



Advancing Knowledge and Innovation in Food and Agriculture

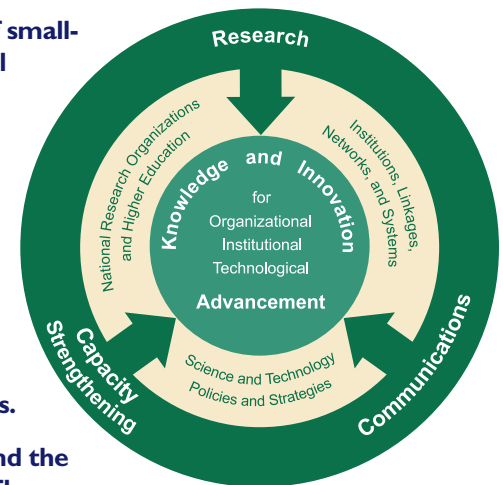
The International Service for National Agricultural Research (ISNAR) Division

The ISNAR Division works to improve the livelihoods of the large number of small-scale farmers in the developing world by strengthening national agricultural research and innovation systems. It facilitates knowledge creation and innovation in institutions that help these smallholders meet the challenges of a rapidly evolving world. It generates, disseminates, and applies new knowledge and technologies for solving problems of smallholder food systems.

Scientific organizations often fail to achieve their goals because they lack effective systems, regulatory environments, customs, and processes. The reasons are manifold. Some governments do not place enough emphasis on agricultural research and development (R&D) and, as a result, economic growth and poverty reduction stagnate. Other countries suffer from weak institutional capacities because they have been beset by political and other crises and outmoded customs and practices.

In many developing countries, the national agricultural research system (NARS) and the higher-education institutes carry out the work that can help small-scale farmers. They undertake agricultural research, disseminate new knowledge and technologies, and facilitate technological adoption. One way to ensure that national agricultural development programs achieve success is to make these research institutions effective in their work.

The ISNAR Division maintains a global focus. For its work on the organization and management of knowledge, innovation, and science systems, it places a particular emphasis on Sub-Sahara Africa, given the region's paramount need for more effective institutions.



FOCUS

The ISNAR Division's work falls broadly under two IFPRI research themes: (1) food- and nutrition-related science and technology policies and innovations that serve poor people, and (2) capacity strengthening. The four specific areas of work are

- Agricultural science and technology policy
- Institutional change in agricultural innovation systems
- Organization and management for strengthening agricultural research
- Learning and capacity strengthening

Farmers face environmental risks and climate-related and other shocks that can threaten their livelihoods. Scientific innovations can mitigate these threats, but they must be generated, adapted to local conditions, and adopted by farmers. The social and economic impacts of new scientific knowledge and technology depend significantly on the **science and technology policy** and investment choices made by individual countries. Many developing countries, however, do not give science and technology the attention they deserve and therefore do not benefit from their full potential. Investment in agricultural R&D is less than 1 percent of agricultural gross domestic product in most developing coun-

tries, compared to more than 2 percent in the developed world. When decisionmakers in developing countries are aware of the huge potential of R&D, they are in a better position to implement public policies and strategies that can improve the funding, performance, and impact of public and private agricultural R&D for poverty reduction and environmental sustainability.

Under the Agricultural Science and Technology Indicators (ASTI) initiative, the Division collects data on investments in and national policies regarding agricultural R&D, and examines the factors that inhibit or enhance the performance of agricultural science and technology in developing countries. It gives specific attention to the changes and trends in science and technology policy so that policymakers, researchers, and other R&D actors can make meaningful comparisons among different countries, types of actors, and points in time in order to determine strategic options.



The nature of innovation processes in food and agricultural systems is changing, and so is the understanding of how innovation occurs. When policy advisers and policy-makers fully comprehend the dynamics of **innovation processes and institutional change**, and the accompanying dissemination/adoption processes, they will be able to develop effective strategies with high impacts on poverty reduction. The ISNAR Division experiments with effective ways of bringing suitable technology to final users by involving these users in innovation processes. This approach helps ensure that innovation benefits users and raises productivity, and that the process becomes more efficient.

Agricultural research for development takes place in dynamic technological, sociopolitical, and institutional environments. The ISNAR Division supports national research institutes, higher-education institutes, farmer organizations, and public, private, and non-profit input and output distribution enterprises to **organize and manage knowledge and innovation processes** efficiently and **build institutional capacity**. It conducts research on organizational and management arrangements in developing countries that facilitates pro-poor innovation, dissemination, and adoption of agriculture-related technology for the reduction of hunger and poverty.

APPROACH

The ISNAR Division uses cutting-edge approaches in research, capacity strengthening, and communications to achieve the highest possible impact in implementing its agenda. Research projects are highly collaborative with national and regional partners, follow action-research paradigms, and employ both qualitative and quantitative methods. Capacity-strengthening and communication activities emphasize skill development and knowledge sharing at various levels: global, regional, national, and local.

Research

The Division generates evidence-based, policy-relevant, and practical knowledge; disseminates that knowledge; and engages in capacity building (education, training, networking, and institutional support) to help improve innovation systems. Research programs generate information for various levels of decisionmaking.

1. For better understanding the processes of innovation, researchers collect information from farmers and other actors in

the food systems, paying attention to sociocultural, political, and economic factors that affect the creation of knowledge and the adoption of innovation.

2. Research undertaken at the organizational level helps organizations strengthen their innovation processes—for example, by setting more coherent priorities; planning more effective research, participation, monitoring, and evaluation; and improving networking and partnerships.
3. Research at the systems level focuses on policies and institutions that enable improved coordination and stronger interaction among the various drivers of innovation in national innovation systems.

Capacity Strengthening

Strong national capacity to innovate contributes to agricultural growth, poverty reduction, and economic development. As a global leader in food policy research, IFPRI can play a key role in strengthening capacity for policy research and analysis. To be more effective in promoting learning to achieve its mission, IFPRI has consolidated its capacity-strengthening program under the ISNAR Division. The Division liaises with other IFPRI divisions, the NARS, and centers in the Consultative Group on International Agricultural Research (CGIAR) in implementing its capacity-strengthening program.

The Division generates new knowledge in collaboration with partners and strengthens the capacity of individuals, groups, and institutions in food and agricultural innovation systems so that they promote sustainable solutions for reducing hunger and poverty. Capacity strengthening activities bring together IFPRI researchers and collaborators to undertake learning events and distance-education programs for trainers and others; design and produce learning modules; develop networks and linkages that support higher-education and other institutions engaged in agricultural innovation; and conduct research on learning and capacity strengthening for agricultural innovation and food policy analysis. Capacity strengthening is demand-driven and delivered through re-usable learning materials.

Through the development of the Global Open Food and Agriculture University (GO-FAU), the Division hosts a CGIAR-wide distance-learning program for supporting MSc-level courses in agriculture that traditional and open universities in the developing world will offer, and for specialized courses that will improve the knowledge and skills of practicing professionals.

Communications

Through targeted publications the Division communicates research results to a wide variety of users, including scientists, policy-makers, extension officers, and leaders of farm and rural organizations. Continuous dialogue with decisionmakers and other end users helps in the better implementation of research results.

The ISNAR Division hosts a knowledge center on behalf of IFPRI that individuals and organizations can contact for food-policy-related information (for more information contact: s.babu@cgiar.org).

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