



Kunming-Montreal Global Biodiversity Framework **Target 6 on invasive alien species**

Invasive Alien Species and tourism

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

Tourism is one of the world's largest and fastest-growing economic sectors, and it also poses a significant risk for the unintentional introduction and spread of IAS to new environments. This includes passengers, who may unknowingly carry alien species or pathogens on food, sports equipment, luggage, clothing or footwear. Many sites that are important for biodiversity, and sensitive to impacts from IAS, such as islands, are also popular for tourists and tourism facilities, making them susceptible to introductions. For instance, international tourists may visit several protected areas within a short period of time. In

fact, the abundance and richness of alien species are significantly higher in sites where tourist activities take place.²

Tourism establishments can also pose a risk, through their construction and operations, including the importing of goods, machinery, and horticultural plants. By displacing native species and degrading natural environments and habitats that tourists value and want to visit, IAS can also have impacts on the tourism sector and activities, and the economy of areas that depend upon it.

¹ Target 6 <https://www.cbd.int/gbf/targets/6>

² Anderson, L.G., et al., (2015). <https://doi.org/10.1371/journal.pone.0140833>

Eradication of Small Indian Mongoose (*Urva auropunctata*) revitalising eco-tourism in Amami-Oshima Island, Japan.

Located in the southwestern Japan, Amami-Oshima Island is home to numerous rare and endemic species, surrounded by coral reefs, mangroves, tidal flats, and Japan's largest subtropical evergreen broadleaf forests. Its unique flora and fauna and distinctive culture nurtured in harmony with nature, have long attracted tourists. In particular, night tours to observe the Amami rabbit (*Pentalagus furnessi*), found only on this island and the neighbouring island, have become extremely popular with tourists.

However, in 1979 a small number of mongoose were intentionally introduced to the island to control poisonous snakes. By the year 2000, they had increased to a population size of approximately 10,000 causing damage to agriculture and livestock, and a decline in many endemic species, including the Amami rabbits. Their impact led to reduced opportunities for tourist encounters, affecting tourism on the island.

A program for eradication of mongooses was launched in 2000, and following an investment of 3.57 billion JPY (>US\$20 million), it achieved success in 2024, resulting in the largest ever



Small Indian Mongoose (*Urva auropunctata*) © Ministry of the Environment, Japan

eradication of mongooses (71,200 ha). As the removal measures were implemented, the populations of many native species began to recover, including the Amami rabbits. This contributed to the inscription of "Amami-Oshima Island, Tokunoshima Island, the Northern part of Okinawa Island and Iriomote Island" on the World Heritage List in 2021. To this day, the native ecosystems restored through mongoose eradication have become a valuable tourist resource for the island.

There are a number of actions that tourism operators can take to reduce the risk that their operations lead to the introduction and spread of IAS. Firstly, they can identify which operations and activities may pose a high risk and take actions to mitigate them. For example, by ensuring that horticultural plants used are not known or potential IAS in the country and prioritising the use of native species, or by applying practical biosecurity practices³ when transporting tourists and equipment to and from sensitive areas.

Tourism companies can collaborate and engage with other stakeholders to support the monitoring and management of IAS in the landscapes where they operate and depend upon. One example is on the Seychelles Islands, where three private islands with tourist resorts successfully eradicated rats.⁴ This work was funded by the tourism sector and implemented in collaboration with civil society organizations.

3 This could include undertaking a risk assessment to identify high-risk IAS and pathways relevant to each site and their activities, developing relevant biosecurity protocols such as 'check-clean-dry' (checking all equipment for plant material or soil, cleaning them on site, and ensuring that they are dry), and training staff on IAS identification and biosecurity protocols.

4 Millet, J.E., et al. (2017). <https://portals.iucn.org/library/node/48358>

Tourism operators can also play a key role in helping to raise awareness of IAS with tourists and help change their behaviour to reduce the risk that they bring IAS into countries and sensitive areas and spread them from one site to another. Tourists also offer an opportunity to strengthen citizen science programmes, and with the right information and guidance, can play a role in supporting the monitoring and surveillance of IAS.

To empower the tourism sector to take meaningful action, operators need access to information and data to support awareness-raising activities and the implementation of measures to prevent the introduction of IAS across their operations. This will require support and engagement from governments and civil society to ensure that information is tailored to the location, type of tourism activities, and introduction pathways relevant to each operator.

Key sources and further reading

Anderson, L.G., et al. (2015). The Role of Tourism and Recreation in the Spread of Non-Native Species: A Systematic Review and Meta-Analysis. *PLOS ONE*, 10(10), e0140833. <https://doi.org/10.1371/journal.pone.0140833>

Hulme, P.E., et al. (2023). Chapter 3: Drivers affecting biological invasions. In: Thematic Assessment Report on Invasive Alien Species and their Control of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Roy, H. E., Pauchard, A., Stoett, P., and Renard Truong, T. (eds.). IPBES secretariat, Bonn, Germany. DOI: <https://doi.org/10.5281/zenodo.7430727>

Hulme, P.E. (2024). Networks of risk: international tourists as a biosecurity pathway into national parks. *Biol Invasions* 26, 4317–4330. <https://doi.org/10.1007/s10530-024-03448-6>

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/gbf>

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