



Consultancy Ref No: 62/WRAP/North/24-25

RFP FOR CONSULTANCY SERVICES WWF-PAKISTAN

SUBJECT:

Climate Change Risk Modelling: Assessment of Future Water Demand and Supply Using WEAP Model; Exploring Future Risks in Water Resource Management at Bagrote Valley.

Application Submission:

Interested consultants should submit the Proposal on Application Form Available Online or can access through following Link:

<https://forms.gle/zGq2gRUHyuFRCxhM9>

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1) INTRODUCTION & BACKGROUND

Contract type:	Consultancy and Services
Duration of assignment:	20-01-2025 to 30-3-2025
Type:	Individual or firm

Background of Project & Assignment:

Bagrote Valley is located in the Karakoram Range of the Himalayas, and the area is particularly vulnerable to the impacts of climate change. The valley's water resources depend heavily on glacial meltwater by surrounding glaciers. But recent climatic shifts, viz., rising temperatures and altered precipitation patterns have accelerated risks of glacial retreat, Glacial Lake Outburst Floods (GLOFs), flash floods, landsliding, biodiversity loss, water scarcity, access to clean drinking water, and agricultural activities in the valley. Due to its unique climatic conditions and reliance on glacial melt for water, Bagrote Valley is an ideal study area for addressing the challenges posed by climate change induced risks. By employing scenario-based modelling, hazard mapping, and integrating local knowledge, this consultancy can develop targeted strategies to enhance climate resilience, improve water security, and promote sustainable development. This approach aligns with broader initiatives to safeguard the water resources and resilience of the Hindu Kush Himalaya (HKH) region. This project seeks to utilize the Water Evaluation and Planning (WEAP) Model to assess the future demand and supply of water resources in the valley. The aim is to develop sustainable water resource management strategies to address risks arising from climate change, population growth, and agricultural expansion.

2) GENERAL CONDITIONS

- 1) The WWF-PAKISTAN reserves the right to reject or accept any proposal. The WWF-PAKISTAN reserves the right to proceed with the implementation of any Service, in whole or in part, as described in the Proposal.
- 2) The WWF-PAKISTAN reserves the right to engage in discussions with any BIDDER to clarify responses or discuss certain issues with regard to the proposal or services requested. The WWF-PAKISTAN has no obligation to notify the other BIDDERS of the discussions, clarifications, or other information provided by a BIDDER. Any additional information required for the preparation of the BID shall be distributed to all participants at the same time.
- 3) The WWF-PAKISTAN reserves the right to award the proposal based on experience, qualification, completion date, service cost, and other criteria, and not necessarily the lowest cost.
- 4) Based on the RFP BID the WWF-PAKISTAN is entitled to change/replace or omit any clause/part of the preliminary defined scope of services of the proposal. The WWF-PAKISTAN shall conduct negotiations with WWF to achieve the full compliance to the requirements.
- 5) The WWF-PAKISTAN reserves the right in the event the successful CONSULTANT fails to comply with the terms and conditions as listed, to cancel this contract and award it to another CONSULTANT without penalty or action against the WWF-PAKISTAN. The RFP does not constitute an agreement or order.
- 6) The RFP is not a binding agreement between the parties, submission of a proposal or response by a proponent is voluntary.
- 7) By submitting a bid, the BIDDER is deemed to have acknowledged all of the undertakings, specifications, terms and conditions, **WWF Fraud and Corruption Prevention and Investigation Policy and WWF's Environment Social & Safeguard for consultant agreement** and to be bound by them if the BID is accepted. All expenses incurred by the Bidder in connection with the preparation of its proposal are to be borne by the RFP participant, and the WWF-Pakistan shall not incur any obligation whatsoever toward the Bidder regardless of whether such bid is accepted or rejected.

3) PURPOSE

a. The objective of the Consultancy:

The specific purpose of the consultancy is to conduct a comprehensive study using the WEAP model to analyze and project water demand and supply scenarios in Bagrote Valley from 2010 to 2025, and beyond. Further, this study will provide

actionable recommendations for sustainable water resource management and integrate future climate risks into decision-making processes to select appropriate intervention sites in the valley.

b. Specific Tasks:

The consultant will perform the following tasks to complete this study as listed below:

1. Data Collection and Analysis

- Gather historical climatological, hydrological, glacier mass, irrigation, wetlands, springs, biodiversity, pastures, rangelands, and socio-economic data from reliable sources, viz., local meteorological departments, government reports, and scientific databases, and/or from available scientific articles.
- Collect water demand and availability data across agriculture, domestic, and industrial sectors.
- Incorporate high-resolution imagery from drones for hydrological mapping, hazards, vulnerabilities and risks to existing water resources and water supply and/or irrigation systems.

2. WEAP Model Setup and Calibration

- Develop a WEAP-based model for the Bagrote Valley, delineating watershed boundaries and incorporating glaciers mass, glacial meltwater, river systems, wetlands, springs, and groundwater sources.
- Calibrate the model using historical data to simulate baseline and future water scenarios by using climate and/or meteorological data and available glacier mass data.

3. Scenario Analysis

- Simulate five future scenarios considering various variables and independent subsystems, viz., climate system (evaporation, wind, precipitation, temperature, and extreme climate events), socio-economic system (population growth, economic development, technological change, agricultural expansion, water, and land use practices), and management system (water allocation strategies, legislative standards, and political intervention).
- Assess total water demand, un-meet demand, streamflow, potential shortages, and irrigation networking under each scenario.

4. Risk and Vulnerability Assessment

- Conduct a system-wide assessment of climate change induced risks/hazards, viz., floods, landslide, rock falls, mudflow, GLOFs, seasonal variability, sedimentation, or any other hazards related to climate change.
- Identify vulnerable hotspots and sectors using GIS mapping and scenario-based projections for IWRM or appropriate guidance for interventions sites.

5. Recommendations and Stakeholder Engagement

- Develop actionable recommendations for sustainable water resource management, viz., irrigation technologies, water conservation strategies, and mitigations and adaptation measures to implement effective IWRM actions in the model village.
- Organize stakeholders' workshops to build local capacity and integrate findings into district-level adaptation plans.

4) Deliverables

The selected consultant will be required to deliver the following:

1. Inception report detailing methodology, work plan, and timeline.
2. A comprehensive database of climatic, hydrological, socio-economic, and water management data for the Bagrote Valley.
3. WEAP model set-up and scenario simulation results for long term predictions.
4. A detailed risk and vulnerability assessment report of model village.
5. Final report with actionable recommendations for sustainable water resource management and actionable options of mitigation and adaptation for IWRM in the village.
6. Stakeholder workshop report and training materials, pictures, model infographics, videos, or any other material generated from this study.

5) REQUIREMENTS

a. Eligibility

- A proven track record in climate risk assessment, hydrological modeling, and water resource management.
- Expertise in using the WEAP model for water resource planning.
- Strong analytical skills and experience in GIS-based mapping and data analysis.
- Familiarity with the socio-economic and climatic conditions of the Hindu Kush Himalaya region, especially Gilgit-Baltistan
- Identifies and aligns with the core values of the WWF organization: courage, Collaboration, Respect, and Integrity.
- Adhere to WWF's brand characteristics: Knowledgeable, Optimistic, Determined, and Engaging.

b. Qualification

- Having MS or PhD in Geoinformatics/GIS/GIS Modelling, climate change risk modeling, Environmental Sciences, and Natural Resource Management with a track record of well-reputed publications and experience in climate change risk modeling.

c. Experience

- At least 8 to 10 years of relevant experience in similar projects.

6) CORRESPONDENCE & SUBMISSION OF PROPOSAL

1. Application Submission:

Interested consultants should submit the Proposal on Application Form Available Online or can access through following Link:

<https://forms.gle/zGq2gRUHyuFRCxhM9>

1. Interested consultants should submit the Proposal and can send their Queries through Email by attention to the following:

To: Faiza khan (fakhan@wwf.org.pk)

Cc: Muzzammil Ahmed (mahmed@wwf.org.pk)

2. The RFP submission deadline is mentioned on WWF- Pakistan, Website.
3. Any information and responses to inquiries will be made in writing and distributed by email to allproponents. Enquiries after the foregoing deadline will not receive a response.

7) FORMAT OF THE PROPOSAL

The BID submitted by the participant must be structured as per the below provided instructions:

- 1) **Application Form available at WWF-Website** - General information about the Bidder, covering qualification and experience, CV, and all related Information.
- 2) **Experience:**
 - a) **Description of the complete projects:** the list and general information about the complete projects, description of the role in the project, and other accomplishments of the Consultant.
- 3) **Proposal outlining scope consultancy service-** Description of scope and working process, stages, deliverables, exclusions, conditions;
- 4) **Provide template of already complete similar type of reports-** the WWF-PAKISTAN may request additionally;
- 5) **Service Provision Timeline** – Provide Detailed Work Plan as per Deliverable and TORs.
- 6) **Financial Proposal-** the prices shall be provided in **Pak Rupees**; the total price shall include all costs related to

service provision including applicable taxes.

Note:

Templates of all Information are provided on the application form available on the website. Any Additional Information related to the RFP can be attached along with the application Form.

8) FINANCIAL PROPOSAL

The proposed prices shall be provided in PKR, the total price shall include all costs related to service provision including all Direct and Indirect taxes, Travel, Boarding & Lodging shall be based on actual receipt up to max Ceiling (If Any).

The consultant will submit the cost of the assignment in a lump sum, including all applicable taxes according to the Government of Pakistan and the Government of KP

The Payment Term: shall be defined by the contract to be concluded between WWF -Pakistan and the consultant

9) EVALUATION PROCESS

The applicant's proposal shall be evaluated based on the Quality and Cost Based Selection (QCBS) method. Under QCBS both technical and financial proposals shall be evaluated as per the following criteria against a maximum score of 100 points.

A) Technical Proposal (70%)

- Detailed work plan
- Expression of interest (EOI)
- Company Profile
- Detailed methodology

B) Financial Proposal (30%)

- Detailed financial proposal which should be inclusive of all applicable taxes and out of pocket expenses. The financial proposal should follow a breakdown structure i.e., specifying cost(s) to each head and subhead
- Company's registration certificate
- NTN detail(s)
- Any legal or technical certification required for the task
- Audited Accounts Report (if available) of last FY

Note: Late/ incomplete submissions will not be accepted. Only three (03) top-ranked firms will be included in the comparative process

10) DOCUMENTATION AND CONFIDENTIALITY

All documents completed based on requirements of the present RFP shall be the property of the WWF-Pakistan, and shall not without the consent of the WWF-Pakistan be used, reproduced, or made available to third parties beyond what is necessary in respect of the fulfillment of the Project. All documents issued and information given to the BIDDER shall be treated as confidential.

11) BUDGET

The total Budget for this activity inclusive of all taxes and Out of Pocket expenses is **PKR 1,000,000/ only.**