

# *les dossiers* d'**AGROPOLIS** INTERNATIONAL

*Expertise of the scientific community*



## Societies and sustainable development

*Contribution of the social sciences*

Number 7

in 'rapidly and unstably' developing countries of the South, especially with respect to the most vulnerable social groups.

The UPR (internal research unit) Animal and Integrated Risk Management (**AGIRS**, CIRAD) focuses on sanitary and environmental risks that threaten societies of developing countries (emerging diseases) or, locally, vulnerable production systems (multispecies systems), and proposes to:

- identify, through observatories and permanent monitoring systems, major risks associated with animals that could be detrimental to the health, development and safety of vulnerable societies of the South, while also endangering those of the North
- describe and quantify key structural and functional factors of the main risks associated with animals and uncertainties due to associated changes (linked with the environment, mobility and the market)
- model major risks linked with animals using decision-support

scenarios at different scales to help to understand, foresee and manage risks

- design and test management and intervention tools to monitor, prevent and limit their causes or consequences
- incorporate the risk perception of different stakeholders in decision-making parameters and management tools.

### *Sustainable development, natural resource management, designing and testing public policy instruments*

The joint research unit (UMR) **LAMETA** (UM1, Montpellier SupAgro, CNRS, INRA) conducts both theoretical and applied research. Its scientific project consists of six research programmes, four of which directly concern sustainable development, natural resource management, and designing and testing public policy instruments. The methods implemented are

focused especially on modelling and formal approaches (game theory, mathematical programming), quantitative methods (econometrics) and laboratory and field model tests. These six research programmes are as follows:

- '*Behavioural and experimental economy*' involves studying and designing efficient incentive mechanisms for solving conflicts and social dilemmas. The adopted method consists of controlled laboratory experiments to monitor subjects' behaviour during strategic interactions.
- '*Economic policies and public choices*' recenters previous macroeconomic, public economics and industrial organization research on public action in externally-oriented economies faced with increased competition, and with increasing economic and social inequalities. Macroeconomic, redistribution and health policies, as well as competition and transportation policies are investigated.
- '*Applied econometrics*' concern the econometrics of commodity markets,

## Observatories in support of collective action

Information is a key element in an ever-changing agricultural world. Shared, reliable, up-to-date information is vital in coordinating activities, implementing collective operations and managing rural territories. This information—which may be of high or poor quality, scattered, incomplete or disorganized, depending on the situation—can be compiled, organized and disseminated by setting up an observatory.

The UMR TETIS (CIRAD) developed a new participatory approach to build such observatories in defined territories on the basis of collective actions targeting a specific issue.

Between 2005 and 2007, a test was carried out in two areas of France: the Aume-Couture basin (Charente region), where the central issue was water management, and the Hien valley (Isère region), where the issues were biodiversity and water quality. Rural stakeholder groups were asked to build an observatory and lay the foundations for an information system.

The approach consisted of four stages:

- Expressing needs: determining the priority issues,

identifying and mobilizing stakeholders, understanding their contributions to the issues and explaining their information needs to characterize, understand and follow up the practices

- Representing the viewpoints: modelling the information system, organizing the observatory with its partners, databases and geographical information systems.
- Developing the computer application, setting up the data management procedures
- Deciding, learning and producing knowledge to address the territorial issues, assessing stakeholder appropriation of the observatory, its impact on negotiation and coordination processes, preparing recommendations for improvement or adaptations.

The feasibility study concluded that the approach was relevant, highlighting the extent to which stakeholders were involved and the importance of formalizing how the different stakeholders expressed their aims and viewpoints. There are plans to introduce the method in other situations in both developed and developing countries, and to extend its use.

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