

## **RINSE management trials and demonstrations for an invasive evergreen shrub in coastal dunes**

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Coastal dunes are a unique ecosystem and home to a large number of red list species. Embryonic dunes, shifting white or fixed grey dunes, humid and wet dune slacks, dune grasslands and moss dunes are high conservation value habitats of European importance. However, many of the dune areas are small and fragmented, making them very susceptible to external influences. Surveys have shown that the surrounding gardens are an important source of invasive plant species occurring in these natural areas. Some of these plants, such as black cherry *Prunus serotina*, *Ribes aureum*, *Cotoneaster* spp. and exotic *Populus* spp. are starting to cause problems for native biodiversity. Detailed monitoring shows that some of these species are starting to display invasive behaviour. Therefore, there is an urgent need amongst conservation managers for detailed data on efficiency of potential management measures. The non-native North American Oregon grape (*Mahonia aquifolium*) is such a species. This evergreen shrub is a very popular garden plant in the area. It grows vigorously on sandy soil along the coast and with its yellow flowers has great ornamental value. However, with its strong clonal growth it can strongly proliferate and overgrow native vegetation. Furthermore, its blue berries are easily spread by birds. Little is known about management of this invasive species. Therefore, within RINSE, an experiment was set up in three heavily infested dune reserves. Individual *Mahonia* shrubs were located with GPS and received different management treatments. Some were manually removed with shovels, some were treated with a glyphosate Roundup Max 5 % formula on the leaves, others were cut and painted with glyphosate or with a saturated salt solution as an environmentally friendly alternative. The direct effect of these treatments in terms of kill rate and vital regrowth will be compared so that a clear advice can be given to the manager of these areas. Besides this field trial, which targets individual plants and small infestations in sensitive areas, a demonstration was held (November 2013) in highly infested areas on mechanical removal using a heavy excavator. Here, invasive shrub (Oregon grape *Mahonia aquifolium* and Japanese rose *Rosa rugosa*) removal was combined with large scale landscape restoration. The effort will be documented (cost, effort, aftercare) and the outcome monitored in terms of regrowth from different depths. This work is performed in cooperation with the Agency for Nature and Forest (ANB). The trials and demonstrations are performed within the framework of the EU co-funded Interreg 2Seas project RINSE (Reducing the Impact of Non-Native Species in Europe) ([www.rinse-europe.eu](http://www.rinse-europe.eu)) (2012-2014), which seeks to improve awareness of the threats posed by INNS, and the methods to address them. RINSE also engaged in networking with local stakeholder forums to set up preventive actions towards garden centers, public bodies and private owners. The first comprehensive results of the *Mahonia* field trial are expected in spring 2014.