

## UR GREEN

**Renewable resources and environment management** (Gestion des ressources renouvelables et environnement)

**Director**  
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### Research area

The **Renewable resources and environment management unit (GREEN)** develops conceptual and technical tools designed for representing eco-socio-systems and for modelling the interactions between economic, social, ecological, spatial and temporal dimensions of these systems. Research focus on the plural viewpoints and knowledge of stakeholders (experts and laymen) at various levels of organisation, and develops procedures for the use of these tools. Experimental research involves both local stakeholders and scientists in management processes ranging from collective learning and negotiation, to collective decision making.

Website: <http://www.cirad.fr/ur/green>

### Research highlights

Complexity sciences and modeling  
Participatory research  
Environmental sociology and economics  
Agrobiodiversity

### Staff profile

	Total permanent staff	Total Scientists*	Scientists with "HDR" <sup>1</sup>	Post-doc fellows	PhD students
Staff	<b>16</b>	<b>16</b>	<b>6</b>		<b>27</b>

\*Scientists per member institution: 16 CIRAD

### Research teams

- Participative research on management processes and institutions (biodiversity and agrobiodiversity, forest resources, land use...)
- Analysis and Modeling of sustainable development (interactions between society and the environment) through companion modeling
- Complex systems science (development of tools adapted to modeling complex systems)

### Platforms and other tools

Two dedicated software platforms have been developed:

- Natural resources and multi-agent simulations (CORMAS), a programming environment to construct multi-agent simulation models for modeling renewable resource management. (<http://cormas.cirad.fr/indexeng.htm>)
- Computerized Methods for Agent-based Modeling and Simulation (MIMOSA) – MIMOSA is a generic platform for modeling and simulation, using an extensible variety of formalisms. (<http://sourceforge.net/projects/mimosa>).

A scientific network dedicated to exchanges on companion modeling experiments

<http://commod.org/>

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<sup>1</sup> French university degree for confirmed thesis supervisor

## International Partnerships

Chulalongkorn University (Thailand)  
University of Brazilia (UNB) (Brazil)  
University of Canberra (Australia)  
University of Wageningen (WUR) (The Netherlands)

## Facts and figures

### Publications in international ranking journals

- ❖ 2007 : 16
- ❖ 2006 : 5
- ❖ 2005 : 9

### Representative publications

Barnaud C., Trébuil G., Dumrongrojwatthana P., Marie J., 2008. Area study prior to companion modelling to integrate multiple interests in upper watershed management of northern Thailand. *Southeast Asian studies*, 45 (4): 559-585

Barreteau O., Le Page C., Perez P., 2007. Simulation and gaming in natural resource management. *Simulation & gaming*, 38 (2): 181-184.

Antona M., David G., Mirault E., 2007. Scientists dealing with stakeholders' demand for coral reef management indicators: methodological approach and issues, *International journal of sustainable development*, 10 (1-2): 46-60.

Gurung T.R., Bousquet F., Trébuil G., 2006. Companion modeling, conflict resolution, and institution building: sharing irrigation water in the Lingmuteychu Watershed, Bhutan. *Ecology and society*, 11 (2(art36)).

Antona M., D'Aquino P., Aubert S., Barreteau O., Boissau S., Bousquet F., Daré W., Etienne M., Le Page C., Mathevet R., Trébuil G., Weber J.. 2005. La modélisation comme outil d'accompagnement. *Natures sciences sociétés*, 13: 165-168.

### Total annual budget

	<b>2006</b>	<b>2007</b>
Total annual budget (k€- including salaries)	2203	2621
External contracts (k€):	568	751
ANR		60
EU		
Private sector		
Others	50	20