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CONFERENCE OF THE PARTIES TO THE
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PROGRESS REPORT ON THE IMPLEMENTATION OF THE PROGRAMMES OF WORK ON THE
BIOLOGICAL DIVERSITY OF INLAND WATER ECOSYSTEMS, MARINE AND COASTAL
BIOLOGICAL DIVERSITY, AND FOREST BIOLOGICAL DIVERSITY (DECISIONS IV/4,
IV/5, IV/7)

Gaps in measures taken to prevent the introduction of, or the adverse
effects from, alien invasive species and genotypes that threaten
marine and coastal ecosystems, habitats or species

I. INTRODUCTION

1. The importance of the threats to biological diversity that alien species may pose is recognized in Article 8(h) of the Convention on Biological Diversity (CBD), which states that "each Contracting Party shall, as far as possible and appropriate, prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species." ^{1/}

2. In 1995, the Conference of the Parties to the Convention on Biological Diversity expressed its deep concern at the serious threats to marine and coastal biological diversity caused by various factors including invasion of alien species (decision II/10, preamble). Furthermore, it noted that "because of the difficulties of complete containment, introduction of alien species, products of selective breeding, and living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of marine and coastal biodiversity should be responsibly conducted using the precautionary approach" (decision II/10, annex I, paragraph (xi)). These provisions, as well as further work of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) (see SBSTTA recommendation III/2), led to the identification of element 5 of the programme of work on the conservation and sustainable use of marine and coastal biological diversity, as contained in the annex to decision IV/5. This

* UNEP/CBD/COP/5/1.

^{1/} As Article 8(h) refers to those alien species having a negative impact on ecosystems, habitats or species, for the purpose of this document, and to avoid confusion with those alien species that do not affect negatively biological diversity... the term "alien invasive species" is used to the extent possible (see also the section of the document dealing with terminology).

programme element is fully devoted to alien invasive species and genotypes in marine and coastal areas.

3. In particular, operational objective 5.2 of the programme element aims at:

(a) Identifying gaps in existing or proposed legal instruments, guidelines and procedures to counteract the introduction of, and the adverse effects exerted by, alien species and genotypes which threaten ecosystems, habitats or species, paying particular attention to transboundary effects; and

(b) Collecting information on national and international actions to address these problems, with a view to prepare for the development of a scientifically-based strategy for dealing with the prevention, control and eradication of alien invasive species which threaten marine and coastal ecosystems, habitats and species.

4. The present note is intended to assist the implementation of the above-mentioned operational objective. Section II provides information on international, global and regional legal instruments, guidelines and procedures; section III provides information on national and international actions; and section IV focuses on gaps emerging from an analysis of national and international legal instruments, guidelines, procedures and actions.

5. Pending the development of standardized terminology on alien species (in line with SBSTTA recommendation IV/4, paragraph 4 (f)), the following terminology is used wherever possible in this document:

(a) "Alien" or "alien species" refers to a species occurring outside its normal distribution;

(b) "Alien invasive species" refers to those alien species which threaten ecosystems, habitats or species; and

(c) "Alien genotype" refers to products of selective breeding, and living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of marine and coastal biodiversity. ^{2/}

6. It should be noted that alien invasive species will be considered in depth by the Conference of the Parties at its sixth meeting and in preparation for this discussion, SBSTTA at its sixth meeting will consider the matter as its main focus of work. The present document may be considered as a preliminary assessment specific to marine and coastal biodiversity. The Conference of the Parties may wish to request the Executive Secretary to continue work on identifying gaps in existing or proposed legal instruments, guidelines and procedures on alien invasive species and genotypes in the context of preparation for SBSTTA-6 in line with decision V/4.

II. INTERNATIONAL, GLOBAL AND REGIONAL LEGAL INSTRUMENTS, GUIDELINES AND PROCEDURES ADDRESSING THE EFFECTS OF

^{2/} The definitions for "alien", "alien species" and "alien invasive species" are taken from the interim Guidelines for the Prevention, Introduction and Mitigation of Impacts of Alien Species, annexed to SBSTTA recommendation V/4, and the definition for "alien genotype" is derived from paragraph (xi) of annex I to decision II/10 of the Conference of the Parties.

ALIEN INVASIVE SPECIES AND GENOTYPES ON THE MARINE AND
COASTAL ENVIRONMENT

7. The introduction of alien species in the marine and coastal environment can be either unintentional or intentional; for instance the accidental release of aquatic organisms in the ballast water of ships, or the intentional introduction from aquaculture.

8. At the international level, there are numerous existing instruments, guidelines and procedures which are relevant. An important one is Agenda 21 that addresses the matter of prevention, reduction and control of degradation of the marine environment from sea-based activities. Paragraph 17.30 of Agenda 21 provides that: "States, acting individually, bilaterally, regionally or multilaterally and within the framework of the International Maritime Organization (IMO) and other relevant international organizations, whether sub-regional, regional or global, as appropriate, should assess the need for additional measures to address degradation of the marine environment". With particular reference to degradation of marine and coastal environment caused by alien invasive species as a consequence of ballast water, paragraph 17.30 (vi) proposes the consideration of the adoption of appropriate rules on ballast water discharge to prevent the spread of non-indigenous organisms.

9. On the basis of this provision and noting the objectives of the Convention on Biological Diversity, the IMO Assembly adopted, in November 1997, resolution A.268(20) containing guidelines for the control and management of ships' ballast water to minimize the transfer of harmful aquatic organisms and pathogens. Furthermore, the Assembly requested Governments to take urgent action in applying these guidelines as the basis for any measures they adopt to minimize the risks of introducing harmful aquatic organisms and pathogens, and to report to the Marine Environment Protection Committee (MEPC) on any experience gained in their implementation. The IMO Assembly also requested the MEPC to work towards completion of legally binding provisions on ballast water management in the form of a new annex to MARPOL 73/78, together with guidelines for their uniform and effective implementation with a view to their consideration and adoption in the year 2000.

10. Appendices to the IMO guidelines include a ballast water reporting form and a document intended to provide guidance on the safety aspects of ballast water exchange at sea.

11. Since States have the right to manage ballast water by national legislation, the effectiveness of those guidelines will depend on their implementation at national level.

12. The FAO Code of Conduct for the Import and Release of Exotic Biological Control Agents, the Code of Conduct for Responsible Fisheries, and Code of Practice on the Introductions and Transfers of Marine Organisms provide guidance on how alien invasive species and genotypes should be dealt with in the context of, in particular, mariculture activities.

13. Most countries are Parties to the International Plant Protection Convention, which has "the purpose of securing common and effective action to prevent the spread and introduction of pests of plants and plant products, and to promote appropriate measures for their control". Although not specifically targeted at protection of marine and coastal biodiversity, each of these

countries have national plant protection organizations established according to the Convention with authority in relation to quarantine control, risk analysis and other measures required to prevent the establishment and spread of all invasive alien species that, directly or indirectly, are pests of plants. Under this Convention, Parties agree to cooperate on information exchange and on the development of International Standards for Phytosanitary Measures, which include agreements on definitions (terminology), and ways of working (procedures). These standards are recognized in the World Trade Organization's Agreement on the Application of Sanitary and Phytosanitary Measures.

14. Article 196, paragraph 1, of the United Nations Convention on the Law of the Sea, on protection and preservation of the marine environment, on use of technologies or introduction of alien or new species, reads: "States shall take all measures necessary to prevent, reduce and control (...) the intentional or accidental introduction of species, alien or new, to a particular part of the marine environment, which may cause significant and harmful changes thereto".

15. The Convention on Wetlands (Ramsar, 1971) presented an expert paper on invasive species at its seventh meeting of the Conference of the Contracting Parties in 1999, in the course of which the Conference adopted resolution VII.14 on invasive species and wetlands. Pursuant to this, the Scientific and Technical Review Panel (STRP) of the Convention established an Expert Working Group on Invasive Species which has as part of its Terms of Reference to review the IUCN Guidelines and the interim Guiding Principles annexed to SBSTTA recommendation V/4, in order to establish if they provide appropriate guidance for Parties to the Convention on Wetlands in dealing with problems of alien invasive species. Within the joint work plan of the Convention on Biological Diversity and the Convention on Wetlands for the period 2000-2001, STRP plans to complete its review of the IUCN Guidelines and the interim Guiding Principles and thereafter report on their value for application by Parties to the Convention on Wetlands.

16. Concerning the effect of alien invasive species, article II.3(c) of the Convention on the Conservation of Antarctic Marine Living Resources (Canberra 1980), , seeks to prevent changes, or minimize the risk for changes, in the marine ecosystem, not potentially reversible over two or three decades, taking into account the state of available knowledge.

17. Under the United Nations Environment Programme (UNEP) regional seas conventions, five protocols ^{3/} on protected areas have been adopted that require Parties to take measures to limit non-indigenous species introductions within the protocol's geographical region of application, or within marine protected areas or both. Of these, only the 1982 Geneva Protocol, and its successor the recent, more comprehensive 1995 Barcelona Protocol, have entered into force.

18. Under the Barcelona Protocol, negotiated after the adoption of the Convention on Biological Diversity, Parties are to regulate introduction of

^{3/} The Protocol on Protected Areas and Wild Fauna (Nairobi, 1985); the Protocol for the Conservation and Management of Protected Marine and Coastal Areas of the South-East Pacific (Paipa, 1989); the Protocol on Specially Protected Areas and Wildlife to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Kingston, 1990); the Protocol on Mediterranean Specially Protected Areas (Geneva, 1982); and the Protocol on Specially Protected Areas and Biological Diversity in the Mediterranean (Barcelona, 1995).

any non-indigenous species into specially protected areas (article 6(d)), regulate the intentional or accidental introduction into the wild of non-indigenous species and prohibit those which may have harmful impacts on ecosystems, habitats or species, as well as endeavour to eradicate species that scientific assessments demonstrate cause, or are likely to cause, damage to ecosystems, habitats or species (article 13(2)).

III. SYNTHESIS OF INFORMATION ON NATIONAL AND INTERNATIONAL
ACTIONS TO ADDRESS ADVERSE EFFECTS EXERTED BY MARINE
AND COASTAL ALIEN INVASIVE SPECIES AND GENOTYPES

19. A survey of the first national reports submitted to date by the Parties to the Convention (<http://www.biodiv.org/natrep/index.html>) reveals that 13 out of 111 Parties have established or are establishing national measures to prevent the introduction of potentially harmful alien species, and control and eradicate alien species which threaten ecosystems, habitats and species in marine and coastal areas. Although most of the Governments are aware of the adverse impacts of alien invasive species on biological diversity and, therefore, are committed to control and regulate the introduction and spread of such organisms, only a limited number of measures are in place to support this commitment. These measures include: policy and legislative measures; and management and research programmes.

20. In February 1999, the United States of America instituted an Executive Order to coordinate a federal strategy to address the growing environmental and economic threat of invasive species. The Order directs federal agencies to use their authority to prevent the introduction of invasive species and to restore native species. It directs a new Interagency Council to come up with an invasive species management plan, including measures to prevent the entry of invasive species, eradicate invasive species before establishment, control invasive species once established, and conduct outreach and education for the general public. The order covers the marine and coastal environment.

21. At the international level, the Programme of Action for the Sustainable Development of Small Island Developing States (SIDS) acknowledges that certain non-indigenous species have resulted in a significant loss of biological diversity on islands (paragraph 41); that protection of marine biological diversity from non-indigenous species should be included in national biological diversity strategies (paragraph 45(A)(i)); that biologically significant sites need special protection (paragraph 45(B)(i)) and that quarantine problems must be addressed nationally, regionally and internationally (paragraphs 55(A-C)).

22. The Norway/United Nations Conference on Alien Species, held in Trondheim in 1996, specifically dealt with the development of a sound, scientific knowledge base on alien species in the areas of ecological and social effects and prevention and management of introductions, and control and eradication, within the context of the conservation and sustainable use of biological diversity. The proceedings of the Conference contain selected papers that mainly address the alien species issue in general. Although some initiatives and activities have wide applicability, such as the invasive species database/information system developed by the IUCN Invasive Species Specialist Group, only five of the 38 presented papers focused on marine and coastal alien invasive species.

23. The IUCN draft Guidelines for the Prevention of Biodiversity Loss due to Biological Invasion provides recommendations for reducing the risks of biodiversity loss caused by alien invasive species, to assist Governments meet their obligations under the Article 8(h) of the Convention on Biological Diversity. These guidelines address alien invasive species generally, without any specific reference to marine and coastal species. Nevertheless, they contain elements applicable and useful for the more specific marine and coastal environment, such as the need to assess the risk and the environmental impact prior to an intentional introduction and the monitoring of introductions and their impacts after release.

24. In partnership with IUCN and the Commonwealth Secretariat, the Secretariat of the Convention on Wetlands is at present developing a communication and awareness-raising project about invasive species in wetlands in Africa. This will gather information on the incidences of, and approaches to dealing with, invasive species in the African context, and disseminate advice, based on best practices, throughout the continent.

25. Finally, the work of SBSTTA on alien invasive species, and in particular its set of interim Guiding Principles annexed to recommendation V/4 will be considered by the Conference of the Parties at its fifth meeting.

IV. GAPS EMERGING FROM AN ANALYSIS OF LEGAL INSTRUMENTS, GUIDELINES, PROCEDURES AND ACTIONS

26. The information contained in the national reports on ways and means to counteract the introduction of, and the adverse effects exerted by, alien invasive species and genotypes in the marine and coastal environment, is very limited. No rigorous analysis of the gaps in legal instruments, guidelines and procedures is possible based on the scant information provided. Those Parties that reported on efforts in this regard show that Governments are taking steps towards the regulation of this issue. While not specifically reported it can be surmised that Governments are generally aware of negative impacts caused by the introduction of invasive species and are committed to control and regulate the introduction of such organisms. Hopefully future national reports will provide more information on which to make some assessments of national actions.

27. Generally national measures to counteract the introduction of, and the adverse effects exerted by, alien invasive species are mainly of a legislative nature, and have been established only recently. Although the awareness of the alien invasive species issue is still relatively new, and requires more research and study, during the last few years the potential and realized harmful role exerted by those species has become apparent. To address this issue adequately without a complete knowledge of what species are where, or the harmfulness of known species, Governments should adopt a proactive approach to control the introduction and spread of alien species, based on the precautionary principle.

28. Overall, the information contained in the first national reports shows generally a lack of strength of existing legislation; poor effectiveness of existing punitive measures; and lack of programmes aimed at implementing and supporting legislative measures (such as education and public awareness; rehabilitation and restoration of habitats; risk and impact assessment activities; monitoring activities; overview of the current state of knowledge).

29 An analysis of existing international instruments, guidelines and procedures shows that there are a large number of them, coming from a wide variety of backgrounds and with very different implementing agencies and means of adoption. Some are legally binding on Governments while others are only guidelines, and none are uniformly adopted or implemented. Some differ by the types of measures proposed, and in the scope of what is considered the target organisms or target environments. Uneven adoption of these widely varying measures has led to a complex and patchy global effort in controlling alien invasive species. Given this complicated situation a more in-depth analysis is required of how existing measures could be strengthened to form a truly comprehensive global effort as part of the elaboration of a scientifically based strategy for the implementation of Article 8(h) of the Convention.
