

Socio-ecological theories & empirical research (SETER)

Confronting different theories and frameworks of analysis of socio-ecological systems with empirical knowledge and data

ABSTRACT

For the last twenty years, the research units participating in this project (Agropolis Foundation ones as well as the associated ones) have been developing research activities on socio-ecological systems aiming at understanding relationships between agriculture and biodiversity, policies and landscapes dynamics, watershed management, ecosystem management and health risk, etc. At the same time, diverse schools of thought, especially in Europe, USA and Australia, have developed theories and frameworks to analyse the dynamics and management of socio-ecological systems.

The objective of this project is to assess the relevance and the complementarities of theoretical frameworks by applying and testing them in the case of several empirical research case studies developed by the participating units based in Montpellier for the last twenty years. These empirical research were also based on underlying conceptual frameworks which will be presented.

The 4 proposed case studies represent cases of interactions between biological dynamics well studied by the research units included in the projects and social dynamics characterized by a crisis-induced management : the tomato infestation by TYLC virus, transmitted by the whitefly Bemisia; the locust population dynamics and its control; the firewood exploitation in sahelian periurban areas in Mali; the conservation and multiple issues for land and water management in Camargue.

Keywords : Society, Management strategy, Model, Socioeconomic factors

Year : 2008

Project number : 0802-030

Type of funding : AAP

Project type : AAP

Research units in the network : BIOAGRESSEURS-PHIM CBGP CEE-M

Start date : 2009-02-01

End date : 2011-12-31

Flagship project : no

Project leader : Martine Antona Francois Bousquet

Project leader's institution : CIRAD

Project leader's RU : SENS

Budget allocated : 235871.13 €

Total budget allocated (including co-financing) : 235871.13 €

Funding : RTRA

GOAL

On one hand this assessment enhances the value of such empirical research and on the other hand SETER project activities clarify the respective potential of these different theoretical frameworks. The lessons from SETER project also provides the basis for new conceptualisations of socio-ecological systems dynamics and management.

RESULTS

1) scientific animation of the scientific community involved in socio-ecological systems research which

promoted exchanges, networking.

- 12 visiting scholars for two stays in 2009 and 2010
- 10 conferences organised in Montpellier by the visiting scholars and discussion
- 18 meetings with the scientific community in Montpellier within and outside Agropolis foundation Network
- 1 Summer School in Political Ecology
- 1 Seminar on Trade-offs between Ecosystems services
- 1 PhD (USA) on political ecology of locusts, under the direction of one of the visiting scholars

2) cross analysis of each case study in order to identify convergences between theoretical frameworks and to propose new insights on these frameworks

3 Field visits and work (Camargue/ Tomato production areas near Perpignan)

Analysis of each case study by the visiting scholars according the framework of Political ecology; Common Pool Resource; Resilience; Environmental Services; Robustness; Vulnerability; Social représentation and mental models.

3) Dissemination of the results and proposition of an analytical frame for the articulations of the various schools (the PISA framework for power- incentive-system-adaptation)

- 2 Organised sessions in 2 conférences in Montpellier and Washington; 1 Communication in the Resilience Conference in Arizona state University,
- 1 final seminar on the results of the project in Montpellier for discussion on the results
- 1 invited seminar in Stcoholm Resilience Center
- 2 Web sites : <http://seter.org>
- http://www.politicaecology.fr/animation_scientifique/ecole_chercheur_en_political_ecology_montpellier_juin_2009.

On going production of reports, joint synthesis papers on the 4 case-studies and all the schhol of thoughts, specific papers based on one case studies.

PERSPECTIVES

Application for future projects

- Belmont Project (Multi-scale climate change adaptations and social-ecological sustainability in coastal areas), based on the Camargue case study and Resilience and Robustness approaches.)
- Open Science Agropolis
- Network