

ANNEX

Recommendation I/1: Recommendation on the *modus operandi* of the Subsidiary Body on Scientific, Technical and Technological Advice

Recalling the relevant provisions of the Convention on Biological Diversity, in particular Article 25 and the principles contained in the preamble of the Convention;

Recalling also the decisions of the first meeting of the Conference of the Parties to the Convention on Biological Diversity, held in Nassau, Bahamas, from 28 November to 9 December 1994, and in particular its decision 17 on the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA);

The first meeting of the SBSTTA, held in Paris at the Headquarters of UNESCO from 4-8 September 1995, recommends for the consideration and adoption by the second meeting of the Conference of the Parties, to be held in Jakarta, Indonesia, from 6 to 17 November 1995, the following additional elements on its *modus operandi*:

I. Functions

1. The functions of the SBSTTA are those contained in Article 25 of the Convention. Accordingly, the SBSTTA will fulfill its mandate under the authority of, and in accordance with, guidance laid down by the Conference of the Parties, and upon its request
2. Pursuant to Article 25, paragraph 3, the functions, terms of reference, organization and operation of the SBSTTA may be further elaborated, for approval by the Conference of the Parties.

II. Rules of procedure

3. The Rules of Procedure for meetings of the Conference of the Parties to the Convention on Biological Diversity shall apply, in accordance with rule 26, paragraph 5, *mutatis mutandis* to the proceedings of the SBSTTA. Therefore, rule 18 on credentials will not apply.
4. In accordance with rule 52, the official and working languages of the SBSTTA will be those of the United Nations Organization. Accordingly, the proceedings of the SBSTTA will be carried out in the working languages of the Conference of the Parties.
5. The Chairman of the SBSTTA, elected at an ordinary meeting of the Conference of the Parties, shall remain in office until his or her successor is elected at the next ordinary meeting of the Conference of the Parties.

III. Frequency and timing of the SBSTTA

6. The SBSTTA shall meet annually and sufficiently in advance of each regular meeting of the Conference of the Parties, for a duration to be determined by the Conference of the Parties. The number and length of the meetings and activities of the SBSTTA and its organs should be reflected in the budget adopted by the Conference of the Parties or other sources of extra-budgetary funding.

IV. Documentation

7. The documentation prepared for meetings will be concrete, focused draft technical reports and will include proposed conclusions and recommendations for consideration of the SBSTTA.

V. Organization of work during the meetings

8. Two open-ended sessional working groups of the SBSTTA could be established and operate simultaneously during meetings of the SBSTTA. They shall be established on the basis of well-defined terms of reference, and will be open to all Parties and observers. The financial implications of these arrangements should be reflected in the budget of the Convention.

VI. Ad hoc technical panels of experts

9. A limited number of ad hoc technical panels of experts on specific priority issues on the programme of work of the SBSTTA may be established, as required, for a limited duration. The establishment of such ad hoc technical panels of experts would be guided by the following elements:

(a) The ad hoc technical panels of experts should draw on the existing knowledge and competence available within, and liaise with, international, regional and national organizations, including non-governmental organizations and the scientific community;

(b) The ad hoc technical panels of experts shall be composed of a limited number of experts competent in the relevant field of expertise, taking into account the need for a balanced representation of the five regional groups referred to in United Nations General Assembly resolution 2997 (XXVII) of 15 December 1972 which would, each year, designate members to be represented in each of the established Intergovernmental Technical Panels of Experts, taking also into account the provision of rule 21, paragraph 1, of the rules of procedure for meetings of the Conference of the Parties;

(c) The SBSTTA will recommend the exact duration and specific terms of reference, when establishing such panels for the approval of the Conference of the Parties;

(d) Panels will be encouraged to use innovative means of communication and to minimize the need for face-to-face meetings;

(e) The ad hoc technical panels of experts may also convene meetings parallel to the proceedings of the SBSTTA;

(f) All efforts will be made to provide adequate voluntary financial assistance for the participation of experts of the panels from developing countries and countries with economies in transition; and

(g) The number of ad hoc technical panels of experts active each year will be limited to a maximum of three and will depend on the amount of resources designated to the SBSTTA by the Conference of the Parties in its budget or on the availability of extra-budgetary resources.

10. In addition, and in order to avoid duplication of efforts and facilitate the use of available scientific, technical and technological competence available within international organizations, including non-governmental organizations, the Executive Secretary may establish, in consultation with the Chairperson and the other members of the Bureau of the SBSTTA, liaison groups, as appropriate. Such liaison groups will depend on the resources available and the results should be widely reported to Parties in a transparent manner.

VII. Contribution of non-governmental organization

11. The scientific and technical contribution of non-governmental organizations to the fulfillment of the mandate of the SBSTTA will be strongly encouraged in accordance with the relevant provisions of the Convention and the rules of procedure for meetings of the Conference of the Parties

VIII. Cooperation with other relevant bodies

12. The SBSTTA shall cooperate with other relevant international, regional and national organizations, under the guidance of the Convention of the Parties, thus building upon the vast experience and knowledge available.

13. In this context, the SBSTTA emphasizes the importance of research to further increase available knowledge and reduce uncertainties, and recommends that the Conference of the Parties consider this issue in relation to the financial resources required for the effective implementation of the Convention.

IX. Regional and subregional preparatory meetings

14. Regional and subregional meetings for the preparation of regular meetings of the SBSTTA may be organized as appropriate. The possibility of combining such meetings with those regional preparatory meetings of the Conference of the Parties, in order to make maximum use of available resources, should be considered. The convening of such regional and subregional meetings will be subject to the availability of voluntary financial contributions

15. The SBSTTA should, in the fulfillment of its mandate, draw upon the contributions of the existing regional and subregional intergovernmental organizations or initiatives.

X. Focal points

16. A list of focal points and focal persons to the SBSTTA shall be established and regularly updated by the Secretariat, on the basis of information provided by Parties and other relevant regional, sub-regional and intergovernmental organizations.

XI. Roster of experts

17. A roster of experts, in the relevant fields of the Convention, will be compiled by the Secretariat from a list of experts provided by Governments and relevant intergovernmental and non-governmental organizations. The roster of experts will be regularly updated.

18. The ad hoc technical panels of experts referred to in paragraph 9 above should make full use of such a roster of experts.

Recommendation I/2: Proposal for a medium-term programme of work of the Subsidiary Body on Scientific, Technical and Technological Advice, 1995 - 1997

Recalling that the Conference of the Parties at its first meeting requested the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) to prepare a proposal for a medium-term programme of work (1995 - 1997) based on the priorities set in the programme of work of the Conference of the Parties and on Article 25 of the Convention on Biological Diversity;

The SBSTTA recommends that

1. Its programme of work will have to be adjusted at its subsequent meetings as the need arises in the medium-term programme of work of the Conference of the Parties;
2. Its work programme should be well focused on the priorities of the medium-term programme of work of the Conference of the Parties to yield concrete in-depth advice;
3. The Conference of the Parties approve the establishment of temporary *ad hoc* panels for selected items from its work programme on an annual basis;
4. Its final work programme and its *ad hoc* technical panels of experts approved by the Conference of the Parties shall be duly reflected in the budget of the Secretariat.
5. Bearing in mind that its programme of work for 1995 is contained in the agenda of its first meeting, the proposed programme of work for 1996 and 1997 is as follows:

PROPOSED PROGRAMME OF WORK OF THE SBSTTA FOR 1996-1997

1. In 1996, the second meeting of the SBSTTA may consider, *inter alia*, the following items:
 - 1.1 Provision of scientific and technical assessments of the status of biological diversity (Article 25, paragraph 2 (a)):
 - 1.1.1 Review of assessment of biological diversity made in 1995, and provision of advice on methodologies for future assessments, as well as the minimum standard data required, as appropriate, to be applied in accordance with national priorities and programmes;
 - 1.1.2 Alternative ways and means in which the Conference of the Parties could start the process of identification, monitoring and assessment of components of biological diversity, as well as processes and categories of activities which have or are likely to have significant adverse impacts on the conservation and sustainable use of biological diversity in accordance with Article 7
 - 1.2 Preparation of scientific and technical assessments of the effects of types of measures taken in accordance with the provisions of the Convention (Article 25, paragraph 2 (b)):
 - 1.2.1 Review and promotion of indicators of biological diversity to be

used for assessment of effectiveness of measures taken in accordance with the provisions of the Convention.

1.3 Identification of innovative, efficient and state-of-the-art technologies and know-how relating to the conservation and sustainable use of biological diversity and provision of advice on the ways and means of promoting development and/or transferring such technologies (Article 25, paragraph 2 (c)):

1.3.1 Identification of sound technologies including biotechnology, an description of ways and means to promote and facilitate access to, and transfer and development of these technologies, and the role of the clearing-house mechanism;

1.3.2 Ways and means to identify and protect the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles and to compensate through the equitable sharing of the benefits arising from the use of such knowledge, innovations and practices, in accordance with Article 8(j) of the Convention on Biological Diversity;

1.3.3 Provision of advice on capacity-building in relation to the safe transfer, handling and use of living modified organisms resulting from biotechnology that may have adverse effect on the conservation of biological diversity and the sustainable use of its components. The Conference of the Parties should ensure that work of the SBSTT on this item should be consistent with its decision on Article 19.3, in order to avoid duplication with any other work that the Conference of the Parties might set in train.

1.4 Provision of advice on scientific programmes and international cooperation in research and development related to conservation and sustainable use of biological diversity (Article 25, paragraph 2 (d)):

1.4.1 Consideration of the role of the clearing-house mechanism in facilitating and promoting technical and scientific cooperation in research and development related to conservation of biological diversity and sustainable use of its components

1.5 Scientific, technical, technological and methodological questions that the Conference of the Parties and its subsidiary bodies may put to the body (Article 25, paragraph 2 (e)):

1.5.1 Provision of advice on scientific, technical and technological aspects of the conservation of agricultural biological diversity and sustainable use of its components (also taking into account the other provisions in Article 25, paragraph 2);

1.5.2. Provision of advice on scientific, technical and technological aspects of the future programme of work for terrestrial biological diversity in the light of the outcome of deliberations of the third session of CSD in 1995;

1.5.3 Provision of scientific, technical and technological advice on economic valuation of biological diversity and its components, in particular in relation to access to genetic resources;

1.5.4 How can the Convention on Biological Diversity contribute to the forthcoming special session of the General Assembly to review implementation of Agenda 21?

2. In 1997, the third meeting of the SBSTTA may consider, *inter alia*, the following items:

2.1 Provision of scientific and technical assessments of the status of biological diversity (Article 25, paragraph 2 (a)):

2.1.1 Continuation of the two items 1.1.1 and 1.1.2 initiated in 1996, as needed.

2.2 Preparation of scientific and technical assessments of the effects of types of measures taken in accordance with the provisions of the Convention (Article 25, paragraph 2 (b)):

2.2.1 What kind of scientific and technical information should be compiled and what ways and means should be used for public education and awareness to promote and encourage understanding of the importance of, and the measures required for the conservation of biological diversity, and what topics should be included in educational programmes in accordance with Article 13?

2.2.2 What kind of scientific and technical information should be collected for environmental impact assessment of projects and what ways and means should be used to share this information to promote minimization of adverse impacts in accordance with Article 14

2.3 Identification of innovative, efficient and state-of-the-art technologies and know-how relating to the conservation and sustainable use of biological diversity and provision of advice on the ways and means of promoting development and/or transferring such technologies (Article 25, paragraph 2 (c)) and the role of the clearing-house mechanism.

2.3.1 Continuation of item initiated in 1996, as needed.

2.4 Provision of advice on scientific programmes and international cooperation in research and development related to conservation and sustainable use of biological diversity (Article 25, paragraph 2 (d)):

2.4.1 Provision of advice on the scientific, technical and technological aspects of international cooperation in the area of conservation of biological diversity and sustainable use of its components, in accordance with Article 18

2.5 Scientific, technical, technological and methodological questions that the Conference of the Parties and its subsidiary bodies may put to the body (Article 25, paragraph 2 (e)).

2.5.1 Identification of alternative models and mechanisms for linkages between *in-situ* and *ex-situ* conservation;

2.5.2 Overall assessment of the SBSTTA's work and of the effectiveness of its advice (1995-1997), in the light of possible future work of the SBSTTA.

Annex to Recommendation I/2

PROPOSED PROGRAMME OF WORK OF SBSTTA FOR 1996-1997

Functions	Year	
	1996	1997
Provision of scientific and technical assessments of the status of biological diversity (Article 25, paragraph 2 (a)).	<p>1. Review of assessment of biological diversity made in 1995, and provision of advice on methodologies for future assessments, as well as the minimum standard data required, as appropriate, to be applied in accordance with national priorities and programmes.</p> <p>2. Alternative ways and means in which the Conference of the Parties could start the process of identification, monitoring and assessment of components of biological diversity, as well as processes and categories of activities which have or are likely to have significant adverse impacts on the conservation and sustainable use of biological diversity in accordance with Art. 7.</p>	1. Continuation of the two items 1 and 2 initiated in 1996, as needed.
Preparation of scientific and technical assessments of the effects of type of measures taken in accordance with the provisions of the Convention (Article 25, paragraph 2 (b)).	3. Review and promotion of indicators of biological diversity to be used for assessment of effectiveness of measures taken in accordance with the provisions of the Convention.	<p>2. What kind of scientific and technical information should be compiled and what ways and means should be used for public education and awareness to promote and encourage understanding of the importance of, and the measures required for, the conservation of biological diversity, and what topics should be included in educational programmes in accordance with Art. 13?</p> <p>3. What kind of scientific and technical information should be collected for environmental impact assessment of projects and what ways and means should be used to share this information to promote minimization of adverse impacts in accordance with Article 14?</p>
Identification of innovative, efficient and state-of-the-art technologies and know-how relating to the conservation and sustainable use of biological diversity and provision of advice on the ways and means of promoting development and/or transferring such technologies (Article 25, paragraph 2 (c)).	<p>4. Identification of sound technologies including biotechnology, and description of ways and means to promote and facilitate access to, and transfer and development of these technologies, and the role of the clearing house mechanism.</p> <p>5. Ways and means to identify and protect the knowledge, innovations</p>	4. Continuation of item initiated in 1996, as needed.

Functions	Year	
	1996	1997
	<p>and practices of indigenous and local communities embodying traditional lifestyles and to compensate through the equitable sharing of the benefits arising from the use of such knowledge, innovations and practices, in accordance with Article 8(j) of the Convention on Biological Diversity.</p> <p>6. Provision of advice on capacity building in relation to the safe transfer, handling and use of living modified organisms resulting from biotechnology that may have adverse effect on the conservation of biological diversity and the sustainable use of its components. The COP should ensure that work of the SBSTTA on this item should be consistent with its decision on Article 19.3, in order to avoid duplication with any other work that the COP might set in train.</p>	
Provision of advice on scientific programmes and international cooperation in research and development related to conservation and sustainable use of biological diversity (Article 25, paragraph 2 (d)).	7. Consideration of the role of the clearing house mechanism in facilitating and promoting technical and scientific cooperation in research and development related to conservation of biological diversity and sustainable use of its components.	5. Provision of advice on the scientific, technical and technological aspects of international cooperation in the area of conservation of biological diversity and sustainable use of its components, in accordance with Art. 18.
Scientific, technical, technological and methodological questions that the Conference of the Parties and its subsidiary bodies may put to the body (Article 25, paragraph 2 (e)).	<p>8. Provision of advice on scientific, technical and technological aspects of the conservation of agricultural biological diversity and sustainable use of its components (also taking into account the other provisions in Article 25, paragraph 2).</p> <p>9. Provision of advice on scientific, technical and technological aspect of the future programme of work for terrestrial biological diversity in the light of the outcome of deliberations of the third session of the CSD in 1995.</p> <p>10. Provision of scientific, technical and technological advice on economic valuation of biological diversity and its components, in particular in relation to access to genetic resources.</p> <p>11. How can the Convention on Biological Diversity contribute to the forthcoming special session of the General Assembly to review implementation of Agenda 21?</p>	<p>6. Identification of alternative models and mechanisms for linkages between <i>in-situ</i> and <i>ex-situ</i> conservation.</p> <p>7. Overall assessment of SBSTTA work and of the effectiveness of its advice (1995-1997), in the light of possible future work of the SBSTTA.</p>

Recommendation I/3: Alternative ways and means in which the Conference of the Parties could start the process of considering the components of biological diversity particularly those under threat and the identification of action which could be taken under the Convention

Recalling that the Conference of the Parties decided to address, at its second meeting, preliminary considerations of components of biological diversity particularly under threat and actions which could be taken under the Convention;

Recalling also that, in its decision I/7 taken at its first meeting, the Conference of the Parties requested the SBSTTA to advise on how the Conference of the Parties could start the process of considering these components;

Recalling further the provisions of Article 20, paragraph 4, of the Convention on Biological Diversity;

The first meeting of the SBSTTA recommends to the second meeting of the Conference of the Parties to consider the following:

1. Conservation and sustainable use of biological diversity and its components should be addressed in a holistic manner, taking into account the three levels of biological organization (genomes and genes; species and communities; and ecosystems, habitats and landscapes) and fully considering socio-economic and cultural factors. However, the ecosystem approach should be the primary framework of action to be taken under the Convention.

2. Assessment of the status and trends of components of biological diversity and causes of biodiversity losses provides baseline data which can assist countries to formulate their biodiversity strategies, plans and programmes to implement the provisions of the Convention. This activity leads to the identification of both components under threat and those components that might become threatened, and for which urgent action might be needed to stop or prevent their loss. There is, however, a need to identify, evaluate, develop and share methods needed for the assessment and conservation and sustainable use of biological diversity. Specifically there is a need to:

(i) Further describe the categories of components of biological diversity set down in Annex I of the Convention;

(ii) Evaluate methodologies for identification, characterization and classification of biological diversity and their components so as to identify methods suitable for different conditions of data availability and how their effectiveness can be enhanced;

(iii) Identify methodologies for detecting national and international negative trends in biological diversity;

(iv) Promote exchange of information on existing methodologies through various information systems including electronic mail;

(v) Identify and develop methods for integration of biodiversity concerns into all relevant sectoral policies, plans and actions; integrate biodiversity considerations into area planning mechanisms and processes; and to develop methods for an integrated management approach;

(vi) Develop methods for identifying the links between socio-economic and cultural factors and biological diversity change or loss, and also identify how these factors should be included when deciding

upon effective action to correct for unsustainable use/influence, including environmental impact assessment

(vii) Develop methods for management of biological diversity based on limited knowledge;

(viii) Develop or refine models of processes responsible for biological diversity maintenance and those relating to ecological services provided by biological diversity for different ecosystems through multidisciplinary groups consisting, *inter alia*, of ecologists, natural history experts, oceanographers, economists and sociologists. Identification and targeting of ecological processes and functions should be the basis for conservation and sustainable use of biological diversity and its components;

(ix) Encourage Governments to carry out case studies to learn about ecosystem management efforts, identifying barriers to implementing the ecosystem approach as well as ways and means of overcoming such barriers. Major issue areas influencing the effectiveness of the ecosystem approach may be examined in such studies, including, *inter alia*, budget issues, institutional issues, public participation, science and information as well as legal authorities. The results of such studies should be reported to the Secretariat of the Convention on Biological Diversity for dissemination and further methodological work.

3. While there is merit in assessing the status and trends of components of biological diversity, it is essential to identify the driving forces determining the status and trends, so that appropriate action can be taken to control them.

4. There is a need for each Party to start assessing the effectiveness of measures taken under the Convention. However, methods for assessing the effectiveness of measures to conserve or sustainably use biological diversity should be reviewed. The use of indicators of biological diversity and the status of its components is particularly time- and cost-effective. Several indicators are currently being used and developed. They should be reviewed and their use promoted.

5. The Conference of the Parties should organize international cooperation:

(i) To respond to the needs formulated under paragraphs 1 to 4 above and, more specifically, to compile and assess the above-mentioned methodologies, taking into account existing data, processes and reference materials;

(ii) To identify possible concrete actions for the conservation of biological diversity and to use its components sustainably;

(iii) To make these studies available through the clearing-house mechanism established by the Convention to promote technical and scientific cooperation, and to promote a regional approach to further enhance the collection and analysis of relevant information.

6. These studies should yield concrete information, useful to various national sectors, and assist Contracting Parties in implementing the provisions of the Convention.

7. The financial and administrative implications of all these recommendations, if they are approved by

the Conference of the Parties, should be taken into consideration in the budget of the Convention. The Conference of the Parties should request Parties to provide enough financial resources to undertake this process.

8. Noting that an Intergovernmental Panel on Forests has been established by the CSD and recognizing the importance of forests for the conservation and sustainable use of biological diversity, the SBSTTA recommends that the Conference of the Parties consider whether an input to that process would be desirable. In this context, the SBSTTA suggests that the following main elements be considered:

(i) There is an urgent need to identify the main causes that lead to the decline of forest biological diversity, develop and promote the use of methods for the management, conservation and sustainable use of forests, based on the identification and targeting of ecological processes and the multiple roles and functions of forest ecosystems, including ecological landscape planning and environmental impact assessment;

(ii) Urgent development and application of ways and means to ensure fair and equitable sharing of benefits derived from the use of forest genetic resources would provide a major incentive for efforts to maintain forest biological diversity;

(iii) The protection of the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles, and compensation through the equitable sharing of the benefits arising from the use of such knowledge, innovations and practices, in accordance with Article 8(j) of the Convention on Biological Diversity, should be promoted in order to improve conservation and sustainable use of forest biological diversity.

9. The SBSTTA encourages all Parties and observers to submit their view on the scientific, technical and technological dimensions of the conservation and sustainable use of forest biological diversity to the Secretariat of the Convention on Biological Diversity in good time before the second session of the Conference of the Parties in order to facilitate for the Conference of the Parties, should it so decide, the preparation of an input to the Panel

Recommendation I/4: Ways and means to promote and facilitate access to, and transfer and development of technology as envisaged in Articles 16 and 18 of the Convention

Recalling the relevant provisions of the Convention and, in particular, Article 25, paragraph 2(c) and Article 20, paragraph 4;

Recalling also that the Conference of the Parties at its first meeting requested the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) to provide advice to the second meeting of the Conference of the Parties on ways and means to promote and facilitate access to, and transfer and development of technology;

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1. The SBSTTA recommends for consideration by the Conference of the Parties at its second meeting that:

(a) The SBSTTA, in order to provide advice to the Conference of the Parties on technical and technological matters concerning technical cooperation, access to and transfer of technology relevant to the conservation and sustainable use of biodiversity or which makes use of genetic resources, subject to the provisions of Articles 16, 18 and 25(2)c, should, *inter alia*, develop and maintain an overview of relevant existing mechanisms and activities, and identify the unmet needs of Parties, and the ways and means to achieve synergy with existing activities and to facilitate new initiatives to meet such needs;

(b) As the Conference of the Parties at its second meeting will review concrete costed recommendations for the establishment of the clearing-house mechanism, and the SBSTTA will address scientific, technical and technological questions, consideration should be given by the Conference of the Parties to the need for coordination between the SBSTTA and the clearing-house mechanism so as to facilitate the objectives of the Convention, whilst avoiding duplication;

(c) The Conference of the Parties may wish to clarify the relationship which it envisages between the SBSTTA, the clearing-house mechanism and the Secretariat, identifying relevant operational and service responsibilities. These should allow the clearing-house mechanism to provide assistance to the SBSTTA and the SBSTTA to make inputs to the clearing-house mechanism. The SBSTTA stands ready to provide assistance to the Conference of the Parties in its guidance of the functioning of the clearing-house mechanism;

(d) The Conference of the Parties request the Executive Secretary to prepare, for consideration by the SBSTTA at its second meeting, a substantive and well-focused background document, taking into account the views expressed by States Parties and observers during the first meeting of SBSTTA, the deliberations and decisions of the first and second meetings of the Conference of the Parties, including those decisions related to the clearing-house mechanism, and the deliberations of the first and second sessions of the Intergovernmental Committee on the Convention on Biological Diversity, and of the open-ended Intergovernmental Meeting of Scientific Experts on Biological Diversity, held in Mexico in April 1994;

(e) The Conference of the Parties request the Executive Secretary to invite relevant submissions by States Parties, observers and relevant international and non-governmental organizations, including, in particular, the private sector, and to take these into account in the preparation of the background document. Subject to the approval of the Conference of the Parties, the background document should identify key priority issues and contain specific proposals for consideration by the SBSTTA for recommendation to the Conference of the Parties. To assist in the preparation of the background document, the Executive Secretary may, as appropriate, establish a liaison group, in accordance with recommendation I/1 on the *modus operandi* of the SBSTTA.

2. The SBSTTA recognizes that the issue of intellectual property rights is on the medium-term programme of work of the Conference of the Parties and looks to the Conference of the Parties for guidance with respect to the future work of the SBSTTA on the transfer of technology in accordance with the provisions of Article 16 and other relevant provisions of the Convention. For instance, one specific issue

which came up in the SBSTTA's deliberations was the utility of including in patent applications using biological source materials information relating to country/countries of origin and common public knowledge of the use of those materials.

Recommendation I/5: Scientific and technical information to be contained in the national reports

Recalling Article 26 of the Convention on Biological Diversity, as well as Article 20, paragraph 4;

Recalling also decision 1/7 of the first meeting of the Conference of the Parties which requested the first meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) to consider as a matter of priority what kind of scientific and technical information should be contained in national reports on measures taken for the implementation of the provisions of the Convention and their effectiveness in meeting the objectives of the Convention;

The first meeting of the SBSTTA recommends to the second meeting of the Conference of the Parties to consider the following elements in deciding on the form and intervals of national reports:

1. The scientific and technical information to be contained in national reports will depend on the expected decisions of the Conference of the Parties on the form and intervals of national reports;
2. Such decisions on the form of national reports should take into account:
 - (a) the three-fold objectives of the Convention;
 - (b) the different socio-economic conditions of Parties, as well as the various stages of the implementation of the Convention at the national level
 - (c) the evolving tasks required under the Convention, as well as the evolutionary character of the reporting requirement contained in Article 26 of the Convention;
 - (d) the comprehensive scope of the Convention, as well as its multisectoral and multidisciplinary approach;
 - (e) the need for an agreed standard and methodologies for reporting, with particular regard to biological diversity data gathering;
 - (f) the purposes of reporting, as well as the need to share national experiences and relevant information between Parties;
 - (g) the need for a flexible form of reporting so that it may be adjusted in the light of progress achieved and experience gained in the implementation of the Convention at the national level;
3. Such decisions on intervals of reporting should take into account the following elements:
 - (a) the human, technical and financial implications related to the interval of reporting agreed

upon;

- (b) the time required for the preparation by the Parties and, in particular, the developing countries and countries with economies in transition Parties, of their national reports
- (c) the need to avoid placing a heavy burden on Parties with regard to reporting requirements;
- (d) the need also to streamline information contained in national reports of Parties addressed to various fora related to biological diversity, including the Commission on Sustainable Development, so as to avoid duplication of efforts and overlap of reporting activities;
- (e) the need to proceed in a step-wise approach

4. In the light of paragraphs 2 and 3 above, the Conference of the Parties may wish to recommend that the first report of Parties may focus on the measures taken for the implementation of Article 6 of the Convention, as well as the information available in the national country studies on biological diversity. In this regard, the Conference of the Parties may wish to recommend the format contained in the annex of this recommendation. The content of such subject-oriented reports will be based on the outcome of the deliberations of the second meeting of the Conference of the Parties on approaches and experiences related to the implementation of Article 6.

5. The subsequent national reports may focus on selected subjects contained in the medium-term programme of work of the Conference of the Parties and the programme of work of the SBSTTA.

6. Such subject-oriented reports may lead, at a later stage, to a comprehensive report to be submitted by Parties on the implementation of the Convention.

7. In deciding on the form and intervals of national reports, due regard should also be paid to the need to strengthen capacity-building of developing countries and countries with economies in transition Parties, as well as to reflect the financial implications of such decisions in the budget of the Convention on Biological Diversity, so as to establish adequate administrative and human capacities.

Annex to Recommendation I/5

POSSIBLE FORMAT OF NATIONAL REPORT ON THE IMPLEMENTATION OF ARTICLE 6

(a) **Executive summary:** a brief summary of the action plan report, stating succinctly the importance of biodiversity, the commitment to the Convention, the mandate, the participants list, the biotic wealth and national capacity, the goals and gaps, strategic recommendations and characteristics of the action (who will do what, when, where, with what means and funding).

(b) **Introduction:** describe why biodiversity is important to the country and its local

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communities. Explain the Convention and the nation's commitment to its provisions. Present the aim of the national biodiversity action plan and specify to whom it is directed.

(c) **Background:** describe the legal and policy framework that provides the mandate and instructions for preparing the action plan report. Provide a short summary of the nation's biotic assets, capacity (human resources, institutions, facilities, and funding) and ongoing programmes. Explain the institutional arrangements and responsibilities, with a view to informing people of the manner in which the strategic recommendations will be implemented.

(d) **Goals and objectives:** state the vision for biodiversity and its place in the society, focusing on its protection, scientific understanding, sustainable use, and on the equitable sharing of its benefits and costs. The specific targets to meet the local, national, and international goals in terms of protecting, assessing, utilizing, and benefiting from biodiversity and its components need to be determined.

(e) **Strategy:** summarize the gaps between the current situation in the country and the stated vision, goals and objectives. Summarize the strategic recommendations, including the activities, policies, and tasks that have been selected for implementation to cover the gaps. Assign relative priorities to each.

(f) **Partners:** describe the public and private entities, communities and industries that have participated in the process and have agreed to be responsible for particular activities and investments.

(g) **Action:** present the detailed activities, tasks and policies to be implemented. Explain which partner (ministry, industry, indigenous group, NGO, or university) will implement each item, where, and what measures the partners will employ.

(h) **Schedule:** present a timetable for the implementation of the various tasks, reflecting the priorities that have been assigned. Note signposts to help signal progress or delay.

(i) **Budget:** provide the budget for the plan of action, showing funding requirements for operating expenses, capital purchases, transport, field costs, etc. List the personnel needed by category of skill or background, the facilities and services required, and possible international technical and financial cooperation

(j) **Monitoring and evaluation:** explain the measures to be used for tracking the results of the action plan and for monitoring changes in the economy, environment and society. Give the indicators that will be used. Present the individuals and organizations who will carry these responsibilities and how they were selected. Note the audience for the reports, along with the document's content and timing of implementation.

(k) **Sharing of national experience:** present success stories on the implementation of Article 6 which might be useful for other Parties.

Recommendation I/6: Global Biodiversity Outlook

In view of the need for a large dissemination of scientific and technical information relevant to the conservation and the sustainable use of biological diversity;

In view also of the importance of scientific and technical research in achieving the goals and objectives of the Convention on Biological Diversity;

The first meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), held in Paris from 4 to 8 September, recommends that the second meeting of the

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Conference of the Parties to the Convention on Biological Diversity, to be held in Jakarta, Indonesia, from 6 to 17 November 1995, consider:

1. Requesting the Secretariat to prepare, under the guidance of the Bureau of the Conference of the Parties and the SBSTTA, a periodic report on biological diversity. Such a report, which may also reflect the views of the scientific community, may include, *inter alia*:
 - (a) A brief summary of the status and trends of biological diversity at global and regional level;
 - (b) An analysis of the global and regional trends in the implementation of the objectives of the Convention on Biological Diversity on the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising out of the utilization of genetic resources;
 - (c) A summary of the implementation of the Convention on Biological Diversity at the national level on the basis of the information contained in national reports to be submitted by Parties in accordance with Article 26 of the Convention;
 - (d) An overview of the cooperation with other biological-diversity-related conventions and intergovernmental processes; and
 - (e) A presentation on the implementation of the decisions of the Conference of the Parties and the recommendations adopted by the SBSTTA.
2. The implications of this proposal in terms of financial and human resources in relation to other tasks to be fulfilled by the Secretariat.

Recommendation I/7: Contribution to the preparation for the forthcoming International Technical Conference on the Conservation and Utilization of Plant Genetic Resources for Food and Agriculture in 1996

Recalling decision I/7 of the first meeting of the Conference of the Parties, which requested the first meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), to provide advice on "How can the Convention on Biological Diversity contribute to the preparation for the forthcoming International Technical Conference on the Conservation and Utilization of Plant Genetic Resources for Food and Agriculture in 1996?";

Recalling also resolution 3 of the Nairobi Final Act on the interrelationship between the Convention on Biological diversity and the promotion of sustainable agriculture;

The first meeting of the SBSTTA recommends to the second meeting of the Conference of Parties to consider the following:

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1. A possible statement from the Conference of the Parties to the fourth International Technical Conference on the Conservation and Utilization of Plant Genetic Resources for Food and Agriculture, to be held in June 1996. Such a statement may include the common elements identified in the report prepared by the Secretariat (UNEP/CBD/SBSTTA/1/7), as well as the views expressed during the first meeting of the SBSTTA regarding the long-term programme of work of the Conference of the Parties and the global plan of action to be adopted at the Leipzig Conference. It may also include the following elements:

(a) the comprehensive nature and the multidisciplinary character of the Convention on Biological Diversity, aimed at addressing all facets of biological diversity within its three-fold objectives: the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of its benefits;

(b) the importance attached by the Conference of the Parties to the conservation of plant genetic resources for food and agriculture and their use in a sustainable manner;

(c) the recognition that plant genetic resources for food and agriculture are critical components of biological diversity;

(d) the large number of Parties (127) to the Convention on Biological Diversity committed to implementing the comprehensive provision of the Convention and the fulfillment of its objectives

(e) the need to assess the current situation of plant genetic resources for food and agriculture and identify gaps and needs for priority action;

(f) the need to strengthen the capacity-building, in particular in developing countries;

(g) the relevance of the issues to be considered by the fourth International Technical Conference on the Conservation and Utilization of Plant Genetic Resources for Food and Agriculture to the provisions of the Convention on Biological Diversity;

(h) the need to make the processes of the fourth International Technical Conference on the Conservation and Utilization of Plant Genetic Resources for Food and Agriculture and the Convention on Biological Diversity mutually supportive and complementary, in harmony with the provisions of the Convention.

2. To examine, at the third meeting of the Conference of the Parties, the outcome of the fourth International Technical Conference on the Conservation and Utilization of Plant Genetic Resources for Food and Agriculture, in order to consider how the Convention on Biological Diversity can contribute to the implementation of the Global System on Plant Genetic Resources. This issue may also be considered in relation to the agenda item of the third meeting of the Conference of the Parties on agricultural biological diversity within the context of the Convention's three objectives and its provisions.

3. The SBSTTA stands ready, if so requested by the Conference of the Parties, to provide its advice for the consideration of this item by the third meeting of the Conference of the Parties

4. Compliment the Secretariat of the Food and Agriculture Organization of the United Nations responsible for the programme and processes for the fourth International Conference on the Conservation

and Utilization of Plant Genetic Resources for Food and Agriculture and note that the innovative model based upon national reports, regional and subregional meetings leading to a global assessment of biological diversity of unique ecosystems is exemplary.

Recommendation I/8: Scientific, technical and technological aspects of the conservation and sustainable use of coastal and marine biological diversity

Recalling that the Conference of the Parties decided to address, at its second meeting, advice from the SBSTTA on the scientific, technical and technological aspects of the conservation and sustainable use of coastal and marine biological diversity;

Recalling further that, in its decision I/7 taken at its first meeting, the Conference of the Parties requested the SBSTTA to advise on how the Conference of the Parties could start the process of considering those aspects;

1 . In order to advance this work the SBSTTA has before it a number of papers on marine and coastal biological diversity. From these papers and a detailed discussion in plenary, a number of key areas were selected for consideration. Included in the overall aspect of integrating coastal and marine area management were the more specific issues of sustainable use of living coastal and marine resources, mariculture and the control of alien organisms. Recommendations on all these issues are included below. The rationale for these recommendations, which was based on the documentation before the SBSTTA and, in particular, document UNEP/CBD/SBSTTA/1/8, is included in the annex. 1 . In order to advance this work the SBSTTA has before it a number of papers on marine and coastal biological diversity. From these papers and a detailed discussion in plenary, a number of key areas were selected for consideration. Included in the overall aspect of integrating coastal and marine area management were the more specific issues of sustainable use of living coastal and marine resources, mariculture and the control of alien organisms. Recommendations on all these issues are included below. The rationale for these recommendations, which was based on the documentation before the SBSTTA and, in particular, document UNEP/CBD/SBSTTA/1/8, is included in the annex.

2 . Although education, training and raising public awareness at the international and regional level were regarded as key delivery mechanisms, it was felt that, due to the insufficient time and complexity of issues in question, they should be comprehensively considered at the next session of the SBSTTA. The same session of the SBSTTA should also address the questions related to bio-prospecting on the deep sea bed, including access to its genetic resources. 2 . Although education, training and raising public awareness at the international and regional level were regarded as key delivery mechanisms, it was felt that, due to the insufficient time and complexity of issues in question, they should be comprehensively considered at the next session of the SBSTTA. The same session of the SBSTTA should also address the questions related to bio-prospecting on the deep sea bed, including access to its genetic resources.

3 . The SBSTTA considers the conservation and sustainable use of marine and coastal biological diversity to be of such significance that it recommends the establishment of an ad hoc expert panel to provide advice on current issues. The expert panel shall be established for a period of three years and shall make an annual progress report. Issues which should be immediately reviewed by this panel are: the gaps in knowledge of the distribution and abundance of marine and coastal biodiversity; the particular needs for marine and coastal conservation and sustainable use of biodiversity in the context of threat alleviation,

technology transfer; the linkages between the status of marine and coastal biodiversity and management of watersheds as well as pollution from marine vessels. It should also review the achievements of the scientific bodies associated with other international legal agreements, programmes and bodies dealing with aspects of marine and coastal biodiversity. 3 . The SBSTTA considers the conservation and sustainable use of marine and coastal biological diversity to be of such significance that it recommends the establishment of an ad hoc expert panel to provide advice on current issues. The expert panel shall be established for a period of three years and shall make an annual progress report. Issues which should be immediately reviewed by this panel are: the gaps in knowledge of the distribution and abundance of marine and coastal biodiversity; the particular needs for marine and coastal conservation and sustainable use of biodiversity in the context of threat alleviation, technology transfer; the linkages between the status of marine and coastal biodiversity and management of watersheds as well as pollution from marine vessels. It should also review the achievements of the scientific bodies associated with other international legal agreements, programmes and bodies dealing with aspects of marine and coastal biodiversity.

4 . The SBSTTA intends to review this panel's conclusions at its fourth session in order to provide the fifth meeting of the Conference of the Parties with recommendations on this issue. 4 . The SBSTTA intends to review this panel's conclusions at its fourth session in order to provide the fifth meeting of the Conference of the Parties with recommendations on this issue.

5 . The following recommendations in this report for the Conference of the Parties are issues on conservation and sustainable use of marine and coastal biological diversity that the Conference of the Parties may wish to suggest to the fourth session of the Commission on Sustainable Development (CSD).⁵ .

The following recommendations in this report for the Conference of the Parties are issues on conservation and sustainable use of marine and coastal biological diversity that the Conference of the Parties may wish to suggest to the fourth session of the Commission on Sustainable Development (CSD).

6 . The SBSTTA recommends to the Conference of the Parties to forward the following statements to the next session of the CSD:⁶ . The SBSTTA recommends to the Conference of the Parties to forward the following statements to the next session of the CSD:

(a) The Conference of the Parties endorses integrated marine and coastal area management as the most suitable framework for addressing human impacts on marine and coastal biological diversity and for promoting conservation and sustainable use of these biological diversity. Governments are encouraged to establish and/or strengthen, as appropriate, institutional, administrative, and legislative arrangements for the development of integrated management of marine and coastal ecosystems, plans and strategies for coastal and marine areas, and their integration within national development plans

(b) Research and monitoring are urgently needed to assess the status and trends of marine and coastal biodiversity, evaluate the success of management and conservation actions, and develop more effective management practices. Research and monitoring programmes should include biological, physical, social, cultural and economic studies, consistent with the time-frame commensurate with their objectives. They should be supported by information management, interpretation and dissemination. Resource owners, users and managers should be involved to the maximum extent possible.

(c) Recognizing the need for global and regional action to address the loss of coastal and marine biodiversity, the Conference of the Parties recommends that the CSD call for the implementation of existing national and regional strategies to conserve coastal and marine biodiversity. The Conference of the Parties further recommends that the CSD recognize the International Coral Reef Initiative (ICRI) and other

similar initiatives and endorse the ICRI Call to Action.

(d) The Conference of the Parties endorses and highlights the inclusion of representative systems of marine and coastal protected areas within integrated area management, consistent with the objectives of the Convention on Biological Diversity.

7. The SBSTTA further recommends to the Conference of the Parties that it recommend to the CSD the need for the CSD to evaluate the world-wide over-capitalization of fishing fleets and its impact on marine and coastal biodiversity, and to review the role of national government subsidies in contributing to the over-capitalization. 7. The SBSTTA further recommends to the Conference of the Parties that it recommend to the CSD the need for the CSD to evaluate the world-wide over-capitalization of fishing fleets and its impact on marine and coastal biodiversity, and to review the role of national government subsidies in contributing to the over-capitalization.

8. The SBSTTA further recommends to the Conference of the Parties that it recommend to the CSD to highlight and urge the need for international cooperation to stem the adverse impacts of alien species introductions. 8. The SBSTTA further recommends to the Conference of the Parties that it recommend to the CSD to highlight and urge the need for international cooperation to stem the adverse impacts of alien species introductions.

9. The following recommendations are recommended for the consideration of the second meeting of the Conference of the Parties. 9. The following recommendations are recommended for the consideration of the second meeting of the Conference of the Parties

10. On integrated marine and coastal area management, the SBSTTA recommends to: 10. On integrated marine and coastal area management, the SBSTTA recommends to:

(a) Promote integrated marine and coastal area management as the framework for addressing impacts of land-based activities on marine and coastal biodiversity by, *inter alia*, minimizing or eliminating inputs of pollutants (including persistent organic and radioactive substances, excessive nutrients and sediments), in particular those arising from municipal waste, industrial effluents, deforestation, watershed degradation, unsustainable forms of agriculture and mining.

(b) Promote integrated marine and coastal area management as the framework for addressing human impacts on marine and coastal biological diversity and encourage governments, communities, and users to develop and adopt integrated management measures, including:

- (i) land/habitat use capability analysis and planning for multiple use;
- (ii) environmentally sound land and coastal resource use practices based on precautionary ecosystem management approaches and best management practices; and
- (iii) sustainable tourism planning and management.

(c) Carry out environmental impact assessment of all major coastal and marine development activities with special attention to marine and coastal biological diversity, and taking into account cumulative impacts. Undertake systematic monitoring and evaluation of project impacts during implementation.

(d) Address socio-economic needs of coastal communities in the planning and implementation of the marine and coastal area management.

(e) Promote rapid appraisal techniques to improve the conservation and management of marine and coastal biological diversity.

(f) Address impacts of land-based activities on marine and coastal biological diversity and identify methodologies and research to assess these impacts, in close cooperation with the implementation of the Global Programme of Action for the Protection of the Environment from Land-Based Activities, the major product of the UNEP Conference on Protection of the Marine Environment from Land-Based Activities.

(g) Address impacts of desludging and pollution by maritime vessels on marine and coastal biological diversity, in particular in those countries which border international waterways, and adopt measures to mitigate adverse effects.

(h) Consider the effectiveness of both area management and species management as tools to provide a balanced approach to use and conservation of marine and coastal biological diversity.

11. On marine and coastal protected areas the SBSTTA recommends to: 11. On marine and coastal protected areas the SBSTTA recommends to:

(a) Based on consideration of biogeography and scale, and the objectives of the Convention on Biological Diversity, establish or consolidate representative systems of marine and coastal protected areas. Enhance linkages and information exchange among the sites.

(b) Promote research and monitoring of marine and coastal protected areas to assess their value for the conservation and sustainable management of biodiversity. Apply, as appropriate, rapid assessment techniques to identify and improve the management of protected areas.

(c) Explore means to incorporate marine and coastal protected areas within a broader framework for multiple use planning, as exemplified by UNESCO MAB Biosphere Reserves.

(d) Encourage the participation of local communities concerned and of resource users in the planning, management and conservation of coastal and marine areas

(e) Consider all three levels of biological diversity, and factors determining their structure and function, in the development and implementation of management plans.

12. On sustainable use of coastal and marine living resources, the SBSTTA recommends to the Conference of the Parties that, as far as possible and appropriate, Parties should include in their national plans and programmes the following basic management elements ensuring that:

12. On sustainable use of coastal and marine living resources, the SBSTTA recommends to the Conference of the Parties that, as far as possible and appropriate, Parties should include in their national plans and programmes the following basic management elements ensuring that:

(a) Management decisions are based on application of the precautionary approach;

(b) Management decisions are based on the best available and sound scientific knowledge, research and information, taking into account ecosystem impacts;

(c) Waste (such as waste through discard, spoilage, or mortality in the trade in living organisms) is reduced;

(d) Local communities, users and indigenous people are involved in the conservation and management of resources;

(e) National legislation ensuring the conservation and sustainable use of living marine and coastal resources in conformity with the Convention on Biological Diversity, the United Nations Convention on the Law of the Sea (UNCLOS) and Agenda 21, and that the provisions of the draft FAO Code of Conduct for Responsible Fisheries once approved, will be followed;

(f) Existing international agreements addressing over-exploitation and conservation of marine and coastal resources, are acceded to, and fully implemented and enforced, especially the Agreement on Straddling and Highly Migratory Fish Stocks; and

(g) Monitoring mechanisms are used or established to assist sustainable management of marine and coastal living resources.

13. Regarding the management and technology tools recommended by FAO Code of Conduct, the SBSTTA recommends that the Conference of the Parties support the efforts of FAO to provide advice on these tools, and request an opportunity for the input of the Conference of the Parties into the draft Code of Practice in order to ensure that the Code becomes fully consistent with the objectives and provisions of the Convention on Biological Diversity.

13. Regarding the management and technology tools recommended by FAO Code of Conduct, the SBSTTA recommends that the Conference of the Parties support the efforts of FAO to provide advice on these tools, and request an opportunity for the input of the Conference of the Parties into the draft Code of Practice in order to ensure that the Code becomes fully consistent with the objectives and provisions of the Convention on Biological Diversity.

14. In addition, the SBSTTA recommends to the Conference of the Parties:

14. In addition, the

SBSTTA recommends to the Conference of the Parties:

(a) To identify constraints, including economic, for conversion of fishing gear and phase-out of fishing over-capacity, and the possibility of reducing subsidies for fisheries

(b) To offer the technical expertise of the SBSTTA to offer advice on the draft FAO Code of Conduct for Responsible Fisheries in order to ensure its consistency and conformity with the objectives and provisions of the Convention on Biological Diversity;

(c) To take into account the ecosystem functions and processes identifying and targeting critical processes for the conservation and sustainable use of biodiversity;

(d) To ask the FAO, or other appropriate bodies, to collate information on the availability of selective fishing gear and methods, possibly through the convening of an ad hoc intersessional panel on marine and coastal biodiversity; and

(e) To urge the Parties not yet signatories to the Agreement on Straddling and Highly Migratory Fish Stocks to sign the Agreement.

15 . On mariculture, the SBSTTA recommends to the Conference of the Parties:15 . On mariculture, the SBSTTA recommends to the Conference of the Parties:

I. Parties should, as far as possible and as appropriate, implement environmentally sustainable mariculture practices, including the following:

(a) mariculture should be incorporated into integrated marine and coastal zone management plans, particularly taking into account the vulnerability of areas of high biological value;

(b) mariculture should be subject to prior environmental and social impact assessments (in accordance with Article 14) and regulations (Article 10) and should incorporate the participation and needs of local and indigenous communities;

(c) use of chemicals for therapeutics and other applications, high nutrient release and freshwater diversion should be minimized. Eutrophication should be avoided. Specific steps to achieve this include use of chemicals only in a prescribed and responsible manner, improvement in waste treatment, improvement in feed technology, and in promotion of integrated farming and polyculture;

(d) mariculture operations should not result in the overexploitation of natural stocks through harvesting of wild larvae;

(e) because of the difficulties of complete containment, introduction of alien species, products of selected breeding and living modified organisms resulting from modern biotechnology should be treated as an introduction into the wild. Therefore, adherence to international codes of practice such as the International Commission for Exploration of the Sea and the "Organisation Internationale Epizootique" should be a minimum requirement. Because of the potentially high risks, assessments should be rigorous, must correspond with the precautionary principle, and an

appropriate monitoring programme must be put in place if introduction goes ahead. Preference should be given to the use of local species. Furthermore, development of technology to ensure a more complete containment should be encouraged;

(f) the conservation of genetic diversity in the wild stocks which farmed populations are derived should be an objective of overall management; and

(g) in areas where unsustainable mariculture operations have already substantially reduced or destroyed natural habitats and ecosystems, Parties should, where possible, undertake restoration programmes.

II. The clearing-house mechanism should be used to link databases and information networks to collect, share and disseminate data related to responsible mariculture measures.

III. The Conference of the Parties is invited to request the SBSTTA to monitor the development and provide input into the draft FAO Code of Conduct for Responsible Fisheries, in order to ensure that the Code is consistent with the objectives and provisions of the Convention on Biological Diversity.

IV. National reports (Article 25) and national biodiversity strategies and action plans (Article 6) should include an examination of mariculture operations within the jurisdiction of Parties, and steps to avoid significant adverse impacts on marine and coastal biodiversity in the above ways

16. On alien species, the SBSTTA recommends to the second meeting of the Conference of the Parties that, consistent with Articles 8(h) and 8(l) of the Convention on Biological Diversity, the Parties should, as far as possible and appropriate: 16. On alien species, the SBSTTA recommends to the second meeting of the Conference of the Parties that, consistent with Articles 8(h) and 8(l) of the Convention on Biological Diversity, the Parties should, as far as possible and appropriate:

I. Include in their national plans:

(a) Means to prevent, control, or eradicate, where possible, those alien species which threaten ecosystems, habitats or species (Article 8, paragraph (h)). These means might include the implementation of international protocols and guidelines (e.g. the International Maritime Organization (IMO) ballast water guidelines or the International Council for the Exploration of the Sea (ICES) Code of Practice).

(b) Conduct of environmental impact assessments, including risk assessment, prior to the intentional introduction of alien species (Article 14.1, paragraph (a)) and consult with neighboring States before introducing alien species into shared waters. To minimize unintentional introductions, components of an assessment might include identification of primary pathways for unintentional introductions; identification of types of organisms with the greatest potential to be dangerous; mitigation techniques to minimize unintentional introductions; monitoring to identify the establishment of alien species; and development of means for elimination of hazardous alien species.

(c) Prior to intentional introduction, an assessment should be made of possible indigenous species alternatives, whether the introduced species can be adequately monitored (per Article 7, paragraph (c)), and whether adverse effects can be reversed within two human generations

(as recommended by the draft FAO Code of Conduct for Responsible Fisheries). Additional assessment should include: (i) biological information on the species in its native habitat, including life stages and trophic level; (ii) results of previous introductions elsewhere; (iii) potential impact on indigenous species, through, e.g. predation and competition, or on ecosystem function; (iv) associated pathogens and parasites and ability to treat or screen for such organisms; (v) potential for habitat modification; and (vi) the potential for interbreeding with and deleterious genetic impacts on indigenous species/stocks. The assessment should take into account that organisms transferred from one ecosystem to another may not maintain the same characteristics in the new ecosystem.

(d) Conduct of environmental impact assessments prior to constructing canals linking coastal water bodies.

(e) Education of the general public to the possible dangers to the ecosystem that could result from the release of ornamental species and unauthorized releases of species for sport fisheries.

II. Be encouraged to conduct research (Article 12) where additional targeted studies would further the understanding of the impacts of alien species on *in-situ* conservation, including, for example:

(a) undertake ecological surveys and ballast discharge water surveys to help establish baseline data and level of risk associated with introductions through ballast water, including on the effects of introduction of harmful algal species through ballast water;

(b) undertake research on the long-term effects of species replacements due to introductions on ecosystem functioning.

17. Furthermore, the SBSTTA recommends that, consistent with Article 18 (Technical and scientific cooperation), the Conference of the Parties: 17. Furthermore, the SBSTTA recommends that, consistent with Article 18 (Technical and scientific cooperation), the Conference of the Parties:

(a) Establish under the Clearing-house mechanism (CHM), or other data exchange mechanism information on normal or pathogenic flora and parasites of aquatic species being introduced for mariculture or stocking programmes. Information to be included in the clearing-house would be on infectious agents detected in indigenous, wild or alien cultured stocks, parasitic life-cycles, pathogen-specific methods of detection, and information on disease outbreaks and immune status in commercially shipped stocks. An existing mechanism for epizootics has been established in France (Organisation Internationale Epizootique);

(b) Establish, under the CHM, information from results of environmental impact assessments or similar assessments on introduced species to provide a means of evaluating effective and ineffective methodologies for preventing the introduction of, controlling, and eradicating alien species and minimizing their adverse effects

18. Additional recommendations for future action by the Conference of the Parties: 18. Additional recommendations for future action by the Conference of the Parties:

(a) The SBSTTA suggests that the Conference of the Parties support efforts of the IMO to draft ballast water guidelines and request an opportunity for the input of the Conference of the Parties into those guidelines. The Conference of the Parties should ensure that the guidelines are consistent with the objectives and provisions of the Convention on Biological Diversity;

(b) The Conference of the Parties should contact relevant international bodies and instruments (for example, FAO) with a view to ensuring adequate controls of intentional introductions of alien or living modified organisms that have adverse effects on marine biodiversity.

19. Recommendations for the second meeting of the Conference of the Parties to consider for the medium-term work programme: 19. Recommendations for the second meeting of the Conference of the Parties to consider for the medium-term work programme:

(a) Review the draft IMO ballast water guidelines to ensure that the guidelines are consistent with the objectives and provisions of the Convention on Biological Diversity;

(b) Review information provided by Parties and other sources on the assessment of alien species introduction to gain from past experience.

Annex to Recommendation I/8

I. INTEGRATED MARINE AND COASTAL AREA MANAGEMENT

Introduction

1. Coastal and marine areas contain some of the world's most diverse and productive systems. They include extensive areas of complex and specialized ecosystems, such as enclosed seas and tidal systems, estuaries, salt marshes, coral reefs, seagrass beds and mangroves that are sensitive to human activities, impacts and interventions.
2. Pressures on these systems are growing more intense. As rapid development and population growth continue in coastal areas, increasingly heavy demands will be placed on the natural resources and remaining natural habitats along the coasts. Unless corrective measures are taken, environmental degradation and over-exploitation will erode marine and coastal biological diversity, undermine productivity, and intensify conflicts over the increasingly scarce resources of the coastal zone.
3. The most important present and potential threats to marine and coastal biological diversity are well known:
 - (a) alteration and loss of habitat, including destruction of watersheds;
 - (b) chemical pollution and eutrophication, including from land-based activities
 - (c) global climate change;
 - (d) invasions of alien species; and
 - (e) over-exploitation of living marine and coastal resources
4. These threats cannot be treated separately, as ecosystem functions and processes are connected over wide distances. Singly, or in combination, these human perturbations can lead to structural and functional transformations of ecosystems.
5. Since threats will vary between regions and countries, depending on differences in ecological processes, level of availability of funding and economic and social activities, the Parties will need to tailor management regimes to the specific needs of each area.

Integrated Marine and Coastal Area Management

6. Current sectoral approaches to the management of marine and coastal resources have generally not proven capable of conserving marine and coastal biological diversity. New models are needed to move planners toward multiple-use, systems-oriented modes of management, based on precautionary approaches and ecosystem management principles. Wide adoption and implementation of integrated marine and coastal area management are necessary for effective conservation and sustainable use of marine and coastal biological diversity.
7. Integrated marine and coastal area management is a participatory process for decision-making to

prevent, control, or mitigate adverse impacts from human activities in the marine and coastal environment and to contribute to the restoration of degraded coastal areas. It involves all stakeholders, including: decision makers in the public and private sectors; resource owners, managers and users; nongovernmental organizations; and the general public. Community-based management approaches have proven particularly important. Integrated management programmes have already demonstrated their potential as an effective tool in developed and developing countries around the world.

8. On the regional level, integrated management of marine and coastal ecosystems could be promoted through the Large Marine Ecosystem approach to monitor and evaluate ecosystem health. Through ensuring the integrity and productivity of large-scale ecosystems, continuous benefits can be derived from the vast array of biological resources they contain.

Marine and Coastal Protected Areas

9. Within the context of national and regional efforts to promote integrated marine and coastal area management, networks of marine and coastal protected areas, other conservation areas, and biosphere reserves, provide useful and important management tools for different levels of conservation, management and sustainable use of marine and coastal biological diversity and resources, consistent with customary international law.

II. SUSTAINABLE USE OF LIVING MARINE AND COASTAL RESOURCE

10. Many of the world's fishery resources are in danger of depletion. The impacts of these activities can be direct and indirect. In addition, other living resources, for example mangroves, coral species and species amenable to bio-prospecting, are subject to or under threat of over-exploitation. The principal impact of over-exploitation is unsustainable removal of living marine and coastal resources. The most significant indirect impacts on biodiversity include habitat destruction, bycatch and ancillary impacts on interacting species or ecosystems. The overall goal is to achieve conservation and long-term sustainable use of living marine and coastal resources in a manner that respects both societal interests and the integrity of ecosystems

III. MARICULTURE

11. Mariculture production worldwide is growing at the rate of about 5 to 7 per cent annually. Currently, the main types of marine organisms being produced through mariculture include seaweeds, mussels, oysters, shrimps, prawns, salmon and other species of fish. Mariculture offers possibilities for sustainable protein-rich food production and for economic development of local communities. However, mariculture on an industrial scale may pose several threats to marine and coastal biodiversity due to, for example, wide-scale destruction and degradation of natural habitats, nutrients and antibiotics in mariculture wastes, accidental releases of alien or living modified organism resulting from modern biotechnology, transmission of diseases to wild stocks, and displacement of local and indigenous communities. Noting this situation, a precautionary approach should be applied to any mariculture development, in accordance with the preamble of the Convention on Biological Diversity.

IV. ALIEN SPECIES

12. Alien components of biodiversity, including species, genetic strains, mixed genetic stock and living modified organisms, have the potential for significant, non-reversible, adverse impacts on marine and coastal biodiversity. Such impacts generally tend to be unpredictable. When they are adverse, they tend to

homogenize and simplify biotic communities. Eradication of established alien species is difficult, if not impossible. One means to mitigate damage due to these components is to make introductions subject to rigorous prior environmental impact assessments.

13. Alien species can be introduced inadvertently and intentionally. Non-intentional introductions primarily result from the discharge of ballast water, escapees from mariculture, organisms associated with species introduced intentionally, and unauthorized releases by the public. Furthermore, it should be recognized that introductions result from the engineering of waterways connecting previously separate bodies of water.

14. Intentional introductions occur primarily for mariculture production, including marine ranching, although an additional significant pathway is by release of hatchery-spawned organisms into the wild for the purpose of augmenting wild populations, generally for future capture in fisheries or in an attempt to enhance a population that is under threat. Particularly in the case of intentional introductions, alien species may include those resulting from the interbreeding of different genetic stocks or that have been genetically modified.

Recommendation I/9: Draft provisional agenda of the second meeting of the Subsidiary Body on Scientific, Technical and Technological Advice

1. Opening of the meeting.
2. Organizational matters:
 - 2.1 Election of the officers
 - 2.2 Adoption of the agenda;
 - 2.3 Organization of work.
3. Matters on which advice from the SBSTTA is required by the third meeting of the Conference of the Parties:
 - 3.1 Review of assessment of biological diversity made in 1995, and methodologies for future assessments, as well as the minimum standard data required, as appropriate, to be applied in accordance with national priorities and programmes.
 - 3.2 Alternative ways and means in which the Conference of the Parties could start the process of identification, monitoring and assessment of components of biological diversity, as well as processes and categories of activities which have or are likely to have significant adverse impacts on the conservation and sustainable use of biological diversity, in accordance with Article 7
 - 3.3 Review and promotion of indicators of biological diversity to be used for assessment of effectiveness of measures taken in accordance with the provisions of the Convention.

- 3.4 Identification of sound technologies, including biotechnology, and description of ways and means to promote and facilitate access to, and transfer and development of these technologies, and the role of the clearing-house mechanism.

- 3.5 Ways and means to identify and protect the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles and to compensate through the equitable sharing of the benefits arising from the use of such knowledge, innovations and practices, in accordance with Article 8(j) of the Convention on Biological Diversity.
 - 3.6 Capacity-building in relation to the safe transfer, handling and use of living modified organisms resulting from biotechnology that may have adverse effect on the conservation of biological diversity and the sustainable use of its components.
 - 3.7 Role of the clearing-house mechanism in facilitating and promoting technical and scientific cooperation in research and development related to conservation of biological diversity and sustainable use of its components.
 - 3.8 Scientific, technical and technological aspects of the conservation of agricultural biological diversity and sustainable use of its components (also taking into account the other provisions in Article 25, paragraph 2).
 - 3.9 Scientific, technical and technological aspects of the future programme of work for terrestrial biological diversity in the light of the outcome of deliberations of the third session of the Commission on Sustainable Development in 1995.
 - 3.10 Scientific, technical and technological advice on economic valuation of biological diversity and its components, in particular in relation to access to genetic resources.
 - 3.11 Contribution of the Convention on Biological Diversity to the forthcoming special session of the General Assembly to review implementation of Agenda 21.
4. Programme of work of the SBSTTA for 1995-1997.
 5. Draft provisional agenda of the third meeting of the SBSTTA.
 6. Date and venue of the third meeting of the SBSTTA.
 7. Other matters.
 8. Adoption of the report.
 9. Closure of the meeting.

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