High Level Policy Dialogue on Investment in Agricultural Research for Sustainable Development in Asia and the Pacific

Rama Gardens Hotel, Bangkok, Thailand
8-9 December, 2015

Scoping Paper



Organizers

Asia-Pacific Association of Agricultural Research Institutions (APAARI)
Australian Centre for International Agricultural Research (ACIAR)
Department of Agriculture (DOA), Thailand
Food and Agriculture Organization of the United Nations - Regional Office for Asia and the Pacific (FAO-RAP)
Global Forum on Agricultural Research (GFAR)
International Food Policy Research Institute (IFPRI)

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1. Introduction

Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their needs. Sustainable development now a globally accepted tenet (SDGs 2030), suggests that meeting the needs of the future depends on how well social, economic, and environmental objectives and/or needs are balanced now and in the future. Sustainable agriculture is economically profitable, socially and environmentally beneficial and safe, and contributing positively to improving or being neutral to quality of life. All definitions of sustainable development require that the world is seen as a composite system that connects both space and time.

The focus of the "High Level Policy Dialogue on Investment in Agricultural Research for Sustainable Development in Asia and the Pacific" is on discussing the direction, needs and mechanisms to enhance and improve investments (financial, infrastructure, capacity development and policy support) in agricultural research and innovation systems (including extension and education) that can contribute to improving the region's overall agriculture and agri-food systems and achieving the Sustainable Development Goals.

The dialogue will draw the direction, needs, and quantum of investment now and in the future in agricultural research and innovation in the Asia-Pacific region.

2. Changing Role of Agriculture in Development

The definition of "agriculture" has been rapidly evolving. Agriculture now is seen as a primary economic sector blending across sectors like industry/

manufacturing and services. Agriculture, beyond its traditional role (producing food, feed, fiber and fuel), is considered as an organized knowledge based "bio-economy", using renewable natural resources and technological innovation for economic benefits. It is further considered to have several sectoral overlaps in energy, water, environmental services, health, recreation, tourism and preservation of cultural heritage. All these may influence the quantum and direction of investment in it.

Food systems are specific components of agriculture. Food systems, from generation of farm inputs to consumption and with pre-and post-consumption "waste", also overlap with other systems such as for environment and energy generation. While sharing all other aspects of agriculture, food systems need special emphasis due to food's essentiality to mankind. This special emphasis has deep economic, social, political, environmental and technological implications.

It may be emphasized that the inter-connections of all these systems are not linear but as in a network, where many commodities and products are consumed, processed and recycled by a multitude of actors. Investment in improving agricultural research and innovation is also done by a multitude of actors such as the national governments, international research and development agencies, private sector and others. Therefore, investing in agricultural research and innovations can also be very complex with multiple dimensions, each having different layers.

3. Changing Demands on Agriculture in Asia and the Pacific

The Asia-Pacific region is the most populated part of the world, with a large portion of its population depending directly or indirectly on the agriculture sector for livelihood. This sector is and will remain one of its primary economic sectors for some time to come. Any change, whether beneficial or harmful, in agriculture will impact significantly upon economic and social development of countries and communities in the region.

In recent years, many countries in the region have shown very rapid and high rates of economic and social development. As a result, national food security has almost been attained and poverty significantly reduced.

However, there still remain many challenges to the region's agriculture as it evolves economically, socially, politically, technologically and in its physical environment. These include poor productivity, low affordability of food, high food inflation, weak household and community food and nutritional security, persistent malnutrition, lack of assurance in food safety, unsustainable use of natural resources and energy, environmental degradation, loss of forests and biodiversity, market failures and poor value addition to agricultural commodities.

The process of sustainable development in the region needs to also recognize massive ongoing urbanization in the region. There is a general opinion that rapid urbanization is taking place in part resulting from the partly broken down agricultural systems on which a majority of rural livelihoods depend in many countries of the region.

The economic and social transformation of the region, seen through trends such as rapid urbanization and social conflicts, is forcing a very serious rethinking on the policies and strategies for revitalization of agriculture. The much needed sustainability of agriculture in the region will need to be a balance of economic, social and environmental progress through appropriate application of science, use of technology and their *en masse* adoption through innovative practices.

The changed socioeconomic scenario has brought forth new demands on the region's agriculture which needs to become more rapidly market oriented and globally competitive. The region is, therefore, at the cusp of significant change in its agriculture and agri-food systems. These systems urgently need new technologies and innovations for their impending transformation. Investment in agricultural research and innovation systems will determine the success of future agricultural development in the region.

4. The Future of Agricultural Research and Innovation

The focus of agriculture related research and innovation in the region now needs to urgently shift to making food more accessible, affordable, safe, healthy, nutritious and meet internationally accepted quality standards. There is greater vertical coordination in supply chains within countries and sub-regions such as South Asia, Southeast Asia and East Asia with formation

of trade blocs such as the Association of Southeast Asian Nations (ASEAN), South Asian Association for Regional Cooperation (SAARC) and Asia-Pacific Economic Cooperation (APEC) and also the region as a whole. This is also bringing new needs for research, technology and innovation. Many opportunities are emerging for ushering farming systems based revolution comprising crops, animal, horticulture and aquaculture appropriate for specific agro-ecologies and local preferences.

Research and innovation need to be directed towards enabling a green bio-based economy that produces new bio-material as industrial feedstock and also emphasizes ecosystem management and sustainable use of natural resources, energy and forests, amidst a background of challenges of coping with climate change, fluctuating prices and unstable economies as well as preventing and managing spread of trans-boundary diseases of human, animals and plants.

4.1 Advocacy for Investment in Agricultural Research and Innovation

Investments in agricultural research and innovation were so far guided by the need of governments in the region to attain national food security. These were to some extent guided by the domestic and foreign agricultural development community who also lobbied for investment in agricultural research to generate, adapt and adopt new technologies into farming.

Decision-making on future investments in this area has now shifted to include political, economic and business considerations taking into account the following:

- Benefits from competing demands such as of health, education and infrastructure;
- Importance attached to agriculture as a primary economic sector and its development through use of technology;
- Perception of contributions to and impact on development and growth from agricultural research;
- Perceptions of returns on investment in agriculture compared to investments in other sectors; and
- The absorption capacity of the investment by the national research and development systems.

This shift and competition for investment is expected to intensify further in the future. Therefore, new ways to advocate and attract investment in agricultural research and innovation are now required.

4.2 Investing in New and Emerging Areas of Science, Technology and Innovation

There are several pathways, for solving the numerous problems in agriculture and agri-food systems that the region faces, through the use of science, technology and innovations. Some pathways such as for germplasm management, new variety development and utilization, and space application comprise those that require large multi-million dollar investments for decades and advanced infrastructure in science and technology. There are also those that need a larger spread of relatively small investments that enable mass innovation by farmers, market intermediaries and consumers. The region has only a few countries that can effectively invest large amounts over long periods of time in this area. Considering the region as a whole, there is now a need to carefully consider appropriate pathways and collaborate including pooling of resources in order to apply advanced science and technology as also mass innovation to effectively address these issues.

4.3 Investing in Capacity Building

The Asia–Pacific Region is comparatively better endowed than other regions with capacities for formal agricultural research. For example, China has more than 1,25,000 trained agricultural scientists and technicians in its agricultural research system and India about 35,000. It has a long and rich tradition of agricultural innovation, having developed countless crop varieties and animal breeds, sustainable and resilient agricultural practices, irrigation methods, agricultural farming equipment, etc. However, with the need for new agric-food systems to be competitive in globalized agricultural product markets and shift to bio-based economies, there will be a need for not only increased but also new and different capacities in institutions, technologies and enabling communities to innovate to participate in markets.

There is also a growing realization of the benefits of investing in human capital by way of improvement in health, nutrition, education of particularly the poor, and greater networking possibilities in knowledge, skills, and technology that leads to mass innovation.

4.4 Investment by Public, Private and Community Sectors

There is growing realization in national governments in the region that for the successful transformation to a new economy, partnership with the private and community sectors is vital. Public sector funding in research and innovation is essential to provide confidence for the private sector to also invest and impact on agricultural development.

However, most governments do not yet consider that the community of those who practice farming and allied occupations as a major contributor to agricultural innovation. If this sector is accounted for it may be the largest investor in this area. For the shift to a new bio-based economy that manages the environment through sustainable means, public investment to leverage innovation by communities will now need greater attention.

4.5 National, Sub-regional and Regional Partnerships and Collaborations

The national governments in the region also realize that partnership with littoral countries and forming economically free trading zones such as the APEC, ASEAN and SAARC is a key to their continued growth and development. Extending partnership in trade will lead to partnerships in use and development of new technologies and in research and innovation. Institutional innovations and partnerships aligning with new understanding are evolving for collective actions at global, regional, national and community levels to solve complex, interconnected problems that affect the whole society. Investments will be needed to foster these new partnerships through institutions and partnership based organizations in carrying out research as also spread of innovations.

4.6 Renewed Political Will

There is renewed recognition and expressions of political will especially in terms of government policies of the role and impact of agriculture as one of the major drivers of economic and social development. Other parallel developments include the renewed political recognition of the role of agricultural research at the global level with new international mechanisms involving UN agencies, the G20, the World Economic Forum, the revamped Committee on Food Security and Global Forum on Agricultural Research

(GFAR) as open and inclusive mechanism for action with an expanded range of research globally.

5. The Policy Dialogue

The High Level Policy Dialogue aims to understand and discuss issues relevant to investment in agricultural research and innovation systems in Asia and the Pacific. It will provide information on questions such as why, what, where and how investments are being made now and will need to be made in future at the national, sub-regional, and regional levels for intensifying the development of agriculture and agri-food systems in Asia and the Pacific.

5.1 Goal

The overall goal of the Dialogue is to promote investment in agricultural research and innovation for sustainable development through appropriate policies, strategies and actions.

5.2 Purpose

The purpose is to catalyse policy/decision makers, re-sensitize NARS, and create an environment for increased resource allocation and congenial policy environment for agricultural research and innovation for sustainable development in Asia and the Pacific.

5.3 Dialogue Organization

The dialogue is expected to discuss many of the above issues in the context of investing in agricultural research and innovation. The Program is arranged in four major thematic areas to provide:

- An overview, including current status, trajectories, trends and forward looking of investments in agricultural research and innovation;
- Scoping specifics of investments in agricultural research and innovation systems
    - Current and Emerging Challenges
    - Smart and Sustainable Agriculture
    - Knowledge Management, and
    - Capacity Development – partnership, collaboration and networking

- Impact expectations from investing in agricultural research and innovation for development (ARI4D)
- New and innovative ways of investing in ARI4D

The overall objective is to make investments more efficient and effective.

The sessions are organized to have quality resource papers, and to fully involve participants in discussions through questions and answers in each session, panel discussions and plenary sessions to sum up the proceedings as the dialogue progresses. The activities, deliberations, inputs and outputs will be covered by social media through face book, blogs, twits, etc. so that the wider global communities are aware of these deliberations and outcomes.

5.4 Participation

The participants in this dialogue include researchers, policy makers, farmers and representatives of various organizations including NARS institutions, the private sector, women and youth representatives, CGIAR Centers, international agricultural research centres, advanced research institutions, civil society organizations (CSOs) including non-governmental organizations (NGOs), farmer organizations (FOs), foundations and funding /donor agencies.

5.5 Expected Outputs, Intermediate Outcomes and Outcomes Based on Theory of Change

5.5.1 Expected Outputs

- Assessed and validated current and future national, sub-regional and regional trends and capacities in investment (including areas of investment) in agricultural research and innovation systems;
- Participants became more aware on current investments, their trends and future needs and areas of investment in agricultural research and innovation systems;
- Consensus developed on appropriate joint arrangements for public-private- community co-investments in research and innovations and way forward on innovative funding mechanisms;
- Perceptions of donors and policy makers firmed-up on funding for and expectations from agricultural research and innovations;

- Dialogue proceedings brought out with recommendations, action plan and way forward;
- Quality presentations made with abstracts and briefing papers for data bases and future references;
- Posters and accompanying briefing papers on national and other stakeholder investments (private sector, community sector, education, extension, etc) displayed and circulated;
- Synthesis paper of country reports and briefing papers and other materials as presented at the dialogue; and
- Advocacy toolkit on improved and increased investment in agricultural research and innovation systems developed.

5.5.2 Intermediate Outcomes

- The inputs to and outputs from the Policy Dialogue, directly relevant for the proposed GCARD 3 process, for follow up;
- Resource Group established to support regional and national investment needs such as for policy, strategy, investment structures, re-engineering and development;
- Engagement in skills and capacity development for attracting investments and mobilizing spending, leading to more refined, competitive and objective methods and approaches for the long-term investments;
- Systematically advocated and promoted improved and increased investment in agriculture research and innovation systems for the present and future;
- National, sub-regional and regional planning for ARI4D improved through advocacy toolkit developed by APAARI;
- Investments for ARI4D in annual budgets of national governments and regional development agencies enhanced and improved;
- Sharing and exchange of research and innovation efforts and their outputs within and across the region; and
- Improved traction and contribution of global, regional and national development agencies in working with research and innovation systems.

5.5.3 Expected contributions to the following development outcomes

- Innovations in agriculture and food systems in the Asia-Pacific region, leading to greater economies and efficiencies;
- Foundation for development of agriculture, food and nutritional security, development and growth in the region and its various constituencies;
- Increasing and improving availability of affordable, safe, healthy, nutritious and high quality food and agro-industrial feedstock;
- Greater and more effective participation of the Asia-Pacific Region in globally competitive agricultural products and technology markets;
- Energy utilization management especially in rural areas for agricultural production;
- Sustainable use, conservation and reduction in wastage and loss of natural resources and biodiversity;
- Improved environment with recreation and preservation of local cultural heritage; and
- Increased, sustainable livelihoods and environments.

5.7 Organizers

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5.8 Sponsors

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