

## **PhD position: Analysis of hybrid modes of governance for the sustainable management of ecosystem services provided by agriculture and forestry: a France-Germany comparison**

The French National Research Institute for Agriculture, Food, and the Environment (INRAE) is a public research establishment gathering a community of 12,000 people with more than 270 units including fundamental and experimental research, spread out throughout 18 regional centres in France. Internationally, INRAE is among the top research organisations in agricultural and food sciences, plant and animal sciences, as well as in ecology and environmental science. It is the world's leading research organisation specialising in agriculture, food and the environment. Faced with a growing world population, climate change, the depletion of resources and declining biodiversity, the Institute has a major role to play in providing the knowledge base supporting the necessary acceleration of agricultural, food and environmental transitions, to address the major global challenges.

### **Work environment, missions and activities**

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You will work within UMR Territoires, where research focuses on the analysis of transitions in rural territories (<https://umr-territoires.fr/>). You will also conduct research during regular stays at Eberswalde University for Sustainable Development (HNEE) in Germany (<https://www.hnee.de/en/>).

You will be specifically in charge of completing a PhD thesis on the topic described below.

#### **Context and research question**

Ecosystem degradation, natural resource depletion, biodiversity loss and climate change are major policy and management concerns at the national, European and global levels. Especially the agricultural and forestry sectors exert direct pressure on biodiversity, water resources and soils, and contribute significantly to climate change. At the same time, the services provided by agro-ecosystems and forest ecosystems are threatened by the decreasing availability of natural resources and the impacts of climate change. The sustainable provision of these ecosystem services requires the definition and implementation of targeted policies and novel forms of governance (Stallman, 2011; Muradian and Rival, 2012; Vatn, 2018).

The PhD project deals with innovative modes of governance aimed at the sustainable management of ecosystem services provided by agro-ecosystems and forest ecosystems in a context of global change. In particular, the project focuses on hybrid forms of governance that combine public intervention, market mechanisms and/or decentralized collective action (Ménard, 2011; Pahl-Wostl, 2019; Blackstock et al., 2021). The aim is to assess the potential of these modes of governance for the sustainable provision of ecosystem services, i.e., to identify the factors influencing their emergence and their ecological, social and economic performance.

#### **Theoretical and methodological approach**

The research will combine approaches in the field of institutional economics and social-ecological systems (Ostrom, 2009; McGinnis and Ostrom, 2014) with approaches in the field of sustainability transitions, such as socio-technical systems (STS) and the multi-level perspective on transitions (Geels, 2002; Geels and Schot, 2007; Voß et al., 2009).

The factors influencing the emergence and performance of hybrid governance modes will be identified on the basis of a comparative analysis of cases in France and Germany. The methods considered include a systematic review of empirical studies on the drivers and barriers to the development and performance of hybrid modes of governance, and the collection and analysis of primary and secondary qualitative data for comparative case study research. Two cases of innovative Payments for Ecosystem Services (PES) schemes have been identified for the empirical analysis: PES for the protection of drinking water resources from agricultural diffuse pollution and local carbon offset schemes.

It is expected that the PhD project contributes to the understanding of the conditions under which hybrid modes of governance favor the sustainable management and provision of ecosystem services. In particular, the comparison between the German and French contexts will serve for assessing the role of institutional factors in the development and performance of these modes of governance.

The PhD will be co-supervised by Laurence Amblard (INRAE, UMR Territoires) and Carsten Mann, Professor at Eberswalde University for Sustainable Development (HNEE) in Germany. Regular stays in Germany will be organized, for the PhD student to exchange with the German supervision team and work on data collection.

## References

- Blackstock, K.L., Novo, P., Byg, A., Creaney, R., Juarez Bourke, A., Maxwell, J.L., Tindale, S.J., Waylen, K.A., 2021. Policy instruments for environmental public goods: Interdependencies and hybridity. *Land Use Policy* 107: 104709. <https://doi.org/10.1016/j.landusepol.2020.104709>.
- Geels, F. W., 2002. Technological transitions as evolutionary reconfiguration processes: A multi-level perspective and a case-study. *Research Policy* 31 (8-9): 1257-1274. [https://doi.org/10.1016/S0048-7333\(02\)00062-8](https://doi.org/10.1016/S0048-7333(02)00062-8).
- Geels, F. W., Schot, J., 2007. Typology of sociotechnical transition pathways. *Research Policy* 36(3): 399-417. <https://doi.org/10.1016/j.respol.2007.01.003>.
- McGinnis, M.D., Ostrom, E., 2014. Social-Ecological system framework: initial changes and continuing challenges. *Ecology and Society* 19 (2): 30. <http://dx.doi.org/10.5751/ES-06387-190230>.
- Ménard, C., 2011. A new institutional economics perspective on environmental issues. *Environmental Innovation and Societal Transitions* 1, 115-120. <https://doi.org/10.1016/j.eist.2011.04.002>.
- Muradian, R., Rival, L., 2012. Between markets and hierarchies: the challenge of governing ecosystem services. *Ecosystem Services* 1: 93-100. <https://doi.org/10.1016/j.ecoser.2012.07.009>.
- Ostrom, E., 2009. A General Framework for Analyzing Sustainability of Social-Ecological Systems. *Science* 325: 419-422. <https://doi.org/10.1126/science.1172133>.
- Pahl-Wostl, C., 2019. The role of governance modes and meta-governance in the transformation towards sustainable water governance. *Environmental Science and Policy* 91: 6-16. <https://doi.org/10.1016/j.envsci.2018.10.008>.
- Stallman, H. R., 2011. Ecosystem services in agriculture: Determining suitability for provision by collective management. *Ecological Economics* 71: 131-139. <https://doi.org/10.1016/j.ecolecon.2011.08.016>.
- Vatn, A., 2018. Environmental governance – From Public to Private? *Ecological Economics* 148: 170-177. <https://doi.org/10.1016/j.ecolecon.2018.01.010>.
- Voß, J.-P., Smith, A., Grin, J., 2009. Designing long-term policy: rethinking transition management. *Policy Sciences* 42 (4): 275-302. <https://doi.org/10.1007/s11077-009-9103-5>.

## Training and skills required

**Recommended training:** master in agricultural sciences/forestry or in social sciences with training in economics

**Desired knowledge:** institutional economics, sustainability transition in agriculture/forestry, natural resource management, policy analysis

**Appreciated experience:** qualitative data collection and analysis (such as interviews, focus groups)

**Skills:** autonomy and team work abilities, scientific writing, English writing and speaking

## Quality of life at INRAE

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- up to 30 days of annual leave + 15 days "Reduction of Working Time" (for a full time);
- parenting support: CESU childcare, leisure services;
- skills development systems: training, career advise;
- social support: advice and listening, social assistance and loans;
- holiday and leisure services: holiday vouchers, accommodation at preferential rates;
- sports and cultural activities;
- collective catering.

### Contract details

- Hosting unit name: UMR Territoires
- Postal code and city workplace: 63178 Aubière
- Type of contract: doctoral contract
- Duration: 3 years
- Starting date: December 1<sup>st</sup>, 2025
- Remuneration: starting at €2,200 gross per month
- Supervision: Laurence Amblard (INRAE, UMR Territoires) and Carsten Mann (Eberswalde University for Sustainable Development (HNEE))
- Doctoral school: Economics, Law, Political and management sciences, Clermont-Auvergne University

### How to apply

Please send:

- a CV and cover letter
- the list of classes attended in bachelor and master studies with grades
- a personal piece of writing (master thesis, article, project...), demonstrating scientific and writing skills
- the names and e-mail addresses of two reference persons

By email: Laurence Amblard ([laurence.amblard@inrae.fr](mailto:laurence.amblard@inrae.fr)) and Carsten Mann ([carsten.mann@hnee.de](mailto:carsten.mann@hnee.de))

✗ Deadline to apply: **September 30<sup>th</sup>, 2025**

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