

## PROJECT PREPARATORY TECHNICAL ASSISTANCE

### A. Justification

1. There is no pre-feasibility or feasibility study available. Project preparatory technical assistance (PPTA) is necessary to carry out the feasibility study and prepare design of the Project. PPTA is also necessary to undertake due diligence of technical, social, environmental, and economic aspects of the Project.

### B. Major Outputs and Activities

2. Output of the PPTA will be the final TA report that will include required feasibility, design, and due diligence. The PPTA will (i) determine scope, components, and geographical coverage of the project; (ii) identify portfolio of subprojects; (iii) carry out feasibility study of the project, including technical, financial, economic, social, environmental, and gender assessment; (iv) prepare core subprojects for advance contracting; (v) prepare procurement plan; (vi) prepare resettlement framework for the project and resettlement plans of core subprojects; (vii) prepare environmental assessment and review framework of the project and conduct initial environmental examination studies of core subprojects; (viii) prepare gender action plan; (ix) design implementation arrangements; (x) carry out economic analysis and calculate economic internal rate of return; (xi) prepare cost estimates and financing plan; (xii) assess financial sustainability of irrigation systems; and (xiii) prepare terms of reference for design and support consultants. The major outputs and activities are summarized in Table A3.1.

**Table A3.1: Summary of Major Outputs and Activities**

Major Activities	Expected Completion Date	Major Outputs	Expected Completion Date
Walk through surveys and consultations	1 December 2014	List of identified subprojects	31 December 2014
Field investigations, data collection and analysis	1 January 2015	Selected core subprojects	31 January 2015
Poverty, gender, social and environmental assessment	1 January 2015	SPRSS, GAP, EARF, LARF	28 February 2015
Prepare core subprojects	1 February 2015	BOQ, Tender documents	15 May 2015
Feasibility study, Cost estimates, financing plan, implementation plan, procurement plan, financial management assessment, economic and financial analysis, implementation arrangements, TOR of design and support consultants	1 January 2015	Draft final report, Financial management assessment report, Cost estimates, Financing Plan, Financial sustainability assessment report	15 June 2015

BOQ = bill of quantities; EARF = environmental assessment and review framework; GAP = gender action plan, LARF = land acquisition and resettlement framework; SPRSS = summary poverty reduction and social strategy; TOR = terms of reference.

Source: Asian Development Bank.

### C. Cost Estimate and Proposed Financing Arrangement

3. The TA is estimated to cost \$990,000, of which \$900,000 equivalent will be financed on a grant basis from ADB's Technical Assistance Special Fund (TASF-V). The government will provide counterpart support in the form of counterpart staff, data collection, office accommodation, appliances, furniture, and utilities. The detailed cost estimate is presented in Table A3.2.

**Table A3.2: Cost Estimates and Financing Plan**  
(\$'000)

Item	Total Cost
<b>Asian Development Bank<sup>a</sup></b>	
1. Consultants	
a. Remuneration and per diem	710.7
i. International consultants (33 person-months)	563.3
ii. National consultants (39 person-months)	147.4
b. International and local travel	74.3
c. Reports and communications	5.0
2. Equipment <sup>b</sup>	12.0
3. Workshops, trainings, public consultations <sup>c</sup>	10.0
4. Vehicles <sup>d</sup>	20.0
5. Surveys	20.0
6. Miscellaneous administration and support costs <sup>e</sup>	6.0
7. Representative for contract negotiations	4.0
8. Contingencies	38.0
<b>Total</b>	<b>900.0</b>

<sup>a</sup> Financed by the Asian Development Bank's Technical Assistance Special Fund (TASF-V).

<sup>b</sup> Computers, printers fax machine, photocopier, other office equipment.

<sup>c</sup> Inception and Final report sharing workshops with stakeholders, training of FWUCs of core subprojects, consultations with farmers, FWUCs and CSOs to be conducted by consultants.

<sup>d</sup> Leased for field activities such as surveys, consultations and meetings for 8 months.

<sup>e</sup> Support staff and any other eligible expense not covered in above heads.

Note: In-kind Government contribution is estimated at 10% of the total cost.

Source: Asian Development Bank.

#### D. Consulting Services

4. A total of 72 person-months of consulting services (33 person-months of international and 39 person months of national experts) will be required for project preparation. The consulting services will be recruited through a firm using quality- and cost-based selection method at a ratio of 80:20 based on a bio-data technical proposal and individual consultants.<sup>1</sup> The consultants will be recruited in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). The positions and person-months required are in Table A3.3 and terms of reference are in paras. 5 to 21.

**Table A3.3: Summary of Consulting Services Requirement**

Positions	Person-Months Required	
	International	National
Water Resources Specialist/Team leader	7	-
Hydrologist	2	5
Hydraulic Design Engineer	-	2
Irrigation Management Specialist	2	7
Gender Specialist	1	3
Environment Specialist	1	3
Climate Change (Adaptation) Specialist	1	-
Social Safeguards Specialist	3	2
Economist	2	2
Financial Management Specialist	1	1
Procurement Specialist	5	1
Agriculture Specialist/Agronomist	1	3

<sup>1</sup> International Monitoring and Evaluation, Procurement, Environment, and Social Safeguards Specialists will be recruited as individual consultant; and their inputs will also be used for start-up activities post approval of the Loan to avoid start-up delays.

Positions	Person-Months Required	
	International	National
Institutional/Social Development Specialist	3	3
Soil Scientist	-	3
On-farm Water Management Specialist	-	3
Watershed Management Specialist	1	1
Monitoring and Evaluation Specialist	3	-
<b>Total</b>	<b>33</b>	<b>39</b>

Source: Asian Development Bank.

5. **Water Resources Specialist/Team Leader (1 international):** (i) Provide overall supervision of the PPTA for preparing the Project, provide technical guidance, and ensure quality of work and delivery as scheduled; (ii) maintain close coordination among ADB, PPTA team, executing agency and implementing agency; (iii) review policy reforms and institutional strengthening under Water Resources Management Sector Development Program (WRMSDP) and develop the Project integrated with those; (iv) review ongoing Rice Commercialization Sector Development Program to develop synergies with the Project; and (v) prepare PPTA report including technical, financial, economic, environmental and social assessments, scope of project, components of project, implementation arrangements, TOR of design and supervision consultants, implementation schedule, cost estimates, economic and financial analysis, climate risk assessment, procurement plan, gender action plan, social assessment, selection criteria of subprojects, Environment Assessment Review Framework (EARF), Land Acquisition and Resettlement Framework (LARF) and any other plans required by ADB.
6. **Hydrologist (1 international, 1 national):** (i) Document and review all available reports and data on water resource assessments in the project area; (ii) identify the data gaps, collect additional data and carry out hydrological analysis for assessing river flows and seasonal variability for core subprojects; (iii) suggest suitable sites for installing hydro-met stations; and (iv) propose and estimate cost of instruments to be installed.
7. **Hydraulic Design Engineer (1 national):** (i) Participate in selection of subprojects; (ii) prepare the hydraulic design of selected core subprojects; and (iii) prepare bill of quantities and bidding documents of core subprojects.
8. **Irrigation Management Specialist (1 international, 1 national):** (i) Propose options for modernizing irrigation systems; (ii) incorporate those in design of core subprojects; (iii) assess irrigation efficiency of core subprojects and incorporate measures to improve efficiency in design; (iv) carry out irrigation scheduling for core subprojects and prepare irrigation schedules; and (v) design operational system for increasing efficiency and productivity of irrigation systems for core subprojects. National specialist will also be deputy team leader.
9. **Gender Specialist (1 international, 1 national):** (i) Carry out gender analysis in the agricultural, irrigation and natural/water resources management sector as well as in the communities of the project area. Look at issues such as gender division of labor, women's participation in agricultural work, women's access to and control agricultural and water resources, percentage of female headed households and additional constraints faced, women's skills and relevant training needs to participate in skilled construction labor, female/male membership and leadership in existing FWUCs, women's skills and leadership training needs to manage FWUCs; (ii) identify scope for gender mainstreaming in the proposed subprojects and prepare a Gender Action Plan based on the findings of the gender mainstreaming analysis; (iii) propose capacity building measures for the executing and implementing agencies to develop gender inclusive sub-projects in the agriculture and irrigation sectors, including development of sector specific checklists and guidelines.

10. **Environment Specialist (1 international, 1 national):** (i) Prepare EARF; (ii) prepare environment screening checklists; (iii) carry out applicable environmental impact assessments in accordance with ADB Safeguard Policy Statement 2009; (iv) prepare Environmental Management Plans for the core subprojects; and (v) assess capacity of the EA/IAs to implement the EARF and EMP and propose measures for improvement, if required.
11. **Climate Change Adaptation Specialist (1 international):** (i) Assess climate change risks and suggest adaptation measures to climate proof infrastructure; (ii) design climate proofing interventions for core subprojects and estimate cost; and (iii) prepare training/awareness program for farmers water user communes (FWUCs) to enhance climate resilience.
12. **Social Safeguards Specialist (1 international, 1 national):** In accordance with ADB Safeguard Policy Statement 2009 (i) Prepare LARF for the Project; (ii) prepare involuntary resettlement and indigenous peoples screening checklists; (iii) prepare Land Acquisition and Resettlement Plan (LARP) of the core subprojects; and (iv) estimate cost of implementing LARPs of core subprojects.
13. **Economist (1 international, 1 national):** (i) Carry out economic analysis of the Project and core subprojects; (ii) develop with- and without-project farm budgets and economic and financial analyses for each core subproject; (iii) carry out poverty impact assessment; and (iv) determine baseline and targets for farm income, crop production and water productivity.
14. **Financial Management Specialist (1 international, 1 national):** In accordance with ADB's Financial Due Diligence – *a Methodology Note*, conduct a financial analysis which will entail (i) preparing projections of incremental recurrent costs, including operation and maintenance expenditures required to ensure sustainability of project benefits; (ii) undertaking an assessment of the executing and implementing agencies' capacity to fund recurrent costs and financial sustainability of irrigation systems; (iii) carrying out an assessment of the executing agency's financial management capacity & auditing system and propose measures to address gaps, if any; (iv) designing a financial management, accounting and reporting and internal auditing system in accordance with ADB's Financial management guidelines; and (v) designing and set up of monthly project accounts, financial reports, internal audit reports, and fund flow mechanism for the Project.
15. **Procurement Specialist (1 international, 1 national):** (i) Assess the capacity of national contractors for executing works of similar nature and size; (ii) prepare procurement plan including packaging of works, services, and goods with estimated cost and time schedule; and (iii) assist EAs/IAs in preparing RFP(s), bidding documents for procurement of works and goods and procurement mode.
16. **Agriculture Specialist/Agronomist (1 international, 1 national):** (i) Propose cropping patterns and intensities taking into account the soil quality, climatic conditions and crop water requirements; (ii) prepare cropping calendar; and (iii) provide input for economic and financial analysis of the Project and core subprojects.
17. **Institutional/Social Development Specialist (1 international, 1 national):** (i) Conduct poverty and social assessment of the Project and core subprojects; (ii) prepare complete poverty and social assessment reports for the project and for core subprojects with baseline socio-economic data that is disaggregated by sex wherever relevant and stakeholder analyses, among others; (iii) review institutional strengthening implemented and planned under WRMSDP, and on this basis prepare a plan for implementing those relevant to the Project scope and area;

(iv) map existing FWUCs and other civil society organizations in the project area, including women's groups and CSOs working with rural women; (v) assess capacity of FWUCs for taking responsibility of O&M of tertiary canals; (vi) assess training needs for that purpose and prepare training plan with cost estimate, estimate and assess training needs in leadership – especially for women – for management committee positions in FWUCs; (vii) train FWUCs for core subprojects; and (viii) consult nongovernment organizations especially NGOs working with rural women.

18. **Soil Scientist (1 national):** (i) Prepare guidelines for soil mapping to propose suitable cropping patterns; (ii) manage soil testing of farms under core subprojects; and (iii) support Agronomist in preparing cropping calendar.

19. **On-Farm Water Management Specialist (1 national):** (i) Propose options for improving on-farm water management practices; (ii) develop specific measures for reducing field application losses such as laser land levelling and high efficiency irrigation systems; (iii) estimate cost of proposed interventions for subprojects; and (iv) design and estimate on-farm interventions for core subprojects.

20. **Watershed Management Specialist (1 international, 1 national):** (i) Identify watershed management interventions appropriate to be supported under the project; and (ii) design and estimate cost of interventions for core subprojects.

21. **Monitoring and Evaluation Specialist (1 international):** (i) Design progress reporting system to capture physical, financial, social, environmental and gender aspects; (ii) design Project Performance Monitoring System based on design and monitoring framework of the Project; and (iii) design data collection, compilation and reporting mechanism. Design will take into account that data will need to be disaggregated by sex wherever relevant.

## E. Implementation Arrangements

22. MOWRAM will be the executing agency. The executing agency will nominate a senior official as Project Coordinator. The executing agency will provide counterpart staff, office accommodation to the PPTA consultants, field visits coordination and support, and data. Ministry of Agriculture, Forest and Fisheries will also facilitate field work and provide assistance to the consultants in collecting field data and carrying out surveys. The proceeds of the TA will be disbursed in accordance with the Technical Assistance Disbursement Handbook (2010 as amended from time to time). Procurement, if any, will follow ADB's Procurement Guidelines (2013 as amended from time to time). The PPTA consultants will administer and implement workshops, trainings and public consultations and provisions for those will be included in their contract as provisional sum. The proposed PPTA processing and implementation schedule is listed in Table A3.4.

Major Milestones	Expected Completion Date
Approval	8 August 2014
Commencement	1 November 2014
Final Report	30 June 2015
Physical completion	30 September 2016
TA completion	31 December 2016

Source: Asian Development Bank.