What is AIS?
Understanding Agricultural Innovation Systems

Common Framework on Capacity Development for Agricultural Innovation Systems (CD for AIS)

Training of National Innovation Facilitators
The Common Framework promotes a system perspective on agricultural innovation, since agriculture increasingly involves complex interactions among stakeholders at multiple levels.
Agricultural Innovation
System Definition

A network of actors or organisations, and individuals together with supporting institutions and policies in the agricultural and related sectors that bring existing or new products, processes and forms of organisation into social and economic use.

Policies and institutions (formal and informal) shape the way that these actors interact, generate, share and use knowledge as well as jointly learn.
Agricultural Innovation System

Key Elements of AIS

- Reflection and Joint Learning
- Partnership and Network Building
- Co-Creation of Knowledge
- Process Documentation
- Facilitation/Brokerage
- Facilitative Leadership
<table>
<thead>
<tr>
<th>Actors</th>
<th>Roles in AIS</th>
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</table>
| Farmer/Farm Family            | • Users of knowledge to create, test and adapt new technologies to field conditions.  
>|                               | • Apply and suggest innovative products and practices to increase agricultural productivity and market accesses.  
| Farmer Organizations          | • Represent farmers (interests, needs, opportunities) in value chains and the community and policy arenas.  
| (includes commodity networks  | • Brokerage of knowledge and technology between farmers and other actors.  
| and platforms)                | • Facilitating access to agricultural inputs, credit and markets.  
|                               | • Helping organize value chains.  
|                               | • Promoting specific innovation through collaborative research & organizing logistical support.  
| Advisory services             | • Brokerage of knowledge and practices between farmers and other actors.  
| (private, non-governmental   | • Making new knowledge and practices available to farmers and other local actors.  
| and public)                   | • Forging networks, and supporting organization of producers.  
|                               | • Facilitating access to credit, inputs and output services.  
|                               | • Promoting equitable participation—especially disadvantaged groups such as, rural women, smallholders.  
| Agro-dealers (input suppliers | • Providing (new) agricultural inputs and output markets.  
| and processing)               | • Identifying, piloting and mainstreaming new market opportunities.  
|                               | • Defining quality standards of agricultural products.  
|                               | • Facilitating investment in physical and human resources for process and product development.  
|                               | • Linking agricultural actors to rest of the market.  
| Tertiary education institutes | • Improving general educational level of all actors.  
|                               | • Education and training of professionals in the agricultural sector.  
|                               | • Development of better knowledge and associated skills for farmers and other actors.  
|                               | • Facilitating investment in human resources for process and product development.  
|                               | • Developing approaches and methods of experiential and multi-actor learning.  
| Researchers (public,         | • Developing and improving technologies, practices and processes relevant to local/regional/national contexts.  
| non-governmental, private &  | • (Joint) Testing of locally developed (indigenous) technologies and processes.  
| universities)                 | • Documenting the ways new practices and technologies are adapted and further innovated with (for both men and women, poor and rich), to feed into other agricultural research efforts and policy decisions.  
|                               | • Cooperating with researchers of other countries / international organisation.  
| Policy makers                 | • Providing strategic orientation for the AIS.  
|                               | • Formulate, implement and enforce strategies, policies and regulations.  
|                               | • Allocate resources for research and human resources development.  
|                               | • Provide incentives to innovate and collaborate.  
|                               | • Enabling networks and partnerships  
| Consumer organizations        | • Influence research priorities and innovation practices.  
|                               | • Facilitate consumer acceptance.  
|                               | • Facilitating and brokering information of new products and processes.  

<table>
<thead>
<tr>
<th>Periods/Era</th>
<th>Transfer of Technology (ToT)</th>
<th>Farming System Research</th>
<th>Agricultural Knowledge &amp; Information Systems (AKIS)</th>
<th>Agricultural Innovation Systems (AIS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>Central Since 1960s</td>
<td>Starting in 1970s &amp; 1960s</td>
<td>From 1990s</td>
<td>Since 2000s</td>
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<td></td>
<td>Supply technologies through linear processes</td>
<td>Learn farmers’ constraints through surveys</td>
<td>Collaborate in research (participatory research) &amp; extension</td>
<td>Co-develop innovation involving multi-actor processes and partnerships</td>
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<tr>
<td>Scope</td>
<td>Productivity increase</td>
<td>Efficiency gains (input-output relationships)</td>
<td>Farm-base livelihoods</td>
<td>Value chains, institutional change</td>
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<tr>
<td>Innovators</td>
<td>Scientists</td>
<td>Scientists and extensionists</td>
<td>Farmers, scientists and extensionists together</td>
<td>Multiple actors</td>
</tr>
<tr>
<td>Role of Farmers</td>
<td>Adopters or laggards</td>
<td>Source of information</td>
<td>Experimenters</td>
<td>Partners, entrepreneurs, innovators exerting demands</td>
</tr>
<tr>
<td>Role of Scientists</td>
<td>Innovators</td>
<td>Experts</td>
<td>Collaborators</td>
<td>Partners, one of the actors responding to demands</td>
</tr>
<tr>
<td>Key Changes Sought</td>
<td>Farmers’ behaviour change</td>
<td>Removing farmers’ constraints</td>
<td>Empowering farmers</td>
<td>Institutional change, innovation capacity</td>
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<tr>
<td>Market Integration</td>
<td>Nil</td>
<td>Nil</td>
<td>Low</td>
<td>High</td>
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<tr>
<td>Capacity Development Outcome</td>
<td>Technology adoption and uptake through development of technical skills &amp; infrastructure</td>
<td>Technology adoption and uptake through development of technical skills &amp; infrastructure &amp; integration of agro-ecological and farm-economic conditions</td>
<td>Enhancing communication between actors, co-evolved technologies better fit to livelihood systems</td>
<td>Capacities to interact, innovate &amp; learn, creating enabling conditions</td>
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