



# WATER FOR WOMEN

---

REPLENISHMENT OF WATER – KOHISTAN, THATTA



## Introduction

### Rationale

Thatta is the tail-end area of Sindh facing a severe water crisis. Millions of people from urban and rural communities are impacted by water shortages.



Fresh Water Situation in Thatta – (Blue Color showing Fresh Water Availability in Thatta) Redlined area is project Targeted Area

Some Towns (Tehsil) of Thatta District, like Daro, Jati and Kohistani areas (Redlined Areas), are impacted more than others. In the former, the continuous shortage of water in has become reached serious proportions. Health of the rural communities is negatively impacted because of the reliance on unhygienic and unsafe water of wells, canals and hand pumps. Quality of and access to safe drinking water is a huge issue in this region, as women and children have to walk for miles to fetch water.

The poor water quality has results in diarrhea, malaria, typhoid, paratyphoid, enteric fevers and hepatitis, leading to a high mortality rate. Lack of awareness of WASH (Water, Sanitation and Hygiene) leads to open defecation, requiring any water intervention to be coupled with sanitation and hygiene awareness, training and provision of facilities.

Under the Sustainable Development Goals, SDG3 (Good Health and Wellbeing) and SDG6 (Clean Water and Sanitation) intervention in the segment of water will automatically lead to meeting SDG 3, with a clear advantage to the women as there is a clear water and women nexus. They are responsible for fetching it, and also for using it for various household purposes.

WASH awareness and training sessions with the women, and school children will be done to teach them how to make household, in Kohistan, usable from the waste water gardening to improve overall

nutrition of the community. IET already has the experience of training 100 women in Kitchen Gardening & Plantation.

Here is what Indus Earth Trust would like to propose:

### Project Target Area

#### Kohistan District Thatta

Kohistan situated in Tehsil Thatta, comprises of 10 Tapa and 57 revenue villages with close to the **Nai Baran (hill torrent)**. The torrent brings rainwater through Kirthar range in the monsoon and fills wells and ditches which are used by the people for drinking, domestic and agriculture purposes.



Besides agriculture, people of Kohistan also depend on livestock, like buffaloes, goats, sheep, camels and cows for their livelihood. Humans & livestock in Kohistan are under tremendous pressure due to the shortage of water and the absence of appropriate technology & knowledge regarding management of water at local level. Villagers have only sources of water for drinking, domestic use, for livestock and agricultural purposes: (1) Rain Water Harvesting. (2) Underground Water conservation. (3)

Flood Water capture. The spin offs would be soft component of sensitization on WASH.

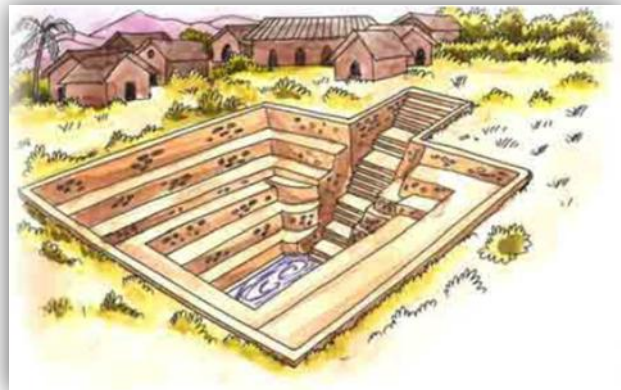
#### Water Harvesting

The Nai Baran, the hill torrent mentioned above is the source of surface and underground water in the area. It feeds the wells and reservoirs that are used throughout the year. However, right now there is an inefficient, use due to open and wells and unlined reservoirs.

#### Project Proposal:

The project proposes civil engineering interventions to capture the water, and allow for its maximization.

Rainwater Harvesting will be an additional source of water replenishment by training water to fall in the **LINED** troughs and reservoirs by making channels to collected it falls.



In areas where there is excess rainfall, the surplus rainwater can be used to recharge ground water through artificial recharge techniques.

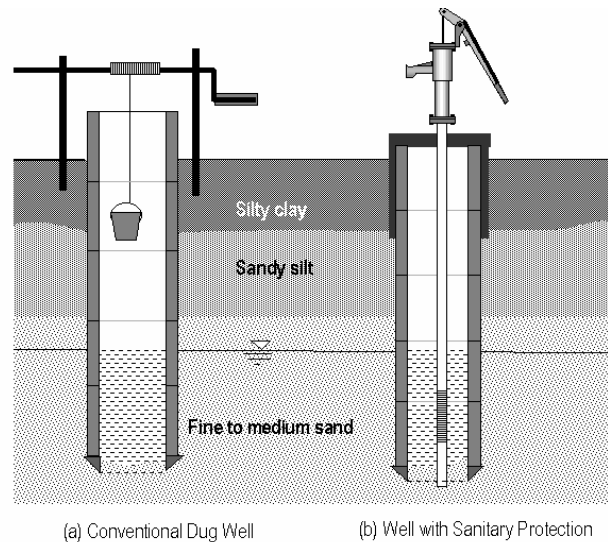


A simple affordable, technically feasible and socially acceptable safe drinking water supply system in the geo-hydrological areas (rural/urban) through bio-sand filters will be put in place to provide safe potable water.

Dug wells are a traditional method of obtaining water, used for thousands of years. In its simplest form, a dug well is a shallow hole dug down to the level of the water table. Open, unprotected dug wells are common, especially in rural areas. IET will rehabilitate existing dug well and install hand pump on the surface and construct the platform to reduce the women labor and easy to lift water from bottom level. This system is sanitary protected, which means water is lifted through casing pipe along with the filtration pipe from the well. Please see fig: 3.2

Hand-dug wells are excavations with diameters large enough to accommodate one or more people with shovels digging down to below the water table. All artificial wells were pump less hand-dug wells of varying degrees of sophistication, and they remain a very important source of potable water in some rural areas where they are routinely dug and used till today

There are many dug wells in Kohistan region, that are poorly functional or not functional, **The rehabilitated dug wells will be brick-lined and capped with a solar pumps which will have a timer devise to monitor and discourage the injudicious extraction of water. The water thus extracted will be taken into a covered tank from where it will be distributed.**



**Fig. 3.2 Conventional and Sanitary Protected Dug Wells**

### Flood Water Management – Check Dams

Water & Flood-water harvesting techniques have been developed for various types of water collection from torrents rain-water harvesting schemes through the micro to the macro flood control levels. The harvesting schemes shown below discuss two methods of water harvesting, the first looks at floodwater harvesting through the building of Small Check Dams.

These as discussed vary in design. The second method is the collection and slowing of water through contour systems.



It is important when choosing a water harvesting technique to consider not only the physical aspects of the project but the socio and economic requirements of the community it is to serve.

**This has already been done successfully by Indus Earth Trust in Balochistan where 5000 acres were**

irrigated through water saved by the check dams. See above picture of small check dam.

**Objectives:**

- 1- Targeting SDG 3 and SDG 6 by enhancing the capacity of communities regarding the Replenishment of the water received through natural sources.
- 2- Catalysing IWRM (Integrated Water Resource Management) through a combination of indigenous knowledge and modern interventions

**Methodology:**

1. Baseline survey through the Poverty Scorecard

**Implementation method:**

1. Identification of potential sites for water harvesting – Water Reservoirs. In Kohistan & Mirpur Sakro
2. Identification of potential location for small check Dams – Water Route Diversion
3. Rehabilitation of Existing Water Dug Wells.

**Target benefit:**

- 1- Lessening the burden on the women who have to fetch water at great risk to their physical health and wellbeing
- 2- Ensuring the provision of potable quality of water to the community with WASH (water & sanitation) benefits
- 3- Bringing economic stability to community livelihood by ensuring health of humans and livestock

**Scaling up & replication plan:**

Initiating the work through a mix of communication tools suited to the community, including organizing Women led CBOs, street theatre and variety of audio-visual tools and training aids like documentaries on WASH, and material for school children, and a training manual.

**Monitoring & Evaluation**

- 1- Documenting the lessons learnt so they can be replicated elsewhere showcasing qualitative and quantitative benefits through photographs and documentaries ... pre and post project, which can also be used for showcasing.
- 2- Develop a manual on Water Replenishment Techniques

**Principles for Water Sector Development – National Water Policy, Pakistan**

**Guiding Principles**

1. National water resource development and management should be undertaken in a holistic, determined and sustainable manner to meet national development goals and protect the environment

2. Planning, development and management of specific water resources should be decentralized to an appropriate level responding to basin boundaries.
3. Delivery of specific water services should be delegated to autonomous and accountable public, private or cooperative agencies providing measured water services in a defined geographical area to their customers and/or members for an appropriate fee
4. *Water use in society should be sustainable - with incentives, regulatory controls and public education promoting economic efficiency, conservation of water resources and protection of the environment - with a transparent policy framework*
5. Shared water resources within and between nations should be allocated efficiently for the mutual benefit of all riparian users
6. *Water sector activities should be participatory and consultative at each level, leading to commitment by stakeholders and action that is socially acceptable*
7. *Successful water sector reform requires a commitment to sustained capacity building, monitoring, evaluation, research and learning at all levels to respond effectively to changing needs at the national, basin, project, service entity and community level.*

The broader objective of the Indus Earth Trust “Water for Women Program” is to knit together replenishment of the water, climate change impacts on water resources, behavioral change among the communities towards saving water, with the follow up of guiding principles suggested by the National Water Policy.

### Focus on Gender

Fetching water is the primary task of women, in rural as well as poor urban localities. In rural areas, in communities living far from a suitable water source, women and girls spend several hours a day traveling to collect water to meet their family's needs.

As this task is so time consuming, young girls are unable to finish their education, Having access to clean, water sources close to their place of residence frees up their time and enables them to pursue other activities to better their lives. It also lessens the physical burden on them, which has been documented to have an adverse effect on them.

The proposed Water for Women Project, in Kohistan area of Thatta District aims to alleviate their hardship by making clean water sources accessible to them within their area.

#### Indus Earth Trust & Gender Development

Indus Earth Trust strongly believes in inclusion and Gender equity all levels. All of IET’s previous and existing projects have a strong emphasis on women empowerment.

IET is currently working with more than 100 women community organizations in rural areas and has developed a manual of “ Community Management skills training” CMST to build the capacity of women



local leaders. This is possible only if they are freed from their daily routine of spending several hours in a day in search of water.

Indus Earth Trust will ensure women participation at all levels of the project implementation, and involve in decision-making. They will be trained in sustainable WASH techniques.

[More details on:](#)

<http://www.indusearthtrust.org/water-and-community-physical-infrastructure/>

<http://www.indusearthtrust.org/water-on-tap-colse-undp/>

### Relevant Experience

Indus Earth Trust			
Water Projects			
S. No	Name of Project	Type of Project	No of Projects
1	Drinking Water Projects	Reservoirs	11
2	Irrigation Water Project	Check Dams	9
3	Drinking Water Projects	Hand Pumps	300
	<b>Total</b>		<b>320</b>

[More details on:](#)

<http://www.indusearthtrust.org/water-and-community-physical-infrastructure/>

<http://www.indusearthtrust.org/water-on-tap-colse-undp/>

### Deliverables

S. No	Deliverables	Measurable	Means of Verification	Expected Outcomes
1	Site Identification & Construction of Water Reservoirs (RWH)	10 Water Reservoirs WITH LINING (containing 100,000 gallons)	Feasibility, Design & Drawings Photographs, Reports, GIS	8000 people (Men, Women & Children) will benefit from delivery of safe drinking water
2	Existing Dug Wells Rehabilitation	20 Dug Wells (Capped & channeled to	Feasibility, Design & Drawings Photographs, Reports, GIS	Approx. 8000 people (Men, Women & Children) will benefit from

		catch run off in trough for water for kitchen gardening & livestock)		delivery of safe drinking water
3	2 Small Check Dams Construction	4 Check Dams	Feasibility, Design & Drawings Photographs, Reports, GIS	4000 people (Men, Women & Children) will be benefitted with safe Drinking water
1	Community Organizations Development	40 Community Organization will be established	Community Meeting Record, Election Record, Photographs,	40 villages will be organized with CMST Training on Replenishment of Water Issues.
2	Survey Poverty Score Card Fixed point photography and videography	40 Villages	MIS & Analytical Report	40 Villages surveyed with Poverty Ranking
3	Signing of TOP with COs	40 COs	Copy of MOU, Meeting Record.	40 Communities ensure their contribution in cash & kind
7	Women train in IWRM & WASH	1000 Women	Attendance Sheet, Training Report, Photographs.	1000 women will be trained in IWRM and WASH as Master Trainers
8	Children educate in WASH	4000 Children	Attendance Sheet, Training Report, Photographs	4000 Children will be educated in WASH
9	Replenishment of Water Manual	1000 Copies	Hard & Soft Copy of Manual	People will be trained in Replenishment of water
10	Monitoring and Evaluation	2 Quarterly	M&E Report	Progress Update

Note: The remoteness of the location is the major reason for the operational cost being high