2017 International Aid Business Opportunity Seminar

Asian Development Bank (ADB) Sectoral Session: Agriculture

12 October 2017
AGENDA

• 2.00 pm – 2.10 pm  WELCOME
  Ms Elodie Journet, Senior Trade and Investment Commissioner to the Philippines & Micronesia, Austrade Manila
  Ms Jenny VandeMeeberg, Trade Adviser Austrade Melbourne

• 2.10 pm – 2.40 pm  ADB SECTORAL PRESENTATION
  Mr Lance Gore, Senior Water Resources Specialist South Asia Department, Asian Development Bank
  Sector Overview
  Opportunities
  Countries of Focus

• 2.40 pm – 2.55 pm  Q&A

• 2.55 pm – 3.00 pm  NEXT STEPS & CONTACT DETAILS
HOW TO ASK QUESTIONS

1. Select “Chat” function
2. Select “Host & Presenter”
3. Type your question here
3. Press ‘Send’
LANCE GORE

Lance Gore is a Senior Water Resources Specialist in ADB’s South Asia Department, preparing and managing water resources and irrigation investment projects in Bhutan, India and Sri Lanka. Prior to joining ADB, Lance consulted on numerous ADB-financed and other sector-related projects throughout the region and globally.
Asian Development Bank’s Agriculture & Rural Water Operations

12 October 2017

Lance Gore
Senior Water Resources Specialist
Environment, Natural Resources & Agriculture Division, South Asia Department, ADB
ADB Background

Headquarters: Manila, Philippines

Founded: 1966  Members: 67

Field Offices: 31

Authorized Capital:  $143 billion

Annual Loan/Investment Approval:  $17.5 billion
(excluding technical assistance and cofinancing)

Staff: 3,092  (international staff 1,103)
ADB’s Sectors

By Sector
In 2016 (in 2015)

- Energy: 26% (33%)
- Transport: 23% (17%)
- Finance: 12% (16%)
- Water: 9% (11%)
- Agriculture: 7% (5%)
- Public Sector Management: 11% (10%)
- Education: 4% (4%)
- Industry and Trade: 5% (0.5%)
- Health: 2% (2%)
- ICT: 1% (1%)

Public Sector Management
ADB’s MISSION: an Asia and Pacific free of poverty

Asian Development Bank commits to $2 billion food and nutrition security investment annually
2009-2016 Agriculture and Natural Resources Investments and 2017-2018 Project Pipeline ($million)

- 2009: $544 (Sovereign $544, Nonsovereign $0)
- 2010: $409 (Sovereign $409, Nonsovereign $0)
- 2011: $671 (Sovereign $671, Nonsovereign $0)
- 2012: $1,272 (Sovereign $1,272, Nonsovereign $49)
- 2013: $838 (Sovereign $838, Nonsovereign $143)
- 2014: $662 (Sovereign $662, Nonsovereign $534)
- 2015: $753 (Sovereign $753, Nonsovereign $98)
- 2016: $1,120 (Sovereign $1,120, Nonsovereign $286)
- 2017: $2,435 (Sovereign $2,974, Nonsovereign $539)
- 2018: $3,633 (Sovereign $3,933, Nonsovereign $300)

Legend:
- Orange: Sovereign
- Yellow: Nonsovereign
2016 Lending
BY REGION AND TYPE ($1,386 million)

Central and West Asia: water management, irrigation, and value chain development

East Asia: flood control, sustainable livestock farming, ground water protection, sustainable farmland management, and value chain development

Southeast Asia: flood management, aforestation, biodiversity conservation, emergency support for livelihood restoration, and irrigation

South Asia: rural infrastructure and climate adaptation

Private Sector: high-value horticulture, livestock and dairy farming

13 Countries; 22 projects (including 6 in PSOD)
ADB’s Agriculture Lending
2016 vs. 2017 by region

2016: $1,386 million

2017: $2,974 million

Number of Projects: 25
Number of Countries: 19
Operational Plan 2015-2020
OUR PRIORITIES AND ACTION AREAS

Action Areas
- Climate-smart agriculture
- Agribusiness value chains
- High-level technologies

Priority Areas
- Increased productivity and reduced food losses
- Improved market connectivity and value chain linkages
- Enhanced food safety, quality and nutrition
- Enhance management and climate resilience of natural resources

Cross-Sector/ Cross-Thematic Synergies
- Climate Change
- Energy
- Environment
- Finance
- Gender
- Social Development
- Transport
- Water

Outcome
Safe, nutritious and affordable access to food for all
Technology Applications to Smallholder Agriculture at Scale: **Climate-Smart Agriculture, Cooperatives and Smart Supply Chain Management**
Market Infrastructure and Logistics: Efficient and sustainable food supply and distribution system
Simple Cold Storage can increase farm income and profit by **loosing less**
Enabling Policy and Regulatory Environment: Important Role of the State for Sustainable Agriculture and Food System

- A key role for the public sector to leverage private investments by reducing the risks involved in agriculture investments.
- Regional cooperation in harmonizing policies and increasing their transparency is effective.
- Well-functioning factor markets (inputs, land and labor) are fundamental for developing cost- and resource- efficient food value chains and balancing urban-rural markets during structural transformation of many Asian economies.
CLIMATE-SMART AGRICULTURE

BAN: Initiation of Pilots on Climate-Smart Agriculture Practices for Irrigation Schemes
- Being implemented under Rural Infrastructure Maintenance Program (PDA) ($2 million, 2016)
- Introduction of new seed varieties (drought-resistant rice varieties) and on-farm practices (alternate wetting and drying, land leveling) (ADB-IRRI partnership)
- Substantial yield gain, water-saving, GHG emission reduction expected

PRC: Inclusive and Climate-Smart Agribusiness Value Chain Development
- Loan 3450-PRC: Fujian Farmland Sustainable Utilization and Demonstration Project ($100 million, 2016)
  - Drought resistant local crop varieties; water sprinkle and drip irrigation; and water collection and storage
- Workshop: Agricultural Service System Development to Promote Rural Economy Transformation and Upgrading through Internet Plus (Beijing, November 2016)
  - Pipeline: Gansu Internet-Plus Based Socialized Agricultural Service System Development ($150 million, 2018)

Global: Climate Finance Tracking Guidelines (with the Climate Change and Disaster Risk Management Thematic Group)
- Draft guidelines prepared
- Target for increasing climate investments set
AGRICULTURE VALUE CHAINS

**PRC: Shanxi Inclusive Agricultural Value Chain Development Project**
- Technical support on agricultural value chain analysis and capacity building
- Loan: $100 million (2017), with Rabo Bank

**NEP: Agriculture Sector Development Program**
- Financing models for agriculture value chain enterprises developed (with the Finance Sector Group)
- $70 million loan (for 2018 approval)

**VIE: Business Development in Agri-logistics and Market Infrastructure**
- Enhancing agricultural competitiveness: TA concept developed
- Business development missions: dialogues with government and other stakeholders

**UZB: Horticulture Value Chain Development Project** (with the Finance Sector Group)
- Intensive orchards, cold storages, processing and packaging equipment
- Drip irrigation, fertigation, and greenhouse modernization
PRIVATE SECTOR FINANCING

- **Regional: High-Value Horticulture Development** (Client: Agripacific Group) - climate-controlled greenhouse technology development in Viet Nam, PRC, Indonesia ($15 million loan in USD, JPY, and CNY)

- **PRC: Inclusive and Sustainable Livestock Farming** (Client: Jiangsu Lihua Animal Husbandry Stock Company) - inclusive and sustainable livestock farming ($62.5 million loan, $32.5 million B-loan in CNY)

- **PRC: Sustainable Dairy Farming and Milk Safety** (Client: Inner Mongolia Saikexing Breeding and Biotechnology Group) - dairy farming modernization and product safety ($125 million loan in CNY)
# 2017 and Beyond

## PROJECT PIPELINE DEVELOPMENT

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<th>Regions</th>
<th>Climate-Smart Agriculture</th>
<th>Agribusiness Value Chains</th>
<th>High-Level Technologies</th>
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<td><strong>Central and West Asia</strong></td>
<td>TAJ: Achieving food security through climate resilience dairy value chain development (2017)</td>
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<td>PAK: Balochistan water resources (GIS) (2018)</td>
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<td>Pacific</td>
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<td>SAM: Agribusiness finance (2017)</td>
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<td>South Asia</td>
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<td>BAN&amp;NEP: Value chain infrastructure (2018)</td>
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<td>SRI&amp;IND: Fishery (2019)</td>
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Central and West Asia

TAJ: ACHIEVING FOOD SECURITY THROUGH CLIMATE RESILIENCE DAIRY VALUE CHAIN DEVELOPMENT ($40 million, 2017)

- Improve enabling environment for commercialization of dairy industry
- Develop private sector led inclusive dairy value chain development
- Develop improved pastureland management practices using climate resilient technologies
- Establish institutional capacity development along the dairy value chain
Central and West Asia
UZB: HORTICULTURE VALUE CHAIN INFRASTRUCTURE DEVELOPMENT PROJECT ($100 million, 2018)

- Develop modern processing, storage, and refrigeration facilities
- Develop market infrastructure and institutions
- Public-private partnership for operations of value chain infrastructure (based on lease contract with the private sector)
East Asia

PRC: GANSU INTERNET-PLUS BASED SOCIALIZED AGRICULTURAL SERVICE SYSTEM DEVELOPMENT ($150 million, 2018)

- Demonstrate the application of network-connected sensors and tracing technologies along the entire agricultural value chain
- Enable precision of inputs (water, fertilizer, pesticides) and product tracing along the value chain
- Implement activities through farmer cooperative associations
Southeast Asia

REG: CLIMATE-FRIENDLY AGRIBUSINESS VALUE CHAINS SECTOR PROJECT (2018)

Cambodia ($130 million), Lao PDR ($68 million), Myanmar ($92.5 million)

Mobilized $27 million grant from the Global Agriculture and Food Security Program (Myanmar)

- Improve agribusiness value chain (farm roads, water storage, small scale irrigation systems, drying, storage, milling and packaging facilities) and waste-to-energy infrastructure (bio-digesters, bio-fertilizer facilities, others for effective biomass management)

- Promote the adoption of high-level technologies (laser land levelling, drip irrigation) and ICT applications (for improved information sharing on climate-friendly agriculture and practices)
South Asia

BAN: MARKET AND VALUE CHAIN INFRASTRUCTURE DEVELOPMENT PROJECT ($70 million, 2018)

- Improve farm-level food safety and quality
- Develop community-level business centers
- Provide credit to facilitate private sector participation (e.g., logistics)
- Provide infrastructure to farmers for post-harvest handling, and improved link to food processors, retailers and exporters.
Private Sector Projects

PRC: ENVIRONMENTALLY SUSTAINABLE AGRICULTURAL INPUT DISTRIBUTION ($100 million, 2017)
- Sponsor: Kingenta Ecological Engineering Group Co., Ltd,
- Establish 300 crop production service centers (one-stop shops for farmers) and upgrade 10 fertilizer manufacturing plants to produce high efficiency compound and specialty fertilizers
- Beneficiaries: 3 million smallholder farmers in 8 PRC provinces

REG: AGRICULTURAL VALUE ADDITION AND TRADE PROJECT ($175 million, 2017)
- Client: Olam International Ltd.
- Support value addition processing projects and working capital investments of 30,000 smallholder farmers of coffee, cashew, spices and cocoa
- Countries: Viet Nam, Indonesia, Timor-Leste, and Papua New Guinea

VIE: FRUIT AND VEGETABLE SUPPLY CHAIN AND FOOD SAFETY ($200 million, 2017)
- Client: Vingroup Joint Stock Company
- Including $20 million from the Canadian Climate Fund, and $1 million technical assistance program
- Fruit and vegetable supply chain and food safety, including corporate farms, contract farming, and supermarkets
- Domestic supply of high quality and safe fruits and vegetables
Food Safety and Sustainability Standards: modern sterilized milk production system and environmental protection

- **PSOD**: a $125 million loan for Inner Mongolia Saikexing Breeding and Biotechnology Group (PRC)

- **Environmental protection**: modern treatment and processing facilities to recycle treated waste to be treated as organic fertilizer, irrigation and energy

- **Food Safety**: modern sterilized milking and healthy feed processing equipment to expand the domestic supply of quality milk
Agriculture Inputs Market: Access to modern fertilizers and precision agriculture practices for 3 million farmers in PRC

PSOD: Environmentally Sustainable Agricultural Input Distribution ($100 million in loan and equity)

- Upscaling Distribution of Quality Agricultural Inputs: 300 crop production service centers in 6 poor provinces

- Environment Protection: Access to high-efficiency compound and specialty fertilizers and other environmentally sustainable agricultural inputs and services
Strategy 2030

Rural Development and Food Security (Agriculture)

- Progressively increase investments in agriculture ($2 billion annually by 2020)
- Establish a dedicated fund for innovation, knowledge sharing, and partnerships
- Improve internal knowledge capture, sharing and learning from projects
- Increase investments in climate change, high-level technology and private sector agribusiness
In response, food supply capacity needs to increase by 60%.
58% of irrigated agriculture are under high to extremely high water stress

1/4 land in Asia are highly degraded

Fundamental transformation of the agriculture and food system to “SUPPLY MORE WITH LESS” is required
Climate Change Adaptation is essential for food and nutrition security: *Irrigated rice in Asia will lose its 27% supply capacity by 2050.*
Water is cross cutting
Water SG covers overall water issues and facilitates complementarities and synergies

- Urban water supply, sanitation and sewerage
- Urban flood protection
- Hydropower generation
- Water cooling for thermal power

Integrated rural water supply and sanitation
Integrated flood management
Integrated water resources management
Agriculture, Rural Development and Food Security TG
Irrigation and drainage

Under the current project classification system, water operations is reported (with no double counting) in:
- WUS - Water and other Urban Infrastructure and Services
- ENE - Energy
- ANR - Agriculture, Natural Resources, and Rural Development
Strategic Direction: Increased Water Security*
(Based on Water Operational Plan)

* Water security is not just being able to provide sufficient water for households and economic activities, but also includes ensuring healthy ecosystem, and protecting against water-related disasters.

**Increased water use efficiency**
- Improved water productivity in irrigated agriculture
- Non-revenue water reduction in water supply

**Water and climate**
- Flood and drought
- Other water-related disaster

**Integrated Water Resources Management**
- River cleanup
- Groundwater management
- Governance (water allocation, institutional arrangement)

**Expanded sanitation and wastewater management**
- Fecal sludge management
- Wastewater reuse
Key Operating Areas

- Irrigation Modernization
- Water resources management and governance
- Flood and river bank protection
- Coastal management
- Climate change adaptation
Water Sector - 2016 Operations Achievement
$2.4 billion approved investments

By Subsector

- Irrigation and drainage (ANR)
- Flood management (WUS/ANR)
- Water resources management, wetlands and watershed protection (ANR)
- Water supply, sanitation, wastewater management (WUS)
- Hydropower generation (ENE)

By Operations Departments

- Climate finance
  - Adaptation - $518 million
  - Mitigation - $33 million

- CWRD: 463 M (19%)
- EARD: 634M (26%)
- PARD: 45M (2%)
- PSOD: 150M (6%)
- SERD: 458M (19%)
- SARD: 668M (28%)

- By Actual and Pipeline
  - Annual Average 2011-2014
  - Actual
  - Pipeline

- Amounts in $ billion

- Water supply, sanitation, wastewater management (WUS)
- Irrigation and drainage (ANR)
- Flood management (WUS/ANR)
- Water resources management, wetlands and watershed protection (ANR)
- Hydropower generation (ENE)
Water Sector Group Priority Areas for 2017

**CWRD**
- dam rehabilitation
- institutional reform
- river clean-up
- water productivity measurement in irrigated agriculture
- water security for food

**EARD**
- basin water management
- ecosystem services
- groundwater management
- urban-rural integration of water resources

**SARD**
- irrigation modernization
- water accounting in pilot river basins
- water productivity measurement in irrigated agriculture
- water resources management

**PARD**
- climate change adaptation
- water utilities management

**SERD**
- flood and drought risk management
- irrigation modernization
- urban water security and water resilience
- water accounting in pilot river basins
- water productivity measurement in irrigated agriculture
INO: Flood Management in Selected River Basins Sector Project - 2016/22 [$108.7M]

Promotes Flood Risks Management (FRM) through balanced upstream and downstream, and soft and hard set of measures

4 Outputs: (i) Enhanced planning; (ii) improved land management and upgraded flood infrastructure; (iii) Enhanced capacity for community-based FRM; and (iv) improved policy, coordination and capacity at national level
MYA: Irrigated Agriculture Inclusive Development Project

- Approved in November 2016, the sector project will increase agricultural value added by improving irrigation and strengthening agricultural value chains in three regions of Myanmar's central dry zone (CDZ).

- The Central Dry Zone region has the second highest population density and is one of the most food insecure, water-stressed, climate sensitive and natural resource poor regions in Myanmar. The will support the development of district-wide agricultural value chains and the modernization of irrigation systems in Magway district of the Magway region, Shwebo district of the Sagaing region, and Meiktila and Yamethin districts in the Mandalay region. The irrigation system rehabilitation and modernization component will cover about 20,000 hectares (ha) and benefit about 24,000 households.

Loan amount: $75.00 million
WFPF Support (PPTA): $0.50 million
PRC: Shandong Groundwater Protection Project

Total project costs: $344 million
ADB lending: $150 million
Approved: 29 June 2016

Scope: Improving (ground) water management and introducing technological innovations for safeguarding the ‘Vegetable Garden’ of Beijing

Key features:
- Retention and storage of excess surface water flows during the rainy season
- Promotion of ‘Managed Groundwater Recharge’
- Innovation for metering and restricting groundwater usage (e.g. groundwater trading)
- Demonstration project for similar water-stressed areas
TAJ: Water Resources Management in Pyanj River Basin Project (Loans 3434(SF)/0498(SF), JFPR Grant 9188, JFPR TA 9183-TAJ)

- Assessing irrigation performance using satellite remote sensing technology developed under PPTA
- GOT and GOA will establish and implement Joint River Commission for better trans-boundary water resources management
  (Note: the same approach will be implemented under 0506/0507-AFG: Panj-Amu River Basin Sector Project)

M&E system showing water use ratio (WUR) at target irrigation system

ADB: $25 million, JFPR Grant: $3 million, JFPR TA: $2 million

Note: The blue and red line areas show gravity and pump irrigation zone, respectively.
VIE: Water Efficiency Improvement in Drought Affected Provinces

- Approved in August 2016, and closing in September 2017

- The project aims to improve water productivity (crop per drop) by increasing water use efficiency in irrigated agriculture in five drought affected provinces in the Central Highland and South Central Coastal Regions: Binh Thuan, Dak Lak, Dak Nong, Khanh Hoa, and Ninh Thuan. The project pilots the use of remote sensing technology to assess and monitor water productivity at the farm level.

PPTA amount: $0.80 million
WFPF Support (PPTA): $0.25 million
IND: Madhya Pradesh Irrigation Efficiency Improvement Project

- SARD’s flagship project – India’s large scale pressurized piped irrigation project, scheduled for approval in 2017.
- A $370 million project will develop 125,000 hectares (ha) of new, highly efficient irrigation networks supporting productive agriculture in Madhya Pradesh.
- DBO (Design, Build and Operate) contract to strengthen O&M.
INO: Integrated Participatory Development and Management of Irrigation Program - 2017/21
[$600M] Results based lending

Focus on improving irrigation system operation, maintenance, and water delivery to farmers in 74 districts.

Promotes innovations to improve O&M:(i) web based irrigation asset management information system; (ii) aerial surveys; (iii) water accounting using satellite; (iv) pilot testing water productivity.
PAK: Balochistan Water Resources Development Project

Expected ADB Approval in 2017 for $100 million OCR

- Developing GIS-based integrated water resources information system (WRIS)
  - First WRIS in Pakistan
  - Good use of free satellite data from JAXA
  - Integrated information management among themes and sectors
  - Efficient water use, disaster risk management, and climate change adaptation

- Developing high efficiency irrigation system
  - Fertigation; efficient use of water and fertilizer
### Areas of Business Opportunities

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<th>Consulting Services (Firm/Individual)</th>
<th>Civil Works</th>
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<td>• project preparation</td>
<td>• irrigation facilities</td>
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<td>• feasibility study</td>
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<td>• project design</td>
<td>• riverbanks and embankment</td>
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<td>• project implementation and</td>
<td>• coastal engineering</td>
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<tr>
<td>management support</td>
<td>• agribusiness facilities</td>
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**Supply of Goods/Equipment/Materials**
- machines, computers, vehicles, etc
Project Procurement: Consulting Services

ADB engages individual consultants and consulting entities (firms, universities, NGOs, etc.) for a wide range of assignments. For example, consulting entities are retained for pre-investment, sector, or other studies, detailed design, contract preparation, and project supervision. Individual consultants, whether hired directly or through consulting entities, provide expert advice and help the ADB to prepare studies, appraisals, and reports.

Consultant Management System (CMS)

The CMS lets consultants create and update their profile, search opportunities, send expressions of interest, respond to non-committal inquires, and prepare and submit proposals. Users log in to the system by typing their registered email address and password. Read more information on the CMS.
THANK YOU!

ANY QUESTIONS?
HOW TO ASK QUESTIONS

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PROCUREMENT AND USEFUL LINKS

• ADB Focus Areas: Opportunities - www.adb.org/focus-areas
• ADB project details - www.adb.org/projects
• ADB’s Procurement Guidelines - www.adb.org/documents/procurement-guidelines
• Business intelligence can be collected through consultancy recruitment notices, country partnership strategies and operations business plans. Register in ADB’s Consultant Management System – www.cms.adb.org

www.austrade.gov.au/events
2018 AUSTRALIAN CONSULTING SERVICES MISSION TO THE ADB BUSINESS OPPORTUNITIES FAIR, MANILA – MARCH 2018

- ADB BOF 2-day Educational conference and networking forum - ADB funded projects and procurement opportunities
- Over 600 international consultants, contractors, manufacturers and suppliers
- Additional Austrade sessions:
  › pre-departure briefing with ADB Executive Directors - Australian Constituency
  › one-on-one meetings and knowledge-sharing sessions with ADB officers
  › networking reception
  › briefings with other multilateral banks and aid agencies (e.g. World Bank, UN, USAID, GIZ, DFAT, Development platforms, executing agencies, local contractors)

For more information, contact Ms Sheila Trance, Austrade Manila
sheila.trance@austrade.gov.au
Mr Lance Gore  
Senior Water Resources Specialist  
South Asia Department  
Asian Development Bank  
lgore@adb.org

Ms Elodie Journet  
Senior Trade and Investment Commissioner  
Austrade Manila  
elodie.journet@austrade.gov.au

Mr Peter Ironmonger  
Team Leader – Infrastructure  
Austrade Sydney  
peter.ironmonger@austrade.gov.au

Ms Jenny VandeMeeberg  
Trade Adviser  
Austrade Melbourne  
jenny.vandemeeberg@austrade.gov.au

Ms Sheila Trance  
Business Development Manager  
Austrade Manila  
sheila.trance@austrade.gov.au

Ms Vanessa Perez  
Business Development Manager  
Austrade Manila  
vanessa.perez@austrade.gov.au