



CPM FOCUS GROUP ON SEA CONTAINERS

REGULATORY AND NON-REGULATORY MEASURES WORKING GROUP

PROGRESS REPORT DECEMBER 2025

(Prepared by the CPM Focus Group on Sea Containers' RNR working group)

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1. Participants

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2. Goals of the Regulatory and Non-Regulatory Measures (RNR) Working Group (WG)

- [2] Describe and evaluate measures and then further elaborate the most practical, economical and concrete measures that could be globally adopted. This will serve as input for the Commission on Phytosanitary Measures (CPM) Focus Group on Sea Containers (FGSC) in making recommendations to CPM-21 in 2027. This task relates to the FGSC's Terms of Reference (ToR) activities #3-5 as follows:

- Continue to analyze potential regulatory and non-regulatory measures;
- Consider the costs and benefits for pest risk management, practicalities and possible impacts of the identified measures on container logistics, supply chains and national plant protection organizations (NPPOs);
- Identify and describe recommended measure(s); and
- Provide recommendations to CPM on the preferred measures and draft specifications for further development of such measures as necessary (including providing guidance and whether development of an International Standard for Phytosanitary Measures (ISPM) is feasible and desirable).

3. Identification of potential risk mitigation measures

- [3] Potential risk mitigation measures have been raised through various means by the CPM Sea Container Task Force (SCTF), the CPM FGSC, NPPOs and industry, and on multiple occasions such as international sea container workshops and symposia (London, UK in September 2022, Brisbane, AU July 2023, Rotterdam, NL November 2024). The evaluation required that each measure be described in sufficient detail to allow for a careful and uniform assessment. The measures that were included in the assessment are captured in Table 1.

Table 1. Measures that were considered by the RNR WG

Measure category	Measure*
Non-Regulatory	Education and outreach (NPPOs and industry)
	Industry-led programs (e.g. custodial responsibility)
	Container design improvements
	Technology in ports and containers
	CTU Code with phytosanitary cleanliness components
	Trade facilitation practices (e.g. Authorized Economic Operator; World Customs Organization (WCO) SAFE Framework of Standards) that have cleanliness component
Regulatory	Mandatory inspection and certification
	Mandatory standards (e.g. ISPM)
	Third Party Authorization or Recognition

*Detailed descriptions of each measure are provided in Annex 1.

4. Assessments of measures

- [4] For the assessment of the identified measures, the RNR WG applied the following overarching principles, namely that measures must:
- be effective at minimizing introduction and spread of plant pests globally;
 - be practical, feasible and cost-effective;
 - have minimal impact on supply chain logistics; and
 - be able to be adopted and implemented globally.
- [5] Additionally, an important aspect of the success of the identified measures depends on the cooperation between different entities. The RNR WG therefore assessed the required cooperation and coordination among:
- NPPOs, border control agencies and other government organizations;
 - industry sectors along the supply chain; and
 - NPPOs and industry.
- [6] The timeframe for a measure to be fully developed to be ready for implementation, as well as additional timeframe for it to be globally operationalized, are other aspects under consideration by the RNR WG.
- [7] The RNR WG developed an assessment template (Annex 2) as a tool to allow for a uniform assessment of potential measures based on a comprehensive set of objective criteria. These criteria

were discussed and refined by the RNR WG and FGSC. For each measure, one or multiple members of the RNR WG had to complete the assessment template based on their own judgment. The assessments were then discussed and potentially revised by the full group. Based on the outcomes, it was discussed which measures to pursue further within the time remaining for the FGSC work to make recommendations to CPM-21. During the assessment, it was concluded that a combination of measures (a framework) was required to arrive at a minimum viable product.

5. Progress until December 2025

- Described the potential risk mitigation measures (Annex 1).
- Assessed these measures using the template (Annex 2).
- Identified measures to pursue further based on the outcomes of the assessments (Table 2), as well as consideration of next steps to complete the analyses for developing recommendations for CPM-21. Measures to be further pursued are: Education, Awareness and Outreach, Custodial Responsibility, Container Design, CTU Code, Third Party Authorization or Recognition. Most of these are already mentioned in CPM Recommendation on *Minimizing the pest risk associated with the sea-container pathway* (R-06). It is anticipated that further elaboration of these measures may increase uptake of CPM Recommendation R-06. An ISPM as a potential longer-term solution is also under consideration by the RNR WG.
- Presented an overview of the measures at the Symposium on Plant and Biodiversity Protection: Mitigating Risks of Pest Contamination in the International Containerized Supply Chain in Copenhagen, DK October 7 and 8, 2025.
- Consideration of a framework or “suite of measures” by incorporating the selected measures.
- Reporting of the outcomes and discussion at CPM FGSC meeting October 9 and 10, 2025.
- Initiated in-depth development of the selected measures November 2025.

Table 2. Outcomes of Assessments**

Measure	Evaluation Outcome
Mandatory inspection and certification approaches: Phytosanitary certification of containers; Official declaration of cleanliness of containers	<p>Could be very effective at reducing risk; However not pursued at this time because</p> <ul style="list-style-type: none"> - High volume of containers (export and import) - Low feasibility; Highly complex; - Not cost-effective for industry and NPPOs - Not available globally (e.g. legislative authority; resources) - Negative impact on supply chain logistics anticipated
Mandatory inspection and certification approaches: Declaration of cleanliness of containers by operators	<p>Could be very effective for imported containers; However, not pursued at this time because</p> <ul style="list-style-type: none"> - Low feasibility; Highly complex (e.g. differing declaration requests among NPPOs and Operator capacity) - Not cost-effective for industry and NPPOs - Not available globally (e.g. legislative authorities) - Negative impact on supply chain logistics anticipated
Mandatory Standard: ISPM	<p>Effective for risk mitigation May provide global assurance for some contracting parties However, this will be considered at a later date as</p> <ul style="list-style-type: none"> - Content still to be determined; Feasibility, cost-effectiveness, impact on supply chain and global availability will depend on that content
Third Party Authorization or Recognition: focused on shippers and freight forwarders	<p>Pursue further because it would be</p> <ul style="list-style-type: none"> - Effective at minimizing risk - Feasible as described - Cost-effective for industry and NPPOs - Has both regulatory and non-regulatory application - Could be available globally

Awareness raising, education and outreach	<p>Pursue further because it</p> <ul style="list-style-type: none"> - Is part of CPM Recommendation R-06 - Already being implemented to some degree - Effective at minimizing risk - Feasible as described - Cost-effective for industry and NPPOs - Fundamental measure - Could be stand-alone as minimal viable measure - Available globally
Industry-led measure: Custodial Responsibility	<p>Pursue further because it</p> <ul style="list-style-type: none"> - Is part of CPM Recommendation R-06 - Effective at minimizing risk - Feasible as described - Cost-effective for industry and NPPOs - Considers all parts of the supply chain - Available globally
CTU Code	<p>Pursue further because it</p> <ul style="list-style-type: none"> - Is mentioned in CPM Recommendation R-06 - Already well under way - Enabler to effectively minimize risk - Feasible as described - Cost-effective for industry and NPPOs - Considers all parts of supply chain - Available globally
Container Design	<p>Pursue further because it</p> <ul style="list-style-type: none"> - Is part of CPM Recommendation R-06 - Testing underway in real-world situations - Effective at minimizing risk - Feasible as described - Cost-effective for industry and NPPOs - Available globally
Trade Facilitation Practices (SAFE Framework)	<p>This measure is an enabler for effective risk mitigation, feasible as described, would be cost-effective for industry and NPPOs and available globally. However, it is not being pursued further at this time due to current challenges in integrating into the World Customs Organization's cycle for trade/supply chain security proposals in a timely manner</p>
Port and Container Technologies	<p>This set of measures are enablers for effective risk mitigation, may have cost effectiveness for industry and NPPOs, uses emerging and advancing technology (e.g. AI, eDNA, cameras). However, this is not being pursued further at this time because it is conceptual with few real-world applications to date and is not likely to be available globally</p>

**Measures in bold type are moving to the next phase of the RNR WG framework consideration

[8] The time required for each identified measure to be ready for implementation could range from under a year to several years. The timeframe for preparing measures for implementation is likely shorter than the timeframe for operationalising some of the measures. The RNR WG is considering the estimated timeframe for fully developing the measures for implementation readiness and then the timelines for operationalising each measure globally.

6. Next Steps for RNR WG

[9] The RNR WG will continue elaboration of the measures and framework development (December 2025 to November 2026). This work involves determining what else is needed to fully explain each measure, implications of each measure, how to fit the measures into a framework, and implementation readiness and operationalization aspects. This work would include timelines,

guidelines, key performance indicators (where feasible), resource implications and incentives. Measures should be elaborated to, at least, minimum viable products. The WG will also be contributing to the FGSC's determination of the need for a supporting ISPM and what that might entail. The RNR WG expects to contribute to the FGSC's presentation at CPM-20 side-session and final recommendation to CPM-21 in 2027.

Annex 1: Descriptions of each measure

Education, Awareness and Outreach Measure

- [10] An informed community of NPPOs and industry is paramount to the success of any action taken to achieve the ultimate outcome of minimizing risk of pest movement in the sea container pathway. Well-designed and implemented education and outreach programs help to ensure:
- support for the work, why it is needed and why it should be important to each party; and
 - enhanced compliance with actions, guidelines, etc. as each party involved in the program is aware of what actions are expected of them and how their actions protect their community and the world from the risks of pest.
- [11] Education, awareness, and outreach serve as foundational control measures. Their effectiveness is significantly amplified when integrated with both regulatory and non-regulatory approaches and should be an integral component of all such measures. Policies and programs focusing on education and outreach aim to highlight the benefits of clean containers and drive positive behavioral changes among all stakeholders in the sea container pathway. Implementation strategies may include bulletins, infographics, webinars, social media campaigns, posters, mobile applications, and other communication tools. Training programs for NPPOs and industry may also be included in this measure.
- [12] This measure aims to improve levels of understanding and adoption of established practices and programs that reduce the need for very strict regulatory measures with a large impact on NPPOs and operators in terms of costs and operational resources. This measure can reduce obligations and costs on both NPPOs and industry.
- [13] Education, awareness, and outreach initiatives can be enhanced by incorporating incentive policies designed to encourage voluntary participation from industry and NPPOs. Identifying cost-effective methods to achieve desired outcomes while minimizing the need for enforcement or intervention provides significant benefits to both parties. These incentives act as powerful drivers for positive behavioral change and are not confined to financial rewards. Non-monetary incentives can also be employed effectively to inspire participation and foster collaboration.

Industry-led measure: Custodial Responsibility

- [14] “Custodial Responsibility” describes a series of non-regulatory commitments made by each commercial party involved in the international shipment and carriage of goods by intermodal freight containers and which takes custody of the container at some point in its journey.
- [15] The responsibility placed on each custodian of the container is to take reasonable steps to ensure that the container, and any cargo it contains, are received from the previous party free of any visible pest contamination, and that reasonable efforts are made to prevent such contamination from occurring whilst the container and/or cargo is in that party’s custody. Responsibility for reducing the risk of contamination is therefore shared between all parties to a containerised shipment.
- [16] To do this, the Custodial Responsibility arrangements identify a series of checkpoints during the journey of a container shipment where the party having custody of the container undertakes to check that where access is safe and practicable, its external and interior surfaces, and any cargo it contains, are free of visible pest contamination.
- [17] These checkpoints occur at the following points in the journey of a shipment:
1. Upon dispatch of an empty container to a shipper or packer from a container depot by the depot operator on behalf of the container operator.
 2. Upon collection of an empty container by the transport operator delivering the container to the location where it is to be packed.

3. Upon receipt of an empty container at the packing location by the shipper or their designated packing (or container stuffing) contractor.
4. Upon completion of packing or cargo in the container and closure and sealing of the doors by the shipper or packer, but prior to dispatch.
5. Upon collection of the packed container at a packing location by the transport operator delivering it to a port terminal or other designated location.
6. Upon receipt of the packed container at a port terminal or other container handling location by the operator of that terminal.
7. Upon loading of a container aboard a ship by the port terminal operator.
8. During a sea voyage by the operator of the ship carrying the container.
9. Upon unloading from the ship at the destination port by the port terminal operator.
10. Upon collection of the container by the transport operator delivering the container to the location where it is to be unpacked.
11. Upon receipt of the container at the packing location by the consignee or their designated unpacking (or destuffing) contractor.
12. Upon opening of the container by the consignee or unpacker.
13. Upon completion of unpacking and emptying of the container and closure of the doors by the consignee or unpacker.
14. Upon collection of the emptied and, if necessary cleaned, container by the transport operator delivering the container to the container terminal or depot where it is to be stored awaiting further use.

[18] At each checkpoint, the party undertaking the check is expected to hold the previous custodian of the container accountable if visible pest contamination is found, and also to take the necessary measures to contain, remove or otherwise manage the contamination using recommended practices, following consultation with local plant protection offices, where appropriate. It must be stressed that checks do not involve the breakage of seals to gain access to the cargo carried, if applicable.

[19] The level of overall accountability for the cleanliness of containers and their cargoes under Custodial Responsibility is therefore driven by the desire of each party to avoid the significant costs and delays involved in cleaning a contaminated container, and the spoiling or devaluing of cargoes.

Container Design

[20] This measure involves modifications to existing container designs. A November 2024 international symposium identified, and a WG is further exploring the following modifications:

- Floor designs that eliminate gaps and cracks and prevent nail holes, with a preference for so-called steel floors;
- Base frame structures with fewer horizontal ledge configurations and/or a change in the design to that of a corrugated base, similar to reefer containers; and
- Elimination of bitumastic undercoatings. There is collective agreement within the industry WG to move forward with these options initially while continuing to explore other design changes that may improve resistance to the carriage of pests.

[21] In addition it has been agreed to move forward with the creation of an ISO Standard for a “Pest free” container design, which will ensure continued future compliance.

[22] It is important to note that this is a long-term measure as it will take many years for a substantive change in global container fleet design. However, it is considered to be one of the most effective, and enduring passive measures available.

CTU Code

- [23] The CTU Code is a non-mandatory code of practice for the handling, packing and transport of cargo transport units (CTUs), including freight containers, in sea and land transport. It is jointly sponsored by the International Maritime Organization (IMO), International Labour Organization (ILO) and United Nations Economic Commission for Europe (UNECE) and was developed by an expert group with active industry involvement. It provides guidance on all aspects of packing, securing and transport of cargo in containers and other CTUs, and as such addresses a plethora of issues of importance to packers, shippers, freight forwarders and shipping companies, amongst others.
- [24] There is no systematic empirical data on the uptake of the CTU Code by parties in the CTU supply chains. However, industry associations working together in the Cargo Integrity Group are undertaking significant efforts to raise awareness and usage of the Code, including by the issuance of a Quick Guide to the CTU Code as well as a Container Check List (in all the official UN languages) to assist in the safe handling of containers and their cargoes, including measures to minimize pest contamination.
- [25] The current version of the CTU Code (published in 2014) contains information about pest contamination of CTUs and examples of such contamination. However, various NPPOs and regional plant protection organizations (RPPOs) as well as the IPPC's SCTF have expressed some concerns about the pest contamination content in the current version of the CTU Code. These concerns are shared by the IPPC's FGSC that established a sub-group on the CTU Code to develop more comprehensive pest-related information for inclusion in the Code that is presently undergoing revision. It is anticipated that a revised version of the CTU Code may become publicly available in Q1 2026 with a view to subsequent adoption by the three sponsoring UN organizations. The CTU Code should be considered the authoritative global source of information for the handling, packing and transport of CTUs. It is available for free on the UNECE's and IMO's website.

Third Party Authorization or Recognition (with a focus on shippers and freight forwarders)

- [26] This is an approach to risk reduction that involves the setting of standards necessary to achieve defined benefits or facilitations, and verification by an independent auditor that a shipper or forwarder is able to achieve them on a reliable basis.
- [27] This approach could be applied to reduce risks of visible pest contamination in intermodal containers and cargoes by the adoption of defined phytosanitary standards and practices by shippers or forwarders in the supply chain; verification of those entities by an independent third party that these standards and practices have been implemented and are effective; and recognition by NPPOs that shipments made under these verified arrangements will present a reduced phytosanitary risk and revision by NPPOs of their inspection and interventions for those shipments accordingly to provide tangible savings in time and cost for the entity (typically a shipper or a forwarder). Such schemes have been developed and implemented in some countries.
- [28] A scheme based on this approach would therefore consist of the following activities:
- The compilation and agreement of a Standard of operation that needs to be reliably achieved in order to qualify for the facilitations offered.
 - The appointment of an independent Auditor of entities to establish whether the standards have been, and can continue to be, reliably achieved.
 - The adaptation of operations to meet the Standard by economic entities seeking the facilitations and their formal Application to an NPPO (or other appropriate body) for accreditation.
 - The Inspection of the economic entity's operations and systems of control at first-hand by the appointed Auditor.

- The Accreditation of the economic entity by the Auditor, recognising that the defined standards have been, and can continue to be, reliably achieved; or if not achieved, the Reporting of shortcomings and recommendations for improvement to the economic entity.
- The Recognition of the accreditation by the NPPO and the Granting of the facilitations offered to shipments covered by the Accreditation.

[29] The approach may require legal measures to be enacted locally to permit it to be used by an NPPO as a basis for granting facilitations (or for denying them to non-accredited entities) but there would be no compulsion for entities to seek or achieve the defined standards.

[30] The prospect of reduced costs and/or more reliable shipment clearance times needs to provide sufficient financial incentive for shippers and forwarders to apply for the accreditation and incur the costs of adapting and improving their routine operations.

Mandatory inspection and certification

[31] 1: Phytosanitary certification of containers. Depending on their previous movements, storage or transportation before export, containers may become contaminated with quarantine pests or regulated articles. Following a risk analysis, countries may decide to establish phytosanitary import requirements and require a phytosanitary certificate to certify that containers are in conformity with these requirements. The NPPO of the exporting country may e.g. perform inspections or authorize entities for the treatment or cleaning of containers. The NPPO of the importing country may perform documentary checks and conduct import inspections to verify that containers are free from contamination. When a non-compliance occurs, the NPPO of the country of destination may take phytosanitary actions (e.g., refusal of entry, cleaning or treatment) and notify the exporting country. An ISPM is expected to contribute to such measures because of the general nature of the risks of contamination (which makes it difficult to perform a regular risk-assessment) and to harmonise phytosanitary import requirements across different countries.

[32] 2: Official declaration of cleanliness of containers. Depending on their previous movements, storage or transportation before export, containers may become contaminated with quarantine pests or regulated articles. Following a risk analysis, countries may decide to establish phytosanitary import requirements and official proof that containers are in conformity with these requirements. Such proof can be a cleaning declaration (including verification that cleaning was successful) or treatment certificate. The NPPO of the exporting country may authorize entities or operators for the treatment or cleaning of containers. The NPPO of the importing country may perform documentary checks and conduct import inspections to verify that containers are free from contamination. When a non-compliance occurs, the NPPO of the country of destination may take phytosanitary actions (e.g., refusal of entry, cleaning or treatment) and notify the exporting country. An ISPM is expected to contribute to such measures because of the general nature of the risks of contamination (which makes it difficult to perform a regular risk-assessment) and to harmonise phytosanitary import requirements across different countries.

[33] 3: Declaration of cleanliness of containers by operators. Depending on their previous movements, storage or transportation before export, containers may become contaminated with quarantine pests or regulated articles. Countries may decide to require proof that containers are not contaminated. Such proof can be a cleaning declaration (including verification that cleaning was successful) by the importing operator. The NPPO of the importing country may perform documentary checks and conduct import inspections to verify that containers are free from contamination. When a non-compliance occurs, the NPPO of the country of destination may take phytosanitary actions (e.g., refusal of entry, cleaning or treatment). An ISPM would not contribute to this measure because the declaration does not involve the NPPO of the exporting country.

Mandatory standard: ISPM

[34] An ISPM should provide guidelines on how to reduce the risk of the introduction and spread of pests associated with the movement of sea containers and their cargoes in international trade. There

are several elements that might be included in an ISPM such as: phytosanitary measures- inspection of sea containers by exporting or importing countries on a case by case or risk-based basis to detect pest contamination; inspection for compliance and verification of cleanliness; The importing/exporting country may undertake a phytosanitary action to reduce the risk posed by pest contamination. Regulatory measures are adopted by official authorities and compliance with them is mandatory. The CPM recommendation on sea containers "encourages contracting parties to establish appropriate regulatory tools to enable NPPOs to manage the pest risk associated with the sea-container pathway." These regulatory tools may focus on establishing the competence of official authorities to carry out phytosanitary actions related to sea containers (e.g. inspections, testing, surveillance or treatment), to implement phytosanitary measures or to enable phytosanitary certification. Its implementation entails establishing requirements that must be met by operators (e.g., registration, documentation), and/or by sea containers (e.g., treatments, construction, cleaning). Compliance verification can be conducted by various actors prior to export or import and may require some sort of proof. The requirements in the ISPM should consider the operational capacity of both NPPOs and operators.

Container and Port Technologies

[35] Innovative technological options for pest risk management of sea containers include:

1. Smart Container Systems: Smart containers can provide real-time tracking, allowing for immediate identification of containers that are originating from/destined for areas of interest.
2. Automated Inspection Technologies: Use of cameras mounted on ship-to-shore cranes and applied machine learning to detect and identify the type of biosecurity risks in real-time.
3. Artificial Intelligence (AI): Apply AI algorithms to large datasets to identify patterns and predict potential risks associated with specific shipments or routes, improving decision-making in biosecurity measures.
4. Drones and Robotics: Drones for aerial surveillance and inspection of shipping ports and container yards.
5. Mobile Apps for identifying and reporting: mobile applications allow stakeholders to report and share information about potential biosecurity threats in real time
6. eDNA and eRNA testing: Testing samples collected from dust/air for identifying the presence or absence of pests.

[36] Implementing innovative technologies -key considerations:

1. Regulatory Frameworks: Clear and harmonised international regulations and standards to ensure compliance.
2. Infrastructure Readiness: Investments may be needed to upgrade facilities to accommodate new technologies.
3. Cost and Funding: Financial implications of implementing these technologies.
4. Data Privacy and Security: Ensuring the protection of sensitive data collected through technologies.
5. Training and Capacity Building: Developing training programs to ensure stakeholders can effectively use new technologies.
6. Technology Compatibility: Ensuring that new technologies can integrate with existing systems used in logistics and customs processes
7. Scalability and Flexibility: Technologies should be scalable and flexible enough to adapt to varying sizes of operations and diverse geographical challenges.
8. Monitoring and Evaluation: Implementing mechanisms for continuous monitoring and evaluation of technology effectiveness.

World Customs Organization (WCO) SAFE Instrument

- [37] The proposed amendments to the existing text in relevant SAFE standards are outlined below.
- [38] The first proposal aims to encourage collaboration among government organizations to optimize use of government and regulated parties' resources while conducting mandated work. The proposed new text for section 2.1.7 is: "Cooperation between Customs and biosecurity agencies/agriculture agencies responsible for phytosanitary regulations. Cooperation may include areas such as the exchange of available and appropriate information and where possible alignment of compliance control and follow-up activities. Customs are encouraged to consult their local NPPOs to exchange applicable international or national standards or guidelines related to compliance activities, including inspection procedures, and recording of results. For phytosanitary compliance activities associated with sea containers, Customs are encouraged to reference the International Plant Protection Convention's Sea Containers Surveys Guidelines for NPPOs (<https://www.fao.org/3/ca7740en/CA7740EN.pdf>)."
- [39] The second proposal aims to create awareness that there are phytosanitary requirements or concerns related to all pathways and encourages other government agencies to work together where feasible to maximize compliance/risk management. The proposed text for section 2.4.1 is: "Customs should collaborate with all partner agencies to harmonize, to the extent possible, their control processes, measures, or strategies to ensure security and economic competitiveness. Such collaboration may include information exchange, coordinated risk management and mutual recognition of controls. When the nature and conditions of the consignment attracts the attention of different agencies authorized to carry out required procedures, such as Customs and veterinary or phytosanitary authorities, Customs should consult with the relevant agencies and take all necessary steps to ensure compliance procedures (such as document checks, verification of consignment integrity, inspection, or testing, etc.) are carried out simultaneously at one place, with a minimum of delay. And, whenever possible, carried out with prior coordination with the party having custody of the consignment. "An informed community of NPPOs and industry is paramount to the success of any action taken to achieve the ultimate outcome of minimizing risk of pest movement in the sea container pathway. Well designed and implemented education and outreach programs help to ensure:
- support for the work, why it is needed and why it should be important to each party; and
 - enhanced compliance with actions, guidelines, etc. as each party involved in the program is aware of what actions are expected of them and how their actions protect their community and the world from the risks of pest.

Annex 2: Sea Container and Cargo Cleanliness: Global Solutions - Assessment template

Criterion	Rating	Explanation
Operational, economic and trade implications for operators		
1. Ease of implementation into current industry operations	1 = Highly complex; will require significant resources and time 2 = Complex 3 = Moderately complex/somewhat easy 4 = Easy 5 = Very easy; can be implemented smoothly with minimal resources	
2. Cost implication for industry	1 = Significantly increases costs relative to the current situation 2 = Moderately increases costs 3 = Neutral; doesn't substantially affect costs	
3. Industry acceptance (openness to engaging regulators and within industry)	1 = High resistance by industry 2 = Moderate resistance 3 = Neutral; industry is neither resistant nor fully accepting 4 = Moderately open 5 = Open	
4. Trade implications	1 = Severe trade restrictions expected 2 = Moderate negative implications 3 = Neutral. 4 = Moderate positive implications; 5 = Strong positive; enhances trade relations and operations.	
5. Cost implication on contracting parties	1 = Significantly increases costs relative to the current situation 2 = Moderately increases costs 3 = Neutral; doesn't substantially affect costs	
6. Ease of implementation into existing regulatory and operational framework of contracting parties	1 = Highly complex; will require significant resources and time 2 = Complex 3 = Moderately complex 4 = Relatively easy 5 = Very easy; can be implemented smoothly with minimal resources	
Implementation Readiness		
7. Maturity of the solution (proven vs. conceptual)	1 = Purely conceptual; no real-world testing or application 2 = Initial testing ongoing 3 = Tested in controlled environments; not widely adopted. 4 = Partial real-world application; adopted in some areas 5 = Proven solution; widely recognized for its effectiveness	
8. Duration until full implementation	1 = Long-term solution; extensive time needed until fully implemented 2 = Medium to long-term solution 3 = Medium-term solution 4 = Short to medium-term solution 5 = Short-term solution	
Effectiveness and Assurance		
9. Effectiveness in reducing phytosanitary risks to an acceptable level; as low as reasonably feasible; reducing all visible contamination	1 = Minimal effectiveness; risks will largely remain 2 = Somewhat effective 3 = Moderately effective 4 = Highly effective 5 = Exceptionally effective; nearly all risks will be eliminated	

10. Type of contamination targeted (External, Internal, and/or Cargo)	1 = Manages external contamination only 2 = Manages internal contamination only 3 = Manages cargo contamination only 4 = Manages both cargo and container contamination in some instances 5 = Manages both cargo and container risks	
11. Standalone Effectiveness at reducing risk vs. Complementary Requirement	1 = Entirely dependent on other solutions 2 = Largely dependent; offers limited standalone benefits 3 = Partially dependent; enhanced with complementary solutions 4 = Mostly standalone; achieves most outcomes independently 5 = Completely standalone; achieves outcomes without complement	
12. Ease of Measuring Compliance	1 = No established metrics to measure compliance 2 = Compliance can be inferred but cannot be measured directly 3 = Basic metrics available, but requires intensive effort to be applied 4 = Compliance can be measured with regular effort. 5 = Comprehensive standardized metrics available to measure compliance with limited effort	
13. Possibility to increase compliance by incentives	1 = No possibility to increase 2 = Minor possibilities 3 = Some possibilities 4 = Large possibilities 5 = Excellent possibilities	
Scalability and Global Availability		
14. Scalability	1 = Not scalable; tailored for specific, limited applications 2 = Slightly scalable 3 = Moderately scalable 4 = Well scalable 5 = Highly scalable	
15. Global Availability (adoptable)	1 = Not globally available, suitable for a limited number of countries 2 = Not globally available; suitable for specific regions 3 = Moderately available; can be adopted with local adjustments 4 = Suitable for most regions; minor local adjustments needed 5 = Global implementation possible	