

les dossiers d'**AGROPOLIS** INTERNATIONAL

*Expertise of the scientific community
in the Languedoc-Roussillon region*





▲ Composted poultry litter.

ISARD project

greening of agricultural production systems through waste recycling

Organic waste products (OWPs) generated through human activity are constantly increasing. Farming produces them in great quantities (livestock, agro-industries). Wastewater production too increases owing to urban growth and denser urban populations. Wastewater or sludge from wastewater treatment is often spread on agricultural land on the outskirts of cities. These OWPs are sources of organic matter that may increase soil fertility and, as a corollary, allow sustainable agricultural production to be carried on. In studying how best to use them, a number of things need to be taken into account, viz. the many types of waste and the wide variation in where they are found and what they can be used for.

The ISARD project is developing a comprehensive approach to the integration of applied knowledge in this field. Where it breaks new ground is in considering the organic matter produced by agricultural and other activities. That consideration is at two organizational levels:

- ❶ the first level deals with the OWPs, the soils on which they are used and the crops grown; the processes studied are essentially the biogeochemical cycles;
- ❷ the second level looks at units producing, processing and using organic matter, as well as stakeholder groups; the processes studied are the transformations and flows of organic matter, regulations and costs.

At both levels, many tools exist to ensure a timely response to the needs of integrated management. The project makes use of those tools, with the goal of improving them by taking into account the risk/benefit ambiguity and by defining helpful indicators.

The project involves nine partners in four areas: the Versailles plain (France), Réunion Island, the Dakar metropolitan area (Senegal), and the Mahajanga region (Madagascar). Its attention to the situation in developing countries affords a more nuanced view of the composition of OWPs, treatment facilities, societal demands and existing regulatory frameworks.

Contact: Hervé Saint Macary, hervé.saint_macary@cirad.fr

