



How do markets encourage the adoption of sustainable agriculture? The role of institutional innovations in developing countries

Introduction

Incentives and enabling measures encourage farmers to adopt sustainable agricultural practices. They include improving farmers' education and technical training, implementing strategies for reducing the costs of inputs, enacting organic farming legislation that protects product integrity, and providing financial incentives for adoption of sustainable practices. Market demand for sustainable products can also constitute a significant incentive. Improving access to such markets can provide revenue to farmers who then invest in the sustainability of their production systems, improving food security for consumers in their communities. However, increased revenues are not the only market incentive; revising the rules of the market and expanding access to markets are also powerful incentives. In this brief, FAO presents lessons learned from experiences in 15 developing countries where developments in markets have enabled farmers to transition to sustainable practices. The brief provides recommendations on what these innovative systems need to grow and prosper.

Results

In 2013–2014 FAO undertook a survey of innovative approaches that enable markets to provide incentives for the adoption of sustainable practices in developing

Key messages

- A wide range of actors in developing countries are inventing new forms of interaction and organization (called institutional innovations) to supply local markets with sustainable agricultural products.
- Participatory guarantee systems, multi-actor innovation platforms and community-supported agriculture are exciting institutional innovations that deserve attention.
- Social and institutional innovations are as essential as technological innovations in transitions to sustainable food systems, and they require policy support.
- Even when innovations are led by private actors, partnerships with public actors and civil society have an important role in creating linkages between farmers and markets.
- Autonomy, reciprocity and recognition of the diverse types of knowledge that are fostered through institutional innovations all create incentives for the adoption of sustainable practices.

INSTITUTIONAL INNOVATIONS
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countries. Through a competitive process, 15 cases (Figure 1) were selected to provide insights into how market demand can drive small-scale initiatives that lead to innovations in the institutions that govern sustainable practices and market exchanges. These innovations are classified into three types: participatory guarantee systems (innovation in certification); multi-actor innovation platforms (innovation in knowledge creation); and community supported agriculture (innovation in community investment).

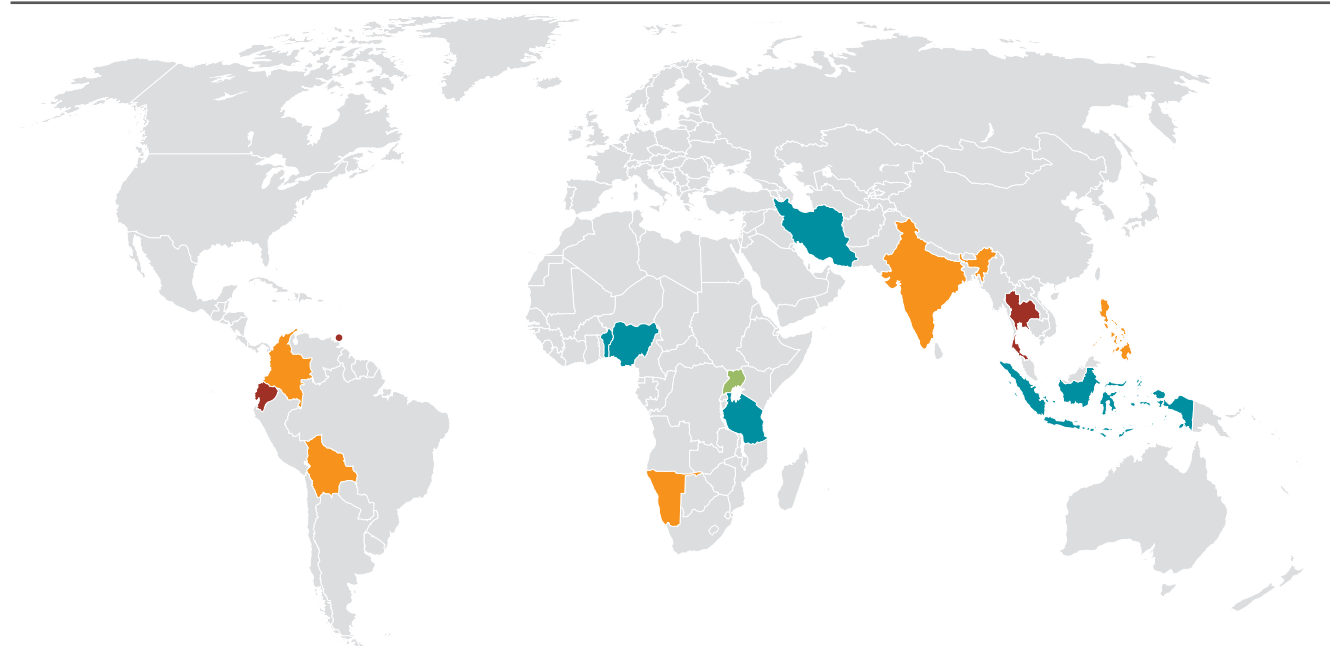
The innovators defined “sustainable agriculture” differently depending on the local conditions; for instance, sustainable agriculture could include organic, integrated production systems, agroecology, agroforestry and/or integrated pest management. Local actors adapt sustainable practices to local contexts and create new market outlets for their products in line with local social values

related to trustworthiness, health (nutrition and safety), food sovereignty, youth development, and farmer and community livelihoods.

The following are the main findings of the research:

- a. Innovations enabled the development of new market rules and assured the sustainable quality of products.
- b. New forms of organization permitted actors to play multiple roles in the system, such as farmer-auditor, farmer-researcher, consumer-auditor, consumer-intermediary.
- c. New forms of market exchange were created, such as box schemes, direct marketing, public procurement and community seed exchanges.
- d. Promising technologies for sustainable agriculture were applied, such as effective microorganisms, biopesticides and soil analysis techniques.

Figure 1: Location and typology



Multi-actor innovation platforms (IPs)		Participatory guarantee systems (PGS)		Community-supported agriculture (CSA)	
Benin	The Songhai Model of integrated production	Bolivia (Plurinational State of)	Ecological fairs in La Paz, Cochabamba and Tarija	Ecuador	Reinforcing Local Systems of Healthy Food of Sierra Centro
Indonesia	<i>Partisipasi Inovasi Petani</i> (PIP) project: A participatory model for promoting farmer-driven innovation	Colombia	<i>Familia de la Tierra</i> PGS	Thailand	Moral Rice Programme, Dharma Garden Temple
Iran (Islamic Republic of)	Using Farmer Field Schools on Integrated Pest Management to support sustainable production and marketing	India	PGS and Smallholder Markets: Idea of Trust and Short Market Chains	Trinidad and Tobago	The Brasso Seco Paria Community Make Agrotourism their Business
Nigeria	Impact Assessment of Community-Based Farming Schemes in Enhancing Sustainable Agriculture	Namibia	The Namibian Organic Associations' Participatory Guarantee System		
Uganda	Role of Cooperatives in Linking Sustainable Agricultural Practices with Markets (KACE)	Philippines	The Innovative Institutional Approach: Quezon Participatory Guarantee System		
United Republic of Tanzania	Sustainable Agricultural Practices by Smallholder Tea Farmers	Uganda	Facilitating Social Networks through FreshVeggies PGS		



Private actors (farmers, consumers, cooperatives, firms, etc.) led the innovations, but partnerships with public actors and civil society were fundamental to creating the enabling institutional and market environments.

Recommendations

To encourage institutional innovations that support local markets for sustainable agriculture, the researchers make five recommendations for policy-makers.

1. Promote learning-by-doing to enhance technical and market knowledge

Interactive learning was essential for adapting sustainable agricultural practices to specific contexts. The most frequently noted approach was creating and sharing knowledge via farmer-led experimentation. Knowledge about agricultural practices was adapted and applied through a learning-by-doing approach and participatory experiments in farmers' fields. Through this approach, technical knowledge was combined with traditional knowledge of local farming systems, and individual farmers' knowledge of the agro-ecosystem. These interactions enabled farmers to build social innovations for marketing their food through direct sales.

Actions: *Ministries, public agencies and international organizations can promote innovative participatory systems or platforms where farmers play multiple roles such as farmer, researcher and market agent, including by using farmer field schools (FFS) in official training programmes. Universities and research institutes can develop locally adapted and ecosystem-specific curricula for sustainable agriculture. These innovative platforms and participatory approaches make applied research and extension more effective and inclusive.*

2. Strengthen farmers' innovations in strategic market negotiation

Farmers who engaged in strategic marketing did so by increasing their bargaining power in new and existing markets. They established semi-formal price-setting committees that included farmers, consumers, intermediaries and other value chain actors, used participatory guarantee systems (PGS) for certification, organized collective sales, and created physical spaces where new types of markets could be held. These institutional innovations increased farmers' capabilities in negotiating prices that reflected the additional value of sustainably produced products. Greater support for capacity building, infrastructure and investments that help farmers to become more strategic in exploiting market opportunities is crucial for improving farmers' capabilities to benefit from the monetary advantages found in new markets.

Actions: *Local government can provide physical spaces for markets by organizing periodic market outlets for sustainably produced products. National authorities can sponsor fairs and exhibitions for sustainable food and create market channels by prioritizing sustainable products in public procurement schemes. National and regional authorities can provide legal recognition, tax incentives and innovative financing for new organizational forms such as social enterprises, inclusive business models, cooperatives and equity-sharing corporations.*

3. Encourage communication and trust among farmers, intermediaries and consumers, starting in the field

When farmers, intermediaries and consumers interact directly outside the market, they build trust that carries over into their market interactions. These non-market interactions occur through collaboration in participatory research, membership in PGS, consumer study visits to farms, and community events. When these approaches are combined with direct marketing or increased consumer knowledge about current farming practices, consumer demand expands.

Actions: *Public actors and donors can finance innovative, multi-stakeholder, participatory projects in the fields of research, tourism, community development and education. Through inter-ministerial collaboration, public actors can carry out awareness-raising campaigns on the benefits of sustainable products. National authorities should give official recognition to alternative certification mechanisms that rely on peer review (e.g., PGS) and integrate these into their national systems of standards for food safety and sustainable agriculture.*

RESEARCH APPROACH

- Competitive open call for proposals (initially 87 proposals from 46 countries)
- Two-year participatory research project with 15 innovators, FAO and the French National Institute for Agricultural Research (INRA)
- Field visits and extensive peer review
- Analytical techniques: analysis of actor-networks and functions of innovation systems
- Researcher–Practitioner Workshop, 23–25 June 2015, Bogotá, Colombia



4. Improve public infrastructure for value chain logistics

The consumers of sustainable products also look for other quality attributes such as freshness, reasonable shelf-life and safety in their food. Good management of logistics can make all the difference in ensuring that the food that consumers purchase meets these quality requirements. Logistics are also important for ensuring on-time delivery of sufficient quantities of the desired products, even for direct sales and particularly for box schemes.

Actions: Public actors can support local-level private initiatives in collective transport, storage and processing of sustainable products to synchronize the timing of on-farm harvest and delivery to consumers. This support will be facilitated by investments in public logistics infrastructure such as roads, railways, ports, warehouses, wholesale hubs and retail points.

5. Legitimate innovative initiatives so that they can be scaled up

Although most innovations are created by private actors and often rely on voluntary systems, public support is needed for their scale up. This support requires an enabling legal and policy environment that legitimizes both the sustainable agricultural practices and the marketing innovations. In the study, legitimization of innovations was found to be the most important role for public actors at the sub-national, national and international levels.

Actions: Governments and legislatures can provide policy frameworks that recognize ongoing initiatives in their countries through legal recognition, such as the constitutional principles for food sovereignty, the right to food and a fair economy in the Plurinational State of Bolivia and Ecuador, and the natural resource and biodiversity legislation in Namibia and Trinidad and Tobago; regulations and voluntary standards, such as the Organic Act in the Plurinational State of Bolivia; or dedicated national-level training programmes, such as the integrated pest management farmer field school programme in the Islamic Republic of Iran. International collaboration on research into sustainable agricultural practices should also consider the market dynamics necessary for creating sustainable products.

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POINTS TO REMEMBER

- **Flexibility needs to be integrated into all regulatory approaches**

Flexibility is needed to capitalize on the diversity found in each local context. Regulators should ensure that any new principles, laws, directives and programmes provide actors with the appropriate level of autonomy to adapt technologies and rules to their local situations. Governments and ministries can create dedicated public agencies and/or participatory platforms that serve as official spaces for debate, negotiation and elaboration of rules and incentive mechanisms that meet local requirements.

- **Recognize that institutional innovation is a long-term process**

This brief describes initiatives that have been in existence for at least 10–15 years. Institutional innovation is a long-term process that can be achieved only through cooperation among public, private and civil society actors.

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