

A photograph of three women, likely from an African country, wearing traditional headwraps and colorful clothing. They are gathered around, looking intently at a small amount of seeds held in their hands. The woman in the foreground is wearing a yellow headwrap and a yellow top. The woman behind her is wearing a red top. The woman on the right is wearing a blue top with white polka dots. The background is a blurred green field. The title text is overlaid on the image in a circular arrangement.

# REALIZING THE POTENTIAL OF AGRICULTURAL INNOVATION IN FAMILY FARMING

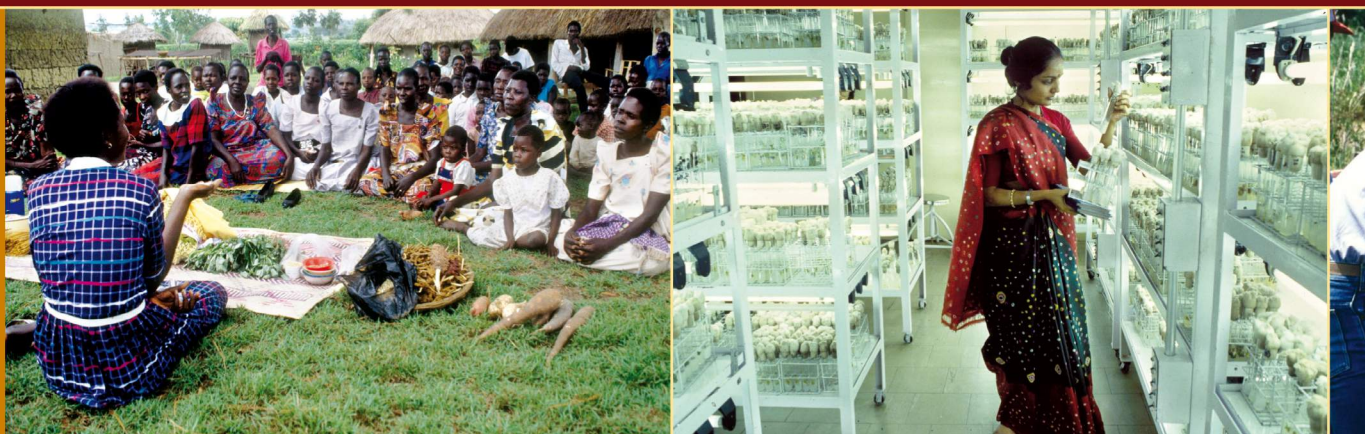
VISION, MISSION AND ACTIVITIES OF **FAO'S RESEARCH AND EXTENSION BRANCH**



Rural communities in developing countries face increasing challenges related to their livelihoods and food security, the deterioration of natural resources, the impacts of climate change and volatile food prices, among others. Innovation is key to agricultural development. In order to realize the potential of agricultural innovation in family farming, national priorities of sustainably increasing food production and productivity, and reducing hunger and poverty, require rural knowledge institutions to be stronger and communication processes to be improved.

**FAO'S RESEARCH AND EXTENSION BRANCH** focuses on transforming agricultural innovation systems of member countries. It works to develop an enabling environment and to enhance national agriculture research institutions and rural extension services by providing policy advice and technical assistance projects/programmes, and by promoting studies and policy dialogue.

## CAPACITY DEVELOPMENT - PARTNERSHIPS -





**FAMILY FARMING** (also **FAMILY AGRICULTURE**) is a means of organizing agricultural, forestry, fisheries, pastoral and aquaculture production which is managed and operated by a family and predominantly reliant on family labour, including both women's and men's. The family and the farm are linked, co-evolve and combine economic, environmental, social and cultural functions. Despite the great heterogeneity among countries and within countries, family farming has the following key characteristics:

- Often limited access to land and capital resources;
- Predominantly family labour involving members of the household in the production process;
- Agricultural/forestry/aquaculture/fishery activities being the main source of income for the family nucleus, which may be complemented with other non farming activities undertaken inside or outside the family unit.

An **AGRICULTURAL INNOVATION SYSTEM** is “a system of individuals, organizations, and enterprises focused on bringing new products, processes and forms of organization into social and economic use to achieve food and nutrition security, economic development, and sustainable natural resource management”.





**OUR VISION** is to be “recognized as a global leader in assisting member countries in developing inclusive agricultural innovation systems to achieve food and nutrition security and sustainable natural resource management.”

**OUR MISSION** is to contribute to the strengthening of inclusive agricultural innovation systems that respond to the needs of small producers by:

- Providing policy advice to member countries and donors;
- Promoting partnerships at all levels; and
- Supporting capacity development for rural knowledge institutions and decision makers.



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# METHODOLOGIES - POLICY ADVICE - PARTNERSHIPS - BIOTECHNOLOGIES: A MAJOR SOURCE OF INNOVATION IN AGRICULTURE

FAO'S RESEARCH AND EXTENSION BRANCH PROVIDES ADVICE TO FAO MEMBERS ON DEVELOPING NATIONAL BIOTECHNOLOGY STRATEGIES AND BIOSAFETY FRAMEWORKS AND WORKS WITH THEM TO DEVELOP THEIR CAPACITIES IN AGRICULTURAL BIOTECHNOLOGIES THROUGH TECHNICAL CO-OPERATION AND TRAINING. THE BRANCH ALSO ASSISTS IN PROVIDING THEM WITH ACCESS TO HIGH-QUALITY, SCIENCE-BASED KNOWLEDGE ABOUT AGRICULTURAL BIOTECHNOLOGIES.

## WHY IS IT IMPORTANT?

Agricultural biotechnologies represent a large range of technologies that are used, *inter alia*, to genetically improve plant varieties and animal populations, characterize and conserve genetic resources, diagnose plant and animal diseases, and develop vaccines. They contribute to alleviating hunger and poverty, adapting to climate change and maintaining the natural resource base.



## HIGHLIGHTS

### FAO CONFERENCE ON AGRICULTURAL BIOTECHNOLOGIES IN DEVELOPING COUNTRIES (ABDC-10)

The Branch hosted the Secretariat and provided technical support to the FAO international technical conference on “Agricultural biotechnologies in developing countries: Options and opportunities in crops, forestry, livestock, fisheries and agro-industry to face the challenges of food insecurity and climate change” (ABDC-10) that took place in Guadalajara in March 2010, hosted by the Government of Mexico. At ABDC-10, member countries agreed, *inter alia*, that FAO and other international organizations and donors should significantly increase their support to strengthening national capacities in the development and appropriate use of pro-poor agricultural biotechnologies.

### FAO BIOTECHNOLOGY FORUM

The Branch also hosts the FAO Biotechnology Forum, an e-mail based community that was launched in 2000 to provide access to quality balanced knowledge and make a neutral platform available for interested stakeholders to exchange views and experiences on biotechnologies in developing countries. The Forum has about 3,600 members worldwide and has hosted 17 moderated e-mail conferences so far, with over half of all messages posted coming from participants living in developing countries.



# STRENGTHENING POLICIES AND STRATEGIES FOR INNOVATION IN FAMILY FARMING

FAO'S RESEARCH AND EXTENSION BRANCH PROMOTES INCLUSIVE AGRICULTURAL INNOVATION FOR MEMBER COUNTRIES, FOCUSING ON SMALL-SCALE PRODUCERS AND THEIR ORGANIZATIONS. THE BRANCH PROVIDES DIRECT POLICY ADVICE TO MEMBER COUNTRIES, PRODUCES POLICY STUDIES (SUCH AS THE FLAGSHIP PUBLICATION ON INNOVATION IN FAMILY FARMING PLANNED FOR 2014), AND PROMOTES REGIONAL POLICY DIALOGUE. POLICY DEVELOPMENT ACTIVITIES ARE CENTRED ON THE ROLE OF INSTITUTIONS AND POLICIES THAT SHAPE INTERACTIONS, INFORMATION SHARING AND LEARNING BETWEEN DIFFERENT ACTORS, ALL OF WHICH SPUR INNOVATION.

## WHY IS IT IMPORTANT?

Agricultural development depends on innovation. Food security, climate change adaptation, poverty alleviation and sustainable management of natural resources rely on innovation processes in which small-scale producers are protagonists. While much has been learned about innovation in recent years, policy options for strengthening inclusive agricultural innovation systems still need to be developed further. By analysing good practices and lessons learned from agricultural innovation and family farming, more effective policies can be implemented.



## HIGHLIGHTS

### EXPERT CONSULTATION WORKSHOP ON DEVELOPING AGRICULTURAL INNOVATION CAPACITY FOR SMALLHOLDER FAMILY FARMING

The UN General Assembly declared 2014 as the International Year of Family Farming and invited FAO to facilitate its implementation. To mark this important initiative, FAO plans to launch in 2014 a flagship report on agricultural innovation systems, focusing on family farming. As part of the preparations, the Branch invited external experts to join FAO staff in March 2012 for a technical consultation on Innovation in Family Farming. The experts provided FAO with valuable guidance and inputs for developing the study. Discussions emphasized that the study should focus on an enabling environment, the dimension in which FAO can make a unique contribution to the development of inclusive agricultural innovation systems.

### DEVELOPING A MARKET FOR AGRICULTURAL INNOVATION SERVICES IN PERU

The Branch, the World Bank and FAO's Investment Center partnered with Peru in the Agricultural Research and Extension Program (INCAGRO), a programme designed to strengthen the market for agricultural innovation services (research and extension) through two competitive funds. Producer groups competed against one other to obtain extension and innovation brokerage support and applied research projects. Research institutions competed against one other over high-priority research projects. Extension providers also participated, through competitive proposals for the provision of training. Based on these practical experiences of managing competitive funds for innovation, the Branch staff wrote a Thematic Note for the 2012 World Bank Agricultural Innovation Sourcebook that examines successes and challenges in using such funds to promote agricultural innovation.



# CAPACITY DEVELOPMENT IN INCLUSIVE AGRICULTURAL INNOVATION SYSTEMS

CREATING AN ENABLING ENVIRONMENT WHERE THE NEEDS AND DEMANDS OF SMALL-SCALE PRODUCERS AND CONSUMERS ARE HEARD AND THEIR VOICES INFLUENCE THE NATIONAL RESEARCH AND EXTENSION AGENDA IS KEY TO ACHIEVING SUSTAINABLE RURAL DEVELOPMENT. FAO'S RESEARCH AND EXTENSION BRANCH SUPPORTS FAO MEMBER COUNTRIES TO DEVELOP THEIR CAPACITIES TO ADOPT AGRICULTURAL INNOVATION SYSTEMS IN SHAPING THEIR INSTITUTIONS AND THEIR POLICIES.

## WHY IS IT IMPORTANT?

The traditional role of research and extension is changing as there is a need to shift from a research-driven process that relies on technology transfer to one that enables and rewards innovation. Innovation itself should be a process of generating, accessing and using knowledge, a process in which stakeholders learn and innovate together, sharing the benefits and the risks. This can only happen if development policies and resource allocation are aligned, research and extension institutions are reshaped, and civil society actors are included. Equally important is the interactions and learning between all actors as a means of creating arrangements that truly respond to local contexts.

## HIGHLIGHTS

### COMMUNITY LEARNING AND ACTION FOR DEMAND-DRIVEN EXTENSION AND RURAL SERVICES – PAKISTAN

The Branch supported the design and implementation of this programme, funded by IFAD, in Azad-Jammu/Kashmir Region in Pakistan. The programme, which ran from 2005-2011, empowered rural communities to articulate their demands and influence development planning in their areas. It also helped them set up a collaborative and demand-driven approach to agricultural and rural services. The approach addresses mobilizing rural people to organize themselves, promoting participatory village development planning, developing the capacity of public sector service providers for demand-responsive planning and delivery, and facilitating stakeholder collaboration (public and non-public) at district level.

### ACCELERATE AGRICULTURAL INNOVATION BY STRENGTHENING RESEARCH INSTITUTIONS – REPUBLIC OF GUINEA

Through FAO Technical Cooperation Program, the Branch provides technical expertise to develop the capacity for innovation in member countries. In targeted, short term, catalytic projects such as, for example, the project: “Development of a Strategic plan for Agricultural research in Guinea”, FAO research officers support the republic of Guinea in defining priorities and developing strategic partnership to establish its Agricultural Innovation System. The plan is elaborated with the participation of all public and private stakeholders, including farmers organizations, to ensure its relevance. It is expected that the implementation of the plan will result in an acceleration of the pace of innovation in rural area and will, in the long term, increase productivity, competitiveness and economic growth for the country.





# TOOLS TO FACILITATE INTERACTION/NETWORKING FOR AGRICULTURAL INNOVATION

BY DEVELOPING TOOLS AND METHODOLOGIES, FAO'S RESEARCH AND EXTENSION BRANCH PROMOTES NETWORKING, KNOWLEDGE SHARING AND INTERACTION BETWEEN MANY ACTORS IN AGRICULTURAL INNOVATION SYSTEMS. IT SUPPORTS MEMBER STATES IN APPLYING NEW ICTS AND PARTICIPATORY APPROACHES TO FACILITATE LEARNING, DIALOGUE AND ACCESSIBILITY OF INFORMATION – WITH A VIEW TO DEVELOPING, SHARING AND ADOPTING PRACTICES AND TECHNOLOGIES.

## WHY IS IT IMPORTANT?

Successful participation of small-scale producers in agricultural innovation systems depends on their ability to access information, link to other actors, and access services, technologies and markets locally, nationally and globally. The application of ICT tools can enable rural advisory services and producers' organizations to respond to the needs of small-scale producers and facilitate their interaction with other actors of the agricultural innovation system at all levels.

## HIGHLIGHTS

### VIRTUAL EXTENSION AND RESEARCH COMMUNICATION NETWORK (VERCON)

VERCON is an approach that employs internet-based technologies and ComDev methodologies to facilitate networking, knowledge sharing and interaction among agricultural institutions, producers' organizations and others in the agricultural innovation system. Over the last decade it has been adapted and applied in more than ten countries in Africa, Asia, Eastern Europe, Latin America and the Near East.

### TECHNOLOGIES AND PRACTICES FOR SMALL AGRICULTURAL PRODUCERS (TECA)

TECA is an initiative for documenting and sharing proven technologies and practices for small-scale producers. It combines an internet-based knowledge base with a forum for interaction and learning among those engaged in agricultural innovation systems. Partnerships are being developed at various levels to increase the content of practical knowledge, and to reach out to rural small-scale producers. The TECA modules and guidelines are also made available to national systems and institutions that wish to develop customized tools, as was recently done in Bolivia and Albania.



# PROMOTING AGRICULTURAL INNOVATION THROUGH PARTNERSHIPS AND GLOBAL FORA

FAO'S RESEARCH AND EXTENSION BRANCH PROMOTES AGRICULTURAL INNOVATION THROUGH COALITIONS WITH THE CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH (CGIAR), THE GLOBAL FORUM ON AGRICULTURAL RESEARCH (GFAR), THE GLOBAL FORUM FOR RURAL ADVISORY SERVICES (GFRAS) AND OTHER INTERNATIONAL PARTNERS.

## WHY IS IT IMPORTANT?

International agricultural research needs to be embedded in wider development programmes and well linked with development partners at national and international levels if it is to have an impact on increasing food production, reducing hunger and poverty and promoting the sustainable use of national resources. Knowledge sharing, learning and partnering at national, regional and international levels are crucial to develop more effective and efficient extension policies and services.



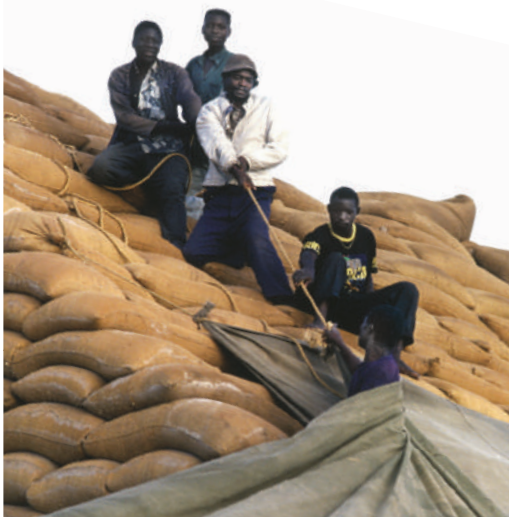
## HIGHLIGHTS

### PARTNERSHIP WITH INTERNATIONAL AGRICULTURAL RESEARCH

The Branch promotes a genuine coalition between the international agricultural research system and development agencies to mobilize the potential of innovation for sustainably increasing food production and alleviating poverty. In particular, it promotes and coordinates the FAO-CGIAR collaboration and FAO's contribution to CGIAR governance. The Branch supports the GFAR Secretariat and contributes to the organization of the Global Conference on Agricultural Research for Development (GCARD), where the international research for development agenda is set.

### REGIONAL AND GLOBAL NETWORKING OF ADVISORY SERVICES

The Branch supported the establishment, strategic planning and normative activities of GFRAS. The Branch contributes to the development of regional extension platforms. Jointly with the Technical Centre for Agricultural and Rural Cooperation ACP-EU (CTA), the Forum for Agricultural Research in Africa (FARA), GFRAS and others, FAO co-organized the Global Extension Conference (2011) and advocates for the policies and principles outlined in the Conference Declaration. These include: increased funding and mechanisms that ensure services which are high-quality, demand-led and sustainable; continuous gender-sensitive capacity development; and participatory processes for developing policies and for monitoring, evaluation and research on extension.





FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO)  
[www.fao.org](http://www.fao.org)

FAO'S RESEARCH AND EXTENSION BRANCH  
[www.fao.org/nr/research-extension-systems/res-home/en](http://www.fao.org/nr/research-extension-systems/res-home/en)

## TOOLS AND METHODOLOGIES - POLICY ADVICE



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