

**Year of CfP: 2007**

**Project No: 07057 Completed**

<b>Project title:</b> Preparation of an approach for the Construction of Innovative Agro-ecological Intensification Systems to contribute to more sustainable agriculture (C-SIAD)
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**Unit managing the project:** INNOVATION (Innovation and development in agriculture and the agrifood sector) (INRA, CIRAD, SupAgro)

**Project leader:** Bernard Triomphe (bernard.triomphe(a)cirad.fr)

**Countries involved in the project:** Brazil, Netherlands, Burkina-Faso, Mali, Madagascar, Zimbabwe

**Research units from the Foundation's scientific network involved:** Green, System

**Subthematic axes:** STDI-1 (Socio-Technical Dynamics of Innovation 1: *Agri-environmental innovations, agri-ecosystems, resources management*), STDI-3 (Socio-Technical Dynamics of Innovation 3: *Innovation processes, social management of innovations*)

#### **Objectives:**

In both the North and the South, the combined pressure of changes in society, in the global economic system and the climate means that agriculture is experiencing ecological and economic crises. Locally, these take the form of the degradation of natural resources (soil, water, air and biodiversity) and an increase in the cost of factors of production such as inputs, energy and labour. These crises are felt particularly strongly by the poorest, least-organised farmers, with direct threats to their food security and their capacity to play their role in the reproduction of the ecological services provided by the rural areas and ecosystems of which they are the main trustees. Meanwhile, classic systems of agricultural research and advisory services are often significantly weakened by state withdrawal from the funding of the corresponding institutions and they have difficulty in renewing their paradigms and their intervention modes that are still largely based on those developed and implemented during the Green Revolution after World War 2, while they suffer increasingly from the consequences of growing disciplinary specialisation. Among other things, this evolution is resulting in the fragmentation of agricultural research, the comparative poverty of the innovations proposed in ecological farming and, in spite of the efforts made by supporters of participative research and research-intervention, recurrent difficulties in relations between the research sector and the great diversity of users? This makes the solving of the major challenges involved in the renewing of relations between nature and societies difficult and slow.

The aim of the project is the articulated design and implementation of the measures, approaches and research methods making it possible (1) to characterise the functioning and impact of systemic innovations enhancing ecological intensification and (2) to accompany their emergence in rural societies in the South and the North.

#### **Action carried-out and results obtained:**

The PEPITES project (Ecological processes and sociotechnical innovation processes in Conservation Agriculture) was successfully submitted to the ANR SYSTERRA Call for proposal in April 2008. Its objective is to produce knowledge on both ecological and innovation processes and their interactions, to assess and conceive more sustainable cropping and farming systems as well as the set-ups required to accompany the corresponding stakeholders and processes. It focuses on various scales, including the soil, the plant cropping and farming systems, as well as actor networks. It operates in 4 sites: 2 in France (grain cropping systems in Central France, organic agriculture in South-eastern France), and 2 tropical countries (Brazil and Madagascar). Its key partners include research teams from INRA, CIRAD, AgroParisTech, IRD and ISARA-Lyon. It started effectively in January 2009 and will last for four years, under the joint coordination of Stéphane de Tourdonnet (AgroParisTech), Eric Scopel and Bernard Triomphe (CIRAD).

Two CSA (Coordinating and Support action) projects were successfully submitted to the FP7-KBBE Call for Proposal in January 2009. Like PEPITES, the first called CA2Africa (Conservation Agriculture in AFRICA: Analysing and Foreseeing its Impact - Comprehending its Adoption) is coordinated by Marc Corbeels (CIRAD). It focuses on Conservation Agriculture. It will allow to get an in-depth understanding and assessment of different types of modeling approaches, by assessing their main advantages and imitations in the African context. Its objective is to assess and learn jointly from past and on-going CA experiences under which conditions and to what extent does CA strengthen the socio-economic position of landholders in Africa. CA2AFRICA will operate via regional platforms régionales throughout Africa. its partners include CIRAD and European partners such as ZALF, WUR, and CSIC), CGIAR centres (CIAT-TSBF, CIMMYT, ICARDA) and African partners such as ACT, INERA-Burkina Faso, and INRA-Maroc.

The second FP7 project, called JOLISAA (JOint Learning about Innovation Systems in African Agriculture) is coordinated by Bernard Triomphe (CIRAD). It focuses on multistakeholder innovation systems and processes already tackled in PEPITES, and to a lesser degree in CA2Africa. Its objective is to assess and learn jointly from recent experiences across Africa about how innovation processes involving multiple stakeholders and types of knowledge operate, in order to identify concrete priorities for research, practice and policy for addressing the needs and demands of smallholders and other rural actors. It will operate in 3 sites in Africa (Kenya, Benin et South Africa), in which cases studies will be conducted on various types of innovation experiences. its partners include 4 European institutions (CIRAD, WUR-LEI, ETC, ICRA) and 3 African institutions (University of Prétoria in South Africa, Université Abomey-Calavi in Bénin, KARI in Kenya).

**Prospects for the future:**

Prospects include mostly the successful implementation of the 3 above projects over the next few years, trying to find synergies among partners, activities and sites whenever possibles.

**Total Agropolis Fondation funding:** € 28,200 (4 months contract, travel expenses, workshop)

**Funding categorie(s):** Agropolis Fondation small grants (support to prepare applications for national or international calls for proposals (e.g. ANR and EU FPs)

**Project duration:** January 2 2008 – December 30 2009

**Keywords:** ecological reinforcement – innovation – agriculture – agronomical research