Submission form for topics for IPPC Standards

*(Updated by the IPPC Secretariat 2014-11)*

Name of Country or Organization Secretariat of the Convention on Biological Diversity

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| **Submission form for IPPC standard setting work programme topics** |
| Proposed by: Braulio Ferreira de Souza Dias, Executive Secretary, Secretariat of the Convention on Biological Diversity |
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| Type of topic: |
| A. New ISPM:[\_\_] Concept[\_\_] Pest specific[X ] Commodity specific[\_\_] Reference | B. New componentto an existing ISPM:[\_\_] Supplement[\_\_] Annex[\_\_] Appendix[\_\_] Technical Panel (technical area)[\_\_] DP: Diagnostic protocol (subject)[\_\_] PT: Phytosanitary treatment (topic)[\_\_] Glossary term (subject) | C. Revision/Amendment of:[ ] ISPM[\_\_] Supplement[\_\_] Annex[\_\_] Appendix[\_\_] Glossary term |
| Proposed title of new ISPM or component: or Title of document to be revised or amended:**Guidelines for the export, shipping, handling, import and disposal of live organisms as pets, aquarium and terrarium species, and as bait and food** |
| Summary justification for the proposal (2 lines max.): **Pursuant to paragraph 2 of decision XII/16 of the CBD COP, the Secretariat of the CBD invites the IPPC Secretariat to develop an ISPM the export, shipping, handling, import and disposal of live organisms as pets, aquarium and terrarium species, and as bait and food.** |
| Submissions should address the applicable criteria for justification of the proposal (as listed below). Where possible, information in support of the justification and that may assist in the prioritization should be indicated. All core criteria must be addressed; supporting criteria should be addressed if applicable |
| Core criteria: |
| Contribution to the purpose of the IPPC as described in Article I.**Live organisms traded as pets, aquarium and terrarium species, and as bait and food (PATBF) and contaminants associated with the live organisms carry phytosanitary risks, which will be managed globally. The proposed ISPM will ensure that the necessary risk reduction measures in exporting, handling, shipping, importing and disposal of these live organisms will be in place, and will contribute to the protection of agricultural production, wild flora and the environment.** |
| Feasibility of implementation at the global level (includes ease of implementation, technical complexity, capacity of NPPOs to implement, relevance for more than one region).**Many NPPOs of importing countries of live organisms as PATBF may wish to implement the proposed ISPM to address the negative impacts of the escaped live organisms in agricultural (incl. aquaculture) production areas and protected areas. The application of pest risk analysis (PRA) to high risk live organisms on biodiversity has worked effectively in some countries with strong biosecurity policy. Such countries’ NPPOs have the capacity to implement the proposed ISPM, and may provide expertise to develop the proposed ISPM. The proposed ISPM ensures that the phytosanitary risk management in both exporting countries and importing countries, and contributes to international trade facilitation. It also assists achieving the Aichi Biodiversity Targets, in particular Target 9 on invasive alien species, globally. Therefore, the proposed ISPM is with highly relevant to all regions.** |
| Clear identification of the problems that need to be resolved through the development of the standard.**Existing ISPMs do not sufficiently address the following issues of live organisms in international trade :*** **Risk of escape of non-plant live organisms from confined conditions and its reduction measures;**
* **Risk of contaminants associated with the escaped/disposed live organisms and its reduction measures;**
* **Pest risk of herbivorous animals, wide range of insects that were not recognized as agricultural pests in the past and aquatic plants as well as their hybrids that threaten biodiversity, including agricultural biodiversity;**
* **Pest risk of live bait/food organisms and their contaminants (e.g. fungi, insects, algae) that threaten biodiversity in both terrestrial and aquatic environments;**
* **No confinement method for non-quarantine pests that are not related to plant for planting is available.**

**Currently, no guidance for NPPOs of exporting countries to address the phytosanitary risk of live organisms as PATBF in the existing ISPMs.** |
| Availability of, or possibility to collect, information in support of the proposed standard (e.g. scientific, historical, technical information, experience).**The Secretariat of the CBD and its partners have relevant expertise and stand ready to provide information for the development of the proposed ISPM pursuant to the “Guidance on devising and implementing measures to address the risks associated with the introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food” (annex to decision XII/16 of the Conference of the Parties to the CBD)** <https://www.cbd.int/doc/decisions/cop-12/cop-12-dec-16-en.pdf>  |

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| **Supporting criteria (Practical)*** Feasibility of adopting the proposed standard within a reasonable time frame.

**Drafting the proposed ISPM may be completed by one expert meeting with inputs from the Secretariat of the CBD. The Secretariats of Biodiversity Related Conventions (e.g. CITES), CODEX Alimentarius and World Organisation for Animal Health (OIE) may also be invited to ensure harmonization of the proposed ISPM with other international guidance.*** Stage of development of the proposed standard (is a standard on the same topic already widely used by NPPOs, RPPOs or a relevant international organization).

**The COP to the CBD adopted the *“Guidance on Devising and Implementing the Risks Associated with the Introduction of Alien Species as Pets, Aquarium and Terrarium Species, and as Live Bait and Live Food”.* This guidance provides the basis and outline for the proposed ISPM. Relevant to the implementation of the CBD guidance, a numbers of expert groups, e.g. CSIRO in Australia, DEFRA in U.K., U.S. Fish and WildLife Service, IUCN-Invasive Species Specialist Group, International Union of Forest Research Organizations, among others, have accumulated knowledge and experiences on risk assessment and possible risk reduction measures for live organisms in international trade.*** Availability of expertise needed to develop the propose standard.

**Technical partners to the CBD, as mentioned above, may be available.** |
| **Supporting criteria (Economic)** **The estimated overall economic loss caused by invasive alien species (non-indigenous species became pests) is reportedly $33.2 billion/year in South East Asia, €12 billion/year in European Union and $120 billion in USA, and the loss in forestry and agriculture of CND$7.5 billion/year was estimated for Canada.** **Regarding the cost to manage established invasive species, the U.S. Fish and Wildlife Service has spent more than $6 million to address the growing problem of Burmese pythons and other large invasive constrictor snakes in Florida in 2015-2012.****The proposed ISPM contributes to the reduction of the economic loss and reduces management cost of non-indigenous pests.****For countries including many of developing countries that plan to export live organisms as PATBF, their access to the international market will be facilitated when the proposed ISPM is implemented.** |
| **Supporting criteria (Environmental)*** **Utility in the prevention of the introduction of invasive alien species (non-indigenous species which are pests of plants) that threaten ecosystems, habitats or plant species**
* **Contribution to the protection of the environment, through the protection of native flora, habitats and ecosystems, and of agricultural biodiversity.**
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| **Supporting criteria (Strategic)*** Extent of support for the proposed standard (e.g. one or more NPPOs or RPPOs have requested it, or one or more RPPOs have adopted a standard on the same topic).

**Those NPPOs of importing countries of live organisms as PATBF and countries with strong biosecurity policy are expected to support the proposed ISPM. With regard to trade facilitation, exporting countries of exotic live organisms should widely be benefitted with the proposed ISPM.*** Frequency with which the issue addressed by the proposed standard emerges as a source of trade disruption (e.g. disputes or need for repeated bilateral discussions, number of times per year trade is disrupted).

**According to TRAFFIC, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) recorded that an annual average of traded live specimens includes more than 317,000 in birds, 2 million in reptiles and 1.1 million in coral species between 2005 and 2009. This statistics only includes legal and reported cases of the CITES listed species (endangered species) and more numbers and wider range of taxa that are not listed in the CITES system have presumably been in international trade as PATBF.****Considering the fast growing pets market and fast developing e-commerce, the cross-boundary shipment of live organisms as commodity is becoming a major pathway of non-indigenous species, of which 10-15% could be becoming pests.** **The survey conducted by the IUCN-Invasive Specialist Group showed that escapes of pet/aquarium species were the second highest frequent-introduction pathway following to the escapes of horticulture.** **Regarding the concerns of trade disruption, safe trade of wildlife species facilitates access to the international market in developing countries. In addition, appropriate commodity treatment (recording) may potentially reduce illegal wildlife trade and contribute to sustainable development.*** Relevance and utility to developing countries. **High relevance for developing countries where wildlife live species are exported. Safe wildlife species trade facilitates their access to the international market.**
* Coverage (application to a wide range of countries/pests/commodities). **Trade partners are global. Range of potential pests covers kingdom Animalia, plant and micro-organisms that are a health concern for plants and humans.**
* Complements other standards (e.g. potential for the standard to be used as part of a systems approach for one pest, complement treatments for other pests). **Prevention of introduction of live organisms with phyotsanitary risks contributes to NPPOs’ effective management in relation to ISPM 09; ISPM16; ISPM 20; ISPM 21, among other standards.**
* Foundation standards to address fundamental concepts (e.g. treatment efficacy, inspection methodology). **Pest risk assessment method and risk reduction measures for broad taxa, methodology of confinement of potential pests in consignments.**
* Expected standard longevity (e.g. future trade needs, suggested use of easily outdated technology or products).**As pet/wildlife trade is rapidly increasing and e-commerce becoming popular, the proposed ISPM will be needed as soon as possible and utilized, globally.**
* Urgent need for the standard.

 **Non indigenous pests referred to as invasive alien species are one of the major threats to biodiversity, especially in islands. Considering the scale of the international market for live organisms as PATBF and the rapid growth of e-Commerce, prevention of introduction of alien species as live organisms as PATBF is urged and development of the proposed ISPM should be completed as soon as possible.** |
| **Diagnostic protocols are subject to additional criteria. For proposals for DPs, please elaborate on the following criteria to help the future consideration of the subject proposed:** **N/A** |

CPM-7 (2012) agreed that all submissions of proposed topics for the IPPC Standard Setting work programme should be accompanied by a draft Specification and a literature review. This provision would not apply to proposals for diagnostic protocols, phytosanitary treatments or glossary terms.

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| **Draft Specification**(SC approved specifications are posted on the IPP ( https://www.ippc.int/core-activities/standards-setting/approved-specifications) and may be referenced for examples.**)** |
| **Proposed Title: Guidelines for the export, shipping, handling, import and disposal of live organisms as pets, aquarium and terrarium species, and as bait and food** |
| **Reason for the standard** (justification as to why the standard is needed, some of this can be copied from the above submission): **International trade of live organisms as pets, aquarium and terrarium species, and as bait and food (PATBF) poses increasing risk on biodiversity. Although existing ISPMs cover phytosanitary measures on invasive plants, high risk organisms such as insects that are not recognized as pests, herbivorous animals and contaminants associated with the live organisms are not sufficiently covered. To address the phytosanitary risk of live organisms globally, the proposed ISPM ensures prevention of entry and minimizes the risk associated with live organisms as PATBF in international trade. The proposed ISPM should also address the increasing phytosanitary risk occurring in the growing market in e-commerce.** |
| **Purpose** (explain what issue will be addressed and/or harmonized once this standard is put in place): **The proposed ISPM addresses a gap in the existing commodity standards, in particular addressing the growing international trade of live organisms as PATBF. The proposed ISPM also covers the contaminants associated with the live organisms as PATBF to prevent and minimize the negative impact of non-indigenous live organisms on agricultural (incl. aquaculture) production, agricultural biodiversity and the environment.**  |
| **Scope** (this provides the boundaries or limits to what the standard should cover): **Management of phytosanitary risk of live organisms as PATBF in international trade** |
| **Tasks for the expert drafting group** (this will help direct the work of the experts): * ***Basis for decision of export and import of non-indigenous live organisms as PATBF, considering:***
	+ **The probability of escape of organisms, at any stage of their life cycle, from confined conditions (including through accidental or careless release);**
	+ **The probability of establishment and spread of the non-indigenous live organisms in the import area;**
	+ **The impacts of establishment and spread of the non-indigenous live organisms on biodiversity, including hybridization with native species leading to loss of genetic diversity, and related impacts on agricultural production activities and human health;**
	+ **Risk regarding spread of pathogens and parasites associated with PATBF.**
* ***Identification of risk reduction options for escapes of live organisms***
	+ **Methods of secure confinement, handling, and transport;**
	+ **Labelling on the consignment; taxon of the commodity, risk as potential hazard to biodiversity; appropriate handling for prevention of escape;**
	+ **Safe methods of disposal of unwanted live organisms as PATBF.**
* ***Evaluation and selecting measures***
* ***Harmonization with other existing international guidance (CITES, CODEX Alimentarius, OIE)***
* ***Determination of the document to develop***
* ***Review of related ISPMs, if any amendments are needed.***
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| **Expertise** (this will provide the basis for screening nominations)**:** **A group of 6-8 experts with combined experience in risk management in agriculture, aquaculture and biodiversity conservation; risk analysis; and economy of ecosystem services would be needed. Participation of pet industry should be welcomed in view of safe international trade facilitation.** |
| **References** (Relevant ISPMs and national, regional or international standards on the same topic and any specific references that would be relevant during drafting): * **Guidance on devising and implementing measures to address the risks associated with the introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food (annex to decision XII/16 of the Conference of the Parties to the CBD)**

 <https://www.cbd.int/doc/decisions/cop-12/cop-12-dec-16-en.pdf>* **ISPMs 02, 03, 05, 09, 11, 16, 20, 21**
* **Management of Risks Associated With Introduction of Alien Species as Pets, Aquarium and Terrarium Species, and as Live Bait and Live Food, and Related Issues (UNEP/CBD/SBSTTA/18/8)**

https://www.cbd.int/doc/meetings/sbstta/sbstta-18/official/sbstta-18-08-en.pdf* **Pathways of Introduction of Invasive Species, their Prioritization and Management (UNEP/CBD/SBSTTA/18/9/ADD.1)**

<https://www.cbd.int/doc/meetings/sbstta/sbstta-18/official/sbstta-18-09-add1-en.pdf>* **The Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species that Threaten Ecosystems, Habitats or Species (Annex to decision VI/23 of the COP to the CBD)**

 <https://www.cbd.int/decisions/?id=7197> |
| **Literature review** (this section will provide a **summary of the topic** based on scientific and technical publications, including a referenced **list of literature reviewed**. This will help provide the scientific basis for the content of the standard to be used by the selected experts during the development of the standard)**:** **With reference to the standard setting bodies recognized by the WTO, and reaffirming to the Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species that Threaten Ecosystems, Habitats or Species (Annex to decision VI/23 of the COP to the CBD), the COP to the CBD adopted the “Guidance on devising and implementing measures to address the risks associated with the introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food” (annex to decision XII/16 of the Conference of the Parties to the CBD).** **This voluntary guidance stipulates biological invasion risks associated with introduction of alien (non-indigenous) species introduced as PATBF. The guidance identifies the risk of non-indigenous species escaped from the confined condition and threatening biodiversity. It provides guidance on labeling on the consignment of the live organisms as PATBF, and also suggests that if it is not demonstrated as safe with an appropriate risk assessment the consignment may be labelled “Potential Biodiversity Hazard”. The guidance also calls for responsible shipping, handling, possessing and humane termination of the live organisms as PATBF.****The approximate composition of ‘pet’ population includes: 100,000 insects (which likely more broadly implies a variety of invertebrates); 40-45 million ornamental fish; 100,000 frogs and toads; 300,000 tortoises and turtles; 400,000 lizards; 400,000 snakes; >2 million domestic fowl and caged birds; >2 million small mammals; 9 million dogs; and 8 million cats (Pet Food Manufacturers Association Pet. Population Statistics).****Some non-indigenous species introduced as PATBF acted as pests (invasive alien species) and disturbed ecosystems, habitats or indigenous species. International trade of PATBF is recognized as one of major pathways of introduction of non-indigenous species with phytosanitary risk in both developing and developed countries.****Cases occured in both terrestrial and aquatic environments. Negative impacts of non-indigenous species that escaped or released from confined condition include:*** **Loss of agricultural productions and its negative economic impacts;**
* **Increasing cost of management of invasions to protect biodiversity, including agricultural biodiversity.**
* **Exposure of pathogens (e.g. chytrido fungal pathogens) to indigenous species;**
* **Threatening wild flora (and fauna), ecosystem services, and habitats.**

**Non-indigenous species contaminated in the live organisms in international trade e.g. *Sargassum muticum*, *Undaria pinnatifida*, *Asparagopsis armata, Asparagopsis taxiformis etc.* posed risks on wild flora, often more dramatically in the aquatic environment. In such cases, pathway of introduction includes contaminated aquaculture species which acted as a vector of pest algal species. Negative impacts of these contaminants include:** * **Becoming invasive (acting as pest) when commodity organisms escaped and entered into the natural environment;**
* **Spreading harmful algae, benthic invertebrates or other microscopic organisms;**
* **Spreading pathogens e.g.*****Batrachochytrium dendrobatidis (Bd)*, *Batrachochytrium salamandriborans (Bsal*).**

**Contaminations were often detected in the bait boxes in the market by using eDNA technology and therefore the pest risk or disease risk in the environment seems to be significant. Mitochondrial haplotype analysis on invasive (acting as pest) crayfish showed that introductions could have occurred multiple times and pathways were speculated via the fishing bait, the escape of live aquaculture and the release of pet crayfish.****The scale of international trade of live organisms as PATBF and opportunities of biological invasion with escaped live organisms are rapidly increasing with e-commerce and its shipping. Appropriate international guidance on measures for safe export, handling, shipping, import and disposal is urged, globally.****list of literature reviewed**Secretariat of the Convention on Biological Diversity (2014) :Guidance on devising and implementing measures to address the risks associated with the introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food (annex to decision XII/16 of the Conference of the Parties to the CBD) <https://www.cbd.int/doc/decisions/cop-12/cop-12-dec-16-en.pdf> Secretariat of the Convention on Biological Diversity (2014) :Management of Risks Associated With Introduction of Alien Species as Pets, Aquarium and Terrarium Species, and as Live Bait and Live Food, and Related Issues (UNEP/CBD/SBSTTA/18/8) <https://www.cbd.int/doc/meetings/sbstta/sbstta-18/official/sbstta-18-08-en.pdf> Secretariat of the Convention on Biological Diversity (2014) Pathways of Introduction of Invasive Species, their Prioritization and Management (UNEP/CBD/SBSTTA/18/9/ADD.1)  <https://www.cbd.int/doc/meetings/sbstta/sbstta-18/official/sbstta-18-09-add1-en.pdf>Secretariat of the Convention on Biological Diversity (2010) : CBD Technical Series No.48,Pets, Aquarium, and Terrarium Species: Best Practices for Addressing Risks to Biodiversity., <https://www.cbd.int/doc/publications/cbd-ts-48-en.pdf>C. 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(2014): Horizonscanning for new invasive non-native species in the Netherlands, Technical Report Netherlands Centre of Expertise on Exotic Species (NEC-E), Radboud University Nijmegen, Institute for Water and Wetland Research, Department of Environmental Sciences, FLORON, Stichting Bargerveen, SOVON, Natuurbalans, Bureau van de Zoogdiervereniging, RAVON  <http://www.researchgate.net/publication/273639444> US Fish and Wildlife Service : The Economic Cost of Large Constrictor Snakes.,  <http://www.fws.gov/verobeach/PythonPDF/EconImpact_LargeConstrictorSnakes.pdf>  US Fish and Wildlife Service : The Cost of Invasive Species, <http://www.fws.gov/verobeach/PythonPDF/CostofInvasivesFactSheet.pdf>Grant D Martin and Julie A Coetzee (2011): Pet stores, aquarists and the internet trade as modes of introduction and spread of invasive macrophytes in South Africa. 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