

# Innovations in linking sustainable practices with markets

- How do standards and market-based mechanisms act as incentives for the adoption of sustainable agriculture practices?
  - What are the motivations and drivers that enable the adoption of sustainable practices?
  - How are value chains and local institutions being reorganized to facilitate the adoption of sustainable practices?
- Focus on institutional innovations:
  - Novel ways of organizing public and private actors, organizations, institutions (including rules/regulations)



EC/FAO Global Programme: Global Governance for Hunger Reduction [GCP /INT/130/EC]



Organización de las Naciones Unidas para la Alimentación y la Agricultura



# Constructing 'agroecological food systems'.

## An analysis of diversified and sustainable market channels.

**Interactions in AGROECOLOGY** *Virtuous Cycles and Ecosystem Services that Underpin Agricultural Production*

**POLLINATION**  
Most flowering plants only produce seeds if animal pollinators move pollen from the anthers to the stigma of their female flowers. Pollination is a factor to food production and security, has been the subject of substantial research, and is a key element of agroecology. It is essential for the production of many of the world's most important crops. Understanding the interactions and finding solutions to restore their populations are critical, through greater diversity of habitats and reduction in the use of pesticides.

**NATURAL PEST CONTROL**  
Agroecological approaches to reduce pest control rely on biological interactions. These include: maintaining a functional balance with low pest populations; using natural predators and parasites; and enhancing the functional complexity of agroecological systems, such as using crop rotation, intercropping, and other components of agroecology, to break pest cycles.

**CROP-LIVESTOCK INTEGRATION**  
Integrating crop-livestock systems involves feeding crop and livestock products together to generate virtuous cycles and environmental outcomes. Integrating is done to improve resource efficiency, allowing products to be produced in one component farm as a resource for the other - i.e. manure from the crop and crop residues feed animals. The virtual balance between crop and livestock can vary in these systems. It may range from relatively intensive, with less integration of crop and livestock (e.g. grazing crop residues after harvest to use as feed for livestock), to more extensive applications where crop farms within a region.

**SOIL BIODIVERSITY**  
The soil is the life of the soil as well as the health. This influence soil structure and thus water and nutrient availability, and is essential for crop growth. They are essential for crop growth and soil health. They are essential for crop growth and soil health.

**NITROGEN FIXATION**  
The growth of all organisms depends on the availability of essential nutrients, and more is seen in the soil. Nitrogen fixation is a process by which plants and bacteria fix atmospheric nitrogen, from its abundant gaseous form in the air's atmosphere - nearly 78% of the air we breathe. In agroecology, nitrogen fixation is used to reduce dependence on synthetic fertilizers. It is essential for crop growth and soil health. It is essential for crop growth and soil health.

**DROUGHT RESISTANCE**  
In the face of climate change, many small-scale crops such as small grains and legumes, are getting attention. Small crops have many benefits: they are inherently drought tolerant, are generally hardy and resilient, and have a long history of use in agroecology. They are essential for crop growth and soil health. They are essential for crop growth and soil health.

**AGROFORESTRY**  
Agroforestry is a dynamic, ecologically based, natural resource management system that, through integration of trees and shrubs with agricultural crops, livestock and aquaculture, and other natural and human-made systems, provides a range of ecosystem services and socio-economic benefits. It is essential for crop growth and soil health. It is essential for crop growth and soil health.

**WATER MANAGEMENT**  
The key goal of agroecology is to improve water efficiency and reduce dependence on synthetic fertilizers. It is essential for crop growth and soil health. It is essential for crop growth and soil health.

**AGROECOLOGY, PONDS AND WETLANDS ON-FARM**  
Wetlands have high levels of biological productivity and diverse interactions, and are essential for crop growth and soil health. They are essential for crop growth and soil health.

**COVER CROPS AND ROTATION**  
Planting crop cover in rotation between cash crops is a key strategy to the ecological benefits, providing multiple ecosystem services. Benefits include: nitrogen fixation and carbon sequestration; water retention; and soil structure. They are essential for crop growth and soil health.

**PERENNIAL CULTIVATION**  
Scientists are working to restore perennial crops of wheat, corn, soybeans, and other annual crops. Perennial crops have many benefits: they are inherently drought tolerant, are generally hardy and resilient, and have a long history of use in agroecology. They are essential for crop growth and soil health.

**WILDLIFE**  
Wildlife and forests are essential for crop growth and soil health. They are essential for crop growth and soil health.

**ENERGY**  
Making more efficient use of energy has always been a focus point of agroecological practices, and will be in the future. Energy efficiency is essential for crop growth and soil health.

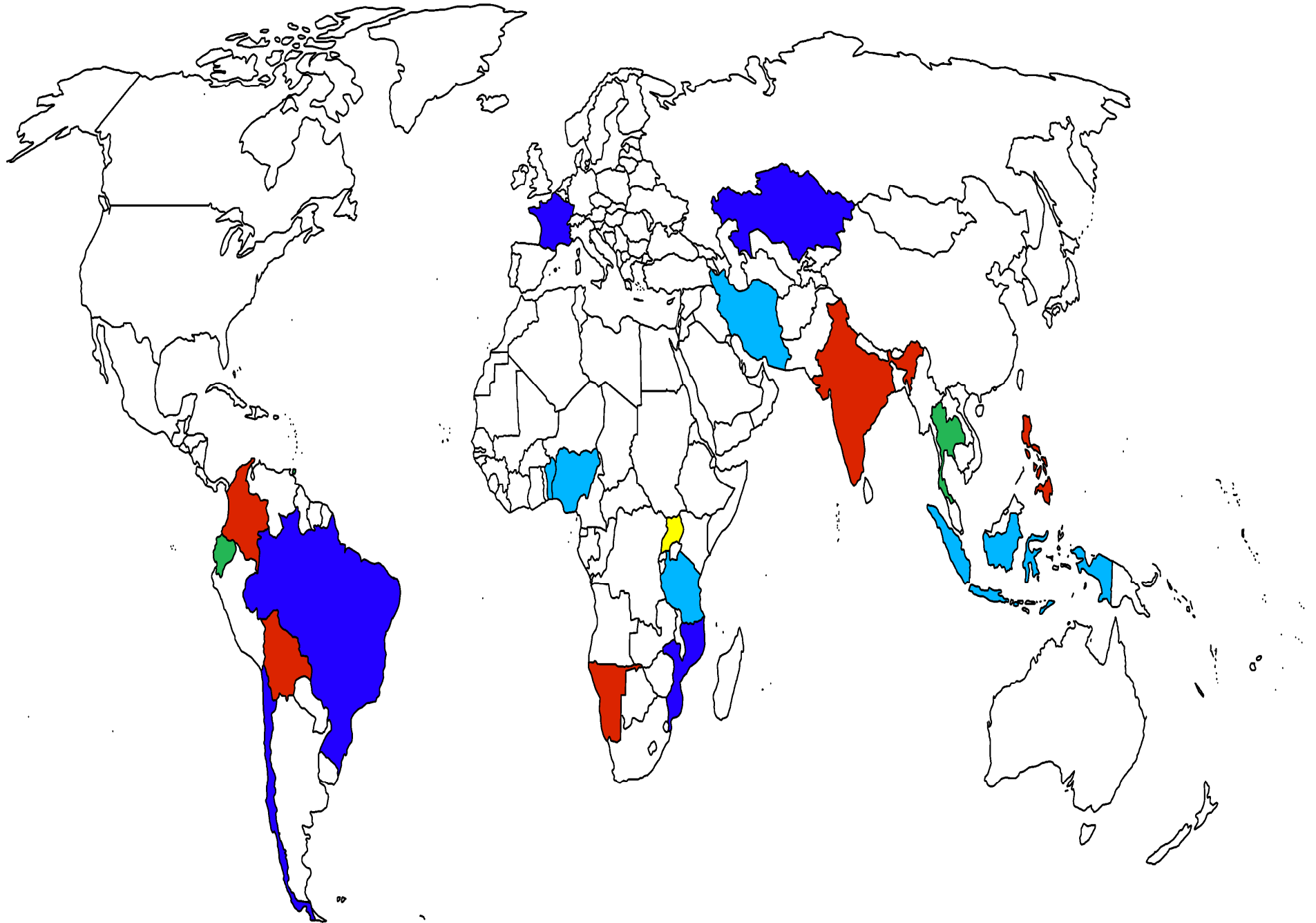
**BIODIVERSE COMMUNITIES**  
Agroecological approaches have many benefits: they are inherently drought tolerant, are generally hardy and resilient, and have a long history of use in agroecology. They are essential for crop growth and soil health.

**AGROECOLOGY**  
is the integrative study of the ecology of the entire food system, encompassing ecological, economic and social dimensions. It focuses on working with and understanding the interactions between plants, animals, humans and the environment within agricultural systems. By bringing ecological principles to bear in agroecosystems, through ecological intensification, novel management approaches can be identified, building on key interactions and strengthening virtuous cycles in agricultural production that would not otherwise be considered.

Preliminary as a contribution to the International Symposium on Agroecology for Food Security and Nutrition

- What are the market practices that best fit agroecological production practices and how can they be scaled up?
- Focusing on:
  - The diversity of sustainable market channels/practices (input and output markets)
  - The valorization (valuation) of products.
  - Business models (institutional arrangements).
  - Scaling up (network stability)





<b>Multi-actor Innovation Platforms (IP)</b>	
<b>Benin</b>	The Songhai Model of integrated production
<b>Indonesia</b>	Partisipasi Inovasi Petani (PIP) Project: A participatory model for promoting farmer-driven innovation
<b>Iran</b>	The role of CBOs in sustainable production and marketing of agricultural products
<b>Nigeria</b>	Impact Assessment of the Community-Based Farming Scheme in Enhancing Sustainable Agriculture in Nigeria
<b>Tanzania</b>	Sustainable Agricultural Practices by Smallholder Tea Farmers
<b>UgandaKACE</b>	The role of cooperatives in linking sustainable agricultural practices with markets
<b>Participatory Guarantee Systems (PGS)</b>	
<b>Bolivia</b>	The Ecological Fairs of La Paz, Cochabamba and Tarija
<b>Colombia</b>	The Familia de la Tierra PGS
<b>India</b>	PGS and smallholder markets: Idea of Trust and Short Market Chains
<b>Namibia</b>	The Namibian Organic Associations' Participatory Guarantee System
<b>Philippines</b>	The Innovative Institutional Approach: Quezon Participatory Guarantee System
<b>UgandaFV</b>	Facilitating social networks through FreshVeggies PGS
<b>Community Supported Agriculture (CSA)</b>	
<b>Ecuador</b>	Reinforcing the Local Systems of Healthy Food of Sierra Centro
<b>Thailand</b>	Moral Rice Program, Dharma Garden Temple
<b>Trinidad &amp; Tobago</b>	The Brasso Seco Paria Community Make Agrotourism their Business
<b>Agroecological Food Systems (AFS)</b>	
<b>Brazil</b>	Sateré-Mawé Native Waraná Presidium, Brazil
<b>Chile</b>	Quinoa de los Mapuche
<b>France</b>	La Ruche qui dit Oui !
<b>Hawai'i</b>	Agroecology and Indigenous Hawaiian Fishponds in the Hawaiian Islands
<b>Kazakhstan</b>	Operations of small farms and households in Akmola Province, Kazakhstan