

Invasive alien species (IAS) are one of the main drivers of biodiversity loss, and they have severe negative impacts on biodiversity, health, nature contributions to people, and economic activities among others. The Kunming-Montreal Global Biodiversity Framework has 23 action-oriented global targets for urgent action over the decade to 2030, and one of these, target 6, aims to eliminate, minimize, reduce and or mitigate the impacts of IAS on biodiversity and ecosystem services.¹

The rapid growth of e-commerce and the subsequent ease with which consumers can buy live plants, seeds, and animals, is creating a major new pathway of introduction and spread for alien species.

E-commerce allows commercial entities and individuals to buy directly from sellers based almost anywhere in the world, providing access to an unprecedented variety of species. International e-commerce trade also often bypasses traditional biosecurity controls, and the rise of frequent

small parcel shipments makes inspections more challenging, thereby increasing the risk of introductions, including those of IAS that may be banned in the importing country. Online marketplaces and platforms, including social media, can also facilitate peer-to-peer trading of IAS, particularly within countries. Given the scale of e-commerce trade and the wide variety of online platforms, with many lacking physical stores, the monitoring of species being sold and enforcing regulations is particularly challenging.

E-commerce of IAS in Australia



The extent of illegal online trade in IAS is increasingly being recognised, for both plants and animals. A recent study in Australia searched e-commerce platforms for the sale of IAS and found 1,415 instances of invasive alien plants advertised, of which 411 breached local jurisdictional (State or Territory) laws.² A separate study found 667 non-native pets being sold via e-commerce sites in Australia, of which 279 were illegal to commercially import.³

Opuntia microdasys (bunney ears cactus) was the species with the most frequently prohibited advertisements, © Johnny Roger Pedersen CC 4.0 BY NC

What can be done

At a national level, understanding which IAS and potential IAS are most likely to be traded over e-commerce can help inform online monitoring, stakeholder engagement, and legislation development, for example, regulating the import and sale of priority high-risk species. In addition, legislation and policies should aim to ensure that effective surveillance, biosecurity, and enforcement actions can be taken where relevant. This could include provisions requiring specieslevel identification on imports, and to cover unintentional introductions (e.g., hitchhikers in packaging or substrate) to support customs taking risk-based inspections. The regular monitoring of e-commerce platforms can also play a key role in identifying which IAS are being traded, and in the identification of the sale of regulated species.

Engagement and communication on regulated or priority species and risks associated with trade in IAS with key stakeholder groups, including e-commerce platforms, sellers and exporters, and the pet and horticulture sectors, will help raise awareness and improve compliance with regulations and policies. These groups can also support the development of good practices or codes of conduct, and in the production and dissemination of awareness-raising campaigns targeting e-commerce buyers directly.

There are a number of actions for international bodies and standard-setting governing consider. particular organizations to Of importance is the need to share data, information, advances in technology and relevant expertise on e-commerce among all stakeholders. This includes disseminating e-commerce guidance from relevant authorities, such as that produced by the International Plant Protection Convention⁴ and World Customs Organisation. 5 Collaboration, joint capacity building, and information sharing between national governments and their border agencies will also help improve action to reduce risks of IAS introductions through e-commerce.

Maher, J. et al. (2023). https://doi.org/10.3897/neobiota.87.104472

³ Toomes, A. et al. (2023). https://doi.org/10.1016/j.biocon.2023.110040

⁴ IPPC E-commerce guidance https://www.ippc.int/en/core-activities/capacity-development/e-commerce/

⁵ WCO E-commerce package https://www.wcoomd.org/en/topics/facilitation/instrument-and-tools/frameworks-of-standards/ecommerce.aspx

Key sources and further reading:

Convention on Biological Diversity. Decision 16/18. Elements of volountary guidance Annex II. Identification and minimization of additional risks associated with cross-border e-commerce in live organisms and the impacts thereof. https://www.cbd.int/doc/decisions/cop-16/cop-16-dec-18-en.pdf

International Plant Protection Convention (IPPC) E-commerce guidance https://www.ippc.int/en/core-activities/capacity-development/e-commerce/

Maher J, et al. (2023) Weed wide web: characterising illegal online trade of invasive plants in Australia. NeoBiota, 87: 45-72. https://doi.org/10.3897/neobiota.87.104472

Toomes, A., et al. (2023). A snapshot of online wildlife trade: Australian e-commerce trade of native and non-native pets. *Biological Conservation*, 282, 110040. https://doi.org/10.1016/j.biocon.2023.110040

World Customs Organisation E-commerce package https://www.wcoomd.org/en/topics/facilitation/ instrument-and-tools/frameworks-of-standards/ecommerce.aspx



A toolkit has been developed to support Parties in the implementation of Target 6, and it can be accessed here www.cbd.int/invasive/cbdtoolkit

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More information on the Kunming-Montreal Global Biodiversity Framework: https://www.cbd.int/qbf



