

Overview of strengthening regional agricultural innovation platform towards Food Security and Nutrition and better livelihoods in Central Asia and the Caucasus: Deepening the transformations and refining the focus in agricultural research

Pre-CGARD consultations, 2009

In 2009, the Central Asia and the Caucasus Association of Agricultural Research Institutions (CACAARI) conducted on-line consultations to define agricultural research priorities in Central Asia and the Caucasus (CAC) region.

Identified priority needs for Agricultural Research for Development (AR4D) in the CAC region could be grouped into five categories: (i) Institutional issues, (ii) Research issues, (iii) Policy issues, (iv) Environment protection issues, and (v) Socioeconomic issues. Among the institutional issues, agricultural extension was on the top of the list followed by agricultural research and education, and linkages, partnerships and collaboration. Among the research issues per se included improved technology for sustainable crop production; Water and irrigation management; Livestock research including rangelands; Horticulture; Seed systems; Forestry; and Mountain agriculture. Among the policy issues, the need for greater investments in agriculture (including agricultural research, education and extension) was the most important followed by marketing of agricultural commodities and developing suitable agricultural development policies. Conservation of biodiversity and climate and desertification were considered the two important issues under Environment protection issues. Among the socioeconomic issues, attention to gender/women-related issues was considered the most important followed by the study and analysis of livelihoods in rural areas.

CGARD 2010

[The Global Forum on Agricultural Research \(GFAR\)](#), a multi stakeholder-led initiative that serves as a neutral forum for dialogue and action on strategic issues in agricultural research for development, along with the Consultative Group on International Agricultural Research (CGIAR), and France as host country, organized the first Global Conference on Agricultural Research for Development (GCARD) from March 28 to 31, 2010, at Montpellier.

The GCARD process addressed the below questions:

- What are the development needs where AR can play its best role?
- How best do we turn research in development impacts at scale?
- How can more effective pathways be developed to create impact for the poor?
- What investments, institutions, policies and capacities are necessary?

CGARD Roadmap

The GCARD clearly showed that agricultural research development (AR4D) systems need urgent transformation to better meet the needs of the poor and in particular those of resource-poor farmers and rural communities. GCARD 1 participants adopted the concept of a “Road Map” to address these challenges.

[The GCARD Roadmap](#) establishes an inclusive, rolling process of reform and capacity development that aims to mobilize the full power of agricultural knowledge and innovation towards meeting agriculture and food-related development needs. It proposes a six-point plan for transforming agricultural research for development around the world, requiring actions from all those involved in the generation, access and use of agricultural knowledge:

1. The need for collective focus on key priorities, as determined and shaped by science and society,
2. The need for true and effective partnership between research and those it serves,

3. Increased investments to meet the huge challenges ahead and ensure the required development returns from AR4D
4. Greater capacities to generate, share and make use of agricultural knowledge for development change among all actors
5. Effective linkages that embed research in the wider development context and actions enabling developmental change
6. Better demonstration and awareness of the development impact and returns from agricultural innovation

Regional CAC consultations, 2011

Inspired by GCARD1 Roadmap CACAARI in April 2011 initiated country level consultation on National Strategies of transformation of Agricultural Research Systems accompanied by reviewing agricultural research and innovation needs and priorities. The broad multi-stakeholders consultations were followed by the cross country synthesis of the agricultural research strategies and research priorities, and in fact created a basis for the [Regional Strategy for Transforming and Strengthening of Agricultural Research and Innovation Systems for Development in the Central Asia and Southern Caucasus region](#).

The Synthesis of the national strategies objectives has shown that AR4D system of the CAC should focus on four main goals of agricultural research:

1. Improving the well-being of the rural population, particularly vulnerable groups and those dependent on agriculture;
2. Guaranteed improvement of the quality and quantity of nutritious food through the intensification and diversification of agriculture;
3. Rational use of natural resources;
4. Mitigating adverse effects of climate change.

Transformation of AR4D in the CAC aligns with the six elements of the GCARD1 Roadmap, and suggests strengthening linkages between constituent elements of the innovations: (i) innovative and participatory research, (ii) demand-driven education and capacity building, (iii) pluralistic extension services; and (iv) increase the impact of ICT on transforming AR4D and agriculture development.

Rural Advisory Services

The CAC community of practice recognize that an efficient system of coordination of agricultural research in the region is very much lacking and so is the absence of a mechanism that could achieve it. Moreover, poor linkages between research, education, advisory services systems, farmers, especially women farmers, private sector stakeholders and policy makers are a common issue in the CAC region. In this context, Rural advisory services (RAS), also called extension services, are fundamental to provide agricultural knowledge and innovation to rural people to deal with existing and emerging challenges, and to improve their livelihoods.

CAC Regional strategy on Transforming and Strengthening of Agricultural Research and Innovation Systems, highlights that transformation of extension systems should be a priority in the short term development of AR4D. Enhanced extension systems will assist farmers in making economic and innovative decisions on improving productivity, introducing new technologies, and enhance resilience to food and economic crises and climate change impacts through improved information management, application of R&Ds.

Considering the importance of the RAS system for CAC region, CACAARI with support of GFAR and [Global Forum for Rural Advisory Services \(GFRAS\)](#) has set-up Central Asia and the Caucasus Forum for Rural Advisory Services (CAC-FRAS) in 2014, as informal forum for discussing the regional issues related to RAS, providing advocacy and leadership on rural advisory services.

Agro-information centers

CACAARI actively promotes establishing of agro-information centers at the leading national agrarian universities, that are supposed to provide knowledge and information to agricultural innovation system actors to strengthen their innovative capacities and provide various information, updates. Such centers combine the elements of research, education and extension and serve as nodal points for dissemination of knowledge and information and promising models of extension centers. The first agro-information center based on national agrarian university was established in Uzbekistan in 2011 at the Tashkent State Agrarian University. Now, similar centers are open in other CAC countries.

AIS 4 FSN, on-line discussions, 2015

This online discussions on the role of Agricultural Innovation Systems (AIS) in Central Asia and Caucasus countries and China towards more sustainable food security and nutrition (FSN) (<http://www.fao.org/fsnforum/eca/en/AIS-CAC-China>) were initiated and conducted from the 6th of May until the 9th of June 2015 by CACAARI in close collaboration with the Northwest Agriculture & Forest University (NAFU) in China and supported by FAO's Global Forum on Food Security and Nutrition in Europe and Central Asia (FSN Forum in ECA). The purpose of this cross-regional online discussion was to offer stakeholders an opportunity to share their experience, knowledge and regional good practices on strengthening Agricultural Innovation Systems (AIS) in CAC countries and China. The objectives of these discussions were to contribute to a) identifying challenges, opportunities and collective actions towards strengthening Agricultural Innovation Systems (AIS) in countries of Central Asia and Caucasus (CAC) and China; b) identifying roles of various stakeholders; c) gathering insights and views on consistent actions needed to enhance the capacities of existing regional platforms to promote communication and collaboration on agricultural innovations; (d) promoting regional cooperation (through initiatives such as "One Road One Belt") for improved policies to enhance market liberalization, environmental sustainability, and regional development.

The discussion highlighted the lack of coordination between different AIS actors and sectors across countries. The linkages among the key stakeholders (such as the public and private sector, or academic and civil societies) within the national agricultural research system in CAC countries and China are very weak, which is evident in the poor planning, poor resource and labour distribution, defragmentation, and duplication of interventions in the agricultural sector.

In addition, insufficient linkages constrain the application of innovation approaches for improvement of food security and well-being of population. Functional linkages among agricultural education, research and rural advisory services also remain weak. Having high-quality staffs, the majority of resources have been directed at agricultural universities in teaching and researching.

The participants agreed that AIS could play a crucial role in achieving more sustainable food security and nutrition in CAC countries and China through an innovative infrastructure that enables interaction between academia and producers. However, currently AIS is not contributing at its fullest capacity. The following further measures for strengthening Agricultural Innovation Systems at the national and regional level were suggested by participants:

- Framing national policies, legislation, regulations, and institutions for Agricultural Innovation Systems (AIS) in an integrated approach;
- Operationalizing AIS at the national and local level;
- Implementing a unifying information system and big-data management in AIS;
- Identifying farming technology and techniques which are suitable for local-level climatic, socio-economic, and cultural environments;
- Supporting agricultural actors along food chains in the application of new technologies;
- Promoting new, high-yield plant varieties resistant to disease and tolerant of drought, salinity, and frost, as well as promoting new high-productivity animal breeds with a strong immunity to disease;
- Supporting modernization and diversification processes in agriculture;

- Strengthening the role of gender and increasing the involvement of youth and low-income populations in agricultural innovation and human capital development, including health, nutrition, education, and skills;
- Providing support in mitigation and adaptation to climate change; and others.

Also participants stressed on institutional changes needed, such as:

- Establishing an agricultural innovation institution. This could serve as a platform of knowledge formation and technology transfer where different actors of AIS can benefit from knowledge sharing, coordination and innovation.
- Improving access to finances, in order to obtain adequate funding for improvement of material and technical capacities.
- Marketing the products and services provided by agricultural research, education and extension institutions. This will help attract both public and private investors.
- Establishing a unified information system. ICT is a useful tool for the development, transfer, application and dissemination of agricultural information and knowledge to increase agricultural productivity and income, as well as to fill a communication gap between agricultural research, academia, rural advisory services and rural areas.
- Empowering women and youth in agricultural innovations should be considered in the development agenda. The participation of women and young people in agricultural innovations is indispensable, given their crucial role in household livelihoods and in the socio-economic and cultural environment.

It should be noted that The public sector is playing a central role in developing AIS in CAC countries and China. Nevertheless, in many transition economies, government interventions need to be enhanced, including the operationalization and institutionalization of national RAS systems.

To address an important socio-economic challenge such as food security and better nutrition, “the regulatory role of the government in innovative development objectively comes to the forefront; it will ensure positive results only in case of a balanced long-term development strategy”.

Towards Setting up Multistakeholders Foresight Platform in the CAC Region

The CAC region, as many other regions in the world is facing global transformations, including globalization and localization processes, the development of ICT, changing consumption patterns, ecological decline and resource scarcity, population dynamics, urbanization, technology development. These drivers of change are interconnected. They will significantly affect the future of agriculture and food security, but in different ways according to the local characteristics where they take place.

Exploring and anticipating changes do not only require mastering specific tools, it also requires a new and different mindset. For this purpose, foresight capacities and foresight oriented mindsets are required. Foresight is a systematic, participatory and multi-disciplinary approach to explore mid- to long-term futures and drivers of change. However, this capacity and mindset to explore the future of agriculture and food security is not yet developed in the CAC region.

There is, therefore, a need to improve the capability of CAC organizations, to enable them to be more pro-active in setting the research and innovation agenda for food, agriculture and rural development and positioning research and innovation in the broader context of development.

For this reason, and in response to suggestions by those working on the front lines of research for development, GFAR has established a Global Foresight Hub to support forward thinking in agricultural research for development. The Hub consists of a global foresight academy, a forward thinking platform and a series of policy dialogue platforms. This concept is supported by CACAARI, that is taking the lead in the region to engage its constituencies in using the future to help making decision and priorities for the present.

In November 2014, CACAARI with support of GFAR organized the workshop on introduction to Foresight concept and building a critical mass in foresight in the CAC region, during the CAC Regional Conference

on RAS in Bishkek, Kyrgyzstan. The objectives of the workshop was to engage participants in a foresight exercise about the futures of food, agriculture and rural development in the CAC region, and Initiating a process for building foresight capacity in the region.

As result of the foresightworkshop participants acknowledged the value of engaging in foresight/forward thinking in the CAC region on the future of food, agriculture and rural development, and that they would form a critical mass with which CACAARI can work in order to promote and implement the concept of the foresight academy.

Transformation of CACAARI

Taking into account the challenges in agriculture, and the responsibility that agricultural researchers and other stakeholders should take to improve the impact of agricultural innovations, the urgency to strengthen the cooperation and innovation partnership, the members of CACAARI and its partners encouraged the initiative of transforming the Association into the Forum for Agricultural Research and innovation towards more inclusive, effective and comprehensive approach to achieve the goals set in GCARD Roadmap and alignment with AR4D evolving process globally.

The online survey "CACAAR Governance review" was launched on April 26, 2014, both in Russian and English languages, in accordance with CACAARI Action plan for 2013-2014, particularly mainstreaming *Activity 1.3. Updating and adoption of the CACAARI charter (Transforming of CACAARI into Forum on Agricultural Research and Innovations) of the CACAARI Strategic directions 1. Institutional development and strengthening of the Regional Forum, the integration of stakeholders across agricultural innovation pathway for better foreseeing challenges in agriculture and addressing the needs of rural smallholders to prioritize agricultural research and innovations and in following GCARD2 proceedings.*

CACAARI Secretariat initiated the online survey with the support of the GFAR in order to facilitate institutional changes in CACAARI forum.

This survey was intended to engage in a constructive dialogue on all stakeholders who are interested in the CACAARI activities and policies, as well as to contribute to: a) the development of this unique regional platform for agricultural research and innovations, b) identifying and prioritization of measures and action aimed at the sustainable evolution of CACAARI, which involves managers, researchers, private sector, non-governmental organizations, farmers' organizations and agricultural universities and other stakeholders.

According to the respondents CACAARI should focus and apply efforts to improve its functional performance, and particularly in:

1. Actively advocate and seek for funds to develop and support regional research programs
2. Facilitate and further advocate the participation of different stakeholders in agricultural research and innovations
3. Restructuring the CACAARI governance.
4. The original mission (objectives, activities) must be revised with a clear vision, purpose and objectives
5. Revising the partnership strategy for the CACAARI and/or the thematic network should be revised.
6. The partnership with the national government / local authorities should be strengthened.
7. Enhanced communication activities/tools.
8. A number of partners among global development organizations must be increased.
9. The collaboration with other fora and networks within and outside the CAC regions should be increased.

CACAARI Steering Committee meeting in November 2014, in Bishkek, Kyrgyzstan, endorsed the decision to transform CACAARI into CAC Forum for agricultural research and innovations. CACAARI Secretariat was requested to design the name and abbreviation of the new forum, and to submit to the next meeting of the CACAARI Steering Committee CACAARI.