



PROJECT CATALOG

W WATER FOR LIFE

A AND

S SANITATION

H HYGIENE



HELPING HAND
FOR RELIEF AND DEVELOPMENT

☎ 1-888-808-4357[HELP] 🌐 www.hhrd.org



MISSION

The mission of Helping Hand for Relief and Development's (HHRD) Water for Life (WFL) program is to provide access to clean water, for daily consumption and irrigation purposes, through the construction and rehabilitation of water supply schemes. And, to ensure dignity and health through Water, Sanitation and Hygiene (WASH) programs.

VISION

HHRD's WFL vision is a world in which all communities realize their human right to easy access to safe, protected and sustainable drinking water and sanitation; as well as protection from water-borne diseases through hygiene education.

Africa



RAINWATER HARVESTING

Kenya & Uganda

Average time to install and inaugurate:
2 months

Average number of beneficiaries:
2000 students (in school setting) or 1550 people (in a community hospital setting)

Life span of project:
6 years, if well maintained

Rainwater harvesting is the collection and storage of rain which would otherwise run off and become dirty and polluted. Rainwater is collected from a roof-like surface and redirected to a tank, for future needs. The rainwater harvesting system is one of the best methods implemented to support the conservation of water. Rainwater, which is pure and of good quality, can be used for irrigation, washing, cleaning, bathing, cooking and also, for other livestock requirements.



BOREHOLE

Kenya

Average time to install and inaugurate:
6 months

Average number of beneficiaries:
30,000 people

Life span of project:
15 years, if well maintained

Digging range:
100ft to 350ft

A borehole is a narrow shaft bored in the ground, either vertically or horizontally. the surface.



SHALLOW WELL

Kenya, Uganda, Somalia, Mali & Tanzania

Average time to install and inaugurate:
2 months

Average number of beneficiaries:
1,000 people

Life span of project:
5 years, if well maintained

Digging range:
20ft to 50ft

A shallow well is a hole which has been dug, bored, driven or drilled into the ground for the purpose of extracting water. The source of a shallow well is an aquifer--a body of porous rock or sediment saturated with groundwater, resulting from precipitation which seeps through the soil. Shallow wells tap the shallowest aquifer in the vicinity. A well is considered to be shallow if it is less than 50 feet deep, allowing use of a suction pump to extract water, the practical lift of which is assessed as 22 feet (6.7 meters).



WATER FILTRATION PLANT

Kenya

Average time to install and inaugurate:
6 months

Average number of beneficiaries:
15,000 people

Life span of project:
15 years, if well maintained

A water filtration plant is a facility that works to filter and purify water by removing chemicals, hazardous materials, and toxic matters from a water source.

Filtration is a process which removes particles suspended in water. Removal takes place by a number of mechanisms which include straining, flocculation, sedimentation and surface capture.



WASHROOM PROJECT

**Kenya, Uganda
Somalia &
Tanzania**

**Average time to install
and inaugurate:**
6 months

**Average number of
beneficiaries:**
15,000 people

Life span of project:
10 years, if well
maintained

Digging range:
3 meters long, 2 meters
wide, 7.5 meters deep

HHRD Africa latrines consist of 5-unit pit latrines and one hand-washing area. It is used as a sanitation facility in public schools. The toilets are supplied with water for cleaning and flushing purposes. A septic tank is located at least 3 to 6 meters away from the latrines building structure.



SUBMERSIBLE PUMP

**Kenya, Uganda
Somalia, Mali &
Tanzania**

**Average time to install
and inaugurate:**
4 months

**Average number of
beneficiaries:**
1,000 people

Life span of project:
5 years, if well
maintained

Digging range:
80 feet or more in depth

The submersible pump is especially suited for deep wells. The pump utilizes a submersible motor coupled directly to the bowl assembly and is designed to operate completely submerged in the fluid being pumped. Power is supplied to the motor by waterproof electrical cable. Submersible pumps are efficient, high in capacity, require very little maintenance and are generally very economical for wells that are more than 80 feet in depth.



Nepal

AND
DEVELOPMENT
on+ for
Hand Pump
7,
adah man
Jhapa, Nepal
Rhatti Family,
Friends from
MA, USA:
Your Sincere Prayers.®



FILTRATION + AERATION WITH COMMUNITY HAND BIO SAND PUMP

**Average time to install
and inaugurate:**

3-4 months

**Average number of
beneficiaries:**

500 people (daily)

Life span of project:

5 years

Installing a simple traditional hand pump for the provision of raw water, HHRD Nepal keeping in mind the ground situation, adds a Bio Sand Filtration, an Open Aeration and Electrical Dozen Pump that turns this small project into a worthy and more productive project. This provides water for washing as well as for drinking purposes.



Features:

- Inexpensive and an ideal project for smaller communities; schools or extended families/homes.
- Filters water from turbidity (sand, silt & clay), color, taste and smell.
- It can provide 500 liters/hour.

DRINKING WATER TREATMENT PLANT (UV/RO)

**Average time to install
and inaugurate:**

3-4 months

**Average number of
beneficiaries:**

500 people (daily)

Life span of project:

5 years

Installing a traditional hand pump for the provision of raw water, HHRD Nepal keeping in mind the ground situation, adds a Bio Sand Filtration and an Open Aeration that turns a small project into a worthy one. This provides water for washing as well as for drinking purposes.



Features:

- Kills infectious microorganisms of water using ultraviolet rays.
- Filters water for taste and smell.
- Since it does not use chemicals so it is one of the safe water treatment systems.



Pakistan

COMMUNITY HAND PUMP “AFRIDEV” AND “LOCAL”

Average time to install and inaugurate:
4-6 months

Average number of beneficiaries:
150 people
(7-15 households)

Lifespan of project:
1 -2 years

Digging Range:
Affredev hand pump = 120 ft
Local Hand Pump = 80ft

Capacity: 900 liters/hr

Community hand pumps are ideal for villages and households in which surface sources are common, so only a basic pump suffices for poor families trying to meet their water requirements. Suction hand pumps are economical, easy to install and maintain. Maintenance is done at the village level without the need for specialist parts. The pumps are made with cast iron.



Afridev Hand Pump Projects will be installed at feasible locations after assessment. In special cases households also vary due to water flow and local requirements.

SOLAR POWERED WATER PROJECT

Average time to install and inaugurate:
4-6 months

Average number of beneficiaries:
200 people

Lifespan of project:
1 -3 years

Digging Range: 120 ft

Capacity: 1500 liters/hr

After brainstorming with the team, consultation with relevant stakeholders, local NGOs, and locally available resources, WFL came across the idea to install Solar Powered water uplifting solutions along with a 500 liters water storage tank. The project was designed to replace the Afridev hand pump in educational institutes where it is difficult to use and not easily accessible for disabled children.



In special cases extra taps are installed and the number of households also vary. Solar Based Drinking Water Solution Projects will be installed in Schools, Madaris, Mosques.

DUG WELL

Average time to install and inaugurate:
4-6 months

Average number of beneficiaries:
200 people

Lifespan of project:
5-10 years

Digging Range:
80 ft

Capacity:
3000 liters/hr

It is a traditional source of water in rural areas of Pakistan. The ground is excavated deep to fetch water. Digging is done through various techniques including drilling, blasting, etc. Cemented rings are put in open wells for long life and sustainability. Water motors and hand pulleys are used for pulling the water up, down from the wells.



In special cases households also vary due to water availability and local requirements. Water Well Project will be installed at a suitable place.

WATER SUPPLY (GRAVITY FLOW) SCHEME

Average time to install and inaugurate:
4-6 months

Average number of beneficiaries:
250 people

Lifespan of project:
15 - 25 years

Digging Range:
No Boring

Capacity:
2,700 liters/hr

The distribution of water is always troublesome in hilly and remote areas. To remedy the situation a reservoir of water is created mechanically and stored at a place where it could be easily disseminated to the required population. The scheme also involves the development of new water resources so that demand could be met along seamless provision lines.



In special cases households also vary due to water availability and local requirements. Gravity Flow Schemes will be installed at feasible locations after assessment.

SUBMERSIBLE WATER PUMP

Average time to install and inaugurate:

4-6 months

Average number of beneficiaries:

250 people

Lifespan of project:

3 - 5 years

Digging Range:

300 - 400 ft.

Capacity: 2,500 liters/hr

A submersible water pump operates beneath the earth's surface. Submersible Water Pump pushes water to the surface. Most submersible pumps are long cylinders that are about 3 to 5 inches in diameter and 2 to 4 feet long. Submersible Water Pumps have a hermetically sealed motor that is close-coupled to the body of the water pump. Having a hermetically sealed motor prevents the water from getting inside the pump's motor and causing a short circuit. Other components of a submersible water pump are the cable, which is connected to the motor, and a pipe that transports the water to the surface. Water is then stored in the RCC water storage tank which is constructed near the Submersible water pump tube well. Submersible Water Pumps are best suitable to run systems for water pumping in remote areas or where electricity has a frequent outage.



In special cases households also vary due to water availability and local requirements. Submersible Pump Projects with Tanks will be installed at feasible locations after assessment.

DEEP TUBE WELL

Average time to install and inaugurate:

4-6 months

Average number of beneficiaries:

1,500 people

Lifespan of project:

5 -10 years

Digging Range:

500 - 600 ft.

Capacity:

2,000 liters/hr

A tube well is a type of water well in which a long, 6 inches to 10 inches pipe is bored into an underground aquifer. The lower end is fitted with a strainer, and a pump lifts water for irrigation. The required depth of the well depends on the depth of the water table. A small reservoir of water is made at the outlet of the tube well. This reservoir is used for different usage of water by the local population.



In special cases households also vary due to water availability and local requirements. Tube well projects will be installed at feasible locations after assessment.

RAM PUMP PROJECT

Average time to install and inaugurate:
8 - 12 months

Average number of beneficiaries:
1,500 - 2,000 people

Lifespan of project:
10 - 15 years

Digging Range:
No boring

Capacity:

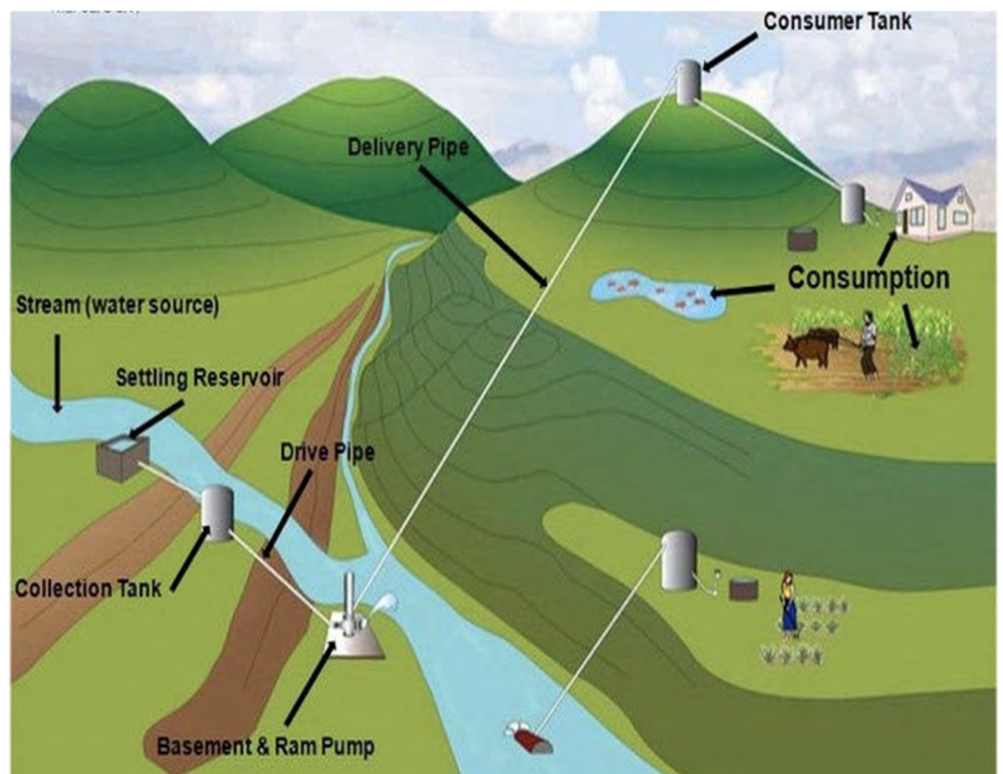
- Ram Pump complete with 4" input & 2" water delivery
- Ram Pump complete with 3" input & 1.5" water delivery
- Ram Pump complete with 2" input & 1" water delivery

The conventional theme for the water pump is to first use the potential energy of the water to generate electricity, from this produced electricity the pump is operated to transfer the water to the required location.

The main theme of the hydraulic ram pump is to utilize the energy of the flowing water to pump it to a higher height without any added energy. Ram pump harvests the energy of a large volume of water from the low head to pump the small volume of water to a higher head. The scientific principles of operation for the working of hydraulic ram pumps are listed below.

- Incompressibility of water
- Conservation of energy

Using above mentioned principles and their effective application by the careful and studied construction of the pump, the device works as a Positive Displacement Pump to gain a higher head as compared to its centrifugal counterparts whilst not consuming additional energy i.e., fossil fuel and electricity.



WASH IN SCHOOLS PROJECT

Average time to install and inaugurate:
6 months

Average number of beneficiaries:
200 - 250 students

Lifespan of project:
5 - 8 years

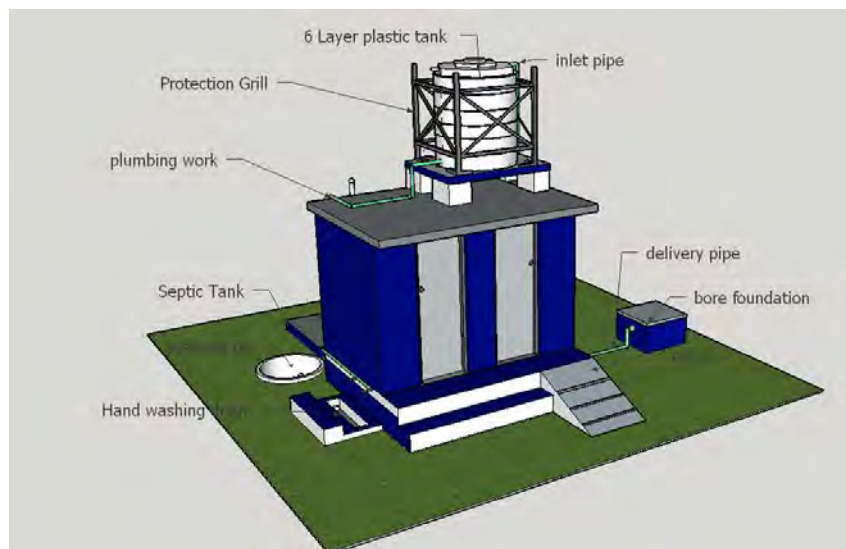
Digging Range:
150 - 200 ft.

Capacity:
40 -50 students per toilet

The project will focus on three major areas: I) increasing the knowledge and improving the behavior of the students, teachers, and parents around Water, Sanitation, and Hygiene in schools, ii) improving the WASH-related infrastructure at schools through rehabilitating and constructing latrines, installing a water system, and iii) improving knowledge of hygiene management in the most deprived areas.



The project will use the child-to-child approach used for the promotion of good health practices. The schoolteachers and parents will also be engaged in the promotion of good hygiene behaviors and practices. These three will also contribute to improved hygiene behaviors at the school level. The usage of a forum like a child club proved highly successful in imparting hygiene communication messages at scale. Additional enabling factors such as training programs for schoolteachers, capacity building and awareness-raising, coordination, and support for the district-level government education department played significant roles in the program's success.



WATER FILTRATION PLANTS

Average time to install and inaugurate:
6 months

Average number of beneficiaries:
2,000 people

Lifespan of project:
5 - 10 years

Digging Range:
300 - 400 ft.

Capacity:
2,000 liters/hour

In special cases beneficiaries can also vary due to water availability and local requirements.

RO and 2 UFT Plants will be installed at feasible locations after assessment.

Water purification is the process of removing undesirable chemicals, biological contaminants, suspended solids, and gases from contaminated water. The goal is to produce water fit for drinking purposes. Water purification plants are the source of providing pure, safe, and healthy drinking water to people.

Water filtration plants make use of Ultrafiltration (UFT) and Reverse Osmosis (RO) processes for water purification. The Reverse Osmosis process is used in those areas where underground water condition is not good, i.e., water is saline. The ultrafiltration process is used in those areas where underground water is sweet but not completely pure to drink.



A woman in a dark blue headscarf and long coat is operating a hand pump. The pump is mounted on a concrete base and has a red bucket placed under the spout. The background is a blurred outdoor setting.

Afghanistan

BOREWELL WITH AFREDIV HAND PUMP

**Average time to install
and inaugurate:**
4 - 6 months

**Average number of
beneficiaries:**
100 - 170 people

Lifespan of project:
3 years

Digging Range:
30 - 55 meters

Afrediv hand pumps are ideal for villages and households in which surface sources are common, so only a basic pump suffices for poor families trying to meet their water requirements. Suction hand pumps are economical, easy to install and maintain. Maintenance is done at the village level without the need for specialist parts. The pumps are made with galvanized iron.



Indonesia

BOREWELL WITH WATER TANK

Average time to install and inaugurate:

3 months

Average number of beneficiaries:

10 households

Lifespan of project:

3 - 5 years

Digging Range:

Minimum 100 meters from one water well to another. Some areas need around 12 meters depth / 20 meters depth or more. Depends on the geographical conditions of the areas.

In order to increase the health rate of Indonesians, Human Initiative initially builds water well projects. To achieve this vision, indeed we have missions including clean water for consumption and providing an easy access public facility. This mission is supported by several activities, one of them is the construction of 20 meters depth water well to increase community access to clean water resources. Thus, it may create public health by considering that clean water is a beneficial resource in our daily lives. The water well is built in residential areas that urgently need clean water. Furthermore, most people in those areas work as farmers and laborers with middle to lower economic levels. This program itself has been implemented across Indonesia; Bogor (West Java), Lombok, East Nusa Tenggara, and Central Sulawesi.



Cambodia

WATER TANK

Average time to install and inaugurate:
3 months

Average number of beneficiaries:
50 people daily for households,
200-300 students for schools,
200 patients at health centers,
225 congregants at masjid

Lifespan of project:
5 years

How it works:

Inauguration: start to build the water project (foundation)

Mid-Implementation: Almost work done with all installments.

Completion: Handing over program is the beneficiary program to community

In many rural areas in Cambodia such schools, masjid, health centers and community there are only one small water well pumps with raw water directly from where the plant is installed. This included a hand wash basin in addition to the motor pumping water from the water system.

Water Project Model: we selected the water tank project model to make wudu/ablution, drinking and more.

Capacity: we have one tank that can keep 2000 liters or water, four water out systems with cement and tail designation in good condition and quality, so one water tank can be used for at least over 5 years.

Machine: we use the motor pumping the water system from small well or river to store in water tank.

Civil work: Basic Survey Participation of Local Govt. Feasibility Study Water Quality Testing Water Consumption Committee





Jordan & Lebanon

WATER SUPPLY VIA TRUCKS AND WATER TANKS

Average time taken to finish the project:

Jordan: 3 Days per week

Lebanon: Daily

Average number of beneficiaries:

600 people Jordan

1500 people Lebanon

This project provides needy families with clean and fresh water through water tanks four times a month. We aim to ease the sufferings of the refugee families especially women and children.



WATER FILTRATION SYSTEM

Average time to install and inaugurate:

21 days

Average number of beneficiaries:

200 people

Lifespan of project:

1 -3 years

Digging Range: 120 ft

Capacity: 1500 liters/hr

There is lack of clean drinking water in MENA region especially in Jordan and Lebanon, so HHRD Middle East North Africa (MENA) provides Water Filters to Palestinian refugees in Jordan. This project can ease their lives and make it healthier for them and improve access to clean drinking water.



WASHROOMS FOR SYRIAN REFUGEES

Average time taken to finish the project:

11 months

Average number of beneficiaries:

600 people

Life span of project:

5 years

Digging range (if any):
land preparation

Thousands of Syrian refugee families live in tents in Jordan in several areas especially in Al Mafraqa and Madaba. They are lacking proper facilities for sanitation and have to go outside to relieve themselves. This practice is not only affecting the environment but also not healthy for the people living in the area. Moreover, in harsh weather it becomes difficult for people to go outside. Life threatening animals like snakes, scorpions, and such are also another issue in this regard. If proper restrooms can be provided for these deprived families living in tents, it can improve their way of living.



PROJECT DONATION LEVELS FOR 2022

Afghanistan	
Afrediv Pump	\$3,335
Africa	
Kenya Shallow Well with Afrediv	\$4,500
Somalia Shallow Well with Afrediv	\$4,500
Uganda Shallow Well with Afrediv	\$4,500
Tanzania Shallow Well with Afrediv	\$4,500
Mali Shallow Well with Afrediv	\$5,750
Kenya Rain Harvesting	\$3,450
Uganda Rain Harvesting	\$3,450
Kenya Mega Borehole	\$115,000
Uganda Mega Borehole	\$115,000
Kenya Mega Water Filtration Plant	\$160,000
Kenya WASH (5 Units Restroom)	\$6,670
Somalia WASH (5 Units Restroom)	\$6,670
Uganda WASH (5 Units Restroom)	\$6,670
Tanzania WASH (5 Units Restroom)	\$6,670
ASEAN	
Cambodia Water Tank	\$1,600
Indonesia Water Tank	\$2,500
Bangladesh	
Water Project	\$1,600
Haiti	
Water Project	\$5,750
India	
Water Project	\$2,875
WASH (Restroom)	\$3,800

PROJECT DONATION LEVELS FOR 2022

MENA	
Jordan Water Tanks Placement at 3 Locations	\$1,150
Palestinian Refugees Home Water Filtration for 3 Families	\$1,000
Syrian Refugees in Jordan Water Supply by Truck Project for 2 Families	\$1,000
Syrian Refugees in Lebanon Water Supply by Truck Project for 2 Families	\$1,000
Syrian Refugees WASH in Jordan (One Unit Restroom)	\$2,000
Nepal	
Bio-Sand Filtration Community Water Pump	\$1,460
Drinking Water Treatment Plant	\$6,000
Pakistan	
Afrediv Pump or 2 Abayaar Hand Pumps (in selected locations)	\$1,000
Solar Based Drinking Water Solution (SBDWS)	\$1,300
Dug Well	\$2,650
Submersible with Brick Masonry Water Tank	\$3,450
Gravity Flow Schemes	\$3,450
Tube Well	\$11,300
Ultra-Filter Unit (UFT)	\$13,300
R O Plants	\$20,000
Ram Pump	\$20,000
WASH (2 Units Restroom)	\$5,400
Rohingya Refugees in Bangladesh	
Mega Water Project	\$11,000
WASH (2 Units Restroom)	\$2,450