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FURTHER WORK ON GAPS AND INCONSISTENCIES IN THE INTERNATIONAL REGULATORY FRAMEWORK ON INVASIVE ALIEN SPECIES, PARTICULARLY SPECIES INTRODUCED AS PETS, AQUARIUM AND TERRARIUM SPECIES, AS LIVE BAIT AND LIVE FOOD, AND BEST PRACTICES FOR ADDRESSING THE RISKS ASSOCIATED WITH THEIR INTRODUCTION

Revised note by the Executive Secretary

EXECUTIVE SUMMARY

The Conference of the Parties (COP) has progressively identified, clarified and addressed the gaps and inconsistencies in the international regulatory framework on invasive alien species (IAS). In its decision IX/4 A, it, *inter alia*, identified a number of possible ways to address certain gaps through the work of other relevant international instruments and called for further work under the Convention on Biological Diversity on the specific area of invasive alien species introduced as pets, aquarium and terrarium species, as live bait and live food, including the collation of best practices. It also requested the Executive Secretary to continue to collaborate with various organizations on this and other issues.

To date, the Secretariat has not received formal replies from these organizations to the letters of the Executive Secretary conveying the invitation of the Conference of the Parties for them to consider addressing certain gaps and inconsistencies in the international regulatory framework on invasive alien species. The Executive Secretary is following up and will report to the Conference of the Parties in line with decision IX/4 A. Consultations confirmed that the risks from alien species as pets, aquarium and terrarium species, and as live bait and live food, are not currently addressed by international processes, such as the International Plant Protection Convention (IPPC), the World Organization for Animal Health (OIE) and the Committee on Sanitary and Phytosanitary Measures of the World Trade Organization. Moreover, although a wider application of the mandates of these bodies could, in the future, make contributions to addressing this issue, they are unlikely to do so in a comprehensive way.

Submissions on best practices addressing the risks associated with the introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food were provided by twelve Parties and two organizations. Detailed submissions from Australia and the United Kingdom, together

* UNEP/CBD/SBSTTA/14/1.

with the case-studies provided by the Expert Workshop on Preventing Biological Invasions: Best Practices in Pre-Import Risk Screening for Species of Live Animals in International Trade (UNEP/CBD/COP/9/INF/32/Add.1), held in Indiana, United States of America, from 9 to 11 April 2008, and the tools developed by industry associations and the Global Invasive Species Programme (GISP), could contribute to the development of more widely applicable practical guidance. The number of submissions was low and included few from developing countries. While this may suggest the absence of good-practice cases in most countries, further submissions should be sought.

The paper concludes that it is necessary and appropriate to consider the establishment of an Ad Hoc Technical Expert Group (AHTEG) to suggest means, including practical guidance, to address the risks of invasive alien species introduced as pets, aquarium and terrarium species, building upon existing and additional best-practice cases.

SUGGESTED RECOMMENDATIONS

The Subsidiary Body on Scientific Technical and Technological Advice (SBSTTA) may wish to recommend that the Conference of the Parties adopt a decision along the following lines:

The Conference of the Parties,

Pursuant to paragraph 10 of its decision IX/4,

1. *Takes note* of the information compiled by the Executive Secretary for addressing invasive alien species introduced as pets, aquarium and terrarium species, as live bait and live food, as summarized in the note prepared for the fourteenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (UNEP/CBD/SBSTTA/14/16);

2. *Establishes* an Ad Hoc Technical Expert Group (AHTEG) to suggest ways and means, including practical guidance for addressing invasive alien species introduced as pets, aquarium and terrarium species, as live bait and live food with the terms of reference annexed hereto*;

3. *Requests* the Executive Secretary:

(a) To seek further submissions from Parties and organizations on examples of best practices for addressing invasive alien species introduced as pets, aquarium and terrarium species, as live bait and live food;

(b) Subject to the availability of financial resources, to convene meetings of the Ad Hoc Technical Expert Group as necessary for it to complete its work for consideration at a meeting of the Subsidiary Body on Scientific, Technical and Technological Advice prior to the eleventh meeting of the Conference of the Parties;

(c) To explore further ways and means to improve the capacity of Parties to address invasive alien species introduced as pets, aquarium and terrarium species, as live bait and live food.

* See page 14 below.

I. INTRODUCTION

1. Since its fifth meeting in 2000, the Conference of the Parties has sought to progressively identify, clarify and address the gaps and inconsistencies in the international regulatory framework on invasive alien species. In this work, the Conference of the Parties has been supported by SBSTTA and the Ad Hoc Technical Expert Group (AHTEG) on Gaps and Inconsistencies in the International Regulatory Framework Decision in Relation to Invasive Alien Species. Decision VIII/27 lists the gaps and inconsistencies on the basis of the work of the AHTEG.

2. At its ninth meeting, the Conference of the Parties adopted decision IX/4 A, in which it:

(a) Encouraged Parties to make appropriate use of the risk assessment guidance and other procedures and standards of IPPC and other bodies (paragraph 1);

(b) Identified a number of possible ways forward to address certain gaps through the work of other relevant international instruments in particular IPPC, OIE, WTO and the Committee on Fisheries (COFI) of the Food and Agriculture Organization of the United Nations (FAO) and requested Parties, other Governments and organizations and the Executive Secretary to follow-up on this (paragraphs 2-7);

(c) Called for further work under the Convention on the specific area of invasive alien species introduced as pets, aquarium and terrarium species, as live bait and live food, requesting the Executive Secretary to collate best practices provided by Parties and observers, as well as the information gathered at an expert workshop; and

(d) Requested the Executive Secretary to continue to collaborate with a number of organizations {the above mentioned instruments as well as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO) (paragraphs 11 and 12);

3. At its fourteenth meeting, SBSTTA is expected to:

(a) Consider the collation of best practices on invasive alien species introduced as pets, aquarium and terrarium species, as live bait and live food, and if necessary and appropriate, consider the establishment of an AHTEG to suggest means, including practical guidance, for addressing the risks of invasive alien species introduced as pets, aquarium and terrarium species, as requested in paragraph 10 of decision IX/4 A;

(b) Consider options for further work, as necessary on the basis of options provided by the Executive Secretary, in line with paragraph 13 of decision IX/4 A.

4. Section II of the present note provides an update on the consultations with various instruments and organizations; section III deals with the best practices submitted by the Parties, Governments and organizations; and section IV proposes follow-up action with respect to invasive alien species introduced as pets, aquarium and terrarium species, as live bait and live food. No additional options are proposed at this stage on the broader aspects of decision IX/4 A, or decision VIII/27.

5. Pursuant to paragraph 7 of decision IX/4 A, a further report will be presented to the Conference of the Parties at its tenth meeting, concerning the responses of the International Plant Protection Convention (IPPC), the World Organization for Animal Health (OIE), the Committee on Sanitary and Phytosanitary Measures (SPS) of the World Trade Organization (WTO) and the Committee on Fisheries (COFI) of the Food and Agriculture Organization of the United Nations (FAO) in relation to the invitations issued to them by the Conference of the Parties at its ninth meeting.

6. Decision IX/4 B provided for follow-up to the in-depth review of the programme of work on invasive alien species. A progress report will be made available in an information note to SBSTTA at its fourteenth meeting and to the tenth meeting of the Conference of the Parties.

II COLLABORATION WITH RELEVANT INTERNATIONAL ORGANIZATIONS

7. Pursuant to paragraph 11 of decision IX/4 A, the Executive Secretary continued to collaborate with the secretariats of relevant organizations including IPPC, OIE, the WTO SPS Committee, the International Civil Aviation Organization (ICAO), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the International Maritime Organization (IMO), the FAO Committee on Fisheries, the Global Invasive Species Programme (GISP) and the IUCN Species Survival Commission on matters relevant to invasive alien species.

8. The Executive Secretary consulted with relevant organizations through various means, including:

(a) Letters to the heads of the secretariats of the bodies referred to in paragraphs 2 to 5 of decision IX/4 A, i.e., IPPC, OIE, WTO and the FAO Committee on Fisheries, inviting them to consider addressing, within those bodies, certain gaps and inconsistencies in the international regulatory framework on invasive alien species;

(b) An e-conference among OIE, WTO, IMO, GISP and the Convention Secretariat in April 2009 to discuss collaboration in general, as well as the specific issue of invasive alien species introduced as pets, aquarium and terrarium species, as live bait and live food;

(c) A regular joint secretariats meeting of the Convention on Biological Diversity and IPPC in Montreal in December 2009; and

(d) Other bilateral contacts.

9. In this section, some of the results of these consultations and overall findings are noted.

10. The Secretariat is planning to hold a meeting of the concerned organizations to further promote implementation of decisions VII/27 and IX/4 A. This liaison group meeting is tentatively scheduled for April 2010. The outcome will be made available to SBSTTA at its fourteenth meeting and/or the tenth meeting of the Conference of the Parties, as appropriate.

A. *International Plant Protection Convention (IPPC)*

11. A joint meeting between the secretariats of IPPC and the Convention on Biological Diversity, held in December 2009 with a view to discuss implementation of paragraphs 2 and 11 in decision IX/4 A, concluded that:

(a) Both secretariats continue to collaborate on mainstreaming biodiversity by exchanging notifications and other information and circulating them to the Parties to the Convention on Biological Diversity and the Parties to the IPPC in order to facilitate communication between the national focal points for the Convention on Biological Diversity, national plant protection organizations (NPPO) and regional plant protection organizations (RPPO);

(b) The Secretariat of the IPPC has welcomed input from the Secretariat of the CBD on the process of standard-setting and has called for new topics to be considered for inclusion during the development of the IPPC standard-setting work programme. IPPC provides training courses on the application of international sanitary and phytosanitary measures (ISPM) and risk assessments prior to the

introduction of plants and animals that are categorized as plant pests. It is possible to accept applications not only from NPPOs but also from national focal points for the Convention on Biological Diversity;

(c) Regarding the issue of invasive alien species introduced as pets, aquarium and terrarium species, as live bait and live food, it was considered that terrarium species which have negative impacts on plant biodiversity may possibly be considered within IPPC's mandate. However, expansion of its coverage of plant pests in the aquatic environment requires consideration by its governing body, the Commission on Phytosanitary Measures.

B. World Organization for Animal Health (OIE)

12. In 2008, OIE placed *Batrachochytrium dendrobatidis* (Bd), a type of the chytrid fungus, and ranavirus on its list of notifiable diseases, given their recognized impacts on the international trade in amphibians and the health of populations in the wild. These pathogens are suspected to be spread via international transportation of amphibian species for various purposes (e.g., food, biological supply, pets, zoological collection, conservation initiatives). This step may be regarded as a contribution to an expansion the OIE list of pathogens to include a wider range of diseases of animals in line with paragraph 3 (a) of decision IX/4 A.

13. Expanding the mandate of OIE to address invasive alien species that are not animal diseases or pests listed the OIE, in response to paragraph 3 (b) of decision IX/4 A would require a decision of the World Assembly of OIE Delegates. In order to carry out an expanded work programme to establish standards for the prevention of spread of invasive alien species, the OIE would need to access additional scientific and technical staff and financial resources.

14. The OIE secretariat notes that the Organization is preparing a special edition of its scientific and technical review publication dealing with invasive alien species and the preservation of biodiversity as a means to raise the awareness of its 175 members.

C. WTO Committee on Sanitary and Phytosanitary Measures

15. The Standards and Trade Development Facility (STDF)¹ regional consultations in May and June 2008 identified outstanding needs and priorities in the SPS area in East Africa and Central America. There was consensus on the importance of developing local public and private sector capacity to build capacity in the SPS area as a means to enhance sustainability.

16. In 2008, the STDF organized a workshop² on good practices in technical co-operation in the SPS area, in collaboration with the Organisation for Economic Co-operation and Development (OECD). Regarding capacity-building to address the issue of invasive alien species, the workshop provided an opportunity to consider the Paris Principles on Aid Effectiveness³ in the context of the highly technical area of SPS-related technical co-operation.

17. Although there are often differences across countries in a region, it was considered important to pay adequate attention to developing regional capacity and coordination in the SPS area as a means to maximize results and enhance sustainability in the long-term. Similarly, it was noted that technical assistance could create market distortions, both within and across countries in a region, affecting competitiveness, and that this should be avoided.

¹ The Standards and Trade Development Facility (STDF) is a global programme in capacity building and technical co-operation established by the Food and Agriculture Organization of the United Nations (FAO), the World Organization for Animal Health (OIE), the World Bank, the World Health Organization (WHO) and the World Trade Organization (WTO).

² http://www.wto.org/english/tratop_e/spse/wkshop_oct08_e/wkshop_oct08_e.htm

³ http://www.oecd.org/document/19/0,3343,en_2649_3236398_43554003_1_1_1_1,00.html

18. WTO organized 22 training courses on SPS matters, including capacity-building to meet the standards set by IPPC and OIE, in Costa Rica, Belize, Cape Verde, Chile, Burkina Faso, Laos, Rwanda, Indonesia, India, China, Fiji, Lebanon, Mozambique, Turkey and Zimbabwe in 2008. Twenty-five training courses were organized in 2009 in Fiji, Turkey, Oman, Mauritius, Saudi Arabia, Angola, Lebanon, Bangladesh, Indonesia, Ethiopia, Uganda, Nigeria, Malawi, Zimbabwe and Comoros. However, the risks associated with trade of pets, aquarium and terrarium species, as live bait and live food were not specifically addressed by these courses. To do so would require that standard-setting for such matters be incorporated in WTO-SPS measures in due form.

19. Under the existing agreement of the Sanitary and Phytosanitary Measures (SPS Agreement), Argentina, Australia, Costa Rica, European Community, Egypt, Indonesia, Republic of Korea, Malaysia, Netherland, New Zealand, Chinese Taipei, Chile, Colombia, Singapore, Thailand and the United States of America submitted information to the WTO on exports, including pets (birds, dogs, cats and ferrets), ornamental fishes, live fish, molluscs and crustaceans, including eggs and gametes, and live bait intercepted since 2008.

D. International Civil Aviation Organization (ICAO)

20. The secretariat of ICAO drafted “Guidelines for preventing the transport and introduction of invasive alien species by air” before the ninth meeting of the Conference of the Parties to the Convention on Biological Diversity. However, the programme budget for 2008, 2009 and 2010, approved at the 36th Session of the Assembly of ICAO, did not include the necessary funding to test the draft guidelines in a field trial.

21. Continued collaboration between the secretariats of the CBD and ICAO is necessary. The Assembly of contracting States to ICAO might be invited to consider paragraph 11 in section A of decision IX/4 as well as paragraph 21 in section B of the same decision.

E. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

22. Under Resolution Conf. 9.24 (Rev. CoP14) on *Criteria for amendment of Appendices I and II*, adopted by the Conference of the Parties to CITES, high vulnerability to threats from alien invasive species (such as hybridization, disease transmission, depredation or habitat alteration) are considered as extrinsic, aggravating factors which might cause a species with a small wild population and restricted area of distribution, or which has exhibited a marked decline in its population size, to be [eligible for inclusion](#) in Appendix I or II of the Convention.

23. Under Resolution Conf. 12.10 (Rev. CoP14) on *Guidelines for a procedure to register and monitor operations that breed Appendix-I animal species for commercial purposes*, CITES Parties are urged, prior to the establishment of captive-breeding operations for exotic species, to undertake an assessment of the ecological risks, in order to safeguard against any negative effects on local ecosystems and native species.

24. Under Resolution Conf. 13.10 (Rev. CoP14) on *Trade in alien invasive species*, it is recommended that CITES Parties: (a) consider the problems of invasive species when developing national legislation and regulations that deal with the trade in live animals or plants; (b) consult with the Management Authority of a proposed country of import, when possible and when applicable, when considering exports of potentially invasive species, to determine whether there are domestic measures regulating such imports; and (c) consider the opportunities for synergy between CITES and the Convention on Biological Diversity and explore appropriate cooperation and collaboration between the two Conventions on the issue of introductions of alien species that are potentially invasive.

F. International Maritime Organization (IMO)

25. Currently, the mandate of IMO is not specifically relevant to the introduction pathway of alien species as pets, aquarium and terrarium species, and as live bait and live food; however, IMO expressed interest in taking part in the liaison group to continue to work on the issue.

G. Overall conclusions concerning the role of other international bodies in addressing certain gaps and inconsistencies in the international regulatory framework on invasive alien species

26. To date, the Secretariat has not received formal replies to the letters of the Executive Secretary conveying the invitation of Conference of the Parties for them to consider addressing certain gaps and inconsistencies in the international regulatory framework on invasive alien species. The Executive Secretary is following up and will report to the Conference of the Parties in line with decision IX/4 A.

27. Concerning the risks associated with the introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food, informal consultations suggest that:

(a) IPPC may expand the implementation of its mandate to additional plant and animal species if the alien species are considered to be plant pests. However, aquatic species may not be considered as plant pests, and the IPPC tends to prioritize pests relevant to agriculture and forestry;

(b) Expanding the application of OIE to address diseases in animal biodiversity is considered to be feasible if appropriate budget and staff are devoted to OIE; however, the introduction of animals themselves, such as pets, aquarium and terrarium species, and live bait and live food, may remain beyond its mandate;

(c) The WTO SPS Committee does not have any specific standards *per se*, other than broad guidance on the requirements for establishing national systems to protect animal, plant and human health. The SPS Committee does have the mandate to consider international standards developed by other standard-setting bodies in addition to the OIE, IPPC and *Codex Alimentarius*. While the SPS Committee has not had formal discussions to date on the issue of the introduction of species as pets, aquarium and terrarium species, and as live bait and live food, it could have such discussions in the future. Such discussions could also include considerations as to whether to recognize international standards developed under other relevant international instruments or organizations, such as the Convention on Biological Diversity, IMO, or ICAO.

28. Each secretariat reaffirmed that its area of work is clearly determined by its governing authority, and that expansion of the work area would require a decision of the Parties or member states. On the other hand, although resolving gaps and inconsistencies by expanding the mandates of existing organizations would take time, the secretariat of WTO SPS Committee suggested that opportunities to provide training and other capacity-building workshops for developing countries exist and that standards set by IPPC and OIE may be included in such programmes.

III BEST PRACTICES ADDRESSING THE RISKS ASSOCIATED WITH SPECIES INTRODUCED AS PETS, AQUARIUM AND TERRARIUM SPECIES, AS LIVE BAIT AND LIVE FOOD

A. *Findings of the Expert Workshop on Preventing Biological Invasions: Best Practices in Pre-import Risk Screening for Species of Live Animals in International Trade*

29. The Expert Workshop on Preventing Biological Invasions: Best Practices in Pre-import Risk Screening for Species of Live Animals in International Trade referred to in paragraph 9 of decision IX/4 A, was held from 9 to 11 April 2008 at the University of Notre Dame, Indiana, United States of America. The approaches suggested by workshop participants for the importation of live alien animal species were provided in and information prepared for the ninth meeting of the Conference of the Parties (UNEP/CBD/COP/9/INF/32/Add.1). The main points may be summarized as follows:

(a) The workshop highlighted the essential role of risk assessments to assist in making decisions regarding imports of live alien animal species. According to the workshop, such processes should be: (i) science-based, (ii) appropriate to the specific context, and (iii) include biodiversity and environmental risks associated with the alien species as well as with their parasites and pathogens. Additionally, risk assessments should consider (i) the progression of biological invasion from introduction through to establishment and impact, (ii) the potential role for subnational and regional risk assessments and the relevance of other available technical tools which might be geographic or taxa-specific;

(b) The workshop noted existing gaps in the international regulatory framework, highlighting that other international agreements, including the WTO SPS Agreement, do not explicitly address the invasiveness of animals as a distinct category. However, in the absence of global standards, the workshop participants noted the option to fall back on the general provisions of the WTO, in particular articles 5.1-5.3 and 5.7 of the SPS Agreement;

(c) Workshop participants noted with concern that pathogens and parasites of alien species in trade that could pose risks to wildlife are currently not listed by OIE, and are therefore not adequately regulated;

(d) Workshop participants noted that countries have extensive flexibility to adopt protective measures as they see fit to achieve their desired level of protection from animal invasions. Countries can also tighten animal import systems or otherwise revise previous systems or decisions as long as they follow the WTO SPS provisions in doing so;

(e) Due to the lack of capacity, countries must make decisions using risk assessments based on limited data and information. Thus, the need for capacity-building on risk assessments and increased access to relevant, accurate information were recognized as top priorities;

(f) The workshop noted that, if either data or capacity are lacking, a country may reasonably choose to complete a risk assessment based on the answers to only one or a few questions. As additional data and/or capacities become available, a more complete risk assessment should be performed, the results of which can be used to review and amend the initial decision as appropriate;

(g) Workshop participants suggested that the IPPC Pest Risk Analysis (PRA) model and other relevant International Standards for Phytosanitary Measures (ISPMs) may provide useful guidance for pre-screening. They may also inform the possible development of international standards or procedures for addressing the risks associated with species of live animals in international trade.

B. Best practices submitted by Parties and organizations

30. The Executive Secretary sent notifications 2008-127, dated 1 October 2008, and 2009-137, dated 19 October 2009, which called for submission of examples of best practices for addressing the risks associated with the introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food. Twelve Parties—Australia, Belgium, Canada, Czech Republic, Estonia, France, Japan, Netherlands, Portugal, Spain, Thailand, United Kingdom—and two organizations—IUCN-SSC-Invasive Species Specialist Group and the University of Canberra, Australia—submitted information.

31. Most of the Parties who responded to the CBD notifications have either enacted legislation relating to invasive alien species or developed voluntary codes to address the risks associated with the introduction of alien species as pets, supplementing existing regulations. Those species under control for import or other means of transportation are listed by the authorities based on risk / impact assessments, as appropriate. The lists include organisms which are either allowed to be introduced or prohibited, depending on the country's legislation.

32. For most of the processes which establish the list of species to be controlled, conducting appropriate (i) quarantine measures and management if the introduced organisms can be established, and (ii) cross-sectoral coordination are important to effective control. For example, the Aquatic Nuisance Species Task Force in the United States, the Great Britain Non-Native Species Programme Board in the United Kingdom and the Canary Islands Initiative of Spain took an intergovernmental/ministerial approach, involving the science community and industries. In the submissions of Canada and the Netherlands, emphasis was on the importance of communication between relevant ministries to address the issue of invasive alien species not only as pet species.

33. At the implementation level, the submissions strongly emphasized the implementation of outreach activities on web sites, newsletters and other media, to increase public awareness on the risks to the national environment associated with release or escape of the introduced live species as well as the result of risk / impact assessments.

34. The most comprehensive submissions were provided by Australia and the United Kingdom. In Australia, pre-import screening and environmental assessments are conducted prior to introduction of all live animals, including ornamental fishes and reptiles. A national legislated list of animals and plants suitable for live import has been established, and species that are not on the list cannot legally be imported. Proposals to import animals not currently allowed as import as pets or for other purposes have to be first assessed in terms of their potential impact on the Australian environment. Proposals to import unlisted ornamental finfish for commercial and non-commercial purposes, or for other purposes, also have to be assessed in terms of their potential impact on the Australian environment.

35. *A Strategic Approach to the Management of Ornamental Fish in Australia* was approved in 2006 by all governments in Australia through the Natural Resource Management Ministerial Council. The strategy is being implemented by the Ornamental Fish Management Implementation Group in close consultation with industry and other stakeholders.

36. The scientifically-based models for risk assessment for the establishment of exotic vertebrates in the new environment where the species was introduced, including information and guidelines, were published and used by the Australian Government, state policy officials and wildlife managers to reduce the risk that new exotic species establish and cause harm to the environment.

37. A strategic approach to the management of ornamental fish includes: the establishment of a nationally recognized noxious species list; new management frameworks for the ornamental sector; better communication with stakeholders and a public awareness campaign on the dangers of releasing fish where they can get into waterways; and management of species that are no longer wanted.

38. With regard to live bait and live food, Australia does not permit the importation of live bait and does not permit the importation of live rodents, mice, or rats as pets, or as live food for other animals.

39. In the United Kingdom, the Great Britain Non-Native Species Programme Board developed a risk analysis mechanism which uses a generic risk assessment methodology to assess the risk posed by all alien species. The generic risk assessment methodology that is used was developed by a consortium led by the Central Science Laboratory. The format is based on the European Plant Protection Organization's risk assessment methodology. The Great Britain Non-Native Risk Analysis Panel, which has expertise in entomology, plants, fish, animal diseases, marine and economics, reviews the results of risk assessments conducted by experts to ensure consistency of approach and accuracy of content. Comments made by the panel are sent back to the risk assessor to address or rebut. This process is often repeated several times until the panel is satisfied that the risk assessment is fit for the purpose prior to introduction of non-native species.

40. At the regional level, the Council of Europe is in the process of establishing a European Code of Conduct on Companion Animal and Invasive Alien Species, aimed at encouraging the pet industry to adopt voluntary measures to prevent unwanted introduction and release of invasive alien species into the wild. The code is intended to promote awareness of invasive alien species and inform the public on which species are native to an area and which are not, and disseminate the message that members of the public should never release pets to the wild as it may compromise their welfare and may be cruel. The code also proposes solutions for reporting and rapid response to companion animals in the wild.

41. The information on best practices submitted by the Parties and organizations were mostly on the risks associated with the introduction of pets, and aquarium and terrarium species. Regarding the risks associated with live bait and live food, except for Australia, it is not certain whether there were no measures taken by the Parties or whether they are in progress.

42. Few submissions were received overall, and there was no submission from African and Southern American countries. The very limited number of submissions from developing countries in all regions could be an indication that the capacity at the national level may not be adequate to address the risks associated with the introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food.

43. In light of the limited number of submissions received, additional research was undertaken by the Secretariat on best practices on alien species as pets, aquarium and terrarium species, as live bait and live food.

44. Risk/impact assessment seems to be a standard practice for determining prioritized control activities in a number of countries. According to a recent study,⁴ risk/impact assessments are undertaken in Australia, Argentina, Canada, French Polynesia and New Zealand, and some lists of controlled species are prepared by the authoritative agencies for prevention and management of invasive alien species. Legislation for minimizing the negative impact of invasive alien species has been enacted in Australia, Albania, Argentina, Brazil, Canada, Chile, Costa Rica, Croatia, European Union, Fiji, Finland, France, Greece, Iceland, India, Indonesia, Japan, Madagascar, Malaysia, Mexico, Mozambique, Netherlands, New Zealand, Palau, Portugal, Russia, Senegal, South Africa, Republic of Korea, Spain, Sweden, Switzerland, Tanzania, Uganda, United Kingdom, United States, Viet Nam, Zambia and Zimbabwe.

45. Legislation has been enacted by 20 per cent of the Parties to the Convention based the results covered by the survey above. Although it is recommended that risk assessment be conducted prior to introduction of alien species, the details of information on risk assessment were found in only 3 per cent of the Parties.

⁴ <http://www.gisp.org/publications/policy/countryprofiles.asp>

C. *Practices of Aquarium Industries to Trade Companies and Consumers*

46. Ornamental Fish International (OFI), an association of aquarium-species trade industries, held a workshop in Singapore at the margins of the international trade fare, “Aquarama” in May 2009, focusing on improving awareness of the risks for fauna and flora associated with the ornamental fish and plants trade. The topic of invasive alien species was presented to the aquarium industry worldwide for the first time. Over 4,400 visitors at Aquarama were exposed to the message on the risks of invasion.

47. The Ornamental Aquatic Trade Association (OATA) has produced *Biosecurity and the Ornamental Fish Industry: Future Proofing the Industry*, a publication that includes up-to-date information and a self-assessment biosecurity questionnaire for its members. OATA also produces and disseminates outreach materials, such as booklets, web sites, and plastic bags in which animals and plants are taken home from pet shops, to educate pet-shop owners and consumers regarding the environmental risks associated with ornamental fish⁵ and aquatic plants.⁶

D. *PIJAC/GISP toolkit on best practices for the pet release/escape pathway*

48. In paragraph 23 of decision XI/4 B, the Conference of the Parties invited relevant organizations, including the Global Invasive Species Programme and, as appropriate, Parties and other Governments to support the development and implementation of voluntary schemes, certification systems and codes of conduct for relevant industries and stakeholder groups, including specific guidelines to prevent the introduction of, and manage potentially invasive commercially important species.

49. The Pet Industry Joint Advisory Council (PIJAC) and the Global Invasive Species Programme are developing a toolkit of best management practices designed to minimize the risk of alien species being released or escaping into the natural environment through the pet trade pathway. The toolkit will highlight particular examples and distil lessons relevant to the development of national regulations as well as industry best management practices. Topics include issues such as animal inspection, acclimation and quarantine protocols; measures for housing, packing and handling; codes of conduct; consumer and industry outreach and education; and other tools to reduce release and escape risks (e.g., customer record sheets, re-homing, same gender sales, spay and neuter programmes). A provisional draft will be available for public review at a SBSTTA meeting prior to the eleventh meeting of the Conference of the Parties to the Convention on Biological Diversity.

E. *Some findings on the Internet Trade of Pets and Other Relevant Organisms*

50. The pet and pet products trade on the Internet is estimated to be worth some \$US 30 billion annually in the United States alone, according to the Global Invasive Species Programme.⁷ There is a huge and rapidly increasing market in European Union member States for non-native pets. For example, the European Union is the largest global importer of reptiles.⁸

51. The range of species openly available for purchase on the Internet includes a variety of protected species. Many countries have strict regulations in place to control the import of live organisms through regular channels but such regulations generally do not deal with Internet sales. The United States Department of Agriculture, for example, set up an Internet Surveillance Project, which includes an Agricultural Internet Monitoring System (AIMS).

⁵ <http://www.ornamentalfish.org/aquanautconservation/petfishbelong.php>

⁶ <http://www.ornamentalfish.org/aquanautconservation/invasiveplants.php>

⁷ www.gisp.org/publications/brochures/FactsheetInternetPathway.pdf

⁸ www.iar.org.uk/news/2007/downloads/exotic-pet-factsheet.pdf

52. The policy of the largest Internet marketplace, eBay Inc., prohibits any kind of trade in live animals.⁹ However, the following are exceptions: (i) aquarium or pond fish, snails or similar creatures, (ii) lobsters, crabs, shellfish and other similar creatures that are live when sold but intended for human consumption, and (iii) live insects, crickets and worms used as bait or feeder food for pets.

53. A preliminary assessment of a non-native species pathway, the United Kingdom Internet Pet Trade, conducted by Central Science Laboratory in 2009,¹⁰ found that the non-native animals most frequently offered for sale in the United Kingdom are boas and pythons. In the United States of America, the occurrence of escaped/abandoned pet pythons in the wild has been an increasing phenomenon in the Everglades National Park. The assessment report indicates that the individual snakes may survive in more clement regions of the United Kingdom, with periods of torpor or hibernation during colder periods. This scenario may become more of a possibility in the event of climate warming.

54. Existing national regulations for invasive alien species do not always deal with Internet sales on pets, and aquarium and terrarium species. In addition, the policy of Internet marketplaces left the introduction pathways as live bait and live food out from the restriction. Introductions of invasive alien species as pets, aquarium and terrarium species, and as live bait and live food are largely dependent on users' awareness of whether the species can survive and establish in the environment. As the Internet market has already been growing very rapidly, an international approach to prevent the introduction of invasive alien species by Internet trade should be considered.

F. Databases on invasive alien species and early warning systems

55. The G-8 Summit of the Environment Ministers in Syracuse, Italy, adopted "*Carta di Siracusa*" on Biodiversity in 2009.¹¹ Paragraph 20 contains the following: "Developing and strengthening actions to prevent and to control invasive alien species, also taking into consideration the high costs of coping with existing invasions and their strong impact on biodiversity and ecosystem services. Among the priority actions to implement are early warning and rapid response."

56. Useful information on invasive alien species, their geo-referenced invasion occurrence and climate conditions in invaded areas is currently stored in different databases. The CABI Invasive Species Compendium, the Delivering Alien Invasive Species Inventories for Europe (DAISIE) project, the Global Invasive Species Information Network (GISIN), the IUCN Invasive Species Specialist Group's Global Invasive Species Database (GISD) and Global Registry on Invasive Species (GRIS), The Invasives Information Network of the Inter-American Biodiversity Information Network (IABIN-I3N), the North European and Baltic Network on Invasive Alien Species (NOBANIS) and many other resources on invasive alien species are accessible on Internet. It is vital to make existing information resources directly applicable for risk/impact assessments and development of early warning system by improving the interoperability of these databases.

IV. CONCLUSIONS

57. Consultations confirmed that the risks from alien species as pets, aquarium and terrarium species, and as live bait and live food, are not currently addressed by the international organizations, such as IPPC, OIE and the WTO Committee on Sanitary and Phytosanitary Measures. Moreover, although a wider application of the mandates of these bodies could, in future, make contributions to addressing this issue, they are unlikely to do so in a comprehensive way unless further collaboration is conducted among the relevant organizations mentioned in decisions VIII/27 and IX/4 A.

⁹ <http://pages.ebay.com/help/policies/wildlife.html>

¹⁰ <http://www.nonnativespecies.org/documents/UK%20internet%20pet%20trade%20final%20report.pdf>.

¹¹ The text of the *Carta di Siracusa* can be found at <http://www.cbd.int/doc/g8/g8-2009-04-23-chair-summary-en.pdf>.

58. Submissions on best practices addressing the risks associated with the introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food were provided by twelve Parties and two organizations. Submissions from Australia and the United Kingdom provided detailed submissions, and together with the case studies provided by the expert workshop on best practices for pre-import screening of live animals (UNEP/CBD/COP/9/INF/32/Add.1), held in Indiana, United States of America, from 9 to 11 April 2008, and tools developed by the Pet Industry Joint Advisory Council and GISP, could contribute to the development of more widely applicable practical guidance. The number of submissions was low and included few from developing countries. While this may suggest the absence of good practice cases in most countries, further submissions should be sought. Proposed terms of reference are annexed to the present note.

59. Further to paragraph 10 of decision IX/4 A, it may be necessary and appropriate for SBSTTA to consider the establishment of an ad hoc technical expert group (AHTEG) on addressing the risks associated with the introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food, to suggest means, including practical guidance, for addressing the risks of invasive alien species introduced as pets, aquarium and terrarium species. It is urgent to develop technical guidance and/or standards on the Internet trade of living animals and plants and their shipping, as the Internet market has been growing rapidly.

60. The AHTEG would build the best-practice cases gathered at the Expert Workshop on Best Practices for Pre-Import Screening of Live Animals (see section III A above), as well as existing and additional submissions from Parties and observers, including industry groups and GISP. The composition of the AHTEG should take into account that wide range of stakeholders is involved in trade of pets and other living organisms, and that the socio-economic structure of this trade is rapidly changing with the growth of the Internet market.

61. Technical guidance on how to address species which are not considered plant pests and animal diseases and to regulate transportation of living organisms as pets, aquarium and terrarium species, and as live bait and live food, could refer to, and be based on, the best-practices report by Australia, the United Kingdom, and others, as summarized in section III above, and could be developed in collaboration between the secretariats of relevant international organizations and experts under the Convention on Biological Diversity. The AHTEG might also provide advice on capacity-building with special attention to training in risk assessment prior to decision-making on introduction of alien species as pets, aquarium and terrarium species, as live bait and live food. It is urgent to develop technical guidance and/or standards on the Internet trade of living animals and plants and their shipping, as the Internet market has been growing rapidly.

62. Mainstreaming of biodiversity to address the issue of invasive alien species was recognized in submissions from the Parties as a means to address the introduction of pets and others. This requires active involvement of a wide range of stakeholders both inside and outside of the government. Furthermore, successful cases are associated with outreach activities to the public. An inter-sectoral approach needs to be promoted.

63. It is important to coordinate relevant database providers, web-based metadata search mechanism providers and experts in order to make existing information fully available for addressing the issue of invasive alien species. Although there is currently much information available on Internet and other media, they are not interoperable and not directly applicable to use for risk assessments, border controls and quarantine measures.

64. In addition, and pending the development of practical guidance and its subsequent consideration by SBSTTA and the Conference of the Parties, as appropriate, Parties may continue to apply the Guiding

Principles for the prevention, introduction and mitigation of impacts of invasive alien species that threaten ecosystems, habitats or species as annexed to decision VI/23*.

65. In light of the limited response from Parties, in particular from developing countries, the Secretariat should explore further ways and means to improve the capacity of Parties to address invasive alien species introduced as pets, aquarium and terrarium species, as live bait and live food.

Annex

DRAFT TERMS OF REFERENCE FOR THE AD HOC TECHNICAL EXPERT GROUP ON ADDRESSING THE RISKS ASSOCIATED WITH THE INTRODUCTION OF ALIEN SPECIES AS PETS, AQUARIUM AND TERRARIUM SPECIES, AND AS LIVE BAIT AND LIVE FOOD

1. The purpose of this Ad Hoc Technical Expert Group (AHTEG) is to suggest means, including practical guidance, for addressing the risks associated with the introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food.
2. More specifically, the Ad Hoc Technical Expert Group shall identify relevant tools, methodologies and best practice examples for addressing the risks associated with the introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food, drawing upon:
 - (a) Information provided by Parties and observers;
 - (b) Information provided by the secretariats of relevant international organizations;
 - (c) Information gathered at the Expert Workshop on Preventing Biological Invasions: Best Practices in Pre-Import Risk Screening of Live Animal in International Trade (UNEP/CBD/COP/9/INF/32/Add.1), held in Indiana, United States of America, from 9 to 11 April 2008;
 - (d) Other relevant scientifically-sound information.
3. The Ad Hoc Technical Expert Group shall be established in accordance with the procedures outlined in the consolidated *modus operandi* of SBSTTA (decision VIII/10, annex III), taking into account the need to draw upon the experience of relevant international organizations, industry organizations and GISP.
4. The Ad Hoc Technical Expert Group shall meet as required to complete its task, subject to the availability of financial resources, and also work through correspondence and teleconferences.
5. The Ad Hoc Technical Expert Group shall report to a meeting of SBSTTA prior to the eleventh meeting of the Conference of the Parties to the Convention on Biological Diversity.

* One representative entered a formal objection during the process leading to the adoption of this decision and underlined that he did not believe that the Conference of the Parties could legitimately adopt a motion or a text with a formal objection in place. A few representatives expressed reservations regarding the procedure leading to the adoption of this decision (see UNEP/CBD/COP/6/20, paras. 294-324).