



Aims & Objectives

- ➔ To provide a clearer understanding of the co-evolution of water resources and society, including technical aspects.
- ➔ To design water regulation tools, economic instruments and consultation mechanisms in order to make collective and industrial water uses and services (farming, drinking water and sanitation) more effective and more resilient.
- ➔ To identify potential overlaps between land use planning and water management policies, in an effort to address the impact of resource scarcity, global change and competing uses.
- ➔ To develop innovative irrigated crop systems that are less prone to environmental degradation and more resilient to market variations, climate change and other hazards.



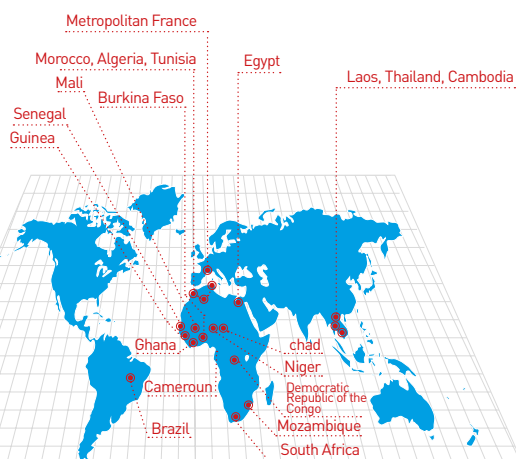
Linkage with IM2E research fields and emerging issues

G-Eau's work covers the majority of IM2E's disciplines and challenges

- > The unit coordinates the "water, actors and regions" theme and the "viability in water basins" challenge.
- > It works closely with the agronomy community and jointly coordinates the "water & agriculture" challenge.
- > Its work also covers the "technological innovation" challenge, with a particular focus on the technical feasibility and consequences of wastewater reuse in irrigation.
- > Its vulnerability research overlaps with other work in the hydro-climatic risks discipline, bringing an HSS perspective to the "contaminants and health risks" challenge.



Study areas



Research teams involved into IM2E

Hydraulic management, optimisation and supervision of water transfers (GHOSTE)

Led by:

MALATERRE Pierre-Olivier

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Optimising irrigation technologies and steering practices: minimising inputs and environmental transfers (OPTIMISTE)

Led by:

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Controversies and public actions (CAP)

Led by:

BARONE Sylvain

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Innovations and changes in irrigated agriculture (INCA)

Led by:

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VENOT Jean-Philippe

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Tools and governance of water and sanitation (OGEA)

Led by:

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Socio-hydrological dynamics of water territories (Socio-Hydro)

Led by:

RIAUX Jeanne

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Water and societies interrelated dynamics: adaptations (Adaptations)

Led by:

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Participation for water management (PAGE)

Led by:

BOUARFA Sami

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Experimental analysis of social-hydrological dynamics and regulations (AnExpe)

Led by:

FAROLFI Stefano

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Evaluation: creating and using indicators (EVE)

Led by:

MORARDET Sylvie

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highlights

Scientific and/or technical

● Thesis topic:

"Performance contracts in the Ugandan urban water sector, structures of the market logic's materialisation and supports for institutional work"

Marine COLON (3 times award winner : AFC-FNEGE 2014, RIODD-VIGEO 2015, AIRMAP 2015)

● Thesis topic:

"Participatory planning, evaluation and institutional dynamics in African Natural Resource Management (NRM)"

Emeline HASSENFORDER

Jointly supervised by: ANU (Canberra - Australia)

● Thesis topic:

Assessing the productivity of irrigation water through modelling: subsurface drip irrigation for corn in deep loam soil

Rami ALBASHA

● Thesis topic:

Design and assessment of combined financial incentive and social preference water management instruments: groundwater withdrawal for agricultural use

Anne-Gaëlle FIGUREAU

2016 SHF-Pierre Massé award «water and society» winner

● Thesis topic:

A burgeoning technical innovation: drip irrigation in practice in Morocco - actors, makeshift systems and efficiency

Maya BENOUNICHE

Jointly supervised by: IAV (Rabat, Morocco)



Academic and industrial partners

France

- CNRS, INRA, CNES
- Pôle EAU
- ONEMA and Agence de l'eau Rhône Méditerranée

Europe

- IHE Delft and Univ Wageningen
- UFZ Leipzig
- CSIC (Espagne)

International

- International Water Management Institute (IWMI)
- CSIRO and ANU (Australie)
- International Commission on Irrigation and Drainage



Examples of partnership projects

ANR "Terra" CHEX (ANR scientific chair of excellence)

> The aim of this project is to analyse and model the impact of global environmental changes on water resources in semi-arid regions at different, embedded spatial scales.

EAU4Food (EU FP7-KBBE-AFRICA-2010)

> This programme involved five cooperative research projects focusing on irrigated farms in Tunisia, Mali, Ethiopia, South Africa and Mozambique. The ultimate aim was to move towards sustainable intensification of agriculture in Africa.

EAU&3E (ANR Sustainable Cities, coordinated by CIRED)

> This project addresses changing water consumption habits, looks to improve demand forecasting and seeks to predict the impact of different water savings incentive policies, particularly in the Languedoc-Roussillon region of France.



Platforms and Equipments

- **Lavalette experimental site: agricultural and environmental engineering research** - Languedoc-Roussillon region, France.
- **Gignac experimental site: irrigation canal regulation** - Languedoc-Roussillon region, France.
- **Montpellier SupAgro water technology facility** - Languedoc-Roussillon region, France.

G-Eau keywords:

Governance
Water and sanitation service
Catchments
Irrigated agriculture
Participation
Adaptive management
Vulnerability
Water resources
Public policy
Aquatic environment quality

UMR G-EAU (Water Management, Actors and Uses), UMR N°183, AgroParisTech, Cirad, IRD, IRSTEA, Montpellier SupAgro

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