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Item 13.9 of the provisional agenda*

STANDARDS, GUIDANCE AND RELEVANT ACTIVITIES OF THE ORGANIZATIONS THAT SUPPORT PARTIES AND OTHER GOVERNMENTS TO ADDRESS THE RISKS ASSOCIATED WITH THE INTRODUCTION OF ALIEN SPECIES AS PETS, AQUARIUM AND TERRARIUM SPECIES, AND AS LIVE BAIT AND LIVE FOOD

Note by the Executive Secretary

I. INTRODUCTION

1. Pursuant to decision X/38, the Conference of the Parties (COP) requested the Executive Secretary to convene a meeting of an Ad Hoc Technical Expert Group (AHTEG) to consider ways and means to prevent the impacts and minimize the risks associated with the introduction of invasive alien species (IAS) as pets, aquarium and terrarium species, and as live bait and live food (paragraph 2 of decision X/38).

2. Accordingly, the Executive Secretary, with generous financial assistance from the Governments of Spain and Japan, convened a meeting of the AHTEG on Invasive Alien Species from 16 to 18 February 2011 at International Environment House in Geneva, Switzerland. Some members of the inter-agency liaison group on invasive alien species, including the World Trade Organization (WTO), the International Plant Protection Convention (IPPC) and the World Organisation for Animal Health (OIE), and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) participated in the meeting of the AHTEG.

3. The report of the AHTEG was presented as an information document to the fifteenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA)¹ which in its recommendation XV/4 requested the Executive Secretary, in collaboration with the members of the inter-agency liaison group on invasive alien species, to prepare an information document on how the standards, guidance and relevant activities of the organizations could support Parties in addressing the threats from invasive alien species introduced as pets, aquarium and terrarium species, as live bait and live food, and to make it available before the eleventh meeting of the Conference of the Parties.

4. In response to paragraph 1 of section II of recommendation XV/4 the Executive Secretary prepared this document as information for the Conference of the Parties at its eleventh meeting. Section II of the document summarizes the conclusions of the AHTEG. Section III provides information on international standards and guidance collected in collaboration with the Inter-agency Liaison Group on Invasive Alien Species. Section IV summarizes guidance on eradication and

* UNEP/CBD/COP/11/1.

¹ see document UNEP/CBD/SBSTTA/15/INF/1 accessible from <http://www.cbd.int/doc/meetings/sbstta/sbstta-15/information/sbstta-15-inf-01-en.doc>.

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mitigation, and section V provides information on opportunities of capacity-building to implement the existing international standards and guidance.

5. This document is a preliminary review. It has not been formally reviewed by the members of the Inter-agency Liaison Group on Invasive Alien Species. Further guidance on the existing international standards will be posted on the CBD website (<http://cbd.int/invasive/lg>).

II. CONCLUSIONS OF THE AHTEG

6. The AHTEG recognized that the Guiding principles for the prevention, introduction and mitigation of impacts of alien species that threaten ecosystems, habitats or species, annexed to decision VI/23* (Guiding Principles) continue to provide guidance to Parties, other Governments and relevant organizations to address the risks associated with the introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food (UNEP/CBD/SBSTTA/15/INF/1).

7. The AHTEG recognized that the risk from organisms, that have a negative impact on plant species, that are introduced as pets, aquarium and terrarium species and as live bait and live food are covered by the IPPC when Parties to the CBD set appropriate phytosanitary legislation, regulations and procedures, and apply the relevant phytosanitary measures in close collaboration with their National Plant Protection Organizations (Official contact point for IPPC at national level). Therefore, risk of biological invasion associated with the pathways of introduction need to be focused on alien animal species, that are not harmful to plants, introduced as pets, aquarium and terrarium species, and as live bait and live food (UNEP/CBD/SBSTTA/15/INF/1).

8. The IPPC covers invasive species that are considered as pests which include any species, strain or biotype of plant, animal or pathogenic agent injurious to plants or plant products, including e.g. weeds and plants themselves in terrestrial and aquatic environment. In the context of alien animal species introduced as pets, aquarium and terrarium species, and as live bait and live food, animal species that are injurious to plants or plant products are considered as pests under the IPPC. (See ISPM No.5 “Glossary of Phytosanitary Terms - Appendix I: Terminology of the Convention on Biological Diversity in relation to the Glossary of phytosanitary terms”²)

9. Taking into account the existing IPPC standards and the mandate of the IPPC, the AHTEG decided to focus on organisms that are harmful to animals, and that are not injurious to plants, in its report. Note that the term “animal species” used at the AHTEG includes mammals, birds, fish, reptiles, amphibians, invertebrates and zooplankton (any taxa under kingdom Animalia), and it includes any part, gametes or propagule of such species that might survive and subsequently reproduce in accordance with the definition of alien species indicated in the footnote of the Guiding Principles.*

10. It also notes that parasites and pathogenic microorganisms associated with introduced animals and their containers including aquatic medium may pose threats to species of wild fauna and flora and also human health (zoonosis).

11. Regarding organisms other than animals (kingdom Animalia) and plants (kingdom Plantae) the AHTEG suggested to clarify whether fungi which are not in the kingdom Plantae could be covered by the IPPC³ (UNEP/CBD/SBSTTA/15/INF/1).

12. The following definitions of terms are used in this document to be consistent with the Guiding Principles* and as suggested by the AHTEG (UNEP/CBD/SBSTTA/INF/1):

² ISPM No. 5 [https://www.ippc.int/file_uploaded/1336736415_ISPM_05_En_2012-05-07\(CPM-7\).pdf](https://www.ippc.int/file_uploaded/1336736415_ISPM_05_En_2012-05-07(CPM-7).pdf)

* 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).

³ SBSTTA recommendation XV/4: *encourages* the IPPC to (i) broaden the application of the International Plant Protection Convention to include the health of bryophytes and algae species; and (ii) Clarify whether its mandate also applies to the health and protection of fungi, with a view to identifying and, if necessary, addressing possible gaps.

(a) **Alien species:** a species, subspecies or lower taxon, introduced outside its natural past or present distribution; includes any part, gametes, seeds, eggs, or propagules of such species that might survive and subsequently reproduce (the Guiding Principles*);

(b) **Invasive alien species:** an alien species whose introduction and/or spread threaten biological diversity (the Guiding Principles*);

(c) **Pets, aquarium and terrarium species:** Those species or lower taxon of the kingdom Animalia kept for personal amusement or companionship, and “aquarium and terrarium species” is subsumed under this term and that scope is restricted to privately-kept animals (UNEP/CBD/SBSTTA/15/INF/1);

(d) **Live bait and live food:** those species that are not considered pests of plants, introduced as food for animals or human consumption, whose threat to biodiversity is not adequately considered in other applicable regimes (UNEP/CBD/SBSTTA/15/INF/1);

13. In addition, the following terms are used in this document to assist understanding of those contents in the international standards and guidance:

(a) **Alien animal species:** those species or lower taxon of the kingdom Animalia that threaten biological diversity which include pest of plants under the definition of the International Plant Protection Convention (IPPC) and hazard under the definition of World Organisation for Animal Health (OIE) (UNEP/CBD/SBSTTA/15/INF/1);

(b) **Risk analysis:** (i) the assessment of the consequences of the introduction and of the likelihood of establishment of an alien species using science-based information (i.e., risk assessment), and (ii) to the identification of measures that can be implemented to reduce or manage these risks (i.e., risk management), taking into account socio-economic and cultural considerations (the Guiding Principles*).

III. FURTHER COLLABORATION WITH THE INTER-AGENCY LIAISON GROUP

A. *The WTO agreement on the application of sanitary and phytosanitary measures*

14. When the pathway of introduction is identified as international trade of alien animal species, the World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement)⁴ is relevant to protecting animal, human or plant health and providing the technical justification.

15. Under the SPS Agreement, Members (of the WTO) have the right to take sanitary and phytosanitary measures necessary for the protection of human, animal or plant life or health (SPS Agreement Article 2). In Annex A of the SPS Agreement, an SPS measure is defined, inter alia, as “any measure applied to protect animal or plant life or health within the territory of the Member from risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms or disease-causing organisms”. Another type of measure covered by the SPS Agreement that is relevant in this context is measures applied “to prevent or limit other damage within the territory of the Member from the entry, establishment or spread of pests”.

16. With regard to this definition, a footnote inserted to the SPS Agreement clarifies as follows: “For the purpose of these definitions, “animal” includes fish and wild fauna; “plant” includes forests and wild flora; “pests” include weeds; and “contaminants” include pesticide and veterinary drug residues and extraneous matter”.⁴

17. To harmonize sanitary and phytosanitary measures on as wide a basis as possible, Members of the WTO are required to base their sanitary or phytosanitary measures on international standards, guidelines or recommendations (The SPS Agreement Article 3), which are set by three standard-setting bodies recognized by the SPS Agreement, namely (i) the IPPC for plant health, (ii) the OIE for animal health (including zoonoses), and (iii) the Codex Alimentarius Commission

⁴ The SPS Agreement http://www.wto.org/english/tratop_e/sps_e/spsagr_e.htm.

(Codex) for food safety. Codex sets standards related to food additives, veterinary drug and pesticide residues, contaminants, methods of analysis and sampling, and codes and guidelines of hygienic practice. With regard to the risks associated with introduction of live bait and live food, currently food safety for humans is covered by Codex. There are no international standards recognized in the SPS Agreement that explicitly apply to the risks of live animals for consumption (as bait or food) becoming invasive. In some cases, where the live animals for consumption affect animal or plant health, such risks may be covered by the IPPC or the OIE respectively.

18. All of the International Standards for Phytosanitary Measures (ISPMs) are accessible on the IPPC's web site at https://www.ippc.int/index.php?id=ispms&no_cache=1&L=0.

19. The OIE standards (Terrestrial Animal Health Code,⁵ Aquatic Animal Health Code,⁶ the Manual of Diagnostic Tests and Vaccines for Terrestrial Animals (Terrestrial Manual)⁷ and the Manual of Diagnostic Tests for Aquatic Animals (Aquatic Manual)⁸) are available at <http://www.oie.int/international-standard-setting/overview/>.

20. The adopted standards under the IPPC provide guidance to contracting parties of the IPPC on Phytosanitary Principles for the Protection of Plants and the Application of Phytosanitary Measures in International Trade, with specific standards covering such areas as risk analysis, import and export systems, post-border controls and surveillance and reporting on pests and diseases.

21. The OIE Animal Health Codes provide guidance on conducting animal health control measures (e.g. risk analysis, sanitary measures relating to trade, veterinary certification, notification of listed diseases and emerging diseases) and manuals provide guidance on diagnostic methods, and where applicable, vaccines for specific diseases.

B. International standards for phytosanitary measures

22. Food and Agriculture Organization of the United Nations⁹ defines the term "Biosecurity" for Food and Agriculture Production (see footnote 9). Biosecurity measures are taken in some countries to address invasive alien species. Which comprise with implementation of the international standards and guidance, and where it does not exist, these countries apply the SPS measures with possible available scientific evidences, using the framework of the SPS Agreement.

23. The international trade of live animal species starts in the exporting country. When an importing country decides on importation of live animal species with appropriate risk analysis, live animals are handled and shipped to a border area where sanitary and phytosanitary measures may be taken at both the exporting country and importing country, including transition countries. After clearance of Customs, the live animals are further transported to post-border area of importing country. Under the SPS Agreement, the international standards, guidelines and recommendations are set to cover the SPS measures throughout the process from exporting countries to importing countries, including the management in post border area of the importing countries to monitor and report on pests and diseases. The international standards are also set for eradication of pests and diseases once their establishment or outbreak is reported. Traders must adhere to the regulations that are set by the authorities of Members.

⁵ The OIE Terrestrial Animal Health Code <http://www.oie.int/international-standard-setting/terrestrial-code/>.

⁶ The OIE Aquatic Animal Health Code <http://www.oie.int/international-standard-setting/aquatic-code/>.

⁷ Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2012 <http://www.oie.int/international-standard-setting/terrestrial-manual/access-online/>.

⁸ Manual of Diagnostic Tests for Aquatic Animals 2011 <http://www.oie.int/en/international-standard-setting/aquatic-manual/access-online/>.

⁹ A strategic and integrated approach that encompasses the policy and regulatory frameworks (including instruments and activities) that analyse and manage risks in the sectors of food safety, animal life and health, and plant life and health, including associated environmental risk. Biosecurity covers the introduction of plant pests, animal pests and diseases, and zoonoses, the introduction and release of genetically modified organisms (GMOs) and their products, and the introduction and management of invasive alien species and genotypes. Biosecurity is a holistic concept of direct relevance to the sustainability of agriculture, food safety, and the protection of the environment, including biodiversity (<http://www.fao.org/biosecurity/> FAO Biosecurity for Food and Agricultural Production).

24. The adopted standards under the IPPC provide guidance to contracting parties of the IPPC on Phytosanitary Principles for the Protection of Plants and the Application of Phytosanitary Measures in International Trade, with specific standards covering such areas as risk analysis, import and export systems, post-border controls and surveillance and reporting on pests and diseases. In the context of preventing and minimizing the risks associated with introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food, the relevant ISPMs include:

- (a) Basic principles of phytosanitary measures (ISPM No. 1);
- (b) Pest risk analysis (ISPM No. 2, No. 6, No. 11 and No. 21);
- (c) Management of shipping, export, import and releases (ISPM No. 3, No. 15);
- (d) Phytosanitary certificates (ISPM No. 7);
- (e) Pest detection, recording, identification, monitoring and reporting (ISPM No. 4, No. 6, No. 8, No. 13, No. 17, No.26, No. 30);
- (f) Pest eradication (ISPM No. 9, No. 28);
- (g) Making available lists of regulated pests (ISPM No. 19);
- (h) Structure and operation of phytosanitary regulatory system including legislation, regulation, procedure etc. (ISPM No. 12, No. 20, No.32, No. 34, No. 35, No. 36);
- (i) Procedure for the inspection and sampling of regulated articles (ISPM No. 23, No. 31);
- (j) Procedure to identify, assess and manage phytosanitary risks in the country of transit under Customs control (ISPM No. 25);
- (k) Terminology (ISPM No. 5).

C. The OIE Animal Health Codes

25. The OIE Terrestrial Animal Health Code (2012) covers the following in the context of preventing and minimizing the risks associated with introduction of alien animal species, in terms of disease risks in animals and human (zoonosis):

- (a) Animal disease diagnosis, surveillance and notification (Section 1);
- (b) Risk analysis (Section 2);
- (c) Quality of Veterinary Services (Section 3);
- (d) General recommendations on disease prevention and control (Section 4);
- (e) Trade measures, import/export procedures and veterinary certification (Section 5);
- (f) Veterinary public health (Section 6);
- (g) Recommendations applicable to OIE Listed diseases (Sections 8 to 15).

26. The OIE Aquatic Animal Health Code (2012) covers the following in the context of preventing and minimizing the risks associated with introduction of alien animal species, in terms of the disease risks in aquatic animals:

- (a) Aquatic animal disease diagnosis, surveillance and notification (Section 1);
- (b) Risk analysis (Section 2);
- (c) Quality of Aquatic Animal Health Services (Section 3);
- (d) General recommendation on disease prevention and control (Section 4);
- (e) Trade measures, importation/exportation procedures and health certification (Section 5);
- (f) Veterinary public health (Section 6);

- (g) Recommendations applicable to OIE Listed diseases (Sections 8 to 11).

27. Recently, the OIE published the “Guidelines for assessing the risk of non-native animals becoming invasive” to assess the risks arising from alien animals which are not considered as agents that are pathogenic for animals and/or humans. As of September 2012, these guidelines are not included in the OIE Animal Health Codes, and therefore this is not recognized as an international standard within the OIE framework. However, the OIE made the guidelines available on its web site for public to use in assessing risks of introduction of alien animal species.¹⁰ (The guidelines are accessible at http://www.oie.int/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/OIEGuidelines_NonNativeAnimals_2012.pdf.)

28. The IPPC and the OIE consider the environment and health of species in wild fauna and flora as appropriate. Authorities established nationally to address issues related to animal (OIE) and plant (IPPC) health are often different authorities than those dealing with environmental issues (CBD). Addressing risks associated with the introduction of alien species requires collaboration among various national authorities, which maybe challenging at the national level. The existing capacity within each country to address invasive alien species, for example, conducting risk analysis, can often be found in the National Plant Protection Organization or the National Veterinary Service which maybe different organizations from where the contact point for the CBD is.

D. FAO Code of Conduct for Responsible Fisheries

29. Regarding aquatic alien animals, such as aquarium species, aquatic species used as live bait and live food, the FAO Fisheries and Aquaculture Department has undertaken a variety of activities and partnerships that constitute a framework for the control and responsible use of alien species. The framework consists of:

- (a) An overarching international agreement (Code of Conduct for Responsible Fisheries; FAO 1995a);
- (b) Technical guidelines on how to implement the articles of that agreement in relation to alien species (the International Council for the Exploration of the Sea (ICES 1995, 2005) and the Code of Practice on the Introduction and Transfer of Marine Organisms (EIFAC 1988);
- (c) Five further technical guidelines on how to address fish health concerns (the Asia Regional Technical Guidelines and Beijing Consensus (FAO/NACA 2000);
- (d) An information source to help with assessing possible positive and negative impacts (the FAO Database on Introductions of Aquatic Species (DIAS 2003); and
- (e) A mechanism to deal with lack of information (i.e., uncertainty) by application of a precautionary approach to species introductions.

30. FAO Code of Conduct for Responsible Fisheries¹¹ provides guidance on development of aquaculture and trade of fishes and product of fishes, which is highly relevant to addressing risks associated with introduction of aquatic alien species. This Code is voluntary. However, certain parts of it are based on relevant rules of international law, including those reflected in the United Nations Convention on the Law of the Sea of 10 December 1982, which recognizes the conservation of living resources, and the study, protection and preservation of the marine environment.

31. Under the code, States should establish, maintain and develop an appropriate legal and administrative framework which facilitates the development of responsible aquaculture (Article 9.1.1). This includes minimizing adverse ecological changes and related economic and social consequences (Article 9.1.5), and minimizing risks of disease transfer and other adverse effects on wild and cultured stocks (Article 9.3.3).

32. With regard to international trade, the code indicates that fish trade measures adopted by States to protect human or animal life or health, the interests of consumers or the environment, should

¹⁰ See Article 5.8 of the SPS Agreement.

¹¹ FAO Code of Conduct for Responsible Fisheries <http://www.fao.org/docrep/005/v9878e/v9878e00.HTM>.

not be discriminatory and should be in accordance with internationally agreed trade rules, in particular the principles, rights and obligations established in the SPS Agreement (Article 11.2.4).

33. The following provide information on relevant FAO guidelines and a publication to implement the FAO Code of Conduct for Responsible Fisheries:

(a) FAO Technical Guidelines under the Code of Conduct for Responsible Fisheries (CCRF),¹²

(b) FAO Technical Guidelines for Responsible Fisheries 2 "Precautionary approach to capture fisheries and species introductions" (FAO 1996);¹³

(c) FAO Technical Guidelines for Responsible Fisheries 5 suppl. 3 "Aquaculture Development, 3. Genetic resource management" (FAO 2008);¹⁴

(d) FAO Technical Guidelines for Responsible Fisheries on Health Management for Responsible Movement of Live Aquatic Animals (FAO 2007);¹⁵

(e) FAO Technical Guidelines for Responsible Fisheries on Recreational Fisheries (FAO 2012);¹⁶

(f) **Asia** Regional Technical Guidelines on Health Management for the Responsible Movement of Live Aquatic Animals and the Beijing Consensus and Implementation Strategy (FAO 2000).¹⁷

34. For understanding and applying risk analysis in aquaculture as well as best management practices regarding the use of alien species in Asia and Pacific, "The Use of Genetically Improved and Alien Species for Aquaculture and Conservation of Aquatic Biodiversity in Africa",¹⁸ is also available.

E. The Convention on International Trade in Endangered Species of Wild Fauna and Flora

35. The framework provided by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and related national legislation, offers Parties and other States a potential mechanism for controlling the import and export of CITES-listed species that are also invasive alien species. In this connection, it is known that some CITES-listed species are invasive when introduced to areas outside their natural range. Resolution Conf. 13.10 (Rev. CoP14) of the Conference of the Parties to CITES addresses trade in alien invasive species. In the Resolution, it is recommended that 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

¹² <http://www.fao.org/fishery/publications/technical-guidelines/en>

¹³ FAO Technical Guidelines for Responsible Fisheries - Precautionary Approach to Capture Fisheries and Species Introductions - 2 (FAO 1999) <http://www.fao.org/docrep/003/w3592e/w3592e00.htm>

¹⁴ FAO technical guidelines for responsible fisheries 5 Suppl. 3, Aquaculture development, 3. Genetic resource management (FAO 2008) <http://www.fao.org/docrep/011/i0283e/i0283e00.htm>.

¹⁵ FAO Technical guidelines for responsible fisheries 5 Suppl. 2, Aquaculture development, 2 Health management of responsible movement of live aquatic animals. (FAO 2007) <ftp://ftp.fao.org/docrep/fao/010/a1108e/a1108e00.pdf>.

¹⁶ FAO Technical guidelines for responsible fisheries 1, Recreational Fisheries (FAO 2012) <http://www.fao.org/docrep/016/i2708e/i2708e00.pdf>.

¹⁷ Asia Regional Technical Guidelines on Health Management for the Responsible Movement of Live Aquatic Animals and the Beijing Consensus and Implementation Strategy (FAO 2000) <http://www.fao.org/docrep/005/X8485E/X8485E00.HTM>.

¹⁸ Gupta M.V., Bartley D.M and Acosta B.O ed. "The Use of Genetically Improved and Alien Species for Aquaculture and Conservation of Aquatic Biodiversity in Africa", published by WorldFish Center, Philippines ISBN-982-2346-27-4 (2004).

(c) Consider the opportunities for synergy between CITES and the Convention on Biological Diversity (CBD) and explore appropriate cooperation and collaboration between the two Conventions on the issue of introductions of alien species that are potentially invasive.

36. References to the concept of invasive alien species are also contained in Resolution Conf. 9.24 (Rev. CoP15) on *Criteria for amendment of Appendices I and II*, Resolution Conf. 10.7 (Rev. CoP15) on *Disposal of confiscated live specimens of species listed in the Appendices* and Resolution Conf. 12.10 (Rev. CoP15) on *Registration of operations that breed Appendix I animal species in captivity for commercial purposes*.

37. The CITES system of permits and certificates, its CITES Trade Database,¹⁹ its network of national authorities and its compliance procedures (including the possible adoption of recommendations to suspend trade in one or more CITES-listed species) provide countries with some tools to control the international introduction of invasive alien species. National or supra-national policy instruments for CITES should ensure that trade in listed wildlife species is legal, sustainable and traceable and may also help to prevent or minimize the introduction and spread of certain invasive alien species.

Box 1. EC Wildlife Trade Regulation No.338/97 in European Union

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is implemented in the European Union through a set of regulations known as the “*EC Wildlife Trade Regulations*”. The Council Regulation (EC) No. 338/97 deals with the protection of species of wild fauna and flora by regulating the trade in these species. It lays down the provisions for import, export and re-export as well as internal EU trade in specimens of species listed in its four Annexes (including non-CITES species).

The EC Regulation No. 338/97 covers species that are known to pose an ecological threat to indigenous species (Art. 3.2(d)), and currently there are four animal taxa listed for these reasons (see also COMMISSION REGULATION (EU) No 101/2012 of 6 February 2012 amending Council Regulation (EC) No 338/97 on the protection of species of wild fauna and flora by regulating trade therein):

- Red eared slider (*Trachemys scripta elegans*);
- American bullfrog (*Rana catesbeiana*);
- Painted turtle (*Chrysemys picta*); and
- American ruddy duck (*Oxyura jamaicensis*).

These species are banned from import and the border service inspects for these animals. In addition, the European Commission can establish an import suspension on the import of live specimens of species listed in Annex B to the EC Regulation No. 338/97 and known to present an ecological threat to indigenous Community fauna and flora.

38. Management efforts also need to focus on improving labelling and identification of species in stores, shipping and transport. It is helpful to indicate about the risks posed by release of alien species, including the risks of diseases to be spreading. Providing information is important, particularly on invasion risk of introduced species and its better options for responsible disposal when it becomes unwanted. These approaches can be underpinned by legislation, for example, setting requirement to distribute information materials.

39. Regarding labelling standards, the International Air Transport Association (IATA) has set international standards for live animal transportation by commercial air. It is recommended in Resolution Conf. 10.21 (Rev. CoP14) on *Transport of live specimens*, adopted by the Conference of the Parties to CITES, that all Parties dealing with the preparation and transport of live animal specimens promote the full and effective use by Management Authorities of the IATA Live Animals Regulations (for animals) and the IATA Perishable Cargo Resolutions (for plants) and incorporate

¹⁹ CITES Trade Database <http://www.unep-wcmc-apps.org/citestrade/trade.cfm>.

them into their domestic legislation. Similar labelling may apply for domestic barter, transfer or shipping of live animals with various carriers, including postal and other shipping services.

F. National and regional practices

40. If the risk is found to be unacceptable based on the result of risk analysis, measures can be taken at the border and post boarder area. The ways to prevent/control introduction of unacceptable species include:

(a) Designating the species as quarantine pests and apply sanitary and phytosanitary measures in accordance with international standards;

(b) Designating the species as invasive alien species or a potential invasive alien species and apply appropriate measures for invasive alien species under national legislation or regulation.

41. If importing country decides to prevent entry of quarantine pests or regulated non quarantine pest (combined referred to as regulated pests), firstly, these species should be listed as regulated pests as obliged under the IPPC. In accordance with ISPM No. 16,³⁵ required information associated with this type of list includes the pest's (invasive alien species') scientific name, the pest category and commodities or other articles that are regulated for the pest. Supplementary information may be provided such as synonyms and references to data sheets and pertinent legislation. Updating of the lists is required when pests are added or deleted or when required information or supplementary information changes. Lists should be made available, and may be posted on the IPP (International Phytosanitary Portal (IPP), <http://www.ippc.int>) or supplied to other contracting parties on request.

42. The SPS Agreement contains provisions of technical assistance for Members, particularly for developing countries, to implement SPS measures consistent with international standards and the expectations of trading partners.²⁰

Box 2. Biosecurity in Australia, New Zealand and the Pacific Island States

“Biosecurity” is protecting the economy, environment and people’s health from pests and diseases. It includes trying to prevent new pests and diseases from arriving, and helping to control outbreaks when they do occur. While robust response arrangements are in place to combat outbreaks, preventing pest, disease and weed incursions in the first place, remains a national priority. (Australian Government Department of Agriculture, Fisheries and Forestry - <http://www.daff.gov.au/animal-plant-health/pests-diseases-weeds/biosecurity>).

Under the national policies to protect economy, environment and people’s health partnership with governments, agencies, industry and the community is established in countries including, but not limited to, Australia, Cook Islands, Fiji, New Zealand, Palau, Samoa among others in the Pacific. Quarantine is not all biosecurity management in these countries. These countries collaborate in building capacity among neighboring countries. Within the country, the relevant government offices are working together with importers to ensure raising awareness on their responsibilities, and with exporters to ensure exporting goods are free of pests and diseases (which are nearly equal to those invasive alien species if they were introduced from outside of natural range) that have already established are subject to minimize their negative impact on countries’ economy and environment.

43. To control those animal species designated as invasive alien species some appropriate measures on invasive alien species can be established at national level either by adjusting the existing legislation or by newly developing specific regulation on invasive alien species. There are practices taken by Parties and other Governments to develop specific measures on invasive alien species relevant to the risks associated with introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food. These include:

(a) Invasive alien species act;

²⁰ http://www.wto.org/english/tratop_e/devel_e/build_tr_capa_e.htm

- (b) Voluntary codes of conduct;
 - (c) Guidance to the public.
44. With regard to appropriate measures under invasive alien species act include:
- (a) Import bans on listed species;
 - (b) Obligation of appropriate keeping and prohibition of release;
 - (c) Prohibition of selling and transferring ownership;
 - (d) Permission system to import with certain condition, such as:
 - (i) Registration of owning or breeding alien species as pets;
 - (ii) Implant microchip which uses passive radio frequency identification technology implant on pets;
 - (iii) Continuous monitoring on escapes;
 - (iv) Penalties on selling, transferring of ownership, release or abundant of the listed species, as appropriate.

Box 3. Invasive Alien Species Act in Japan (Law No. 78)

Under the announcement of national policy by the Cabinet regarding implementation of relevant measures to prevent various damages caused by invasive alien species, the invasive alien species act was enacted in 2005. The lists of designated Invasive Alien Species (IAS), Uncategorized Alien Species (UAS) and Living Organisms Required to have a Certificate Attached (LORCA) are produced in consultation with an expert panel. These listings were subjected to public comments, and then presented to WTO Members. Under this act, breeding, planting, keeping, and carrying of IAS are prohibited in Japan, unless permission from the competent ministers is possessed. The actions being categorized in specific occasions are exempted. Importing and transferring of IAS are prohibited unless the permission is granted by the competent ministries. Releasing those species is prohibited under any condition. Competent ministers and other interest groups such as local governments shall take some measures for the mitigation of invasive alien species that already exist in Japan. UAS which carry possibility of being categorized as IAS in the future need further detailed investigation prior to permission on importation /exportation to be granted. Regarding LORCA, any species that cannot be clearly distinguished from the species described above must be labeled with documentation issued by the government or others (of exporting country) attached, in order to present their information on their taxa and characteristics. The competent ministers can request relevant information on individuals who have obtained the permission for importation as well as other persons concerned. The ministries also inspect the site where the species are being used, and order qualified persons to take appropriate measures, where necessary. There are also provisions of penalties, interim measures, and so forth.

45. The practices of Parties and other Governments including examples of national legislation and codes of conduct applying on pet/aquaria species can also be found in Pet pathway tool kit (Pet Industry Joint Advisory Council).²¹

46. Some codes of conduct focused on pets have been developed by several Parties and by pet industry. Codes of conduct are not legally binding, and they can encourage actions taken by the industry, consumers and all other relevant stakeholders. This may include best management practices that are shared by experts. The following are examples of codes of conduct/practice relevant to pet, aquarium and terrarium species, live bait and live food:

- (a) European code of conduct on pets and invasive alien species;²²

²¹ Pet pathway tool kit (PIJAC 2011) <http://www.petpathwaytoolkit.com/Pet-Pathway-Toolkit-%20Final%202011.pdf>

- (b) European code of conduct on companion animals and invasive alien species;²³
- (c) Voluntary codes of conduct for the pet trade (by Instituto Hórus in Brazil);²⁴
- (d) National reptile improvement plan (by Pet Industry Joint Advisory Council);²⁵
- (e) Ornamental aquatic trade association code of conduct.²⁶

47. Raising awareness on consequence of release or escapes and possible biological invasion is important to manage the risks at the community level. The introduced species should be recognized as threat to biodiversity in the community. Providing education materials on responsible practice in consistent with national policy is necessary. Some examples of education tools for such purpose are available on their web sites:

- (a) Sales of pets, pet ownership and animal exhibition (Singapore);²⁷
- (b) Responsible pet owners programme (Australia);²⁸
- (c) Responsible pet ownership (Singapore);²⁹
- (d) Pet pathway tool kit (Pet Industry Joint Advisory Council).³⁰

48. Some examples of voluntary measures by private sector including veterinary/fisheries experts, pet industry and pet owners (consumers) to self-regulate the handling of live species are available on their web sites:

(a) Habitattitude TM - An ANS Taskforce Partnership representing Pet Industry Joint Advisory Council, the US Fish and Wildlife Service and NOAA National Sea Grant College Program³¹ (this programme targets aquatic species);

(b) Importing non-native animals – what you need to know (Government for the general public in England and Wales);³²

(c) Responsible pet ownership (produced by Pet Food Industry Association of South Africa, South African Animal Health Association, South African Companion Animal Council, South African Veterinary Association).³³

49. Among the stakeholders of live animals markets end-users of the live species are anonymous consumers / pet owners. There is no guarantee that the introduced alien species will be kept for their full lifespan. Both regulatory and non-regulatory measures at this stage have an important role to discourage irresponsible releases. Nature conservation legislation may impose a strict ban on releasing

²² European code of conduct on pets and invasive alien species
<https://wcd.coe.int/com.instranet.InstraServlet?command=com.instranet.CmdBlobGet&InstranetImage=1959973&SecMode=1&DocId=1776136&Usage=2>

²⁵ European code of conduct on companion animals and invasive alien species
<https://wcd.coe.int/com.instranet.InstraServlet?command=com.instranet.CmdBlobGet&InstranetImage=1921600&SecMode=1&DocId=1731536&Usage=2>

²⁴ Voluntary codes of conduct for the pet trade http://www.institutohorus.org.br/pr_pets_eng.htm

²⁵ National reptile improvement plan (PIJIAC)http://www.pijac.org/_documents/nripadoptfinal.pdf

²⁶ Ornamental aquatic trade association code of conduct
<http://www.ornamentalfish.org/common/acrobat/codeofconduct.pdf>

²⁷ Sales of pets, pet ownership and animal exhibition (Singapore)
<http://www.ava.gov.sg/AnimalsPetSector/SalesOfPetsOwnershipExhib/PetShops/#grading>

²⁸ Responsible pet owners programme (Australia) <http://www.pets.info.vic.gov.au/>

²⁹ Responsible pet ownership (Singapore) <http://www.ava.gov.sg/AnimalsPetSector/ResponsiblePetOwnership/>

³⁰ Pet pathway tool kit (Pet Industry Joint Advisory Council) <http://www.petpathwaytoolkit.com/Pet-Pathway-Toolkit-%20Final%202011.pdf>

³¹ Habitattitude TM <http://www.habitattitude.net/>

³² Importing non-native animals – what you need to know (Government for the general public in England and Wales)
<http://www.defra.gov.uk/wildlife-pets/wildlife/management/non-native/documents/nn-import-leaflet.pdf>

³³ http://www.petwise.co.za/live/content.php?Category_ID=153

non-native species into protected areas in many countries. However, areas not designated as protected areas may also be ecologically vulnerable. To prevent release of unwanted pets or other alien species to the environment, possible measures on termination of companionship or use include:

- (a) Resale or return arrangements with the pet retailer or breeder;
- (b) Attributing responsibility to the pet owner to find a proper home;
- (c) Formal rehoming programs with appropriate information support;
- (d) Amnesty programs run by local wildlife agencies;
- (e) Veterinary euthanasia or appropriate disposal.

G. Internet trade of live animal species

50. In the IPPC document entitled "Internet Trade (e-Commerce) in Plants - Potential Phytosanitary Risks", consideration was given to invertebrate, arthropod and other life-forms. These terms, in the pet trade, are often referred as Aquarium livestock and could be used in aquatic ecosystems, aquaria and for insect rearing.

51. Under CITES, Resolution Conf. 11.3 (Rev. CoP15) on Compliance and enforcement and Decisions 15.57 and 15.58 on E-commerce of specimens of CITES-listed species, adopted by the Conference of the Parties to CITES, provides for the compilation of information and intelligence on Internet-related wildlife crime. The CITES Standing Committee, at its 61st meeting (Geneva, August 2011), established a Working Group to draft guidelines for and to discuss other issues related to e-commerce. The Committee also directed the Secretariat to develop a toolkit, subject to the availability of funding, in order to assist Parties and the general CITES community with the regulation of legal trade in specimens of CITES-listed species via the Internet.

VI. ERADICATION AND MITIGATION

52. When establishment of the alien species is reported, appropriate steps to such as eradication, containment and control, to mitigate adverse effects, in accordance with the Guiding Principle 12.^{3,34}

53. The international standard setting bodies require contracting parties to report on information on status of pests and diseases when occurrence, outbreak or spread is discovered:

(a) Under the IPPC, countries are responsible for the distribution of information within their territories regarding regulated pests (Article IV.3(a)), and they are required to the best of their ability, to “conduct surveillance for pests and develop and maintain adequate information on pest status in order to support categorization of pests, and for the development of appropriate phytosanitary measures. This information shall be made available to contracting parties, on request.” (Article VII.2(j)) They are required to “designate a contact point for the exchange of information connected with the implementation” of the IPPC (Article VIII.2). In the ISPM No.16 “Pest reporting”, the responsibilities of and requirements for contracting parties to the IPPC in reporting the occurrence, outbreak and spread of pests in areas for which they are responsible;

(b) Under the OIE’s Animal Health Codes the veterinary authorities are responsible to notify and whatever information is necessary to minimise the spread of important animal diseases and to assist in achieving better worldwide control of these diseases should be made available (Article 1.1.2). In addition to the OIE’s listed diseases, an emerging disease with significant morbidity or

³⁴ **Guiding principle 12: Mitigation of impacts:** Once the establishment of an invasive alien species has been detected, States, individually and cooperatively, should take appropriate steps such as eradication, containment and control, to mitigate adverse effects. Techniques used for eradication, containment or control should be safe to humans, the environment and agriculture as well as ethically acceptable to stakeholders in the areas affected by the invasive alien species. Mitigation measures should take place in the earliest possible stage of invasion, on the basis of the precautionary approach. Consistent with national policy or legislation, an individual or entity responsible for the introduction of invasive alien species should bear the costs of control measures and biological diversity restoration where it is established that they failed to comply with the national laws and regulations. Hence, early detection of new introductions of potentially or known invasive alien species is important, and needs to be combined with the capacity to take rapid follow-up action.

mortality, or zoonotic potential has to also be notified to the headquarters through the World Animal Health Information System (WAHIS) or by fax or e-mail, within 24 hours (Article 1.1.3).

54. The overview on flow of international trade and relevant international standards and guidance under the SPS Agreement and the CBD Guiding Principles* are summarized below in Figure 1.

V. CAPACITY-BUILDING AND INFORMATION SHARING

A. *Opportunities for capacity-building*

55. In the context of the WTO SPS Agreement the WTO, the standard setting organizations recognized by the SPS Agreement, and other bilateral, regional and multilateral donors provide capacity-building opportunities to member states that include the following:

(a) Standards Trade Development Facility (STDF) is a global partnership that supports developing countries in building their capacity to implement international sanitary and phytosanitary (SPS) standards, guidelines and recommendations as a means to improve their human, animal and plant health status and ability to gain or maintain access to markets;

(b) Enhancing trade capacity involves other forms of assistance, such as building more efficient ports and road networks, providing customs officials with automated equipment and teaching entrepreneurs how to take advantage of business opportunities in the global marketplace;

(c) To build human capacity the STDF and WTO organizes workshops and seminars on implementation of the SPS Agreement in collaboration with the three standard setting bodies.

56. Under the IPPC, countries are responsible for the distribution of information within their territories regarding regulated pests (Article IV.3(a)), and they are required to the best of their ability, to “conduct surveillance for pests and develop and maintain adequate information on pest status in order to support categorization of pests, and for the development of appropriate phytosanitary measures. This information shall be made available to contracting parties, on request.” (Article VII.2(j)) They are required to “designate a contact point for the exchange of information connected with the implementation” of the IPPC (Article VIII.2). Several ISPMs provide guidance such as No. 6 “Guidelines for surveillance”, No. 8 “Determination of pest status in an area”, No.9 “Guidelines for pest eradication programmes” and No.17 “Pest reporting”, the responsibilities of and requirements for contracting parties to the IPPC in surveying for pests, determining their status and reporting the occurrence, outbreak and spread.

57. The OIE provides capacity-building opportunities to nationalist member countries under the framework of the OIE PVS Pathway. The OIE PVS Pathway is a progressive pathway to strengthening Veterinary Services with an eventual goal of good governance of animal health systems. It provides tools for evaluating the Veterinary Services and support programmes for filling the gaps identified through evaluations.

58. The CBD organizes series of regional capacity-building workshops for Parties to achieve Aichi Biodiversity Target 9 and other relevant decisions on invasive alien species. Parties are invited to nominate experts / officials who can apply his/her gained capacity to address invasive alien species at national and regional levels. Progress on capacity-building is reported in UNEP/CBD/COP/11/28.

B. *Information sharing*

59. Most of risk assessment procedure requires best available information. Reliability and robustness of data sources and accessibility to the required information determine the capacity of tackling the risks associated with alien species introduction.

60. In paragraph 29 of decision IX/4 B information resources on invasive alien species are mentioned, which include:

(a) Inter-American Biodiversity Information Network’s Invasives Information Network (IABIN-I3N);

(b) North European and Baltic Network on Invasive Alien Species (NOBANIS);

(c) Delivering Alien Invasive Species Inventories for Europe (DAISIE);

- (d) Global Invasive Species Information Network (GISIN);
- (e) IUCN’s Invasive Species Specialist Group’s Global Invasive Species Database (GISD) and Global Registry on Invasive Species (GRIS); and
- (f) CABI’s Invasive Species Compendium.

61. Following the consideration at SBSTTA 15 on Joint Work Programme to Strengthen Information Services on Invasive Alien Species as a Contribution towards Aichi Biodiversity Target (UNEP/CBD/SBSTTA/15/INF/14), the Executive Secretary convened an “Organizational Workshop for the Global Invasive Alien Species Information Partnership on 9-10 July 2012 in London, United Kingdom. This partnership will be launched at the eleventh meeting of the Conference of the Parties to make robust information sharing through the Partnership Gateway to access scientifically valid information on invasive alien species. The Partnership Gateway will improve data-interoperability of major invasive alien species databases, make global registries of invasive alien species, tools, best management practices, economic evaluations, risk analysis and others (UNEP/CBD/COP/11/INF/34).

62. To help with assessing possible positive and negative impacts of aquatic species introduction the FAO Database on Introductions of Aquatic Species (DIAS 2003) is developed and it is searchable online (<http://www.fao.org/fishery/introp/search/en>).

63. Regarding general information on decisions adopted by the governing bodies of all major multilateral environmental agreements, which relate to invasive alien species, can be obtained from InforMEA (www.informe.org) – the United Nations Information Portal on MEAs. This portal was developed under the MEA Information and Knowledge Management Initiative, which is co-chaired by UNEP and the CITES Secretariat and involves the CBD as well as ten other global MEAs and one regional MEA.

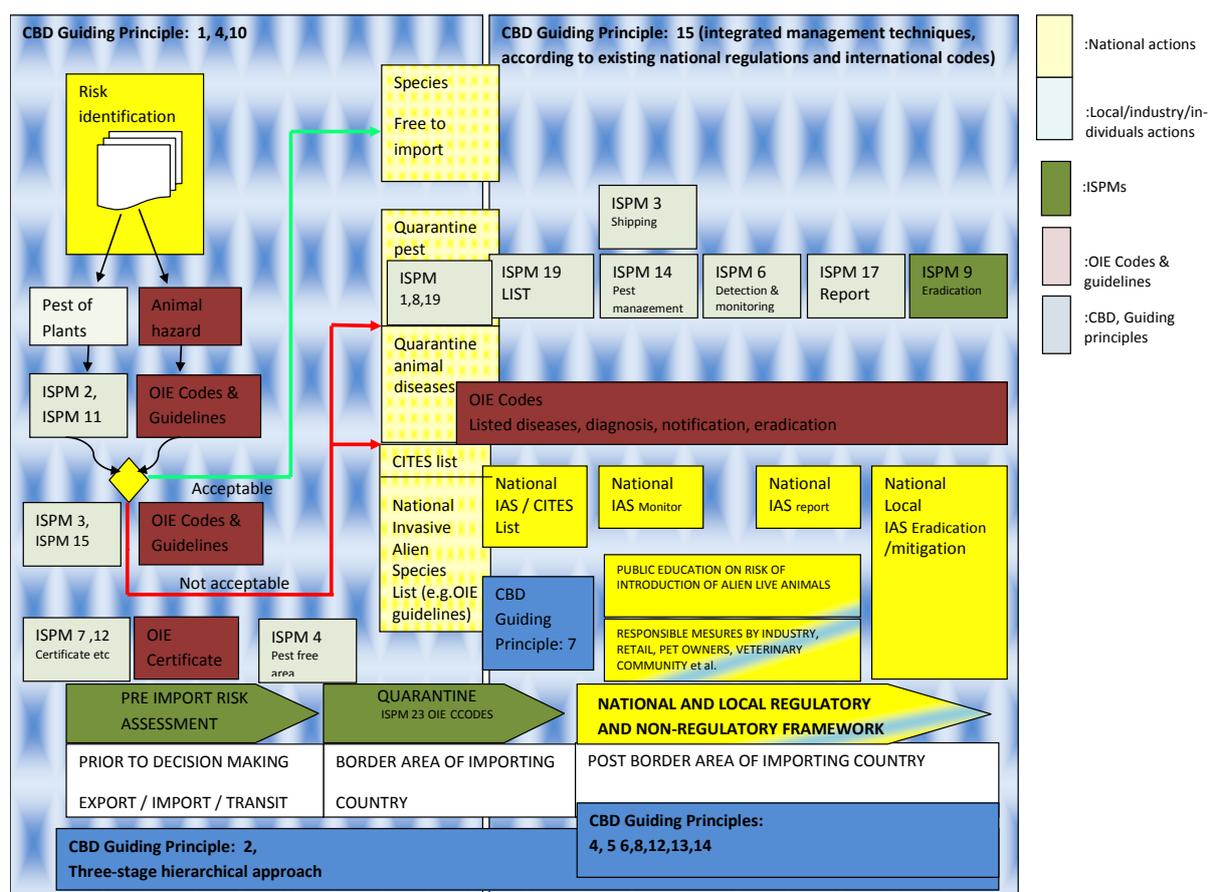


Figure 1. An example of measures addressing the risks associated with introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food and relevant international standards and guidance

This figure does not necessarily reflect the views of the CBD, IPPC, OIE nor CITES.