
Terms of Reference (ToRs)
Construction of Water Reservoirs at the suitable places of Keti Bunder, Shah Bunder and Kharo Chan,
District Thatta and Sujawal

Background:

The World Wide Fund for Nature-Pakistan (WWF-Pakistan), one of the leading conservation organizations in the world, has a mission to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature by:

- Conserving the world's biological diversity;
- Ensuring that the use of renewable natural resources is sustainable; and
- Promoting the reduction of pollution and wasteful consumption.

To achieve this, WWF-Pakistan works with international donors, central and local government agencies, the private sector, civil society organizations (CSOs), and local communities to implement its various conservation programmes across six thematic areas, including climate and energy, forests, freshwater, wildlife, food and markets, and oceans.

Founded in 1970, WWF-Pakistan is an independent nature conservation NGO in Pakistan, with over 20 offices nationwide and an average annual budget is over 5.06 million euros, mainly financed by private and public funding. Since its inception, WWF Pakistan has implemented over 200 projects and programmes, working closely with local and national partners, governments, intimate partners, research organizations, and communities.

A 50-year vision (2006-2056) for the Indus Delta was developed as a central part of WWF-Pakistan's conservation strategy for the coastal areas. Through participatory co-management, WWF has been working to protect mangrove forests and their associated biodiversity while promoting sustainable fisheries for local communities' livelihood and food security. Thus far, more than 14,000 hectares of mangrove forests have been reforested in the Indus Delta through cooperation between WWF Pakistan, the Sindh Forest Department (SFD), local communities, and businesses. WWF-Pakistan plans to continue this work, in collaboration with SFD and its regional partners, to conserve and co-manage mangroves in Keti Bunder, Kharo Chan, and Shah Bunder under the framework of the BMZ funded **"Sustainable mangrove management and community development in the Indus Delta II"** project, till December 2024.

Brief project description:

In the continuity of phase I, 'Sustainable mangrove management and community development in the Indus Delta II' is being implemented in 36 villages of the lower Indus delta, comprising the sites of Keti Bunder, Kharo Chan, and Shah Bunder. The inhabitants of the project area are impoverished and vulnerable to climate change. Most of them earn their livelihood exclusively from fishing and the natural resources of the mangrove ecosystem.

Scarcity of freshwater is a common challenge throughout the coast of Pakistan, the community living a deprived life with the limited sources of freshwater. The groundwater is also not usable in

the project villages. The other available water resources are highly contaminated and below the national standards. The community spends a significant amount of money on purchasing that water for their daily consumption.

One way of providing sufficient drinking water in the villages for at least part of the year is to build freshwater reservoirs. For this purpose, three water reservoirs supporting five villages have been developed under the Phase I project. However, there is still a need for more water reservoirs so that more communities can have access to safe drinking water. In cooperation with the local authorities and representatives of the village communities, five more reservoirs will be constructed in the project villages after a need assessment. Focused group discussions within each cluster will select the villages and sites.

Objectives:

Five water reservoirs will be constructed to store flooding water through already available water channels during the monsoon period. For this purpose, simple basins are dug out, surrounded by a properly designed earth work with stone pitching. At the end of the monsoon season, the basins are filled with freshwater that lasts for at least 3-5 months after the monsoon period ends. A prerequisite for this is that the villages have to be close to the primary arms of the Indus so that they can benefit from the floods during the monsoon season. The excavation work is carried out with the help of an excavator, which will be jointly monitored by the village committees and staff of WWF-Pakistan.

Responsibilities of the consultant/Contractor:

- Develop a layout of the planned water reservoirs and share it with WWF-Pakistan before execution of earthwork;
- Designing and constructing of 05 Water reservoirs with the dimensions of 66 x 33 x 2 meters (4,356 m³) at suitable project sites;
- Each water reservoir will be designed and developed in presentable and perfect shape (as per BOQs);
- Each water reservoir will be fenced with rust-resistant material in such a way to avoid the entrance of any wild/domestic large and medium animals;
- All the reservoirs will be strengthened and made sustainable with stone pitching to reduce the erosion;
- Two handpumps will be installed with each water reservoir in a way to make the access easy to the reservoir water;
- The standard quality material will ensure that it is used in the construction of water reservoirs, including but not limited to stone pitching, embankments, reservoir dimensions, fencing, handpumps, etc.
- The contractor/consultant will also keep liaison with the project staff and the local communities and ensure to avoid any conflict with the community representatives;
- The contractor/consultant will ensure the photographic evidence of the progress and share it with the project manager weekly.

- The contractor will be providing the operation and maintenance of the sites after the completion of work for a certain period (06 months)

Deliverables:

- Layout for the designs of the water reservoirs.
- Completion of the Five properly designed water reservoirs of the dimensions 66 x 33 x 2 m (4,356 m³) with a presentable embankment.
- Proper four feet high fencing of each water reservoir with rust-free material to avoid animal entrance, e.g., dogs, etc.
- Stone pitching of each water reservoir for their sustainability up to the fencing base at the internal sides of each reservoir.
- Installation of two handpumps at each water reservoir, the depth of the handpump pipe will be 50 ft.
- Regular reporting and photographic evidence of the progress.

Requirements:

- A reputable contractor having working experience in such type of construction in the coastal areas of Pakistan;
- At least 15 years of experience in the construction field;
- Having a valid construction license from the Pakistan Engineering council;
- Having an active NTN number;
- Having an understanding of the coastal issues and challenges, including but not limited to cyclones, floods, heavy rains, erosion, salinity, etc.;

Timeline for the project: 15th July – 30th October 2022

Reporting:

The consultant/contractor will report to the Project Manager, Manager of the Marine Programme, and Regional Head of Sindh and Balochistan, WWF-Pakistan. Brief updates on progress must be emailed to the personnel above every two weeks.

Conditions:

- WWF-Pakistan reserves the right to accept any proposal or reject all proposals.
- Only shortlisted contractors/consultants will be contacted for further consideration.

Copyrights:

WWF-Pakistan will retain the copyright for any data, reports, and materials for, or originating from, the project. The contractor/consultant(s) will have no right to use the data/reports in any form or publication.