LISAH

Laboratoire d'étude des **I**nteractions **S**ol, **A**grosystème, **H**ydrosystème

Laboratory for the study of the interactions between Soil, Agrosystem and Hydrostem

INRAE IRD Montpellier SupAgro

Head : Jean-Stéphane Bailly and Fred Jacob

www.umr-lisah.fr

International Joint Lab
LMI Naila

PRIMA PARTNERSHIP FOR RESEARCH AND INNOVATION IN THE MEDITERRANEAN AREA

Project PRIMA- Altos
Kick Off Meeting, 25-26 May 2021

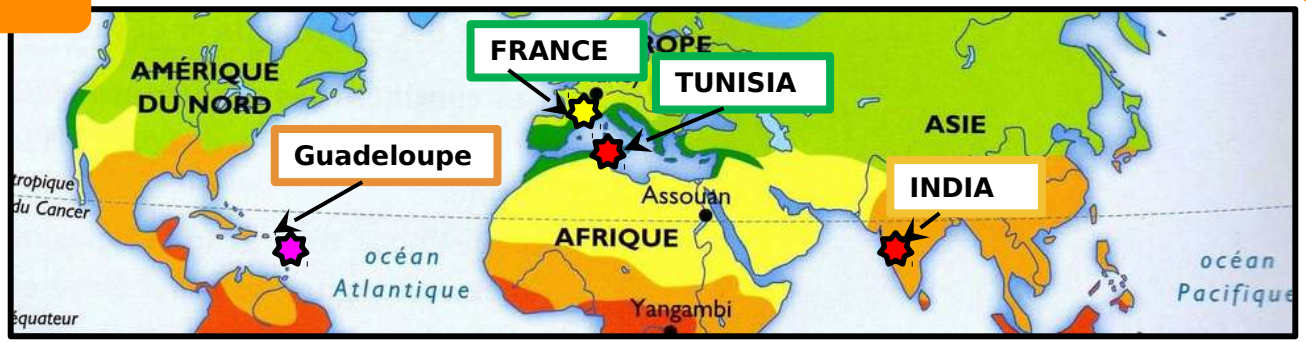
40 **Permanent staff**
(researchers, teachers, engineers, technicians)

15 **Non-permanent staff**
(PhD students, Post-docs)

SCIENTIFIC SKILLS

- Hydrology (stream runoff, surface-groundwater exchange, evapotranspiration, ecohydrology)
- Soil science (erosion, digital soil mapping, reactive transport)
- Biogeochimistry (pesticides dynamics, physico-chemical reactions, transport)
- Agronomy
- Numerical modelling (catchment models, soil models, landscape spatial model)
- Remote sensing

LOCATIONS



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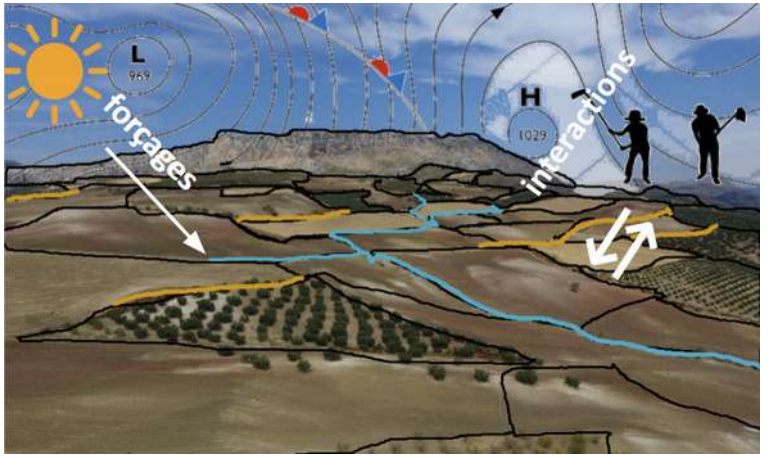
Main research topic

Understanding the water, matter and energy fluxes in cultivated rainfed landscapes

- Interactions between soil, water and plant cover
- Climatic and human drivers
- Mediterranean and tropical contexts



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Scientific objectives

To understand and model the hydrological, hydrochemical and erosive functioning of the cultivated landscape in relation to its "natural" (soil, relief) and anthropic properties (farming system, soil and water conservation infrastructure, ...)

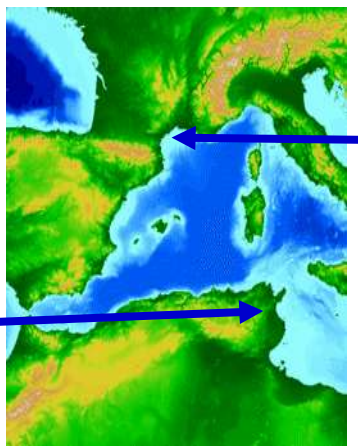
To contribute to the design of sustainable management methods for the cultivated landscape, methods that combine the reasoning of the spatial organization of agricultural practices, cropping systems, semi-natural interstitial spaces and agro-ecological infrastructures.

OMERE Observatory

www.obs-omere.org

OMERE
Observatoire Méditerranéen de l'Environnement Rural et de l'Eau

Kamech catchment



Roujan catchment

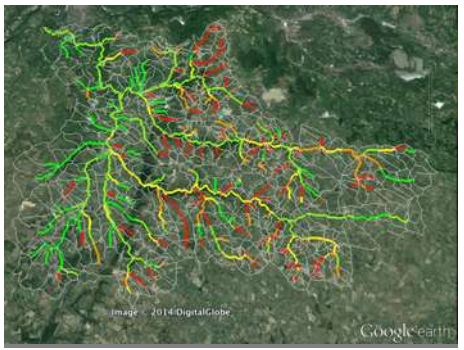
An agro hydrological observatory with two catchments in France and in Tunisia

Partners : INRGREF and INAT (Tunisia) ; LISAH and Hydrosciences Montpellier (France)

Modelling

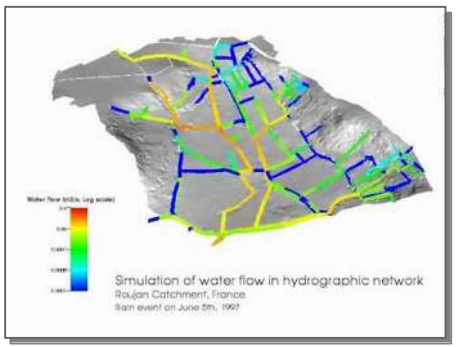
Catchment model MHYDAS for water, erosion and pesticides

Simulated herbicide concentration in stream



Louchart et al.

Simulated water height in stream



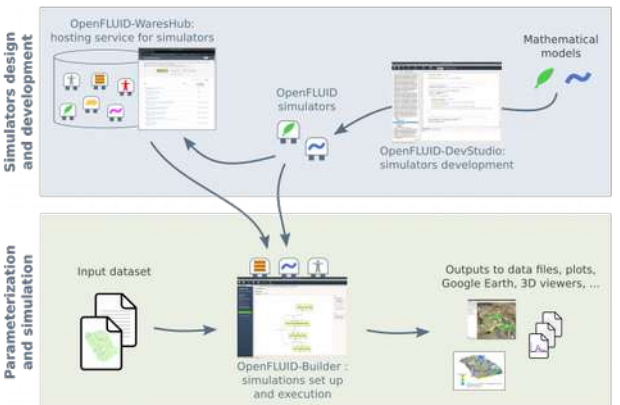
Moussa et al.
Dagès et al

OpenFLUID Spatial Modelling in Landscape

OpenFLUID
Software Environment
for Modelling Fluxes in Landscapes

Fabre et al.

www.openfluid-project.org



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Thank you

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