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INNOVATIVE MARKETS FOR SUSTAINABLE AGRICULTURE

How innovations in market institutions encourage sustainable agriculture in developing countries

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The agroecological transition challenge

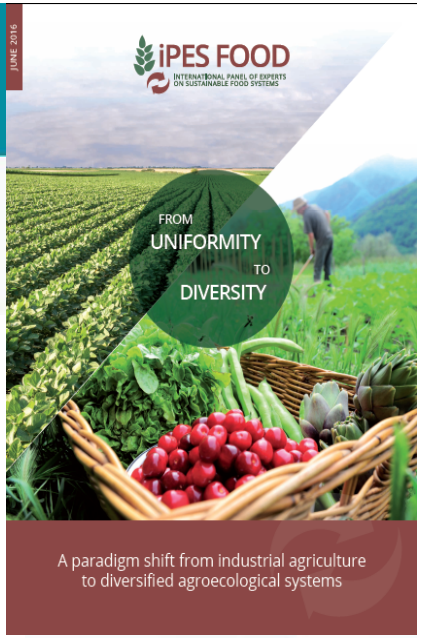
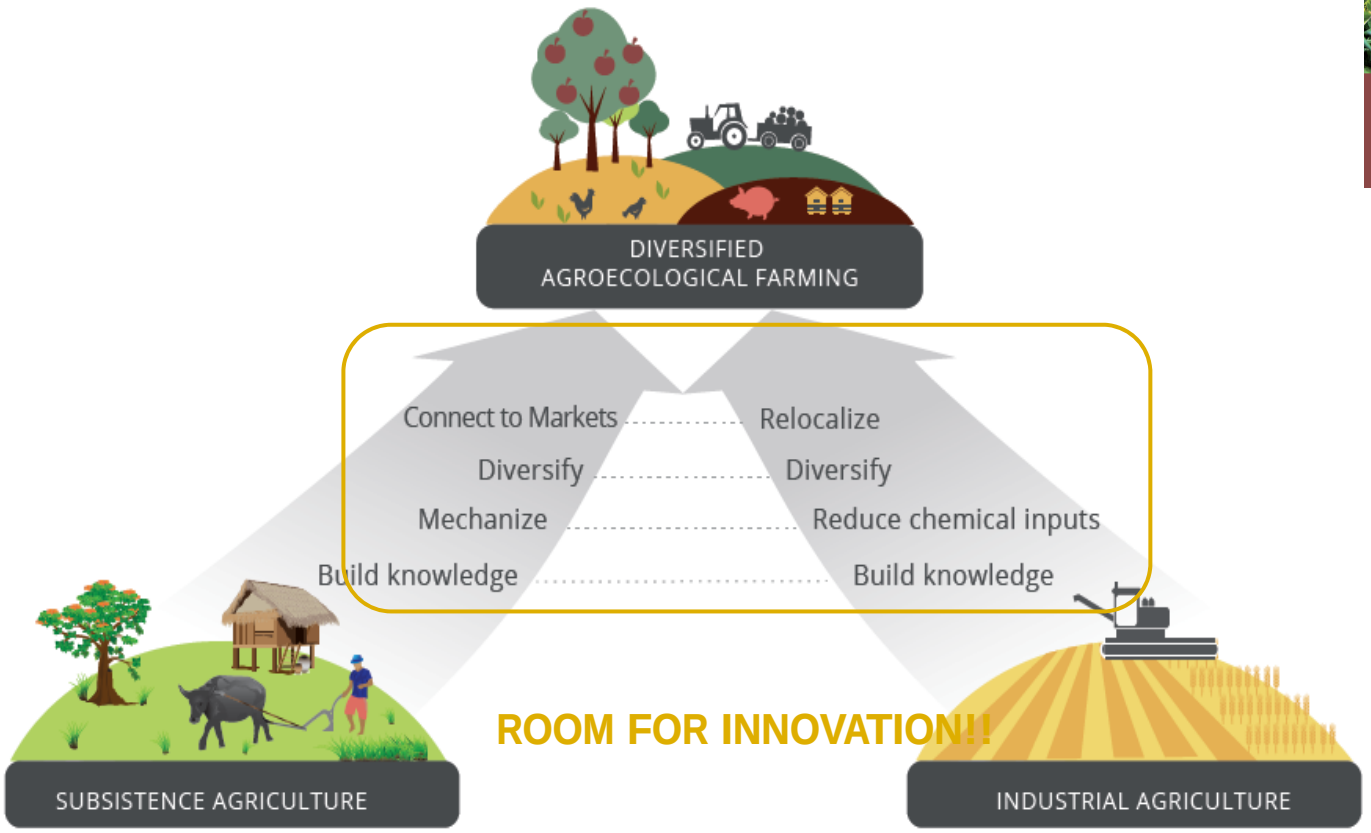


FIGURE 2 - TRANSITIONING FROM DIFFERENT STARTING POINTS



What do we need to innovate about? Challenges of sustainable food systems

- Gaining access to sustainable inputs
- Satisfying consumer demand in terms of quantity and availability all year long
- Providing quality guarantees to consumers
- Finding the right balance between costs and prices
- Strengthening the capacity of farmers on sustainable farming practices and market knowledge to improve ability to negotiate value
- How to make systems sustainable and attractive to the next generation?

But… what is an innovation?

- **Assumed linear path (invention, design, commercialization):**
  - Scientists and companies invent, with state investment through R&D funding (patents)
  - The private sector commercializes and develops products
  - The public sector distributes the benefits to all people (prevent poverty), extension diffuses the new technologies
  - The State manages environmental and social impacts of technology and innovation
  - Civil Society is a watchdog
  - People are consumers, producers, employees and voters (but not innovators)

What is an innovation?

- **But … significant evidence of multi-actor networked paths:**
  - user innovation (von Hippel); co-invention (Malerba);
  - open innovation (Chesbrough); open source (Raymond)
  - participatory design (Schuler, Namioka), community innovation (Oost)
  - upstream engagement (Fischer) mid-stream modulation (Fischer), Constructive Technology Assessment (Rip et al.)
  - cooperative research (EC RTD); democratising innovation (Felt et al)
  - Responsible innovation (Guston), responsible research and innovation (Von Schomberg, McNaughten, Owen, Stilgoe)
  - social innovation (Stirling), grassroots innovation (Smith)

Innovation is a collective process, not only a new technology

- "Innovation is not simply a technology (or a technical object), it must be the reorganization of institutions, organizations, value chains, businesses to enable actors to innovate on their own terms" (Felt et al., 2007)
- "An innovation occurs when new ideas, new technical devices or new forms of organisation meet their users" (Joly 2011).


EUROPEAN COMMISSION

TAKING EUROPEAN KNOWLEDGE SOCIETY SERIOUSLY

Report of the Expert Group on Science and Governance to the Science, Economy and Society Directorate, Directorate-General for Research, European Commission

Ulrike Felt (rapporteur)

Brian Wynne (chairman)

Members of the Expert group:
Michel Callon, Maria Eduarda Gonçalves, Sheila Jasanoff, Maria Jepsen, Pierre-Benoît Joly, Zdenek Konopasek, Stefan May, Claudia Neubauer, Arie Rip, Karen Siune, Andy Stirling, Mariachiara Tallacchini

Directorate-General for Research
Science, Economy and Society

2007

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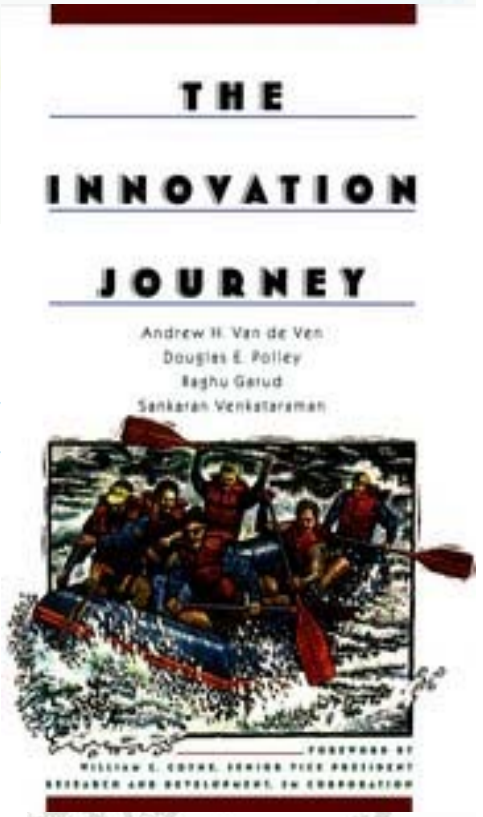

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How do markets support the transition to sustainable ag in developing countries?

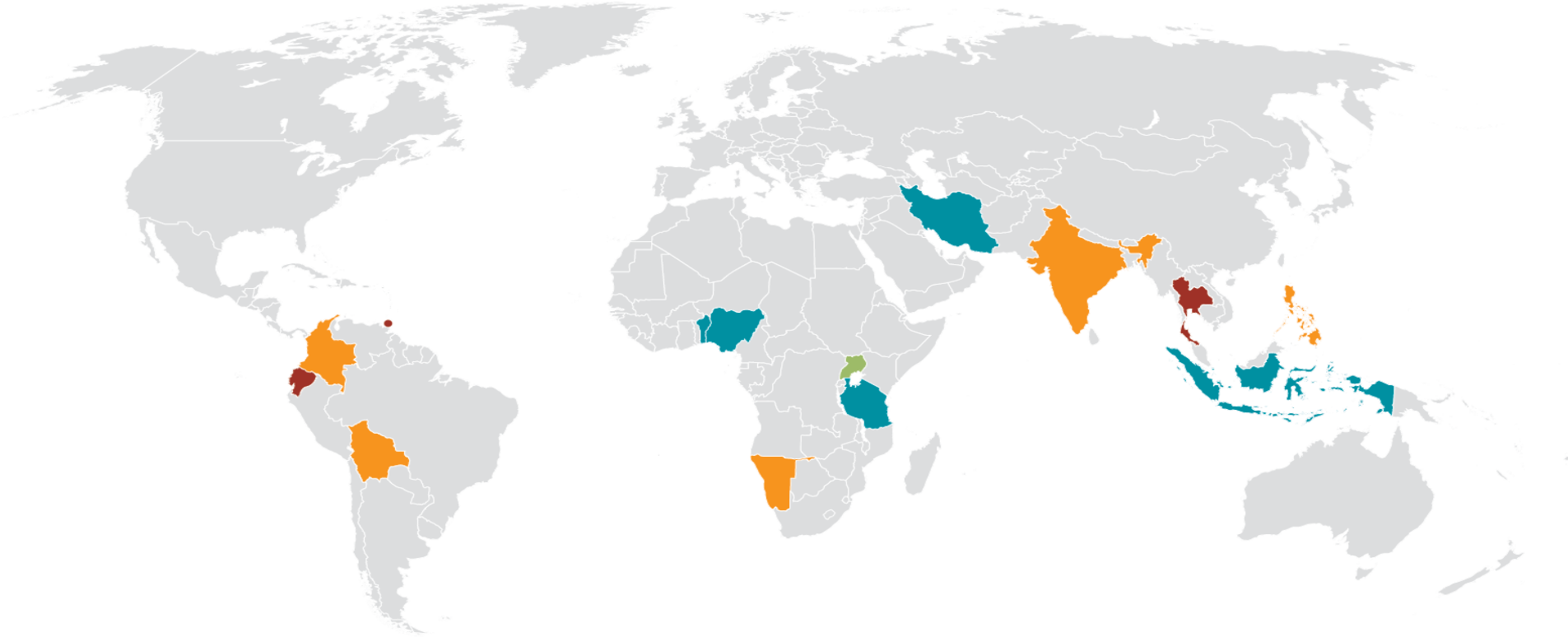
FAO-INRA participatory research co-constructed with innovators

The role of 'Institutional Innovations'

- New rules & forms of interaction between actors
- They helped
  - bring together food systems actors that had not traditionally worked together
  - redefine "sustainable" practices at local level
- **Institutional innovations are as important as technological innovations** in the transition to sustainable agriculture,

  and they require policy support

Figure 1: **Location and typology**



Multi-actor innovation platforms (IPs)	
Benin	The Songhai Model of integrated production
Indonesia	*Partisipasi Inovasi Petani* (PIP) project: A participatory model for promoting farmer-driven innovation
Islamic Republic of Iran	Using Farmer Field Schools on Integrated Pest Management to support sustainable production and marketing
Nigeria	Impact Assessment of Community-Based Farming Schemes in Enhancing Sustainable Agriculture
Uganda	Role of Cooperatives in Linking Sustainable Agricultural Practices with Markets (KACE)
United Republic of Tanzania	Sustainable Agricultural Practices by Smallholder Tea Farmers

Participatory guarantee systems (PGS)	
Bolivia (Plurinational State of)	Ecological fairs in La Paz, Cochabamba and Tarija
Colombia	*Familia de la Tierra* PGS
India	PGS and Smallholder Markets: Idea of Trust and Short Market Chains
Namibia	The Namibian Organic Associations' Participatory Guarantee System
Philippines	The Innovative Institutional Approach: Quezon Participatory Guarantee System
Uganda	Facilitating Social Networks through FreshVeggies PGS

Community-supported agriculture (CSA)	
Ecuador	Reinforcing Local Systems of Healthy Food of Sierra Centro
Thailand	Moral Rice Programme, Dharma Garden Temple
Trinidad and Tobago	The Brasso Seco Paria Community Make Agrotourism their Business

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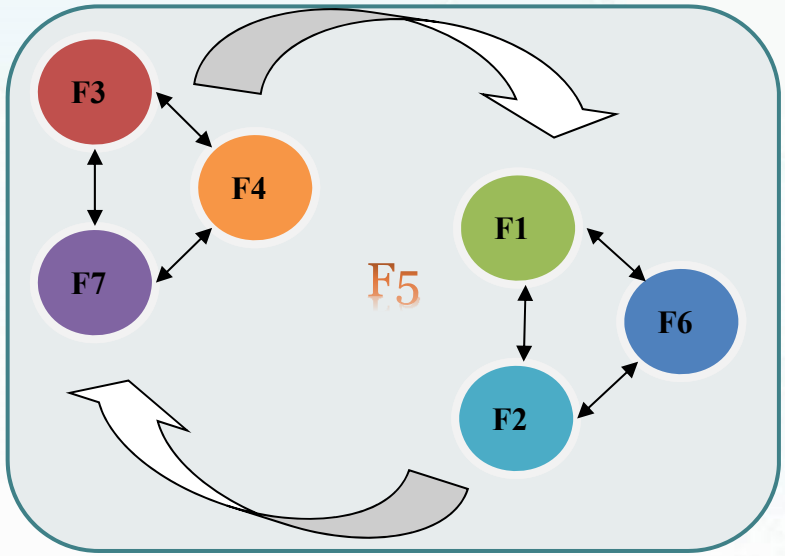
Participatory Guarantee Systems



Legend of the functions needed :

F1 = entrepreneurial activity

F2 = knowledge creation

F3 = knowledge creation trough networks

F4 = guidance of the search

F5 = market formation

F6 = resources mobilization

F7 = creation of legitimacy

- The focus is on **an alternative form of certification** (based on free or low-cost peer review) and farmer-led experimentation
- Begins with partnerships between between farmers, consumers and intermediaries (including service providers, organic movements)
- Uses local and national knowledge (and harmonized international organic standards)
- Initial legitimacy comes from within the group, then outside recognition
- New local markets created based on direct contact with consumers: farm visits, farmers'markets, internet sales and supermarkets used
- Changes in rules for organic production, internal organization and the sharing of roles and responsibilities among different people within the groups

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Bolivia: Public procurement for local agroecological food

- National regulation for Ecologic Agriculture
  - 2006 - Export = 3PC, Domestic = PGS
  - Registration with Food Safety Authority
- School Breakfast
  - Camelidos/Quinoa production system
  - Local, traditional products
  - PGS as the registration mechanism
  - Direct procurement from local farm families

PRODUCTO TRANSICIÓN BOLIVIA ESTADO PLURINACIONAL

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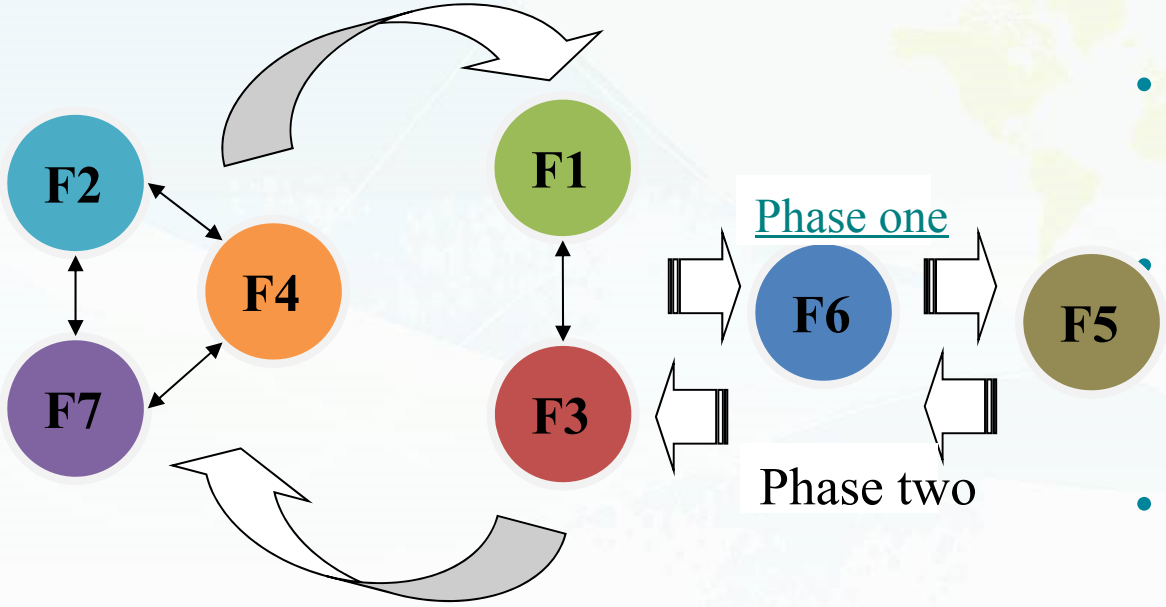
Multi-actor Innovation Platform



Legend of the functions needed:

F1 = entrepreneurial activity

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- Focus on **specific technologies & farmer-led experimentation**
- Begins with partnerships within local research, training or extension and includes farmers
- Uses national and international knowledge to promote organic or sustainable agriculture
- Initial legitimacy comes from outside of the group
- New local market created
- Changes rules in extension, production, and allocation of responsibilities among actors

Benin: Integrated production systems and the creation of local input supply systems

- Youth training centre
- Integrated model (crop, livestock, aquaculture, bio-fertilizers, biogas production, transformed products, shop, business center…)
- 5 regional hubs (training, production, processing, services) that sell inputs (EM, seeds, biorepellents) and buy products from ex-trainees
- 54% of value of finished products was internal to the network. 46% constituted product sales with a value of US$ 7,040,540 in 2014
- Replicated to several countries outside Benin

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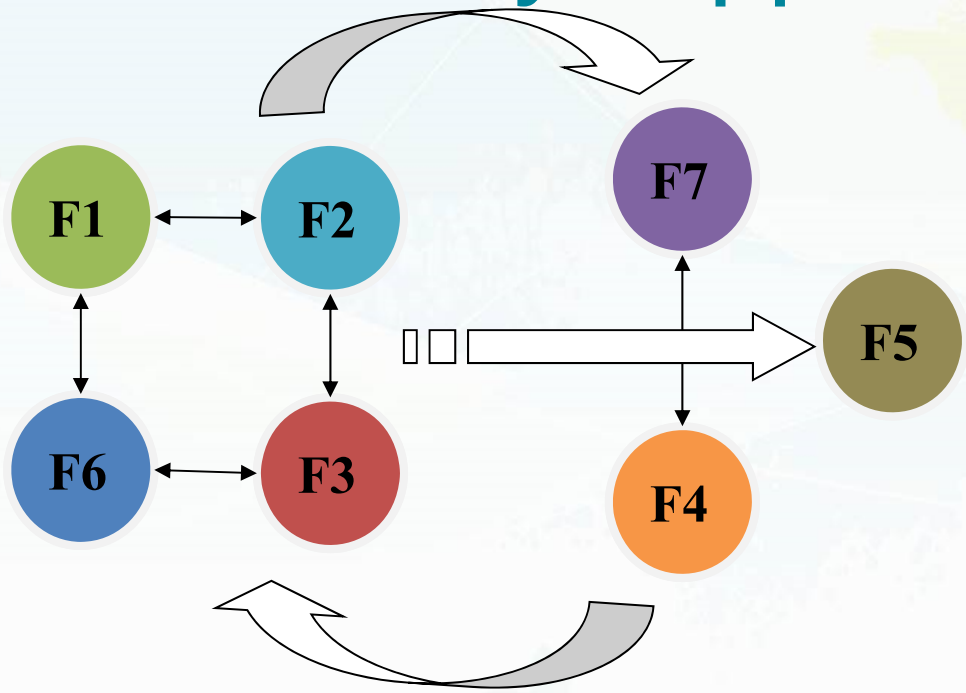
Community Supported Agriculture



Legend of the functions needed :

F1 = entrepreneurial activity

F2 = knowledge creation

F3 = knowledge creation trough networks

F4 = guidance of the search

F5 = market formation

F6 = resources mobilization

F7 = creation of legitimacy

- Begins with grassroots entrepreneurial activities **to resolve a community concern**
- Resources mobilized from within the community
- The CSA practices are reinforced through internal improvements, focalizing on purpose of the initiative and building internal/external legitimacy
- Market formation, often in the form of bringing the market into the community, is a result of these reinforcement mechanisms
- Change seen in the rules for how the community creates a protected space to market their products within the local communities

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Trinidad & Tobago: Community supported agriculture – multi-functional innovation

- Brasso Seco Tourism Action Committee
- Began with Bird Watching – now a vibrant agri-torusim community
  - Continuous investment, new ideas, new products, new events in order to value old traditions
- Bringing the market into the commuinity

TOP: STOP AND STARE BRASSO SECO NATURE WALK
MIDDLE: COFFEE GRINDING DEMO
BOTTOM: AD FOR INDIGENOUS FOOD FESTIVAL 2011

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Policy Recommendation 1

- **Promote interactive learning to create and spread knowledge where farmers have multiple roles**
  - **Farmer-led research**
  - **Learning-by-doing**
  - **Engaging non-traditional actors in research**

Policy Recommendation 2

- **Public support to strengthen farmers' capabilities in strategic market negotiation**
  - *physical spaces for monthly or weekly markets for sustainably produced products*
  - *national fairs and exhibitions for high-quality food*

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Policy Recommendation 3

- **Support communication and trust relationships between farmers, intermediaries and consumers** by financing innovative, multi-stakeholder participatory projects in research, tourism, community development and education

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Policy Recommendation 4

- **Scale-up and <u>legitimize</u> innovative initiatives through policy & regulatory frameworks and recognition of ongoing initiatives**

Key points

- Incentives for adopting sustainable practices can come from the autonomy created when local actors develop innovative rules for market interactions.

- Local actors rely upon social values (e.g., trustworthiness, health (nutrition and safety), food sovereignty, youth development, farmer and community livelihoods) to adapt sustainable practices to local contexts and create new market outlets

- Even when private actors (farmers, consumers, cooperatives, firms, etc.) are leading the innovations, partnerships with public actors and civil society are fundamental for legitimating political and physical spaces

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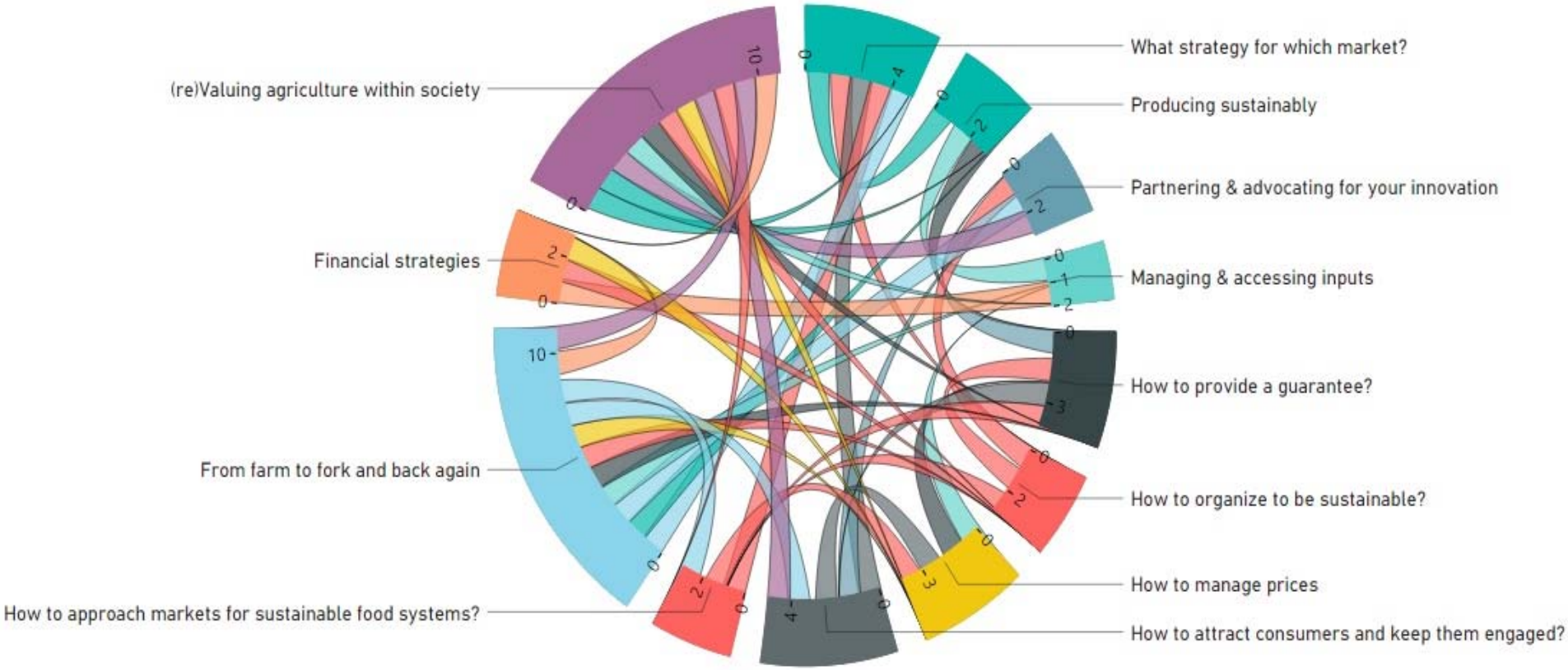
How to innovate in food systems transitions?



6 policy interventions to (Re)Value agroecology

- **Re**cognize existing agroecological markets by facilitating the registration of agroecological farmers with trade and food safety authorities according to appropriate standards
- **Re**vise input subsidy schemes to include agroecologica/ biological inputs + financial incentives for small-scale agro-enterprises
- **Re**form research and extension programs in order to include agroecology and enable more flexible collaboration and experimentation with producers, private and civic actors
- **Re**invest in agriculture through public procurement from agroecological producers by adapting the procurement protocols to local realities of agroecological production
- **Re**create public spaces for agroecology by providing public facilities to host farmers' markets, fairs and festivals
- **Re**search, via participatory methods, the innovative markets for agroecology and sustainable agriculture to better understand how they contribute to Sustainable Agriculture and Food Systems