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IRSTEA

www.esmeralda-project.eu

WHO WE ARE

- ★ Irstea, National Research Institute of Science and Technology for Environment and Agriculture is a public scientific and technical institute in joint supervision with the Ministry of Research and the Ministry of Agriculture and is holder of an agreement with the Ministry of Ecology. Irstea, the new name for Cemagref has built a multidisciplinary and systemic approach in three domains – water, environmental technologies and land – which today form the basis of its strength and originality.
- ★ Among others, Irstea’s researchers, engineers and technicians possess recognised scientific and technological leadership expertise in the areas of land management (remote sensing and spatial information, landscape level assessments, biophysical and spatial modelling, biodiversity and ecosystem services and regional development (territorial planning, drivers, public participation and conflict assessment).

OUR EXPERIENCE

- ★ Our main expertise is in the field of ecology, thus we’ll focus mainly on ecosystem functions, status and capacity to provide ES.
- ★ Expertise on biophysical spatial modelling at different scales. Linking Ecosystem Services to Biophysical Dynamics (Environmental models, habitat models)
- ★ Vegetation mapping, patterns analysis and structure at different scales based on ecological, GIS, remote sensing and coupling modelling
- ★ species distribution modelling (SDM) different species at different scales
- ★ Assessment of ecosystem services based on indicators and on the vulnerability of ES to global change pressures and drivers
- ★ Landscape, land use and land cover patterns and changes.
- ★ Landscape and territorial planning based on potential trade-offs
- ★ Integration of ecosystem services into sustainable management of complex forested and agricultural landscapes
- ★ Expertise on mapping cultural ecosystem services through crowd-sourced information to capture different dimensions of coupled human-environment systems



WHAT WE DO IN ESMERALDA

IRSTEA will support **ESMERALDA** in all activities – with a regional focus on France, it will especially contribute to mapping methods in Task 3.4 (Biophysical Mapping Methods) as well as assessment methods in Task 4.4. supporting the development of an integrated and flexible methodology, that clearly sets out the roles that spatial analysis can play in ecosystem assessments

WE ARE ALSO INVOLVED IN

OPENNESS, IPBES, provide expertise for FAO CGIAR Research Program and have leadership on different related networks like AlterNet, IALE, IUFRO, European Land Institute



Dr Philip Roche

- Senior Scientist at **Irstea** since 2007 and Deputy Science Director of Land department since 2012.
- Assessment of biodiversity and ecosystem services based on indicators and on the vulnerability of ES to global change drivers.



Dr Sandra Luque

- ★ Director of Research at **IRSTEA** since 2007. At present, Senior Visiting Researcher at Centre for Biological Diversity (CBD) University of St Andrews, School of Biology
- ★ Landscape Ecologist, expertise on spatio-temporal dynamics and disturbances at the landscape level. I look at biodiversity and habitat quality at different scales and its implications for ecosystem processes and planning. cross-cutting issues in relation to sustainable development concepts and tools