

PROJECT PREPARATORY TECHNICAL ASSISTANCE

A. Justification

1. The PPTA would assist the government in finalizing the road alignment for missing link between Lhamoizingkha and Sarpang on the southern east-west highway (SEWH), and undertaking a holistic needs assessment of the overall cross border trade and logistics infrastructure at Phuentsholing, Gelephu and Nganglam. The consultants shall ensure integration of proposed project components with future economic developments, and facilitate movement of goods via multi-modal supply chain logistics. Proposals are to include the dry port design, integrated checkpoints and the necessary access roads connecting to the existing highway network. As part of technical due diligence, road safety, climate change adaptation measures should also be considered. The consultants shall update/develop the demand analyses, undertake economic and financial analyses, and ensure mitigation of social and environmental impacts. Safeguards documents shall be prepared in accordance with ADB's Safeguard Policy Statement (2009). The consultants shall also assess capacity development needs of Executing and Implementing Agencies by undertaking Financial Management Assessment, Institutional Assessment, Procurement Assessment and Project Implementation Assessment.

B. Major Outputs and Activities

2. The major outputs and activities are summarized in Table A3.1. For the trade facilitation component, physical components identified by ongoing technical assistance on SASEC Trade Facilitation¹ will be prioritized and feasibility designs will be developed under this PPTA.

Table A3.1: Summary of Major Outputs and Activities

Milestones	Major Output	Expected Completion Date
Pre-feasibility studies	Completion of environmental surveys and initial assessment of road alignment options	Month 3
Mobilization of feasibility studies (firm)	(i) Work program, (ii) initial assessment and study approach for needs assessment of trade facilitation component	Month 6
Mid-term workshop	Workshops to present (i) road alignment; (ii) needs assessment and proposed Trade Facilitation component	Month 9
Interim Report	Feasibility Report on road and trade facilitation component	Month 12
Draft Final Report	(i) Engineering feasibility study, (ii) government consensus on high priority trade facilitation component (iv) economic and financial analysis (v) safeguard documents (vi) institutional capacity, financial management assessment, project implementation assessment and procurement assessment (vii) project administration manual and procurement plan	Month 15
Final Report	(i) Tripartite Meetings, and (ii) finalization of RRP documents	Month 24
Progress Report	Monthly progress reports will be provided to ADB by e-mail or fax, indicating accomplishments achieved during the month	Monthly

Source: Asian Development Bank

¹ BHU TA-8437 Kingdom of Bhutan: Supporting Participation in the South Asia Subregional Economic Cooperation Trade Facilitation Program; and RETA-7491 Support for South Asia Subregional Economic Cooperation.

3. The consulting services will be implemented over 24 calendar months from the commencement date. Necessary inputs and assistance will be provided to ADB project team during the ADB loan processing and fact-finding missions.

C. Cost Estimate and Proposed Financing Arrangement

4. This PPTA would be delivered by 1 international firm and 4 individual consultants. It is estimated to cost \$1,000,000, financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-V). The government will provide support in the form of counterpart staff, office space including furniture and utilities, access to data, records, and other information required to perform the assigned tasks; and counterpart staff and engineers to coordinate with the Consultant's team.

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

Item	Amount
A. Asian Development Bank^a	
1. Consultants	
a. Remuneration and per diem	
i. International consultants	505.90
ii. National consultants	154.60
b. International and local travel	85.50
c. Reports and communications	10.00
2. Equipment ^b	8.00
3. Training, seminars, and conferences	16.00
4. Surveys	150.00
5. Miscellaneous administration and support costs	5.00
6. Contingencies	65.00
Total	1,000.00

^a Financed by the Asian Development Bank's Technical Assistance Special Fund (TASF-V).

^b Equipment will be turned over to the implementing agency upon completion of the TA activities.

Source: Asian Development Bank estimates.

D. Consulting Services

5. The international firm will be recruited using the quality- and cost-based selection procedure, with a simplified technical proposal and a 90:10 proportion of quality to cost. The services will be implemented over 24 calendar months and will require 21 international PM and 24 national PM. The individual environmental expert (national), wildlife expert (international) and procurement expert (international) will be recruited separately from the firm. The firm and individual consultants are expected to work closely and share all relevant project related information and resources to ensure smooth TA implementation and timely delivery of outputs.

Table A3.3: Summary of Consulting Services Requirement

International Name of Positions	Person- months	National Name of Positions	Person- months
Logistics and customs expert/ Team Leader	6.5	Deputy Team Leader and Highway	6.0
Transport Economist	2.0	Engineer	
Geotechnical Engineer	1.0	Structural Engineer	2.0
Bridge/Structural Engineer	1.5	Social/Gender Development Expert ^a	7.0
Financial / Institutional Expert	2.0	Environmental Expert ^a	12.0
Wildlife Expert ^a	6.0		
Procurement Expert ^a	2.5		
Total	21.5	Total	27.0

^a Individual consultant to be recruited separately from international firm.

E. Outline Terms of Reference for Key Experts

6. **Logistics and Customs Expert/Team Leader** (international, firm) He/she will be a Civil Engineer with Master's degree in Highway or Transportation Engineering, and at least 20 years of experience in the customs and logistics transport sector. He/she will provide technical and managerial inputs; focus primarily on the development plan for the trade facilitation component; and coordinate closely with individual consultants (recruited separately from the firm) on Environment Expert, Wildlife Expert, Procurement Expert and Detailed Design Consultants to ensure overall coordination and timely delivery of outputs of the overall project.

7. **Transport Economist** (international, firm). He/she will possess post-graduate qualifications in transportation or transportation economics and at least 15 years' experience in the sector. He/she will undertake economic analysis of the subproject, and overall project, as required by ADB.

8. **Geotechnical Engineer** (international, firm). He/she shall be a Civil Engineer, preferably with Master's Degree in Civil Engineering, and at least 10 years of experience in foundation design in geotechnical engineering. He/she shall provide robust engineering analyses, ensuring robust and safe design and cost estimates.

9. **Bridge/Structural Engineer** (international, firm). He/she shall be a Civil Engineer, preferably with Master's Degree in Structure Engineering, and at least 10 years of experience in the field of bridge engineering. He/she shall design suitable bridge type; considering the availability of material cost and maintenance.

10. **Financial/Institutional Expert** (international, firm). He/she will be a Chartered Accountant or holding a Master's degree in Business Administration with finance and accounting, with at least 12 years' experience in financial management, audit, and accounts for public sector institutions. He/she will undertake a financial management and sustainability assessment of the implementing agency and conduct financial cost-benefit analysis for any components with cost recovery aspects as per ADB's requirements. The expert will recommend measures for capacity building of the EA/IA, and design the funds flow and disbursement mechanism for the ensuing project. The expert would study financing options, including possible public-private partnership schemes.

11. **Highway Engineer/Deputy Team Leader** (national, firm). He/she will be a Civil Engineer, preferably with Master's degree in Highway Engineering, and at least 15 years of experience in the highway engineering. The deputy team Leader will primarily deliver feasibility design of the road component, incorporate road safety features and inputs from the environmental and wildlife experts.

12. **Structural Engineer** (national, firm). He/she will be a civil engineer, with Bachelor's degree in civil engineering, and at least 7 years of bridge design and structure design experience. The engineer will be primarily responsible for feasibility design of bridge structures, and structural components cross border facility infrastructure.

13. **Social/Gender Development Expert** (national, individual). He/she will be a graduate in sociology, or other related fields. The expert will have at least 10 years' experience in dealing in designing or implementing social/gender components of development projects in Bhutan, preferably with work experience in transport sector funded by donor agencies. The expert will

address gender issues and prepare safeguard documents in accordance to ADB policies and guidelines.

14. **Environmental Expert** (national, individual). He/she shall have minimum of a Master's Degree in Environmental Science/Management, Wildlife Conservation or Ecosystem Management and related subjects. He/she should also have minimum of 8 years of working experience in wildlife conservation related activities involving protected areas and transport projects.

15. **Wildlife Expert** (international, individual). He/she shall have a minimum of a Master's Degree in Wildlife Conservation or Ecosystem Management and related subjects. He/she shall have a minimum of 15 years of working experience in wildlife conservation related activities involving protected areas. Must have adequate experience and knowledge in designing and implementing wildlife conservation features within transport projects.

16. **Procurement Expert** (international, individual). He/she shall have a minimum of a Bachelor's degree in civil engineering, business administration, or related field with at least 5 years' experience in procurement (of goods, works and consultancy services) for infrastructure projects, preferably including PPP and design and build contracts. He/she will assess suitability of private sector development of project components. He/she would develop appropriate procurement packages, undertake procurement assessment, and project implementation assessment of the implementing agency's capacity as per ADB's procurement guidelines. The expert will also support the Government on recruitment of the Detailed Design Consultants; as well as procurement of civil works as per ADB's procurement guidelines. The expert shall be familiar with ADB's procurement guidelines.

F. Implementing Arrangements

17. The Department of Roads (DOR) and Department of Revenue and Customs (DRC) will be the government counterpart for the road component and trade facilitation component respectively. A project management unit has been set up, led by DOR and DRC, and including relevant agencies such as Wildlife Conservation Division (WCD) and Department of Trade (DOT). The proposed TA processing and implementation schedule is listed in Table A3.4.

Table A3.4: Technical Assistance Processing and Implementation Schedule

Major Milestones	Expected Completion Date
Concept Paper clearance	August 2014
Commence consultant mobilization	October 2014
Project documentation completed	January 2016
Completion of PPTA	September 2016

18. Disbursements under the TA will be done in accordance with the ADB's Technical Assistance Handbook (May 2010, as amended).