

From 2010-2017 | Total budget € 1,500,000

## Fertile and climate-smart soils in the Amazon region

Anthropogenic soils that combine high fertility and substantial carbon storage in the Amazon (Terra Preta de Índio; also known as Amazonian Dark Earth) challenge conventional theories on environmental limitation of cultural development of pre-Colombian Amerindian people in tropical South America. These improved soils offer a major inspiration for creating and recreating soils for climate-smart sustainable agriculture. This Wageningen Universityfunded interdisciplinary programme aimed to (1) understand conditions under which Terra Preta originated, both from the biophysical and socio-economic side; (2) understand the institutional and policy dimensions related to actual use and potential future use of these fertile soils; (3) link actual perception and use of these soils for various agricultural purposes, ranging from annual and biannual cropping systems to forestry and agroforestry, to biophysical properties and socio-economic conditions (markets); (4) contribute to the creation of soils that allow sustainable and productive agriculture in the Amazon, using Terra Preta (5) contribute to and maintain the functioning of a network of Latin American Terra Preta researchers; (6) use the conceptualisation of Terra Preta as socially constructed soils to reflect on (and change) actual scientific discourses and practices. Research took place in three countries: Brazil, Bolivia and Colombia. Results: recreation of these soils depends on more than addition of biochar. Interaction between carbon, phosphorus and calcium (and possibly other nutrients) is crucial. Together with soil life, which drives nutrient and carbon transformation, these soils are best considered as living soils.

More information:

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