Convention on
Biological Diversity

Secretariat

Ref.:SCBD/I&O

Madam/Sir

January 2001

It is with great pleasure that we forward to you the final report of the second meeting of the CBD-UNESCO Consultative Working Group of Experts on Biological Diversity Education and Public Awareness, held in Bergen, Norway, on 19–21 November, 2000.

The Group of Experts identified relationships between objectives, problems and challenges, strategy, and operational elements and suggested action and reviewed the basic structure of its final report, through the Executive Secretary, to the Conference of the Parties to the Convention on Biological Diversity at its sixth meeting, in April 2002.

At the Bergen meeting, the Group concluded mainly that education and public awareness:

(a) Should be integrated in all the programmes of work of the Convention's thematic areas and cross-cutting issues;

(b) Constitute a professional discipline. Therefore, professional education and communication expertise should be included in all relevant education and communication activities;

(c) Should be a basic element in the Strategic Plan of the Convention and in all funding mechanisms on biological diversity.

The next meeting of the Group will be held in mid-May 2001, most probably in Bilbao, Spain. In the meantime, a core group will gather in Montreal on 14 March, during the sixth meeting of the Convention's Subsidiary Body on Scientific, Technical and Technological Advice, and participate in the side event on the issue during the meeting in order to extend the education and public awareness message to the participants.

We will keep you informed of future developments and further actions undertaken.

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CBD-UNESCO CONSULTATIVE WORKING GROUP
OF EXPERTS ON BIOLOGICAL DIVERSITY
EDUCATION AND PUBLIC AWARENESS
Second meeting
Bergen, Norway, 19-21 November 2000

REPORT OF THE CBD-UNESCO CONSULTATIVE WORKING GROUP OF EXPERTS ON BIOLOGICAL DIVERSITY EDUCATION AND PUBLIC AWARENESS ON THE WORK OF ITS SECOND MEETING

1. OPENING OF THE MEETING

1. The second meeting of the CBD-UNESCO Consultative Working Group of Experts on Biodiversity Education and Public Awareness (hereinafter referred to as 'the Group') was officially opened by the representative of the host Government at the SAS Hotel in Bergen, Norway, on Monday, 20 November 2000 at 9 a.m.

2. The representatives of the host Government, Mr. Hamdallah Zedan, the Executive Secretary of the Convention on Biological Diversity (CBD), and Mr. Peter Bridgewater, UNESCO focal point for biodiversity matters, welcomed the participants. 1/ It was decided that Mr. Peter Schei (Norway) would chair the meeting.

2. ADOPTION OF THE PROVISIONAL AGENDA AND ORGANIZATION OF WORK

3. The Group adopted the agenda of the meeting as contained in annex II to the present report on the basis of the provisional agenda that had been circulated as document UNEP/CBD/GEEPA/2/1. It was decided that the morning session of the first day should be devoted to presentations and that towards the end of it sub-working groups might be constituted as necessary. Those groups would work throughout part of the afternoon and report to the Group in plenary session by the end of the day. The second day would be devoted to the remaining agenda items.

3. BACKGROUND ON THE DEVELOPMENT AND LAUNCHING OF THE GLOBAL INITIATIVE ON BIOLOGICAL DIVERSITY EDUCATION AND PUBLIC AWARENESS

4. Mr. Schei presented an overview of the general context of new trends in management of biological resources and how these are going to affect the Global Initiative on Biological Diversity

1/ The list of participants is contained in annex I to the present report.

Education and Public Awareness. He stressed the sustainable-use role of the Convention on Biological Diversity and made reference to the guiding principles and operational guidance for the application of the ecosystem approach. National experience in implementing the Convention varied significantly, but at the same time common elements could be identified, such as the need for high-level political support, the crucial nature of sectoral integration of responsibility (albeit a difficult and lengthy process), the need to develop ownership of objectives, and priorities and problems within an integrated approach. He also made reference to biodiversity values and the market and their implications.

5. The Group recalled the important links between cultural diversity and biological diversity and of the kind of knowledge used to manage the various systems. As ecosystems also include people, it is necessary to put people back to those ecosystems as part of the public awareness process. With regard to decentralization, delegation of authority is important, although it has some preconditions, and the goal should be to reach a balanced decentralization.

6. Mr. Alexander Heydendael of the Convention Secretariat presented the framework for the Initiative, which is based on implementation of Article 13, as reflected in the discussion leading to decision V/17 of the Conference of the Parties to the Convention. He placed the Initiative in the context of the Strategic Plan to be prepared and developed for the Convention, for which a whole process of inputs from the Parties would start at a workshop to be held back-to-back with the first meeting of the Intergovernmental Committee on the Cartagena Protocol in Montpellier, France, on 12 December 2000. Several other opportunities for Parties to provide inputs would arise in the period up to the sixth meeting of the Conference of the Parties in April 2002, when both the outputs of the Group's work and the Plan would be considered. It was noteworthy that the Initiative would become a basic element of the Plan. In conclusion, he informed the Group that the Second Committee of the United Nations General Assembly was considering changing the date of the International Day for Biological Diversity from 29 December to 22 May.

7. The Group reiterated that the Initiative ought to be linked with the Strategic Plan of the Convention.

4. STRATEGIC OBJECTIVES OF THE MEETING

8. Mr. Salvatore Arico of UNESCO introduced the preliminary strategic objectives of the meeting, as contained in the relevant documentation. Those objectives were: to further the overall strategy for the Initiative and link with the Strategic Plan of the Convention; to identify action to support the implementation of a biodiversity education and awareness work programme, as contained in the Group's report on the work of its first meeting, possibly in the form of an draft programme of work; to agree on a strategy to benefit from the next meetings of the Convention's Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) so as to inform the biodiversity community on progress made in the implementation of the Initiative; to prepare for the third meeting of the Group; and to prepare for the formal report by the Executive Secretary and UNESCO to the Conference of the Parties at its sixth meeting.

9. The Group agreed that the strategy related to the further design and implementation of the Initiative should be a central objective of the meeting, if the relevant provisions of decision V/17 were to be addressed and guidance provided to Parties to the Convention on priority activities for biodiversity education and public awareness. The identification of action-oriented elements of the strategy should be another objective of the meeting. Finally, the Group should also identify examples and projects that illustrate the priorities for action that have been identified.

5. PRESENTATION OF NATIONAL AND REGIONAL EXPERIENCES

10. Andreas Glanznig, Community Biodiversity Network (CBN), made a presentation entitled "An Australian Approach to Biodiversity Community Education", covering the period 1995 to the present and based, inter alia, on market surveys conducted in 1991, 1993 and 1998. He referred to Australia's national biodiversity strategy and the related policy framework for its implementation. He presented the "state of play" in Australia related to the public perception of biodiversity and the work of CBN in the area of community biodiversity education. He said that CBN had developed a biodiversity communication model, identified strategic themes (communication, community education, and capacity building), and launched a biodiversity month, which was implemented through a network of organizations and media, and which had led to concrete results and products. The full text of the presentation is included in annex IV to the present report.

11. Mr. Glanzig said that the CBN acknowledged that public understanding of the concept of biological diversity was low, although awareness of the issues confronting the conservation of biodiversity, and in particular the impact of the loss of trees and ecosystems was high. It was observed that the results of market surveys did not take into account the actual context, and that actually people did understand issues if considered in the full context. The question was: how are we positioning ourselves as educators?

12. Mr. Frits Hesselink, former Chair of the IUCN Commission on Education and Communication and presently with Hect Consultancy, presented the results of a needs assessment in terms of biodiversity education and public awareness. The assessment was conducted through in-depth interviews of 15 national biodiversity strategy and action plan (NBSAP) coordinators in Asia, and benefited from the back-up of research conducted by the IUCN Regional Office for South America in 8 South American countries, the IUCN Regional Office for Europe in European Union accession countries, and the involvement in biodiversity strategies in Central Europe and West Asia in the period since 1999. He informed the Group that NBSAP coordinators comprise a variety of people, with a high turnover, and are faced with the following realities:

(a) Limited resources (human and financial);

(b) Lack of knowledge about biodiversity priorities;

(c) Lack of integration in other policies;

(d) Conflicting interests; and

(e) Lack of knowledge of "marketing" of biodiversity.

13. The national coordinators are most in need of:

(a) Identified biodiversity priorities;

(b) National networks;

(c) Solutions for conflicting interests;

(d) Support for biodiversity from decision makers and stakeholders from other departments/regional governments; and

(e) Strategies, methods and media to "market" biodiversity to different target groups.

14. He concluded by presenting the following recommendations:

(a) Select and focus on priorities;

(b) Focus on (diverse) biodiversity coordinators;

(c) Build capacity in regions;

(d) Offer tailor-made tools, strategies, methods and media;

(e) Take into account that knowledge needed is mostly "tacit knowledge";

(f) Focus on developing and testing solutions at national level;

(g) Develop means with target groups;

(h) International level: focus on the exchange of regional knowledge and experience;

(i) Stimulate cooperation between neighbouring countries; and

(j) Use tailor-made means and media.

15. The presenter submitted to the Group's attention three basic final questions:

(a) What does the needs assessment imply for the strategic objectives and projects?

(b) Which priorities and needs should we focus on? and

(c) How can we ensure practical value?

16. The Group agreed that NBSAP coordinators are one critical target group of the Initiative but not the only one; that a very fundamental point is public awareness, which is different from awareness of government officials; and that the public awareness is instrumental in influencing the decision-making process. Therefore, the Initiative should target both groups. The need for training of government officials was also advocated.

17. A written note on "Environmental awareness in Arab countries" was submitted by Irina Springuel and is also reproduced in annex IV to the present report.

6. WORKING METHODOLOGY AND DIVISION INTO SUB-WORKING GROUPS

18. The Group agreed that the following methodology should be followed in order to take its work further. The Group should identify what is *needed* and what it *wants to achieve* but focus on what *can* be done. It was decided that participants should divide into four sub-working groups with the following mandates:

(a) *Sub-working group I*: Knowledge management for education and communication to stimulate innovation and professional development;

(b) *Sub-working group II*: How to manage the communication and educational aspects of integrating biodiversity into others sectors and educational-awareness demonstration projects;

(c) *Sub-working group III*: Inventory of existing networks and individuals and ways to connect them

(d) *Sub-working group IV*: Knowledge on how to undertake biodiversity education; and: biodiversity projects.

7. FORMULATION OF RECOMMENDATIONS

19. The sub-working groups reported to plenary on the outcomes of their work. The Group agreed that those recommendations should already be organized according to the following outline:

(a) Rationale (Article 13 as a framework article for the implementation of the CBD; thematic and other crosscutting programmes of work);

(b) Objectives;

(c) Situational analysis/needs assessment;

(d) Problem identification and challenges;

(e) Strategies for each problem (short-, medium- and long-term);

(f) Actions (what, who, when);

(g) Monitoring and evaluation.

20. The Group agreed that this outline would provide the basic structure of the formal report by the Executive Secretary and UNESCO at the sixth meeting of the Conference of the Parties, but that more thinking was needed in order to decide how the Group's different inputs should be consolidated into a prototype document for that meeting. It was also agreed that the Group at the current meeting should further elaborate on agenda items 2-7 and that, given that the Group had already identified several operative recommendations, an outline of a programme of work for the Initiative should be drafted.

21. Consequently, it was decided that the Group should divide into two new sub-working groups with the following mandates:

(a) Sub-working group I: Envisaged structure of the final report to the Conference of the Parties at its sixth meeting;

(b) Sub-working group II: Relationships between identified objectives, problems/challenges, strategies and actions.

22. Subsequently, the sub-working groups presented to plenary the outcomes of their discussions, which constituted the basis for discussion under the following agenda item.

8. CONCLUSIONS AND ADOPTION OF THE REPORT

23. The Group discussed a possible structure of its report to the Conference of the Parties at its sixth meeting. It was agreed that the three separate stages of the Initiative (strategy, operational elements, and suggested action) should be clearly identified in the final document and that the Group should further elaborate issues within those three stages between now and the end of its work. Emphasis should be placed on the process, and short- and medium-tem, as well as long-term, actions should be planned carefully. These stages will correspond to the main chapters of the final report. Moreover, the report should include a chapter on links with science/data management and another on links with formal education.

24. It was agreed the Group's report would start with a chapter on the rationale for the Initiative and an introduction to the general problem of biodiversity education and public awareness. The rationale would present the provisions of Article 13 as a framework article for the implementation of the Convention on Biological Diversity and would make reference to the thematic and other cross-cutting programmes of work of the Convention. The introductory section will contain operative definitions of education and public awareness as used by the Group and will tackle questions such as: who are the main actors? what are the costs of not knowing? what are the benefits of knowing? The section would provide examples in order to visualize those questions and would also make reference to relevant actions at the international level, including the work of other conventions. Since education and public awareness forms the basic structure on which the Strategic Plan is built, it is important to make the distinction between formal, non-formal and informal education, training and capacity-building, as education is a discipline in itself and requires specific expertise to address the above issues. In fact, education and public awareness should be considered as an education and communications cluster.

25. The Group felt that several of the issues to be presented in the introductory section of the Group's final product had already been elaborated upon to a well-advanced extent by the Group at its first meeting. In particular, excerpts of the findings contained in paragraphs 24 to 28 of the report of the first meeting of the Group should be used for the introductory section of the Group's final product.

26. The Group felt that one of the main challenges related to its work lays with the need to find a balance between paragraphs (a) and (b) of Article 13 of the Convention, as well as between the provisions in the Article and the way in which the Convention can be promoted. A balance must also be struck between the integration of biodiversity into sectoral policies and the action dimension of the Initiative. Thus, the document ought to be sensitive in wording, and the Group agreed that two versions of the final report should be developed: a direct version; and a reformulated version into language readily understood by the Conference of the Parties, which would constitute the basis for the formal report by the Executive Secretary and UNESCO at the sixth meeting of the Conference of the Parties.

27. The Group drew and agreed on a set of strategic recommendations for the implementation of the Initiative, which also contain operational elements and options for action. In doing so, the Group incorporated elements from the report on the work of the Group at its first meeting, in particular, those contained in paragraphs 33 and 34-36 of the report of the first meeting of the Group ("guiding principles" and "future programme of work", respectively). These recommendations are contained in annex III to the present report.

28. With regard to the Group's future work, it was decided that an event should be organized in the margins of the sixth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice, to be held in Montreal from 12 to 16 March 2001, in order to report on progress made in the furthering of the Initiative. The Group should use this occasion to hold informal consultations and interviews.

29. It was felt that a third meeting might be sufficient to finalize the Group's remaining work. In this regard, the UNESCO representative informed the participants of an informal offer by the UNESCO Centre Basque Country (UNESCO-EXTEA) to host such a meeting in the Urdaibai Biosphere Reserve, Spain, around the first two weeks of May 2001. The Group welcomed this offer in principle.

30. The Group decided that its work in the inter-sessional period should also include linking with: relevant provisions of the Global Taxonomy Initiative; the equivalent initiative under the Convention on Wetlands as well as similar initiatives of other global conventions; the Pan-European Biodiversity Strategy and relevant activities in the context of the CEE; and the planned conference on "learning of biodiversity" being organized by the Government of the Netherlands towards the end of 2001.

31. It was decided that individual experts will assist with the establishment of such links and that UNESCO and the Convention Secretariat should include those initiatives in a directory of existing processes, programmes, and initiatives, the first version of which should be produced sometime before the second and third meetings of the Group.

32. In addition to presenting its outcomes at the margins of the sixth and seventh meetings of the Subsidiary Body on Scientific, Technical and Technological Advice and to the Conference of the Parties at its sixth meeting, the Group recommended that links be established also with the Secretary-General's report to the World Summit on Sustainable Development ("Rio + 10") and the work of the Ecosystem Management Group.

9. CLOSURE OF THE MEETING

33. After the organizers congratulated the experts for the work accomplished and the host Government for the excellent hospitality, the representative of the host country declared the meeting closed at 2 p.m. on Tuesday, 21 November 2000

Annex I

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Annex II

AGENDA OF THE MEETING

1. Opening of the meeting.

2. Adoption of the agenda and organization of work.

3. Background on the development and launching of the Global Initiative on Biological Diversity Education and Public Awareness.

4. Strategic objectives of the meeting.

5. Presentation of regional and national experiences.

6. Working methodology and organization into sub-working groups.

7. Formulation of recommendations.

8. Conclusions and adoption of the report.

9. Closure of the meeting.

Annex III

RECOMMENDATIONS

A. Overall strategy

Mission

To create dynamics of awareness leading to participation and action in the conservation, sustainable use, and equitable sharing of benefits of biological diversity.

Mission principles

1. Implementation of Article 13 is fundamental to the overall implementation of the Convention on Biological Diversity.

2. Education and communication is context-dependent. Therefore, education and communication (including training) approaches should reflect the specific, context-dependent nature of each initiative.

3. Education is a professional discipline. Therefore, professional education and communication experts should be included in all education/communication activities.

4. Education should be viewed as a policy instrument in the same way that economic and legal instruments are.

Situational analysis/needs assessment

- Short-term targets:

    (i) NBSAP coordinating groups (focal points). Outputs have to be the ones that can be reasonably and legitimately used by Parties;

    (ii) COP/Secretariat. It is the role of the Secretariat to act as a resource to link with relevant processes.

- Long-term targets: General public.

- Tailor approaches on a country-by-country basis. Develop strategies to reach other audiences (publics, media, etc.) in cooperation with NBSAP coordinating groups in each country.

- Overall strategies must be demand driven.

***Problem identification/challenges AND Strategy/solution identification for each problem*:**

A. Problem: no formal route/forum for integrating education/communication expertise into the Convention on Biological Diversity

Strategy/solution:

- Include education/communication experts in SBSTTA

- Include education/communication experts in the Conference of the Parties

- Include education/communication experts in development of national positions

- Include education/communication experts in thematic programmes of work

- Draw upon IUCN-CEC member network to complete the education/communication expert roles in SBSTTA, the Conference of the Parties and national contexts

- Conduct training for IUCN-CEC members in CBD policy operation at the next Global Biodiversity Forum (GBF)

B Problem: perceived lack of commitment/infrastructure to support the initiative. questions in terms of what can UNESCO/CBD promise in terms of support, funding, personnel, leadership

Strategy/solution: Clarify budget, resources, home base unit, decision-making authorities, etc.

C. Problem: Convention on Biological Diversity not on the political agenda of the Parties

Strategy/solution:

- Conduct demonstration projects using inputs from SBSTTA and the Conference of the Parties to tackle the question "How to get biodiversity on the political agenda?" Demonstration projects thus serves as both a means to demonstrate the value of integrating education/communication into the Convention on Biological Diversity and also addresses a key issue under the Convention

D. Problem: Education/communication does not receive GEF funding

Strategy/solution: Conference of the Parties to instruct GEF to fund education/communication as part of the GEF capacity-building portfolio

E. Problem

(i) Knowledge is equated with scientific knowledge. Other relevant forms of knowledge such as local or traditional knowledge are thus undervalued or ignored. Thus, multi-stakeholder, bottom-up processes are not considered of real value, perceived to be politically correct, but waste of time.

(ii) Only scientific knowledge is divulged in information systems/databases

Strategy/solution

- National biodiversity strategies and action plans must specifically lay down how the country will ensure that multiple types of knowledge are represented

- Develop an information system that depicts a broader range of knowledge types

F. Problem: Lack of awareness

Strategy/solution

- Involve user groups in developing training course and guide

- Involve target groups of coordinators at political level, policy level, and practitioner's level (*N.B.* Because different cultures and products cannot be uniform)

- Develop a participatory process involving key stakeholders in the development of policy strategy for national solutions

G. Problem: Lack of effective networking for biodiversity education and public awareness

Strategy/solution

- Utilize existing networks (IUCN-CEC, ICOM-NatHist, WWF Regional Groups of Educators, Academy of Sciences, etc.)

- Identify key institutions and organisations in the field of biodiversity education and public awareness and define their potential role within the network

H. Problem: Lack of ready access to emerging education/communication tools such as: products, processes, strategies, academic research, case-studies

Strategy/solution

- Create an operational system for education/communication on the clearing-house mechanism

- Provide financial and technical assistance to improve and extend the reach and access of computing systems

I. Problem: Lack of easy access to professional education and communication experts

Strategy/solution

- Create a directory of consultants

- Roster of experts (consultant and public sector)

J. Problem: No formal process for evaluating education and communication programmes outside of the academic literature

Strategy/solution

- Develop a rigorous evaluation process

- Compare information on past and present national experiences

K. Problem: Parties may not recognize when they need education and communication expertise

Strategy/solution

- Use the roster of experts referred to under I above

- Ensure that education/communication is integrated into all thematic work plans and national action plans

L. Problem: Contested nature of information/issues of transparency/risk-trust, framing issues

Strategy/solution

- Widen participation in information development
- Adhere to the principles of the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters
- Adhere to the Rio Principles on Environment and Development

Objectives

1. Increase cooperation and coordination among, within, and between Ministries, sectors, stakeholders, Parties and governments, and international instruments, on biological diversity education and public awareness issues.

2 Develop networking for more efficient development and implementation of biological diversity education and public awareness plans, programmes, and projects.

3 Highlight and integrate communication and educational aspects of the work plans of the Convention.

4 Facilitate access to expertise in education and public awareness for the work plans of the Convention.

5 Develop practical models for education, both formal and informal, and public awareness through lessons learned and best practices.

Guidelines*

The guidelines presented below clarify the nature and contents of messages and products related to the Initiative and encompass indigenous perspectives on biological diversity education and public awareness. They should be used by Parties and other Governments, as well as by any institution active in this field, in their further advancement of the Initiative.

(a) Messages should be adaptable to different regions, sectors of society and audiences, taking into account that perceptions of the concept of biological diversity may be different in different parts of the world and of society. In this way, the local meaning of biological diversity is taken into account, as well as the opportunities for learning and influence with mixed age-groups, which is particularly important in cultures encompassing indigenous knowledge.

(b) Cultural and indigenous sensitivities to different species need to be considered when using icons.

(c) It is preferable to use simple messages that emphasize the importance of biological diversity, including its economic and social value, and stress the urgency of reversing the loss biological diversity.

* As contained in the report of the Group's first meeting and as revised in sequence.

(d) The actions proposed, messages and products must always consider humans as part of the process (human dimension), in accordance with the ecosystem approach.

(e) Actions proposed should lead to practical products that will mean something to people and have immediate results.

(f) If single-topic messages are used, they should be used in a way that exemplifies the complex issue of biological diversity. The message should however be kept simple and, in order to communicate it, information should be kept to a minimum.

(g) Ultimately, educational and public-awareness initiatives should promote appropriate behaviour that ensures the maintenance of habitats and the sustainable use of biological diversity, thus conserving the latter and allowing for proper ecosystem functioning. In this regard, some of the actions proposed should facilitate the development of core knowledge on how to manage stakeholder processes, e.g., how to deal with conflicts between rural and urban society.

(h) The often considerable amount of information on biological diversity already prepared (e.g. materials for decision makers, teaching manuals, posters) should be made available.

(i) Sources of information should be referenced and readily accessible.

B. Draft outline of the programme of work for a Global Initiative on Biodiversity Education and Public Awareness

The Group further elaborated on the draft outline of the programme of work, as contained in the report on the work of the Group at its first meeting. In particular, the Group formulated additional recommendations related to programme elements 1 (Management of education/communication networks) and 3 (Capacity-building – stakeholder approaches). The revised programme elements are presented below, with the highlighted text indicating the outcome of the Group's further elaboration, at its second meeting, of the programme elements as contained in the final report of the first meeting. The Group agreed that, when preparing its final report, recommendations on the draft programme of work by the Group at its different meetings will need to be harmonized into a coherent programme of work and that is consistent with the overall strategy.

REVISED OUTLINE OF PROGRAMME ELEMENTS 1 AND 3

Programme element 1

Management of education/communication networks

Operational objective

Networking for biodiversity education and public awareness for more efficient development and implementation of biodiversity education and public awareness plans, programmes, and projects

Expected results

1. List of education and communication networks contact addresses, including indigenous

groups (CD-ROM and Web-based)

2. Link network lists with Convention's clearing-house mechanism

3. Enhanced possibility of exchange

Proposed actions

1. Identify potential partners and stakeholders:

   A. List of national biodiversity coordinators (Including policy peer network for the purposes of the Convention; links to key coordinators and parallel policy networks for other conventions)

   B. List of education and communications experts, organizations and networks (governmental; non-governmental; indigenous; religious; sectoral – business and industry, agriculture, fisheries, forests, tourism; media)

2. Develop network structures and dissemination/exchange mechanisms:

   A. Information systems (relational database, flexible access. Search fields include: organization name, key contacts, function in education/information convention themes; organizational skills; organizational capacities and achievements; sectors; country types; subregion (Information on partners and stakeholders; national conference/regional workshops – stimulating/developing on communities of interest)

   B. Information dissemination and exchange

3. Networking to encourage implementation of national biodiversity education and public awareness: responsibilities, competencies and drivers

   A. Identification of existing responsibilities at national and regional levels

   B. Lines of communication between responsible partners

   C. Identification of lead agent; and

   D. Terms of reference with respect to the Convention on Biological Diversity

4. Identifying capacity-building needs

   A. Fund-raising

   B. External support

   C. Training needs

   D. Bilateral exchanges/secondments

Ways and means

Convention Secretariat, UNESCO, UNEP, IUCN-CEC, the International Union of Biological Sciences (IUBS); Parties to provide inputs

Time schedule: present – sixth meeting of the Conference of the Parties

Programme element 3

Capacity-building – stakeholder approaches

Operational objective

Manage the communication and educational aspects of integrating biodiversity into others sectors

Expected results

1. Understanding of the need for stakeholder participation

2. Skills to apply stakeholder approaches

Proposed/examples of activities

1. Brochure on structure to work with sectors

2. Guide book stakeholder process

3. Training and training database

Ways and means:

Global: Convention Secretariat, IUCN, WWF Network, UNDP, UNEP

National: Parties

Time schedule: present – sixth meeting of the Conference of the Parties

Annex IV

PRESENTATIONS BY PARTICIPANTS

1. Andreas Glanznig, Community Biodiversity Network: "An Australian Approach to Biodiversity Community Education"

Australia's Community Biodiversity Network (CBN) is a national non-government, community-based network of organizations that works to:

- Increase community understanding of biodiversity and its value
- Provide ready access to biodiversity related information
- Promote community involvement in biodiversity conservation, and
- Ensure the full and effective implementation of the national strategy for the conservation of Australia's biological diversity.

Background

The CBN was established in 1995 by Humane Society International, with funding support from Environment Australia (an agency of the Federal Department of Environment and Heritage). The CBN is hosted by Humane Society International, the Australian Museum Centre for Biodiversity and Conservation Research and the World Wide Fund for Nature - Australia.

Policy context

The CBN contributes to the implementation of National Biodiversity Strategy target area 5: Involving the Community. Adopted in 1996, the National Biodiversity Strategy is Australia's major policy instrument to implement the provisions of the Convention on Biological Diversity domestically.

In addition to providing funding support for the CBN, the Federal Department of the Environment and Heritage also implements a complementary communication strategy.

Operational scope

The scope of the CBN embraces all of Australia's biodiversity. To avoid duplication, the CBN seeks to coordinate, integrate, complement and strengthen existing efforts. This requires the CBN to work closely with existing biodiversity related networks and organisations, in particular the Threatened Species Network and the Marine and Coastal Community Network. Emphasis is placed on overarching issues such as biodiversity community education strategies, ecosystems most at risk and means to ameliorate key threatening processes.

Organisational arrangements

The CBN is a non-membership based network comprising about 1,000 organizations, groups, and networks and hundreds of individuals.

Organizations linked to the CBN receive information via the CBN LifeLines bulletin and email list servers, and participate in the CBN flagship community education initiative, Biodiversity Month.

General communication model

TIER	**TARGET'S DESIRED RESPONSE**
Awareness of the term "biodiversity"	*I've heard of this*
Knowledge and understanding of biodiversity: its overall meaning. The three levels: genetic diversity, species diversity, ecosystem diversity.	*I know about this*
Linkages to our own lives: the food we eat, our health, back-yards, clean water from ecosystems and national parks, quality of life.	*This relates to me*
Consciousness raising; the importance of biodiversity; the need to protect and conserve it; "stewardship" for our children - **ATTITUDINAL MODIFICATIONS**	*I care*
Call-to-action; changes in actions that impact on biodiversity - **BEHAVIOURAL MODIFICATIONS**	*I do / I will*

The CBN recognizes the weak causal relationships between attitudes, knowledge and action, and consequently seeks to include all tiers simultaneously in its communication messages, with a focus on associating the term biodiversity to a household call-to-action, such as creating habitat gardens.

Community education strategies

Communication and education

Objective	**Activities**	**Outputs**	**Outcomes**
Foster partnerships and alliances to develop and implement biodiversity education projects	• Pursue potential partnerships, where appropriate • Provide advice and materials, and cooperate, where appropriate	• *Exploring Biodiversity* national schools theme for Science Week 2001 • *Gondwana Biodiversity Program* developed by Girl Guides Australia • *Oceans Alive* web site developed jointly by the ABC, CBN, and the British Council	More efficient and effective delivery of biodiversity communication education to a variety of audiences
Establish a national media and community focal point to celebrate and promote biodiversity and how it can be conserved	Coordinate and manage Earth Alive! Biodiversity Month held yearly in September. Actions include: • Promoting the Month • Coordinating community events and national media • Staging national Ecohero Awards • Maintaining Biodiversity Month website	• Segments and spots on TV media • Interviews and spots on radio media • TV and radio CSAs aired • Promotional materials, such as posters and stickers • Resource materials, such as Earth Alive Action Guide, background articles on Biodiversity Month action themes Community events held nationally	Increased media support for biodiversity stories. Increased community awareness of biodiversity and simple household actions that can be taken to conserve biodiversity

Objective	Activities	Outputs	Outcomes
Pursue ongoing media coverage to increase awareness and understanding of biodiversity and actions that assist in its conservation	Obtain support by commercial TV networks of CBN Community Service Announcements	• TV Community Service Announcements	
Provide ready access to popular/educational information on biodiversity, issues confronting its conservation, and conservation measures	Develop projects that synthesise existing and emerging information on biodiversity resources Develop innovative educational tools	• CBN Web Site • On-line Biodiversity Education Centre • Oceans Alive web site	Ready access to synthesized information by organisations involved in popularizing biodiversity. Increased knowledge about biodiversity and how to conserve species and ecosystems.
Provide families, households and individuals with tools to understand the value of biodiversity, how it relates to their lifestyles, and how to conserve local species and ecosystems	Develop 'how-to' biodiversity community education materials Distribute through the national network	• Earth Alive Home Guide • Earth Alive Action Guide	Increased knowledge by families, households and individuals of how to conserve local biodiversity and where to access relevant organisations and further resources, leading to adoption of more biodiversity sympathetic behaviour
Provide ready access to information on recent developments on biodiversity policy ad conservation	Engage national network to access information about breaking and topical biodiversity issues Prepare, print and distribute materials that summarise breaking and topical issues	• Publish 4 LifeLines bulletins/year • Maintain Biodiv-talk list server • Maintain on-line CBN Information Clearing House	Biodiversity and natural resource influencers and decision-makers have up to date information on biodiversity conservation initiatives

Capacity-building

Objective	**Activities**	**Outputs**	**Outcomes**
Facilitate the development of a nationally coordinated approach to biodiversity community education	• Regularly liase with biodiversity communicators in other national organisations and the States • Promote information exchange through the CBN Biodiv-ed list server • Encourage involvement in Biodiversity Month	Traffic on the Biodiv-ed list server	Development of a more coordinated approach to biodiversity community education that complements Commonwealth and national initiatives
Increase the capacity of network organisations to develop and implement biodiversity community education programs and projects.	• Provide advice to network organizations • Prepare materials which synthesize existing and emerging knowledge about community attitudes to biodiversity, successful communication triggers and hooks, model biodiversity community education plans, and information resources	• NSW Biodiversity Communicators Kit • Biodiversity Communicators Handbook • Earth Alive Directory of Biodiversity Resources, Programs and Organisations Online database and CD-ROM	Increased capacity of national, state, regional and local organizations to more effectively communicate biodiversity More effective engagement in Biodiversity Month.

Select Bibliography of Printed Resources

Community Education

Earthscoop. 1998. **Biodiversity: A guide to using and protecting Australia's biodiversity**. Environment Australia: Canberra.

Glanznig, A. 2000. **Earth Alive Action Guide.** Community Biodiversity Network: Sydney. (Brochure).

Glanznig, A. and Bateson, P. 1999. **Earth Alive Home Guide**. Community Biodiversity Network and Environs Australia: Sydney.

Glanznig, A. and Prideaux, M. 1999. **Getting on Track: the biodiversity challenge**. Australian Conservation Foundation: Melbourne.

Glanznig, A., Vandine, A., Hayes, S. and Lieberman, T. 2000. **Earth Alive Directory of Biodiversity Resources, Programs and Organisations**. Community Biodiversity Network: Sydney. (CD-ROM)

Formal Education

Primary School

Biodiversity Module. (Qld) 2000. Qld Department of Natural Resources.

Web: www.dnr.qld.gov.au/resourcenet/education/modules/primary/primarybiodiversity/index.html

This on-line teaching module contains background information for teachers and an extensive set of classroom activities consistent with Qld Curriculum core learning outcomes

BioWhat? The Starter Kit for Primary Schools to Conserve and Promote Biodiversity in their School Community. (SA) 1998. South Australian Urban Forest Biodiversity Program.

The kit aims to promote awareness of biodiversity and support participation in local community projects. Activities consistent with Key Learning Areas for Science and SOSE. Includes strong action themes that focuses on adopting a site to restore and conserve.

Food Webs, Classification and Biodiversity Teachers Kit. 1999. Gould League.

Web: www.gould.edu.au/index.htm

The kit contains over 70 magnetic backed animal pictures that can be used to create food webs, overhead transparencies and an accompanying book which explains a variety of new and exciting activities.

Biodiversity Education Resource Book 1 (Vic). 1999. Vic Department of Natural Resources and Environment.

Each book provides background information for teachers, exciting classroom activities and duplication masters. The activities are designed to cover CSF Key Learning Areas for Science and SOSE.

Secondary School

Bugs, Beasts and Biodiversity: Exploring Biodiversity in the South-west of Western Australia (WA). 1999. Australian Association for Environmental Education (WA).

Web: www.iinet.net.au/~aaee/bbb/index.html

This resource assists teachers and educators to integrate biodiversity within the school curriculum using practical case studies specifically dealing with the rich, ancient and unique environments found in the South West of Western Australia.

Biodiversity: A Teaching Guide (NSW). 1999 NSW EPA and NSW National Parks and Wildlife. Sydney.

This guide and it's companion volume 'Sustainability - A Teaching Guide' present the concepts of biodiversity and sustainability to students through classroom activities. Pre readings for teachers are given in each chapter.

Food Webs, Classification and Biodiversity Teachers Kit. 1999. Gould League.

Web: www.gould.edu.au/index.htm

The kit contains over 70 magnetic backed animal pictures that can be used to create food webs, overhead transparencies and an accompanying book which explains a variety of new and exciting activities.

Biodiversity Education Resource Book 2 (Vic). 1999. Vic Department of Natural Resources and Environment.

Each book provides background information for teachers, exciting classroom activities and duplication masters. The activities are designed to cover CSF Key Learning Areas for Science and SOSE.

Web Resources and Interesting Web Sites

Australian Biodiversity Clearing House Mechanism

<chm.environment.gov.au>

Australian Museum Biodiversity Gallery On-line
<www.austmus.gov.au/biodiversity/index.htm#Australian Museum Biodiversity Gallery>

BIONET (extensive quick links to Australian biodiversity related organisations)

<www.cbn.org.au/member/cbn/projects/bionet/bionet.html>

Birds in Backyards: Survey 2000

<www.austmus.gov.au/biodiversity/backyardbirds/intro.htm >

Bird Search (Science in Schools)

<www.birdsaustralia.com.au/birdsearch/index.html>

Community Biodiversity Network Biodiversity Education Centre

<www.cbn.org.au/member/cbn/context/>

Earth Alive Directory of Biodiversity Resources, Programs and Organisations

<www.tnd.com.au/cbn/>

Environment Australia (part of the Federal Department of the Environment and Heritage)

<www.environment.gov.au>

National Biodiversity Strategy and related State policies

<www.cbn.org.au/member/cbn/projects/Policy_and_Law/pal00.html>

Oceans Alive (developed for UN Year of the Ocean)

<www.abc.net.au/oceans/alive.htm>

Gould League

<www.gould.edu.au>

Waterwatch Australia (Communities caring for Catchments: Macro-invertebrate monitoring)

<www.waterwatch.org.au>

Contact Information

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2. Irina Springuel, Arab region Ecotechnie Network: "Notes on Environmental Awareness in Arab Countries"

Most of the Arab countries share a similar environment, where water scarcity is the main constraint, and face common environmental and social problems, including a rapid increase of population growth and urbanization. An alarming decline of biodiversity knowledge among the urban population, particularly in Egypt, is quite obvious. As a professor teaching botany and ecology in a university, I can state that my students of first year biology know only the names of a few cultivated plants. Those from cities and large towns often cannot recognize plants that are commonly cultivated in Egypt. Most of these students cannot give the names of street trees, indigenous Nile Valley and desert plants, common birds and mammals . Some students from cities have seen cultivated land through visiting relatives in villages but most students never have been in the desert, despite 96 per cent of Egypt being desert.

The *fellahin* have a good knowledge of cultivated ecosystems, which they transfer to their children. However, as soon as the children are grown up and leave their parents, especially those who have been educated, and move to urban areas, they no longer work on the land and lose their received knowledge, so are not able to transfer it to next generation. Taking into consideration that most knowledge on their surroundings, including biodiversity, is learned by young children (below the age of two) from their parents, the loss of knowledge on biodiversity is increasing in inverse proportion to the decreasing rural population. However, in Arab countries there is a population group with high knowledge on biodiversity that is transferred from one generation to another. These are the nomadic or semi-nomadic peoples that still exist in remote desert and on the marginal lands, who live in a very harsh environment and sustainable manage the scarce resources of such inhospitable lands.

Let me give you an example. The nomadic population in the Wadi Allaqi Biosphere Reserve are living in the area where rainfall happens once in a few years. Only a deep knowledge of the ecosystem where they are living and their sustainable utilization of resources, particularly pasture land, help them to survive. They know the names and uses of all the plants growing in the surrounding desert. They use almost all of the 130 plant species growing in this area, in almost every aspect of their lives, including food and medicine, animal fodder, charcoal and firewood, domestic artefacts.

I can give another example from the geographer Joseph Hobbs, who lived for about two years with the Khushmaan clan whose territory lies in the Eastern Desert of Egypt. Hobbs states that: "The nomads' knowledge and use of resources are not based only on taxonomic categories or aesthetic qualities. These people are also unmatched authorities about the ecology of their environment." He illustrated the breadth and depth of their knowledge with two detailed examples on animal diet and the ibex. He comments that: "The Khushmaan know a great deal not only about the interrelations of plants and animals but about the life-cycles, habits, habitats and other details of particular animals and plants" and points out that the observations about the ibex he includes are exclusively those of the nomads. "These suggest that much 'scientific knowledge' is held in the untrained, 'unscientific' environmental lore of these people and they illustrate the importance of this animal to the Bedouins." The book's appendix listing Bedouin, Latin, and English plant and animal names follows the Khushmaan classification of plants and animals.

I strongly endorse Hobbs's statement that "the traditional knowledge and skills of pastoral nomads, developed over thousands of years of experience with the desert, should be of priority interest to Egypt and other arid nations with severe environmental problems".

Levels of knowledge on biodiversity (BD)

	Population	**Level of BD knowledge**	**Need for BD education**	**BD knowledge to be acquired**	**Access to media information**
1. Urban	Increasing	Poor, if any	Urgent	None	Good
2. Rural	Decreasing	Relatively good on cultivated ecosystems	Reasonable	Some	Some
3. Nomads or semi-nomads	Dramatically decreasing	Excellent	None	Much	None

The above table briefly summarizes different population groups' level of biodiveristy knowledge and what should be done to improve it.

Priority should be given to the urban population at all ages in improving the level of biodiversity knowledge. Attention should be paid to both family education and higher education, bearing in mind that university graduates could form the nuclei for spreading the knowledge. Access to media information is not a good criterion in evaluating the extent of biodiversity knowledge. For example, the Internet can be a very powerful tool of communication and source of information when a reasonably large proportion of the populace has access to it. However, it is of limited value for biodiversity education, especially in developing African and Arab countries, where even university professors may not have access to Internet, for example in my own university! The semi-nomadic and nomadic peoples, highly knowledgeable on biodiversity, have little or no access to media such as radio and TV and none whatsoever to the Internet. But they can provide us with biodiversity knowledge and our goal is to obtain and protect the indigenous knowledge. The UNESCO MAB programme of Biosphere Reserve is a suitable means of working with these semi-nomads and nomads. Establishing education and training centres in the Biosphere Reserves is strongly recommended for formal and informal environmental education in general and biodiversity in particular.

Chair and networks

In November 1997 a UNESCO-Cousteau Ecotechnie Chair on Environmental Education (EE) and Sustainable Development was established at the Unit of Environmental Studies and Development (UESD), South Valley University, Aswan, Egypt, in recognition of its outstanding contribution in the field of multidisciplinary research and applied studies toward the sustainable development and protection of natural resources. Biodiversity education as an integral part of EE is one of the main components of Chair activities.

The global objectives of the Chair are to contribute to promoting national, regional and international co-operation in balancing the conservation of biodiversity and sustainable use of natural resources and their ecosystems.

The objectives and the activities undertaken by Chair are as follows:

1. To promote interdisciplinary education, training, research and field projects combining socio-economic, human and environmental sciences. The current activities have included the intensive research work by national/international multidisciplinary team in Wadi Allaqi Biosphere Reserve on different aspects of biodiversity and indigenous knowledge of natural resources.

2. To build the capacity of UESD, in order to serve as a Centre of Excellence for Ecotechnie-related, advanced interdisciplinary and multidisciplinary studies, vocational training and research concerning integrated management of natural resources and sustainable development. The present activities focus on the establishment of the infrastructure for laboratory research in the University campus. Phyto-chemistry, eco-physiology, tissue culture, aquatic, soil and renewable energy laboratories with advanced equipment are already established at UESD, supported by a library and offices. The UESD team of senior and junior researchers is highly qualified in different environmental topics with the ability to promote environmental research and education. A field centre and an experimental/demonstration farm have been established in the Wadi Allaqi Biosphere Reserve. A Centre for Desert Research and Training has been proposed on the base of existing infrastructure in Wadi Allaqi Biosphere Reserve and will be advocated in the coming symposium organised by UESD to be held in March 2001.

3. To design projects focusing on the integrated management of natural resources of the Wadi Allaqi Biosphere Reserve. Examples of major projects have been designed and implemented and still implementing by Allaqi team include: environmental valuation and management of indigenous plants; cultivation of indigenous plants with high economic value and particularly medicinal plants; Bedouin women and sheep production and other projects with related items.

4. To improve the general knowledge on environment and promote awareness among policy-makers, educators and the public regarding integrated approaches to environmental conservation, natural resource management and sustainable development. A series of seminars on environmental issues (e.g. population growth, water scarcity, air pollution, biodiversity, desertification, environmental law, etc) is currently being conducted in the university (mainly for students from different faculties) and in the town of Aswan for local people interested in environment, including students, schoolteachers, and government employees. The staff of the UESD has also initiated field studies for schools on the First Cataract Islands at Aswan. These islands have been given conservation status by Egyptian legislation. One of the main objectives of this conservation area is to increase both local adults' and children's awareness of biodiversity.

An important activity of the Chair is the promotion of networking efforts in the fields of study it embraces and to act as a leader in the development of two networks: an national and Arab Region Ecotechnie Network.

The National Egyptian Ecotechnie Network (NEEN) has united several Egyptian universities and other national institutions and organizations in promoting co-operation among national bodies and regional centres working in the field of environmental education and training. Following is the list of national institutions of NEEN:

- South Valley University
- Cairo University
- Ain Shams University
- Alexandria University

- Assiut University
- Mansoura University
- Suez Canal University
- Egyptian Environmental Affairs Agency (EEAA)

The main objective of NEEN is to promote Environmental Education at university level, particularly in supporting the establishment of a Department of Environmental Science at South Valley University and a general course on environment for all first year university students in Egypt. Towards this end NEEN members have prepared syllabi for environmental courses and organized the related meetings with the Supreme Council of Universities, the British Council and UNESCO Cairo Office.

The Arab Region Ecotechnie Network (AREN) between Arab Universities (Egypt, Bahrain, Jordan, Morocco, Sudan, Syria, and Yemen) and similar advanced centres in the world was approved at an Ecotechnie meeting in July 1999 in Bahrain. Universities within AREN are prepared to work together on Biodiversity Education issues as part of environmental education towards sustainable development. Following is the list of AREN members of Arab Universities:

- The University of South Valley (Egypt)
- The University of Bahrain (Bahrain)
- The University of Jordan (Jordan)
- The University of Mohamed V. (Morocco)
- The University of Khartoum (Sudan)
- The University of Damascus (Syria)
- The University of Sana'a (Yemen)

Based on the principle of academic freedom and the free flow of scientific information, and in a spirit of academic solidarity, the participating institutions in the activities undertaken by the Network, shall seek through long-term co-operation to facilitate the transfer of knowledge among themselves. This will be achieved by means of staff exchanges, staff development schemes, curriculum development and other appropriate action, with the overall aim of contributing to the development of the educational and research capacities and self-reliance of the participating universities.

Projects can be designed among the network members to promote multidisciplinary Environmental Education. One of the suggested topics is to study and record the indigenous knowledge of the peoples who are still living nomadically or semi-nomadically in most Arab countries.

Another topic which, is the main objective of AREN, is to build up the capacity of the centres of excellence of AREN in education and training in environment-related maters. This will include both formal and informal education with special attention to training the taxonomists (world wide programme), teachers training on biodiversity and establishment of field centres for BD training. At first stage the AREN can be connected to Arab MAB in establishment of Education Field Centres or stations in following Biosphere Reserves:

- **Egypt**: Omayed; Wadi Allaqi – (some actions already taken toward establishment research and education centre)

- **Jordan**: Dana

- **Morocco**: Arganeraie; Oasis du sud marocain

- **Sudan**: Dinder; Radom
