

**Report of the Webinar among the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) members,  
"Promotion of international cooperation to prevent the spread of invasive alien species through the unintentional introduction pathways associated with trade related logistics",  
an online event hosted by the Government of Japan**

**24 June 2021**

**I. INTRODUCTION**

1. With the expansion of global value chain and its associated international logistics, the increasing negative impacts of invasive alien species (IAS) have become serious concerns for biodiversity and human well-being, globally. Addressing the risk of intentional introductions of invasive alien species has advanced in many of importing countries since Aichi Biodiversity Target 9 was adopted at the tenth meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD) held in Nagoya, Japan in 2010. However, after a decade of biodiversity conservation efforts, IAS introductions associated with international trade related logistics that occur unintentionally, such as stowaways and contaminants, have continued and there is no sign of reduction. Noting that each country continues to suffer from biological invasions via trade-related logistics and that IAS may further spread throughout the supply chain, it is urged to strengthen international cooperation to manage the unintentional introduction pathways.
2. The webinar, *"Promotion of international cooperation to prevent the spread of invasive alien species through the unintentional introduction pathways associated with trade related logistics"* was organized on 24 June 2021 (GMT+9) by the Government of Japan as a part of cooperative activities of CPTPP members under the Environment Chapter of that agreement. Since the major logistics of global supply chain is largely dependent on sea freight, the webinar was designed to share the information on introductions of IAS via sea containers and preventive measures taken by some CPTPP members, as well as global processes facilitated by the relevant international organizations. The webinar was also regarded as a public session of this year's CPTPP Environment Committee meeting, held while Japan served as the chair of the CPTPP Commission.
3. This report contains key messages from the participants from the CPTPP members and relevant organizations in the following section, while a summary of presentations and the discussions are presented in section III and Section IV. The list of participants and the agenda of the event can be

found in annex 1 and 2 respectively. The links to find the materials of presentations made by panelists are shown in annex 3.

## II. KEY MESSAGES

4. At the webinar, the lessons learnt from the implementation of preventive measures for IAS at the national and regional levels were shared. The presentations and discussions at the webinar may contribute to relevant international processes related to IAS, including the process to set out the goals and targets of post-2020 global biodiversity framework at the fifteenth meeting of the Conference of the Parties to the CBD (CBD-COP15) and other processes under the multi-lateral international agreements relevant to safe international trade and transport. The key messages derived from the webinar can be summarized as follows:
  - (a) More than 100 billion US dollars of annual global costs occurs in relation to IAS and such cost has been doubled every six years<sup>1</sup>. These costs remain underestimated and do not show any sign of slowing down. Furthermore, trade volume via sea freight is estimated to increase by up to 12 times in 2050 compared to the volume in 2014<sup>2</sup>. The main pathways of unintentional introductions of IAS include contamination and stowaways via sea containers. The introduction occurs in transport of goods, not only animate products which are mainly regulated by sanitary and phytosanitary measures but also non-animate items, such as vehicles, electric parts and devices. Furthermore, the sea containers themselves frequently provide the opportunities for small organisms' hitchhiking, which fall outside the existing global regulatory framework to protect the health of animals, plants and humans.
  - (b) The practices to clean sea containers and non-animate trade goods prior to packing and loading at the immediate timing of the export, are highly effective and crucially important to prevent spread of IAS.
  - (c) Technical developments<sup>3</sup> in pest management, packing container units, surveillance and tracking

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<sup>1</sup> Diagne, C., Leroy, B., Vaissière, AC. *et al.* High and rising economic costs of biological invasions worldwide. *Nature* **592**, 571-576 (2021) <https://doi.org/10.1038/s41586-021-03405-6>

<sup>2</sup> Sardain, A., Sardain, E., & Leung, B. Global forecasts of shipping traffic and biological invasions to 2050. *Nature Sustainability*, **2**(4), 274-282 (2019) <https://doi.org/10.1038/s41893-019-0245-y>

<sup>3</sup> Technical developments presented includes : (i) "one-push" aerosol of insecticide; (ii) placing "Wasabi" sheets at the timing of packing container unit; (iii) crack sealing with newly developed silicone resin; (iv) smartphone application for rapid identification of contaminated species; (v) surveillance camera with high resolution; (vi) environment-DNA (e-DNA) to detect entering of IAS; and (vii) container-tracking system for rapid responses,

containers should continue to be promoted, and further developments and wider applications of such technologies among trade partners are well recommended.

- (d) Strengthening collaboration of the international organizations, such as CBD, the International Plant Protection Convention (IPPC), the International Maritime Organization (IMO) and the World Customs Organization (WCO) among other trade-related organizations, is crucially important to harmonize and promote effective measures to be applied in wider regions of the world.
- (e) While establishing rules on cleaning of sea containers is recognized to be important, it may require to consider the potential socio-economic impacts for the trade partners, shipping industry and stakeholders involved in the complex value chain of trade in goods.
- (f) Awareness raising for the negative impacts of IAS and closer cooperation among the governments, private sectors and citizens are essential to promote cleanliness of sea containers and effective pathway management.

### **III. SUMMARY OF THE PRESENTATIONS**

#### **Agenda Item 1. Opening of the Webinar**

- 5. In the opening, Mr. Toshio Torii (Director General of the Nature Conservation Bureau, Ministry of the Environment, Japan) made his opening remarks and explained background of this webinar<sup>i</sup>. Dr. Junko Shimura (Japan) moderated the session and briefly informed the agenda and expected outcomes of the webinar to all participants.

#### **Agenda Item 2. Presentations**

- 6. The invited relevant international organizations and global shippers' association, three CPTPP member governments, as well as the invited technical experts on IAS made presentations.
- 7. Dr. David Cooper<sup>ii</sup> (CBD) gave a presentation entitled "Pathways of invasive alien species introductions & on-going activities to address the risk of biological invasions" and provided information on the global situation, including social, economic environmental impacts of IAS as well as the introduction pathway classification framework (CBD/SBSTTA/18/9/Add.1) and frequencies of the introduction for each pathways. Regarding the on-going activities, he presented the actions against IAS under the CBD, including development of International Guidance. He introduced the Inter-Agency Liaison Group on Invasive Alien Species composed of international

standard setting organizations relevant to IAS and the role of the CBD to coordinate the Group. Finally, it is noted that ‘bending the curve (reducing and restoring Global Biodiversity Losses)’ requires managing introduction pathways, prevention of introductions and reducing risks from IAS.

8. Mr. Brent Larson (IPPC) presented on the *"Coordinating the global effort to reduce the introduction of pests through the Sea Container Pathway"*. He introduced the goals of the IPPC to protect plants and plant products, and its roles in setting International Standards for Phytosanitary Measures (ISPMs) recognized by the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) and facilitating safe international trade. He also mentioned that the IPPC strategic framework for the next 10 years covers the protection of environments from plant pests. A focus was placed on sea containers, as known as Cargo Transport Units (CTUs) which provide pest pathways, with emphasis on CTU contaminations rather than the commodity pose threats to crop production and biodiversity. He explained the IPPC secretariat’s ongoing efforts to have its contracting parties agreed with the CPM<sup>4</sup> recommendation on sea containers risk management; to input to the revision of the CTU code<sup>5</sup> in collaboration with the International Maritime Organization (IMO), and the establishment of the Sea Container Task Force under the CPM. The main activities of the Sea Container Task Force include consideration of joint protocols for data collection, risk awareness, preparation of guidance on risk management, and advice for updating the existing CTU code. In addition, workshops and side events have been held widely to discuss the risk of insect pests moving through sea containers. These efforts will be reported at the 16<sup>th</sup> session of the CPM in 2022.
  
9. Following the presentation by the IPPC, Mr. Bingbing Song (IMO) verbally introduced the *"IMO/ILO/UNECE Code of Practice for Packing of Cargo Transport Units"*, as known as CTU code, and he explained that this code provides actors engaged in packing process with guidance on safe packing and cleaning of sea containers as well as advice applicable for the sea container users throughout supply chain. He noted that, while this code is not mandatory, this would contribute to significant reduction in phytosanitary risks associated with international trade through awareness-raising.
  
10. Mr. Igor Jakupic (WCO) introduced the role and challenges of the Customs system in preventing IAS in world trade in his presentation on the *"Customs role in compliance and enforcement of IAS"*, noting

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<sup>4</sup> Commission on Phytosanitary Measures

<sup>5</sup> IMO/ILO/UNECE Code of Practice for Packing of Cargo Transport Units (CTU Code), <https://wiki.unece.org/pages/viewpage.action?pageId=23101768>

that the Customs has played a major role in facilitating and managing international cargo and passenger traffic. Measures by the Customs are undertaken at the point of entry of the importing country, to control the influx of goods from the international supply chain into its economy and the environment, by prohibiting or restricting the import of goods that may be considered as an IAS in the importing country. At the point of exit, it is important to actively identify and seize potential IAS before they enter the supply chain. For this purpose, cooperation at the regional and international levels are also important, and it is necessary to establish a cooperative system for shared views and responsibilities to address the issue of IAS.

11. Dr. Andy Sheppard (Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia) gave a presentation entitled the “*International & Australian risk management activities for hitchhiker and contaminating pests*”. He introduced the overview of international contaminating pest management activities undertaken under the IPPC and the IPBES. He also presented 3 case studies of Australian contaminant management: 1) management of introduction pathway by a private sector (Chevron Barrow Island – Gorgon Project LNG); 2) risk management of contaminating pest, Brown Marmorated Stink Bug (*Halyomorpha halys*; or commonly called BMSB in short) and its interception at the border; and 3) risk profiling on khapra beetle (*Trogoderma granarium*) incursions into Australia. Finally, he pointed that, in order to reduce the risk of trade-related movement of contaminating pests, it is important to conduct risk analysis tailored to the pathway of sea containers and to improve infrastructure, including bio-secure containers with automated inspection processing, and these measures should be commonly implemented among trading countries.
12. Ms. Fumiko Nakao (Ministry of the Environment, Japan) introduced in her presentation on the “*Response to the risk of unintentional introductions of invasive alien species and the needs to strengthen international and inter-sectoral cooperation,*” about the red imported fire ant (*Solenopsis invicta*) entries and their controls in Japan. She highlighted that approximately 90% of the invasion cases were likely to have occurred through the sea container pathway. She also mentioned that sanitary and phytosanitary measures alone are not sufficient for prevention of the unintentional introductions. In the light of these situations, she stated that 1) international cooperation is necessary to prevent contaminants and stowaways posed by IAS, especially in the site where commodity is packed into a sea container at its first place; 2) sea container cleanliness is a key to prevent the negative impacts of IAS on biodiversity ; and 3) development of a guidance to strengthen international cooperation on sea containers management and sharing applicable technologies are necessary to prevent unintentional introductions of IAS and their spread.
13. Ms. Penny McLeod (Ministry for Primary Industries, New Zealand)) gave her presentation entitled the

*“Preventing the Establishment of Contaminant Pests Associated with the Movement of Traded Goods”*. She mentioned that it was recognized that, at present, the international community does not have sufficient systems in place to deal with the problem of organisms adhering to inanimate objects that are not subject to quarantine measures in importation. She introduced an example of Brown marmorated stink bug (*Halyomorpha halys*), BMSB management measure which has been carried out to 37 exporting countries to New Zealand. This management measure obliges exporting countries to export only vehicles and machinery that satisfy the New Zealand government's requirement if these exported goods are not subject to quarantine measures in importation. However, she pointed out issues in regulating offshore treatment providers, and in that some goods cannot be fumigated or heat treated, as well as in tracking cargo that are re-packed in trans-shipment. She emphasized that international cooperation is essential for dealing with the issues of unintentional introductions.

14. Ms. Wendy Asbil (Canadian Food Inspection Agency / North American Sea Container Initiative (NASCI)) gave a presentation entitled the *“Preventing the spread of invasive pests in the sea container and cargo pathway - a North American regional perspective”*. She agreed that, as most other presentations noted, the cost of implementing measures against contamination of sea container is tremendously huge and thus taking measures at the countries where the IAS are native is important. She introduced the NASCI, which had been established in partnership among the Canada government, government of the United States and industries, and Mexico has recently joined the initiative. NASCI as its action to prevent introduction and dispersion of the IAS along movement pathway of sea container and cargo in the North America, this initiative takes a voluntary approach which encourages partners engaged in supply chain to reduce the pest risk related to sea containers and cargos. She added that, to this date, this initiative also has organized several sessions with various sectors and has engaged not only in promoting cleaning of containers but also in collecting information from sectors on their action which had been taken. She emphasized there are huge values in collaboration between governments and industries for achieving goals aiming at minimizing risk posed by contaminants moving along with sea container and cargo as well as at promoting safe and efficient trade at the same time.
15. Mr. James Hookham (Global Shippers' Forum (GSF)) presented on *“The Sea Containers Industry's Contribution to Facilitating Safe Trade via Sea Containers”*. He noted that, in complex world trade which involves many different organizations, each actor has roles in reducing contamination of container by pests. He also noted that trade volume keeps increasing even in the global pandemic of the COVID-19 and pointed out the fact of a large cost of cleaning containers. Regarding opportunities for risk mitigation and avoidance, he explained the accreditation of procedures for packing containers in high-risk countries as well as container tracking and tracing technology by smart technologies.

Introducing information sources on container cleanliness and avoidance of pest contamination, he showed that the GSF translated these information sources into seven languages to disseminate these to wider actors. He noted that industry recognizes emergence and importance of risk posed by sea containers as well as the need for reducing such risk. Finally, he stressed that education is more important than regulation in order to reduce the risk in short term along with continuously promoting global trade.

16. Dr. Koichi Goka (National Institute for Environmental Studies (NIES), Japan), in his presentation on the “Countermeasures to fire ants in Japan”, introduced the control measures against Argentine ants (*Linepithema humile*), which had achieved in eradicating the species at the local level, and showed important lessons learnt from the implementation of control approaches towards this invasive species. Subsequently, he indicated the need of an efficient control strategy according to the different invasion stage to control red imported fire ants invasions in Japan. He also introduced control methods including new technologies such as packaging materials containing an aromatic component of “wasabi” (methylthioheptyl isothiocyanate) which has strong repellent and insecticidal effects against the fire ants, and a single-application method of a household pyrethroid aerosol that can completely eradicate ants within a container. He mentioned that, with these newly developed technologies, Japan has managed fire ant invasions, and has so far succeeded in preventing fire ants from establishing mounds. Noting that various alien insects including fire ants will likely be introduced in Japan with imports of relatively large and growing amount of goods, he emphasized the importance of public and private sectors’ collaboration in promoting technological development to address issues of newly arriving invasive species.

#### **IV. SUMMARY OF THE DISCUSSIONS**

##### **Agenda item 3. Discussions**

17. Following the presentations summarized as above, participants to the webinar broadly shared the following views through the discussions, which led to the compilation of this report including the key messages:
  - (a) Sea containers cleanliness is a priority to prevent introduction and spread of IAS.
  - (b) Packing and loading of sea container is an ideal point of action to ensure container cleanliness; actual on-the-ground inspection can be applied to both inside and outside of the container and to the actual goods to be loaded.
  - (c) The timing, place and methodologies for implementing effective measures remains difficult to be

determined, given that different stakeholders involved have different interests and thoughts. There are international efforts for implementing practical solution, including regulatory and voluntary approaches that are in progress.

- (d) In terms of technological development, advancements are made in technologies to detect, diagnose and control IAS invasions. Such technologies include: “one-push” aerosol of household insecticide in packing; packaging by “wasabi” sheet; crack sealing with newly developed silicone resin; smartphone application for species identification; detection by camera with high resolution; rapid species identification by analysis of its DNA; detection of species occurrence by analyzing environment-DNA (eDNA); container-tracking system; and sea container pathway risk profiling.
- (e) Multilateral regulatory approaches to tackle contamination by IAS could be appropriate, while it may take years to develop and implement such measures globally. An example of a more short-term approach can be found in the actions taken by NASCI, where voluntary participation of the business sectors are achieved through effective awareness raising amongst the stakeholders.
- (f) Regional approach is important but to identify effective measures which can be applied globally is even more important, recognizing that cleaning all the sea containers in the global supply chain should ultimately be achieved.
- (g) When taking global approach, it is necessary to take into account the differences in capacity, tools and legislation among various countries.
- (h) In exploring solutions to effectively manage the issue on sea containers, many presenters recognized raising awareness would be most important. Furthermore, it would be the best that each relevant actor understands what action can be undertaken, also bearing in mind the importance of mutual cooperation.
- (i) To inform the global community of the issue on sea containers, the participants suggested, as a way forward to input the outcomes of this webinar to the global guidance setting processes (CBD, IPPC, among others). In doing so, the Government of Japan will prepare a report on this webinar, to be submitted to the CBD Secretariat and to invite the parties to the CBD to consider incorporating the issue of sea containers into the discussion on the agenda items on IAS and the post-2020 global biodiversity framework at CBD-COP 15.



**Annex I**  
**LIST OF PARTICIPANTS**

Name	Position/Role	Organization
Wendy Asbil	National Manager, Invasive Alien Species and Domestic Programs	Canadian Food Inspection Agency, Canada
Zaeidi Haji Berudin	Senior Forestry Officer	Forestry, Ministry of Primary Resources and Tourism, Brunei Darussalam
Robyn Cleland	Chief Environmental Biosecurity Officer	Department of Agriculture, Water and the Environment, Australia
David Cooper	Deputy Executive Secretary	Secretariat of the Convention on Biological Diversity
Madeleine Dupuis	Acting Manager	Environment and Climate Change Canada, Canada
Duratul Ain Haji Durani	Forestry Officer	Forestry, Ministry of Primary Resources and Tourism, Brunei Darussalam
Koichi Goka	Head, Ecological Risk Assessment and Control Section	National Institute for Environmental Studies
Harol Gutierrez	Coordinator, Plan EEI	Ministry of Environment, Peru
Pedro Gutierrez	Director General	Federal Attorney for Environmental Protection (PROFEPA), Mexico
James Hookham	Secretary General	Global Shippers Forum
Igor Jakupic	Illegal Wildlife Trade Programme Officer	World Customs Organization
Rama Karri	Director, Khapra Working Group	Department of Agriculture, Water and the Environment, Australia
Patricia Koleff	Director General	National Commission for the Knowledge and Use of Biodiversity (CONABIO), Mexico
Brent Larson	Implementation and Facilitation	Secretariat of the

Name	Position/Role	Organization
	Unit Leader	International Plant Protection Convention
Penny McLeod	Senior Adviser, Invasive Species Team	Ministry for Primary Industries, New Zealand
Fumiko Nakao	Director, Wildlife Division	Ministry of the Environment, Japan
Hiroyuki Nishiura	Counselor	Government Headquarters for TPP, Japan
Doris Rodriguez	Specialist, Fauna	National Forest and Wildlife Service (SERFOR), Peru
Angélica Romero	Deputy Director	Ministry of Foreign Affairs, Chile
Andy Sheppard	Research Director, Biosecurity	Commonwealth Scientific and Industrial Research Organisation Health & Biosecurity
Junko Shimura	Advisor	Former CBD programme management officer on IAS
Bingbing Song	Technical Officer, Subdivision for Marine Technology and Cargoes	International Maritime Organization
Ozlem Soysanli	Technical Officer	World Customs Organization
Pierre-Jonathan Teasdale	Director	Environment and Climate Change Canada, Canada
Toshio Torii	Director General, Nature Conservation Bureau	Ministry of the Environment, Japan

\*Participants are listed in alphabetical order of their last names.

**ANNEX II**  
**PROGRAM OF THE WEBINAR**

Time (Japan time, GMT+9)	Activity
	<p><b>ITEM 1. Opening of the webinar</b></p> <ul style="list-style-type: none"> <li>● Opening remarks by the host Government<sup>6</sup> <ul style="list-style-type: none"> <li>-Mr. Toshio Torii, Director General, Nature Conservation Bureau, Ministry of the Environment, Japan</li> </ul> </li> </ul> <p>* Moderator: Dr. Junko Shimura,</p>
9:30 a.m.	<p><b>ITEM 2. Presentations</b></p> <ul style="list-style-type: none"> <li>● Pathways of invasive alien species introductions &amp; on-going activities to address the risk of biological invasions<sup>6</sup> <ul style="list-style-type: none"> <li>- Dr. David Cooper, Secretariat of the Convention on Biological Diversity</li> </ul> </li> <li>● Coordinating the global effort to reduce the introduction of pests through the Sea Container Pathway <ul style="list-style-type: none"> <li>- Mr. Brent Larson, Secretariat of the International Plant Protection Convention</li> </ul> </li> <li>● Customs role in compliance and enforcement of IAS <ul style="list-style-type: none"> <li>- Mr. Igor Jakupic, World Customs Organization</li> </ul> </li> <li>● International &amp; Australian risk management activities for hitchhiker and contaminating pests <ul style="list-style-type: none"> <li>- Dr. Andy Sheppard, Commonwealth Scientific and Industrial Research Organisation Health &amp; Biosecurity, Australia</li> </ul> </li> <li>● Response to the risk of unintentional introductions of invasive alien species and the needs to strengthen international and inter sectoral cooperation <ul style="list-style-type: none"> <li>- Ms. Fumiko Nakao, Ministry of the Environment, Japan</li> </ul> </li> <li>● Preventing the Establishment of Contaminant Pests Associated with the Movement of Traded Goods <ul style="list-style-type: none"> <li>- Ms. Penny McLeod, Ministry for Primary Industries, New Zealand</li> </ul> </li> <li>● Preventing the spread of invasive pests in the sea container and cargo pathway - a North American regional perspective <ul style="list-style-type: none"> <li>-Presenter/prepared by: Ms. Wendy Asbil, Canadian Food Inspection Agency,</li> <li>-Prepared by: Ms. Wendy Beltz, United States Department of Agriculture</li> </ul> </li> <li>● The Sea Container Industry's Contribution to Facilitating Safe Trade via Sea Containers <ul style="list-style-type: none"> <li>-Mr. James Hookham, Global Shippers Forum</li> </ul> </li> </ul>
To 0:15 p.m.	<p><b>Item 3. Discussions</b></p> <ul style="list-style-type: none"> <li>● Discussion among the participants, with a view to prepare a written summary of this webinar session</li> </ul>

<sup>6</sup> Due to the technical issues during the webinar, the presentation was shared among the participants after the webinar.

## ANNEX III

### List of presentations with URL to access

- Pathways of invasive alien species introductions & on-going activities to address the risk of biological invasions
  - Dr. David Cooper, Secretariat of the Convention on Biological Diversity
- Coordinating the global effort to reduce the introduction of pests through the Sea Container Pathway
  - Mr. Brent Larson, Secretariat of the International Plant Protection Convention
- Customs role in compliance and enforcement of IAS
  - Mr. Igor Jakupic, World Customs Organization
- International & Australian risk management activities for hitchhiker and contaminating pests
  - Dr. Andy Sheppard, Commonwealth Scientific and Industrial Research Organisation Health & Biosecurity, Australia
- Response to the risk of unintentional introductions of invasive alien species and the needs to strengthen international and inter sectoral cooperation
  - Ms. Fumiko Nakao, Ministry of the Environment, Japan
- Preventing the Establishment of Contaminant Pests Associated with the Movement of Traded Goods
  - Ms. Penny McLeod, Ministry for Primary Industries, New Zealand
- Preventing the spread of invasive pests in the sea container and cargo pathway - a North American regional perspective
  - Presenter/prepared by: Ms. Wendy Asbil, Canadian Food Inspection Agency,
  - Prepared by: Ms. Wendy Beltz, United States Department of Agriculture
- The Sea Container Industry's Contribution to Facilitating Safe Trade via Sea Containers
  - Mr. James Hookham, Global Shippers Forum
- The status of fire ants invasions in Japan and counter measures for prevention and eradication
  - Dr. Koichi Goka, National Institute for Environmental Studies, Japan

The presentation files used in this webinar are available on the webpage of the Ministry of the Environment of Japan ( [http://www.env.go.jp/nature/cptpp\\_webinar\\_eng.html](http://www.env.go.jp/nature/cptpp_webinar_eng.html) ) .

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<sup>i,ii</sup> Due to the accidental loss of connection to the meeting platform, the video presentations of Mr. Torio Torii and Dr. David Cooper were shared after the webinar to all participants with apologies from the host Government, Japan.