# “Proteger”: a sustainable soil bioengineering project for riverbank protection in the Caribbean.

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To respond to societal needs on erosion risk prevention and to guarantee the safety of human investments, local authorities must carry out works to protect the banks of watercourses and the slopes of gullies. These constructions are usually made of civil engineering mostly pure or concrete riprap. These techniques have a strong negative impact on riparian ecosystems. Soil bioengineering represents a softer and environmentally friendly option. In the Caribbean islands biodiversity hotspot, the natural flora of riverine network system has hardly been studied and native species are still poorly used in soil bioengineering. The lack of knowledge of the structure of riparian flora and the need for their restoration in Guadeloupe led to the emergence of the “Proteger” project in 2015 to develop and promote soil bioengineering techniques on riverbank of this territory and around. The first phase of this project (2016-2018) aimed to describe the riparian plant assemblages, and to identify the most suitable local species to maintain riverbanks. The second phase of the project (2019-2022) consists in controlling the multiplication of these species. We conducted a first *ex situ* experiment aiming to evaluate the vegetative propagation potential of cuttings from thirty-two native species. Experimental conditions were compatibles with soil bioengineering works settlement. Our results indicate that among the selected species, propagation of three trees, four shrubs and three herbs species can be controlled in low tech conditions, allowing the development of soil bioengineering techniques in Guadeloupe and in the Caribbean.