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Societies and sustainable development

Contribution of the social sciences

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World agriculture— *a key challenge* for societies

Agriculture has, historically, always been a key factor in social and political issues. Although its economic role in developing countries has diminished considerably, agricultural and rural concerns with respect to food security in both developed and developing countries, food safety, human health, land and natural resource management are still topical in a world of scarce resources that is now 'set' and marked by increased interdependence.

These issues have long been managed on a nation state level. They are now, however, dealt with in an international setting marked by a globalization process that is unprecedented in the history of agricultural societies. The latter are now faced with disproportionate competition with faraway production systems. These have differing technological levels and their potential for meeting standards set by major economic stakeholders (multinational agricultural suppliers, agrifood companies and large-scale distributors) and public authorities (European Union, USA, etc.) are highly varied. Moreover, consumers seek to be reassured about the quality of products imported from often remote, but sometimes nearby, production areas.

Human activities now have such marked impacts on the biosphere that they warrant consideration in technical and economic assessments. Scientific, technical and economic models underlying agricultural policies in the 20th century which led to production intensification are now challenged. Criteria used to assess their performance should be reevaluated within the scope of sustainable development. Moreover, public policies require updating in the current international setting, marked by the geographical reconfiguration of agricultural production, strengthening of World Trade Organization (WTO) interventions and a shift of some

so-called emerging countries (China, Brazil, India, South Africa) into the foreground.

The future positions and roles of agriculture, the agrifood system and the rural sector with respect to the development of economies, ecosystems and societies are at stake here.

Food production is still crucial for agriculture and the rural sector, but there is growing demand for other functions: production of biomass-energy and plant raw materials (edible and nonedible) for high-tech industries, *in situ* biodiversity conservation, carbon storage, and sustainable water resource management. In addition, agriculture is still the top employment sector worldwide, but the employment situation could be worsened if 'conventional' modernization initiatives are continued.

Agriculture is currently in a paradoxical position. It is a strategic challenge with respect to the Earth's future and is returning to the forefront because of its many roles for the environment, natural resource management, energy, health, biodiversity and culture, in addition to its nurturing role. On the other hand, public investment in agricultural and rural sectors has declined considerably in the last 30 years. Many operators with different interests and highly unequal action capacities (multinational companies,



Harvesting barley

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local communities, environmental nongovernmental organizations (NGOs) are now on a podium that was formerly solely occupied by agricultural operators, so new forms of public action are required. Paradoxically, current assistance and cooperation policies question the prominent position of the rural sector, whereas in most developing countries this sector is still hampered by high population growth rates, and there are few employment opportunities outside of the agricultural sector.

In this setting, new social science challenges are arising, so research is required to gain insight into the changes under way, to highlight contradictions and controversies, to generate clear knowledge that will be useful for hands-on agricultural and rural applications. Social sciences will be called upon to an increasing extent to assess the compatibility of technical progress with ethical

and moral principles under the socioeconomic conditions of its implementation in agrifood systems.

How can agriculture help to reestablish global balances in terms of employment and migration, land and natural resource management, production and management of global public goods (carbon, water, biodiversity, etc.)? What new governance conditions will be required on different levels to promote changes in individual and collective practices?

In the coming decades, innovations will have to be implemented to ensure food security, reduce greenhouse gas emissions, preserve biodiversity, etc. In this setting, with marked tensions between sometimes contradictory objectives, limited resources and increased asymmetries between stakeholders (multinational corporations, farmers and countries), what will be the respective roles of

states, international organizations, civil society representatives, and especially farmers and rural communities to foster the adoption of new tailored practices? How could research analyse the necessary changes and help monitor them in the long run?

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