Understanding how plant root traits and soil microbial processes influence soil erodibility

Fact Sheet

Project Information

FIXSOIL

Grant agreement ID: 626666

Project closed

Start date
1 May 2014

End date
30 April 2016

Funded under
Specific programme "People" implementing the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007 to 2013)

Total cost
€ 202 405,80

EU contribution
€ 202 405,80

Coordinated by
INSTITUT NATIONAL DE RECHERCHE POUR L'AGRICULTURE, L'ALIMENTATION ET L'ENVIRONNEMENT
France

This project is featured in...

Objective

A large part of the world's crops grow on hillsides where the original forest has been felled and severe soil degradation and erosion has occurred through poor planting practice. Careful management of such situations could avoid any detrimental consequences of farming on sloping land, but both fundamental and applied research is required to determine how best to plant, manage and harvest depending on land use, species mixtures and topography. Therefore, Fixsoil will investigate the ecosystem service of soil fixation provided by different crop / forest systems whilst focusing on plant root traits and soil microbial communities. The project will be hosted at AMAP (Montpellier, France) and CEH (Wallingford, UK) with field-sites representing natural forest, agro-forest and organic farmland in temperate oceanic and Mediterranean regions. The relationships between root structural /functional traits and soil microbial communities with soil aggregate stability, soil physical/chemical properties and infiltration, will be studied with the both standard and cutting-edge techniques. The ambitious objective of this project is to determine how the function and role of different parts of a root system (in a variety of species mixtures) and the composition of soil microbial communities provide (or not) the service of reducing soil erodibility. The results of this project will provide data to allow stakeholders and (agro)foresters better determine species mix, spatial and temporal compositions and management strategies with regard to soil degradation and erosion.

Fields of science (EuroSciVoc)

natural sciences > physical sciences > astronomy > planetary sciences > **planetary geology**

natural sciences > biological sciences > ecology > **ecosystems**

agricultural sciences > agriculture, forestry, and fisheries > **agriculture**

Programme(s)

FP7-PEOPLE - Specific programme "People" implementing the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007 to 2013)

Topic(s)

FP7-PEOPLE-2013-IEF - Marie-Curie Action: "Intra-European fellowships for career development"

Call for proposal

FP7-PEOPLE-2013-IEF
See other projects for this call

Funding Scheme

MC-IEF - Intra-European Fellowships (IEF)

Coordinator

INSTITUT NATIONAL DE RECHERCHE POUR L'AGRICULTURE, L'ALIMENTATION ET L'ENVIRONNEMENT

EU contribution

€ 202 405,80

Total cost

No data

Address

147 RUE DE L'UNIVERSITE
75007 Paris
France

Region

Ile-de-France > Ile-de-France > Paris

Activity type

Research Organisations

Links

Contact the organisation Website
Participation in EU R&I programmes
HORIZON collaboration network

Last update: 17 October 2016

Permalink: https://cordis.europa.eu/project/id/626666