

FINAL RESUME ON THE RESEARCH UNIT:
Functional ecology and ecotoxicology of
agroecosystems (ECOSYS)

UNDER THE SUPERVISION OF THE
FOLLOWING INSTITUTIONS AND
RESEARCH BODIES:

AgroParisTech - Institut des sciences et industries
du vivant et de l'environnement
Institut National de la Recherche Agronomique -
INRA

EVALUATION CAMPAIGN 2018-2019
GROUP E



In the name of Hcéres¹:

Michel Cosnard, President

In the name of the experts committee²:

Joana Falcao Salles, Chairwoman of the committee

Under the decree No.2014-1365 dated 14 November 2014,

¹ The president of Hcéres "countersigns the evaluation reports set up by the experts committees and signed by their chairman." (Article 8, paragraph 5);

² The evaluation reports "are signed by the chairman of the experts committee". (Article 11, paragraph 2).

Tables in this document were filled with data provided by laboratories and supervising bodies in the unit's application and in the Excel files "Données du contrat en cours" and "Données du prochain contrat".

UNIT PRESENTATION

Unit name:	Functional ecology and ecotoxicology of agroecosystems
Unit acronym:	ECOSYS
Requested label:	UMR
Application type:	Renewal
Current number:	1402
Head of the unit (2018-2019):	Mr Enrique BARRIUSO
Project leader (2020-2024):	Ms Sabine HOUOT
Number of teams and/or themes:	3

EXPERTS COMMITTEE MEMBERS

Chair:	Ms Joana FALCAO SALLES, University of Groningen, The Netherlands
Experts:	Ms Isabelle BERTRAND, Inra Montpellier (representative of Inra CSS) Mr Frédéric DARBOUX, Inra Vandoeuvre-lès-Nancy (representative of CNECA) Ms Valérie DEMAREZ, Université Paul Sabatier, Toulouse Ms Guenaëlle HELLOU, École Supérieure d'Agricultures, Angers Mr Thierry LABASQUE, CNRS, Rennes (supporting personnel) Mr Rainer SCHULIN, ETH Zürich, Switzerland

HCÉRES REPRESENTATIVE

Mr Christopher CARCAILLET

REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Mr Thierry DORÉ, AgroParisTech
Mr Philippe HINSINGER, INRA Department Environnement et Agronomie
Ms Camille MICHON, INRA Centre de Versailles
Ms Dominique ROBY, INRA Department Santé des Plantes et Environnement

INTRODUCTION

HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The INRA-AgroParisTech ECOSYS Joint Research Unit was created on 1 January 2015 through merging of the Environment and Field Crops (EGC) unit (head of unit, Enrique Barriuso between 2010 and 2015), the INRA Physicochemistry and Ecotoxicology of Soils of Contaminated Agrosystems (PESSAC) unit (head of unit, Christian Mougin, 2010-15), and the Inra and AgroParisTech staff of the Soil Organic Matter team of the BIOEMCO unit.

The ECOSYS supervising bodies are INRA “Environnement et Agronomie” (EA) and “Santé des Plantes et Environnement” (SPE) divisions, with the EA division as pilot division, and AgroParisTech (Agronomic, Forestry, Water and Environment Sciences and Engineering division - SIAFEE). Currently, the unit is located in three buildings, two at the Grignon site and one at the Versailles site. The whole unit will be regrouped in the Saclay campus in 2021.

MANAGEMENT TEAM

Mr Enrique Barriuso, is the unit head of ECOSYS.

HCÉRES NOMENCLATURE

SVE1 Agronomy, plant biology, ecology, environment, evolution

SCIENTIFIC DOMAIN

The unit is organized into disciplinary scientific teams, with transversal themes, that cover the scientific domains linked to agroecology and associated with global change, multifunctionality of ecosystems and ecotoxicology.

UNIT WORKFORCE

	Unit workforce	
	Functional Ecology and Ecotoxicology of Agroecosystems	
Active staff	Number 30/06/2018	Number 01/01/2020
Full professors and similar positions	5	5
Assistant professors and similar positions	14	14
Full time research directors (Directeurs de recherche) and similar positions	15	13
Full time research associates (Chargés de recherche) and similar positions	16	13
Other scientists (“Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.”)	0	0
High school teachers	0	0

Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)	57	56
Permanent staff	107	101
Non-permanent professors and associate professors, including emeritus	1	
Non-permanent full time scientists, including emeritus, post-docs	16	
PhD Students	16	
Non-permanent supporting personnel	9	
Non-permanent staff	42	
Total	149	101

GLOBAL ASSESSMENT OF THE UNIT

ECOSYS fulfils an important scientific niche in France and Europe and has a unique combination of approaches and themes, which together have the potential of being translated into a higher scientific productivity. The main research lines are related to biochemistry of organic matter and contaminants, the fate and impact of contaminants on terrestrial organisms and the ecophysiology and physical chemistry of plant-atmosphere interactions. Transversal themes were created according to a conceptual framework in which the research output from the unit is distributed according to the ecosystem services it relates to. The ultimate aim is to integrate processes in order to evaluate the effects of agricultural practices on agroecosystems. The scientific relevance of the themes covered by the unit can be seen in the large number of publications of high standard, and national and international academic collaborations, resulting several prestigious grants, and solid R&D collaborations with professional organisations or companies. Considering the number and quality of personnel, the impact of ECOSYS scientific production as well as international recognition is expected to increase. In this context, investments could be made in international exchanges and coordination of European projects. The unit has also been actively involved in interacting with non-academic partners, and in disseminating their results to the general public through publications, radio/TV media, etc.

The participation of the unit in training at all levels was very good, generating professionals that are fit to enter the working force in both academic and non-academic settings. Moreover, the committee was very impressed by the overall contentment of non-permanent staff (PhD students, technicians, master students) with the quality and level of support received during their training. The collegiality extends to the permanent staff, who has largely improved the organization of the unit since the past evaluation (increased interaction between teams through the transversal thematic axes). A continuous increase in these interactions, specially through animations, will be beneficial for the unit's life, organization and scientific plans, especially considering the relocation to the Saclay campus. The scientific strategy of the unit is clear and promising, but despite the large number of projects and focus, the rationale for the project development as well as an assessment of the international positioning of the Structural Themes at European level could be improved.

The relocation to a new campus is putting strain in the functioning of the unit from the personnel perspective, due to uncertainties in the future number of staff and early retirement/mutation of several staff members (scientific and administrative). These uncertainties might hamper the development of new (ambitious) projects as well as influence the interactions with socio-economic partners, specially from the agricultural sector.

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