Greater Mekong Subregion (GMS) Sustainable Agriculture and Food Security Program

Southeast Asia Department
Asian Development Bank (ADB)
ADB Strategy 2030

ADB’s Guiding Principles:
- Achieving global commitments
- Using country-focused approach
- Promoting innovative technology
- Providing integrated solutions
- Promoting sustainable development
- Achieving global commitments

Strategic Vision:
- Prosperous
- Inclusive
- Resilient
- Sustainable

Vision Statement:
Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific

JULY 2018
Catalyzing and mobilizing financial resources for development

Various packages of support (staff, TA grant and loans) from Regional Departments for:

PPP capacity development, policy reform, legal framework, investment climate, project feasibility, project selection and prioritization, PPP risk management, project preparation....

Asia Pacific Project Preparation Facility (AP3F)

Transaction Advisory Services

Pillar 1
Advocacy & Capacity Development

Pillar 2
Enabling Environment

Pillar 3
Project Development

Pillar 4

Project Financing

- Sovereign Financing
- Viability Gap Financing
- Availability payment support
- Government equity participation
- State-owned bank on-lending

Non-Sovereign Financing

- Long-term, local-currency finance
- Guarantees, Credit Enhancement
- Takeout financing
- Intermediary/Fund
STRATEGY 2030’S SEVEN OPERATIONAL PRIORITIES

- Addressing remaining poverty and reducing inequalities
- Accelerating progress in gender equality
- Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability
- Making cities more livable
- Promoting rural development and food security
- Strengthening governance and institutional capacity
- Fostering regional cooperation and integration
Why is Rural Development and Food Security an Operational Priority Under ADB Strategy 2030?

- Prevailing unfair terms of trade for agriculture in most DMCs
- Widening disparity in income opportunities between rural and urban areas
- Diminishing interest by youth in farming
- High post-harvest losses due to disintegrated supply chains: inadequate infrastructure and inefficient market access which pose risks to food safety
- Continuing competition for land and water resources by other sectors—prime agricultural lands are being used for urbanization, industrialization, and infrastructure
- Climate change and extreme weather events
- SDGs 1, 2, 12, 13 and 15 may be difficult to achieve
Strategic Directions for OP5: Rural Development and Food Security

• Improve farm productivity and efficiency—knowledge work and adoption of latest technologies to improve productivity and reduce food losses

• Strengthen policy dialogues and partnerships—formulate institutional and policy reforms that incentivize private investments in agriculture

• Strengthen operations in:
  ▪ Agriculture value chains—build market infrastructure and market connectivity; improve supply chain efficiency
  ▪ Use of high-level technologies—use of satellite- and drone-assisted applications, ICT for efficient resource management
  ▪ Climate-smart agriculture—build climate-resilience and promote efficient use of water and energy (water-food-energy-climate nexus)

• Formulate and implement food safety policies and standards—build quality control laboratories, use ICT in food traceability and tracking

• Establish ANR fund facility—allocate ADB seed money to support research and technology applications
CONTEXT

- GEO 6 (March 2019): Current trends, based on technological optimism, improved seeds, machinery and fertilizers, are not likely to supply future demands for food, energy, timber and other ecosystem services and values taking into consideration even moderate projections for land-resource availability (well established).

- Food production is the largest anthropogenic use of land, accounting for 50% of habitable land (well established). Livestock production uses 77% of agricultural land for feed production, pasture and grazing land. The livestock sector provides only 17% of dietary energy and 33% of dietary protein demands. Therefore, using about 80% of agricultural land for livestock is inefficient.

- Approximately one-third of food produced globally for human consumption is lost or wasted (well established).

- FAO: There are still 490 million people in Asia and the Pacific who suffer from chronic hunger; the region is home to almost 62% of the world’s undernourished.

- On the other hand, income growth in GMS countries is hastening a dietary transition towards higher consumption of meat, fruits and vegetables, relative to that of cereals, requiring commensurate shifts in output and adding pressure on natural resources.
Background

- Multiple opportunities for GMS to become a world class supplier of safe and environment-friendly agricultural products
  - Evolving food demand with more demanding consumers
  - Growing investment and trade in agriculture
  - Comparative advantage in food production and supply
  - Consolidation of the agri-food sector

- Challenges for the subregion
  - Poor infrastructure coupled with numerous and fragmented small scale farmers and SMEs leading to ineffective integration in regional and global value chains
  - Lack of harmonized food safety and quality systems and ineffective control of transboundary pests and diseases
  - Worsening climate change impacts and unsustainable agricultural practices and technologies
STRATEGY FOR PROMOTING SAFE AND ENVIRONMENT-FRIENDLY AGRO-BASED VALUE CHAINS IN THE GREATER MEKONG SUBREGION AND SIEM REAP ACTION PLAN, 2018-2022

MAY 2018
SASRAP endorsed by the GMS Ministers of Agriculture

**Impact:** GMS vision as a leading supplier of safe and environment-friendly agriculture products realized

**Outcome:** Benefits to GMS countries and stakeholders from access to market and safer food markets enhanced

**Outputs:**
- Climate-friendly infrastructure for inclusive and gender-conscious agricultural value chains strengthened
- Harmonized crop and livestock safety and quality standards and policies adopted
- Agricultural adaptation in the context of water-food-energy nexus in a warming climate enhanced
Proposed
GMS Sustainable Agriculture and Food Security Program (SAFSP)

Built on:
CASP Phase I and II and SASRAP (Safe and Environment-Friendly Agro-Value Chain Strategy and Siem Reap Action Plan) 2018-2022

Aligned with:
Strategy 2030 OP5 (Rural Development and Food Security)
SDGs

TAD: Transboundary animal disease
AMR: Antimicrobial resistance
GI: Geographic Indication
AI: Artificial Intelligence
IOT: Internet of Things
Key Principles and Areas of Support

Two Principles

- Enhance opportunities for more collaboration among GMS countries and with other sub-regional entities.
- Issues addressed should be transboundary and offer themselves as candidates for promoting regional cooperation and integration.

Three Areas of Support

- Identification of potential infrastructure investments and preparation of pre-feasibility studies to enable mobilization of financing;
- Knowledge management support and technology uptake;
- Policy and strategic planning support.
Theme 1: Greening of Agri-Food Supply Chains

Issues/Challenges

- Agricultural production consumes 70% of global water. Meat production currently uses 77% of agricultural land.
- Performance of agri-food supply chains in GMS is low due to high inefficiencies in energy, water, and waste management along the supply chain;
- Need for integrating green practices into the supply chain management is widely recognized in the GMS but the actual efforts are still limited due to policy/capacity/financing challenges.
- Limited capacities in designing green supply chain networks
- Very few pilots to demonstrate and quantify economic, social and environmental benefits of Green Supply Chain Management (GSCM)

Proposed Activities

- Policy assessment to identify gaps and opportunities for (i) Enhancing energy efficiency, (ii) Promoting renewable energy, (iii) Reducing water consumption, and (iv) Reducing food loss and waste along key agri-food value chains in the GMS
- Capacity strengthening on Green Supply Chain Management (GSCM)
- Modelling the causal factors of post-harvest losses in selected high value crop (e.g. spices, fruits and vegetables) supply chains and design of green supply chain network through public-private partnerships
- Pilots on GSCM in selected agri-food supply chains (e.g., nitrogen fertilizer management) in GMS countries based on country needs, priorities and capacities
Theme 2: Inclusive Agri-Food Value Chains aimed at Job Creation for Women

Issues/Challenges

• Agriculture underperforms because half of all farmers - women - lack equal access to the resources and opportunities. Women have less access to the tools, decision-making power, supplies, and information they need to help their families thrive.

• FAO estimates that (i) giving women equal access to basic resources and services could increase yields on women’s farms by 20-30%, which could raise macro-agricultural output in developing countries by 2.5-4% and (ii) if women had access to the same information and resources as men, up to 150 million people could be lifted out of poverty.

• Women are concentrated in jobs that are low paid and seasonal.

• Providing better services, labor-saving technologies and infrastructure, and/or encouraging a more gender equitable division of domestic and caring work may help free up rural women’s time to take advantage of new employment opportunities.

Proposed Activities

• Assess barriers for job creation for women in selected agri-food supply chains

• Provide support for mainstreaming gender concerns in agri-food policies with focus on job creation

• Strengthen capacity of lead women farmers and women entrepreneurs on agribusiness plan development, financial literacy, market literacy, value addition, climate smart agriculture technologies and practices

• Enhance agri-food marketing skills, access to inclusive markets and support employment of women in agri-food value chains through partnerships with the private sector

• Pilot agricultural digital finance service for women entrepreneurs engaged in agri-food value chains
Theme 3: Financing for Climate-Smart Agribusinesses

Issues/Challenges

• **Sustainable and affordable financing** remains a major constraint for all agribusinesses, especially for SMEs.

• Many agricultural SMEs in the GMS lack **business and marketing skills to mobilize financing**. SME financing requirements are considered too large to be met by microfinance organizations but are considered risky by commercial financial institutions.

• **Limited awareness of different financing instruments and options** (e.g., conservation financing, impact investing, warehouse receipt financing) available for climate-friendly farm enterprises is also a barrier.

• As state sponsored subsidy and guaranteed price programs get dismantled, the **financing gap between the requirement of capital and the available funding options** has increased.

• Examples of **sustainable business models within the agricultural value chain in the GMS** are still limited.

Proposed Activities

• Assess **barriers for financial preparedness of agricultural SMEs** in the GMS

• Strengthen **marketing and business planning skills of agricultural SMEs** to improve their financial preparedness

• Build capacity of climate-friendly agribusinesses on **financing options, including warehouse receipt financing**

• Stimulate the usage of digital financial services to reduce cost, increase market awareness (or competitiveness) and transact transparently

• Pilot climate smart agribusiness financing fund/facility for providing small competitive grants to change the behavior of SMEs to adopt climate friendly manufacturing practices, reduce vulnerability to impacts of climate change while reducing GHG emissions.
Theme 4: Crop Quality and Safety

Issues/Challenges

- Considerable volumes of informal trade in food and agricultural products occur across GMS borders with little control of quality and food safety.
- Consumers in the GMS are becoming more aware of issues of food safety and quality assurance because of food safety scares and outbreaks.
- Pesticide residues in several GMS foods are well above the internationally acceptable levels. Lack of confidence and trust of consumers in food supply chain.
- Potential for global food exports from GMS is constrained by the limited adoption of globally recognized standards for food production, processing and distribution.
- Certification (e.g., organic, GAP, GMP, GI) and use of advanced digital technologies for food traceability are critical to realize the GMS vision of becoming a leading global supplier of safe and environment-friendly agricultural and food products.

Proposed Activities

- Provide technical support towards harmonization of standards related to (i) good practices for crops, livestock and aquaculture, (ii) food safety and quality assurance, (iii) certification and accreditation, and (iv) surveillance systems and laboratories.
- Promote compliance with food safety standards in regional trade by enhancing capacity in certification and establishing quality assurance systems for both domestic and regional trade, and develop overarching food safety communication strategy.
- Facilitate knowledge sharing through training, capacity building and policy dialogues on food safety risk communication, including not only crisis management but also preventive measures.
- Conduct demonstrations on use of high level technologies (e.g., artificial intelligence, Internet of Things, Block chain technologies) for food traceability and quality assurance systems.
Issues/Challenges

- Demand for livestock products is increasing in both domestic and regional markets.
- There is a growing recognition of the need for regional approaches to disease and foodborne hazard risk assessment.
- Livestock production is responsible for 9 per cent of total GHG emissions. However, rotational livestock grazing and other pasture management techniques can decrease the production of GHGs.
- Limited capacity exists within GMS to improve animal health and productivity, market access and trade facilitation, traceability and disease monitoring, reduction of GHG emissions and value addition opportunities.

Proposed Activities

- Support Ministries of Agriculture to strengthen food safety legislations and policies on livestock and livestock products, and feed control.
- Assist GMS livestock departments to provide consolidated training for animal health workers to improve capacity and service delivery (e.g., improved slaughtering facilities).
- Strengthen capacity for livestock product safety and quality, including control of transboundary animal diseases (TAD) and anti-microbial resistance (AMR), and value addition.
- Conduct feasibility studies and piloting of technologies for livestock traceability (e.g., reusable reticular cattle identification systems, Internet of Things).
Theme 6: Water for Food Security in a Changing Climate

Issues/Challenges

• Agriculture consumes nearly 70% of water but there is also a growing competition from other issues – urbanization, industrialization, etc.

• **Climate change is expected to exacerbate water scarcity.** This challenge will become more pressing as the world's population continues to grow, their living standards increase, and diets change.

• We need 2000 to 5000 liters of water to produce the food consumed daily by one person.

• **Limited awareness of options** to produce more food per drop – 1 kg lentil production requires 1250 liters while 1 kg beef production requires 13,000 liters.

• Limited understanding of the impact of climate change on available water resources and on agricultural systems, and a set of policy choices, and investments and managerial changes to address them

Proposed Activities

• Policy support for a **closer alignment between water management and agricultural policies**, and to **identify ‘no-regrets’ strategies** which have both positive development outcomes and make agricultural systems resilient to future impacts of climate change

• **Capacity strengthening** on (i) water accounting in various climate change scenarios; (ii) climate adaptive water management options in agriculture; (iii) early warning systems for irrigation water managers and (iv) adaptive policy making

• Conduct **feasibility studies on climate-smart practices in water use for agriculture** and identify opportunities for scaling them up in multiple river basins
Theme 7: Agricultural Adaptation in the context of Water-Food-Energy-Climate Nexus

Issues/Challenges

- Water, energy and food security are interrelated, and interventions in one sector have consequences for another.
  - Agriculture will have to produce 30-50% more food by 2030
  - Primary energy needs will increase by 40% by 2030
  - Demand for water will exceed availability by 40% in 2030
- Thus, these complex and intricate links require a suitably integrated approach to ensure food, energy and water security.
- Interventions may be classified as “nexus-positive, nexus-neutral, and nexus-negative.”
- Lack of awareness of nexus and limited inter-ministerial collaboration are key barriers for progress in the GMS

Proposed Activities

- GMS Platform for Climate-Smart Agriculture to conduct policy dialogues on options to reduce water, energy, carbon and environmental footprints of agricultural practices, and raise awareness on the nexus
- Policy support for incorporating nexus thinking in the design of projects, and for mainstreaming concerns of water-food-energy nexus in climate change action plans of Ministries of Agriculture
- Knowledge management in GMS on agricultural adaptation to address climate change impacts by 2030
- Pilot studies on adaptive agricultural options and innovative technologies that proactively consider water-food-energy nexus and employ (e.g., solar irrigation, agricultural waste to energy for food processing)
Thank you.

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