

## Ad hoc support : FORCES

### Preparation of H2020 proposal: Forest-based Solutions for Biodiversity, Climate Action and EcoABSYS Services

#### ABSTRACT

Agropolis Fondation grant will support physical meeting of all the partners from the two continents to elaborate FORCES' 2nd step full proposal: in particular, Agropolis Fondation grant will be used to invite partners from Brazil, Costa-Rica, Guatemala and French Guiana to attend the plenary meeting. This physical meeting is crucial because building mutual understanding and trust among many different disciplines and domains of expertise needs time and solid personal contacts: remote video-conferences and other distant collaborative tools, used for the preparation of the 1st step, are not enough. As part of the FORCES project, INRA URFM and CIRAD B&SEF will in particular co-construct a clustering strategy with Brazilian partners to link FORCES with the KIC Climate FORLAND: Brazil is not directly eligible in this H2020 RIA call but is a key partner targeted by the EU among the CELAC countries, and the EU asks for clustering H2020 with other EU projects. This clustering H2020 RIA - KIC Climate is a great opportunity for the Agropolis Fondation Network to reinforce its trans-disciplinary partnership on forest social-ecological systems over Europe and the CELAC.

FORCES aims towards establishing an evidence-based nature-based solutions (NbS) framework by implementing innovative forest-based solutions. FORCES seeks to develop ecosystem-based adaptation actions that simultaneously preserve high levels of biodiversity, ensure sustaining natural capital and the flow of ecosystem services while protecting communities' livelihoods and contributing to climate change mitigation.

Considering that combined actions on climate, biodiversity and societal challenges cannot efficiently be achieved without multiple actors' engagement in local actions, FORCES's strategy is to develop local innovation actions, provide methods and tools to support their extended use and assess their potential global impacts. Thus, FORCES will: i) conduce trans-disciplinary research based on new developments in environmental and social sciences underpinned by stakeholders' expertise; ii) design, implement and assess local innovation actions based on stakeholders' engagement; iii) address cross-scale issues from local actions to global impacts; iv) elaborate a tool box of science-based methodologies and standards to promote the use of nature-based solutions that contribute to achieving specific UN sustainable development goals, combining SDG13 "Climate action" and SDG15 "Life on land", and address societal challenges.

FORCES will develop research and innovation actions in various types of forest socio-ecosystems, aiming to generalize forest-based solutions, and will interact with similar projects on other ecosystems through a clustering approach as mentioned in the call. Forests are appropriate for this research and innovation action because: (1) forests harbor an important terrestrial biodiversity and are particularly vulnerable to climate change due to cumulative effects of annual climate on trees, (2) forests are social-ecological systems providing multiple ecosystem services and contributing to people welfare, they are a lever for C-sequestration and substitution, (3) in the context of global change and multiple uncertainties, the emergence of a new paradigm in forest management offers opportunities to innovate, (4) forests are at the cross-road of multiple EU policies but biodiversity and climate objectives are not yet considered jointly in forest policies and strategies.

FORCES will design, implement and assess innovative nature-based solutions, i.e. innovation actions, at local scale with the local actors. A strategy will be developed to extend the use of the designed NbS and assess their potential impacts on climate and global markets. The proposal is grounded on six Innovation Action Areas (IAAs) in different types of forest systems in Europe (Mediterranean forest in France, Alpine forest in Italy, boreal forest in Finland, urban forest in Germany) and the CELAC (Tropical Agroforest in Guatemala, restoration of degraded Amazonian forest in Brazil). These Innovation Action Areas will be supported by associated Research Sites (RS) for data acquisition and model calibration. IAAs cover well-defined territories, each with coordinated forest strategy. RS generally have a smaller spatial scale, they

are situated within their related IAAs and outside, in similar conditions. All RS have pre-existing background in terms of data and models that will be used and improved within the project. In particular, INRA URFM and CIRAD B&SEF representing the Agropolis Fondation network in this project will be involved in two of the six Innovation Action Areas with the local actors: INRA URFM will co-construct NbS innovation with the actors of the Forest Area Charter Luberon-Lure through collaboration with PNR Luberon, CIRAD B&SEF will co-construct NbS innovation with the actors of the Paragominas municiple (Brazil, state of Para). Furthermore, INRA URFM and CIRAD B&SEF are coordinating research sites and observatories that are related to these innovation areas (e.g. the Tropical Managed Forest Observatory, coordinated by CIRAD B&SEF).

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**Project number :** 1900-005

**Type of funding :** SP

**Project type :** PC

**Research units in the network :** F&S

**Start date :** 2019-01-17

**End date :** 2019-09-04

**Flagship project :** no

**Project leader :** François Lefevre

**Project leader's institution :** URFM

**Project leader's RU :** F&S

**Budget allocated :** 5000 €

**Total budget allocated ( including co-financing ) :** 46300 €

**Funding :** Labex