
Invasive species management in the French Southern and Antarctic Lands (TAAF) : past efforts and future challenges

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Abstract

Alike most islands in the world, the history of animal and plant introductions in the French Southern and Antarctic Lands (TAAF) – formed by Terre Adélie (Antarctic) and a collection of islands lying from tropics (Eparses Islands) to subantarctic (Kerguelen, Crozet, Saint Paul and Amsterdam) in the south western Indian ocean - is strongly correlated with the history of human occupation. Since the beginning of research development in the TAAF, numerous scientific programs have allowed to better document impacts of these non-native species on ecosystems and native biodiversity (e.g. competition, predation, browsing, soil erosion, ‘invasional meltdown’, transmission of pathogens) but also to understand their distribution and their population dynamics. We will first review this significant work that was used to support the implementation of the first management measures. Beyond early experimental eradication operations carried out in the 1950s, the implementation of a first strategy for the management of invasive alien species has been initiated for almost twenty years to ensure the long-term preservation of the native biodiversity of the islands. This strategy is based on three pillars: prevention of introductions, early detection and eradication/control of invasive populations. We will present here some case studies of the first eradication efforts and impacts on species and ecosystem recovery. Despite initial limited financial and human resources, a total of 7 species of introduced mammals established on 13 islands have already been eradicated and more than 70 invasive plant species have been targeted. Management operations were conducted on islands ranging from 80 hectares to 3,405 hectares. From now on, TAAF are looking to set up a new adapted strategy to meet future challenges on a larger scale (i.e. routine implementation of eradications on islands larger than 1,000 hectares). Perspectives in terms of capacity building, regional networking and fundraising will be presented.

Keywords: invasive species, ecological restoration, protected area, management, biosecurity

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