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INVASIVE ALIEN SPECIES: IDENTIFICATION OF SPECIFIC GAPS AND INCONSISTENCIES IN THE INTERNATIONAL REGULATORY FRAMEWORK

Note by the Executive Secretary

EXECUTIVE SUMMARY

The present note provides the main points of an analysis of the international regulatory framework relevant to invasive alien species (including developments since the sixth meeting of the Conference of the Parties, held in The Hague in April 2002), in order to assist the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) in its task of identifying and exploring specific gaps and inconsistencies in the international regulatory framework from a technical perspective of the threats of invasive alien species to biological diversity pursuant to paragraph 9 of decision VI/23. The full analysis is provided as an information document (UNEP/CBD/SBSTTA/9/INF/32).

Under the International Plant Protection Convention (IPPC), important progress has been made on incorporating biodiversity considerations into revised international plant protection standards. Animal health standards developed under the Office International des Epizooties (OIE) focus exclusively on disease and do not cover environmental aspects.

As regards types of potentially invasive species, species that are invasive in their own right are only covered under the IPPC or OIE if they qualify as plant pests or animal diseases.

An International Convention for the Control and Management of Ships' Ballast Water and Sediments is under development under the International Maritime Organization (IMO). However, there is no international regulatory framework for hull-fouling, which may be an equally important risk.

Aquaculture and restocking for commercial and recreational fisheries continue to provide pathways for introduction of non-native aquatic organisms to aquatic ecosystems. Such species are still

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not covered by any binding instrument, despite the acknowledged vulnerability of aquatic biodiversity to biological invasion.

Other potential pathways where an international regulatory framework is lacking or insufficient include intentional introductions for horticulture, and international assistance programmes.

Trade-related activities and associated transport pathways continue to be associated with risks from invasive alien species. Raising awareness of these risks in relevant forums is a key element of an effective strategy on invasive alien species.

Practical guidance is needed for management of threats related to invasive alien species in different natural systems: this is under development for wetlands and islands, less so for forests, dry lands and the marine environment.

Prevention is mainly focused on import, which can be sub-optimal in some circumstances. Rapid response and mitigation measures are strongest under plant and animal health frameworks. Restoration still tends to be neglected and there are few positive incentives for use of native species in land-management practices.

Methodologies for risk assessment and risk analysis are well established in specific contexts such as plant and animal health. There is potential for the application of these methodologies to a wider range of issues related to invasive alien species.

Transboundary cooperation is mainly reactive, although some regions are developing more strategic approaches. Responsibility, liability and redress with regard to invasive alien species are not being addressed. Financial support for prevention and management still has to be found on a mainly case-by-case basis.

SUGGESTED RECOMMENDATIONS

1. The Subsidiary Body on Scientific, Technical and Technological Advice may wish to recommend that the Conference of the Parties:

(a) *Welcomes* the collaboration between the Convention on Biological Diversity and other Conventions and organizations, in particular the Ramsar Convention on Wetlands and the International Plant Protection Convention, in developing mechanisms to address the threats posed by invasive alien species;

(b) *Welcomes* progress on the draft International Convention for the Control and Management of Ships' Ballast Water and Sediments and recommends that Parties to the Convention on Biological Diversity and other Governments consider ratifying this Convention when it is adopted and opened for signature;

(c) Recognizing the need to strengthen further institutional coordination among international organizations, *requests* the Executive Secretary to strengthen collaboration with other relevant partners, and in particular to:

(i) Promote fuller consideration of issues relating to invasive alien species in other international forums, including through the joint liaison group of the Convention on Biological Diversity, the United Nations Framework Convention on Climate Change and the United Nations Convention to Combat Desertification, and the Collaborative Partnership on Forests;

- (ii) Support closer coordination between national focal points of relevant international instruments, regional institutions and international conventions and programmes;
 - (iii) Develop a joint work plan with the secretariat of the International Plant Protection Convention;
 - (iv) Establish closer linkages with the Office International des Epizooties;
 - (v) Explore options for closer collaboration with the International Civil Aviation Organization (ICAO) in the development of a preventive strategy for invasive alien species through civil-aviation pathways;
 - (vi) Cooperate with relevant site-based conventions and other organizations to develop biome-specific practical guidance for site managers;
- (d) Recognizing in particular the need to strengthen institutional coordination at international, regional and national levels on invasive alien species as a trade-related issue and on the implications of further trade liberalization for movements of potentially invasive species,
- (i) *Invites* the World Trade Organization and its relevant committees to give due consideration to the risks from invasive alien species in their deliberations;
 - (ii) *Requests* the Executive Secretary to collaborate, whenever feasible and appropriate, with the Secretariat of the World Trade Organization in its training, capacity-building and information activities, with a view to raising awareness of the issues related to invasive alien species, and promoting enhanced cooperation on this issue;
 - (iii) *Requests* the Executive Secretary to renew his application for observer status in the Committee on Sanitary and Phytosanitary Measures (SPS) of the World Trade Organization with a view to enhancing the exchange of information on deliberations and recent development in the respective bodies of relevance to alien invasive species;
 - (iv) *Invites* Parties and Governments to give due consideration to the risks from invasive alien species during the environmental review of trade agreements and the development or expansion of bilateral and regional free trade arrangements; and
 - (i) *Invites* Parties and Governments to improve communication and cooperation between national environment, trade and other relevant authorities with a view to increasing awareness on issues related to the prevention and management of risks from potentially invasive alien species and ensuring consistency of national policies and programmes;
- (e) *Invites* relevant Parties to the Convention on Biological Diversity and other Governments, as well as national, regional and international organizations to:
- (i) Improve the coordination of regional measures to address transboundary issues through the development of regional standards, regional support for risk analysis and regional cooperation mechanisms;
 - (ii) Support national and regional decision-making and rapid response through the further development of alert lists, diagnostic tools and capacity development;
 - (iii) allocate, as appropriate, resources and capacity for border control and quarantine measures with a view to improve synergies with policy objectives relating to trade facilitation, food security, human health and environmental protection;

- (iv) Strengthen, as appropriate the cooperation between biodiversity, agriculture and land management agencies in the application of environmental risk analysis standards and guidance;
- (v) Consider the introduction of appropriate incentive measures for the use of native species in land and water management and other programmes;
- (vi) Develop strategies to proactively engage stakeholder groups in the prevention and mitigation of impacts of alien invasive species, including by awareness-raising and training as well as through the design and implementation of appropriate incentive measures;

(f) Welcomes the analysis of gaps and inconsistencies in the international regulatory framework on invasive alien species (UNEP/CBD/SBSTTA/9/15 and UNEP/CBD/SBSTTA/9/INF/32);

(g) *Notes* that specific gaps in the international regulatory framework persist, notably in relation to species that are invasive, but do not qualify as plant pests or animal diseases, and with regard to the following potential pathways:

- (i) The use of non-native organisms in aquaculture and the restocking of marine and inland water systems for commercial and recreational fisheries;
- (ii) Hull-fouling, both at sea and in navigable watercourses;
- (iii) Unintentional introductions of invasive alien species through development assistance, humanitarian programmes and military activities; and
- (iv) Intentional introductions in horticulture;

(h) *Requests* the Subsidiary Body on Scientific, Technical and Technological Advice to establish an ad hoc technical expert group to address gaps and inconsistencies in the international regulatory framework, in particular the specific gaps identified in paragraph (g) above, and, on the basis of the work of the expert group, to make recommendations for the full and effective implementation of Article 8(h) of the Convention, to the Conference of the Parties. The expert group should:

- (i) Further clarify the gaps and inconsistencies in the international regulatory framework;
- (ii) Develop practical options on how to address these gaps and inconsistencies, where possible within the context of existing international frameworks, in order to achieve the full and effective implementation of Article 8(h);

(i) *Requests* the Executive Secretary together with the Global Invasive Species Programme, and its participating organizations, and with other relevant organizations, to develop an updated programme of work, to address the priorities for practical actions identified in decision VI/23, and in the present decision.

2. The Subsidiary Body on Scientific, Technical and Technological Advice may also wish to recommend to the Conference of the Parties that it consider the need for sustainable financing for improved prevention, rapid response and management.

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I. INTRODUCTION

1. At its sixth meeting, the Conference of the Parties requested SBSTTA to identify and explore specific gaps and inconsistencies in the international regulatory framework from a technical perspective of the threats of invasive alien species to biological diversity (decision VI/23, paragraph 9), further to the review undertaken in accordance with decision V/8, to allow the Conference of the Parties to identify options for the full and effective implementation of Article 8(h) of the Convention.

2. This note provides the main points of an analysis of the international regulatory framework relevant to invasive alien species (IAS) including developments since the Sixth Meeting of the Conference of the Parties (The Hague, April 2002), in order to assist SBSTTA in its task of identifying and exploring specific gaps and inconsistencies in the international regulatory framework from a technical perspective of the threats of invasive alien species to biological diversity. The full analysis is provided as an information document (UNEP/CBD/SBSTTA/9/INF/32).

3. The coverage of the international regulatory framework can be examined from several perspectives: from the types of species that may be invasive; from the types of habitats, biomes or species that may be threatened by alien species; from the potential pathways for introduction of invasive alien species; and from the stage of intervention: prevention, mitigation or control. The scope of the existing international regulatory is examined from these perspectives in section II below.

4. The instruments that constitute the international regulatory framework may include conventions or equivalent legally binding instruments, codes of conduct or other voluntary measures that may or may not have been endorsed by intergovernmental bodies, as well as general technical guidance and best practices. Recognized international standards are also an important part of the regulatory framework. Cooperation among the various initiatives and wider application of established risk assessment and risk analysis methodologies is addressed in section III below.

II. SCOPE OF THE INTERNATIONAL REGULATORY FRAMEWORK AND IDENTIFICATION OF GAPS AND INCONSISTENCIES

A. *Types of invasive alien species addressed by the regulatory framework*

5. There are few instruments that address species that are invasive, or potentially invasive, on a taxa-specific basis. Specific guidance has recently been adopted for one animal group, namely, the *Guidelines on prevention of introduction of alien migratory waterbird species and their control*, adopted in September 2002 by the Meeting of the Parties to the African-Eurasian Migratory Waterbird Agreement.

6. The International Plant Protection Convention (IPPC) and the Office International des Epizooties (OIE) address risks to plants and to animals respectively. These two instruments develop standards that are recognized under the World Trade Organization Agreement on Sanitary and Phytosanitary Measures. Species that are invasive in their own right are only covered under these agreements if they qualify as plant pests or animal diseases.

7. Under the International Plant Protection Convention (IPPC), important progress has been made on incorporating biodiversity considerations into revised international plant protection standards:

(a) The *Analysis of environmental risks* (Supplement to ISPM No.11 *Pest risk analysis for quarantine pests*), provides for the control of potential weeds, even where they do not directly impact on agricultural systems, and for the control of other pests that cause indirect as well as direct impacts to

plants (e.g., hyperparasites of biocontrol agents; pests that damage pollinators or earthworms; exotic ants or other species that may alter the ecosystem sufficiently to cause problems to plant communities);

(b) The *Guidelines on the understanding of 'potential economic importance' and related terms including reference to environmental considerations* (Supplement to ISPM 5: *Glossary of Phytosanitary Terms*) clarify that pest-risk analysis can account for environmental concerns in economic terms, using monetary or non-monetary values, and that market impacts are not the sole indicator of pest consequences. Phytosanitary measures can thus be adopted with respect to pests for which the economic damage caused to plants, plant products or ecosystems within an area cannot be easily quantified, if the plant pest has “potential economic importance”, that is, a potential for introduction in the area subject to pest risk analysis, the potential to spread after establishment, and a potential harmful impact on plants. The latter could include not only loss of crop yield or quality but also damage to ecosystems, habitats or species, or some other specified value such as recreation, tourism or aesthetics, where plants are affected.

8. These supplements may broaden the scope of implementation of the IPPC to include a wider range of issues beyond agricultural systems. This is a new area for many plant health regulators.

B. Coverage of potential pathways for invasive alien species

9. Paragraph 14 of decision VI/23 urges stronger action on evaluation and management of pathways for the introduction of invasive alien species. There has been progress for some pathways, but gaps remain and more could be done to address in a comprehensive way multiple pathways within sectors.

10. Trade in plants and plant products, livestock and livestock products are largely addressed through the IPPC and OIE, as outlined in the previous section.

11. A new international standard for one vector was approved under the IPPC in 2002. ISPM 15 on *Guidelines for regulating wood packaging material in international trade* describes measures to reduce the risk of introduction and/or spread of quarantine pests associated with wood packaging material in use in international trade.

12. The updating of ISPM 3 on biological control agents is due to be considered under the IPPC in 2003.

13. Many countries now prohibit noxious weeds in commercial seed packages in line with international standards such as those set under the OECD seeds scheme

14. Horticulture provides well established pathways for introductions of potentially invasive alien plants, with Internet-based trade in unusual seeds, bulbs and plants now posing new challenges to quarantine and management authorities. There are a number of initiatives to address this threat, but without an underpinning regulatory framework enforcement may be difficult. To the extent that potentially invasive plants qualify as pests of plants or plant products, the new IPPC guidance on analysis of environmental risks may be usefully applied.

15. Release of reared game for hunting, aviculture and aquaria provide other pathways for introductions. These tend to be addressed by national legislation alone at present, and only in some countries.

16. Aquaculture and restocking for commercial and recreational fisheries continue to provide pathways for introduction of non-native aquatic organisms to aquatic ecosystems. The existing regulatory framework consists of OIE codes, which focus on disease risks, not the invasiveness *per se*, of introduced stock, and non-binding technical guidance and codes of practice such as that developed under the FAO Code of Conduct for Responsible Fisheries. Alien aquatic species are still not covered by any binding instrument, despite the acknowledged vulnerability of aquatic biodiversity to biological invasion. For

example there are no binding requirements for the assessment of risks related to release of alien aquatic organisms into transboundary water systems. However, there has been good progress on invasive aquatic databases: the FAO database on aquatic introductions now covers freshwater fish, molluscs, crustaceans and marine fish and some regions are also developing aquatic database networks.

17. The 1997 Convention on the Law of the Non-Navigable Uses of International Watercourses, which refers to the introduction of invasive alien species, has not yet entered into force, and few of the bilateral watercourse agreements in place address invasive alien species.

18. An International Convention for the Control and Management of Ships' Ballast Water and Sediments is under development within the framework of the International Maritime Organization (IMO). It is expected to be completed and adopted in a diplomatic conference, to be held from 9 to 13 February 2004. The IMO Globallast programme aims to build awareness, regional cooperation and developing country capacity to implement the existing IMO guidelines and prepare for the new IMO Convention.

19. Another pathway associated with international shipping—hull-fouling—which is now considered an equal or greater risk than disposal of ballast waters, is not regulated. The Parties to the Convention on Biological Diversity have already called on the International Maritime Organization (IMO) to develop mechanisms to minimize hull-fouling as a matter of urgency.

20. Risks associated with invasive alien species related to non-shipping pathways (dredging, recreational boating, fishing, fouling of offshore oil and gas platforms) have received very little attention.

21. Risks associated with civil aviation (e.g., transport of the Brown Tree Snake *Boiga irregularis*) are being explored by the International Civil Aviation Organization (ICAO). Based on analysis to be prepared by the ICAO Secretariat, the ICAO Council will consider whether a prevention strategy is necessary and the matter will be addressed by the ICAO Assembly in 2004.

22. Development assistance, humanitarian and military programmes provide non-trade-related pathways that fall outside the regulatory framework. A preliminary report by the Global Invasive Species Programme found that serious and under-documented problems with invasive alien species continue to result from such programmes.

23. Trade related activities and associated transport pathways continue to be associated with risks from invasive alien species. More needs to be done to raise awareness of these risks in trade forums.

C. Coverage by ecosystems and habitats threatened by invasive alien species

24. *Agricultural biodiversity.* A substantial body of guidance and standards relevant to risks in agricultural systems have been developed under the IPPC. The Cartagena Protocol on Biosafety addresses transboundary movements of living modified organisms that may have adverse effects on biological diversity.

25. *Biodiversity of forest ecosystems.* Relatively little attention has been given to issues related to invasive alien species in international forest policy processes. The IPF/IFF Proposals for Action do not explicitly address such invasive alien species, although they do give preference to the use of native species, especially in countries of low forest cover. The expanded programme of work on forest biological diversity under the Convention on Biological Diversity includes two activities specifically targeted at preventing the introduction, and mitigating the impacts of, invasive alien species in forest ecosystems. A number of species grown in plantations, woodlots or agroforestry systems are known to be invasive. FAO has begun to prepare information on invasive species in forestry. The IPPC is applicable to forestry, but implementation to date has focused on agriculture.

26. *Biodiversity of dry and sub-humid lands.* The joint work programme between the Convention on Biological Diversity and the United Nations Convention to Combat Desertification (UNCCD) includes management of invasive alien species in its list of priority actions. However, the UNCCD has not explicitly addressed invasive alien species in any decision to date. It would be useful to develop guidance to prevent the introduction of potential invasive alien species in programmes that address land degradation through afforestation and the planting of windbreaks and shelterbelts, and species for erosion control and soil fertility improvement.

27. *Biodiversity of inland waters.* Invasive alien species in wetland ecosystems are addressed by the resolution VIII.18 of the Conference of the Parties to the Ramsar Convention on Wetlands, on invasive species and wetlands, which was adopted in 2002. The resolution urges Parties to address wetland issues related to invasive alien species in a decisive and holistic manner, making use of tools and guidance developed by various institutions and under other conventions. However, the resolution does not provide practical guidance for wetland managers. As noted above, there are gaps in the regulatory framework dealing with several potential pathways for invasive alien species in aquatic systems.

28. *Biodiversity of marine and coastal ecosystems.* As described above, some important pathways are being addressed through IMO, though gaps remain. Additionally, active policies for the prevention and or management of invasive alien species are being developed under some of the regional seas agreements.

29. *Biodiversity of island ecosystems.* An International Cooperative Initiative on Invasive Alien Species on Islands is being developed by the Government of New Zealand, the Invasive Species Specialist Group and the Global Invasive Species Programme. The proposed development of a programme of work on the biological diversity of island ecosystems under the Convention will offer an important opportunity to integrate issues related to invasive alien species.

D. Application of instruments in prevention, eradication and containment

30. Principle 2 in the Guiding Principles under the Convention on Biological Diversity provides for a three-stage hierarchical approach including prevention, eradication and containment that should assist States to develop their strategies and programmes for the implementation of Article 8(h) of the Convention.

31. Most of the instruments referred to in the previous sub-sections focus on prevention. Prevention is mainly focused on regulating import. Outside plant and animal health frameworks, there are no controls to restrict the export of known/high-risk invasive plants or animals to countries where they are likely to be problematic. Exclusive reliance on import controls is sometimes inefficient or ineffective: regional support for national prevention efforts is of key importance for countries with capacity constraints.

32. Rapid response and mitigation measures are strongest under plant and animal health frameworks. Restoration still tends to be neglected and there are few positive incentives for use of native species in land management practices.

III. COOPERATION

33. Given the large number of instruments that constitute the international regulatory framework relevant to invasive alien species, cooperation among the relevant organizations is critical. Following the adoption of decision VI/23, there has been enhanced cooperation between the Convention and the International Plant Protection Convention and between the Convention and the Ramsar Convention, as set out in the paragraphs above. There have also been important developments in the context of other agreements, in particular the International Maritime Organization, and exchange of information with the WTO. Opportunities remain for enhanced cooperation between the Convention and the Office International des Epizooties, ICAO and WTO.

34. Methodologies for risk assessment and risk analysis are well established in specific contexts such as plant and animal health. There is potential for the application of these methodologies to a wider range of issues related to invasive alien species

35. Regional coordination is also critical to many aspects of prevention and management of invasive alien species. Some regions are focusing on development of regional strategy and capacity-building, and examples of progress are given in the information document accompanying the present note (UNEP/CBD/SBSTTA/9/INF/32). Other regions need to do more to increase awareness of invasive alien species as a regional sustainable development issue and promote coordination between regional institutions. Transboundary cooperation is mainly reactive, although some regions are developing more strategic approaches.

36. Responsibility, liability and redress with regard to invasive alien species have not been explicitly addressed.

37. Financial support for prevention and management and related capacity building activities still has to be found on a mainly case-by-case basis. There is no dedicated mechanism in place to provide sustainable funding, particularly to support rapid response, although projects on invasive alien species may now be eligible for funding under various focal areas of the Global Environment Facility. The World Bank and WTO have established a facility to help developing countries comply with international standards and participate in the work of the SPS Agreement.
