, there are technical links and funding also.

*Question:* Would the Virtual university be for internal purposes, or external purposes?

*Answer:* We don't want a building – it is an organising concept as will be described later in the day. The idea is to identify needs, resources needed and the marketing.

*Question:* SIS: any feed back on the who is using the web, outside the Commission?

*Answer:* SIS is not only for SSC members, it's for the world.

*Question:* Share knowledge with other countries? Should or must?  
Concern was expressed that only the north will have access.

*Answer:* There are no barriers to share information from the north-south.

ECOLEX is available to users at the grass root level: multilingual service, English, French and Spanish. We cannot depend only on the technical, translate the laws, mobilising human resources, though it is hard to find lawyers to translate laws as the languages are too technical.

Developing countries: Aim for a multiplier effect. Syllabus at the Regional Centre is relevant for the region, 30 persons came without any payment. Purpose of training is that when they go back, they train policy makers, judges, and other involved in the management of the environment. Participants are responsible for providing the benefit of their material for the region.

*Question:* How do we update the data?

*Answer:* Ecolex: through monitoring official publications and the participants send us information, through partnerships, treaties, information (secretariats), partnerships of regional centres.

*Question:* Programa PARC: como se actualizan los datos - El acceso al conocimiento es un tema clave.

IUCN is a fantastic organisation but at the country level it is not in evidence. Decision makers have too much information, they need to make decisions.

*Comment:* Knowledge, information and data get confused. There was also discussion about information not being the same as wisdom.

*Question:* Is it possible to connect the IUCN members by e-mail, give voice to the smaller members; pick up case studies from members, provide information on funding?

# 5. Knowledge management amongst IUCN Members

## 5.1 Knowledge management for the Arab Region

“It has become evident that economic development depends on the health of the environment. Therefore to achieve sustainable development, environmental information must be used to underpin decision making in a way that enhances productivity and prosperity without compromising the integrity of the environment”

“Without a strong knowledge base derived from reliable, timely information, we cannot understand the cause and effect of environmental problems in order to decide on appropriate responses and make informed decisions to solve these problems. The lack of common frameworks and co-ordination of information-generating activities results in data duplication, incompatible data formats and inconsistent data quality that hamper the usefulness of information.

“In many developing countries, there are obstacles or constraints, which limit the full utilisation of information technologies and therefore access to information systems that exist. These include the lack of widespread penetration of computer use, telephones, and Internet access within environmental institutions. There is also limited promotion for the use of these technologies, limited training opportunities, and technical assistance capacities, limited availability of information on line, and a lack of data standards. Many communities do not have the financial and technical resources to make full use of available information technologies.”<sup>1</sup>

Adel Farid Abdel-Kader from the Egypt based international organisation, CEDARE reported on its work as an enabling agent in support of sustainable development initiatives at national and regional levels, to stimulate the implementation of international agreements and conventions in the region.

CEDARE develops environmental information systems to generate knowledge, provide analysis, assessment and information in forms suitable for varying uses in society, such as decision making, policy analysis, and use by stakeholders. CEDARE also contributes to capacity building activities in the region.

With increasing use of participatory approaches by public and local communities in environmental management and decision making, public access to environmental information for sustainable development has become a main instrument for informing them and making them aware of possible solutions. The

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<sup>1</sup> A.F.Abdel-Kader, 1999 Environmental Information Systems (EIS): Stewardship towards sustainable development in the twenty first century in Hegazy, A.K. (ed.) *Environment 2000 and Beyond*, UNESCO, ICED, IDRC. Horus for Computer and Printing, Cairo Egypt.

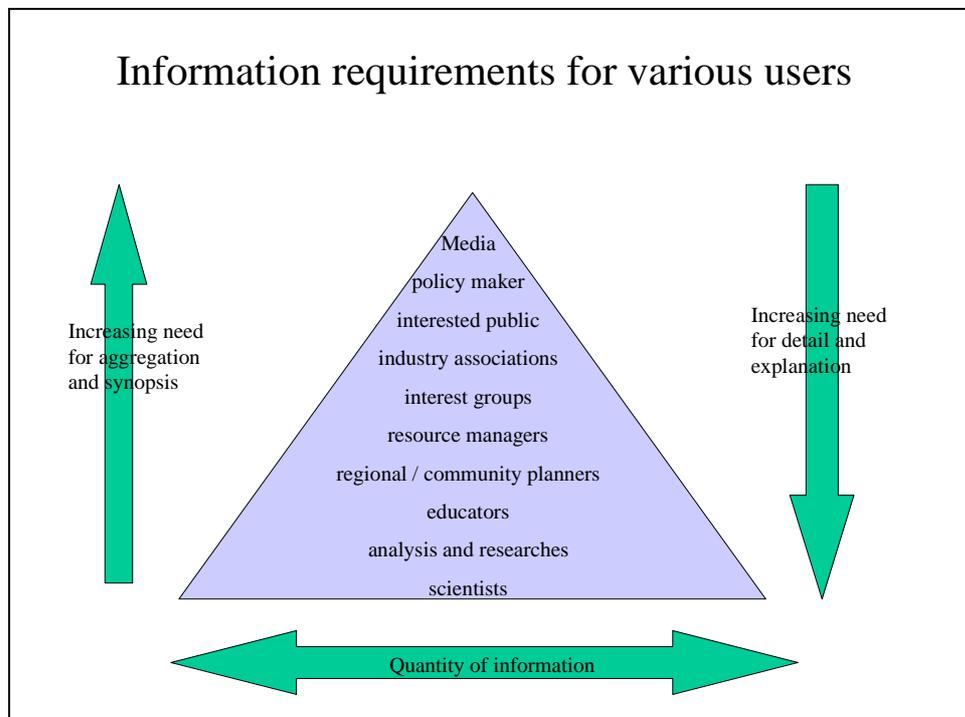
information and communication technologies provide opportunities for individuals and institutions to communicate directly, without bureaucracy, to exchange and share information.

In addition, knowledge networks maximise the rate of knowledge generation from different sources, reduce barriers between sectors and are most suited to the multi-disciplinary approaches of sustainable development. However it is essential to manage information in a network of closely co-operating institutions as well as between the various divisions of a single organisation. This requires an institutional framework, which defines a clear structure and co-ordination mechanism.

Such networks linking national, regional and international organisations can function to:

- Co-ordinate between providers and users;
- Identify key data information sources;
- Establish data sharing agreements;
- Develop standards for interchange and integration of data;
- Promote the improvement of the infrastructure;
- Provide a pool to exchange expertise in data analysis and interpretation;
- Advice on the data sets;
- Provide data directory services;
- Provide a directory of best practice and expertise.

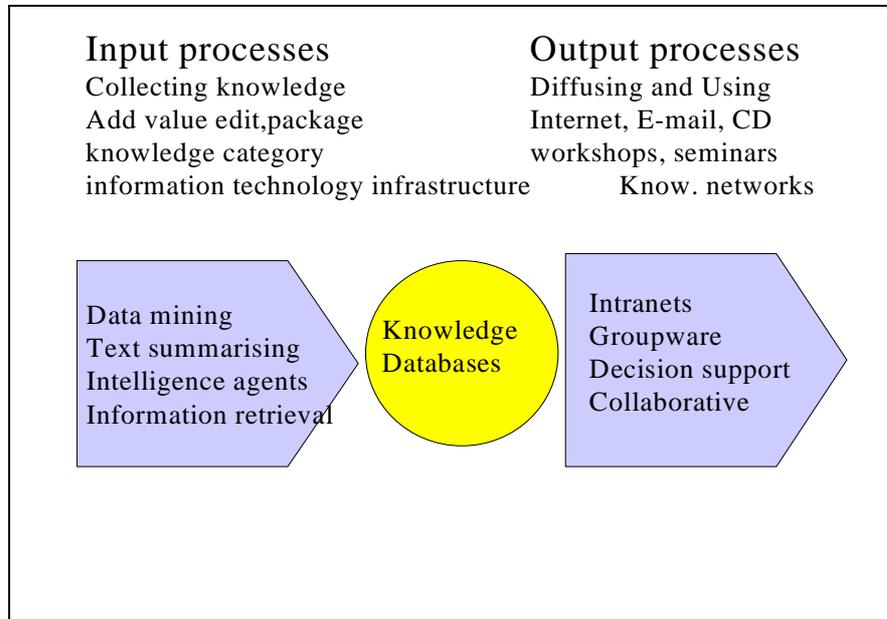
At present the ability to produce and store data is generally higher than the ability to manage and analyse it and then use it in decision-making processes.



Environmental information should respond to decision making and public information needs. Information requirements of users vary greatly in terms of

detail, aggregation and quantity. For example, scientists collect and use the largest amount of data to derive information with the most detail, while decision-makers and the media require aggregated and synopsis information.

Knowledge should not be just information and data. It is marrying technology, organisational structures, and cognitive based strategies, experience, and sharing to raise the yield of existing knowledge and produce new knowledge.



CEDARE uses knowledge to support policy makers and produce policy relevant documents. Examples of these are the State of the Environment Report in the Arab Region; and input reports to the Global Environmental Outlook, Northern Africa and Africa Environment Outlook, which are produced by UNEP.



#### Lessons:

- KM is expensive, but it can be done less expensively and incrementally. Not having knowledge management is more expensive.
- Starting now with what you have is better than tomorrow.
- Effective knowledge management depends on integrated solutions based on people and technology
- Access to knowledge requires building confidence with those that own it;
- Knowledge management is a continuously evolving process;
- There is a need to promote a culture of knowledge sharing.

**CEDARE** - Centre for Environment and Development for The Arab Region and Europe, **Environmental Information System** -

*Content:* Programme areas, activities, GIS, Indicators, databases on experts, institutions etc., bibliography, links

*User group:* National environmental institutions, decision makers at different levels, research communities, as well as regional, and international organizations serving the Arab region

*Costs:* CEDARE Information resources have been made free of charges to its users

*Contact point:* Dr. Kamal A. Sabet, Executive Director  
 Centre for Environment and Development for The Arab Region and Europe (CEDARE), 2, El Hegaz St., Heliopolis, P.O. Box 1057 Heliopolis Bahary  
 Egypt Tel : 2-02- 451 3921/ 2/3/4 Fax: 2-02-451 3918  
 URL : <http://www.cedare.org.eg>

## 5.2 The World Resources Report – new ways of selecting, packaging and disseminating knowledge ...

**Wendy Van Asselt** told how the World Resources Report of the World Resources Institute WRI has undergone a major transformation in the past two years to:

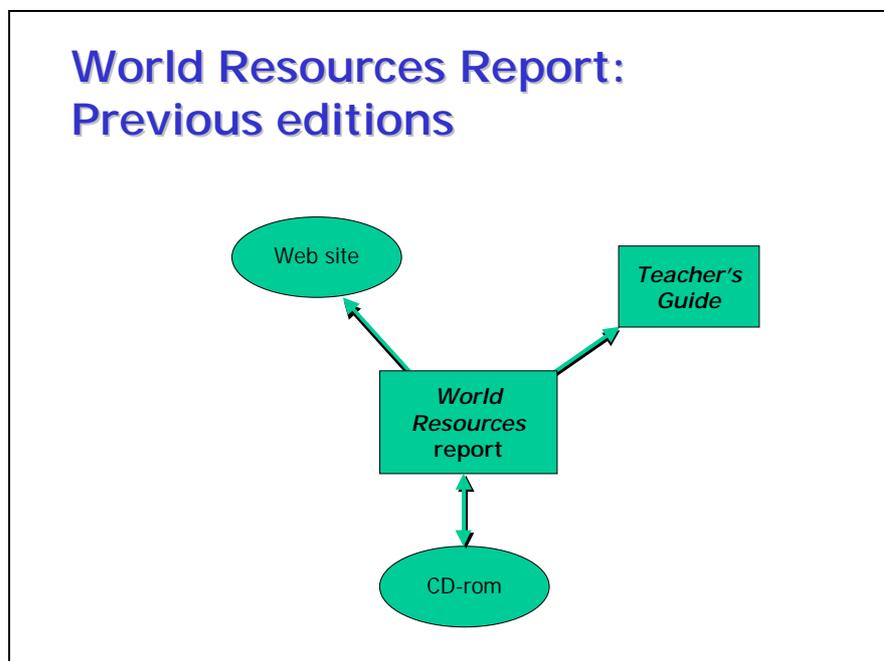
- make its information more accessible and relevant to society
- increase its potential to be disseminated and its information used.

One aspect of this communication strategy is to take advantage of information technology and the world wide web.

Two important lessons learned are:

- the absolute necessity to make use of partnerships including NGOs and mass media;
- knowledge management requires institutional flexibility.

The World Resources Report – A guide to the Global Environment explores the interface between development and environment. The Report is produced by the World Resources Institute WRI and UNDP, PNUMA and the World Bank and was traditionally, text based, academic and without many graphics. Intended for policy makers, it used to reach a limited audience, being presented as only one type of book, which was put onto a CDROM, and the website. A Teachers' Guide was developed to assist teachers to use the Report. .



With pressure from our partners WRI sought to reconceptualise the World Resources Report, in the information presented, the way it was presented and the way it was disseminated.

## 1 Content

The content connected ecosystem health to human health and well being, to connect to benefits. This simple message assisted us to gain more support and funds for the project. The message:

Ecosystems are essential to human health and well being, but globally their capacity to meet human needs is declining.

The World Resources strives to answer the question: how viable are Earth's ecosystems? The Report takes different ecosystems (agricultural, coastal, forest, freshwater, grassland) and assesses them in terms of:

- food and fibre production;
- provision of pure and sufficient water;
- maintenance of biodiversity;
- storage of atmospheric carbon;
- provision of recreation and tourism opportunities.

## 2. Presentation

The one message was presented in many different ways, making a simple interpretation of complex data.

- Maps were very important.
- Technical analysis
- Data tables
- Score cards – these graphic representations appealed to the media and to policy makers
- Case studies
- Graphic boxes

An example of the score card is shown below, making it easy to see the trends in services of an ecosystem.

	Agro	Coast	Forest	Fresh-water	Grass-lands	Condition
Food/Fiber Production	↘	↘	↗	↕	↘	Excellent
Water Quality	↘	↕	↘	↘		Good
Water Quantity	↘		↘	↘		Fair
Biodiversity	↘	↘	↘	↘	↘	Poor
Carbon Storage	↕		↘		↘	Bad
Recreation		?			↘	Not assessed
Shoreline Protection		↘				Changing Capacity
Woodfuel Production			?			↗ Increasing
						↕ Mixed
						↘ Decreasing
						? Unknown

### 3 Dissemination

Something new was to prepare an Executive Summary, which was released before the Report. This built advanced interest in the media, Time Magazine, made a supplement, CNN developed a 10 minute segment. Public broadcasting made a 2 hour segment on the Report Card. Public forums were held and discussions with academic institutions.

The Web site was made more interactive with all the data on the site, a data portal and in one year we will have this data in a usable form so people can produce their own graphs.



A more dynamic dissemination of WRI Information resulted from planning the messages, presentation and communication of the Report.

There are challenges:

- the cost, a \$US4 million price
- Institutional attention
- Maintenance of networks
- Need for varied expertise
- Helps to have a broadly conceived mission

***World Resources 2000-2001: People and Ecosystems: The Fraying Web of Life.***

**Organisation:** World Resources Institute - an independent organisation in Washington, DC that provides information, ideas, and solutions to global environmental problems.

**Content:** *World Resources 2000-2001* is one way that WRI provides objective, authoritative, timely, and useful information about the state of the Earth in its human, economic, and environmental dimensions.

This edition of the report series – “***People and Ecosystems***” – presents the results of the Institute’s Pilot Analysis of Global Ecosystems (PAGE), a first attempt to integrate all available information about ecosystem health and condition. ***People and Ecosystems*** focuses on the capacity of the world’s ecosystems to provide essential goods and services like food, fibre, carbon storage, and biodiversity. It studies the world’s grasslands, forests, coastal systems, farmlands, and freshwaters, and it draws on new data from satellite imaging and the prior work of scientists. The report and web site also include case studies on ecosystem management, a wealth of maps developed by our GIS lab, and a comprehensive collection of data tables and environmental indicators.

*User group:* Policy makers, NGOs, researchers, students, general public.

*Costs:* \$4 million

*Contact point:* Lori Han, Production Coordinator for the ***World Resources Report*** ([lorih@wri.org](mailto:lorih@wri.org)). 202-729-7763.

*URL :* [www.wri.org/wr2000/ecosystems.html](http://www.wri.org/wr2000/ecosystems.html)

Millennium Ecosystem Assessment: <http://www.ma-secretariat.org>

### 5.3 Managing knowledge networks – experiences of IISD

Jason Switzer from the International Institute for Sustainable Development IISD shared lessons learnt from the organisation's 4 years of research and experience in managing Sustainable Development Knowledge Networks, a model for institutional collaboration which harnesses information and communication technologies to influence sustainable development-related policymaking.

#### Background

In 1996 IISD established Spinning the Web, a prototype knowledge management and networking experiment. In 1997, together with IDRC and the North South Institute, IISD sponsored the Maurice Strong-led Task Force Report on Canada's International Priorities for the 21st Century. This task force identified knowledge brokering as a key action area; and recommended that efforts should be made to more effectively utilize information and communications technologies (ICTs) to support this priority.

In 1998, IISD commissioned a follow up report, Formal Knowledge Networks – A Study of Canadian Experiences by Howard Clark<sup>2</sup>, in order to come to a better understanding of what knowledge networks are and how they work. In 1998-99 based on our research and practical experience, IISD established two more knowledge networks, in the areas of Trade and of Climate Change.

IISD's definition for a Knowledge Network is:

*A group of expert institutions working together on a common concern, to strengthen each other's research and communications capacities, share knowledge bases and develop solutions for use beyond the members' of the network.*

Four key points are captured in this definition:

- 1) Knowledge Networks require institutional commitment, beyond the participation of individuals and experts (this factor distinguishes knowledge networks from professional associations, advocacy campaigns, etc.)
- 2) Institutional collaboration takes place around a single issue or problem rather than a broad spectrum of interests: **Focus and work plans are essential.**
- 3) Strengthening capacity is critical to this model. IISD create Knowledge Networks in order to learn from each other and build on each other's strengths.
- 4) Knowledge Networks must move beyond basic information exchange to actually working together on solutions.

**In other words a Knowledge Network is more work than a net.**

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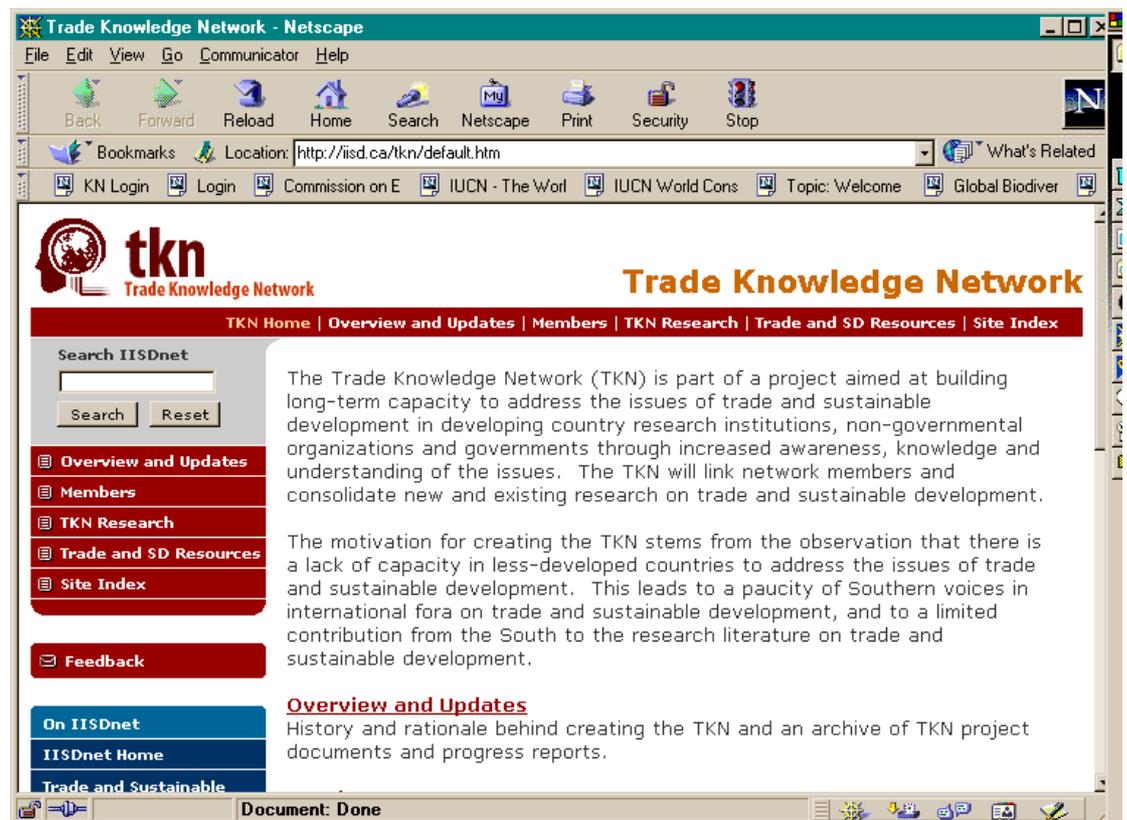
<sup>2</sup> To access the pdf file of Howard Clark Formal Knowledge Networks IISD <http://iisd.ca/pdf/fkn.pdf>

## Knowledge Networks Initiated by IISD

### **Trade Knowledge Network**

<http://iisd.ca/tn/default.htm>

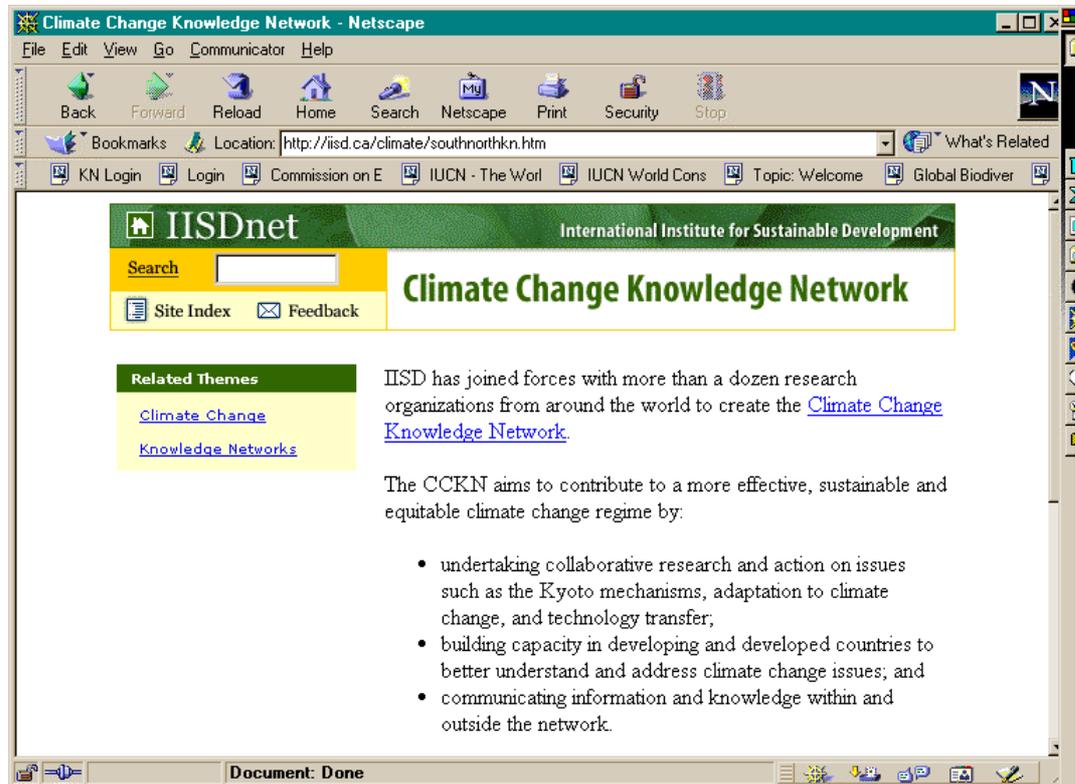
This was established to build capacity within southern institutions to research the linkages between trade and the environment, and to provide better informed advice to government trade negotiators. Member institutions are primarily southern based, including TIPS, South Africa, SDPI, Pakistan, CENIT, Argentina, and institutions in Ecuador, El Salvador and China.



### **Climate Change Knowledge Network CCKN**

<http://iisd.ca/climate/southnorthkn.htm>

This network was established principally to research and develop options for the flexibility mechanisms of the Kyoto Protocol. The purpose of the CCKN is to provide a means of collaboration among leading organizations on scientific and policy research in the area of climate change. As such, southern countries are linked with northern countries to develop new knowledge, and leading edge information is being disseminated more broadly. The CCKN is comprised of 14 NGOs from Latin America, North America, Africa, Asia and Europe, including: TERI, IEE, CSDA, Kiev Academy, IVM, Cicero, IISD, SEI, WRI, ENDA-Energie.



### ***Sustainable Development Communications Network***

<http://iisd.ca/networks/sdcn.htm>

This was established to build capacity in leading sustainable development organizations to use the Internet more effectively to communicate the collective knowledge of the members of the network. Members include SEI, ENDA Senegal, Earth Council, Costa Rica, Development Alternatives India, Regional Environment Centre REC, Hungary, and FARN Argentina.



## **Five Critical Elements for Success of Knowledge Networks are:**

- Focus
- Structure
- Communications
- Youth
- Evaluation

### Focus

Central Sustainable development issue or concern

The Climate Change Knowledge Network will develop 10 projects all focused on key climate change concerns: e.g. training African negotiators to improve negotiating skills in international meetings and to strengthen their overall knowledge on the climate change issue.

Breaking New Ground

The network must look for new ideas and approaches; it must move beyond the traditional information exchange; the network must be prepared to take risks.

Research agenda

A work plan, outlining what each partner in the network is going to work on over the next 6 months, year or 3 years. The same management and discipline required within institutions must applied to networks of institutions.

Link to decision making process

The most successful networks have an outlet for their research findings and recommendations. The network is designed from the beginning to influence specific decision making processes; e.g., the Trade Knowledge Network will influence national trade policy development in the member countries; and also the WTO. The Climate Change Knowledge Network African project will improve the quality of African inputs to the Climate Change COP.

### Structure

Knowledge networks need structure and discipline to be effective and influential.

Membership

Each organization has to have more than just an interest in the topic; it has to have real “bench strength” to do quality research on the issue

Each member has to have a proven capacity to influence the policy process

Cross fertilization of ideas is stronger when membership includes private sector as well as civil society groups; government as well as academic.

A formal, signed governance agreement is helpful to the operation of the network. The agreement outlines duties and responsibilities of members, and the mechanisms for decision making. Funding agreements tend to support a lead organization, which then drives the agenda; whereas a governance agreement helps to distribute ownership and responsibility throughout the network.

#### Coordinating Body

Nevertheless, it is useful to mandate one organization, or a committee, to be responsible for coordinating and monitoring research agendas and communications strategies.

### Communications

Communications is another critical element for a successful Knowledge Network. There are two aspects to communications:

**Internal communications to support the work of the network:** i.e., what needs to be put in place to support the joint work: meetings and workshops, email, closed computer conferencing amongst members, Internet video conferencing, “Extranets”.

In order for members of the CCKN to participate effectively in this network, upgrades to information technology have had to take place. IISD has traveled to several of the member organizations and provided members with upgrades to their modems and assisted with the development of websites in order to improve access to the virtual world.

It is becoming increasingly apparent that access to information is one of the keys to leveling the playing field between developed and developing countries. With improved Internet capability, developing countries can access the latest papers being developed on all issues related to climate change and be better prepared to assist their governments with upcoming international meetings.

#### **External communications**

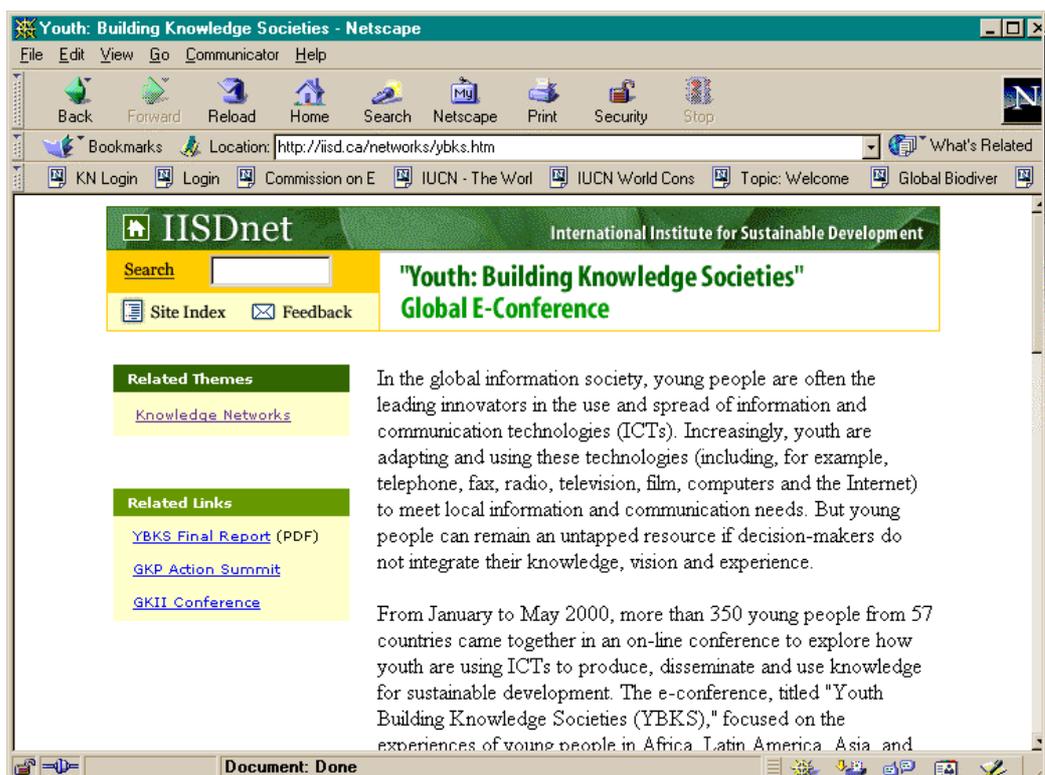
Strategies must be developed for

- the release of research findings,
- publishing electronically;
- website for the network;
- open computer conferences to discuss work with broader audiences;
- strategies for flowing the research results and recommendations into other media (print, radio, TV interviews, etc.)

## Youth

<http://iisd.ca/networks/ybks.htm>

The most effective networks also appear to have well developed roles for young people, such as graduate students, interns and entry level professionals. The youth bring fresh research perspectives, energy and enthusiasm, and, these days, they also bring the Internet communications skills.



Participation in a knowledge network provides great experience for youth, contacts with other organizations for future employment. Knowledge networks help to build capacity in the next generation to further develop and implement sustainable development solutions.

## Evaluation

We also believe that effective knowledge networks have established indicators of success in advance of their work – “what cannot be measured cannot be managed”. In developing indicators of success, knowledge network managers should take into consideration:

- the quality of research products, through peer assessment in the network and outside;
- influence on decision making processes, through the attendance of decision makers at workshops and subsequent follow up with decision makers, and

- use of the communications mechanisms by both network members and external audiences
- operational performance such as strengthening institutions and cost effective use of resources, and the ability to raise revenues.

We believe that pooling our knowledge and staff resources in a Knowledge Network is a more cost effective approach to research, particularly when adequately supported by good use of ICTs.

In summary, based on our own experience and our studies of other networks, we believe that the Knowledge Network is an excellent model for institutional collaboration and partnerships. It leads to :

- new and improved understanding and solutions to sustainable development issues ( new knowledge);
- increased levels of influence due to size of the network and the reputation of the members;
- capacity building across the network in research and communications.

The KN approach leads to focused collaboration, better informed research results, new knowledge and real influence on the policymaking process.

**Knowledge Networks, IISD**

International Institute for Sustainable Development

*Content:* Practical advice for structuring collaboration, emerging from four years of research and experimentation.

*User group:* Managers and knowledge providers

*Contact point:* Terri Willard, [twillard@iisd.ca](mailto:twillard@iisd.ca)

**URL:** <http://sdgateway.net/>

<http://iisd.ca/networks/sdcn.htm>

<http://iisd.ca/climate/southnorthkn.htm>

<http://iisd.ca/tkn/default.htm>

# 6 Knowledge management amongst IUCN Partners

## 6.1 Knowledge management at the World Bank

**Tony Whitten**, World Bank Senior Biodiversity Specialist, reported on the issues in making biodiversity knowledge available in the World Bank and a little about what it takes to get an institution to take on knowledge management.

Five years ago consultants came to the Bank with new vocabularies and jargon about knowledge management. The staff was self sufficient, very busy on project management and had a focused community of practice. There was little interest or support for these new ideas. Information technology, IT, lagged behind the rhetoric and there was a lack of use of the web.

Incentives were set up such as money for staff time, but people had other priorities and knowledge management meant nothing to the staff. Senior management insisted on the importance of knowledge management and slowly the walls were broken down, especially when contributions to knowledge sharing became part of personal evaluation.

Many instruments were deployed to share knowledge as shown below.



The Directory of Expertise is a searchable key word entry based on 200 words on who you are, who does what and where. Distance learning provides tool kits in a web based system. The internal website never took off because many of the functions were taken over by email and information contained in it could be found easier elsewhere. The external web site works fairly well. People write up best practice pieces for posting on the web. Workspaces are created for limited audiences like those working on a project and you need a password to access the discussion. Help desks have not proved very useful. The “Green Belts” are the 15 staff most involved with trying to advance the Bank’s biodiversity agenda.

Knowledge sharing does not have to be high tech! One of the most important tools is the pizza lunch. A lunch is the best way to get World Bank staff away from their computers and involved in discussing an issue.

Now five years on we have the concept of the knowledge bank. More collegiality has developed. People have even more piles of paper on their desks, and are even busier. There are focused communities of practice, loose networks of people that share knowledge. These are used to find who does what. Knowledge spreads with a speed not believed 5 years ago, we respond better to the client, and external users are asking questions. Though there is more use of the web there is still reluctance to its use. The Intranet biodiversity site has been abandoned. There is no formal mission statement, no specific work objectives on knowledge management.

For knowledge management money is not the issue, it is about cultural change and getting people on board. The cultural resistance is slowly changing as it has proved that the tools are useful. Now the knowledge management / knowledge sharing /learning boundaries are getting fuzzier, there is more “letting it happen” and loose control. It is not forced on people as force did not work. There is more clarity and differentiation between knowledge and information. The Bank is enabling knowledge transfer across large distances in a very short time and new tools are being used without people being aware. It is starting to make sense and win approval.

On another note: Efforts to share knowledge about the biodiversity in Asia have been supported by the Bank through the development of local language field guides, in which IUCN has been involved.



World Bank - Five Years of Biodiversity Knowledge Management

## EAST ASIA LOCAL LANGUAGE FIELD GUIDES



### ***Experience with Biodiversity Knowledge management in the World Bank***

*Organisation:* The World Bank

*Content:* Conceptual and practical changes over three years

*User group:* Managers and knowledge providers

*Contact point:* Tony Whitten, Senior Biodiversity Specialist ; Environment and Social Development Sector ; East Asia and Pacific Region

The World Bank

1818 H St NW, Washington DC, 20433, USA

fax: +1-202-522-1666

URL : [www.worldbank.org/biodiversity](http://www.worldbank.org/biodiversity)

## 6.2 Lessons in knowledge management in a donor organisation

Peter Crael from the Canadian International Development Agency, CIDA pointed out that knowledge management is about getting the right information to the right people at the right time.

Development strategies are changing. The most important thing is to get knowledge to decision-makers to help them make decisions. The health of the local environment and of the people who live there are dependent on the quality of the global environment. In the world today there are 2 groups of people, those that benefit from globalisation and those that do not. Poverty is a root cause of many of the environmental issues today, where half the world still has no access to telephone and 70% of the world's poor are women. Trade, development and environmental issues are coming together and being recognised as complimentary issues at the WTO. Global co-operation at all levels is key to ensuring sustainable development principles can be respected.

The occasion of the recent Millennium Summit in New York 2000 is vital, as the declaration, which was signed by states at the close of the Summit, included such remarks as:

*" the current unsustainable patterns of production and consumption must be changed in the interest of our future welfare and that of our descendants";*

*"We still need to press for full implementation of the Convention on Biological Diversity".*

These kinds of statements are quite enlightening. It demonstrates that the leaders of many of the world's nations are now realising that environmental issues are real and that economic prosperity as well as national security are linked to environmental integrity. This sort of realisation is occurring because world leaders are getting the right information on environmental issues which allows them to understand the relationships and make informed decisions. The challenge now is to act on these decisions in a manner which is acceptable to all stakeholders, including senior politicians and decision-makers.

### **What do we know now?**

We know that there are serious threats to the environment, which can have far reaching effects. This knowledge is confirmed by knowledge systems developed over the last 25 years. The Challenge for knowledge systems today will be to focus on developing solutions for the poor and wealthy nations alike. We know that most of the electronic information on Africa is housed in computers in Europe and North America. This kind of imbalance does not lead to effective on the ground partnerships. We must address the digital and local knowledge divide (with approaches similar to the use of cell phones by women in Bangladesh or the use of radio and the Internet in Sri Lanka.

## How is a development agency like CIDA responding?

The President affirms CIDA's objective of being a knowledge- based learning organisation. This involves a combination of information and knowledge management / sharing. It is recognised that knowledge sharing cannot be imposed, it must be facilitated, encouraged and recognised. A management strategy tries to provide needed information at the right time – just in time information.

To assist a chief information officer has been appointed in a project Phoenix and SAP software has been introduced.

## What actions are being taken to bring about knowledge management?

### Networks

Knowledge amplifiers (people need tools to be able to share their information and knowledge):

- ⇒ more coordination with CIDA partners to avoid stove pipes;
- ⇒ synthesis of grey literature and use of forums and seminars.

### Work simplification

- ⇒ focus on identification of solutions;
- ⇒ lessons learned to be shared with Canadian partners and put in agreements;
- ⇒ codification of information.

### Cultural Sensitivity

- ⇒ create culture that values knowledge and knowledge sharing;
- ⇒ public recognition for sharing knowledge;
- ⇒ virtual learning centre.

### Knowledge Directory

- ⇒ directory of knowledge held by CIDA and partners;
- ⇒ foster cooperation and problem solving;
- ⇒ similar to learning exchange at <http://www.iaia.org>

### Partnerships

- ⇒ World Bank & CIDA – Global Knowledge Partnership

What obstacles are there?

- ⇒ being too focused on the process;
- ⇒ getting the lessons learned;
- ⇒ getting knowledge from partners;
- ⇒ removing stovepipes so that all info and knowledge can be shared more horizontally across CIDA
- ⇒ focus on technology rather than people and their knowledge;
- ⇒ time.

But the culture of the organisation must be well understood, as well as what motivates people. Laws, policies regulations, Multilateral Environmental Agreement (MEAs) may mean little unless there are clear and convincing directives from senior management. For example all CIDA's work has to comply with the Canadian Environmental Assessment Act. But this was only taken up more aggressively in CIDA after the President issued directives requiring full compliance by July 1, 2000. All environmental assessments are also linked to our financial electronic systems. It is though these directives that people discovered that environmental assessments have positive benefits for projects which can be more of a motivating force than regulations.

Local and tacit knowledge is also crucial today. CIDA is developing tools to respect these kinds of knowledge systems. Technology is not always the solution. Note that only about 240 million have access to computer based information. Yet, many of the world's poor as well as people who are not "wired into the net" have knowledge which must become part of problems solving. The concept that the web will solve all our problems must not seduce us.

The following proves this point. To promote environmental assessment in CIDA The Environment Assessment and Compliance Unit , Policy Branch developed a communication plan on Environmental Assessment EA The plan involved the completion of a needs survey in CIDA to determine how project officers prefer to get information on EA. There were ten choices, and by far project officers preferred to call an environmental specialist to get information on environmental assessment. Using the web was their last choice. Information technology is still often the last choice, as people see it as trying to get a sip of water from a fire hose.

We also found that people want a simplified and short guide on complying with the Act. Another incentive is to provide case studies that show which projects have benefited from using environmental assessment and that give people something to talk about.

Feedback in our survey stated: "Communication often focuses too much on the facts we want to present to our audiences, and not nearly enough on the beliefs we should be encouraging. Communication too often uses methods that are convenient for the sender to make use of, rather than methods that are most likely to change the behaviour of the audience. For example changing beliefs usually requires face to face interaction, or at least electronic stimulation of that

interaction, such as testimonials from credible peers and leaders on the personal value of changing a cherished behaviour for a new one ”<sup>3</sup>

Another useful guidance from the work we did on the communication strategy is that “once people are aware of an issue it is more effective to talk positively about what has been achieved and how people can contribute to this success.”

The preferred methods of learning about something new in CIDA are in order:

- ⇒ workshops, courses, training
- ⇒ talking to specialist or a resource person;
- ⇒ manuals/ short documents
- ⇒ colleagues;
- ⇒ intra net;
- ⇒ Internet.

#### **Lessons Learned**

Use methods to entice people to want certain types of information.

Ensure senior management commitment to all approaches concerning knowledge and information management.

Make sure that the resource persons in the organisation have the right tools to get information and knowledge for their respective clients, such as project officers.

Ensure local knowledge is respected and applied to projects.

Understand what motivates people in the respective organisation.

#### **Some useful sites**

Environmental Communication Handbook (OECD)  
<http://www.oecd.org/dac/htm/pubs/p-envcom.htm>

Learning Exchange (IAIA)  
<http://www.iaia.org> click networking; click learning exchange

EIA website database

[www.iaia.org](http://www.iaia.org) click networking, click EIA Index

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<sup>3</sup> Angela Sinickas, 1997, Linking internal communication measurements to business goals. Internal Communication Focus 9/97:13-17

### **Canadian Development Assistance Information**

*Organisation:* CIDA, Official Development Assistance

*Content:* CIDA information on development assistance covers a broad range of topics which include, environment, human rights, infrastructure, private sector, poverty reduction, gender and basic human needs.

*User group:* CIDA partners, development agencies, the public, NGOs, international development community

*Costs:* N/A, mostly free

*Contact point:* Peter\_Croal at [acdi-cida.gc.ca](mailto:acdi-cida.gc.ca)

*URL :* <http://w3.acdi-cida.gc.ca>

### 6.3 Building organisational effectiveness – WWF corporate college

Gordon Shepherd of WWF International explained how WWF had set up a College to develop conservation leadership for senior staff and partners. As WWF had no effective system to help key WWF staff to develop their competencies, the knowledge, contact network, and credibility in the organisation remained under used. The College is a learning network rather than an institute with classrooms delivering regular standardised training modules. It is based on an Internet interactive learning environment to meet the needs of a decentralised organisation.

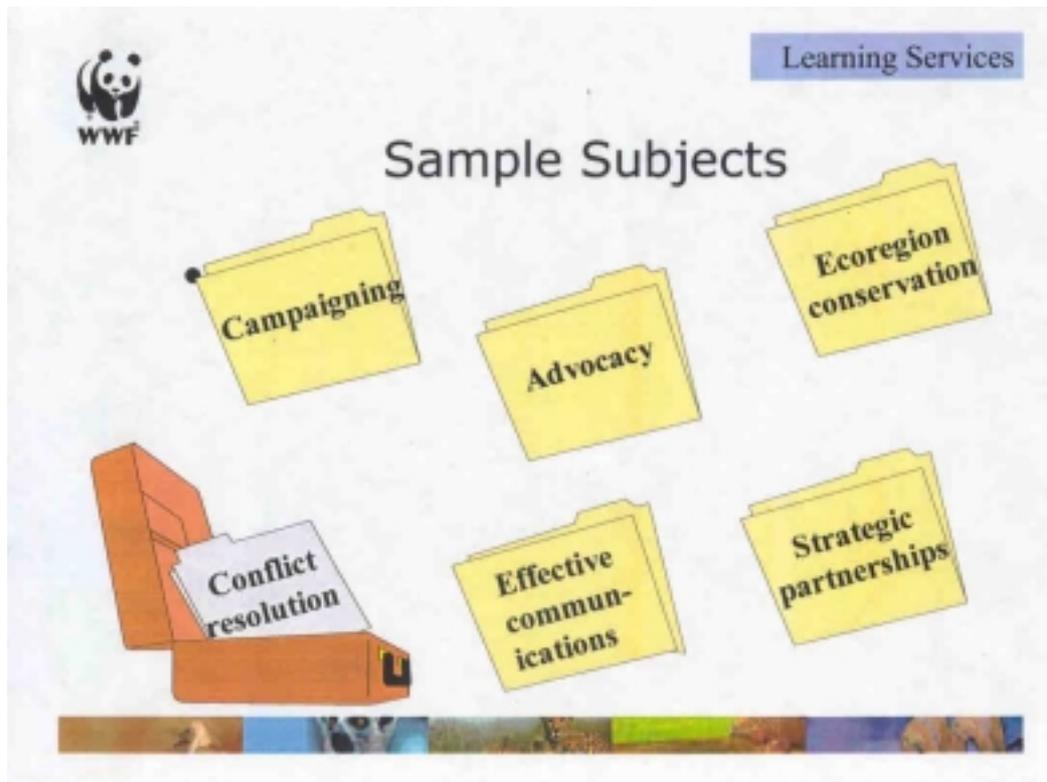
Real conservation is about changing what people do, and changing the way that we as conservationists go about that. Top down and command approaches have been shown to have only so much success. WWF wants to magnify its impact by building strategic partnerships and inspiring other organisations to a shared vision to mainstream conservation. To do that WWF needs leaders who can inspire and influence other leaders and organisations, this means adding new competencies to its staff and network.

The WWF College uses the different perspectives coming from a variety of disciplines amongst WWF staff and partners from around the world to add value to the course and to its content. The course uses a number of means for learning to take place:

- at the computer;
- face to face and long distance using video conferencing;
- learning on the job;
- sharing experiences with peers;
- providing dynamic content as it is continuously renewed and added to with the input of the participants.

Rather than taking a top down expert approach with static designed content, the course has a more demand based approach. Participants are responsible for setting their own learning goals against a competence chart and taking responsibility for their learning. The college course has been developed through discussion with colleagues.

The course is oriented to improving people skills and competencies to be a leader. Modules in the course are focused on campaigning, advocacy, conflict resolution, effective communications, strategic partnerships and ecoregions.

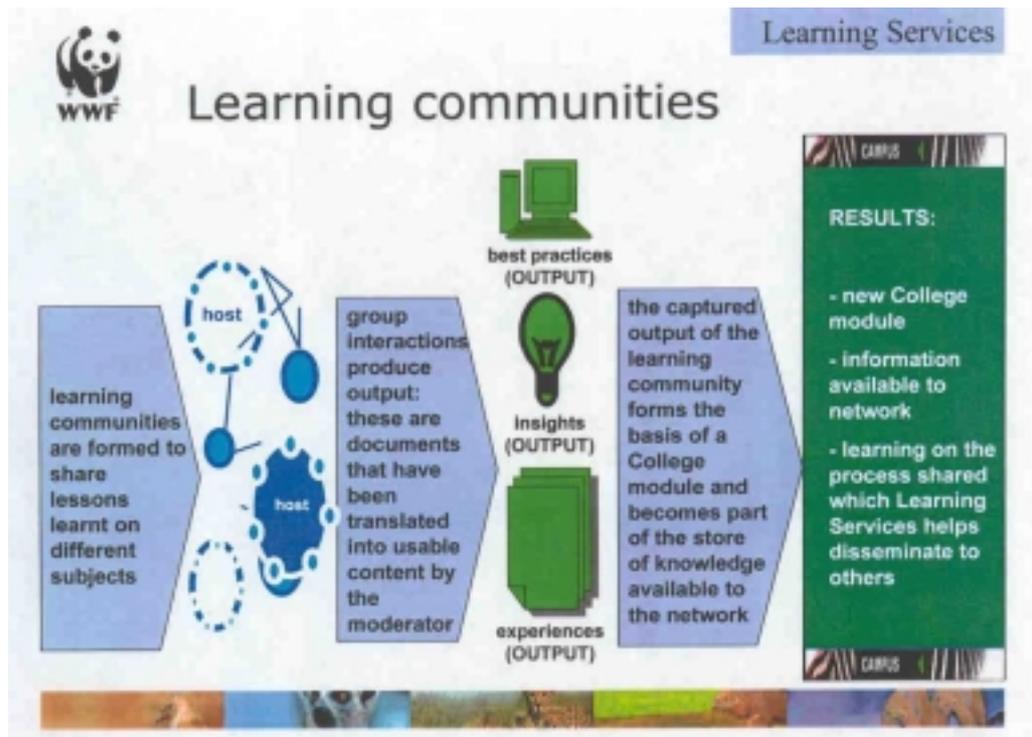


Therefore the emphasis is on understanding what people think as the competencies for leadership require being able to develop and communicate a vision, motivate and direct individuals and teams, build and manage strategic partnerships, design and implement effective campaigns, create awareness and educate others - it's a communication effort.

### **What is the style for learning in the College?**

Learning communities are formed with peer groups, members of the course who will help each other and share lessons on different subjects. Learning communities have defined members, are time limited, have clear objectives and outputs, and are moderated.

There are no rigid guidelines. The course evolves out of who is leading and participating. The course evolves through the contributions of the participants, and to their needs. As they come to conclusions these are passed on within the course and also as part of the next course. Contact comes through some face to face interaction at the beginning of the course when it is important to build a team amongst the participants. The course then is taken through the Internet, with some interaction through video conferencing. Through group interaction an output is produced, which is translated into usable content by the moderator. This brings to the fore guidance on best practice, experiences or insights. This product, captured in the course by the learning community forms the basis of a College module and becomes part of the store of knowledge available to the network. As a result the curriculum or course content is continuously evolving, the information is made available to the network, learning on the process is shared. This learning is disseminated to others by a Learning Services group.



The learning process has been very successful. The course takes approximately 1.5 years with around 2 hours per week. The multiplier effect is real. Involving the people is a critical aspect. Though it is important to have someone to help them when things get rough.

**WWF College:**

*Organisation:* WWF International

*Content:*

1. **Conservation leadership programme** covering leadership & management, strategy & planning, communications & networking, and campaigning & advocacy. Approach is based on sharing of experiences among peers, combined with some theory and assignments. Combination distance learning and face to face sessions. In the near future programmes will be customized and modular.
2. **Learning communities** which involve a group of people coming together on-line for a limited amount of time, with specific objectives and outputs defined, and with a moderator.

*User group:*

1. Conservation Leadership programme is for senior field staff, both WWF and its partners. Customized programmes available to all WWF staff.
2. Learning communities for all WWF staff and its partners where appropriate.

*Costs:*

1. Conservation Leadership programme - \$2500 tuition.
2. Learning Communities free.

*Contact point:* Jeroen Breman, College Manager, college@wwfnet.org, 0031 3069 37 310

[www.wwfcollege.org](http://www.wwfcollege.org)

## 6.4 Discussion

What lessons could IUCN draw from the experiences in other international organisations.

*Question:* In the WWF College what is the minimum size of group, how much is the learning with minimal number of participants? Is the idea that we can apply it in the work field? Is it a programme that we can join? How do you involve West Africans in these colleges? Prerequisite academico, que nivel se necesita para inscribirse en el curso?

*Answer on WWF College:* The minimum number of students is 15-20 but we learn as we go along. Three or 4 are in a group but for a small office this may be difficult. The people form their own exchange group, they are anywhere in the world and it is more beneficial. The wide range of experience in the group allows new ideas to emerge and it is enriching. Outside groups cannot join now, in the future we will look at it, now it is only WWF staff but we are interested in bring in more people and bring in different sectors. It's only a small-scale initiative.

*Question:* The Virtual university is a good recommendation, we need to look at the practical side for the developing world, it must have a regional dimension. Need for a vision and strategic framework. Knowledge is problematic, better access to knowledge, but the real problem is equal access to knowledge. Today it is difficult, the problem is how much we will participate.

*Answer:* Technology shouldn't be the limiting factor. It should be equitable.

IUCN should see how to use radio to communicate. There is an information lake and people are dying to get this information. How should IUCN work? Organisations like banks are looking at the environment: The issues are how can the knowledge be used to minimise the risks?

Use of IK: strongly based on the needs analysis made in the region. PARC is based on identification of strengths and weaknesses in order to improve the management of Protected Areas.

*Question Indigenous:* how are the people that are concerned going to participate. Basic process is education. How do you include indigenous knowledge in the knowledge you are managing?

*Answer:* This is very important, local community leaders involved in knowledge dissemination, this is very important, CIDA was mentioning readers for leaders.

For indigenous knowledge, collaborate with partner institutions and in shared interest in the problem itself. Donors have a problem to fund this.

In CIDA indigenous knowledge is being integrated in project planning.

*Question:* Do you agree with the WB that if people are engaged that money is not a problem?

*Answer:* Money is important but sometimes you can do a lot of things without so much money. You have to manage failures.

Money: its important to develop your ideas and contract personnel.

WWF: reaching other parts of the world. We have internally a lot of technology in our offices, money is provided centrally to help students from the different countries to access the course.

*Question:* What we need is in these case studies are examples of what does not work, some examples of things that don't work. If you evaluate, do you make use of failures?

*Answers:* CIDA we are looking to show the positive side not the failures.

WCMC there are failures stories, the park initiative is the realisation of different kinds of failures

If the focus is too broad you don't have collaboration. Small enough that different people can work upon.

Evaluation: the case studies were relating to the problem, you don't have to show everything is a success to your funders.

*Question:* This Congress has a lot of good books on biodiversity, and education and communication and protected areas. But everything is in English. What means are there to make use of the present information available outside of Europe and the USA.

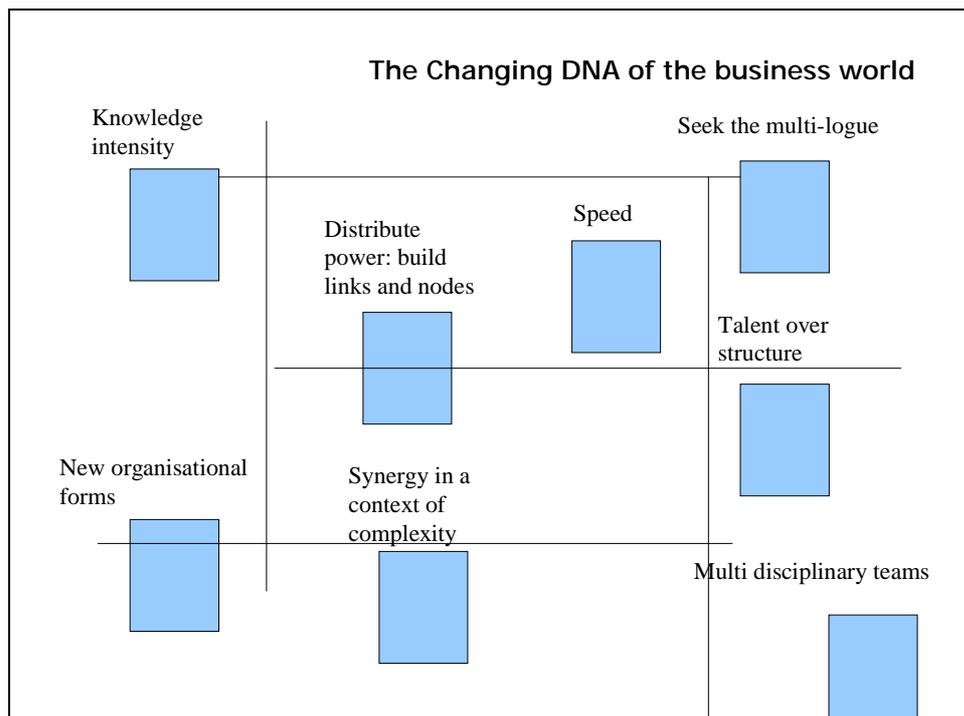
*Answers:* There was no answer offered - but it comes down to money to translate and re print the material

# 7 Knowledge management examples from the corporate sector

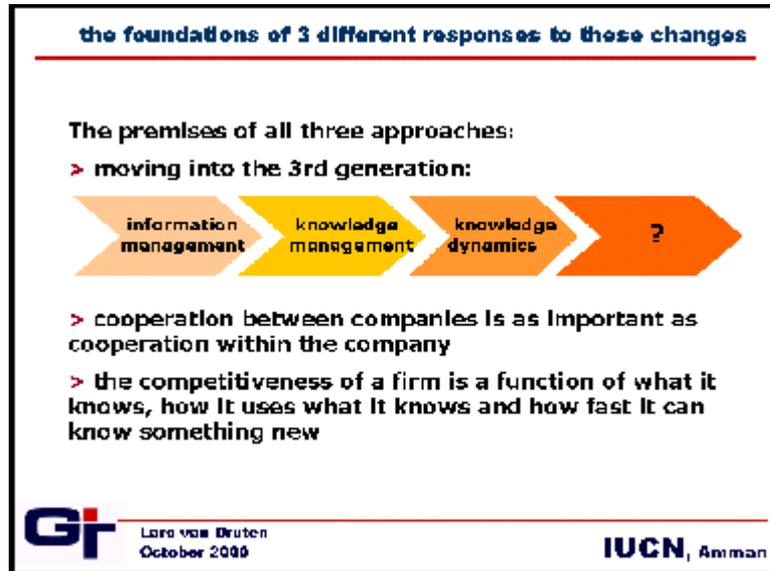
## Benchmarking knowledge management and learning for IUCN

Lara van Druten presented some examples of the trends in the business world and the ways some companies are responding.

In what she called the changing DNA of the business world – or trends that are driving the way businesses are operating- Lara van Druten pointed to the pressures from a new intensity in knowledge, where the life of professional knowledge is 5 years. After that knowledge needs to be refreshed. In such an intense situation it is your ability that is more valuable than what you know now. The importance of managing knowledge has put pressure on the structure of organisations. Dialogues are no longer appropriate, rather multi-logues are sought with people with different backgrounds and skills. Interaction in multi-disciplinary teams is essential to give synergy, as the nature of problems is so complex. Now consideration is for talent. In order to achieve this we need new organisational structures, that break out of the old structures and creates more flexibility. There is more distribution of power as links and nodes are built.



The premises on which businesses have been making change are shown in the figure below. The first is that knowledge is moving into a third generation, knowledge dynamics and then what?



For example the presentations have dealt with different projects that demonstrate the changing phases such as:

1. information management to organise enormous amounts of data – such as SIS and CEDARE;
2. knowledge management in which the different forms of knowledge, explicit knowledge and implicit (data) or tacit are recognised, but there is the issue of why share what I know? e.g the World Bank
3. examples of knowledge dynamics: generating, creating and spreading knowledge around in broad networks, like IISD;
4. What are we moving towards? Chaos management, wisdom, leadership, collective intuition?

In responding to these changing pressures in the business world it is being realised that co-operation between companies is as important as co-operation within the company.

Corporations are realising that the competencies of a firm that determine its competitiveness is a function of what it knows, how it uses what it knows and how fast it can know something.

### **The Vision Web**

Which organisational form best embodies the organisational processes of creating, capturing, storing, sharing, applying and re-using individual knowledge and ability in order to enhance organisational performance?

The Vision Web is one company made up of 6 independent companies and multitudinous cross cutting micro business projects. Here old ideas of organisations have been tossed out of the window, in favour of an organisational form for entrepreneurs. Within the company talent is central, not structure. The company works by sharing in multidisciplinary teams. Performance within that

team is not only on achievement but also about what doesn't work. There are rewards for trying something new, so that encourages people to try it.

An alternative organisational form for entrepreneurship is achieved by:

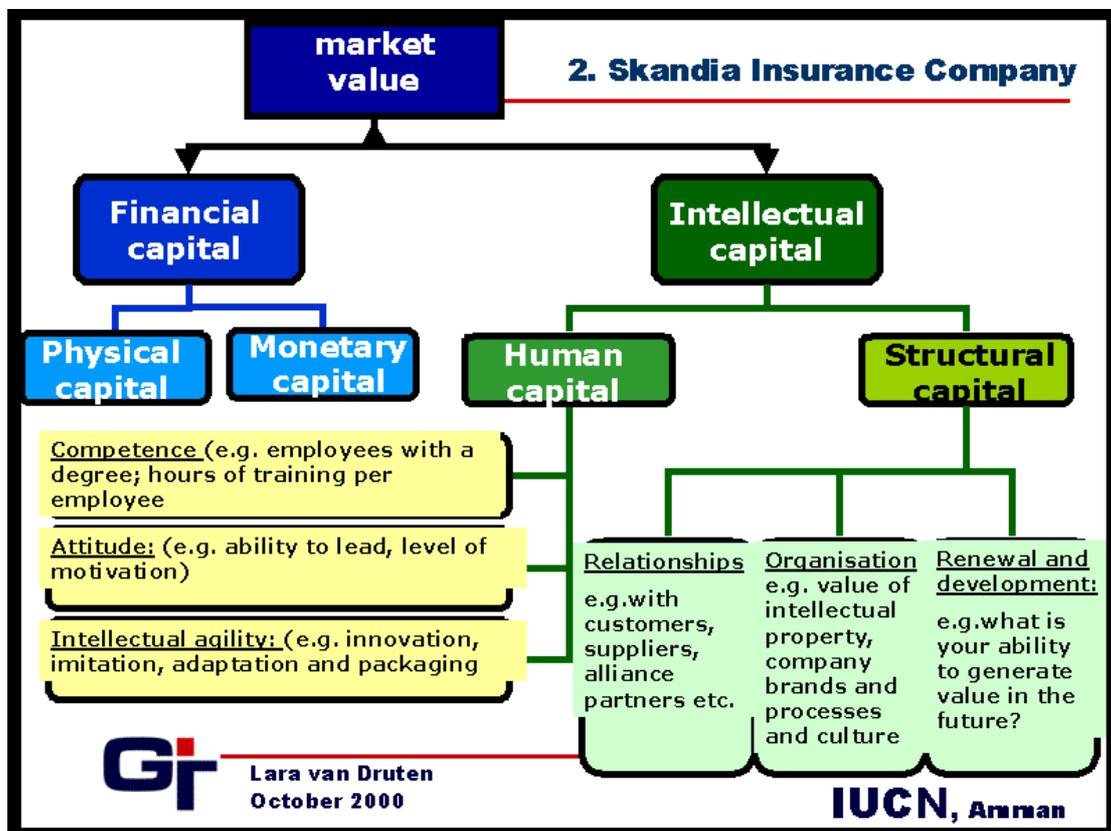
- continuous change in a context of synergy, embedding innovation and dynamism into the organisation;
- an organisational philosophy of cultural diversity;
- a grand café plus 20 computers for 270 people;
- knowledge infrastructure facilitating knowledge sharing, knowledge creating, and organisational transparency;
- virtual communities between employee's and customers;
- participation (profit shared between each micro-business project).

### Skandia Insurance Company

If the market value of a company is determined by what it has, its tangibles and what it knows, its intangibles, how do you go about calculating its market value?

Skandia's concept of intellectual capital – make your competitive advantage clear by mapping out what your company, not just its employees knows.

Skandia mapped out its Financial Capital including physical and monetary capital and also its Intellectual capital, in terms of human competence, agility and attitude and its structural capital ( relationships with clients, organisation, and the ability to renew and create value) in the future, as shown in the diagram.



Skandia came up with the idea that if you worked out a long term strategy, you could see what your organisation could or could not do. If you had more measurable elements you could brand it

Organisations are trying to develop corporate universities to develop the human capital. Once there were 6 corporate universities, now there are 450 international corporate universities.

*Comment*

What does this mean for conservation practice? Rather than take set processes and set practices look at the transitions where there's a completely different process we have to do. Knowledge is not sharing for the sake of sharing but how do you translate this into concrete actions. Sharing is great but is not enough to make change, you have to implement changes on the ground.

## **ING Business School**

How do you go about creating new knowledge if the shelf life of professional knowledge is only 5 years?

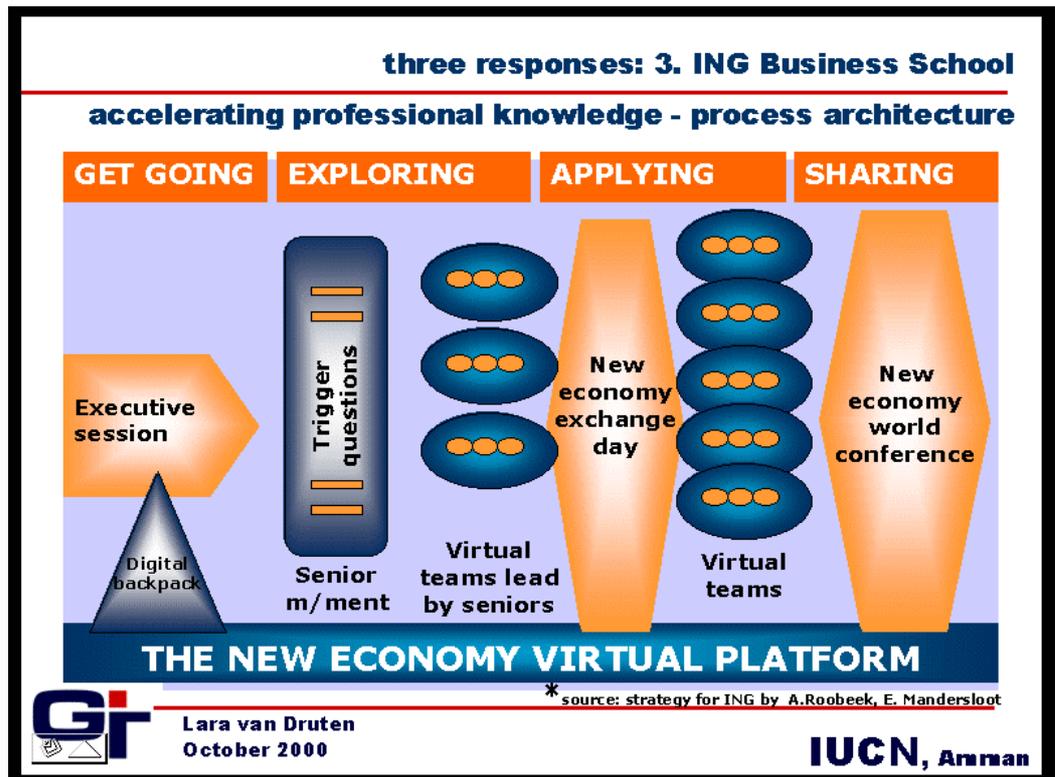
ING's Business School – develop a learning environment aligned to the goals of your corporate strategy.

Key issues for ING in accelerating the speed of professional knowledge:

- Establishing connections between target audiences
  - shaping conditions for informal networking
  - developing up and coming top-talent
  - create personal development paths
- Translating corporate strategy into action learning projects
  - feed the corporation with content
  - stimulate innovative knowledge creation
  - speeding up new business development
- Moderating virtual communities around strategic subjects
- facilitating self-organising networks in virtual space
- optimising internal and external synergy
- Creating an ING knowledge exchange and creation platform

The process for accelerating professional knowledge is shown in the slide over, where senior management for example pose questions, and virtual teams discuss the answers. The results of these discussions are shared first at an organisational level and then more globally to further enrich the knowledge.

To accelerate the development of professional knowledge you cannot carry-on doing the same thing that you are used to do. You need to try something new, ie an executive session, bringing a young group together with a back pack – showing others how to use the internet.



From business we observe three knowledge management and learning responses:

- 1) developing alternative organisational forms based on the premise that sharing knowledge is power; ( $K=I + A + S + E$ )
- 2) developing alternative measurements of success by mapping out the concept of intellectual capital;
- 3) by developing alternative structures for continuous learning in a changing environment.

## What is the competence needed by conservation organisations?

Participants had a multi-logue on the different areas of competence required in view of the changing face of conservation business. Using a form such as this is a way to guide thinking on the knowledge management strategy of an organisation.

Type of competence	Competence we currently have	Changing face of the conservation business	In the future we will need	
			What skills do we have that we will still need?	What skills do we have to develop?
<b>Technical</b>	What are the technical skills your organisation currently has to do the job well?	What are the trends affecting the future?	What skills do we have that we will still need?	What skills do we have to develop?
<b>Cultural</b>	What are the cultural skills your organisation has to do the job well?		What skills do we have that we will still need?	What skills do we have to develop?

### Feedback from the participants:

#### *The changing face of conservation business*

- We use a largely opportunistic approach. The private sector is going faster than NGO sector.
- The trends that affect an organisation are the ability to stay the course even though there is a growing sense of urgency to deal with issues. However we need to resist the temptation to put out bush fires.
- Put the human being at the centre, social issues are important, approaches tend to be more holistic;
- More importantly there is a globalisation of financial organisations;
- The speed of things, and being able to digest information and knowledge;
- More and more information but less knowledge.

#### *In the future we would need:*

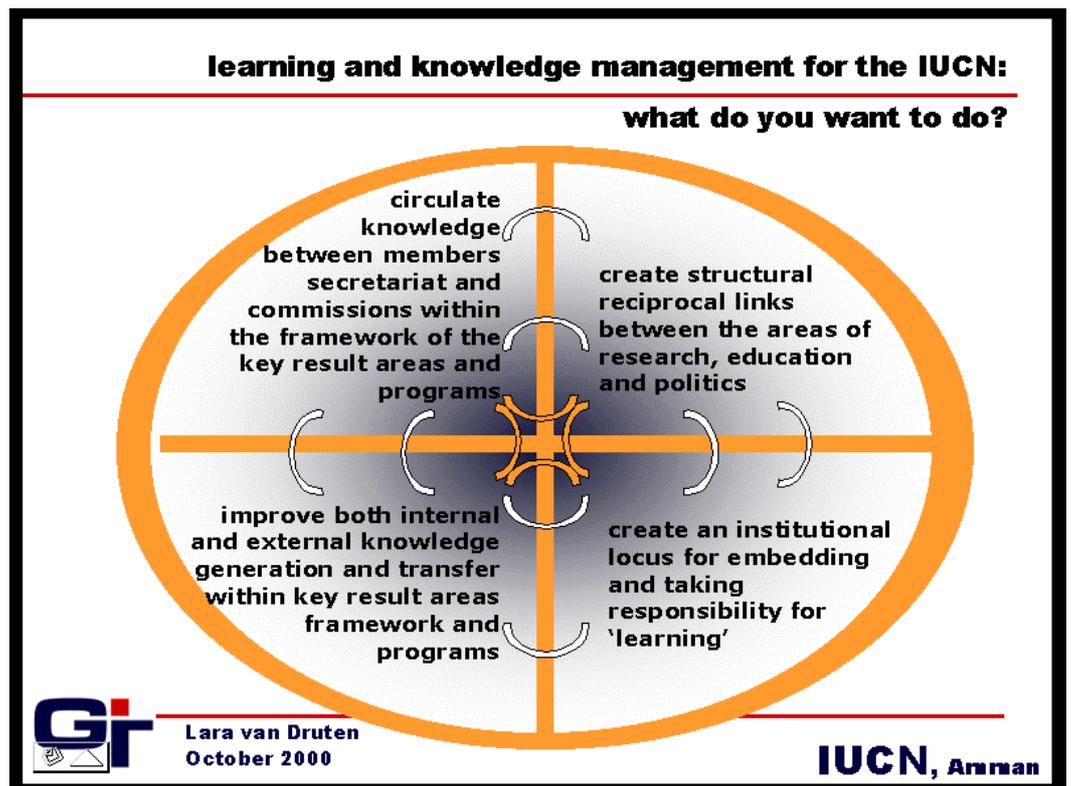
- An international organisation, developing international standards, developed by experts around the world. To have consensus among too many countries, needs time. You cannot do this unless you devote 4 to 8 years.
- Volunteer programme incentives;
- Face to face work – it should not be overshadowed by technology.
- In terms of skills, involve younger people in the developing process.

#### *Skills for the future*

- Skills of treating our target groups as customers as they will look at us in regard to how fast is our service and what's their benefit from our IUCN service.

# 8 A virtual campus as an organising model for IUCN

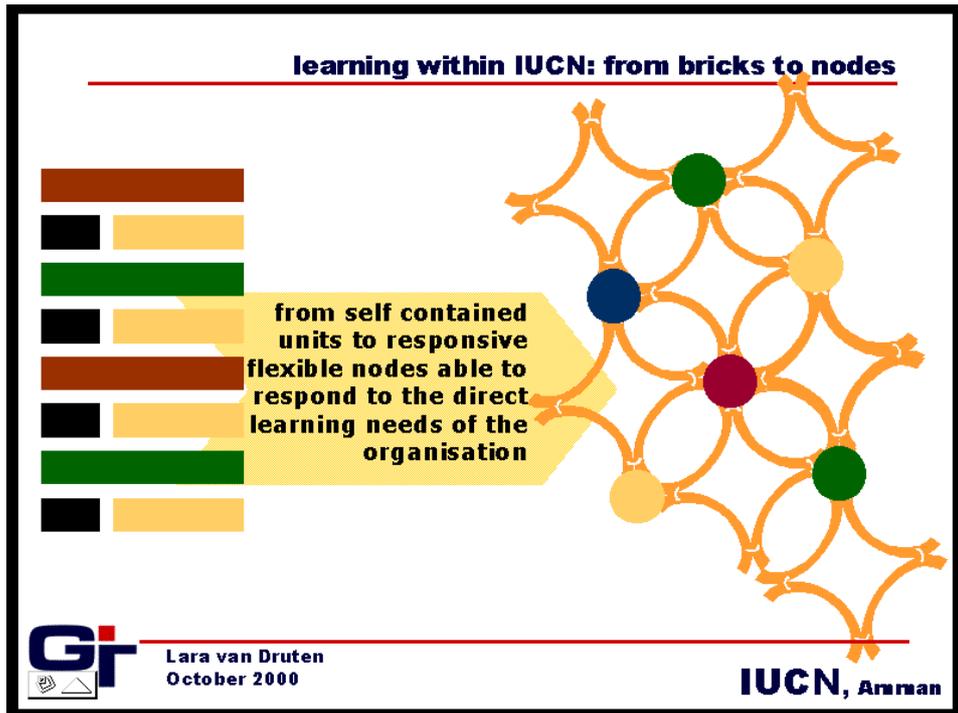
In view of the changing face of the conservation movement, the trends in society and the challenges for the environment, and the various initiatives amongst organisations in the environmental movement, let us look at what IUCN wants to do as suggested in the figure below.



In effect IUCN has an opportunity to:

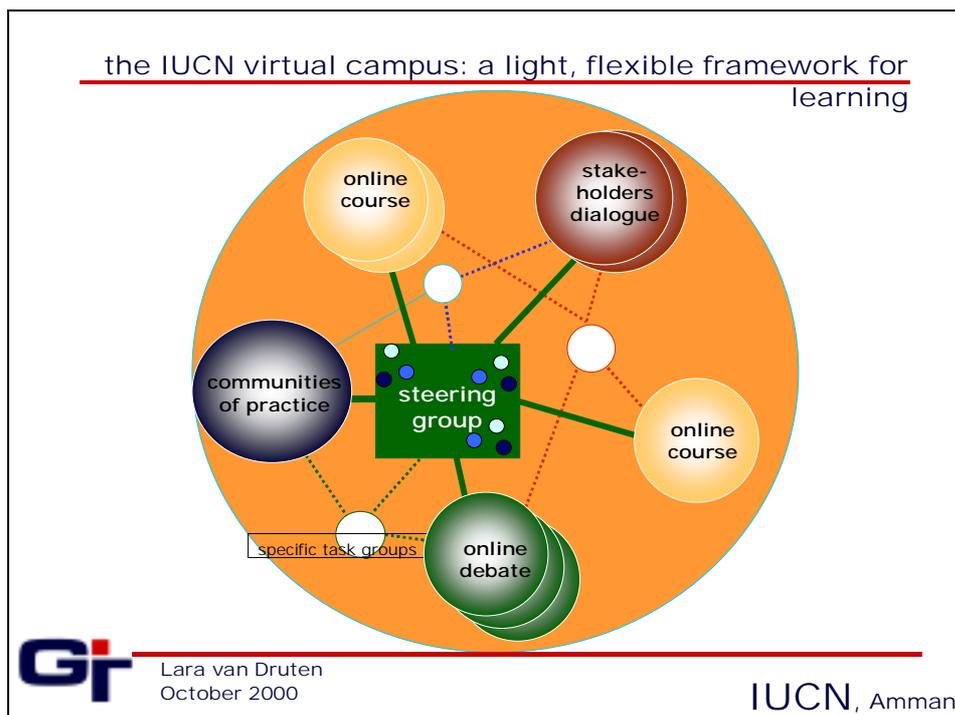
- Better circulate knowledge amongst its programmes, commissions and members;
- Link research, policy, learning and education;
- Improve internal and external knowledge generation and its transfer in support of the programme;
- Create a way to generate learning

As stated in the workshop session, there is much going on in different parts of IUCN. The organisation has more or less self contained units undertaking their own knowledge management. Working towards more flexible interaction between these areas would enable learning and synergy between them.



So the question is what is an organisational way to undertake this bearing in mind the different approaches being undertaken by IUCN, IUCN members and partners and the corporate sector.

The model of an IUCN virtual campus is proposed. As in a university or college there are different ways in which you can transfer knowledge to a group – through dialogues, debates, online courses, and communities of practice.



### *Online Course*

Consider an online course that supports knowledge, empowerment and governance in the IUCN programme on for example the cost benefit analysis of biodiversity. It could be put together by:

Content: sharing 'know how' and 'reference material'

- content specialists in the commissions
- broader IUCN members
- external stakeholders (e.g. British Telecom)

Technical assistance: given by the IUCN Information Management Group

Participants: consist of a broader array of stakeholders as well as the volunteers who are looking for a way to get recognised feedback from the organisation;

Choice of topics: aligned to the Key Result Areas identified in the IUCN Programme and linked to specific programs

### *Stakeholder Dialogue*

Stakeholder dialogue is one form of online interaction. Dialogues provide an opportunity to explore issues in their depth, develop a pro-active response and facilitate decision-making processes for the organisation. What's key is a moderated discussion such as those that take place in the IISD Knowledge Networks or the ESDebate, the World Bank and .

For example a dialogue on the intellectual property of DNA could be organised with:

Content: generated by a co-operating network of stakeholders such as,

- content specialists in the commissions
- broader IUCN members
- external stakeholders (e.g. Life Science industry)

Technical assistance: given by the Information and Communication service to place content in the online learning environment;

Participants: participation is based on invitation only and includes internal and external stakeholders;

Moderation: is strongly led from within the IUCN (Secretariat);

Choice of topics: aligned to the 7 key results areas identified and linked to the specific programmes.

### *Communities of Practice*

Communities of practice provide an opportunity to explore issues in their breadth, a way of scanning opinions and of getting a light form of broad based input. Examples are the plans of the marine programme to set up a portal to draw in lessons by engaging in multi-logues with other people. Same with the World Bank, these very broad based discussions help to keep the pulse.

Content: generated via lightly moderated discussion by a loose co-operating network of interested participants

Technical assistance: given by the IMG who administer a number of different mailing lists

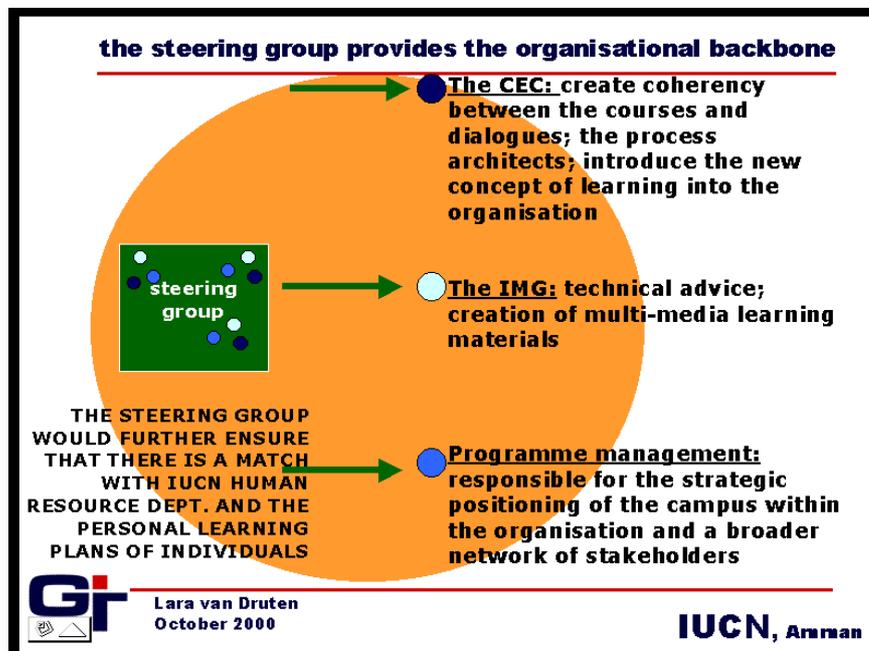
Participants: come from a broad and diverse background; participation is open to ALL interested parties

Moderation: is very light and lead from within the IUCN

Choice of topics: linked to 7 key results areas identified

#### *The steering group*

The steering group provides the organisational backbone for the work. Different parts of IUCN should be represented in a steering group including content specialists, learning and communication specialists and information technology specialists – i.e. it is multi-disciplinary.



#### *The strategic positioning of the IUCN virtual campus*

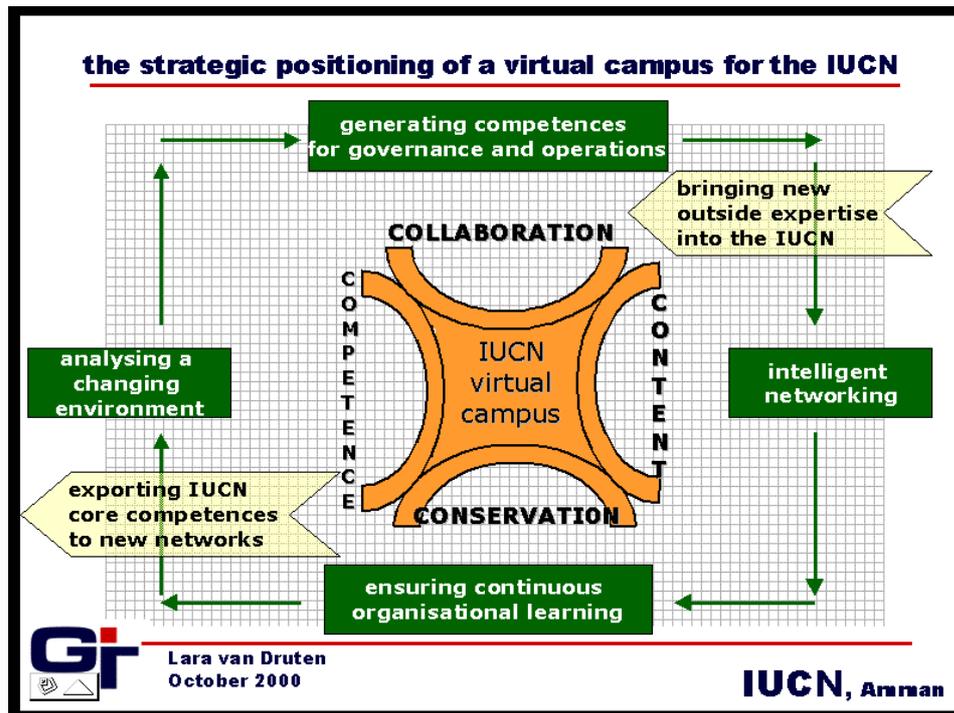
The campus provides a means to improve **Conservation** through ensuring the organisation is at its best through continuous organisational learning.

The campus provides a means for the **Competence** of the organisation to be monitored and developed through keeping tabs on the trends outside the organisation, and a means to continuously monitor the demands of clients.

Through **Collaboration** new competencies for governance and operations can be developed – amongst staff and Members - and new ideas brought in from outside.

The trends, demands and needs for new competence determine the basis for **Content**, developed in the campus. Content is generated by using an intelligent

network, that draws on expertise both in and outside the IUCN family. Of course an important role of the campus is the export of knowledge to new networks.



### Learning from lessons learned: dare to learn, dare to share, dare to make mistakes

- the campus becomes THE international hub for networking, learning and sharing around conservation issues;
- learning and knowledge management are embedded not in a computer but within the organisation (e.g. the world conservation digital library; the IUCN international academy of Environmental law);
- virtual interactions between different agencies that would not otherwise meet (at local, regional and global levels) become out-put oriented;
- different opportunities for mutually beneficial partnerships and joint venture's with new stakeholders (particularly business);
- different modalities allow for diversity and for change within the context of learning and collaboration.

# 9 Conclusions

## Why knowledge management in IUCN ?

The Amman Interactive Session addressed the issue of how IUCN can be more effective in “Mobilising Knowledge for Biodiversity” to achieve the Union’s vision:

*a just world that values and conserves nature;*

and the mission:

*to influence, encourage, and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.*

Some definitions were presented of knowledge and knowledge management, towards developing a common language.

**Knowledge** is facts and experiences known by a person or group of people. This includes consciousness and familiarity gained by experience or learning.

For strategic considerations it is useful to distinguish two types of knowledge.

**Explicit knowledge** is knowledge that can be recorded in a written form (e.g. books, electronic files, databanks) or codified form (e.g. procedures).

**Implicit or tacit knowledge** is knowledge that can not be easily recorded. It comprises mental models (e.g. beliefs, perceptions), wisdom, expertise, and even intuition. Personal advice, demonstration, discussion groups, mentoring or training sessions are the best means to pass on tacit knowledge.

**Knowledge management** is the process of creating, capturing, storing, sharing, applying and reusing knowledge to enhance the organisation’s performance to achieve its mission.

Knowledge is IUCN’s most valuable capital. Mobilising knowledge in time to the right people and in the right form is pivotal for maintaining IUCN’s position as the world’s leading conservation knowledge organisation. The Member organisations, the Commissions, the Secretariat, and their respective networks are huge generators of knowledge as well as means to disseminate knowledge. IUCN as a network manager has the capability to pull and deliver up-to-date knowledge on different issues.

IUCN already has a wide range of knowledge management activities undertaken by the different components of IUCN. Knowledge is gathered, stored and made

available in databases on for example, on species. IUCN disseminates knowledge in publications, web sites, policy advice and training courses. New knowledge is generated in Internet debates, list serves, workshops and by e-mail dialogue with commission members, or specialist groups.

However the IUCN External Review (1999) questioned whether IUCN was effectively managing knowledge. The Review stated that IUCN's knowledge is diverse and dispersed, suggesting that knowledge management is undertaken on a rather ad hoc basis. It suggested that there is ample space for improvements and better synergies. Moreover it was suggested that IUCN could become more customer oriented, that is providing knowledge services more in tune with what our clients want and need.

In recognition of the External Review's call for attention, the IUCN Programme 2001-2004 has a strategy to gather and process knowledge as a means to support empowerment and to influence governance to achieve the programme goals. In addition the review suggested that the Commission on Education and Communication might work to support IUCN's knowledge management and learning. These efforts would be to contribute to IUCN becoming a learning organisation as well as using knowledge to more effectively mobilise society.

The Amman session, Mobilising Knowledge for Biodiversity, therefore sought to explore ways to manage knowledge and make recommendations as to how IUCN could become more effective in getting the right knowledge to the right people at the right time.

To set the workshop on its task a vision for IUCN was proposed that included:

- an open, evaluative, reflective but action directed organisation;
- an organisation which rewards experimenting, action based learning and sharing;
- mastering the application of new media for mobilisation of knowledge and leverage;
- a web site to be renown as the world's foremost interactive hub on conservation;
- an attractive partner for the media and for the private sector because of its ability to generate and disseminate high quality knowledge.

## **Towards knowledge management**

### **Lessons from other organisations**

#### *Management support*

IUCN members and partners are addressing the issue of how to manage knowledge to stimulate conservation and sustainability. Lessons from this work emphasise that executive support is essential to generate a culture of sharing and to change organisational structures in support of knowledge management. Even with management support, care is needed to understand what motivates people, and what means can be used to entice people to want or use certain types of information.

Resource people in the organisation require the right tools to both draw and provide information and knowledge to their clients.

#### *Structures and tools*

Most supported a light organising structure for knowledge management. There are many tools used including a directory of expertise, creating work spaces, distance learning, community of practice, posting best practices, project databases, and pizza lunches. The last adds an extra incentive to draw people away from their desks to share that knowledge that is not so easily written down.

Internet and Intranet are speeding up communication and sharing. This creates a problem in that too much information bombards some who find it difficult to find just what they want. Despite efforts to put information on line, many prefer to pick up a phone or ask someone rather than look on the web. For others, the lack of connectivity impedes access. To overcome this lack of connectivity IISD has provided it to organisations in developing countries as part of its strategy to link them in learning networks. These knowledge networks share research findings and generate policy issues for sustainability and share the findings more broadly through Internet to a broader community.

#### *Success factors for productivity*

As evidenced by most of the examples presented in the session, *partnerships* are essential to bring the diverse skills required into play and to disseminate knowledge.

As IISD suggested the partners must agree to a *focus*, and a *structure* to the work supported by effective *communication*, internally and externally. *Evaluation* should be a part of all activities, to draw out lessons learnt and be used to enhance effectiveness. IISD has found that the inclusion of *youth* with well-defined roles has been a success factor in knowledge networks as young people bring fresh perspectives, energy, enthusiasm and Internet skills.

*Market surveys* are essential to understanding what is the demand for knowledge and what is the best way to deliver it. Knowledge must be "*packaged*" in ways that is appropriate to the *right audience* so that they can make informed decisions. Packaging includes speaking the right language to connect to the target person's perception. If you look at most web sites today, which are planned from a supply side approach, they are difficult to use and to find "what's in it for me?" Therefore it is preferable to develop the knowledge product with and *by the users*.

What information is presented and how it is presented so as to appeal to different audiences was highlighted by the delivery of the latest *World Resources Report*. By thinking of how to attract attention by different groups, information has been packaged in different ways. As shown in the report from CEDARE, the mass media and politicians have a high need for information to be aggregated and presented in synopsis. So in the case of the World Resources Report, an Executive Summary presented a report card with easy to see trends on the state of ecosystems ability to deliver services. The graphic and summarised information triggered great interest from the mass media, and busy decision-makers. However to meet the needs of those requiring more detailed and substantial information, the full report is available in print, and backed up with an on line data base with more substantiated levels of information.

### *Important trends to take into account*

The competitiveness of an organisation is a function of what it knows, how it uses what it knows and how fast it can know something new. For IUCN, competitiveness is required to overcome social trends to diminish biodiversity, as well as for the organisation to continue to be relevant to its members and donors, and to evolve in a fast changing world.

Trends important for IUCN to address include:

- a tremendous overall increase and intensity of knowledge or information;
- increase in speed of change requiring knowledge to be continuously refreshed;
- the necessity to deal with complex situations requiring synergy, partnerships and multi-disciplinary teams;
- implementing different organisational structures that distribute power and generate co-operation within organisations and between organisations;
- evolution from information management (data bases) to knowledge management to knowledge dynamics in which knowledge is generated and spread in broad networks.

## **Implications for IUCN**

While the IUCN Programme states many results that will be achieved in the area of “knowledge” there is no attention to an overall knowledge management strategy that determines:

- What are the important knowledge areas for IUCN to focus on;
- Who are the knowledge providers;
- Where can we apply that knowledge;
- What are the organisational competencies that have to be developed.

This task is much more than putting information on the Internet.

If knowledge is going to stream optimally to those who need it when they need it, then the managers are required to match supply and demand. That is they have to provide what is useful, actively sense needs, ideas, trends, co-ordinate and act as process manager. The more the users of the information are defined, the more you have to identify the partners for that information. Working in this way requires creating a common culture between partners.

Therefore competencies have to be developed including skills of treating our target groups as customers and of providing fast services of benefit to our members.

### *Possible organising structure for IUCN*

A study was presented that had been undertaken by CEC to explore how IUCN might improve its knowledge management. The proposal is to organise IUCN’s many knowledge efforts within a light structure such as an IUCN virtual campus.

The campus would provide a strategy to:

- improve **Conservation** through ensuring the organisation is at its best through continuous organisational learning;
- provide a means for the **Competence** of the organisation to be monitored and developed through keeping tabs on the trends outside the organisation, and a means to continuously monitor the demands of clients;
- through **Collaboration** develop new competencies for governance and operations amongst staff and Members and bring in new ideas from outside;
- determine **Content** based on the trends, demands and needs for new competence in the campus, generating it by using an intelligent network that draws on expertise both in and outside the IUCN family.
- export of knowledge to new networks.

The campus would become THE international hub for networking, learning and sharing around conservation issues where learning and knowledge management are embedded not in a computer but within the organisation.

## An IUCN Strategy for knowledge management

Following the input from the presentations, the participants discussed in groups the following two questions:

1. What would be the issues to address in a knowledge management strategy?
2. What would be the actions to face immediately - first steps as partner, CEC or commissions?

The responses from the groups were collated as they were presented using an on screen “Mind Map”, the results of which can be seen on the accompanying page.

## Conclusions

It is apparent that there are major issues for the secretariat in knowledge management compared to those for the IUCN Members’ needs. Knowledge management in IUCN should be a collaborative effort between Commissions and Programmes. IUCN needs to develop a strategy and action plan as at present there are many systems of managing knowledge. We should start with an assessment of the strengths and the weaknesses and learn lessons from failures. At first look for quick wins to be able to demonstrate benefits and a changing culture.

Since it was stated that it is local people working on the ground where changes will happen, for IUCN members, emphasis should be based on what are the knowledge needs of these people. So regional or local knowledge relevant to

people in the field should have special emphasis. Since it is possible to have an organisation full of competent people and ideas but still not to do anything effective, the development of conceptual models about how to use knowledge is also important.

IUCN could develop a light overarching roof for its knowledge management. One idea is to make a meta-map of databases. IUCN could also create conceptual models or promote existing models to help Members manage knowledge, so as not to duplicate information.

## **Goals of a knowledge management strategy**

The participants gave the following ideas towards the goals of a knowledge management strategy:

- link to Key Result Areas of the IUCN Programme;
- focus on the Convention on Biodiversity CBD and how to encourage countries to move from present status to achieve goals;
- make it useful for developing countries;
- support the diversity of the organisation;
- provide access to information.

## **The elements of a knowledge management strategy**

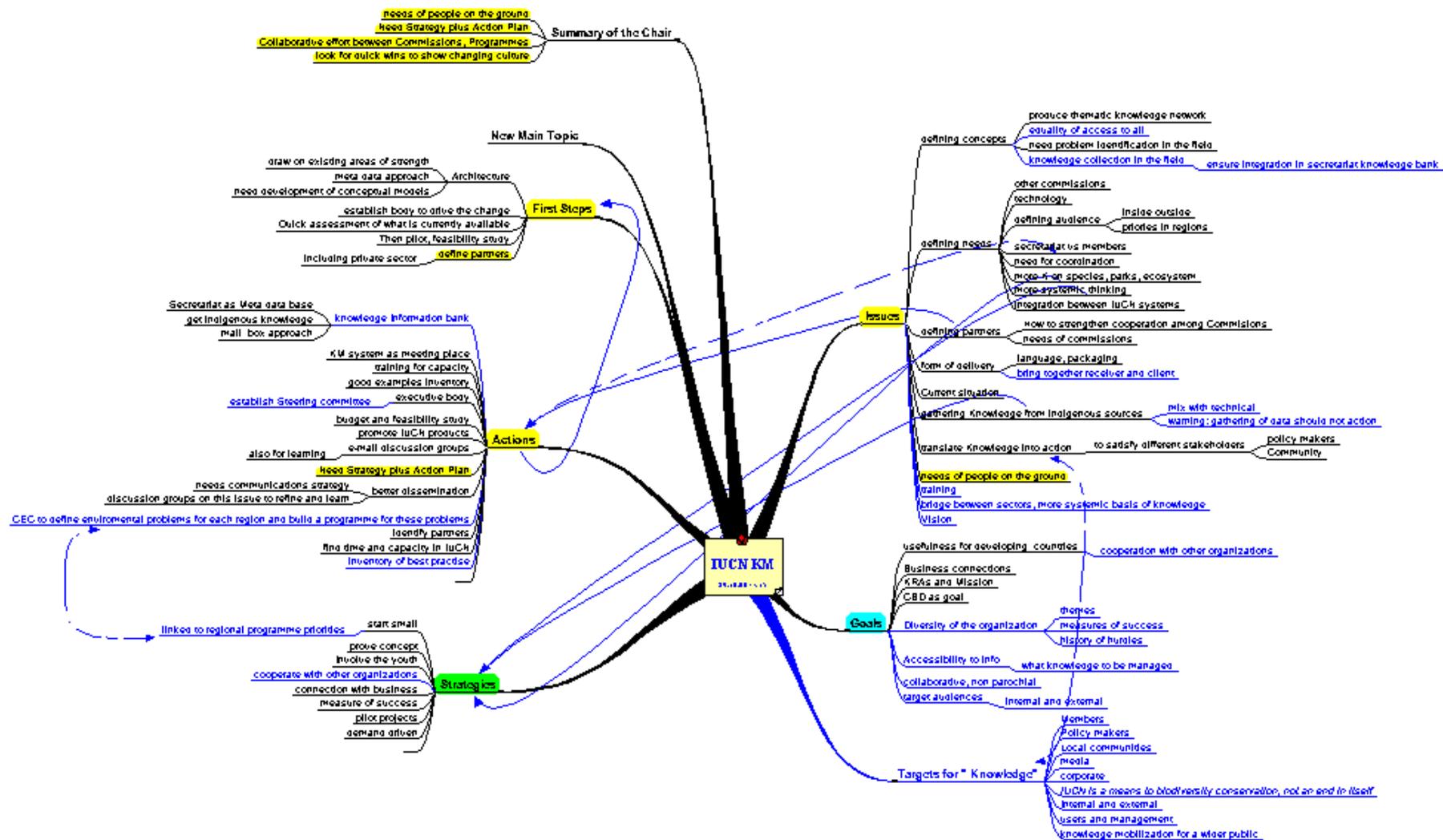
A knowledge management strategy needs to:

- define the knowledge areas;
- be demand driven;
- develop the content with the user;
- be collaborative and co-operate with other organisations;
- connect with the corporate sector;
- involve youth.

The recommendations for points to consider in the strategy include:

1. define the current situation;
2. develop a vision, and how to get there;
3. define concepts in knowledge management and the difference between knowledge and information;
4. define the needs based on problem identification from the field within the IUCN Programme and the form of delivery;
5. define the partners and how to strengthen co-operation between commissions and to make a connection with other stakeholders within and outside the IUCN family;
6. develop the architecture and integrate into the existing structure such as the IUCN knowledge bank;
7. consider a meta data approach and conceptual model that has:
  - knowledge information bank;
  - knowledge management system as a meeting place;
  - training – major capacity building component;
  - good examples;
  - e-mail discussion groups;

# Input from the discussions



8. gathering knowledge from indigenous sources;
9. translate information into forms for taking action that satisfies different groups from policy to community level;
10. bridge between sectors, so there is a more systemic basis of knowledge;
11. include a communication strategy to promote IUCN and its products;
12. define an action plan and operationalise it through incentives to meet the goals.
13. the target audience for the knowledge management strategy is to be internal and external. Define the audience, particularly by regions and their different priorities. Suggestions included Members, policy makers, local communities, media, corporate, management, wider public

### **The first steps for IUCN to take**

Participants recommended that the first steps IUCN could take are:

- CEC might think of establishing a body or a steering group to decide on the feasible actions, based on a quick assessment of what is available. This would not be “supply driven” but “demand driven”.
- The group could consider the architecture of a meta-database; drawing from existing databases and knowledge centres and give it a light roof to reduce duplication and to try to pull the diverse work of IUCN together.
- The group should develop a pilot and feasibility study that starts small in order to prove the concept of knowledge management. To do this the group might link to a regional programme priority, perhaps picking up two priority themes and studying the viability of the content.
- It will be important to find the time and capacity in IUCN, and to establish different bodies who would be responsible to carry out the work. The group will need to make sure that there is a training programme to implement the concept.
- To undertake its work the group will have to identify partners not only from the IUCN membership but also from the private sector.

### **The role of CEC**

The participants supported CEC to take the lead in stimulating further the knowledge management strategy in IUCN and to call a steering meeting to kick of the process.

As the Chair concluded: “All participants should be part of an IUCN dream team and help CEC to develop and implement a strategy – not leave it to making a pass.”

# 10 The presenters

## Chair of the session

### **Joke Waller Hunter**

Director of Environment, OECD, Organisation for Economic Co-operation and Development, Paris, France.

Joke Waller-Hunter has a long and distinguished career in the development and implementation of environmental policy on the local, national and international levels.

Former Director of the Secretariat of the UN Commission on Sustainable Development CSD, where she was responsible for preparing the agenda of the sessions and inter-sessionals of the CSD covering all the subjects of Agenda 21. She has played a key role in opening up the CSD process to NGOs.

Prior to that she was Deputy Director for International Affairs and Director Strategic Planning with the Dutch Ministry for the Environment and also very instrumental in the UNCED process.

## Presenters

### **Dr. Adel Farid Abdel-Kader**

Environment Information Advisor CEDARE

Heads the Environmental Information Unit; regional co-ordinator CEDARE/ UNEP work on the Global Environment Outlook for Northern Africa. Co-ordinates the integration of the report on state of environment for the Arab world.

Ph.D. In Remote sensing/ Geology received on Joint programme between Mansoura University, Egypt and the Ohio State University, USA; Masters in Marine Studies/ Environmental Remote Sensing University of Delaware, USA. My current area of focus is environmental information and its use in environmental assessment, decision support and policy analysis, scenario development, and mobilising knowledge for strategic planning and management.  
*e-mail:* [afarid@cedare.org.eg](mailto:afarid@cedare.org.eg)

### **Javier Beltran WCMC**

Biologist, born in Argentina. Since 1995, working for the Protected Areas Programme of the World Conservation Monitoring Centre, in Cambridge, UK. I am responsible for mobilising knowledge about *in situ* biodiversity conservation activities around the world. I am in charge of managing the World Database of Protected Areas, which was established by WCMC in close collaboration with the World Commission on Protected Areas of IUCN, and others. Most of the projects in which I've been involved have comprised the active interaction and networking with protected area, or biodiversity, experts around the world.

[Javier.beltran@unep-wcmc.org](mailto:Javier.beltran@unep-wcmc.org)

**Peter Croal**

Senior Environment Specialist in the Scientific, Technical and Advisory Services Directorate of the CIDA; Canadian International Development Agency in Ottawa. Geologist who over the last 20 years has worked on mining, natural resource management, Indigenous Peoples issues, traditional knowledge and environmental assessment in the private and public sectors. Peter and his group provide the required knowledge and information to CIDA project managers to ensure their respective development projects are as sustainable as possible, and comply with Canadian federal law, CIDA policies and International conventions and agreements.

*Email:* [Peter\\_Croal@acdi-cida.gc.ca](mailto:Peter_Croal@acdi-cida.gc.ca)

**Frits Hesselink**

Chair of CEC from 1994-2000. He was co founder of an NGO in the Netherlands, SME Milieu Adviseurs, for environmental communication in 1976 and was managing director 1983-1998. Frits started his career as a fellow at the Institute for International Law of the University of Utrecht where he became involved in curriculum development for law and social studies. Now he is founder and managing director of HECT Consultancy working internationally on environmental communication, education and training.

*E-mail:* [hesselink@knoware.nl](mailto:hesselink@knoware.nl)

*Url* <http://utopia.knoware.nl/users/fjh/>

**Bart Romijn**

Bart combines his tasks as director of AIDEnvironment with consultancies. He participated in the external review of IUCN, reviewed the CEC (both in 1999) and is co-developer of a concept for knowledge management and learning for the IUCN-CEC. He is an institutional development specialist and has an extensive experience in international organisations and governmental policies in the fields of nature conservation, water management, environment and development.

*Email:* [romijn@aidenvironment.org](mailto:romijn@aidenvironment.org)

**Gordon Shepherd WWF**

Director of Advocacy and Policy Relations at WWF International. He is responsible for WWF's work on International Treaties, Conventions and Agreements and for capacity building within WWF on these issues. He is also involved in integrating WWF's policy work on cross-sectoral issues such as Trade and Investment, Climate Change and GMOs.

Much of WWF's implementation on Treaties, Agreements and cross-sectoral issues is achieved through campaign activities which combine on the ground work with policy, advocacy and communications. Gordon was formerly Director of Information and Education at WWF International.

Before joining WWF International in 1986 Gordon worked in policy and media relations in the UK with the Ministry of Agriculture and Fisheries, the Prime Ministers Office, the Overseas Development Administration and the Health and Safety Executive.

[GShepherd@wwfint.org](mailto:GShepherd@wwfint.org)

**Andrew Smith**

Co-Chair of SSC's Data Management Working Group and Chair of SSC's Lagomorph Specialist Group. He is Professor of Biology at Arizona State University, and specialises in mammalian ecology and behaviour. In 1994, while on sabbatical at IUCN, he initiated the activity that has culminated in SSC's Species Information Service.

Email: [a.smith@asu.edu](mailto:a.smith@asu.edu)

**Jason Switzer**

Project Officer, IISD Europe

Jason holds masters degrees in environmental engineering and technology policy from MIT.

He is a licensed mediator with experience designing negotiated environmental policymaking processes for the UN RADIUS Program with GeoHazards International, and for the World Commission on Dams.

He is Project Officer for IISD's Environmental Security program.

Email: [jswitzer@ictsd.ch](mailto:jswitzer@ictsd.ch)

**Wendy Vanasselt**

Senior Associate at the World Resources Institute, shares responsibility for structuring, writing, and editing the Institute's flagship publication, the *World Resources* report, and for identifying new, creative ways to reach a world wide audience with the report's information, messages, and data.

Prior to joining the Institute, she promoted sustainable hard rock mining in the United States, and annualised the financial problems confronting American national parks. She holds degrees in economics and public policy from Smith College and from the Kennedy School of Government at Harvard University.

Email: [WendyV@wri.org](mailto:WendyV@wri.org)

**Lara van Druten**

Lara has been involved in diverse range of research areas and pioneering projects involving the application of interactive media. Lara runs an independent consultancy, is associated to the University of Amsterdam and is a senior advisor in innovation strategies with Origin-IT.

[laraguy@xs4all.nl](mailto:laraguy@xs4all.nl)

**Tony Whitten**

Senior Biodiversity Specialist in the East Asia and Pacific Region of the World Bank, based in Washington DC for last 6 years; works in East Asia, managing GEF conservation projects in Vietnam and China, the Biodiversity Strategy and Action Plan in Indonesia, the National Environmental Action Plan in Mongolia, a regional program of local-language fieldguides (with IUCN), and working with religious groups in World Bank forest/ biodiversity projects and development dialogues. Prior to that most of his working life has been spent in Indonesia on ecological research, conservation planning, taught in

various universities, worked on the social and environmental impacts of the transmigration program, and written 15 books – textbooks, fieldguides, readers, and encyclopaedias.

[twhitten@worldbank.org](mailto:twhitten@worldbank.org)

**Nattley Willams**

Nattley Williams is legal officer, IUCN Environmental Law Centre. She has actively participation in the development of ECOLEX, working in close partnership with UNEP

*Email:* [nwilliams@elc.iucn.org](mailto:nwilliams@elc.iucn.org)