

Liberté Égalité Fraternité





UMR**1048** 

**INRAE, AGROPARISTECH** 

# Sciences for action and development: activities, products, territories (Sadapt)

## Mission and objectives

The unit carries out three missions. (I) Produce knowledge on the dynamics of socio-ecological systems with a particular attention to agriculture-environment-climate interactions at different levels of organization (farm, landscape, supply chain). (II) Support the decisions of public and private actors in order to develop social and technical innovations reinforcing agricultural sustainability. (III) Contribute to the structuring of interdisciplinary and transdisciplinary research within Université Paris-Saclay.



The ambition of the unit is to advance our knowledge on the adaptation of agro-food systems to global changes and reduction of their footprint on natural resources.

We express this ambition in our scientific objectives.

- Our research aim to understand the socio-economic processes that constitute the transition of rural and peri-urban spaces towards sustainable development.
- We conduct research to analyze and evaluate the technical, legal, political and economic levers for the transition of landscapes and farms.
- Finally, we are looking to increase our knowledge about technical systems of urban agriculture, its role in urban areas, and the related use of sustainability assessment methods.

Management Philippe MARTIN, head

In few figures

- 39 researchers and teacher-researchers
- 21 PhD and postdoctoral students
- 11 engineers
- 8 technicians and administrative staff

Centre Île-de-France - Versailles-Grignon



Route de Saint-Cyr 78000 Versailles Tél. : + 33 (0)1 30 83 00 00

www.inrae.fr/centres/ile-france-versailles-grignon



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Topics





#### Research

The sustainability challenges that agriculture faces have evolved; they lead us to identify transversal themes explored as part of our research. These themes express our integrated vision for the design and evaluation of new sustainable agro-food systems.

First, we work on the multi-level assessment of agricultural sustainability in the context of global changes. Farm sustainability is envisaged as a necessary but not sufficient condition for landscape sustainability.

Second, we investigate the territorial interactions between society and nature. The concept of socio-ecological metabolism allows us to rethink the dependence of human activities and agriculture on natural resources, biodiversity and ecosystem services. Third, we also explore the territorial interactions between production and food. The concept of local food systems allows us to understand the socio-economic and agronomical implications of the "relocalization" of food systems. Fourth, we undertake multi-actor approaches for the production of actionable knowledge. The complexification of societal challenges demands new approaches in terms of Innovation and design that capitalize on the co-production of knowledge between researchers and actors.

# Collaboration

We have been and remain strongly involved in structuring operations of the University of Paris-Saclay (Labex BASC, C-CLAND Convergence Institute, IDEAS initiative). Our unit has the capacity to carry out disciplinary works and to contribute to interdisciplinary approaches.

Our international collaborations and projects provide a valuable starting point to pursue our international visibility (coordination and involvement in several H2020 projects). In the tradition of the ACT division, we are also strongly involved in the co-design of research with territorial partners (agricultural partners, local authorities). We thus play a major role in fostering dialogue between disciplinary fields on socially relevant issues.

## Education

Our involvement covers all levels of higher education: AgroParisTech engineer, master's degree, doctoral training. Our multidisciplinary research explains why we are involved in three Graduate Schools of the Université Paris-Saclay (Biosphera, Eco-Management, Socio-ScPo). We are also involved in other educational institutions (engineering schools and universities).

We coordinate and participate in engineering courses on systemic approaches to agriculture and the environment (crop farming systems, environmental engineering, livestock breeding and sustainable industries, engineering of urban green spaces).

Our unit is also involved in the management of education in life and social sciences within the framework of masters programs (in particular the AETPF mention).

Finally, we are deeply involved in teaching at the doctoral level, but also in the permanent training of researchers and professional organizations.

