







# Terms of Reference (TOR)

Pre-Feasibility Study, Detailed Survey and Financing Options for

KUMRAT-MADAKLASHT CABLE CAR



# Term of Reference (TOR)

TORs for Consulting Services for Pre-Feasibility Study, Detailed Survey and Financing Options for

# **Kumrat-Madaklasht Cable Car (KMCC)**

Country:	Pakistan
Name of the Project:	Khyber Pakhtunkhwa Integrated Tourism Development Project (KITE)
Consultancy Services:	Consulting Services for Pre-Feasibility Study, Detailed Survey Financing Options for Kumrat-Madaklasht Cable Car (KMCC).
IDA Credit No.:	IDA-64620
Project ID:	P163562
Procurement ID:	PK-KP C&W-210061-CS-CDS

#### A. Introduction:

The Govt: of Khyber Pakhtunkhwa (KP) has received a loan from the International Development Association (IDA) for the development of tourism sector in KP, and part of the loan will be used for development of infrastructures that are enabling and contributing to the development of the tourism sector. For this purpose, the Department of Communication and Works of KP would like to engage a consultant to provide services related to the preparatory activities of the infrastructure component of the project namely pre-feasibility study, detailed survey and financing options for the proposed Kumrat Madaklasht Cable Car Project.

The Communication & Works Department (C&W) of the Government of Khyber Pakhtunkhwa (KP) through one of the project management units (PMUs), i.e. PMU-C&W (KITE), headed by the Project Director will be the implementing agency for this assignment.

# **B.** Background of KITE Project:

The project has been conceived under International Development Association (IDA) assistance to enable the development of an inclusive, responsible and sustainable tourism sector in KP. The infrastructure component of the project includes upgrading/rehabilitation of roads and provision of road side and nearby tourist facilities. Accordingly, the Kumrat Madaklashat Cable Car Project has been selected and the consultancy services for pre-feasibility study, detailed survey and financing options is included under the KITE project.

#### C. Objective of the Assignment

The objective of the assignment is to carry out the Pre-Feasibility Study, Detailed Survey, Preparation of required environmental & social safeguard instruments, Financing Options, Geological & Geotech Study, Land Slide and Disaster Prevention Analysis, Hydrology Study, Architectural Design, Mechanical & Electrical Designs, Tourism Infrastructure Operation and Management Options, and Detailed Engineering Designs of the above proposed project to be financed under the KITE project in accordance with World Bank operational policies and relevant legislation. The Pre-Feasibility will also propose other allied facilities for tourist convenience which can generate economic opportunities for the local communities.

# 1. Background of KMCC Project

communities".

Khyber Pakhtunkhwa (KP) Province, the third largest Province in Pakistan and situated in the northwest region, blessed with the presence of diverse touristic attractions catering to all interest types. Every year millions of tourists from different parts of Pakistan as well as international tourists visit KP Province for tourism and adventures.

Expenditure in the KP's tourism sector rose from Rs. 86.23 million in the financial year 2012-13 to Rs. 791 million in financial year 2018-19. The increased tourism promotion has led to an unprecedented rise in tourist traffic resulting in economic activity growth in the province and the creation of new employment opportunities for the local population.

KP has the means to attract private sector investment and increase the value generated per visitor (average daily spend per visitor multiplied by their average length of stay) through a sustainable development approach. Sustainability refers to the environmental, economic, and socio-cultural aspects of tourism development, and the need to manage these three dimensions to guarantee that a destination continues to provide benefits in the long-term.1 KP's mountainous terrain allows for breathtaking sites of scenic beauty framed by canyons, valleys, forests, lakes and rivers. The province offers unparalleled opportunities for adventure seekers with multiple destinations for mountaineering, trekking, skiing, hunting, sport angling, among many others.

Kumrat valley is located in District Dir Upper Kohistan Region having boundaries with Districts Chitral and Swat Kohistan area of Gabral. Kumrat Valley is located at a distance of about 169 Km

<sup>&</sup>lt;sup>1</sup> In recent years, sustainability has emerged as a critical concern that must be addressed in any viable tourism development strategy. Expressed simply, sustainable tourism can be defined as "Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment, and host

from Chakdara and 367 Km from Islamabad. Kumrat is covered with green pastures, snow clad mountains, the river Panjkora, foggy mounds and deodar forests are attractions of the region, which serve as habitats for variety of flora and fauna.

Despite of very little facilities in the area, millions of tourists visit Kumrat Valley every year for tourism. Keeping in view potential in the area, Kumrat Valley was selected for exploration of opportunities for tourism development in the Province.

# 2. The Project - KMCC

The Department of Tourism along with the Department of C&W, through KITE project's dedicated Project Management Units (PMUs), is interested in assessing the pre-feasibility of implementing a Cable Car Project from Tore Oba Kumrat to Madaklasht, Lower Chitral (KMCC) on a preliminary alignment of approximately 14 km (see Annex A). The project intends to open tourism opportunities in a scenic rugged and unexplored region with multiple natural attractions and considerable potential for tourism market development.

The description of the Project (referred to as "KMCC Project") and its components as conceived by the Client are as under:

- 14 km Cable Car system between Kumrat and Madaklasht.
- The proposed Base Station is located at Kumrat valley and End Station at Madaklasht having some Intermediate Stations.
- Infrastructure Development & Allied Facilities include
  - a. Car parking plaza for 500 vehicles
  - b. Hotels at Base Station, Intermediate Stations and End Station
  - c. Skiing facilities at Intermediate Stations
  - d. Mosques and Walking Tracks
  - e. Surveillance roads between Base and End Stations
  - f. Hydropower plants of sufficient capacity
  - g. Any other facility as proposed by Client

# 3. Objectives

4. The purpose of this consultancy is to assist the GoKP take a decision on the alignment, cable car technology choice, financing and business model for the development, operations and maintenance of the KMCC Project. The analysis shall evaluate the pertinence from the technical, economic, financial, socio-environmental and organizational / institutional angles in an effort to: (i) attract private sector investment through the preparation of a comprehensive

pre-feasibility and options analysis in accordance with international quality standards, and (ii) determine the enabling conditions to convert this infrastructure into a touristic attraction.

# 5. Scope of work

The consultancy's scope of work is:

# 4.1 Task 1 – Inception

# 4.1.1 Assessment of previous and ongoing studies, land legal framework and other available materials

Collection and review of previous data, reports, drawings etc. of the project area. The Client will assist in obtaining previous data from various departments. The Consultant shall:

- 1. Collect all information, guidelines, regulations, protections, ordinances, etc. relevant to developing the KMCC project in the region/province.
- 2. Review the land ownership in the Kumrat Valley along the preliminary alignment of the KMCC (see Annex A)
- 3. Review type of land and identify whether the various project features (Cable Car and Tourists Infrastructure) are legally allowed in such area.
- 4. Review key policy and institutional bottlenecks that may hamper the development of the KMCC Project
- 5. Review of at least 3 existing cable car systems in the world of similar nature and scale. The analysis should include but not limited to, technology choice, safety features and financing modalities (for capital and O&M costs).
- 6. Summarize and report relevant findings for Project's and future reference.

#### 4.1.2 Site / alignment reconnaissance

With guidance from the Client and supported by the existing documentation and preliminary alignment, the Consultant shall conduct detailed site reconnaissance to obtain first-hand information on general terrain, topography, geology, assessment of existing infrastructure, accessibility conditions, tourism potential and expected seasonal tourist traffic, job creation potential for local communities and other important aspects of the project. The preparation of a gap analysis note shall guide the development of the reconnaissance tasks of the proposed alignment as well as other alternative sites as needed for potential optimization, revisions and/or deviations in consultation with the Client.

#### 4.1.3 Topographic survey

Detailed topographic survey shall be carried out covering the area along the proposed project alignment. The survey should include aerial mapping

#### 4.1.4 Geotechnical studies

The Consultant shall conduct following activities

- Detailed geological mapping including discontinuity survey.
- Landslide (including avalanche) hazard studies
- Landslide mitigation study
- Preparation of geotechnical investigation plan, contract documents and invitation of bids
- Supervision of geotechnical investigations
- Programme of laboratory testing
- Analysis of data

#### 4.1.5 HYDROLOGICAL STUDIES

Consultant shall carry out hydrological studies related to rivers, streams and nullahs as per project requirements and exploring possibilities for hydro power generation.

#### 4.2 Task 2 – Analysis of Alternatives

#### 4.2.1 Demand assessment

The Consultant shall estimate the design capacity required for the KCC infrastructure based on inputs from available data sources, empirical evidence or datasets to be collected as deemed necessary.

Design capacity shall be based on:

- 1. Forecasts of daily and/or seasonal potential visitors/tourists,
- 2. Forecasts of labor force in/outflux in line with expansion and growth plans of facilities and services and availability of local human resource in nearby communities and districts,
- 3. Estimated operating times and itineraries for the proposed alignment,
- 4. Limitations, regulations or and/or protections impacting the provision of transport services within the local and provincial jurisdictions.
- 5. Technical specifications of KCC infrastructure and equipment from suppliers with relevant presence in the region/country.

#### 4.2.2 Analysis of Alternative Alignments

The Consultant shall analyze at least 3 different alignments and select the optimal one based on a multi-criteria analysis that should include, but not limited to, the following criteria:

- 1. Touristic attractions
- 2. Connectivity with other transport modes
- 3. Length
- 4. Stations locations
- 5. Construction risk
- 6. Operation and maintenance risk

- 7. Environmental risk: design risks as well as risks during construction and operation phases. (Any indigenous, protected fauna and flora of the project area locations should be identified. Preserved wildlife areas must be avoided for the construction of ancillary facilities including Emergency Rescue Trail. Behavior/characteristics of any endangered/protected species needs to be understood so as to avoid any adverse impacts on its living patterns. Alignment and Tower structures should be built in areas with low ecological value which should be assessed accordingly. Any streams that might have to be rediverted needs to be considered. The routes and locations of access roads besides the location point of the cable cars and its ancillary facilities should be brought into consideration too. individual and societal risks to cable car workers as well as passengers will also need to be assessed.
- 8. Social risk: ease of land acquisition, land ownership, privacy of ground residents from aerial view, security of ground residents from tourist and labor influx, noise, gender specific impacts, stakeholder opinion, and various social risks during construction and operation phases.
- 9. Stakeholders consultation by also involving local communities in the vicinities will need to be carried out.

## 4.3 Project Concept Design and Cost estimate

- 1. The Consultant shall develop a **Concept Design** for the whole KCC Project along the selected optimal alignment. The Concept design should include the following features:
  - a. Cable Car system including the pylons, stations and cars
  - b. Tracks and trails to nearby scenic sites,
  - c. Parking, shopping and recreational/religious areas,
  - d. Landscaping Works (Parks, Gazebos, Benches, Walking Trails) and playgrounds
  - e. Hotels
  - f. Camping sites and development of skiing tracks/facilities
  - g. Consideration of green, inclusive and sustainable development principles in terms of waste management, energy production/consumption, universal accessibility, among others.
  - h. Power requirements and source of uninterrupted power supply,
- 2. The Consultant shall estimate the Capital and O&M costs of the Project using the Concept Design developed above. The O&M costs should be limited to the Cable Car system only, while the Capital cost should include all Project's features.

# 4.4 Task 4 – Financial and Economic evaluation

- 1. The Consultant shall conduct an economic evaluation of the Cable Car system with NPV and EIRR being determined. A discount rate of 6-8% pa is suggested to be used for the NPV calculations. The costs shall include all infrastructure and equipment related only to the Cable Car system including land and buildings and the capital cost of the cable car units. Annual costs of operations and maintenance for all infrastructure, ticketing, etc. and management costs shall also be included. Benefits/disbenefits shall explore:
- Time savings if any can be identified.
- Social and environmental impacts.
- Creation of employment opportunities.
- Fare structures and other revenue channels.

In the event that the minimum criteria is not met, the Consultant shall identify the reasons for the poor performance and prepare a modified option designed to overcome the problems. Modifications might include assumptions of lower fares, reduced infrastructure footprint, additional capacity, etc. An economic evaluation shall be undertaken for this option and if it meets the minimum criteria it shall be adopted as the preferred option and shall be taken forward for financial assessment.

- 2. The Consultant shall undertake detailed life-cycle financial analysis for the Cable Car System and develop a related Financial Model. The Consultant should:
- Prepare projections of revenues for the Cable Car system based on projected traffic, and prevailing tariff and capacity constraints.
- Outline various financial parameters related to capital structure (debt and equity mix, financing
  costs, loan terms and repayment structure), depreciation, tax and commercial accounting
  principles and prepare the projected balance sheet, profit and loss statement, and cash flow
  statements based on estimated capital costs, estimated O&M costs, projected revenue.
- Estimate the return on investment (IRR & NPV), and other critical financial indicators based on previous outputs.
- Compare different models/structure for the project and recommend the most viable plan to stakeholders.
- Assess areas for private sector participation.

# 4.5 <u>Financing and Business Model options for the Construction, Operation and Maintenance of the Cable Car System</u>

The Consultant shall analysis various scenarios for the financing and business model for the Cable Car system. The Consultant shall:

- 1. Propose various options for the mode of financing (public financing and/or private sector investment) along with operational responsibilities.
- 2. Prepare business model for each of the financing options.
- 3. Under scenarios where profitability is constrained by several external factors, assess the desired level of Government's support;
- 4. Review existing/proposed regulatory scheme and assess risk management parameters for private sector stakeholders to enjoy full rights to manage risks to investments;
- 5. Identify risks during design, construction, operation and maintenance of the project including security, demand and traffic risk;
- 6. Identify the regulatory, governance and fiduciary risks associated with the Project, including those related to the Private Sector participation, highlighting potential reputational risks;
- 7. Risk allocation for each stakeholder i.e. participating country and private sector;
- 8. Propose risk allocation matrix for different stakeholders;
- 9. Develop risk mitigation plan.
- 10. Formulate recommendations to address any of the risks highlighted above;
- 11. Define and highlight needs and criteria for PPP from the public perspective in terms of delivery capability, technological know-how, financial capacity and value for money;
- 12. Define and highlight need for PPP from the private sector perspective in terms of public sector's human capacity, knowledge of the operations, and existing assets;
- 13. Review past experiences in cable car systems concessioning and suggest recommendations to address potential investment climate issues sector for minority stakeholders;
- 14. Suggest recommendations for managing perceived risks from private sector such as for tariff regulations and regulation of multimodal interfaces;
- 15. Assess pros and cons options of various procurement modalities, including Construction, Design-Build, Design-Build-Maintain-Operate, Design-Build-Finance-Maintain-Operate.

#### 6. Deliverables and Timeline

Sr.	Required reports	From Contract signing
1.	Inception report (Task 4.1.1)	1 month
2.	Site Reconnaissance, Topography Survey, Geotech & Hydrological Studies (Tasks 4.1.2,4.1.3, 4.14 & 4.15)	2 months
3.	Demand Assessment and Analysis of Alternatives (Tasks 4.2)	3 months
4.	Concept Design and Cost Estimate (Task 4.3)	4 months

5.	Financial and Economic Evaluation (Task 4.4)	4 months
6.	Financing and Business Model Options (Task 4.5)	5 months
7	Final Pre-Feasibility Report (Summarizing all Tasks)	5 months

# 7. Qualification

8. The eligible Consulting firm(s) /JV/sub-consultancy shall have experience in key areas covered under these terms of reference (ToRs) including transport and tourism infrastructure, economic analysis of complex projects and technical pre-feasibilities of multi sectoral assignments in challenging terrains, legal and financial advisory on infrastructure projects including private sector participation. They should have completed at least two (2) similar assignments in past five (5) years at an international level. They must demonstrate the skills set and documentary verifiable international experience required to undertake the tasks set out in these terms of reference primarily focused on Cable Car based Tourist Feasibility Studies. The evaluation of the consulting firm/ consortium will be carried out in accordance with the below criteria:

# 9. Team composition

## **Key Staff**

- 1. **Senior Transport Specialist** / **Team Leader:** responsible for overall project management. Possess experience of at least 15 years and working for the planning (feasibility stage) of mass transit projects. He/She will work closely with key and non-key staff throughout the project. The Task Team leader should have worked on (2) comparable completed cable car projects.
- 2. **Senior Cable Car Specialist:** possess experience of at least 15 years and working for similar projects including planning and designing of cable car systems in mountainous areas. The expert should have worked on (2) comparable completed projects.
- 3. Senior PPP Specialist: He/She must have 10 years of experience in developing and executing transport PPPs projects, preferably for mass transit projects, and developing complex financial models for transport sector. The expert should have worked on (2) comparable completed projects.
- 4. **Senior Transport Economist**: He/She must have 10 years of experience in demand projection and economic appraisal of transport projects, developing traffic and demand forecasts, and complex transport models for business planning. The expert should have worked on (2) comparable completed projects.
- 5. Social Safeguards Specialist (Resettlement Expert): At least ten (10) years of experience in the social issues, out of which at least seven (7) years in land acquisition in KP Province. S/he

should be an expert in applicable laws and regulations and institutional set up and policies of land ownership in KP province especially in Forest areas. S/he will deliver all social aspects of the feasibility study, including assessing land ownership and conducting the social risk assessment.

6. **Environmental Safeguards Specialist:** At least fifteen (15) years of experience in environmental management and monitoring, out of which at least ten (10) years in large infrastructure projects in rural areas (Dams, Highways etc..). S/he will oversee all environmental safeguards related activities of the pre-feasibility study.

#### **Non-Key Staff**

The Consultant shall propose all non-key staff that best respond to the requirements of the TOR. As part of evaluating the proposals, The Client will only evaluate the qualification of the Key-Staff.

Non-key staff should include, but not limited, the following specialists:

- 1. Structural engineers
- 2. Design engineers
- 3. Costing engineers
- 4. Geologists
- 5. Hydraulics engineers
- 6. GIS specialists
- 7. Architects
- 8. Hydropower expert
- 9. Electrical and mechanical engineers
- 10. Tourism development experts
- 11. Legal experts
- 12. Expert in ski resorts

#### 10. Selection method

The selection will be made in accordance with the QBS method set out in the World Bank Procurement Regulations (Procurement in Investment Project Financing, Works, Non-Consulting and Consulting Services. July 2016 Revised November 2017 and August 2018). International market approach will be used for hiring the services of an Individual firm/ Joint Venture or Consortium.

# 11. Working arrangements

The Consultant will be required to present the findings of the various components of the studies to PMU KITE C&W at key milestones during the Consultancy. The Consultancy will also be

extended full support from the relevant agencies of the GoKP including the relevant stakeholders. The PMU KITE C&W will provide access to sites (by obtaining necessary clearances and NOCs), available data and information relevant to the preparation of the documents as well as available information on relevant agencies and stakeholders.

However, it is the responsibility of the qualified firm to contact the identified stakeholders, gather the complete information, synthesize and analyze it as well as prepare all the assignment deliverables satisfactory to the Government of Khyber Pakhtunkhwa. There will be strict adherence to the communications policy of the GoKP, while ensuring GoKP adequate participation. The Consultant will report to the Project Director (DoT-PMU C&W) and is required to complete the assignment within six months from signing of contract.

#### **SELECTION OF CONSULTANT**

Selection will be made in accordance with the QBS method set out in the World Bank Procurement Regulations (Procurement in Investment Project Financing, Works, NonConsulting and Consulting Services. July 2016 Revised November 2017 and August 2018). The attention of interested Consultants is drawn to Section III, paragraphs, 3.14, 3.16, and 3.17 of the World Bank's "Procurement Regulations for IPF Borrowers", setting forth the World Bank's policy on conflict of interest. In addition, please refer to the paragraph 3.17 of the Procurement Regulations regarding specific information on conflict of interest related to this assignment. The Firms/Consultants should have demonstrated experience in relevant assignments and scope of work involved. Consultants may associate with other firms in the form of a joint venture or a sub-consultancy to enhance their qualifications. If consultants intend to associate with other firms, they are advised to clearly identify the lead partner and state the composition and nature of the association (JV/sub-consultant) in their EOI. In case the EOI is submitted in form of Joint Venture, each partner in the association shall meet the minimum requirements under the short-listing criteria. However, the short-listing criteria will not be applied and considered for sub-consultants.

#### SHORTLISTING CRITERIA

S.No	Selection Criterion	Marks
1	The firm should have at least Ten (10) years of experience in undertaking feasibility studies, master planning, detailed survey, environmental and social safeguard instruments, financial viability and options for tourism and transport infrastructure, geological & geotechnical studies, land slide and natural disaster analysis, hydrology study, tourism and destination management, architectural design for installation of Cable Car or similar transportation system for the purposes of tourism and mass transit.	(20)
2	Should have completed at least two-four (2-4) assignments in past five (5) years of comparable scale and complexity as delineated in TORs.	(50)
3	Should have managerial/senior staff having practical and academic qualifications in Architecture, Mechanical Engineering, Electrical Hydrogeology, Geotechnical/Material, Topographic systems/GIS, Public Private Partnerships, Infrastructure Financing, Economic Analysis, Tourism and Transport Infrastructure, and Environmental Engineering	(25)
4	The firm shall have adequate logistical capacity as evidenced through established and functioning offices.	(05)

