



# CONVENTION ON BIOLOGICAL DIVERSITY

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CBD-UNESCO CONSULTATIVE WORKING GROUP  
OF EXPERTS ON BIOLOGICAL DIVERSITY  
EDUCATION AND PUBLIC AWARENESS

First meeting  
Paris, 11-13 July 2000

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

### INTRODUCTION

1. In paragraph 2 of its decision V/17, adopted at its fifth meeting, held in Nairobi from 15 to 26 May 2000, the Conference of the Parties to the Convention on Biological Diversity requested the Executive Secretary of the Convention, in cooperation with the United Nations Educational, Scientific and Cultural Organization (UNESCO), to convene a consultative working group of experts, including the United Nations Environment Programme (UNEP), the World Bank, the United Nations Institute for Training and Research (UNITAR), the Commission for Education and Communication of IUCN, the World-Wide Fund for Nature (WWF), representatives of Parties to the Convention and other relevant bodies to further advance and, in particular, to identify priority activities for the proposed global initiative on biological diversity education and public awareness.

2. In response to that request, the first meeting of the Consultative Working Group of Experts on Biological Diversity Education and Public Awareness, jointly sponsored by UNESCO and the Secretariat of the Convention on Biological Diversity, was held at UNESCO headquarters, in Paris, from 11 to 13 July 2000.

### 1. OPENING OF THE MEETING

3. The meeting was officially opened at 10 a.m. on 11 July 2000 by Mr. Gisbert Glaser, UNESCO Assistant Director-General for Natural Sciences, a.i, who welcomed the participants to UNESCO headquarters. <sup>1/</sup>

4. Mr. Glaser emphasized the need to identify priority activities and to stimulate a new paradigm for education and public-awareness, reflecting the unique concept of biological diversity and the objectives of the Convention on Biological Diversity. He recalled the background for UNESCO's involvement in the development and launching of a global initiative on biological diversity education, training and public

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

awareness, at the invitation of the Conference of the Parties to the Convention at its fourth meeting, held in Bratislava, May 1998. <sup>2/</sup> UNESCO had subsequently proposed a strategy, recently endorsed by the Conference of the Parties, which included the convening of the current meeting. The event was an example of the excellent and concrete cooperation between UNESCO and the Convention Secretariat in advancing common goals. He invited participants to focus on contents and structure of future work on biological diversity education and public awareness in the context of the Convention, as well as strategic elements, capacity-building and funding aspects of future activities.

5. Mr. Olivier Jalbert, Principal Officer, Secretariat of the Convention on Biological Diversity, speaking on behalf of Mr. Hamdallah Zedan, Executive Secretary of the Convention, welcomed the participants to the meeting. He thanked UNESCO for its leadership in efforts to pursue the objectives of the Convention through increased awareness and education. UNESCO's ability and willingness to host the meeting so soon after the fifth meeting of the Conference of the Parties was much appreciated.

6. Mr. Jalbert drew the attention of the participants to the background document prepared by UNESCO and the Convention Secretariat on an initiative aimed at improving the understanding of biological diversity and sustainable development. The document had been presented to the Conference of the Parties at its fifth meeting and constituted the basis for its decision V/17. That decision demonstrated that the Parties to the Convention were giving increasing priority to the need to take specific actions to implement Article 13 of the Convention. The decision specifically called on the Executive Secretary, in cooperation with UNESCO, to convene a consultative working group of experts to further advance, and in particular to identify priority activities for, the proposed initiative on biological diversity education and public awareness.

7. Mr. Jalbert stated that there was no doubt that some significant work had to be done in order to raise awareness of the Convention and, indeed, of biological diversity in general. There was a general agreement on the need to provide a clear understanding of the broad issue: what biological diversity means for everyone and how to reverse its loss.

8. The great merit of this new initiative was that it brought together a number of institutions that had been active in drawing attention to the issue of biological diversity. The basic questions to be addressed were:

- (a) Defining clear objectives: what is our common goal? Where do we want to go?
- (b) Defining the process: how are we going to get there? What activities should be part of the initiative? and
- (c) What could each organization contribute to the process?

9. Mr. Jalbert expressed the wish that the current meeting should be only the first stage in a process that would advance the objectives of the Convention, as well as those of every participating organization to the extent that they were complementary.

10. Mr. Peter Bridgewater, Director, UNESCO Division of Ecological Sciences and UNESCO Focal Point for Biodiversity, also welcomed the participants and stressed the fact that efforts since the fourth meeting of the Conference of the Parties to the Convention on Biological had to date been concentrated on setting the process in motion, but the time was now ripe for some pilot activities to be identified, prioritized and implemented, and for focused outputs to be produced.

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<sup>2/</sup> See decision IV/10 B, para. 6.

11. The representative of UNESCO introduced the working documents, information documents and other material for the meeting, as listed in document CBD-UNESCO/CGEBDEPA-1/3. <sup>3/</sup>

12. The representatives of UNESCO and the Convention Secretariat acted as Co-Chairs for the meeting.

## **2. ADOPTION OF THE PROVISIONAL AGENDA AND TIMETABLE**

13. The Working Group adopted the provisional agenda and timetable as contained in documents CBD-UNESCO/CWGEBDEPA-1/1 and CBD-UNESCO/CWGEBDEPA-1/1/Add.1.

## **3. BACKGROUND TO THE DEVELOPMENT AND LAUNCHING OF THE INITIATIVE**

14. The representative of UNESCO introduced document CBD-UNESCO/CWGEBDEPA-1/Inf.1, which contained a background section on the initiative. The document also made reference to the objectives of the meeting and the methods to be possibly followed. It also contained the original UNESCO-Convention Secretariat proposal that was presented to the Conference of the Parties to the Convention at its fifth meeting.

15. The representative of the Convention Secretariat introduced document CBD-UNESCO/CWGEBDEPA-1/Inf. 2, which contained a compilation of decisions by the above-mentioned meeting with regard to education and public awareness. Previous decisions of the Conference of the Parties relevant to this subject area were contained in the *Handbook of the Convention on Biological Diversity*, which had been made available to all participants.

## **4. RELEVANT EXISTING AND PLANNED INITIATIVES, INCLUDING RELEVANT MATERIALS**

16. Mr. Bridgewater invited participants to present their own programmes and activities of relevance to the initiative.

17. Presentations were made by the following participants:

- Jill Duchess of Hamilton, Flora for Fauna, on the Adopt A Butterfly project;
- Mr. Talal Younés, International Union of Biological Sciences, on “BioEd 2004 – Challenge: Biodiversity Education”;
- Mr. Michael Williams and Mr. Paul Chabeda, on UNEP’s materials and activities in this area, including the UNEP World Conservation Monitoring Centre;
- Ms. Carmen de la Huerga, on environmental education activities of the UNESCO Basque Centre in Bilbao, particularly with respect to the Urdaibai Biosphere Reserve;
- Mr. Victor Anderlini and Ms. Judith Hutt, on the Island Bay Marine Education Centre;
- Ms. Wendy Goldstein, on the IUCN Commission on Education and Communication;

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<sup>3/</sup> The full list of documents for the meeting is contained in annex II to the present report.

- Mr. Luc-Pierre Deslarzes, World-Wide Fund for Nature, on an evaluation of the contributions of educational programmes to conservation within the WWF network;
- Ms. Randi Stone, on the Global Learning and Observations to Benefit the Environment (GLOBE) programme;
- Mr. Tony Whitten, on the World Bank's activities in the area, especially with regard to the development of field guides;
- Mr. Salvano Briceno, on the BIOTRADE programme of the United Nations Conference on Trade and Development (UNCTAD);
- Mr. Gustavo Lopez Ospina and Ms. Jeanne Damlamian, on UNESCO's programmes and activities in the fields of formal and informal education;
- Ms. Elizabeth Wangari, on the activities of the World Heritage Centre in this area;
- Mr. Malcolm Hadley, on examples of UNESCO's biological diversity education and public-awareness materials. <sup>4/</sup>

18. Written presentations were submitted by UNITAR, DIVERSITAS and the Natural History Museum, London.

## **5. FURTHER STEPS IN THE DEVELOPMENT OF THE INITIATIVE**

19. As the Conference of the Parties to the Convention at its fifth meeting had invited UNESCO to develop advice for the formal education sector, the Group decided to confine its discussion to the non-formal—or informal—sector.

20. Participants agreed that the main objective of the meeting should be to produce an action plan for education and public-awareness activities within the strategy for implementation of the Convention, in order to be of practical help to the Parties—the main target group of the initiative.

21. In order to facilitate the work of the meeting, in the late morning of Day 2, two sub-working groups were established with the purpose of identifying priority activities that would give practical effect to the strategy agreed to date by the Conference of the Parties to Convention.

22. While the sub-working groups had similar mandates, Sub-Working Group I, chaired by Ms. Wendy Goldstein, IUCN/CEC, focused mainly on substantive elements and Sub-Working Group II, chaired by Mr. Salvano Briceno, UNCTAD, on procedural elements.

23. The chairpersons of the two sub-working groups reported to plenary about the outcomes of their work at the end of Day 2. Their reports are contained in annexes IV and V, respectively, to the present report.

24. The Working Group discussed the basis of an educational approach for the initiative. The points made during the discussion could be roughly divided into the following areas:

(a) It was asserted that people lacked basic ecological knowledge. Biological-diversity knowledge requires understanding of the hierarchical nature of biological diversity, i.e., at the levels of

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<sup>4/</sup> Summaries of the presentations may be found in annex III to the present report.

genetic, species and ecosystems diversity. That need should be addressed through formal education approaches. The need for knowledge on biological diversity as a solution was one paradigm. Student-oriented approaches were emphasized, with skills being developed in experiential learning by measuring the state of the environment and contact with living things and nature as a means of developing care;

(b) Some participants felt that most of the educational actions presented by members of the Consultative Working Group were “separate educational activities” and had no relation to the priority issues of a national biodiversity strategy. Nor did they relate to the daily life and habits of people and their daily behaviour. It was stated that children knew the facts but that knowledge did not lead to a change in practice. It was only an assumption to say that lack of knowledge was a factor in the destruction of biological diversity, or that increasing ecological knowledge would improve biological diversity conservation. In fact, the economic situation of people was more likely to be a motivating factor as were cultural pressures, like having certain plants in gardens. More importantly, to move from *knowledge* to *action*, there was a need to change the behaviour of the productive sectors. For biological diversity to become a part of human life, there was a need to act on the system, and deal with its complexity, rather than focusing on individual species;

(c) Therefore, the initiative should focus on obstacles that confront people and limit their ability to change harmful practice. A participatory process was required involving key stakeholders in the development of policy and strategy for national solutions. The task currently facing Parties was how to deal with other sectors and stakeholders to address the obstacles to biological-diversity conservation. Parties needed assistance in learning to participate and in handling participatory processes. It was a question of interactive communication, where the viewpoints and knowledge of all were shared, and it was possible for learning to take place as people negotiate solutions. However, participation in and of itself did not lead to improved biological-diversity conservation where institutional factors prevented real change;

(d) Another proposed approach to communication was instrumental communication in which targets, messages and means were planned to influence and inform. Characteristics of such an approach included campaigns using means to attract interest in the issue, by using an interesting symbol to attract media interest, and in using celebrities. Such an approach did have the merit of putting issues on the agenda, but was still a weak means of influencing change in practice. When using the approach, there was a common tendency to think of instruments (for example, to decide on videos or posters) before identifying the problems, the target groups and the messages to be communicated. Moreover, messages had to be based in the perceptions of the people and had to deal with those perceptions, not necessarily by providing biological diversity information. Therefore, communication had to be culture- and context-specific.

## **6. IDENTIFICATION OF THE CAPABILITY TO IMPLEMENT ACTIVITIES AT THE COUNTRY AND REGIONAL LEVELS AND OF APPROPRIATE ACTIONS AT THE INTERNATIONAL LEVEL, INCLUDING THE CONTRIBUTIONS OF COMPETENT INTERNATIONAL ORGANIZATIONS**

25. The Working Group agreed that the responsibility for implementing future activities related to the initiative lies with the Parties to the Convention. Therefore, the initiative should be geared to supporting the Parties in undertaking those activities rather than going into the content of what has to be taught. A survey would be needed to assess where the demand for support lies.

26. Some Parties may have limited capabilities to address education and public awareness within national strategies and action plans in response to the Convention and to implement recommendations and apply guidelines developed in the context of the initiative. Experts from Parties present stated that one of the most important issues for them was how to handle participatory processes with stakeholders and address the obstacles to changing negative practices. The initiative should therefore facilitate Parties to

build on or use existing initiatives, and develop some core knowledge on how to manage stakeholder processes. Stakeholders could include institutions active in biological diversity education and public awareness who could be part of the process of deciding how to assist national efforts through coordinated action.

27. The Working Group agreed that approaches to develop knowledge of biological diversity alone are not adequate; suitable socio-economic contexts needed to be in place so that recipients can act in response to the messages and products. It was also agreed that a range of media, not only the Internet, should be employed, to ensure that access to educational and information resources was not constrained by infrastructure limitations.

28. The Working Group concluded that existing initiatives should form the basis for assistance to countries in their implementation of a programme of work on the initiative. Cooperative efforts should focus on:

- (a) Reorganizing the information already available (using existing networks);
- (b) Adapting information to a level appropriate to identified user needs;
- (c) Identifying data (and their sources) needed for generating educational and public awareness products (through partnerships with scientists);
- (d) Ensuring a close iterative interaction of supply and demand in developing information resources through partnerships with stakeholders/users;
- (e) Coordinating effective networks for the distribution and marketing of relevant information and materials;
- (f) Assisting in strengthening effective synergies among the Rio conventions.

29. Participants proposed that there should be an official launch to promote the initiative among the Parties, ideally in conjunction with the International Day for Biological Diversity.

30. In addition, through their participation in the initiative, countries and regions can greatly enhance their capability to implement activities through the following measures:

- (a) Promoting intersectoral dialogue and negotiation to remove barriers;
- (b) Supporting and facilitating educational actions by the stakeholders with their constituencies, by providing access to information and networking. In this context, tourism boards and agricultural cooperatives and chambers of commerce become active agents of education and to convey public-awareness messages.

## 7. FUNDING ASPECTS

31. The Working Group agreed that decision V/13 of the Conference of the Parties, on further guidance to the financial mechanism, clearly addresses funding aspects of the initiative by instructing the Global Environment Facility, as the institutional structure operating the financial mechanism, to provide support for capacity development for education, public awareness and communication in biological diversity at the national and regional levels, in accordance with decision V/17.

32. At the international level, there is equally a need for relevant international institutions to mobilize resources and to deploy them, in a harmonized way, to implement specific activities under the initiative. The Working Group is expected to facilitate this process.

## 8. FORMULATION OF RECOMMENDATIONS

### A. Guiding principles

33. The Working Group agreed that clear guidelines are needed for the successful further implementation of the initiative. These guiding principles should, *inter alia*, clarify the nature and contents of messages and products related to the initiative. They should also encompass indigenous perspectives on biological diversity education and public awareness. The following guidelines 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;

(b) The local meaning of biological diversity should be 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;

(c) The questions asked and concepts used should be relevant to the thematic and cross-cutting issues dealt with by the Convention. The focus should initially be on cross-cutting issues such as sustainable use, the ecosystem approach, and alien invasive species;

(d) 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;

(e) If single-topic messages are used (such as single species in the case of the Adopt A Butterfly project <sup>5/</sup>), 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;

(f) Cultural and indigenous sensitivities to different species need to be considered when using icons;

(g) The sources of the information should be referenced and readily accessible;

(h) 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;

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

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

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

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<sup>5/</sup> See annex II to the present report.

## B. Future programme of work

34. The Working Group agreed that there was a need to identify both short-term and long-term strategies for the implementation of the initiative. The Working Group recommended that the former be addressed through a series of priority activities (for example, demonstration projects), ideally to be launched and implemented prior to the sixth meeting of the Conference of the Parties to the Convention, so as to allow tangible and pragmatic findings to be included in the progress report of the Executive Secretary to that meeting.

35. The Working Group recommended the launching of the following programme of work initially comprising four programme elements in support of the initiative, namely:

- *Programme element 1: Management of education/communication networks*
- *Programme element 2: Management of knowledge on education and communication*
- *Programme element 3: Capacity-building – stakeholder approaches*
- *Programme element 4: Demonstration project*

36. An outline of these programme elements is given in box 1 below.

*Box 1*

***OUTLINE OF THE PROGRAMME ELEMENTS***

***Programme element 1***

***Management of education/communication networks***

**Operational objectives**

1. Coordinate and harmonize the work of the networks
2. Promote exchange between networks and Parties
3. Distribute information on the Convention

**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/examples of activities**

1. Review the work of existing international and regional networks
2. Compile information from Parties on national networks on education, communication, and indigenous groups
3. Set up of e-mail exchange with network managers and of e-mail discussion forums
4. Compile a calendar of events held by education groups and links to other websites

**Ways and means**

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

**Time schedule:** present – COP 6



***Programme element 2******Management of knowledge on education and communication*****Operational objectives**

1. Identify levels of knowledge
2. Enhance possibility of exchange on lessons on what works and what does not
3. Build up a demand-oriented approach to meet Parties' needs

**Expected results**

1. 20 case-studies
2. Web page and manual on principles of effective education (non-formal) and education programmes
3. Use of manual for capacity-building and for advocacy of social process

**Proposed/examples of activities**

1. Review models of websites that feature case-studies
2. Set up criteria for case-studies
3. Conduct subsequent interviews to really examine the learning in the case-study
4. Make links between sites that feature cases
5. Provide samples of materials, graphics etc.

**Ways and means**

*Global:* Convention Secretariat, UNESCO, UNEP, GEF secretariat, IUCN-CEC, IUBS

*National:* Parties

**Time schedule:** present – COP 6

***Programme element 3:******Capacity-building – stakeholder approaches*****Operational objective**

Learn to work with civil society in general and stakeholders in specific, local situations relevant to biological diversity

**Expected results**

1. Understanding of the need for stakeholder participation
2. Skills to apply stakeholder approaches

**Proposed/examples of activities**

1. Training programmes
2. Manuals (linked with training)
3. Clearing-house mechanism to support capacity-building

**Ways and means:**

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

*National:* Parties

**Time schedule:** present – COP 6

***Programme element 4******Demonstration project*****Operational objectives**

1. Learn by doing involving all stakeholders in the design, implementation and evaluation of the process
2. Identify explicit provisions for the developing countries and indigenous groups; ensure full participation of local and indigenous communities in the formulation and in the implementation of projects and activities

3. Involvement of commercial and other sectors in demonstration projects
4. Synergies among the various environmental and sustainable-development conventions that are relevant for local situations

**Expected results**

1. Understanding of the Earth as a system
2. Lead to other actions, change in habits: people become motivated to change their habits
3. Rehabilitate/restore habitats

**Proposed/examples of activities**

1. Adopt a species, a piece of land, a piece of water
2. Hands-on activities, advertising, multimedia, contests, art, music, drama
3. Research history of an area: Has it changed? Why?
4. Songs, pop culture, etc.
5. Restoration of habitats
6. Comics

**Ways and means**

Consortium of existing organizations (mixture of United Nations, governmental, intergovernmental and non-governmental organizations), private sector

**Time schedule:** present – COP 6

**C. Process**

37. With regard to the long-term strategy for the further design and implementation of the initiative, the meeting recommended that the CBD-UNESCO Consultative Working Group of Experts should continue its work to further advance and technically supervise the initiative until the time at which the Conference of the Parties will hold its sixth meeting. The further work of the Group will be based on the process outlined in box 2.

**Box 2*****PROCESS FOR THE FURTHER WORK OF THE GROUP*****Coordination**

Management of the process is to continue being ensured by UNESCO and the Convention Secretariat.

**Further work of the Group**

The Group should:

(a) Organize the collection and organization through accessible databases of relevant frameworks, networks and techniques for education and public awareness that have succeeded, as well as inventories of materials and resources (sources of information, etc.) for education and public awareness already available that are relevant to the Convention and sustainable development processes;

(b) Develop guidelines to utilize all relevant networks (e.g. the clearing-house mechanism under the Convention, UNESCO's network of ministries of education, UNEP's Information Unit for Conventions, the IUCN-CEC network) for participating in and contributing to the initiative and to disseminate the materials produced;

(c) Formulate recommendations and guidelines on specific methodologies for effective communication strategies to be used with relevant ministries (other than education ministries) and sectors, including the private sector, with the purpose of engaging them in participatory processes on education and public awareness;

(d) Develop recommendations for preparing and disseminating core materials, including on how to facilitate their adaptation to different local, indigenous and cultural concerns;

(e) Identify obstacles and gaps to be filled in education and public awareness processes at national and local levels. In this context, countries' access to information and participation should be evaluated, as it is the case for the UN-ECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus, 1998);

(f) Provide recommendations on formal, as well as non-formal and informal educational systems (taking into account different structures of education systems, capacity-building needs, teachers' training, and methodologies);

(g) Draft criteria for projects and activities that reflect the Convention provisions on education and public awareness;

(h) Evaluate the effectiveness of projects by multilateral and bilateral donors and technical institutions for the Convention and assist, as appropriate, in the evaluation of new project proposals;

(i) Consider the appropriateness to further develop the concept of Convention resource centres as proposed in the proposal for the initiative submitted by UNESCO and the Convention Secretariat to the Conference of the Parties to the Convention at its sixth meeting (UNEP/CBD/COP/5/INF/5);

(j) Ensure that the Strategic Plan of the Convention under development includes a distinct component on education and public awareness that reflect the work to be undertaken within the initiative;

(k) Consider how to use the Global Biodiversity Forum (GBF), organized by IUCN in connection with meetings of the governing and subsidiary bodies of the Convention as the main global forum for exchange of effective education and participation programmes on biological diversity and sustainability.

#### **Ways and means of work and timetable**

The Group should work by electronic means (e-mail). It is also recommended that the Group meet as follows:

- *Second meeting*: November 2000, Bergen, Norway (following the kind offer of the expert from Norway);
- *Third meeting*: second quarter of 2001, after or before the sixth meeting of the Convention's Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA-6), at a venue to be determined;
- *Fourth and last meeting*: fourth quarter of 2001, after SBSTTA-7, at a venue to be determined

The Group will as a matter of urgency set priorities for items to be included in the agendas for the next meetings.

**Reporting**

The Group will have a comprehensive report ready by the end of 2001 in time for the sixth meeting of the Conference of the Parties. It is recommended that the Group organize informal open-ended reporting side-events during SBSTTA-6 and SBSTTA-7.

**Sponsorship**

In addition to the continued efforts of UNESCO and the Convention Secretariat with regard to securing participation of eligible experts to the work and meetings of the Group; and Norway's offer to host the Group's second meeting, the meeting recommended that the Executive Secretary of the Convention should contact the Chairman and Chief Executive Officer of the Global Environment Facility, as well as the GEF implementing agencies, with the goal of ensuring proper support for the exercise.

**D. Evaluation**

38. The Working Group recommended that its further work should include the identification of evaluation standards for the initiative, which should be part of the comprehensive report to the Conference of the Parties at its sixth meeting.

**9. ADOPTION OF THE REPORT**

39. The Working Group considered and provisionally adopted the draft report of the meeting in the morning of 13 July 2000. It was agreed that the report would be circulated electronically to all participants for their further comments prior to finalization.

**10. CLOSURE OF THE MEETING**

40. After closing remarks of the two Co-Chairs on behalf of the two sponsors, the meeting was declared closed at 1 p.m. on 13 July 2000.

*Annex I*

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*Annex II***LIST OF DOCUMENTS***Working documents*

Provisional agenda	CBD-UNESCO/CWGEBDEPA-1/1
Provisional timetable	CBD-UNESCO/CWGEBDEPA-1/1/Add.1
Provisional list of participants	CBD-UNESCO/CWGEBDEPA-1/2
Provisional list of documents	CBD-UNESCO/CWGEBDEPA-1/3
Report of the meeting <i>(to be produced at the meeting)</i>	UNEP/CBD/GEEPA/1/1

*Information documents*

Information note on the CBD-UNESCO biological diversity education and public awareness initiative	CBD-UNESCO/CWGEBDEPA-1/Inf.1
Compilation of COP-V decisions with regard to education and public awareness <i>(as submitted by the CDB Secretariat)</i>	CBD-UNESCO/CWGEBDEPA-1/Inf.2
Information note on BioEd 2004 – Challenge: biodiversity education <i>(submitted by IUBS)</i>	CBD-UNESCO/CWGEBDEPA-1/Inf.3

*Information material*

- Handbook of the Convention on Biological Diversity
- CBD brochures
- Information material tabled by participants

*Annex III***SUMMARY OF PRESENTATIONS BY PARTICIPANTS****1. THE ADOPT A BUTTERFLY PROJECT**

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***Adopt a Butterfly project for schools – to be launched at Battersea Park Zoo: raising an awareness of the importance of growing native plants by showing connections between indigenous plants and animals.***

The planting of Battersea Zoo's garden with the native plants essential for the local butterflies will show how by selecting the right plants people can help the environment, just as they do by recycling newspapers, using bottlebanks, saving trees and conserving energy. Schools will see how they can redress the balance of declining butterflies by growing hospitable plants: especially specific leaves for future butterflies. No holly, no holly blue butterfly; no sorrel, no small copper butterfly; no buckthorn, no brimstone butterfly...

Flora-for-Fauna is a charity (1060715) based at the Linnean Society, London, which shows how plant-animal relationships help Britain's wildlife. It was launched at the end of 1994 to promote "Growing garden plants to help Britain's wildlife" and has become a recognized force in the promotion of biodiversity. The substance, the backbone of *fff* is the **Postcode Plants Database** compiled in the Biogeography Laboratory at the **Natural History Museum** <http://fff.nhm.ac.uk>

*fff* aims include encouraging gardeners, farmers and councils to grow garden plants which benefit Britain's birds, bees, butterflies and other animals with an emphasis on indigenous local plants.

The *Adopt A Butterfly* project includes children growing the foodplants for the caterpillars of their local butterfly in a way that is attractive to the insects.

In both Key Stages 1 and 2 children are required to follow a programme of study which includes investigations into "Life Processes and Living Things" – work on life processes should be related to pupils' knowledge of animals and plants in the local environment.

In some schools students will be using a special instrument called a penetrometer to monitor leaf toughness. Leaf toughness is a major survival factor for newly hatched caterpillars. The students will be studying how variations in leaf toughness are influenced by climate, soil type and seasons. They will also be monitoring growth rates of the plants and compare them with other schools.

Students will also record sightings of butterflies and the larval development of the caterpillars on their vines. In certain cases eggs or larvae will be released in suitable areas when the plants are of suitable size. With assistance some schools may prepare databases and maps of the current distribution of their adopted butterfly species in their area along with the distribution of its foodplants.

It is hoped that the children will encourage the growing of these plants vital for the survival of butterflies. Later key strategic areas in communities will be targeted in cooperation with Government authorities and departments.

## 2. BIOED 2000: CHALLENGE OF BIODIVERSITY EDUCATION

### Goal

By the year 2003, the Commission for Biological Education of the International Union of Biological Sciences (IUBS-CBE) is to provide and assist in the implementation of a series of web-based science education modules for informal and formal science venues based on the emerging biological theme, "Biodiversity".

### Specific objectives of the programme

This proposal is to develop a multiple-part programme in biological education around the integrative content theme of biodiversity. The programme is to reflect the principles derived from the Bio-Ed 2000 Conference held May 15-18 in Paris and to take advantage of the development and progress made by the DIVERSITAS Programme and within the framework of IBOY (International Biodiversity Observation Year – 2001-2002). Partnerships are to be developed with UNESCO and identified funding groups (government and private) to identify and develop 5-10 member States as active nodes for implementation and adaptation of this biodiversity programme for specific regions. A programme for evaluation of programme effectiveness is to be included. This is to be a project that reflects collaboration between biological-science educators, biology teachers and science researchers (as is seen within the membership of the IUBS-CBE) in order to formulate a quality science programme on biodiversity that is learner centred, teacher-friendly and available for global citizens.

Web-based materials, kits and technology guidelines for three educational venues are to be developed:

- University sites for students who potentially are teachers of biodiversity
- Schools where biodiversity is taught
- Informal sites (museums, aquariums, etc) for public understanding of biodiversity

### Projected timetable

A planned 18 months of research to collate existing programmes, design the programme, identify funding agencies for implementation, identify the representatives of UNESCO member States, expand the science and education leadership to address the three educational venues, and formulate the technological network of learners necessary to implement and sustain the programme. These activities will be reported in a synthesis meeting of these persons to establish:

- (a) Agreement on education and science objectives;
- (b) Time course and partnerships for implementation;
- (c) Needs and funding for the objectives.

Funding is to be sought to fund the Executive Committee of CBE, and identified leadership creating the materials and advising the project, and representatives of the identified member States. Seattle, Washington, Paris, France, and Cape Town, South Africa, are being considered as sites for this meeting, and the final decision will depend on available funds.

A second 18 months is to bring together a larger group from the member States along with those who have been identified with research outcomes from the project, and the members of the Commission for Biological Education members. This meeting will serve for presentations of the results, the programme, and the guidelines and the evaluation process. Brazil or Costa Rica are being considered as venues for this meeting, and the final decision will depend on facilities and support available. This meeting should be held during the year 2003. By 2004, materials are to be delivered and in use by the member countries. At that time, funds are to be sought to send implementation teams for teacher enhancement and evaluation of programmes in the participating States.

### **Evaluation**

A central element of this programme is that a schedule for evaluation of this IUBS-CBE initiative be developed at the beginning of the planning programme and attention to the outcomes of these evaluations be incorporated by consensus of the Executive Committee. This programme is to include opportunities for reflection on formative evaluation during the development in order for the programme developers and implementers to make the necessary corrections during the course of the program. It is proposed that the final evaluation of learning outcomes be developed for web-based delivery from the nodes of operation. Full development of the technologies necessary for adequate communication between the developing groups is central to this IUBS-CBE programme, and is to reflect the centrality of the principles of the IUBS-CBE operative guidelines.

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### **3. UNEP**

The United Nations Environment Programme has several important assets and capabilities that it can contribute to a broader education and public-awareness initiative under the Convention on Biological Diversity. First, the UNEP Division of Environmental Conventions has a mandate to promote synergies and collaboration among environmental conventions. The Division can support efforts to share information, best practices, and resources amongst the public-outreach efforts for each convention, including through its widely distributed newsletter *Synergies*.

Second, the UNEP World Conservation Monitoring Centre (WCMC) in Cambridge, United Kingdom, has a globally recognized capacity in the field of biodiversity data and the distribution of information via the Internet. WCMC would be pleased to take the lead in establishing and maintaining a website on biodiversity targeting the general public on behalf of the partners in the initiative.

Third, the UNEP Information Unit for Conventions services the Convention Secretariat's need for press outreach and also collaborates with the Secretariat on information materials. In addition, the press lists, contacts and expertise of the Communications and Public Information unit could help the initiative in targeting journalists. The national committees, youth programme, and other networks of UNEP can also contribute.

Other UNEP assets include its role as an implementing agency of the Global Environment Facility and relevant activities of its policy, assessment, and regionalization divisions.

#### **4. UNESCO ETXEA – UNESCO CENTRE BASQUE COUNTRY**

UNESCO ETXEA – UNESCO Centre Basque Country is a non-governmental organization that, as part of its activities, works in promotion of experiences on the issues of sustainable development and environmental education. Although we develop our activity within the Basque Country, we specially work within the Urdabai Biosphere Reserve, in the context of the UNESCO Man and the Biosphere (MAB) programme.

##### **Activities**

We engage in different activities that are aimed at different population groups:

- Publications: we produce a number of publications forwarded to informal and formal education (basic and secondary level) which are distributed in schools but are also sent to organizations and professionals in informal education. We provide materials about global environmental issues but adapted to the local reality in which local ecosystems, flora, fauna, biodiversity, etc., are studied but as a point of entry to the overall complexity of these issues;
- Meetings: we yearly organize international meetings in the Urdabai Biosphere Reserve about the general issue of sustainable development (sustainable tourism, forestry, agriculture, etc.). The aim of these meetings is to bring international experiences and examples of sustainable use and management to the local stakeholders.

##### **Funding**

The funding for our projects comes mostly from the Basque Country Government and the Biscay Province Government Environmental Departments, but also from local private enterprises.

#### **5. THE ISLAND BAY MARINE EDUCATION CENTRE**

The Island Bay Marine Education Centre is a non-profit conservation education facility located on the rugged, rocky south coast of Wellington, New Zealand. The Centre was created to stimulate interest in, increase knowledge of, and promote the conservation and sustainable use of local, national, and global coastal marine ecosystems through live habitat displays, public education programmes and community – initiated research projects.

The Centre was established in 1996 by Dr Victor Anderlini and Ms Judy Hutt who are the Centre's sole staff. Their Marine Education Programme (which is supported entirely by grants, donations and their voluntary efforts) has given grown from a small pilot project to an extremely successful and nationally recognized programme.

Annually, the Centre now receives over 50,000 pre-school, school age, and adult visitors who participate in the Centre's specialized conservation education courses. In addition to these organized courses, Victor and Judy host a monthly open weekend to allow families and friends of week-day

visitors the opportunity to also view, close up and hands on, some of the vast array of biologically diverse coastal marine flora and fauna and learn something about their ecology.

The programme has outgrown its present facilities and Victor and Judy are now in the process of finalizing plans and seeking financial support for a new purpose-built Marine Conservation Education Centre. They have formed a non-profit charitable trust to pursue this vision.

The new Centre will allow many more visitors to participate in both organized educational sessions and informal learning experiences.

The proposed live displays will be state-of-the-art, and will showcase the diversity of local coastal marine life in natural habitat galleries such as the 600,000 litre Giant Kelp Forest display.

The new Centre will also be a forum for local environmental and special-interest group issues related to marine conservation, and a research and training centre especially for local indigenous Maori people. The Centre's philosophy will emphasize the free exchange of information and transfer of technology among nations for the purpose of promoting coastal marine conservation.

If adequate funding is committed during the coming year, the new Centre will be operational by December 2003.

## **6. THE IUCN COMMISSION ON EDUCATION AND COMMUNICATION**

The IUCN Commission on Education and Communication (CEC) assists IUCN to achieve its goals of restore and maintain ecosystem integrity and a shared responsibility for the extinction crisis. The IUCN programme contributes to these goals in an approach that works on mobilizing knowledge, empowerment, and influencing governance. This approach is put into practice through field projects as well as advising on policy and institutional mechanisms.

CEC advocates for communication and education to be integrated instruments in achieving biodiversity policy from the outset. In particular, CEC advocates the use of interactive communication with stakeholders to develop acceptable policies and strategies and appropriate instruments to support implementation. In such processes stakeholder groups become key actors in implement communication and education and their role is managed and supported by communication.

In relation to the Convention on Biological Diversity, CEC has:

- Mobilized policy recommendations from its expert network;
- Generated knowledge on effective communication and education to draw out lessons and case material in workshops at the Global Biodiversity Forum, and regional conferences;
- Transferred knowledge through publications, web site, help desk, workshops and through communication training programmes: e.g. for five Central European countries, a programme of three years, government and NGO staff involved in natural resource management and national biodiversity strategies and action plans; South America to assist biodiversity plan managers to manage communication in the strategy process; training proposed in Asia, Southern Africa and Eastern Africa;
- Transferred knowledge through development of tools e.g. for integrating biodiversity and gender in development training in Latin America; and biodiversity information materials in Arabic.

## 7. THE CONTINUUM OF SOCIAL STRATEGIES FOR CONSERVATION <sup>6/</sup>

### Towards a clarification

One way of clarifying the differences between and relationships among social strategies is to focus on the nature of the learning processes involved in different strategies and the objectives that are served by them. When this is done, it is possible to see information dissemination, communications, education, and capacity building as lying along a continuum, each with related but discrete objectives and with overlapping and, indeed, complementary methodologies. This means that it is not only very difficult to separate them but also that attempting to achieve one set of objectives without the other in an integrated way, over the long term, is unlikely to lead to successful conservation outcomes and impacts. Figure 1 depicts this way of conceptualizing the relationship between these social strategies for conservation.

Three points should be noted about this suggested clarification of the relationships between these strategies.

1. Each column of figure 1 subsumes the one(s) on its left and thus is generally capable of contributing more to conservation than those it subsumes. This does not mean that any is inferior to the other, just that they have different purposes and can be used to complement each other.

Thus, information provision is defined as the one-way dissemination of conservation messages with the chief purpose of raising public awareness of conservation matters, whereas communication involves dissemination of information as part of a planned two-way exchange of ideas that seek to clarify and enhance the understanding of issues and generate concern.

Similarly, education subsumes the dissemination of information and communication as part of a process of sharing and learning. However, activities conducted in the name of education only become educational when their design and use are embedded within appropriate pedagogical processes that involve people—at all stages of life—in a process of increased understanding, clarification of commitments and priorities, and skill development.

As such, education is an integral component of capacity-building. Indeed, it is one of the essential tools for empowering individuals and communities for greater control of the direction and conservation focus of their work and for building appropriate organisational structures and skills for facilitating conservation work.

This does not mean that capacity-building only involves education. As the examples in figure 1 show, it is clearly much more than this. However, *all education has a capacity-building function*. The role of education within an organization such as WWF is to build social capacity for effective and sustained participation in conservation initiatives through programmes in formal, non-formal, and informal education settings.

Sometimes, the link between formal education and capacity-building for conservation is difficult to see. Much of formal education is geared to developing the outlook, motivations, and skills required for a vibrant and caring civil society, viz: the concerned and involved citizen, the good parent, the effective worker, the cultured individual, the team player, and so on.

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<sup>6/</sup> Extract from "An Evaluation of the Contributions of Educational Programmes to Conservation within the WWF Network - Final Report", pages 24 -27, May 1999.

Such educational work in schools and colleges has the prime function of increasing individual capacity to work with others to shape and achieve social goals; and such work is continuous, extended, and complemented beyond formal education through initiatives in non-formal and informal education.

That such building of social capacity needs to embrace conservation and related issues of sustainability is at last becoming more widely accepted; its incidence is growing, although most certainly too slowly. However, the fact that it is growing is due in no small measure to the influence of NGOs such as WWF. Educational initiatives for conservation seek to increase an individual's capacity to work with others towards conservation goals, thus building social capacity for effective and sustained participation in conservation in both the public sphere and in individual and household consumption.

2. The term "pedagogical processes" requires elaboration owing to its importance in distinguishing education from related social strategies for conservation.

Pedagogy involves more than the traditional concept of instructional practices; any coherent pedagogical approach involves the selection and use of particular teaching strategies, not in any haphazard way, but as guided by a coherent vision of the desired outcome and how education can contribute to it. Thus, pedagogical processes involve a combination of cognitive (knowledge), affective (attitudes and values), and conative (practical action) strategies for learning that include processes such as:

- Thinking about and processing concepts and principles (e.g. of biodiversity and conservation);
- Clarifying personal environmental attitudes and values towards issues of environment and conservation;
- Appreciating political, cross-cultural, gender, and other socio-economic contexts and their implications for conservation;
- Coming to conclusions, making decisions, and developing plans;
- Applying lessons learnt to one's own life and in one's own environmental context; and/or
- Reflecting on the changes that have taken place.

Without a conscious and explicit recognition of pedagogical processes, and their integration into the design of an activity, education is not taking place, and the desired outcomes of increased understanding of environmental issues and enhanced commitment and skills to participate in conservation will be difficult to achieve.

3. The four strategies are related; indeed, they exist along a continuum and borrow tools from each other to address particular short- and/or long-term conservation objectives, and particular audiences and their needs. Thus, these social strategies complement each other and generally are most effective when used in combination.

However, this does not mean that they are synonymous or that it is not important for WWF to have a network-wide understanding of the scope, objectives, and boundaries of each one and to develop appropriate organisational structures to enable the potential contributions of each, and their complementary use in conservation, to be maximized.



Figure 1. A CONTINUUM OF SOCIAL STRATEGIES FOR CONSERVATION

<i>Strategy</i>	<b>Information</b>	<b>Communication</b>	<b>Education</b>	<b>Capacity-building</b>
<b>Objective</b>	To increase awareness and understanding of conservation issues and the work of WWF	To establish a dialogue between sectors of the community and WWF in order to: <ul style="list-style-type: none"> <li>• Increase understanding of the conservation issues that are of most concern, and</li> <li>• Share experiences and priorities and plan collaborative projects to promote conservation</li> </ul>	To promote: <ul style="list-style-type: none"> <li>• Knowledge and understanding of conservation principles;</li> <li>• An attitude of concern for the environmental and</li> <li>• The motivation and capacity to work cooperatively with others in achieving conservation goals</li> </ul>	To increase the capacity of civil society to support and work for conservation through training, policy development, and institutional strengthening within and outside WWF
<b>Processes</b>	Dissemination of information in a variety of media	Facilitation of dialogue or two-way communication both within WWF and between WWF and outside groups	Facilitation of learning experiences through the use of information, communication and pedagogical processes that develop individual and group motivation and skills for living sustainably	<ul style="list-style-type: none"> <li>• Development and enhancement of policy and institutional structures and skills</li> <li>• Training of WWF staff and key stakeholders in society</li> </ul>
<b>Audience Settings</b>	Generally informal settings	Generally informal and non-formal settings	Generally formal and non-formal settings	Generally non-formal settings

<p><b>Tools</b></p>	<ul style="list-style-type: none"> <li>• Public relations and advertising</li> <li>• Information campaigns via a variety of in-person, paper, audio-visual, and electronic media</li> </ul>	<ul style="list-style-type: none"> <li>• Information campaigns with feedback processes to establish dialogue between WWF and groups</li> <li>• Environmental interpretation</li> <li>• Participatory social marketing</li> </ul>	<ul style="list-style-type: none"> <li>• Formal education from pre-school to university</li> <li>• Vocational and professional education courses</li> <li>• Non-formal education through youth, religious, farmer, and business associations</li> <li>• Participatory social marketing</li> </ul>	<ul style="list-style-type: none"> <li>• Professional development and training</li> <li>• Community development via participatory learning and action (PLA/PRA) approaches</li> <li>• Policy review and development</li> <li>• Strategic planning</li> <li>• Network development</li> </ul>
<p><b>Examples</b></p>	<ul style="list-style-type: none"> <li>• Book publishing</li> <li>• Public service announcements</li> <li>• TV programmes</li> <li>• Posters</li> <li>• Stickers</li> <li>• Public displays or exhibitions</li> </ul>	<ul style="list-style-type: none"> <li>• Newsletters to members</li> <li>• Town meetings</li> <li>• Telephone/mail call-back associated with information campaign</li> <li>• Interactive exhibitions</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated curriculum and professional development project</li> <li>• Local school-community water action project</li> <li>• TV programmes integrated with related community workshops</li> </ul>	<ul style="list-style-type: none"> <li>• Participatory learning and action (PLA) projects</li> <li>• Public involvement in Local Agenda 21 planning</li> <li>• Workplace training for ISO 14001 accreditation</li> </ul>

## 8. THE GLOBAL LEARNING AND OBSERVATIONS TO BENEFIT THE ENVIRONMENT (GLOBE) PROGRAMME

### THE GLOBE PROGRAMME

#### *Global Learning and Observations to Benefit the Environment*

[www.globe.gov](http://www.globe.gov)

[info@globe.gov](mailto:info@globe.gov)

- \* The GLOBE programme is a hands-on science and education programme that unites students, teachers, and scientists from around the world in study and research about the dynamics of the Earth's environment. Hundreds of thousands of GLOBE students in over 8500 schools in more than 85 countries are taking important environmental measurements and reporting their data for use by scientists.
- \* The goals of the GLOBE programme are:
  - \* To enhance the environmental awareness of individuals worldwide,
  - \* To increase scientific understanding of the Earth, and
  - \* To improve student achievement in science and mathematics.
- \* The GLOBE programme is implemented through a worldwide network of primary and secondary schools. GLOBE students:
  - \* Take environmental measurements at or near their schools,
  - \* Report their data through the internet to the GLOBE data archive,
  - \* Create maps and graphs to analyse GLOBE data sets, and
  - \* Collaborate with scientists and GLOBE globe students around the world.
- \* GLOBE students have reported data from over 5 million science measurements in the areas of atmosphere/climate, hydrology, soils and land cover/biology. These global data sets are made freely available via the Internet to the world science community and to the students themselves for scientific research, student-scientist partnerships, and worldwide school-to-school collaborations.
- \* Age-appropriate environmental science educational materials have been developed by scientists and educators as a resource for GLOBE teachers. Professional development workshops enable the more than 13,000 GLOBE teachers to guide their students in taking measurements according to scientific protocols, in using the Internet to report and analyse scientific data, and in creating partnerships among students at GLOBE schools around the world.
- \* GLOBE is an inter-agency programme of the National Oceanic and Atmospheric Administration, National Aeronautics and Space Administration, National Science Foundation, Environmental Protection Agency, and Departments of Education and State. Implementation in the United States depends upon the efforts of more than 100 state and local partner organizations.

- \* Broad international participation is integral to the design of the GLOBE programme. Bilateral agreements establish partnerships between the United States and its international partners, which are then responsible for designing programme implementation in their own countries.

GLOBE students actually participate in the process of science, develop their own conclusions, and learn to work with others. They not only learn the scientific method, they live it.

## 9. THE WORLD BANK

The World Bank lends some \$2 billion each year for formal education projects. While some of these supports environmental education, very little is directly or explicitly directed at biodiversity education.

Development of biodiversity education in the informal sector has been tackled by the Bank, as one of the implementing agencies of the Global Environment Facility and through loans projects.

To date, the Bank has managed nearly 200 biodiversity conservation projects, and many of these have education and awareness components. However, to date, there has been no assessment of the effectiveness of the different types of approaches supported. Biodiversity education is also financed through the use of bilateral trust funds. For example, Dutch funds were used to produce 26 local language focal guides across East Asia, to groups from birds to flowers, turtles to traded species.

### **Biodiversity training and the World Bank Institute - Fiscal Year 2001**

Various training programmes and expert consultations over the past year have suggested the following areas as necessary foci for future training programmes by the Environment and Natural Resources Division of the World Bank Institute:

- (a) Linkages between biodiversity and development;
- (b) Regional framework and cooperation;
- (c) Information and knowledge dissemination.

Training on biodiversity conservation over fiscal year 2001 will range from general discussions of the overall importance and value of biodiversity (via Internet seminars) to more specialized and detailed aspects of biodiversity conservation (through courses). The Bank is a major financier of biodiversity projects but there is perceived to be insufficient understanding or appreciation of the need to stem biodiversity loss. To address this, training over fiscal year 2001 will focus on identifying the role of biodiversity in providing: (a) ecosystem services; and (b) reducing vulnerability and maintaining livelihoods. The training modules developed under this programme would be used for staff and for client training, focusing on economic policy makers from client countries and the senior management of the World Bank. In addition, the training material will be made available to other training programmes on sectors such as forestry, rural development etc., where the impact of land-use policies on biodiversity is critical.

The training will identify negative consequences and trade-offs in projects such as road building or hydro projects. This is an area of particular relevance to task managers and staff working on infrastructure projects as well as for staff working on disaster mitigation, fiscal management, etc., where biodiversity issues may be significant. Incentives and disincentive systems that promote biodiversity loss while encouraging growth and the options and synergies between development and conservation will be central to the training programme. Analytical tools to understand and evaluate

alternatives/options and resources, obtain information on best practice and achieve development through conservation will be used.

### **Products for fiscal year 2001**

- A flexible training programme on biodiversity conservation and use will be developed and used either on its own or aspects of it may be incorporated within other training programmes where the focus may be on other sectors but impacts on biodiversity may be significant.
- Regional training for South and East Asia will be offered, in cooperation with partners such as the IUCN.
- Case-studies that exemplify key aspects of conservation will be collated and disseminated via training courses and Internet seminars.

## **10. THE BIOTRADE INITIATIVE**

Many developing countries are endowed with rich and diverse forest and marine biodiversity resources. These resources provide the basis for a wide range of products and services, such as nuts, fruits, perfumes, natural dyes, oils, medicinal plants, biochemical compounds, eco-tourism, watershed protection and carbon sequestration. Many of these products are used by local populations to make a living, while others have served as an important source of innovation for the pharmaceutical, biotechnology or cosmetic industries.

Countries rich in natural resources are losing their biodiversity at alarming rates. The search for short-term economic gains, population growth, and the poverty of local populations are at the root of this biodiversity loss. Well-known examples concern destruction of coral reefs and tropical forest, due to slash-and-burn practices, excessive commercial logging, and clearing of natural habitats for agriculture and urban expansion.

Sustainable use of biological resources generating tangible economic benefits for populations whose livelihood depends on biodiversity could support development and nature conservation. One of the ways to achieve this is to take advantage of the new investment and trade opportunities that are emerging for biodiversity-based products and services. Interest for these products is on the rise because of the emerging biotechnology industry, the search of industries for recyclable products, and shifts in consumer behaviour in developed and developing countries.

If developing countries are able to seize these opportunities, biodiversity could be turned into an engine for growth and sustainable development. Developing countries are therefore focusing on:

- Developing legal and policy frameworks for the sustainable use of biodiversity,
- Acquiring technical and entrepreneurial capabilities,
- Obtaining market information and market access,
- Developing biodiversity conservation schemes.

In most instances, a lack of capacity in several or all of these areas will result in the provision of low value-added products and services that only marginally benefit the country, biodiversity and local populations.

### **The BIOTRADE Initiative**

The BIOTRADE Initiative was launched in 1996 with the objective of stimulating trade and investment in biological resources to further sustainable development, in line with the objectives of the Convention on Biological Diversity. These objectives are the conservation of biological diversity; sustainable use of its components; and fair and equitable sharing of the benefits arising from the utilization of genetic resources.

BIOTRADE seeks to enhance the capability of developing countries to produce value-added products and services from biodiversity for both domestic and international markets. It is an integrated programme consisting of three complementary components: country programmes; policy development and trade facilitation; and Internet services (*www.biotrade.org*).

The BIOTRADE country programmes are at the heart of BIOTRADE. They identify opportunities and constraints for sustainable development of biodiversity resources in each country, focusing on bio-business development, bio-partnerships, and incentives for conservation, sustainable use, and benefit-sharing. Country programmes are managed by national focal points with experience in the area of sustainable development, such as the Humboldt Institute in Colombia and the National Environmental Council (CONAM) in Peru.

### **Partnerships**

BIOTRADE collaborates closely with other UNCTAD programmes and integrates the private sector, government agencies, local and indigenous communities, and other relevant players in its work. To this end, UNCTAD organized the Partners for Development Conference in Lyon (France), in November 1998, during which bio-partnerships for sustainable development, commercialization and the bio-industry challenge were discussed.

BIOTRADE is developing concrete and innovative partnerships in support of the implementation of its programmes. A few examples of partnerships that have been established are:

- **Poverty and Environment in Amazonia (POEMA):** UNCTAD and POEMA, a non-governmental organization, are developing the Bolsa Amazonia programme. The programme helps local communities seize bio-business opportunities for natural products of the Amazonian region by forging links with the private sector. Private organizations like Mercedes Benz, Henkel, the National Economic and Social Development Bank (BNDES) and the Amazon Bank (BASA), as well as public institutions, are involved in the project;
- **Bioamazonia:** UNCTAD collaborates with the NGO Bioamazonia and A2R, a Brazilian Asset Management Company, in establishing the Amazon Biodiversity Permanent Fund, which is intended to finance biotechnology R&D activities of the Brazilian Programme of Molecular Ecology (PROBEM). PROBEM aims at developing bio-industries and promoting the sustainable use of biodiversity, while also improving the well-being of local populations;
- **International Centre for Trade and Sustainable Development (ICTSD):** UNCTAD and ICTSD have started a joint work programme. The programme aims at providing inputs for policy and institutional development on issues related to biodiversity and climate change that are relevant to the BIOTRADE country programmes.

### **Technical cooperation**

In Colombia, a country programme has been started called "Biocomercio Sostenible". The programme is coordinated by the Humboldt Institute. With support from Colombia, Netherlands and Spain, a BIOTRADE seminar was held in Villa de Leyva, Colombia, in March 1999, to introduce and

discuss the programme. Participants came from various segments of society. Prior to the workshop, a capacity-building seminar for local and indigenous communities was held in Bogota.

BIOTRADE, supported by Germany, Norway and Guinée Ecologie, a Guinean NGO, organized a workshop in Guinea in April 1999. The workshop, which was also attended by traditional healers, focused on the commercialization and sustainable use of medicinal plants.

The United Nations Foundation approved a project for development of BIOTRADE in the Amazonian Region for the period 2000-2002. The project is being implemented with the Governments of eight Amazonian countries and several BIOTRADE partners. The project aims at developing BIOTRADE programmes in the Amazonian regions of Colombia, Ecuador and Peru. It also supports the implementation of the Bolsa Amazonia programme in the Amazonian countries, as well as the development of an investment fund for research and development in biotechnology in Brazil.

The BIOTRADE programme also benefits from contributions from the Governments of France, Netherlands, and Norway, as well as from the Andean Development Corporation (CAF), for the development of activities in other parts of the world.

**BIOTRADE main components (circles):**

***BIOTRADE country programmes***

- Country assessments
- Training and capacity-building
- Institutional development
- Identification of market opportunities
- Bio-partnerships and bio-business development
- Education and public awareness
- Pilot projects

***Policy development and trade facilitation***

- Incentives for biodiversity conservation
- Intellectual property rights and traditional knowledge
- Access to genetic and biological resources
- Benefit-sharing mechanism
- Finance and investment
- Market information and trade facilitation
- Bio-business development

***Internet services***

- BIOTRADE reports and databases
- Updates on country activities
- Discussion forums and electronic workshops
- Sources of information
- Experts and organizations

***List of partner and collaborating organizations:***

A2R (Sao Paulo, Brazil): [www.A2R.com.br](http://www.A2R.com.br)

Bioamazonia (Manaus, Brazil)

Comunidad Andina (CAN, Lima, Peru): [www.comunidadandina.org](http://www.comunidadandina.org)

Consejo Nacional del Ambiente (CONAM, Lima, Perú): [www.conam.gob.pe](http://www.conam.gob.pe)

Convention on Biological Diversity (CBD, Montreal, Canada): [www.biodiv.org](http://www.biodiv.org)

Corporación Andina de Fomento (CAF, Caracas, Venezuela): [www.caf.com](http://www.caf.com)

Guinée Ecologie (Conakry, Guinée)

ICTSD (Geneva, Switzerland): [www.ictsd.ch](http://www.ictsd.ch)

Instituto Alexander von Humboldt (Villa de Leyva, Colombia): [www.humboldt.org.co](http://www.humboldt.org.co)

POEMA (Belém, Brazil): [www.ufpa.br/poema](http://www.ufpa.br/poema)

Rutgers University (New Jersey, USA): [www.rutgers.edu](http://www.rutgers.edu)

United Nations Foundation (UNF, Washington, USA): [www.unfoundation.org](http://www.unfoundation.org)

University of Chicago (Illinois, USA): [www.uchicago.edu](http://www.uchicago.edu)

***General coordination:***

BIOTRADE Initiative, DITC/UNCTAD

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Email: [biotrade@unctad.org](mailto:biotrade@unctad.org)

For more information please visit our web-site [www.biotrade.org](http://www.biotrade.org)

## **11. WORLD HERITAGE CENTRE**

***Global action to promote capacity-building, communication, education, out-reach, networking, and public awareness to support implementation of the natural aspects of the World Heritage Convention***

The World Heritage Convention was launched by UNESCO in 1972 with a primary mission of identifying cultural and natural heritage of outstanding universal value throughout the world, and ensuring its protection through international cooperation. The natural World Heritage sites contain important and significant habitats for *in situ* conservation of biological diversity and represent ecological and biological-diversity processes of exceptional value for humankind. The raising of awareness for natural World Heritage conservation is of utmost importance for Governments and citizens alike to assure the future of biodiversity, its sustainable use and to enable the implementation of the Convention.

In the above light, an International Task Force meeting to elaborate a five-year strategic action plan for “Capacity Building to Serve Outreach, Natural Heritage Networking, Education, Cooperation and Training” (CONNECT) for World Natural Heritage sites management approved by the twenty-third



session of the World Heritage Committee, and financed with income generated by the Self-Financing Programme, was convened at the UNESCO headquarters from 17-20 April 2000.

The Task Force came to a common agreement on the need for actions to promote communication, education and public awareness in natural world heritage conservation to support implementation of the World Heritage Convention. Among the recommendations made by the Task Force include the need to:

(a) Expand partnerships and increase joint activities with organizations and programmes with shared objectives for conserving natural heritage and further develop substantive working relationships with non-governmental organizations and conventions;

(b) Place greater emphasis on strengthening international self-help networks of natural protected area practitioners and faculty resources of regional training centres to increase natural heritage management effectiveness;

(c) Develop effective and systematic delivery systems to assure World Heritage materials actually reach strategic focal points, and, in particular, all natural World Heritage sites, training centres and partners; Increase efforts to directly involve natural World Heritage site personnel in World Heritage activities and decision-making; and

(d) Develop systematic project performance evaluation mechanisms and incentive programmes (such as a Global Natural World Heritage Conservation Award) to recognize and promote excellence in natural World Heritage achievements.

The major outcomes of the Task Force meeting include the preparation of a strategic plan for CONNECT and elaboration of a proposal for collaborative project with the United Nations Foundation and GLOBE (Global Learning and Observations to Benefit the Environment) to provide conservation/environmental education in schools and other such institutions near World Natural Heritage sites.

The Task Force elaborated in detail the goals and rationale of the CONNECT programme of the World Heritage Convention; the actors; tools; frameworks for action and action planning process; priorities for action; and roles and responsibilities.

The World Heritage Convention - "CONNECT" Programme, will enhance the global initiative of the Convention on Biological Diversity (CBD) on Education and Public Awareness for biodiversity conservation and sustainable use.

The findings of the CONNECT Task Force meeting, the Strategic Plan and the Programme of Work (2001-2005) will be presented to the World Heritage Committee at its twenty-fourth session for consideration and approval.

## 12. UNITAR

UNITAR has great interest in working together with UNESCO and the Secretariat of the Convention on Biological Diversity in the area of training personnel concerning the conservation of biological diversity and the sustainable utilization of biological resources.

UNITAR conducts work on training and capacity-building for developing countries and countries in transition in the field of biodiversity law, including in cooperation with UNESCO and its World Heritage Centre.

Recent activities include the publication of two courses of correspondence instruction on the international law of biodiversity and implementation requirements (Nos. 6 and 14); ecosystem management guidelines; an annual training workshop for Asia and the Pacific on Biodiversity Law (at Kushiro in Japan, held in cooperation with the World Heritage Convention); a regional workshop on ecosystem management held in Thailand (in cooperation with UNESCO-Jakarta); and national training workshops on biodiversity law in the Islamic Republic of Iran, Laos, Viet Nam and Zimbabwe.

In cooperation with the Convention Secretariat, UNITAR is developing a proposal for a training package concerning the Biosafety Protocol which will include national projects and regional workshops in Mexico, Argentina, Senegal, South Africa, India and the Philippines.

In cooperation with UNESCO's offices in Jakarta and Samoa UNITAR is also in the process of developing a regional training workshop on legal aspects of coastal zone management that will give special emphasis to biodiversity.

UNITAR shall look forward to cooperating with UNESCO and the Convention on Biological Diversity as the programme under consideration is further developed.

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### **13. DIVERSITAS INTERNATIONAL BIODIVERSITY OBSERVATION YEAR 2001 (IBOY)**

The aims of the International Biodiversity Observation Year 2001 (IBOY) initiative are to increase understanding of biodiversity and to increase public awareness of the importance of biodiversity. To this end, the scientific community has been asked to put forward projects that will contribute to our understanding of this issue, but that will also help to build an integrated science of biodiversity.

Some of these projects also have an educational component. This goal is also that of the DIVERSITAS programme itself, and perhaps, in as much as DIVERSITAS has had problems working across disciplines and attracting funding, it also reflects the failure of the scientific community to date to realize this goal.

The second main goal of IBOY is increase public awareness of the issue of biological diversity and it is attempting to bring the media into the initiative. There are a number of plans for exhibitions, films and television programmes to be produced during 2001 e.g. an IMAX film entitled *Life in the Balance*, a touring exhibition of the giant model of the Tree of Life and a project with National Geographic. Ivan Hattingsh (an IBOY Steering Committee member) at WWF International is the contact point for these projects.

### **14. THE NATURAL HISTORY MUSEUM IN LONDON**

The Natural History Museum in London undertakes many activities in formal and informal education, directly or indirectly relevant to biodiversity, and based on the Museum's collections and expertise in scientific research and education:

- The Museum's galleries are a focus for family visits and a resource for schools, with supplementary materials linked to specific stages of education and parts of the school curriculum—there is also a teachers' centre, which has a range of support materials. The museum employs education professionals who interact with school groups and teachers, and who provide an education input to exhibition design and interpretation.
- The Museum has a new hands-on investigation centre for 7-14 year-olds that enables children to undertake scientific exploration of museum specimens and living material. A wildlife garden in the Museum's ground recreates a number of UK habitats, showing biological diversity as it occurs in particular environments.
- The Museum runs a MSc course on advanced methods in taxonomy and biodiversity with Imperial College London for around 20 postgraduate students each year. Many Museum scientists teach on undergraduate courses and supervise doctoral students (around 80 at any one time) on topics under the broad umbrella of biological diversity.
- The Museum operates adult informal education courses and a system of professional qualifications for identification of organisms
- Much of the Museum's life sciences research is related to biological diversity, producing publications on fundamental science or more applied products such as keys, guides and inventories for many parts of the world. A number of the Museum's international science projects have collaborative educational elements for local communities or capacity building for local expertise—combining direct collaboration and training with innovative use of information technology.
- New developments in collections spaces—the Darwin Centre—is based on a new philosophy of public interaction with the Museum's collection. The Darwin Centre will hold almost 50 million plants and animals. This new access will be mediated by professional interpreters and scientists and will aim to show, among other things, the importance and scale of biological diversity.
- The Museum's website is developing to provide access to information on science and Museum resources, ranging from collections databases and images to interactive educational materials.

*Annex IV*

**REPORT OF SUB-WORKING GROUP I**

*Recommendations*

1. The Sub-Working Group identified possible elements of a programme of work related to the initiative targeting in particular the Parties to the Convention.
2. The Sub-Working Group recommended that, before the launching of such a programme of work, an agenda-setting activity takes place.
3. The Sub-Working Group also recommended that, in order to make biodiversity issues exciting and of personal interest to targeted audiences, links should be made with the biodiversity day and the environment day. In this regard, attractive products for the media should be developed and coordinated press releases arranged for them.
4. The Sub-Working Group agreed that ideas contained in specific proposals be explored with UNESCO for the formal education system
5. The Sub-Working Group stressed the importance of liaising with the private sector in order to mobilize funding.

**PROGRAMME OF WORK**

The Sub-Working Group identified four activity areas:

- Network management
- Knowledge management
- Capacity-building
- Demonstration project.

For each of these activity areas, the Sub-Working Group identified: operational objectives; expected results; activities; ways and means to implement the activities; next steps; and funding and time schedule.

The programme of work as drafted by Sub-Working Group I is contained in the following table.

	<b>MANAGEMENT OF EDUCATION/COMMUNICATION NETWORKS</b>	<b>MANAGEMENT OF KNOWLEDGE ON EDUCATION &amp; COMMUNICATION</b>
<b>OPERATIONAL OBJECTIVES</b>	<ul style="list-style-type: none"> <li>- Coordinate and harmonize networks' work</li> <li>- Promote exchange between networks and Parties</li> <li>- Distribute CBD information</li> </ul>	<ul style="list-style-type: none"> <li>- Enhance possibility of exchange on what works and what does not</li> <li>- Provide contact information</li> <li>- Provide levels of knowledge, so as to briefly review cases and go deeper</li> <li>- Start with a supply approach, and build up a more demand oriented approach to meet needs of what Parties are grappling with through interviews, regional focus groups etc.</li> </ul>
<b>EXPECTED RESULTS</b>	<ol style="list-style-type: none"> <li>1. List of education &amp; communication networks contact addresses, including indigenous groups (CD-ROM and web based)</li> <li>2. Link network lists on national CHM sites to CBD CHM</li> <li>3. Enhanced possibility of exchange</li> </ol>	<ol style="list-style-type: none"> <li>1. Start with 20 cases</li> <li>2. Web and manual on principles of effective education (non formal) and education programmes</li> <li>3. Use of manual for capacity building and for advocacy of social process</li> <li>4. Short summary, contact information, deeper analysis</li> </ol>
<b>ACTIVITIES</b>	<ol style="list-style-type: none"> <li>1. Review what works in network management (IUCN, Sustainable Communities network)</li> <li>2. Ask Parties to provide information on national networks on education, communication, and indigenous groups</li> <li>3. Use network information from UNESCO, UNEP, Greencom USA etc.</li> <li>4. Set up of e-mail exchange with network managers, to provide information; possible interactive (e-mail) discussions on issues through their networks</li> <li>5. Parties could identify the communication, education person in their Biodiversity Action Plan to be networked with this group</li> <li>6. A calendar of events held by education groups could be provided, or links to other websites, to make available possible conferences, etc.</li> <li>7. Make available possibility for face to face exchange, regional meetings, international meetings/add to GBF, IUCN-CEC meetings, NAAEE, etc.</li> </ol>	<ol style="list-style-type: none"> <li>1. Review models of websites that feature cases (e.g. Horizons, Sustainable Communities)</li> <li>2. Set up criteria for case studies (Link cases to CBD themes: Emphasis on stakeholder processes at first, i.e. how to manage participation in NBSAP; build local strategies; involve sectors)</li> <li>3. Interviews to really examine the learning in the cases and make this as explicit as possible (what not done and why, what went wrong, make clear the context of the activity)</li> <li>4. Collect examples from Parties and organizations</li> <li>5. Make links between sites that feature cases</li> <li>6. Later stage provide samples of materials, graphics etc.</li> </ol>
<b>WAYS AND MEANS</b>	Coordination with the CBD Secretariat (part of function of Outreach Officer); Partners: UNESCO (including MAB networks), UNEP, IUCN-CEC	Lead: CBD Secretariat; Partners: GEF for cases, UNEP, UNESCO/MAB, IUCN/CEC
<b>NEXT STEPS</b>	Assign this as function of CBD secretariat Outreach officer Explore use of interns and volunteers to collect information and to upload on Clearing House Site	
<b>FUNDING AND TIME SCHEDULE</b>	...	Languages/translation funds necessary

	<b>CAPACITY BUILDING – STAKEHOLDER APPROACHES</b>	<b>DEMONSTRATION PROJECT</b>
<b>OPERATIONAL OBJECTIVES</b>	Learning to work with: <ul style="list-style-type: none"> <li>- The civil society (in general)</li> <li>- Stakeholders in specific, local situations, relevant to biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>- A demonstration project is tangible, simple, exciting, some sort of icon such as panda, seahorse and butterfly</li> <li>- The message can be applied to other areas, the emotional aspect is visual</li> <li>- It can be at local, national, regional or international level</li> <li>- People may already be working on a project- combination of top up or bottom down</li> </ul>
<b>EXPECTED RESULTS</b>	<ol style="list-style-type: none"> <li>1. Understanding of the need for stakeholder participation</li> <li>2. Skills to apply stakeholder approaches <ol style="list-style-type: none"> <li>a. General</li> <li>b. Related to biodiversity issues</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. Without using the term « biodiversity », encourage them to think of biodiversity</li> <li>2. Understanding of the Earth as a system</li> <li>3. Lead to other actions, change in habits : people become motivated to change their habits</li> </ol>
<b>ACTIVITIES</b>	<ol style="list-style-type: none"> <li>1. Training programmes for <ol style="list-style-type: none"> <li>a. National governments</li> <li>b. Conservation field</li> <li>c. NGOs</li> </ol> </li> <li>2. Manuals (linked with training)</li> <li>3. Clearing house mechanism to support capacity building</li> </ol>	<ol style="list-style-type: none"> <li>7. Adopt a species, a piece of land, a piece of water</li> <li>8. Biodiversity protocol, adopt a group that is already working in area of biodiversity</li> <li>9. Hands-on activities, advertising, multimedia, contests, art, music, drama</li> <li>10. Research history of an area, has it changed? Why?</li> <li>11. Rap songs, pop culture, etc.</li> <li>12. Restoration of a habitat (private sector do some kind of restoration)</li> <li>13. Comics, « Rails to Trails »</li> </ol>
<b>WAYS AND MEANS</b>	CBD Secretariat (facilitating access to training versus organizing/delivering training); IUCN, WWF Network, UN Bodies (CSD, WFP, UNDP, etc.)	<ul style="list-style-type: none"> <li>- Tap into existing organizations and give a biodiversity twist</li> <li>- Private industry</li> <li>- CBD Secretariat to: <ul style="list-style-type: none"> <li>- approach industries</li> </ul> </li> <li>- pilot activities</li> <li>- Partners: Mixture of governmental and non-governmental organizations</li> </ul>
<b>NEXT STEPS</b>		
<b>FUNDING AND TIME SCHEDULE</b>	Happening now, could be expanded	Follow-up with specific time line

*Annex V***REPORT OF SUB-WORKING GROUP II****Objective**

The principal objective of the global initiative (GI) is to develop guidelines and recommendations to Parties addressing education and public awareness within national strategies and action plans on biodiversity, in response to the Convention on Biological Diversity.

**Recommendations**

Recommendations are focused on the process to follow (procedural elements) rather than on substantive elements which are expected to be developed further in detail by a Working Group which would continue working between now and the sixth meeting of the Conference of the Parties to the Convention.

**A. Constitution of a Working Group**

A Working Group should be constituted to pursue development of the global initiative and report to the Conference of the Parties at its sixth meeting as requested in the decision of the fifth meeting of the Conference of the Parties.

It should be composed of a small number of experts representing relevant international organizations and Parties.

It should meet as frequently as possible, at least a few times in person and mostly by electronic means (Internet or electronic meetings and email). With regard to meetings in person, Norway kindly offered to host one such meeting and it was also recommended to use the opportunity of the IUCN Assembly (Amman, October 2000) to meet as well.

It should have specific proposals ready by end of 2001 in time to report on progress achieved to the Conference of the Parties at its sixth meeting.

It should elaborate criteria for projects and activities that reflect the Convention approaches and new elements (economic, social, ecological values of biodiversity, sustainable use, traditional knowledge, access to genetic resources and benefit sharing, etc.)

Management of the process is to be ensured by the Convention Secretariat and UNESCO. IUCN needs to play a key role in particular through its CEC and possibly a few other organizations that have a relevant experience and skills to contribute.

Funding will depend on the quality of proposals made for activities and projects. Early discussion with relevant multilateral and bilateral donors is recommended in that regard.

The Working Group should undertake, *inter alia*, the following activities:

- Evaluation of the effectiveness of projects by multilateral and bilateral donors and technical institutions in this field (e.g. evaluation made by WWF);
- Develop recommendations for preparing and disseminating core materials and make them easily available to all interested organizations and persons (government agencies, non-governmental organizations, community-based organizations, academic institutions, etc.), and facilitate their adaptation to different local, indigenous and cultural concerns, use the Internet services and printed materials as needed in each context, organize national and local distribution (biosphere reserves, universities, gardens, museums, ...);
- Identification of obstacles and gaps to be filled in education and public awareness processes at national and local levels;

- Provision of recommendations on formal, as well as non-formal and informal educational systems (taking into account different structures of education systems, capacity-building needs, teachers' training, methodologies), and, in particular, recommendations and guidelines on specific methodologies for effective communication strategies to be used with other relevant ministries and sectors (private, academic, NGOs, CBOs, etc.) with the purpose of engaging them in participatory processes on education and public awareness.
- Further development of the concept of Convention resource centres as proposed in the UNESCO/Convention Secretariat proposal on the initiative submitted to the Conference of the Parties to the Convention at its fifth meeting (UNEP/CBDCOP/5/INF/5);
- Development of guidelines to utilize all relevant networks for participating and contributing to the global initiative process and to disseminate the materials produced: clearing house mechanism of the Convention on Biological Diversity, the UNESCO network with ministries of education; CEC of IUCN, etc.;
- Organization of the collection and organization through accessible databases of relevant inventories of materials and resources (sources of information, etc.) already available for education and public awareness processes under the Convention on Biological Diversity and sustainable development approach;
- Detailed review –one by one– the ideas contained in the proposal (UNEP/CBD/COP/5/INF/5) along with the additional and new ideas proposed at the Group of Experts meeting;
- Ensuring that the strategic plan being developed for the Convention on Biological Diversity include a distinct component on education and public awareness that reflect the work to be undertaken within the global initiative. This plan should also reflect the presence of education and awareness within all thematic programmes of the Convention

## **B. Survey**

A survey should be undertaken to identify knowledge and understanding as well as needs in this field. The results of the survey would be helpful in guiding the work to be proposed by the Working Group for the global initiative. It should include identifying more than general awareness, in particular, values, attitudes and behaviour on environment in general but more specifically on the various uses and values of biodiversity resources.

## **C. Pilot projects**

A small and manageable number of pilot projects should be undertaken to develop specific education and public awareness activities addressing the objectives of the Convention.

These should be undertaken preferably in connection and close collaboration with the International Network of Biosphere Reserves as priority areas; possibly one in every continent.

A useful point of entry for initiating and linking pilot activities could be to focus in an integrated manner on specific ecosystems such as the tropical regions.

Field guides on specific species (birds, fishes, etc.) should be developed to provide all relevant information on the species and the ecosystem as a base for awareness and education activities on specific local settings using of course, local languages.

Additionally, specific activities identifying the economic and social values of the biodiversity resources should be developed with full participation of local and indigenous communities in the formulation as well as the implementation of projects and activities.



Pilot projects should develop synergies among the various environmental and sustainable development conventions that are relevant for local situations.

Activities should be based on experiential learning (learning by doing) involving all stakeholders in the design, implementation and evaluation of the process.

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