**CBD Online Discussion Forum on the development of IAS management tools and guidance.**

**Session 2: Methods, tools and measures for identification and minimization of risk of e-commerce**

**Overview:**

In general, participation was good considering that this is a fairly new topic and many countries may not have considered the risks associated with e-commerce or may not have much experience or capacity to develop and implement mitigation strategies.

Trade through e-commerce uses the same physical distribution modes for traditional trade such as marine vessels, overland mail and air freight; however e-commerce creates a significant shift in the way trade occurs and allows global access to items that previously would be difficult to find and purchase.  Understanding the impact of this disruption is an important step toward understanding how best the risk can be minimized and the tools needed.    
  
I posed the following questions to the group to get the discussion started:

2a) How do we define e-commerce?  
2b) Why is e-commerce a challenge for managing invasive alien species?  
2c) What are the roles and responsibilities of the various stakeholders, partners, risk-makers and government organizations involved?  
2d) Examples of how jurisdictions have resolved specific e-commerce issues (both positive and negative outcomes) and what tools or measures already in place or under development.  
2e) Where are the gaps in legislation, outreach and awareness, data collection and analysis, monitoring and enforcement considering the most effective control points along the entire supply chain continuum?

There were several very interesting strategies mentioned during the discussion, some of which are already in use while others are still concepts to be developed. The following is a summary of the discussion loosely organized by the questions listed above and includes a list of references provided by the participants.

**Definition:**

IPPC defines e-commerce as – Sales of plants and plant products ordered through the internet

WCO defines e-commerce as – online ordering, sale, communication and payment, in particular business to consumer and consumer to consumer transactions but can also be applicable to business to business transactions.

**Challenges:**

Globally, e-commerce volume and value is expected to increase annually, amounting to over $4 trillion dollars of trade by 2021. From a regulatory perspective, it makes it very difficult to monitor and enforce without hindering commerce and the interest for expedited releases.

E-commerce is a relatively new phenomenon for developing countries, it may not yet be recognised as a pathway or there may not be the resources to assess the risk and implement adequate mitigation measures. In other countries, such as South Africa, the e-commerce is a pathway of potential concern, but it is difficult to quantify its contribution to the trade and movement of invasive species in comparison to other existing factors such as lack of awareness, lack of proper identification or mis-declaration.

In many countries, the e-commerce pathway goes unchecked and in many instances proper process such as having a phytosanitary certificate is not followed or enforced. Many of the issues with e-commerce is a result of the switch from businesses importing in large quantities to individuals (with little or no knowledge of import requirements) importing small quantities delivered directly to their door by courier.

The massive influx of small, individual parcels makes it difficult to triage high risk from low risk and to identify and target potential biosecurity threats. Adequate tracking and monitoring systems including data on internet sales are problematic to obtain, manage and share, especially for regulatory purposes.

The large-scale growth of e-commerce in the world has provided more convenient conditions for the spread of alien species

Many countries list species in their legislation which are not to be imported, kept or traded (i.e. negative lists). However, the internet provides a platform to trade such a vast range of (potentially invasive) species that an endless number of species needs to be monitored in e-commerce.

**Roles and Responsibilities:**

A review of several articles suggests that there is a general lack of awareness by e-commerce vendors and buyers on what they are actually selling, buying, or trading, on existing plant and animal health regulations and their role in ensuring import or export requirements are met or in reporting contaminating pests to the correct authorities. The importing country is often unaware of items traded via the internet because they can be imported and delivered by mail or courier directly to the customers, bypassing the usual processes that verify compliance with the country’s import requirements. This is further compounded when items are misidentified, incorrectly declared or traded on free sharing sites.

**Specific country examples:**

AUSTRALIA traditionally managed e-commerce trade by x-raying mail items. 10 years ago x-raying was applied to 100% of incoming mail. However this is no longer feasible with massive increases in e-commerce the number of parcels increasing at 10% a year (currently 1.6B) with international inbound parcels growing at more than 40% a year. Australia is developing an e-nose technology as a long-term replacement for sniffer dogs but it is still in prototype. Recommendations of a recent review have been the following:   
1) Biosecurity public awareness campaign re limited financial benefits of selling prohibited commodities, relative to the significant financial penalties  
2) Continue engagement with e-commerce industry (agreements already in place with eBay and Amazon) to better manage the biosecurity risks of trading in invasive species   
3) Require e-commerce industry to ensure clients know their legal obligations with respect to buying, selling and transporting commodities that represent biosecurity risks    
4) Legislative reforms to ensure effective regulation of traders, consumers and e-commerce platforms with requirements for the provision of information by the e-commerce industry   
5) Review effectiveness of a range of software applications for monitoring social media re high risk e-commerce activity  
6) Legislate significant penalties for e-commerce platforms that facilitate the advertisement of illegal matter on their sites  
7) Develop an Australian standard for the management of biosecurity risks in the e-commerce and retail industries involved in trading commodities with biosecurity risks and ensure regulators have appropriate powers to access information from e-commerce organizations   
8) Train specialty investigators to work covertly and collect evidence from the internet and other digital sources so it is admissible in court  
9)Invest in RD&E specialty tools to equip regulators and investigators for regulating the e-commerce market  
10) Undertake a National review of the sale of live organisms via e-commerce

BELGIUM has some very useful tools available to inform species prioritization for prevention and control. In practice, involving sufficient experts and mobilizing resources to actually use the protocols are scarce. Initiatives are underway to better make use of available distribution data through software pipelines fostering more integrated, data-driven procedures for risk evaluation. The European Court of Justice has provided its support for the positive list approach.

BRAZIL has considered e-commerce as an important potential pathway for invasive species, especially for pets, aquarium and ornamental plants and is an issue for both cross-border and domestic trade. A set of actions is being developed to address the IAS risks associated with e-commerce according to the scope of the National Strategy on IAS and to identify major gaps in the legislative framework. For animal species, Brazil uses positive lists to import, keep and trade. They are developing risk analysis to identify priority high-risk invasive species that will help to monitor e-commerce platforms and social media and are working on a public awareness campaign about the risks for the environment of buying and keeping wild species as pets.   
In Brazil, main e-commerce platforms monitor live species trade, which contributes to the reduction of illegal activities. These platforms have been collaborating with investigations of possible offenders. There are also negotiations of Agreements between the Environmental Authority (IBAMA) and the e-commerce platforms. Special investigative operations carried out in Brazil have identified social media as the main platforms for live animal illegal trade. Facebook contributed 97% of the illegal activities. This fact is being explained by the difficulty of identification and prosecution of offenders. The Environmental Authority (IBAMA) has been working in partnership with the US Embassy to get information and prosecute offenders, once Facebook servers are located in the US.

CHINA: X-ray even CT are very effective tools in checking the packages for e-commerce. China is using the AI-based image identification system. In addition, they combine this technology with sampling based on the risk analysis.

CANADA started looking at the risks associated with e-commerce using a small group of high risk plant pests and different online search engines to find websites that may be offering to sell or trade those species. The findings were documented and used to develop the rationale for a more in-depth investigation of this issue. One of the principle focuses is on outreach and communication. Buyers, sellers, and traders on e-commerce platforms may not necessarily consider themselves importers and exporters and may be unaware that rules are in place and need to be complied with whether or not imports or purchases are made on-line. Currently under development is software to automate the search and systematically collect the needed data from websites. This will allow for better targeting for communication materials, and for more informed regulatory actions or changes to better prevent and respond to biosecurity threats.

NEW ZEALAND is looking at ways to leverage e-commerce to achieve operational efficiencies and faster clearance times while managing biosecurity risks, including for IAS. The work done to date highlights that e-Commerce risk management strategies will require non-regulatory as well as regulatory solutions.  Examples might include education of consumers on IAS risks or cooperation with online platforms to reduce the volume of risk goods such as seeds before they enter the supply chain.    This work will require dialogue and information sharing based on partnership between government, business and consumers.  This concept is embedded in New Zealand’s Biosecurity 2025 goal of building a biosecurity team of 4.7 million i.e. every New Zealander.  The 4.7 million programme will develop a specific behaviour change campaign targeting individuals and small businesses who purchase online from offshore websites. Advances in technology and the way business uses technology presents opportunities to improved biosecurity and risk management outcomes, including for IAS.   For example, the availability of data, big data analysis and the use of artificial intelligence could revolutionise our understanding of what goods are traded where and when.  This in turn can be leveraged to remove from or trace high risk items through the supply chain thereby eliminating risk or improving incident response.

**Gaps/Considerations:**

* Should e-commerce be a pathway that is considered in the risk assessment process? How can/should it be included?
* What are some of the popular software used in different countries to monitor e-commerce trade? What is their efficacy? Is there any data available on this?
* How can we access e-commerce data flow while also providing appropriate privacy, consumer rights or commercial protections?
* What regulatory controls have been successfully put in place to avert potential biosecurity threats due to e-commerce?
* Would it be beneficial to develop some industry standards or code of conduct for e-traders?
* How can a country start to monitor the e-commerce pathway?
* How are border officers informed about potential threats? What tools do they need to better identify and target small parcels?
* As most current commerce activities use the internet for part or all of their transactions, are there certain types of commerce that are more risky and how can they be prioritize?
* The resources required to effectively monitor e-commerce activity in real time may not be feasible using traditional methods. What new technology or approaches need to be developed and can these methods be shared with other countries?
* How can countries collaborate to exchange information on non-compliances and coordinate monitoring and enforcement actions?
* Risk communication has not received a lot of attention but the lack of awareness of the risks and regulations is noted as one of the main reasons for non-compliant behaviour. China suggested that countries jointly establish a sharing platform for biosecurity risk publicity and education that allows traders to be informed and communicate relevant information to customers simultaneously.
* Not only monitoring e-commerce trade but other social media sites such as Facebook and the deep web should also be considered

**References provided by participants:**

* The World Customs Organization has defined cross-border e-commerce and established some global standards for tackling associated challenges in the recently adopted WCO Framework of Standards on Cross-Border E-Commerce. Further work is under progress. However the framework seems to focus mostly on the customs aspect rather than the SPS risks. <http://www.wcoomd.org/en/topics/facilitation/instrument-and-tools/frameworks-of-standards/ecommerce.aspx>
* Recommendations on: Internet trade (e-commerce) in plants and other regulated articles <https://www.ippc.int/en/publications/84232/>
* In China, The Law of E-commerce is implemented in 2019. General Administration of Customs, P.R.China also has established several relevant regulations.  
  <http://www.customs.gov.cn/eportal/ui?pageId=696401&currentPage=1&moduleId=803a199eac704a97a8ea1f0a18cb3a0e>
* An insightful horizon scanning for future invasive plants with e-commerce as pathway: [www.invasives.org.za/files/36/2015/882/1.%20cobi12579.pdf](http://www.invasives.org.za/files/36/2015/882/1.%20cobi12579.pdf)
* and also <https://www.researchgate.net/publication/280774833_E-commerce_trade_in_invasive_plants>
* In April 2019, CPM-14 endorsed the draft project work plan and budget that were presented in the paper on e-Commerce (<https://www.ippc.int/en/publications/86924/>).   
  In addition, two topics related to e-Commerce were added to the list of topics for IPPC Standards in May 2019: 2018-014: Guidelines for Phytosanitary (Risk Management) of International Mail Items, and 2018-021: Requirement for phytosanitary certificate on cross-border online-shopping plants, plant products and other regulated articles.