

Exotic plant species in the Caribbean: foreign foes or alien allies?

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People can introduce plant species deliberately or by accident to areas where these do not belong. After the introduction, some plant species become invasive and then they drive out the original species from the ecosystem. Invasive exotics also threaten the most species-rich areas of the Netherlands: Bonaire, St. Eustatius and Saba. Tackling this problem is difficult, because it is not clear where an exotic species is rapidly spreading. Time series of aerial photographs are unfortunately not available. This project will investigate whether the rate of spread of exotic plant species can be derived from just one aerial photo in time based on the spatial pattern of an invasive species. If we know where a species is rapidly spreading, we can measure which environmental factors are causing this. Then the next question is what should be done about the invasive plant species on the BES islands. Exotic species can also have positive effects, such as the improved resilience of ecosystems against hurricanes, the prevention of soil erosion or keeping away mosquitoes. A computer model will simulate the future spreading of invasive exotic species and map the advantages and disadvantages of this. That computer model could be a useful tool for determining a good management strategy for exotic species on the BES islands.