

## Patterns of impacts of four highly invasive plants species on native vegetation in Belgium

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There is a need to improve our ability to predict species responses to human-induced global change, such as the consequences of plant invasions, given their ecological, economical, and societal deleterious effects.

It is often suggested that diverse communities are less likely to be invaded, but both negative and positive relationships, between native flora richness and invasion, have been reported. Invaders may induce differential impacts on different species, resulting in fundamental changes in community structure.

Within the framework of the ALIEN IMPACT project, we investigated the patterns of impacts of four highly invasive species (HIPS) on native plant species richness, structure and composition in Belgium, with a particular focus on sites of high biological value (Natura 2000, SGIB, nature reserves).

Our results showed that the four target species tended to invade diverse habitats or vegetation communities. Disturbances appeared to be the main cause of invaders establishment. The reduction in native plant richness/diversity was a common pattern to invasion. However, the magnitudes of impacts were species specific and were found to be related to the invasive plant density. Although sites of high biological value were targeted, no endangered species or species of concern was found to be directly impacted by invasion.

Indirect consequences on whole communities should be further studied and taken into account in order to produce an integrated ranking of HIPS impacts.