# REQUEST FOR EXPRESSIONS OF INTEREST

## SELECTION OF CONSULTANTS

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| Name of country: | Islamic Republic of Pakistan |
| Project: | Sindh Flood Emergency Housing Reconstruction Project (SFEHRP) |
| Credit No.: | IDA-72530 |
| Assignment of Title: | Design and Feasibility of Climate Change Resilient Model Town |
| Activity No: | PK-SPHFC-412444-CS-CQS |
| Date: | 08 April 2024 |

1. The Government of Sindh (GoS) has received credit through EAD, Govt. of Pakistan from the International Development Association and intends to apply part of the proceeds of this credit to the payments under the contract for **Sindh Flood Emergency Housing Reconstruction Project** (the Project) to perform the consultingservices.

2. The company - Sindh Peoples Housing for Flood Affectees (SPHF), Government of Sindh being the implementing agency of the project is now seeking to procure the services of ***Design and Feasibility of Climate Change Resilient Model Town***. The objective is to develop a comprehensive portfolio to determine the investments at village/settlement level for climate smart/resilient interventions.

3. The services will cover detailed feasibility including Project Development Document along with Model & Master Plan with the aim to guide interventions/investments for making the selected area(s)/settlements/Town Climate smart and resilient.

   The scope will include but not limited to the following:

   - Primary Survey, Data collection of current/existing situation
   - Developing Action/ Plans
   - Landscape design for climate resilience
   - Climate Resilient Prototype Structures
   - Environmental Considerations
   - Design & Improvement of Wet Utilities and Condition Assessment
   - Cost Benefit Analysis
   - Engineering Design and Bidding Documents

4. The services are to be started in May 2024 and are expected to continue for a period of six (06) months. Detailed Terms of Reference (TORs) are available at the SPHF website www.sphf.gos.pk

5. The company now invites consulting firms to indicate their interest in providing the required services. The interested firm are requested to provide information demonstrating that the firm has got the *required qualifications* and *relevant experience* to perform the Services.

6. Consultants may associate with other firms in the form of a joint venture or a sub-consultancy to enhance their qualifications.

7. A Consultant will be selected in accordance with the Consultant's Qualification based Selection (CQS) method set out in the WB Procurement Regulations for IPF Borrowers (Procurement in Investment Project Financing, Goods, Works, Non-Consulting and Consulting Services -Fourth Edition, November 2020).

8. Further information can be obtained from SPHF at the address mentioned below during office hours.

9. Expression of interest must be delivered in written form to the address below in person, by courier, or through email addressed to the Chief Procurement Officer cpo@sphf.gos.pk by **29 April 2024** during the office hours.

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**Khalid Mehmood Shaikh**
**Chief Executive Officer – SPHF**

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# Sindh People's Housing for Flood Affectees

## Design and Feasibility of Climate Change Resilient Model Town

(Activity Ref. PK-SPHFC-412444-CS-CQS)

## Terms of Reference

### 1. Background and Objective

Climate change is a fundamental threat to sustainable economic development, with devastating impacts on agriculture, water resources, ecosystems, and human health. Immediate, substantial reductions in CO2 and other long-lived GHGs are needed to avoid a 4°C warmer world (UNEP 2011a). While every region will be affected, those least able to adapt—the poor and most vulnerable—will be hit hardest.

Post 2022 floods, Government of Sindh has established a public sector section 42 company Sindh Peoples Housing for Flood Affectee's (SPHF) to support reconstruction of ~2.1 million houses in 24 flood affected districts of Sindh province in Pakistan with core objective to support housing reconstruction. The SPHF is also mandated to support the affected communities for WASH, Settlement Improvement and allied facilities with the focus on climate change mitigation and adaptive measure.

The aforementioned initiative is as per programmatic priorities, policy framework, institutional arrangements, financing strategy, and implementation arrangements for resilient recovery, rehabilitation, and reconstruction (4RF) in the aftermath of the 2022 floods.

According to a report compiled by the World Weather Attribution group,12 extreme rainfall in the region has increased by 50–75 percent, with climate models suggesting that this is entirely due to human-induced climate change. The exact extent of the climate-induced nature of the floods has not been fully quantified at present as the region experiences considerably variable weather from year to year, making it difficult to identify long-term changes. However, historical records show that heavy rainfall and greenhouse gas emissions had both dramatically increased in the region, hence climate projections had long predicted such a disaster. The evidence therefore suggests that climate change played a critical role in the floods of 2022.

As per the project appraisal document, the project will contribute to Country Partnership Strategy (CPS) results area 3 on *inclusion,* The Project will contribute to CPS Outcome 3.2 [reduced vulnerability for groups at risk] and Outcome 3.3 [increased resilience to disasters

in targeted regions] by supporting multi-hazard resilient housing reconstruction, with an aim to improve the climate change and disaster resilience of communities and build back better.

Keeping in view the aforementioned contributions to CPS, SPHF initiated climate smart pilot interventions including introduction of Good Bricks along with identifying alternate clean energy solutions. The initiatives also included the concept of climate change/smart villages for which the project identified one village *Mirzo Awan* renamed as Climate Change Town, the first ever initiative in Pakistan with the objective to identify and pilot the investment portfolio at village/settlement level with climate change Lense. Furthermore, the proposed initiative aims at developing a model of climate-resilient settlement development planning.

Climate Change Town, located in Tando Muhammad Khan Taluka in Tando Muhammad Khan District has approximately 112 household having total population of approximately 1,000 people. The area is surrounded by banana farms toward the North and West, Sugar cane farms in the SouthWest and Agriculture Drain towards the east.

With the objective to develop a comprehensive portfolio to determine the investments at village/settlement level for climate smart/resilient interventions, SPHF is seeking the services of qualified consultant(s) to carry out detailed feasibility including Project Development Document along with Model & Master Plan with the aim to guide interventions/investments for making the selected area(s)/settlements/Town Climate smart and resilient.

## 2. Scope of Works

Based on the activities to be accounted under the scope of services the consultant would submit as deliverable the detail design report along with Bidding Documents:

**Primary Survey, Data collection of current/existing situation**

Keeping in view the objective of the proposed initiative the consultant is required to develop comprehensive indicators for 'climate smart and reliant' factors and actors to be accounted along with data collection tools and methodology. The consultant is expected to cover all the parameters to be accounted for the climate smart and resilience with prioritized portfolio of most effective and efficient interventions (short, medium and long term)

Post finalization of the aforementioned indicators / tools and the methodology the consultant would carry out detail survey of the project location followed by necessary analysis and final output in form of Project Development Document/Feasibility. The data collection tools and methodologies should be culturally sensitive and inclusive to capture the needs and perspective of all, including vulnerable groups.

The assessment is envisioned to include but not limited to factors/actors for:

i) Reduces Pollutants,
ii) Improves air and water quality
iii) Prevents flooding
iv) Promotes safe transportation and routes
v) Reduces noise and light pollution
vi) environment ecologically balanced interventions,
vii) mitigates disaster risks
viii) Safeguards health and minimizes hazards
ix) improvement of the fiscal health of a community etc.

The primary factors while developing the project document/feasibility should account for i) sustainability ii) Energy iii) Social Equity iv) Economy v) Livability vi) Transportation vii) Housing viii) Environment ix) Health xi) Food xii) Recovery and xiii) Climate Change. Furthermore, the following are to be taken into account as considerations;

- Potential disasters, hazards, and how to mitigate them
- Transportation types and technological advancements
- Housing improvements and advancements
- Energy conservation
- Green technology and improvements

Data Maps Survey and Testing: Topography & As-built Survey, Catchment Area Map, Necessary required testing (water etc.), Meteorological Data, Risk Assessment and Vulnerability Analysis, hydrological maps etc.

**Developing Action/ Plans**

Based on the aforementioned areas of consideration, the consultant would develop a comprehensive climate resilience, adaptability and change plan. The planning framework for climate-resilient/change village would involve the potential impacts of climate change, identifying areas for growth, and implementing strategies to enhance resilience. Furthermore, the Consultant is required to do Land use planning that involves allocating and managing land for various purposes such as residential, commercial, agricultural, and recreational uses.

**Landscape design for climate resilience:**

The services would account for integratingsustainable and adaptive strategies that address the impacts of climate change with approach toshape the outdoor environment, integrating natural elements with human-made structures to create a harmonious and sustainable living space.

The aspects to be considered would include:

i) Plantation for Resilience

ii) Green Public Spaces
iii) Native Plantings and Biodiversity
iv) Pedestrian-Friendly Pathways
v) Community Gardens
vi) Water Features and Ponds
vii) Recreational Areas and
viii) Sustainable Infrastructure

In addition, the consultant would account for Permaculture practices including:
i) Agroforestryand Food Forests, ii) Water Harvesting and Conservation iii) Drought-Tolerant / flood soakingPlantation and iv) Composting and Soil Health

**Climate Resilient Prototype Structures:**

The Consultant would require to Develop climate- resilient/smart, low-cost prototype structures that involves addressing the specific challenges associated with climate smart interventions including

i) Simple and Efficient Design
ii) Local& Recycled Materials
iii) Passive Climate Control
iv) Modular Construction
v) Energy- Efficient Lighting
vi) Rainwater Harvesting and
vii) Thermal Solutions etc.

The Consultant is required to provide a design concept of such structure in the form of a small residential/School building and WASH facilities.

**Circulation Network:**

Consultant is required to study existing circulation pattern of village and its surrounding, and design circulation pathways such as black top roads for main vehicular access routes, proposing paved pedestrian circulation network within the village & improve existing circulation accesses.

**Identify Key Nodes:**

The consultant is required to identify key nodes will help understand efficient accesses within organic planning of the village.

**Pavement of Internal Pathways:**

Consultant is required to study internal pathways of the village and provide Paved pathways as per standard layering and required loads, pathways should also have appropriate slope and surface permeability in order to promote surface waterrunoff to drainage system during rainy seasons.

**Community Involvement for improvement of existing circulation:**

Consultant is required to promote Community involvement in village circulation planning as it is essential for creatingsustainable, resilient, and thriving communities. Engaging residents in the planning process ensures that the village reflects their needs, values, and aspirations.

**Environmental Considerations:**

Consultant should have careful consideration of environmental factors as it is crucial for promoting sustainability, resilience, and the well-being of both the community and the surrounding ecosystem.

**Design & Improvement of Wet Utilities and Condition Assessment:**

Consultant is requiredto design the Water Supply, Sewerage and Drainage network of the village to make it climate resilient especially in terms of rain water flooding. And required to do studies and Based on the studies, develop a program for improving services in the Projected location. The task also includes preparing detailed engineering (Water Demand requirement, pipe Sizing, Sewage flowcalculation and its sizing and levels, calculating catchment area, generating watershed),specifications, drawings, contract documents, and bill of quantity.

**Cost Benefit Analysis:**

The consultant would evaluate the economic feasibility by conductinga thorough analysis of its costs and benefits for different technologies/solutions. This assessment will weigh the advantages in the short and long term against the expenses of puttingthe system in place. The goal is to determine if the benefits gained from the intervention justifyits implementation costs, ensuring a clear understanding of its economic viability.

**Material and Technology Selection:**

The consultant shall give options to select suitable materials and technologies for building the drainage system, taking into account durability, maintenance needs, and environmental effects. This involves choosing materials and methodsthat are long-lasting, easy to maintain and have minimal impact on the environment.

## 3. Duration of the Assignment

The overall duration of the assignment will be six (6) months.

## 4. Consultant's Qualification

The firm must furnish the following information:

a. Corporate Capacity (Core business and years of experience in same business for at least 10 years);
b. At least three (3) similar assignments completed in the last five years indicating the nature and scope of these assignments;
c. Number of technically qualified staff.

## 5. Team Composition and Indicative Staff:

a. Team Lead
b. Urban/Land-use Planner
c. Climate Change Expert
d. Social Safeguards Specialist
e. Environmental Specialist
f. Hydrologist

a. **Team Lead:** Senior expert with bachelors in civil engineering and post graduate degree in Social Science, Planning Rural Development, or equivalent. Minimum of 15 years relevant professional experience with local authorities as well as with IFC funded projects. Proven Program Management and Rural Development administration, Financial and socio-economic analytical skills are essential. - Proven team management and communication skills are essential. Fluency in both written and spoken English

b. **Urban/Land-use Planner:** should have at least a master's degree in urban/land-use planning, urban development or other related discipline with at least 12 years of experience in regional and urban planning, urban renewal and rehabilitation, policy and management, infrastructure need assessments, institutional analysis, program and project development. He/she shall have demonstrated ability to supervise a team of experts, interface with the team, work with multiple stakeholders (including government, private, and development partner agencies), and ensure the timely delivery of outputs.

c. **Climate Change Expert:** Should have minimum advanced university degree in natural resource management, Agriculture, rural development, climate change, environment, land management or related field from a recognized university. (i) Have the capacity to

identify a range of climate change scenarios with particular reference to the rural sector, for the project to take into account in its design, Based on a review of existing regional models, and stakeholder consultations. (ii) Support the identification of the underlying problem analysis (root-causes, preferred solution, barriers, and project specific interventions; (iii) Support the design of the adaptation measures and prepare pre-feasibility studies and costs-benefits analysis for adaptation measures to be supported by the project; (iv)Support the development of the adaptation trainings programs for the selected communities; and (v) Identify and validate relevant national and regional development plans that need to integrate climate risks and the means to do so.

d. **Social Safeguards Specialist:** The specialist will have a graduate degree or relevant qualification in social safeguards and/or social development studies and at least 10 years of work experience in social development. The specialist will: (i) collect baseline socioeconomic data; (ii) assess the project's social impacts and benefits across different social groups, and identify beneficiaries and affected people and needs and opportunities for local beneficiaries and affected people; and develop measures to target women, the poor, and vulnerable groups; (iii) assess potential benefits and impacts to local people and prepare a due diligence report on indigenous peoples/ethnic minorities

e. **Environmental Specialist:** should have a university degree in environment management, engineering , sciences or a related field with at least 5-8 years of relevant experience in conducting environmental impact assessments and in the preparation of environmental impact reports, including specific experience with the environmental assessment procedures of the Sindh EPA, EIA/IEE Regulation 2021; (i) Perform scoping activities to identify potential environmental impacts, and identify potential impacts from the project to and from the environment; (ii) Assess institutional arrangement to implement proposed mitigation measures; (iii) Assist EA/IA prepare initial environment examination (IEE) report and/or environment management plan (EMP) (if required); (v) Consult with concerned ministries/agencies for compliance with local standards and conduct public consultations with affected people.

**f. Hydrologist:** Master's Degree or post-graduate degree in Engineering, Urban Planning or related disciplines. A university degree in water resources, hydrology, agricultural or civil engineering, preferably with complementary training/work experience in other subject areas in rural development or other related fields**.**

Suitability to undertake the responsibilities mentioned above at the required level. At least 8 years of relevant professional experience in water sector project design and administration (i) Able to perform work independently in own field of specialization, equipped with knowledge and experience of multiple disciplines (ii) Excellent oral and written communication skills in English (iii) Experience working in development sector.

## 6. Deliverables

The consultant will develop a comprehensive climate resilience, adaptability and change plan and do engineering studies. The Consultancy services will be required for the following deliverables:

a. Concept Design
b. Preliminary Design and Feasibility Report
c. Detailed Design & Report
d. Bidding Documents

Note:

i. The outputs/deliverable are intended to be used by SPHF for investments in the studyarea while keeping in view the overall impact and cost effectiveness.
ii. One in number soft copy, one original and one copy of each deliverable will be required.

## 7. Procurement

A Consultant will be selected in accordance with the **Consultant's Qualifications-based Selection (CQS)** method set out in the WB Procurement Regulations for IPF Borrowers (Procurement in Investment Project Financing, Goods, Works, Non-Consulting and Consulting Services - Fourth Edition, November 2020).