

## PROJECT PREPARATORY TECHNICAL ASSISTANCE

### A. Justification

1. The government prepared pre-feasibility studies of the potential subprojects. A complete feasibility study at river basin scale and developing subproject selection criteria are required. The project preparatory technical assistance (PPTA) is necessary to prepare a feasible project and undertake due diligence. The PPTA is included in country's operation business plan (COBP) for 2014. The PPTA will be provided through a consulting firm and individual consultants. The firm and individual consultants will remain eligible to compete for the project design and implementation, if they are not involved in the preparation of terms of reference (TOR).

### B. Major Outputs and Activities

2. The PPTA consultants will (i) review Balochistan's water policy, plans, and institutional requirements; (ii) screen and rank Zhob, Kacchi plain, Dasht, and Hingol river basins; (iii) select two high ranked basins and conduct basins water balance studies; and (iv) prepare feasibility studies of potential subprojects within the two river basins. The feasibility study will cover technical, economic and financial, safeguards, climate change, and governance related issues. The consultants will also prepare PC-1 for each subproject.<sup>1</sup> The PPTA will also assist in processing the ensuing loan. 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
<b>Consulting Firm</b>			
Hydrological study	15 Oct 2015	Report	15 Jan 2016
Surveys and analysis:			
- Social and resettlement	15 Dec 2015	SPRSS/LARF/LARP	15 Mar 2016
- Environmental assessment studies	15 Nov 2015	EARF/EIA or IEE	15 Mar 2016
- Topographic	15 Oct 2015	Survey sheets	15 Mar 2016
Climate change assessment	15 Oct 2015	Assessment report	15 Jan 2016
Study of alternate technical options	15 Jan 2016	Interim report	15 Feb 2016
Subprojects selection criteria and priority projects	15 Mar 2016	Report	15 Mar 2016
Economic and financial analysis	15 Apr 2016	Report	15 May 2016
Financial management assessment	15 Apr 2016	Report	15 May 2016
Feasibility report and PC-1	15 Jun 2016	Reports	15 Jul 2016
<b>Individual Consultants</b>			
Review strategy and assist in coordination	Through out		
Develop water resource information system	15 Sep 2015	Information system	15 Jul 2016
Conduct due diligence	15 Apr 2016	Report	15 Jun 2016
Assist in loan processing	15 Oct 2016	Inputs time to time	30 Nov 2016

EIA = environmental impact assessment, IEE = initial environmental examination, EARF = environmental assessment and review framework, LARF = land acquisition and resettlement framework, LARP = land acquisition and resettlement plan, PC-1 = Planning Commission Proforma 1, SPRSS = summary poverty reduction and social strategy.

Source: ADB estimates.

<sup>1</sup> A PC-1 (Planning Commission Proforma 1) is needed for government's internal approvals.

### C. Cost Estimate and Proposed Financing Arrangement

3. The TA cost is estimated at \$1.2 million (equivalent), of which \$1.1 million (equivalent) will be financed on a grant basis by the Japan Fund for Poverty Reduction and administered by ADB. The government will provide counterpart support, data, and coordination assistance. This counterpart support is valued at \$100,000. The detailed cost estimate is presented in Table A3.2.

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

Item	Total Cost
<b>Japan Fund for Poverty Reduction<sup>a</sup></b>	
1. Consultants	
a. Remuneration and Per Diem	
i. International Consultants (Firm = 4 person-months)	80
ii. National Consultants (Firm = 94 person-months; Individual = 22 person-months)	708
b. International and Local Travel	30
c. Reports and Communications	7
2. Equipment (computers, printers, photocopier, office furniture, satellite images etc.) <sup>b</sup>	35
3. Workshops, Training / Seminars & Conferences	10
a. Facilitators	2
b. Training Program (Community Consultation)	3
c. Training facility	5
4. Vehicles (Rental for field work)	25
5. Miscellaneous Administration and Support Cost	20
6. Contingencies	25
7. Surveys	
i. Provisional Sum for Environmental Study (through Sub-contract)	50
ii. Provisional Sum for Topographic Survey Geotechnical Investigations/tests	50
iii. Provisional Sum for Agriculture, Social and Resettlement Survey (NGO)	50
<b>Total</b>	<b>1,100</b>

<sup>a</sup> Administered by the Asian Development Bank. This amount also includes ADB's administration fee, audit costs, bank charges, and a provision for foreign exchange fluctuations (if any), to the extent that these items are not covered by the interest and investment income earned on this grant, or any additional grant from the Government of Pakistan

<sup>b</sup> Equipment

Type	Quantity	Cost
Computers/laptop and printers	6 set	\$10,000
Photocopier	1	\$5,000
GIS related equipment and satellite images	1 set	\$10,000
Office furnishing		\$10,000

Note: The equipment purchased under the TA will be handed over to the Balochistan Irrigation and Power Department upon TA completion.

Source: ADB estimates.

### D. Consulting Services

4. The consulting service shall be provided through national consulting firm and international and national individual consultants. The consulting firm will (i) assess water resources development potential and prepare water sector investment plan for Balochistan, (ii) conduct water balance study of two river basins, and (iii) prepare feasibility studies of potential subprojects within those basins. The individual consultants will (a) conduct due diligence; (b) assess executing agency's (EA's) capacity in procurement, financial management, and project implementation; (c) identify risks and mitigation measures; and (d) assist in processing documents.

5. The PPTA will provide 4 person-months of international and 117 person-months of national experts. Ninety five person-months of national experts will be provided through a consulting firm; 4 person-months of international experts and 22 person-months of national experts will be provided through individual consultants. The consultants will be recruited in accordance with ADB's *Guidelines on the Use of Consultants* (2013, as amended from time to time).<sup>2</sup> The consultancy firm will be selected through quality- and cost-based selection (QCBS) method (90:10). A full technical proposal will be requested from the shortlisted firms. The individual consultants will be recruited in accordance with ADB's Consulting Guidelines. The person-months requirements are in Table A3.3.

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

Positions under the Firm	Person-Months Required	Positions for Individual Consultants	Person-Months Required
<b>International</b>		<b>International</b>	
<b>Total (International)</b>	<b>0</b>	Remote Sensing Specialist 1	2
<b>National</b>		Remote Sensing Specialist 2	2
Water Resource Management Specialist (TL)	12	<b>Total (International)</b>	<b>4</b>
Hydraulic and Irrigation Engineer (DTL)	10	<b>National</b>	
Agronomist	5	Water Resource Specialist	7
Agricultural Economist	5	Agriculture System Specialist	4
Soil and Water Quality Expert	4	Economist	3
Environmental Specialist	4	Procurement Specialist	4
Social and Gender Specialist	3	GIS Expert	4
Resettlement Specialist	4	<b>Total (National)</b>	<b>22</b>
Hydrologist	4		
Design Engineer (Structure)	5		
Financial Management Specialist	3		
Climate Change Specialist	4		
Unallocated	32		
<b>Total (National)</b>	<b>95</b>		
<b>Grand Total (International + National)</b>	<b>95</b>		

Source: Asian Development Bank estimates.

6. The outline of terms of reference (TOR) is in paras. 7 to 18 for consulting firm and paras. 19 to 23 for individual consultants.

7. **Water Resource Management Specialist (TL) (national; 12 person-months).** Graduate in water resources and 20 years of relevant experience. The expert will provide overall direction and coordinate for inputs, and will be responsible for all output by the team in timely manner.

8. **Hydraulic and Irrigation Engineer (national; 10 person-months).** The expert will be a graduate of civil or agriculture engineering and has 15 years of relevant experience. S/he will (i) prepare alternate proposals, (ii) develop designs and drawings, and (iii) estimate cost.

9. **Agronomist (national; 5 person-months).** An agriculture graduate and 10 years of relevant experience. The expert will review data and assess farm input costs and benefits.

10. **Agricultural Economist (national; 5 person-months).** An economics graduate and 10 years of relevant experience. The expert will (i) review the cost and benefits, and (ii) conduct economic analysis in accordance with ADB's Guidelines for the Economic Analysis of Projects.

<sup>2</sup> Available at: <http://www.adb.org/Documents/Guidelines/Consulting/Guidelines-Consultants.pdf>.

11. **Soil and Water Quality Specialist (national; 3 person-months).** A graduate and 7 years of relevant experience. The expert will review data and advice on future trends and measures.
12. **Environmental Specialist (national; 4 person-months).** Graduate in environmental sciences and 7 years of relevant experience. The expert will review data; and prepare initial environmental examination and environmental management plan.
13. **Social and Gender Specialist (national, 3 person-months).** Graduate in social sciences and 7 years of experience. The expert will conduct social, poverty, and gender analysis.
14. **Resettlement Specialist (national, 4 person-months).** Graduate in social sciences and has 7 years of relevant experience. The expert will supervise data collection, and land acquisition and resettlement plans, and indigenous people plan.
15. **Hydrologist (national; 4 person-months).** Graduate in hydrology or related discipline and 7 years of relevant experience. The expert will (i) assess water availability and estimate floods, (ii) conduct water balance at sub-basin scale, and (iii) advise design discharges.
16. **Design/Structural Engineer (national; 5 person-months).** Civil engineer graduate with 10 years of relevant experience. The expert will conduct structural design and drawings.
17. **Financial Management Specialist (national, 3 person-months).** Graduate in accounting or finance and with 7 years of relevant experience. The expert will conduct project financial analysis and assess EA's financial management capacity.
18. **Climate Change Specialist (national, 4 person-months).** Graduate in relevant disciplines and 5 years of experience. The expert will (i) assess the likely impacts of climate change on the project, (ii) suggest adaptive measures, and (iii) estimate adaptation cost.
19. **Water Resource Specialist (TA Coordinator; national; 7 person-months).** With a minimum of 15 years relevant experience, the expert will (i) coordinate for the TA outputs, (ii) advise on policy, and (iii) ensure subprojects preparation on a sound technical basis.
20. **Procurement Specialist (national; 4 person-months).** With a minimum of 5 years relevant experience, the expert will assess EA's capacity and identify risks and mitigation measure.
21. **GIS Development Specialist (national, 4 person-months).** With a minimum of 5 years relevant experience, the expert will (i) develop end user interface water resources information system (WRIS), (ii) collect feedback, (iii) fix bugs, and (iv) assist the remote sensing specialist.
22. **Remote Sensing Specialists (2 international, 4 person-months).** With minimum of 5 years of satellite-based remote sensing analysis experience. The expert will (i) develop satellite-based WRIS, (ii) develop training material and operational manual, and (iii) conduct training.
23. **Agriculture Specialist (national; 4 person-months) and Economist (national; (national, 3 person-months).** Both experts should be graduate and with 15 years of experience in their respective fields. The experts will review their relevant work by the firm and assist in loan processing.

## E. Implementation Arrangements

24. Balochistan's Irrigation and Power Department (IPD) will be the EA for the PPTA and ensuing loan. IPD will establish project management office and will provide counterpart support in the form of counterpart staff, office space, field accommodation on a nominal cost, and data and documents. ADB will closely coordinate with IPD and Agriculture and Cooperative Department, and PPTA consultants for timely outputs. The disbursements under the TA will be done in accordance with the ADB's *Technical Assistance Disbursement Handbook* (May 2010, as amended time to time).

25. The proposed TA processing and implementation schedule is listed in Table A4.4.

**Table A4.4: Technical Assistance Processing and Implementation Schedule**

Major Milestones	Expected Completion Date
Mobilization of Consultants	15 June 2015
Final Report	31 July 2016
TA Completion	31 December 2016

Source: Asian Development Bank.