



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

Invasive Alien Species and Climate Change



The invasive alien coypu (*Myocastor coypus*) is expected to expand its alien range in Europe due to climate change. © Michal Zifcak, CC 4.0 CC-BY-NC

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 (KMGBF) 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

Invasive alien species are interacting with other drivers of biodiversity loss,² leading to the amplification of their impacts.³ One of these key interactions is with climate change. For example, some invasive alien trees and grasses can alter fire regimes where they are established, especially in those areas that are becoming drier due to a changing climate. This can increase the risk of more frequent and severe wildfires, leading to catastrophic impacts on nature and human well-being.

Extreme weather events like hurricanes, floods, and droughts not only move IAS across landscapes but can also weaken the resilience of ecosystems, creating conditions where IAS can rapidly establish and spread.

A changing climate may create conditions that are more favourable for the establishment and spread of alien species, especially in degraded habitats and nearby natural habitats. For example, by allowing IAS to spread to higher latitudes and altitudes as the climate warms, or by changing water temperatures, allowing IAS to establish in areas where they would not have been able to do so previously.

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

² Particularly land- and sea-use change, and climate change.

³ IPBES. (2023). <https://doi.org/10.5281/zenodo.7430692>



Stands of invasive buffelgrass (*Cenchrus ciliaris*) can alter fire regimes, increasing the frequency and intensity of wildfires
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Climate change is also helping to create new pathways of introduction, for example, by opening up Arctic shipping routes and thereby reducing the time taken for ships to travel between continents, as well as increasing the likelihood that any animals or plants survive the journey. In addition, new species that are more resilient to changing climates are being intentionally introduced for forestry, aquaculture, agriculture, and restoration activities, which may become IAS in the future if their invasive potential is not considered.

What can be done

An integrated governance approach needs to be taken so that the interactions between IAS and climate change are considered when developing policies, strategies, and actions. This can include incorporating climate change when prioritising IAS and pathways of introduction, including within risk assessments, which could become a future threat. In addition, understanding which sites are vulnerable to IAS and climate change may help focus where early detection and rapid response measures to prevent the establishment of new IAS are most needed. Climate change policies also need to consider these interactions and make sure that measures do not lead to the introduction and spread of IAS, for example, through the use of potential IAS for carbon sequestration.

Taking an adaptive management approach⁴ will improve the management of established IAS under climate change. In addition, integrating ecosystem restoration with IAS, site, and/or ecosystem management measures will improve the resilience of the ecosystems to future impacts from both climate change and IAS.

Key sources and further reading

Convention on Biological Diversity. Decision 16/18. Elements of voluntary guidance Annex III. Management of invasive alien species as it relates to the prevention of potential risks arising from climate change and other drivers of biodiversity loss. <https://www.cbd.int/doc/decisions/cop-16/cop-16-dec-18-en.pdf>

IPBES. (2024). Climate change and biological invasions factsheet <https://onet.ipbes.net/node/209>

IUCN. Invasive alien species and climate change. Issues Brief <https://iucn.org/resources/issues-brief/invasive-alien-species-and-climate-change>

⁴ Adaptive management aims to improve management success by learning through application and adjusting policies and activities accordingly. According to IPBES. 2023.

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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