

**Project title:** Seagrass ecology, brown tides, invasive species, connectivity, restoration, ecosystem services and sea turtle grazing in the Dutch Caribbean.

**Level:** Master

**Start:** February 2018 or later (topic 1) and Sep 2017 or later (topic 2)

**Project duration:** 20 to 24 weeks

**Project form:** Field experiments and surveys in Bonaire, lab analyses at RU. In addition or alternatively: Modelling and global mapping techniques, as well as group model building (management science).

**Supervision:** Marjolijn Christianen, Tjisse van der Heide (topic 1); Marieke van Katwijk, Tjeerd Bouma, Marjolijn Christianen, Tjisse van der Heide, Brigitta van Tussenbroek (topic 2)

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### Description of the project:

Two major topics will be investigated during the next 3-4 years, partly or wholly at RU, at two collaborating departments (DES, AE&EB) and perhaps another Dutch university or institute.

1. Global defaunation and plant invasion: cascading effects on seagrass ecosystem services. Effects of sea turtle grazing and a recently invading seagrass species on various ecosystem services of seagrass beds. Details & schedule: Marjolijn Christianen
2. Connectivity between ecosystems (mangroves and seagrass beds) regarding organic matter fluxes. Interactions between systems and effects on ecosystem services, particularly carbon sequestration and coastal protection under 'normal' conditions, and under brown tides and hurricanes. Societal aspects, group model building is planned for the second year. Details and schedule: in prep.

