TERMS OF REFERENCE
Nature Capital/ Economic Valuations of priority ecosystem services in the Indus Delta Ecoregion Landscape.

1. INTRODUCTION
Project Title: DFCD Discover Phase – [Indus Delta Ecoregion Landscape – Pakistan]
Contract type: Consultancy Services (Desk and Field based)
Duration of assignment: Sep 2021-Nov 2021

Established in 1970, World Wide Fund for Nature-Pakistan (WWF-Pakistan) is the largest conservation non-governmental organization in Pakistan. WWF-Pakistan works inter alia with local and indigenous communities, national and provincial governments, civil society, international organizations, industries, and corporate entities, and is committed to the conservation of the country’s rich biodiversity, sustainable use of natural resources, and climate change mitigation. WWF-Pakistan further focuses its efforts in seven (7) different practice areas, which includes wildlife, freshwater, oceans, climate change & energy, forests, and food & markets.

2. BACKGROUND
Launched in December, 2019, the Dutch Fund for Climate and Development (DFCD) is managed by a pioneering consortium of Climate Fund Managers (CFM), World Wide Fund for Nature Netherlands (WWF-NL) and SNV Netherlands Development Organisation, led by the Dutch Entrepreneurial Development Bank (FMO) and supported by the Ministry of Foreign Affairs of the Netherlands.

The DFCD consortium aims to serve as a leading example for institutional partnerships, to attract and deploy public and private capital in well-designed and impactful climate-friendly projects. The consortium connects the long-standing project development expertise of SNV Netherlands Development Organisation and WWF-NL to the capital raising and investment capabilities of Dutch Entrepreneurial Development Bank (FMO) and Climate Fund Managers.

In late 2019, WWF-Pakistan submitted the Indus Ecoregion as potential landscape before the DFCD, and was subsequently chosen out of 61 submissions. The Indus Delta Ecoregion hence is among the first few Landscapes to be selected by the DFCD to pilot and develop what it terms as “Bankable Projects”, that is conservation projects that have the ability to be financially self-sustaining i.e. investment based conservation.

The idea behind investment based conservation is to move away from the grants-based model to a type of self-sustaining, for-profit model for conservation projects. Moreover, it is to establish and forge partnerships with the private sector who would be willing to invest and pilot in such conservation projects. Therefore, the Landscape Approach provides a platform to integrate conservation, sustainable use and where necessary restoration across a whole landscape mosaic to sustain biodiversity and ecosystem services, whilst ensuring room for subsistence and commercial activities.

3. INDUS DELTA ECOREGION LANDSCAPE
The Indus Delta Ecoregion (924470 hectares) has been ranked 40th amongst the G200 most biologically rich ecoregions in the world. The Indus Ecoregion covers approximately 65% of the province of Sindh, while a small north-western part of the ecoregion extends slightly into Balochistan. Located in a semi-arid environment, the ecoregion harbors riverine forests along the Indus River, wetlands, mangrove forests in the coastal areas, and desert ecosystems occupy the periphery of the ecoregion.
Sites: (i) Keenjhar Lake and surrounding areas in Thatta District; (ii) Chotiari Reservoir and surrounding parts in Sanghar District; (iii) Nara Canal and surrounding communities in Khairpur District; (iv) Manchar Lake and surrounding communities in Jamshoro District; (v) Keti Bunder and surrounding communities in Thatta District; (vi) Kharo Chann and surrounding communities in Sajjawal District; (vii) District Umer Kot; and (viii) District Mirpus Khas.

The rationale for selecting this landscape is based on multiple factors including ecological, conservational, social, cultural, and economical significance. The IDEL is very diverse and unique in its biodiversity and resources (7th largest delta in the world, covering 600,000ha, 17 major and small creeks, 240 km long mangrove forest, 9). The landscape provides numerous ecosystem services for its users particularly the business/private sector as they are mostly dependent upon these ecosystem resources and services. Keeping this significance of the landscape, WWF-Pakistan aims to conduct a holistic study to identify the nature capital and economic value of the priority ecosystem services in the IDEL.

4. Purpose and Objective of Consultancy

The purpose of this consultancy is to conduct a specific assessment on the nature capital and economic valuation of priority ecosystems including ecosystem services to human well-being, socio-economic development, and poverty reduction in the Indus Delta Ecoregion Landscape (IDEL). The consultant will identify the nature goods and services from IDEL, determining who values those goods and services as well as measuring these values. The goods and services include benefits from forest resources in sustaining local livelihoods, tourism-related benefits, as well as watershed values and water supplies, but also include plant and wildlife habitat, genetic resources, protection against natural disasters, and so on. Many of these goods and services are not traded on commercial markets and therefore have no evident market value. The values of these non-market goods and services need to be measured and expressed in monetary terms, where possible, so that they can be weighed on the same scale as other economic sectors.

The Consultancy will also identify mechanisms and measures to integrate the values of IDEL into relevant local and national policies, programmes, planning processes and reporting systems.

5. Key Outputs

- **1. Literature Review:** Conduct a detailed literature review relating to existing natural capital studies and economic valuations of ecosystem services in the IDEL through collection of information on the value of ecosystem and biodiversity from local, national and global studies including (i) National and global ‘The Economics of Ecosystem Biodiversity’ (TEEB) valuation results (if any), (ii) Valuation of ecosystems in terms of the direct and indirect income they generate and of the services they provide, (iii) Any other national biodiversity valuation, nature capital economic assessments and ecosystem services studies that have been conducted (e.g. water, carbon), (iv) Existing global and regional studies, maps and overlays of key ecosystem services, (v) Any other studies related to the quantification and evaluation of biodiversity and ecosystems services (e.g. forestry, water, biodiversity etc.);

- **2. Ecosystem Services Valuation (ESV):** Identify potential value of targeted ecosystem services and conduct an analysis on its contribution to livelihoods, poverty reduction, and social wellbeing/lifestyle enhancement (link with regional SDGs that are relevant) as per the ecosystem analysis plan mentioned below;

- **3. Policy Brief:** Develop and provide policy brief on ecosystem valuation for sustainable economic development, effective governance, and decision making in the IDEL;
**Ecosystem Analysis Plan**

1. Scoping: Determination of the spatial boundaries of the IDEL to be studied, i.e. deciding on whether to exclude some areas, and include others (e.g. urban areas);
2. Sites: Identification of ecosystems and ecosystem services present in the site to be studied/assessed;
3. Size: Determine the size of the ecosystems present in the IDEL area under investigation;
4. Services: Conduct market and value chain analyses of selected goods and services to determine sustainable market potential, opportunities for value addition and the necessary policies and systems to support such enterprises;
5. Values: Assess and evaluate the values of provisioning services via local market prices and other ecosystem services using the simplified Benefit Function Transfer Approach\(^1\) and then summing up the values and determining the Total Economic Value/ Nature Capital from the IDEL.

**6. Activities**
The consultant is required to carry out the following but not limited to;

- Based on information available prepare an initial annotated outline report on ecosystem goods and Services and the methodology used;
- Liaise with relevant stakeholders to obtain additional information;
- Compile relevant valuation information on the IDEL and its ecosystem services using the globally standardized techniques such as The Economics of Ecosystem Biodiversity (TEEB);
- Prepare an approximation of the Economic Value of the ecosystem goods and services of the IDEL including a short chapter on the current versus potential values and the use of these values in support of decision-making;
- Identify capacity gaps of local communities/stakeholders in sustainable harvesting, utilization and marketing of natural resource goods and services;
- Provide recommendations for enabling the optimum utilization of the products;
- Present the draft report for discussion and review;
- Finalise and submit the report taking into account the comments and feedback from WWF-Pakistan’s DFCD team.

**7. General Conditions**

- All tasks under the contract shall be carried out as required by and to the satisfaction of Project Management Team;

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\(^1\) For methodology, past WWF-Pak literature and other resources on economic valuation of significant ecosystem services could be referred below;

• The contract may be terminated by Project Management Team through written notice in the event of breach of any condition of the ToRs;
• All reports, reference material data, collected under this assignment and papers written including field samples and photographs prepared under the contract shall be the property of the Project and shall not be used, published or distributed by the Consultant without the prior written permission of the Project Management Team;
• The field expenses including boarding, lodging, traveling, porter service and photocopying of the reference literature cited for the project office record as desired etc. will be borne by the consultants;
• Regular or frequent meetings with WWF-Pakistan to discuss the progress updates.

8. REQUIREMENT FOR EXPERIENCE AND QUALIFICATION

Minimum Requirement:
The successful consultant/contractor/firm/ agency will meet the following minimum requirements:
● Team consisting of economist and Environmental Accounting/Ecosystems Valuation Services Specialist;
● A Master’s degree or higher of team members in Economics, Finance, or environmental economics, bio-enterprise expert or a related discipline, preferably at postgraduate level;
● Firm/He/she shall have minimum of 10 years of experience in environmental economics related to natural resources management issues, preferably with experience related to the assessment of ecosystem services, ecosystems services valuation, data and statistical analysis in the design and implement environmental and natural resource accounting systems at the international level;
● Knowledge and experience in undertaking cost benefit/damage and loss for restoration analysis and good understanding of climate change, environmental considerations, entrepreneurship, bankable projects;
● Strong analytical skills, initiative, and demonstrated problem – solving skills;
● Cultural awareness and sensitivity to gender issues;
● Excellent writing skills and fluency in English (Sindhi language would be an additional advantage).

9. DOCUMENTS TO BE INCLUDED WHEN SUBMITTING THE PROPOSAL

Technical proposal:
   i. Detailed workplan
   ii. Company’s profile/brochure
   iii. Detailed methodology
   iv. Team’s resume(s) along with their role in this assignment
   v. Company’s prior experience in the similar capacity
   vi. Recommendation letter(s)
   vii. Letter of Declaration regarding validity and authenticity of information provided in proposal

Financial proposal:
   I. Detailed financial proposal which should be inclusive of all applicable taxes and out of pocket expenses in Pakistani Rupees (PKR). The financial proposal should follow a breakdown structure i.e., specifying cost(s) to each head and subhead and remuneration as per man days
   II. Company’s registration certificate
   III. NTN detail(s)
IV. Any legal or technical certification required for the task

Criteria of Evaluation:

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

I. Technical Proposal 70%
II. Financial Proposal 30%

The following criteria shall be used as a basis for evaluation of technical proposals:

I. Qualifications (maximum 30 points)
II. Experience relevant to the assignment (maximum 30 points)
III. Adequacy of the proposed methodology and work plan (maximum 20 points)
IV. Skills & Competencies for the assignment (maximum 10 points)
V. Prior experience with WWF-Pakistan (maximum 10 points)

10. Timetable

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<tr>
<th>S. No.</th>
<th>Deliverables</th>
<th>Timeline</th>
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<tbody>
<tr>
<td>1</td>
<td>Inception Report: Literature review report on the existing studies on biodiversity valuation, including review of global experiences; suggestion for next study, process and approach of the IDEL</td>
<td>25 Sep 2021</td>
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<td>2</td>
<td>Draft report for feedback and inputs on the results (approximated) of the Economic Value of the IDEL selected ecosystem goods and services, including a short chapter on (i) current versus potential values and the use of these values in support of decision-making, (ii) contribution of ecosystem and biodiversity to human wellbeing, socio economic development, including poverty reduction, and (iii) policy brief on economic valuation of priority ecosystems in the IDEL</td>
<td>20 Oct 2021</td>
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<td>3</td>
<td>Ppt on the overall nature capital and economic valuation of the priority ecosystem services in the IDEL</td>
<td>30 Oct 2021</td>
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<td>4</td>
<td>Final report</td>
<td>15 Nov 2021</td>
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11. Keywords

Ecosystem services, nature capital, ecosystem valuation, environmental economics, commercial value of ecosystem, economic analysis of delta ecosystem, natural resources economics, environmental accounting, biodiversity valuation, market analysis of ecosystem goods, The Economics of Ecosystem Biodiversity.