

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

*Expertise of the scientific community*

Special Partnership Issue



## **Agroecological transformation for sustainable food systems**

Insight on France-CGIAR research

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## Territorial mechanisms as common goods to achieve the agroecological transition

**A**groecology must be viewed beyond: (i) technical changes alone; (ii) the field and farm; and (iii) sectoral and value chain spheres. Defining new resource usage rules, implementing adapted public policies, creating new public markets for agroecological products, producing ecosystem services and bringing together actors in associations or cooperatives are necessary steps in the agroecological transition. These processes require multifaceted, collective and institutional action coordinated at all scales. The territorial mechanism thereby seeks to shape collective action by establishing new institutional arrangements between actors, i.e. playing rules and their uses within territories. This is an explicit assembly of material (organizational structure, platform, instruments, tools, etc.) and immaterial (ideas, knowledge, attitude, etc.) elements, often of political scope.

Each system implements norms that it tailors to its needs at its own pace using specific instruments. In Brazil<sup>(1)</sup>, many organizations have been created in the semiarid region to provide policy support for local agroecological proposals; local production arrangements, set up within the framework of the rural territorial policy, while seeking to consolidate family farmer integration in production systems and to bolster the agroecological dimension; territorial charters and certifications (e.g. Paragominas in the eastern Amazon) are defined to promote more ecological agricultural practices, linked to new land and resource usage rules and to a change in the power relations. **Applying common goods\* management methods to the territorial system ensures greater efficiency because the rules co-constructed by the actors are more tailored to the**

**specific situation.** These rules must be subject to dispute management and self-control so as to be able to adjust them. These processes encourage learning and contribute to the legitimacy of territorial mechanisms. They modify relationships with territories by providing a common vision of problems and solutions, by participating in the governance of the agroecological transition and by dovetailing individual, collective and governmental actions. **The territorial mechanism is a key element in the institutionalization of agroecology in territories.**

\* A shared and collectively managed resource by a community.

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### For further information

(1) Piraux M., Tonneau J.P., Pocard-Chapus R., 2019. Territorial mechanisms: common goods for undertaking the agroecological transition. In Côte F.-X. et al. (eds): *The agroecological transition of agricultural systems in the Global South*. Éditions Quae, Versailles: 293-312. (Agricultures et défis du monde).



◀ Building natural resource management rules in the Brazilian Amazon. © M. Piraux

## Modeling and the systems paradigm

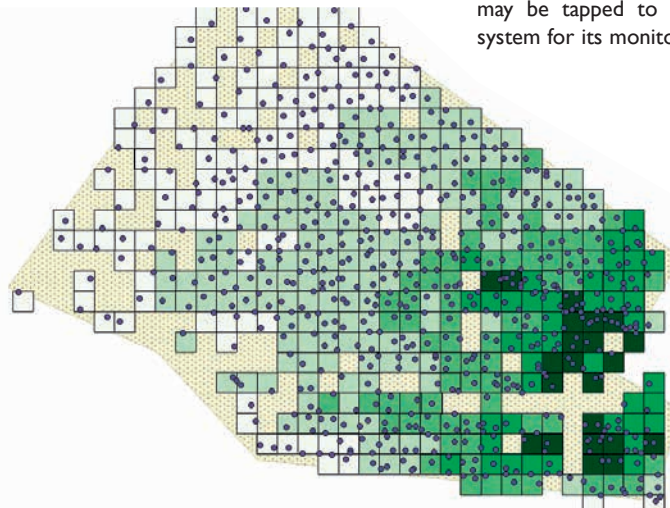
### Agroecological transition as a focus of interdisciplinary research

**A**groecological challenges must be addressed by interdisciplinary approaches, firstly based on knowledge acquired through modeling to enable the development of adaptation solutions and monitoring tools, and secondly geared towards defining and implementing a new paradigm to

reconnect mankind to the biosphere (including the legal implications). Three exemplary models have been developed by the ESPACE-DEV research unit through a socioecological coviability approach:

- An oasis agrosystem (palm groves in Djibouti) that fosters sustainable agricultural

development in drylands, but it is being undermined by climate change. A method based on GIS, *in situ* and remote sensing data has shed light on the adaptive capacity of palm trees under water and salt stress. Knowledge regarding this agrosystem in the medium and long term (datasets in semantic web formats) may be tapped to set up and implement a system for its monitoring. ...cont'd



▲ Mohamed Djama plot near Ali Sabieh, Djibouti: Google Maps aerial view (left) and laboratory analysis (right). © M. Djama