

APAARI Vision 2030:

Strengthened Research and Innovations for Sustainable Agricultural Development



Asia-Pacific Association of Agricultural Research Institutions (APAARI)

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APAARI is a unique voluntary, membership-based, self-mandated, apolitical and multistakeholder partnership organization in the Asia-Pacific region. Since its establishment in 1990, it has significantly contributed towards addressing regional agricultural research needs. The close links, networks, partnerships and collaboration with stakeholders that APAARI has established over the years, as well as its goodwill, authority and focus on results, make the Association a valuable actor that continues to contribute to the development of agriculture and agri-food research and innovation systems in the region.

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Asia-Pacific Association of Agricultural Research Institutions (APAARI)



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Acronyms and Abbreviations

ACS	Agricultural Capital Stock
ADB	Asian Development Bank
APAARI	Asia-Pacific Association of Agricultural Research Institutions
APEC	Asia-Pacific Economic Cooperation
AR&I	Agricultural Research and Innovation
ARI4D	Agricultural Research and Innovation for Development
ASEAN	Association of Southeast Asian Nations
BRICS	Brazil, Russia, India, China and South Africa
CSO	Civil Society Organization
FAO	Food and Agriculture Organization of the United Nations
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GHG	Greenhouse Gases
GFAR	Global Forum on Agricultural Research
ICTs	Information and Communication Technologies
IFPRI	International Food Policy Research Institute
MDGs	Millennium Development Goals
NARIs	National Agricultural Research Institutes
NAROs	National Agricultural Research Organizations
ODA	Overseas Development Assistance
PME	Prioritization, Monitoring and Evaluation
R&D	Research and Development
SAARC	South Asian Association for Regional Cooperation
SARS	Severe Acute Respiratory Syndrome
SDGs	Sustainable Development Goals
SPC	Secretariat of the Pacific Community
UN	United Nations

Foreword

Small farmers in the Asia-Pacific region are facing unprecedented challenges in the 21st Century. With about 63 per cent of the world's hungry and malnourished people living in the region, agriculture and its contribution to food security is crucial. The ever-growing population, increasing scarcity of land and water and unpredictable climate change scenarios suggest that improving agricultural productivity and production will be the key to agricultural growth and its ability to meet the rising and changing demand for food and feed. With new production and supply chains, farmers will need to innovate to respond to changing market demands and increasing competition.



In this dynamic and rapidly changing context of agri-food systems in the Asia-Pacific region, agricultural research and innovation systems must also change. These will require a renewed focus of agricultural research and innovations to help address the current and emerging challenges and explore available opportunities.

In view of the above scenarios, the Asia-Pacific Association of Agricultural Research Institutions (APAARI), following a well-structured process of review, e-consultation and brainstorming, developed a key corporate document - APAARI Vision 2030. The vision considers APAARI's core values and articulates the need for new ambitions and new competencies within the Association. It specifies vision, mission and goal statements as principal guiding elements. It further defines thematic thrusts and APAARI's core functional areas that provide strategic framework for developing medium-term strategic plans and short-term implementation plans as essential building blocks towards realising the vision by 2030.

I take this opportunity to acknowledge the efforts of APAARI Secretariat under the leadership of Dr Raghunath Ghodake, Executive Secretary, APAARI, in overseeing and coordinating the development of APAARI Vision 2030. My sincere thanks are also due to Dr Mruthyunjaya, Lead Resource Person for his invaluable contribution in articulating the vision, and to the International Food Policy Research Institute (IFPRI) for making his services available to APAARI. The core committee comprised of members of the APAARI Executive Committee and eminent persons contributed immensely and their contributions are thankfully acknowledged. My thanks also go to APAARI members and partners, who were part of this consultation process and contributed significantly towards the development of this important document.

The APAARI Vision 2030 provides a new key guide for APAARI, its secretariat and partners to strengthen agri-food research and innovation systems for sustainable agricultural development in Asia and the Pacific.

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Somchai Charnnarongkul Chairman, APAARI Executive Committee and Director General, Department of Agriculture (DOA), Thailand

26 February 2016

Executive Summary

The Asia-Pacific Association of Agricultural Research Institutions (APAARI) was established in 1990 at the initiative of the Food and Agriculture Organization of the United Nations (FAO) and several National Agricultural Research Institutes (NARIs) and National Agricultural Research Organizations (NAROs) of Asia and the Pacific. Since its establishment, APAARI has been promoting agricultural research for development to enhance food and nutritional security in Asia and the Pacific.

APAARI has renewed its Vision to adapt to the dynamic and changing context of the Asia-Pacific region and to address the key challenges as it sets on a path towards contributing to the realization of the Sustainable Development Goals (SDGs) in Asia and the Pacific. Figure 1 below shows the process of developing APAARI Vision as follows:

 The changing context of agri-food systems in the Asia-Pacific region, its key needs, challenges and opportunities, as well as APAARI's institutional context that defines its ethos, roles and functions, has been given due considerations in developing the Vision.



Figure 1: Development of APAARI Vision 2030

- The Vision, Mission and Goal Statements have been generated while developing the Vision and APAARI's broad processes and manifestation of targets that are required to accomplish this Vision have been defined.
- The Vision determines the identification and setting of new ambitions and development of new competencies within the APAARI Secretariat, Stakeholders and the Networks, needed to realize the Vision.
- Key operational elements that are derived from and contribute to the fullfilment of the Vision are APAARI's thematic thrusts. These thrusts need to be addressed through APAARI's implementation focus areas.
- The Vision, thematic thrusts and implementation focus areas, as well as ambitions and competencies form the basis for a Strategic Framework that will lead to strategy planning and development of operational plans for implementation by APAARI.

APAARI Vision

Strengthened research and innovations for sustainable agricultural development in Asia and the Pacific.

APAARI Mission

Promoting, coordinating and strengthening agriculture and agri-food research and innovation systems through partnerships and collaboration, capacity development and advocacy for sustainable agricultural development in Asia and the Pacific.

APAARI Goal

The Asia-Pacific region benefits from and values APAARI's leadership and contribution to developing agriculture and agri-food research and innovation systems.

Background

The Asia-Pacific Association of Agricultural Research Institutions (APAARI) was established in 1990 at the initiative of FAO and several NARIs and NAROs of the Asia-Pacific region.

The overall objective of APAARI was to foster agricultural research and development to contribute to addressing the concerns of hunger, poverty, environmental degradation and sustainability of agricultural production in the Asia-Pacific region.



Upland rice terrace in Vietnam ®VAAS

To pursue its objectives,

APAARI initiated diverse activities through a mid-term perspective plan: 1995-2000. At the turn of the millennium, APAARI developed its Vision 2025. A review of activities of the Association during the past 25 years indicates the very significant role it has played as a useful platform for capacity development, advocacy and awareness creation concerning agricultural research, as well as a regional forum for dialogue on issues related to agricultural research and innovation for development (ARI4D). While these activities continue to remain important, the challenges being faced and the opportunities available now and in the future require a renewed vision and mission for APAARI.

In 2014, the APAARI General Assembly expressed the need to revisit APAARI Vision 2025 document and reprioritize its activities in the light of recent developments in agriculture and the adverse effects of climate change.

Looking at the needs of the region during the next 15 years, this document embodies the renewed APAARI Vision 2030 in alignment with United Nations (UN) Sustainable Development Goals (SDGs), which *inter alia* have direct and/or indirect reference to setting the boundary and direction for the future orientation of agriculture and agri-food research systems beyond 2015 in the Asia- Pacific region.

However, out of 17 SDGs, the most germane one to APAARI is SDG2 – Ending hunger and achieving food security and improved nutrition and promote sustainable agriculture. For this SDG, all the proposed detailed targets by the UN are in the mainstream of APAARI's future contributions to sustainable agricultural development, namely, shifting towards healthier diets; ensuring the supply of safe and nutritious food; zero hidden hunger; doubling productivity and incomes; strengthening capacity for climate change adaptation; maintaining the genetic diversity of seeds and genetic resources; and women's empowerment. Reducing food losses and waste (pre-and post-harvest) is also a critical detailed target of SDG 12 – Ensuring sustainable consumption and production patterns, which is also very important for APAARI.

Context

The context of agri-food systems in the Asia-Pacific region is dynamic and rapidly changing. Despite significant social and economic progress and partial achievements of the Millennium Development Goals (MDGs), the region's problems of hunger, extreme

poverty especially in rural areas, environmental health, social and economic equity still persist. The Asia-Pacific region has about 63 per cent of the world's hungry and malnourished, 50 per cent of the world's extreme poor and 70 per cent of the world's undernourished children and women. Large populations of the Asia-Pacific region currently, and in the



Greening the greenhouse in the Philippines ©PCAARRD

foreseeable future, will continue to depend on farming and agriculture as their main source of livelihoods. Thus, the region, which is at the threshold of a new era, has to play a prominent role in the world's agricultural research and innovation agenda in the coming years.

Economic progress, population growth and rapid urbanization have increased pressure on gross food supplies and created the need for new market-oriented agri-food systems. With changing consumption patterns, an increased demand for food, such as meat, vegetables, fruits, edible oil and sugar, is predicted to place more stress on available resources,

especially land and water. In addition, the price of food is expected to stay high and volatile, which affects real incomes and status of poverty in the region. Higher cost of food affects poor people most.

In recent years, the region has also suffered from several food and nutritional security issues, including safety and quality, resulting in the declining public trust especially related

to food safety and quality. Dietary health issues, such as obesity and metabolic disorders, are now given much attention in some parts of the region, particularly in countries with rapid economic growth and resulting changes in lifestyles. The concerns around environmental health. food safety and healthy diets are predicted to intensify in the coming years.



Rural communities in Central Asia learn about salt-tolerant dual purpose crop/seed multiplication ©ICBA

The above concerns indicate that the Asia-Pacific region faces new emerging challenges of ensuring efficient use of natural resources, improved rural livelihoods and social wellbeing, enhanced resilience of people, communities and ecosystems to climate change and market volatility, as well as good governance, policy and financing framework. Renewed efforts are needed to address these challenges at the earliest.

With increasing initiatives towards regional integration, it is predicted that the region will develop into a single market and production base for goods. It will become a competitive economic region with more equitable economic development. The agriculture and food sector will continue to play a key role in the region.

There is a clear evidence showing that agricultural research has contributed to increased food security in the region. The ongoing emergence of new scientific developments, such as in the areas of nanotechnology, biotechnology, information and communication technologies (ICTs), geo-spatial technology, new material sciences and capacity-building opportunities, hold a great promise to contribute to reduced yield gap and increased and sustained production, productivity and profitability of agri-food systems in the region.

Key Needs

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Some of the key needs pertaining to agriculture and agri-food systems' development in the Asia-Pacific region include the following:

- Developing more sustainable and climateresilient agriculture and agri-food systems.
- Satisfying the dietary and income needs of smallholder farmers and fishers, entrepreneurs, women and youth, especially those located in vulnerable ecologies, who constitute a majority of the world's seriously malnourished people and whose livelihoods and health are largely dependent on farming, agriculture and related activities.
- Accelerating the shift to a bio-based, low carbon footprint economy.
- Ensuring greater inclusion of the least developed countries, such as Afghanistan, Cambodia, Myanmar, small Pacific-island



countries and mountain and hill ecosystems, which are lagging behind in the ongoing science- and knowledge-based agricultural development.

- Addressing the issues of the demographic changes, the critical need for more trained manpower across a wide range of disciplines, particularly in the weaker NARIs and NAROs, immense potential of academia-industry interface, rapid urbanization, the increasing influence of consumer choices on deciding production and supply patterns, and transformation of the rural-urban continuum in the region in the context of agri-food systems development.
- Harnessing alternate options for sustainable development, such as the growth of rural non-farm economy, strengthening secondary agriculture and skill development, scaling up of growth centres and enterprises, including liberally supporting start-ups in agricultural technology and innovation.
- Providing better amenities to support improved quality of life and social well-being in the face of changing rural areas.
- Preserving fast-eroding cultural heritage and blending traditional wisdom with modern science.

- Recognizing institutional plurality of agricultural research and innovation and the need for wider representation and participation in decision making, especially involving smallholder farmers, as well as implementation and assessment of research and innovation efforts in agri-food systems.
- Tapping into the global talent pool by raising aspirations of professionals, improving employability, providing the needed compensation and incentives, and leveraging contacts and expertise.
- Benefitting from the growing importance and influence of global value chains to improve overall food security, as well as engagement and higher earnings of smallholder farmers.

Key Challenges

Some of the key challenges defining APAARI's new role to contribute to meeting the needs of the region are given below.

Increasing the productivity of agricultural and farming systems and producing affordable, safe, healthy, nutritious and high quality food

The rates of growth in yield of most of the crops grown in the region have been declining. To feed a growing population, it is predicted that food production needs to double by 2050. An average yield gap of about 30 per cent exists between the realized and the potential yields. This gap has to be bridged against the odds of significant negative environmental effects. Further, annual growth in agricultural capital stock (ACS) has slowed down in the last decade, with only a fraction of Foreign Direct Investment (FDI) and Overseas Development Assistance (ODA) going to agriculture. This points to a highly varied government expenditure on agriculture and ARI4D among countries in the region. These trends need to be reversed.

Reducing the losses of agricultural produce in the supply chain

Post-harvest losses and wastage are estimated to be about 30 per cent of food supplied to the market. The losses that are occurring on the farm as well as during transit along the supply chain need to be reduced through well-integrated and innovative efforts and the best possible post-harvest management practices.

Enabling agricultural systems to produce new bio-materials and integrate with more advanced agro-industries, agri-business and agri-services

Several countries in the Asia-Pacific region, such as Australia, China, Japan, Malaysia, South Korea and Thailand, already belong to high or middle income countries. Many others are rapidly advancing to join this category as the region has demonstrated high economic growth rates in the past two decades. However, almost all these countries show signs of getting into the "middle income trap", being unable to shift to new and higher stages of economic development that would enable the poorer sections of their societies to move into higher real incomes. A possible route to escape this trap is to enable agriculture to integrate more seamlessly with the manufacturing and service sectors and provide new growth opportunities with more advanced agro-industries, agri-business and agri-services sectors.

Emphasizing sustainable use of natural resources and forests / agroforestry

Access to natural resources such as arable fertile land and water in the region is becoming limited. There is also significant depletion and wastage of these resources within the

region. Asia and the Pacific region uses three times more natural resources than the world average per unit of gross domestic product (GDP). Water scarcity and land degradation are also worsening. Over 28 per cent of the region's landscape is severely degraded and its internal water resources are only about half the world's average.

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Spices and fruits in an agroforestry system [©]ICRAF

Transformational land-use change driven by growing demand for food, fodder, timber, fibre, and energy is also directly linked to the future of forests/agroforestry and trees as providers of ecosystem goods and services to the society. In the tropical countries of the region, loss of natural forests is continuing unabated, and is threatening the source of income, subsistence and survival, especially of poor people. Presently, about 28 per cent of the region's land area retains forest cover. This is equivalent to only a quarter of a hectare of world land per person. This is the lowest rate for any region in the world. Although the region has seen some efforts towards tropical forest plantation development in recent years, increased investment in forest/agroforestry development is the need of the time.

Coping with risks of climate change, extreme weather aberrations, price risks and economic shocks

The region suffers from a proportionately larger share of the world's catastrophic natural and man-made disasters, such as forest fires, cyclones, landslides, floods, droughts and civil unrests. A person living in this region is almost twice as likely to be adversely affected by a natural disaster as compared to a person in Africa, almost six times more than in Latin America and the Caribbean, and almost thirty times more than in North America and Europe. The incidence and impacts of disasters are also increasing in the region.

A major new issue affecting natural resources and their use is climate change and extreme weather events associated with it. Climate change represents an immediate and unprecedented threat to food security in the region as it will cause gradual yield declines for most important crops. A 4°C temperature rise, significant emissions of Greenhouse Gases (GHG) from agriculture, and other land uses, are now predicted to occur by 2050. This will have enormous consequences that call for climate change mitigation and adaptation efforts. The emergence and utilization of carbon markets is also an opportunity that needs to be harnessed.

In a globalized world, the world economies are closely integrated. There would be a greater pass through of cross-border cost shocks and co-movement of inflation rates with ripple effects everywhere. The region's economic outlook is subject to downside risks posed by rising inflationary pressures driven by high food and energy prices. Continued pressure on exchange rates and asset prices emanating from large and volatile capital flows present further risks. The price inflations of 2007 and 2008 have clearly demonstrated how poor people will be hit hard under such multiple shocks.

Preventing and managing the spread of trans-boundary diseases of humans, animals and plants

Trans-boundary spread of zoonotic and plant diseases are a permanent threat to food security, human health and welfare of mankind and animals. Diseases such as severe acute respiratory syndrome (SARS), bird flu, and Ug99 (wheat stem rust), have created panic and untold miseries in many countries in recent years, and pose enormous economic implications. They have threatened human-animal health both through the private and public costs of the outbreak and spread, as well as through the costs of the measures taken at individual, farm, and collective levels both nationally and internationally in order to prevent or control infection and disease outbreaks.

Greater integration of agricultural and food value chain actors with markets

Economic growth, rapid and large-scale urbanization, globalization, reduced state intervention and import barriers have contributed to expanding domestic and international markets for agricultural commodities, processed foods and technologies. Changes in food preferences, diets and food systems towards high value products such as fruits and vegetables, animal products, fish, sugar, oil, and the trend of a dramatic rise in their prices in the past 10 years, make them attractive as value chains opportunity to small farm holders.

Furthermore, as a result of an increasing demand for high value and processed foods, there has been an emergence of complex agricultural supply chains, supermarket and fast food restaurant chains, which though being interdependent are still not well integrated and efficient. In many countries, farmers have poor access to both input and output markets.

With least access, inefficiencies and vulnerabilities of local markets that are the first points of entry for business, producers are deprived of economic benefits of market-oriented agricultural development.

Expanding opportunities for communication and capacity development to promote adoption of agricultural technologies, innovations and best practices

Science discoveries, technology, creativity and innovations are central to promoting progress and are among the most powerful tools for sustainable solutions and rapid socioeconomic transformation.

Equally important is harnessing opportunities in ICTs, such as cell phones, space technology applications and capacity development. This is through upgrading knowledge and skills of farmers, traders and all involved in agricultural value chains to secure adoption of best technologies, innovations and practices in production, processing, storage, transport, traceability, marketing and trade.

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Study tour for South Asian farmers for sharing good practices in India ${}^{\otimes}\text{CAPSA}$

Further, public and private sector partnerships in ARI4D have to be promoted as they have proved to be instrumental in increasing efficiency of research and development (R&D), its applicability and responsiveness towards beneficiaries. To foster transformation towards sustainable development, several key areas require significant enhancement in institutional and human capacity, particularly in small and weaker NARIs and NAROs. Besides capacity development in domain knowledge, skill development for data collection, analysis and providing feedback to support institutional and policy change also requires substantial strengthening.

Sustainable generation and use of energy

The Asia-Pacific region accounts for nearly 60 per cent of the world energy demand and its energy requirements are rapidly rising. The region is a net energy importer. The critical energy issues include greater regional coordination on energy security; removing barriers to energy production; balancing the use of food grains between food and energy needs (biofuel); bringing efficient distribution and consumption, trade and investment and facilitating trade in energy. There is also an urgent need to promote new and renewable energy, energy efficiency and smart communities; as well as forge cooperation on cleaner generation and use of carbon based fuels, especially in the context of rural areas. As agriculture evolves to higher stages of growth, energy demands will be higher in all areas of agriculture from production, processing, storage, and transport to retail marketing. The energy uncertainties in the region will require support of robust energy networks and promotion of flexible and resilient energy systems and markets for sustainable and more efficient agriculture and food systems.

Linking multi-disciplinary agricultural research to development outcomes with innovation pathways, desired milestones and targets

The linkage between scientific advances and development outcomes is currently very weak. However, it is becoming increasingly more important as a prerequisite for securing

more development funding to research undertakings in the future, especially in the era of financial austerity. Research systems need to be more accountable to their beneficiaries rather than focusing on the outcomes of scientific achievements alone. Priorities need to integrate science with development in consideration of issues such as sustainable intensification:



A worker selects plants for harvesting in Indonesia ©CIFOR

better access to safe and nutritious food by vulnerable communities, women and youth; increasing agricultural incomes through value-adding post-harvest management; and creating entrepreneurial opportunities for resource poor smallholder farmers and producers. Strengthening monitoring and evaluation (M&E) practices can contribute to forging strong linkages with development outcomes.

Weak and underfunded ARI4D systems

Many ARI4D systems in the region continue to remain constrained with bottlenecks of leadership, bureaucracy, capacity, investment and linkages with wider development processes as well as with farmers, the private sector and civil society organizations (CSOs). They are poorly-equipped to ably support the changing context of their countries,

communities and the region. They must become more agile and adaptable in responding to the fast changing external environment. Priority attention to strengthen them is necessary. APAARI-ADB Bangkok Declaration includes a recommendation that the annual investments in agricultural research in the Asia-Pacific region need to at least double in real terms in the next decade from their current level of about USD 10 billion.

Emerging opportunities

Technological and institutional innovations

In addition to crop production, several opportunities are emerging for ushering a bioprospecting revolution in the area of animal production, horticulture, aquaculture and sea resources. New advanced technologies and innovations in a range of scientific and social science disciplines can trigger such transformation. Institutional innovations and partnerships that are aligning with new priorities are also evolving to encourage collective action at global, regional, national and community levels to solve complex and interconnected problems that affect the whole society.

Renewed political recognition of ARI4D

Renewed recognition and expressions of political will, especially through government policies, are increasingly emphasizing the role and impact of agriculture as a major driver of economic and social development. Other parallel developments include renewed political recognition of the specific role of ARI4D at both national and global levels. New international mechanisms involving the UN agencies, the G20, the World Economic Forum, the FAO's revamped Committee on World Food Security, and the Global Forum on Agricultural Research (GFAR) offer open and inclusive instruments for action among the expanded range of research for development partners.

Greater vertical coordination in supply chains through policy reforms point to a growing interest in reaching out directly to poor people by supporting investments in human capital, health, nutrition, education, and greater networking possibilities through knowledge sharing, advancement of skills and technology development.

Increasing role of sub-regional organizations

Active sub-regional organizations such as the Association of Southeast Asian Nations (ASEAN), South Asian Association for Regional Cooperation (SAARC), Secretariat of the Pacific Community (SPC), Asia-Pacific Economic Cooperation (APEC), Shanghai Cooperative Organization, and Brazil, Russia, India, China and South Africa (BRICS) Bank, are the new and emerging mechanisms for collective development actions at regional and

sub-regional levels. They are all creating new ways of coordinating and delivering support often involving the private and community sectors.

These opportunities are important for establishing capable ARI4D systems but they are not ably accessed and utilized enough in the Asia-Pacific region. APAARI can catalyse and facilitate all these processes to act collectively and coherently for agricultural development in a big and effective way.



Researchers upload the data to see and analyse the results ©Nanang Sujana/CIFOR

APAARI Vision

APAARI is a unique voluntary, membership-based, self-mandated, apolitical and multistakeholder partnership organization in the Asia-Pacific region. Since its establishment in 1990, it has significantly contributed towards addressing regional agricultural research needs. The close links, networks, partnerships and collaboration with stakeholders that APAARI has established over the years, as well as its goodwill, authority and focus on results, make the Association a valuable actor that continues to contribute to the development of agriculture and agri-food research and innovation systems in the region.



Participants at the High Level Policy Dialogue on investment in Agricultural Research for Sustainable Development in Asia and the Pacific [©]APAARI

APAARI has renewed its Vision to adapt to the dynamic and changing context of agrifood systems in the Asia-Pacific region and to address the key needs, challenges and opportunities. The APAARI's institutional context that defines its ethos, roles and functions, has also been given due consideration in developing the Vision.

Core Values

While the APAARI vision, mission and goals may change to keep pace with dynamic national and international contexts, APAARI's core values have remained intact. They continue to inspire shareholders and stakeholders with APAARI as their trusted and dependable ally for sustainable agricultural development in the region. APAARI's core values are as below.

Visionary approach: Foreseeing the future and working in the frontier areas through collaboration and partnership to realize the full potential of scientific research for sustainable development, advancing ideas and innovations, and encouraging creativity and initiatives.

Devoted to merit and excellence: Functioning as a capable and motivated organization providing an enabling environment for attaining excellence by investing available resources optimally to leverage the full potential of research and innovation for development.

Learning and growing: Continually enhancing knowledge and skills to identify opportunities and capitalize on them for the growth and development of community, system, the nation and the weaker and smaller NARIs and NAROs.

Inclusiveness with equity in participation: Strongly believing that only involving and including the contributions of all potential players and fully harnessing opportunities in partnerships and collaboration both nationally and internationally, with greater equity in participation and sharing of benefits, can meet the growing aspirations of all its stakeholders.

Accountability with highest integrity: Operating with the highest performance standards and integrity, openness and transparency and maintaining high quality in its administration, management and oversight.

The Vision, Mission and Goal Statements generated while developing the Vision are given as below.

APAARI Vision

Strengthened research and innovations for sustainable agricultural development in Asia and the Pacific.

APAARI Mission

Promoting, coordinating and strengthening agriculture and agri-food research and innovation systems through partnerships and collaboration, capacity development and advocacy for sustainable agricultural development in Asia and the Pacific.

APAARI Goal

The Asia-Pacific region benefits from and values APAARI's leadership and contribution to developing agriculture and agri-food research and innovation systems.

APAARI's Ambitions

As APAARI renews its strategic focus, it sets its new ambitions to fulfill its mission to promote, coordinate and strengthen agriculture and agri-food research and innovation systems through partnerships and collaboration, capacity development and advocacy for sustainable agricultural development in Asia and the Pacific. Hence, APAARI aims to become:

- A leading think tank with high quality expertise, regional voice and a hub of high quality capacity development, research collaboration with high priority for smallholder farmers, women and youth in the region.
- The most sought after repository of up-to-date knowledge, information, data and quality
 publications related to agricultural development and innovations in the Asia-Pacific
 region.
- A well-recognized centre of excellence to influence agri-business policy making and institutional development.

- A leader able to continuously inspire by vigorous commitment to add value to the functions and actions of its partners and programmes.
- An influential policy advocate for higher investment, capacity development, management of ARI4D institutions, knowledge, skills and technology sharing.
- An open, transparent, and financially-secured system with best governance and efficient work culture.

New Competencies

To fulfill its ambitions, APAARI will need to acquire new competencies and skills including:

- Knowledge brokering
- Forward thinking and foresight
- Building and consistently sustaining continuous links and partnerships
- Partnership, negotiation, advocacy and policy promotion skills
- Enabling openness and sharing/exchanging of knowledge to get involved in research with wider international, regional and national development programmes, policies and actions, particularly in new sciences and enabling innovations
- Efficient and effective communication
- Enabling extended agri-business and agri-services value chains
- Addressing programme planning, monitoring and impact assessment, and adoption pathways
- Professionalism with a human face, commitment and consistency of action, and transparency and openness in action

Strategic Framework

APAARI Thematic Thrusts

In view of the emerging needs, key challenges and opportunities for agricultural research and innovation, APAARI will have the following thematic thrusts to contribute to the sustainable transformation and development of agriculture and agri-food systems in the Asia-Pacific region:

- Transforming agriculture and agri-food systems
- Integrating agricultural value chain actors with markets
- Making agriculture knowledge intensive for socio-economic development
- Enabling sustainable use of natural resources, renewable energy, and forests/ agroforestry
- Managing and controlling the spread of trans-boundary diseases and pests
- Coping with risks and uncertainties in agriculture and agri-food systems
- Investing in capacity development for impact-based agricultural research and innovation (AR&I)
- Improving APAARI's governance and resource mobilization

Implementation Focus Areas

The above thematic thrusts will be addressed through the following focus areas:

- Foresight and visioning
- Promotion and advocacy
- Partnership and collaboration
- Capacity development
- Information and knowledge management
- Inclusion of women and youth

Strategic Planning

APAARI is committed to address the needs of the region and meet the challenges by enabling strengthened ARI4D systems. For this to happen, APAARI will plan its implementation strategy in a cycle of six years beginning from 2017 by considering the thematic thrusts and implementation focus areas. It will have biennial operational plans to implement these actions. Figure 2 below demonstrates the planning of specific actions/ activities to be derived from strategic plans based on the Strategic Framework.

	Activity Planning Matrix									Year: 2022	
			Activity Planning Matrix Year: 2021								
		Activity	Planning Mat	nning Matrix Year: 2020							
Activity Planning Matrix										Inclusion of women & youth	Activity 1.6
Activity Planning Matrix									Inclusion of women & youth	Activity 1.6	Activity 2.6
Activity Planning Matri	ix	8				Year: 2017		Inclusion of women & youth	Activity 1.6	Activity 2.6	Activity 3.6
Thematic Thrusts		In	nplementati	on Focus	Areas		nclusion of men & youth	Activity 1.6	Activity 2.6	Article 3.6	
	Foresight & visioning	Promotion & advocacy	Partnership & collaboration	Capacity development	Knowledge Management	Inclusion of women & youth	Activity 1.6	Activity 2.6	Activity 3.6	Country with	Activity 5.8
Transforming agriculture & agri- lood systems	Activity 3.1	Activity 1.2	Activity 1.3	Activity 1.4		Activity 3.6	Activity 2.6	Activity 3.6		100.000	recently and
integrating agricultural value chain actors with markets	Activity 2.1		Activity 2.3	Activity 2.4	Activity 2.5	Activity 2.6	Activity 3.6		Artubi 5.6	Activity 5.6	Activity 6.6
Making agriculture knowledge Intensive	Activity 3.1	Activity 3.2	Activity 3.3		Activity 3.5	Activity 3.6		Annual S. S.	rearry and	Activity 6.6	
Enabling sustainable use of natural resources							Artium 5.6	meaning and	Activity 6.6		Activity 8.6
Managing & controlling trans-	Artivity 5.1		Artistis 5.7	Artuaty 5.4		Activity 5.6	internet internet	Activity 6.6		Activity 8.6	
Coping with risks & uncertainties			Prosterily 2.2	reality 2.4	reality and	Printing and	Activity 6.6		Activity 8.6	_	
n apri-food systems	Activity 6.1	Activity 6.2		Activity 8.4		Activity B.6		Activity B.6	-	the second	1
Investment and capacity development for impact-based ARI&D	Activity 7.1		Activity 7.3		Activity 7.5		Activity 8.6	-			
Improving APAARI's governance and resource mobilization.		Activity 8.2		Activity 8.4		Activity 8.8		-	2		
APAARI A	tivity Outputs.	Results and I Advanced Out	M&E Frameworks puts. Intermediate	Dulcomes, and	Outcomes.	-	-				

Figure 2: APAARI Strategic Planning Framework - Activity Planning Matrix and Results/M&E Frameworks

Activities may have outputs, advanced outputs, intermediates outputs and outcomes, and will contribute to the Development Outcomes and SDGs (as reflected in the Results Framework). Figure 2 shows APAARI activity planning matrix reflecting six-year planning that covers 2017-2022. Activities of each year will vary and some years might not have any activities related to APAARI thrusts and focus areas. These will be determined based on priority and resources available. APAARI will also follow an effective prioritization, monitoring and evaluation (PME) system (M&E framework) to demonstrate evidence of outcomes and impacts of such actions.

Photos

Front cover:

Paddy planting in Nepal [©]Jitendra Raj Bajracharya/ICIMOD Moderated discussion at the High Level Policy Dialogue on Investment in Agricultural Research for Sustainable Development in Asia and the Pacific [©]APAARI Group work during the Regional Workshop on Development of Communication Strategies for Adoption of Agri-Biotechnology in the Asia-Pacific Region [©]APAARI Getting feedback on a presentation during the 12th Asian Maize Conference and Expert Consultation on Maize for Food, Feed, Nutrition and Environmental Security [©]APAARI

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Nature food – a rural way of life in Thailand [®]Department of Fisheries, Thailand Herding bulls in India [®]ILRI Local vegetables market, Nepal [®]Nabin Baral/ICIMOD A group of women farmers have grown grass pea in rice [®]ICARDA Rice diversity [®]Isagani Serrano/IRRI Inspecting ripe 'Melrose' fruit on the vine. This tomato line developed by AVRDC – The World Vegetable Center produces tasty, well-shaped fruit and has excellent disease resistance [®]AVRDC





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