Mbinudita Water Connection

Give Access to Clean Water for Rural Area School and Village

kawan baik

FAIR FUTURE

Problem

Difficult access and don't have financial sources to clean water for school residents and local residents in Mbinudita

The communities from the outermost regions do not have the knowledge, the capacities and no financial resources for the most part. Therefore, they cannot construct or imagine technical solutions aimed at improving their living conditions.

The community cannot access a healthy lifestyle, especially because of the problems associated with access to clean water and adequate sanitation solutions

Mbinudita Water Connections

Goals

1

IMPACT 1

Access to clean water is available for school residents and local residents in Mbinudita

2

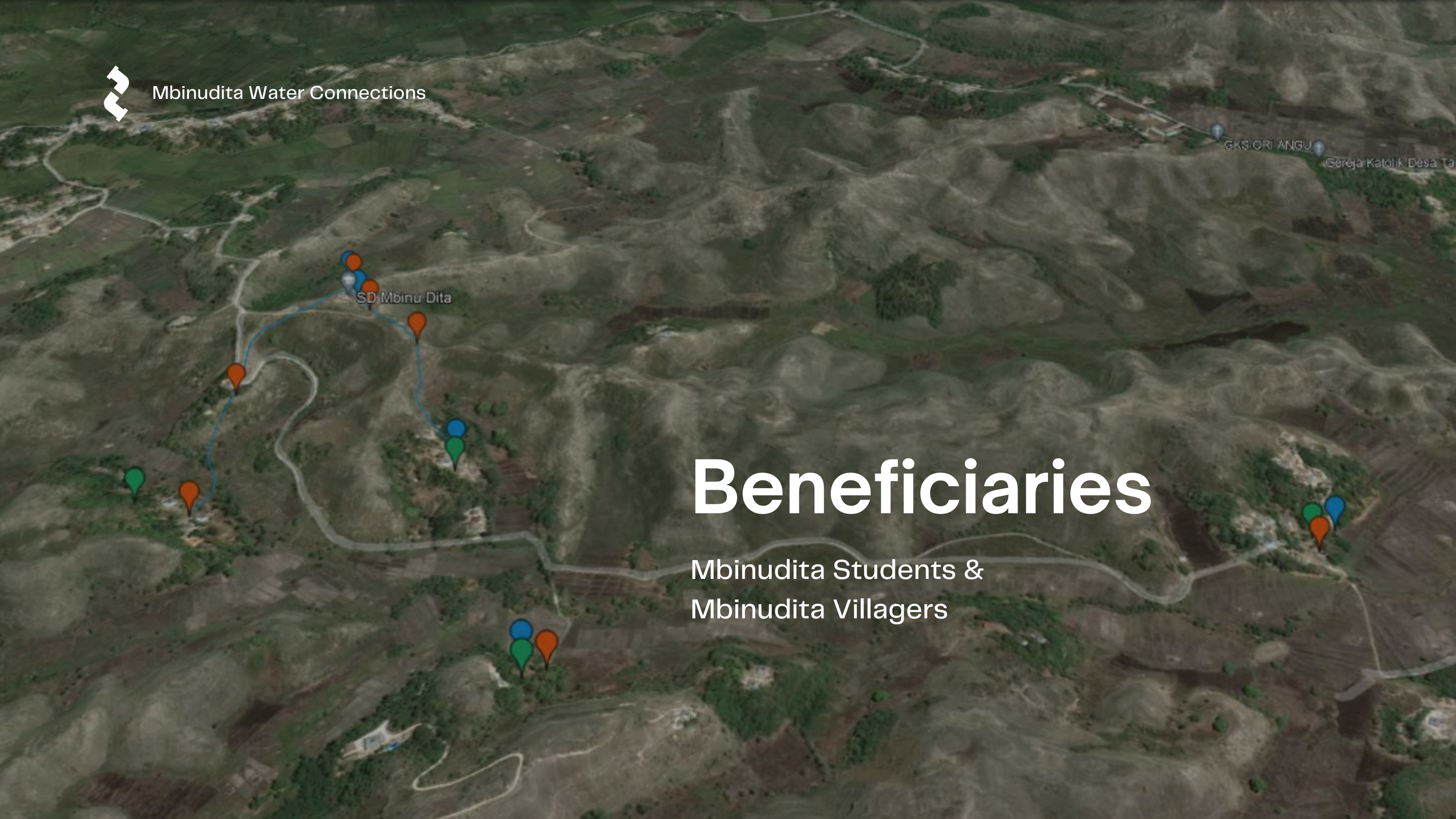
IMPACT 2

Residents have the knowledge and ability to build clean water infrastructures

3

IMPACT 3

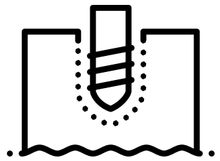
A healthier life for the community, behaviour change, and beliefs of water health and hygiene in schools, homes and communities related to water and sanitation.



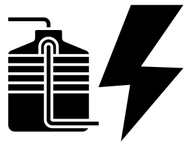
Beneficiaries

Mbinudita Students &
Mbinudita Villagers

Our Actions



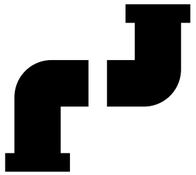
Drilling Wells



Electrical Installation of
Water Pumps Up to the Hill

Ferro-cement
Water Tank
& Rain water harvesting

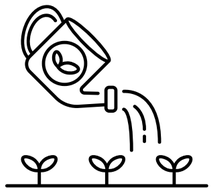
Activate Water Committee



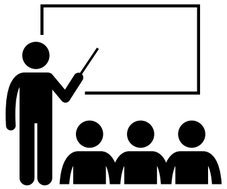
Water Distribution

Public Toilet &
Healthy Sanitation

Hydram Pump



Nutrition Garden



Capacity Building
Community Outreach

Drilling Wells

To get a better quality of clean water, it is necessary to measure and drill wells to a certain depth according to the results of measurements made by experts.

Conventional wells made by local communities generally do not apply measurement methods, so the water obtained does not always get good quality clean water.

The advantages of drilling wells

- Better quality and high change to get quality clean water
- Machine drilled wells allow for deeper depths than manual/conventional wells

The first drilling wells at Mbinudita is started

Electrical Installation of Water Pumps Up to the Hill

When measuring and searching for underground springs by experts, it was found that the water points for drilling were in hill valleys, so the water had to rise from the drilling point of the well following the slope elevation and well height. hill with a pipe length of approximately 200 meters.

A submersible pump with a total head of more than 120 meters is required and an electric power capacity ranging from 1200 to 3000 watts per hour.

Planned to use 5000-watt diesel generator with electrical installation up to 250 meters.

around 250-meter water pipe needed to fulfill the water tank up to the hill

Ferro-cement Water Tank & Rain water harvesting

Residents have to walk 1.5 - 3 kilometres to springs or wells.
Residents do not have water reservoirs around their homes.
No one has yet collected rainwater for household needs

Mbinudita Preparation Village is located in the west-central part of East Sumba Regency which has an average rainfall of 1,500 – 2,000 mm per year* or higher than other areas in the Regency. It's mean potential to make rainwater harvesting.

The advantages of making ferro-cement water tank

- An inexpensive solution for water storage
- Very High Durability than other materials
- Unlimited flexibility for shape and size
- Easy to build
- Easy to duplicate by the villagers

Our first ferro-cement rainwater harvesting tank in Mbinudita used by 7 houses and 11 families

- *https://www.sumbatimurkab.go.id/iklim.html*

Water Distributions

Community involvement is an important point in the water distribution process.

From excavation, pipe installation is involving the beneficiary community to ensure optimal use and maintenance. Everything can be done independently without the help of experts, and all with the spirit of togetherness.

The sense of belonging to the facilities that were built together will be a strong capital so that the facilities are maintained and safe.

Mom and kids bring pipe for drilling wells at Mbinudita

Public Toilet & Healthy Sanitation

Rural areas are quite far from the city and have limitations, related to building materials and experts. These are a challenge for effective and efficient development solutions.

using the same technology as the manufacture of water tanks, we adopt Ferro-cement for toilets building.

The advantages of Ferro-cement constructions

- Low cost
- Appropriate technology with high durability
- Earthquake resistant
- Unlimited flexibility for shape and size
- Easy to build
- Easy to duplicate by the villagers

reference picture of Ferro-cement toilet India

Hydraulic Ram Pump (Hydram Pump)

A hydraulic ram pump is a water pump powered by water with height difference levels.

Springs in Mbinudita are available with this method to provide closer access to villagers living in the hills and surrounding areas

The advantages of making hydram pump

- Uses renewable energy sources
- No electricity power needed
- Very effective in mountainous areas

Learning class with Hydram pump at Bali Apropiate Technology Institute (BATI)

Nutrition Gardens

In 2013 in East Sumba there were approximately 2500 children of which 51.3% were stunted. Meanwhile, the stunting rate in East Sumba decreased in 2019 to 25%.

The province of East Nusa Tenggara (NTT) still has the province with the highest stunting rate in Indonesia. Therefore, NTT requires extra education and nutrition since pregnancy.*

The advantages of Nutrition Gardens

- To help in addressing malnutrition & micronutrient deficiencies by consumption of freshly grown vegetables

Our demo garden
with nutritious edible plants at Rumah Kambera

- *https://www.sumbatimurkab.go.id/menteri-pppa-ri-dukung-penurunan-angka-stunting-di-sumba-timur.html*

Capacity Building
Community Outreach

Inadequate infrastructure in remote areas and the relatively low level of public education have caused people in remote areas to lack understanding and knowledge about clean and healthy living behaviour and how appropriate technology can be their solution.

Training is needed to increase the knowledge capacity of the community to find solutions and be willing to change behaviour to improve the quality of life and better health.

In this training, the community will be invited to learn together about appropriate technology and infrastructure knowledge, hygiene education to help create behaviour change, knowledge, and beliefs of water health and hygiene in schools, homes and communities.

Meeting with Mbinudita villager and Training about Ferro-cement watertank

Activate Water Committee

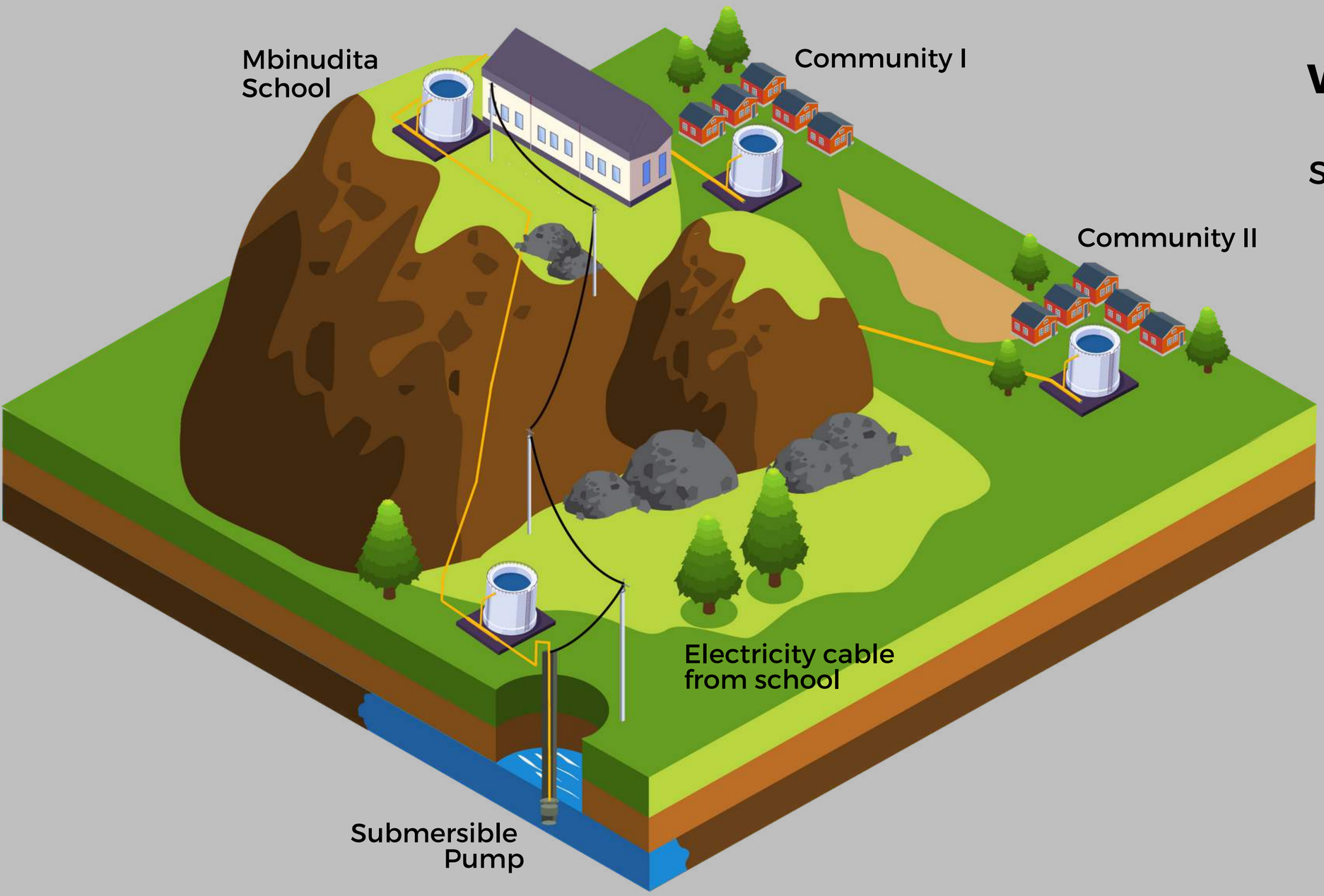
Ensuring the sustainability of the construction and use of facilities is maintained, it is necessary to have a water committee that will work and serve as supervisors and daily implementers for the maintenance and repair of clean water facilities that have been built.

This will be discussed in the forum and mutually agreed upon by the community, especially the beneficiaries of the facility.

Functions and duties of the Water Committee

- Identifying, evaluating, and controlling risks that have the potential to cause facilities to be damaged or not functioning.

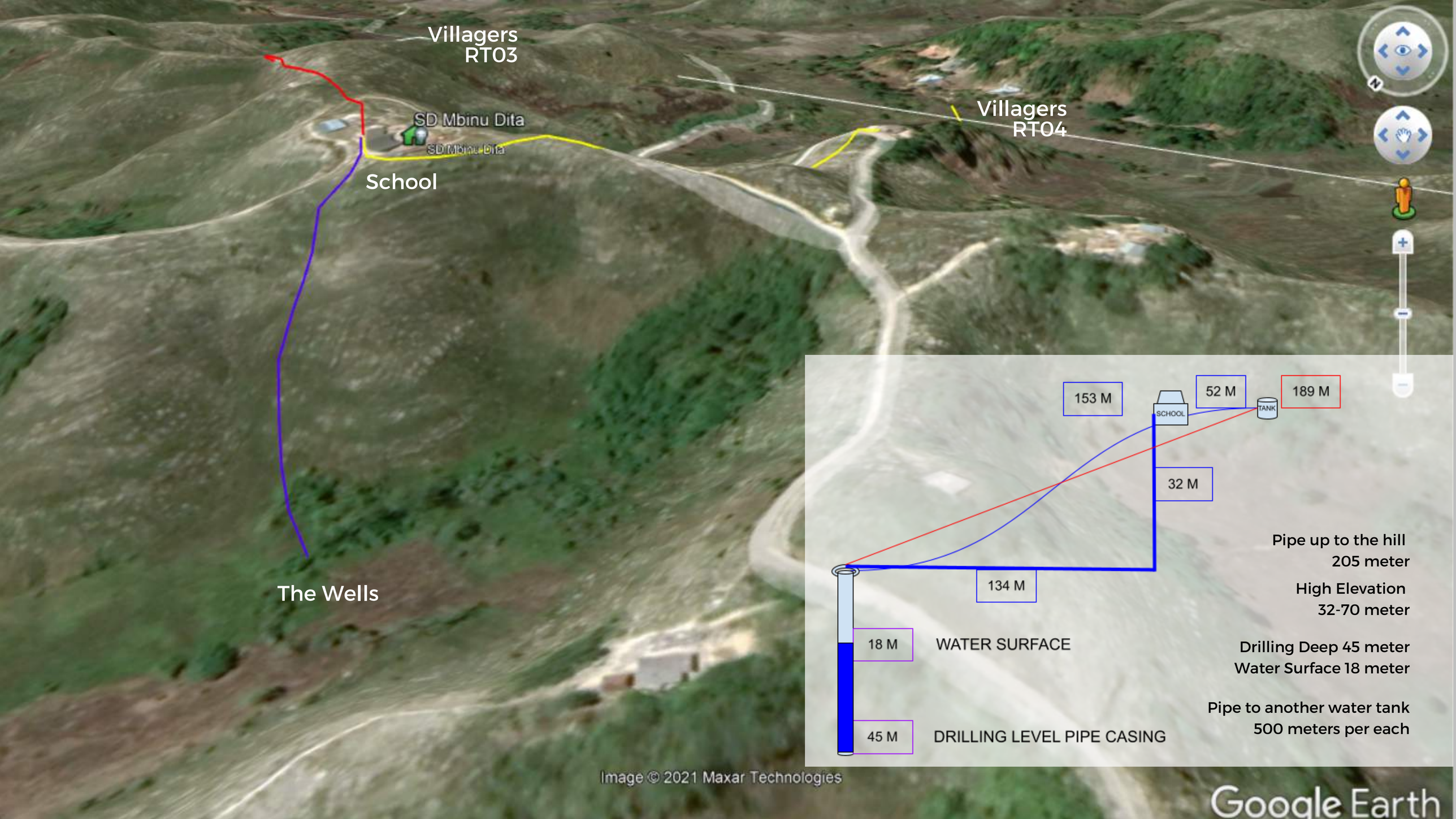
Mbinudita Villager meeting



Mbinudita Water Connections

Spot 1 - Mbinudita school and beyond

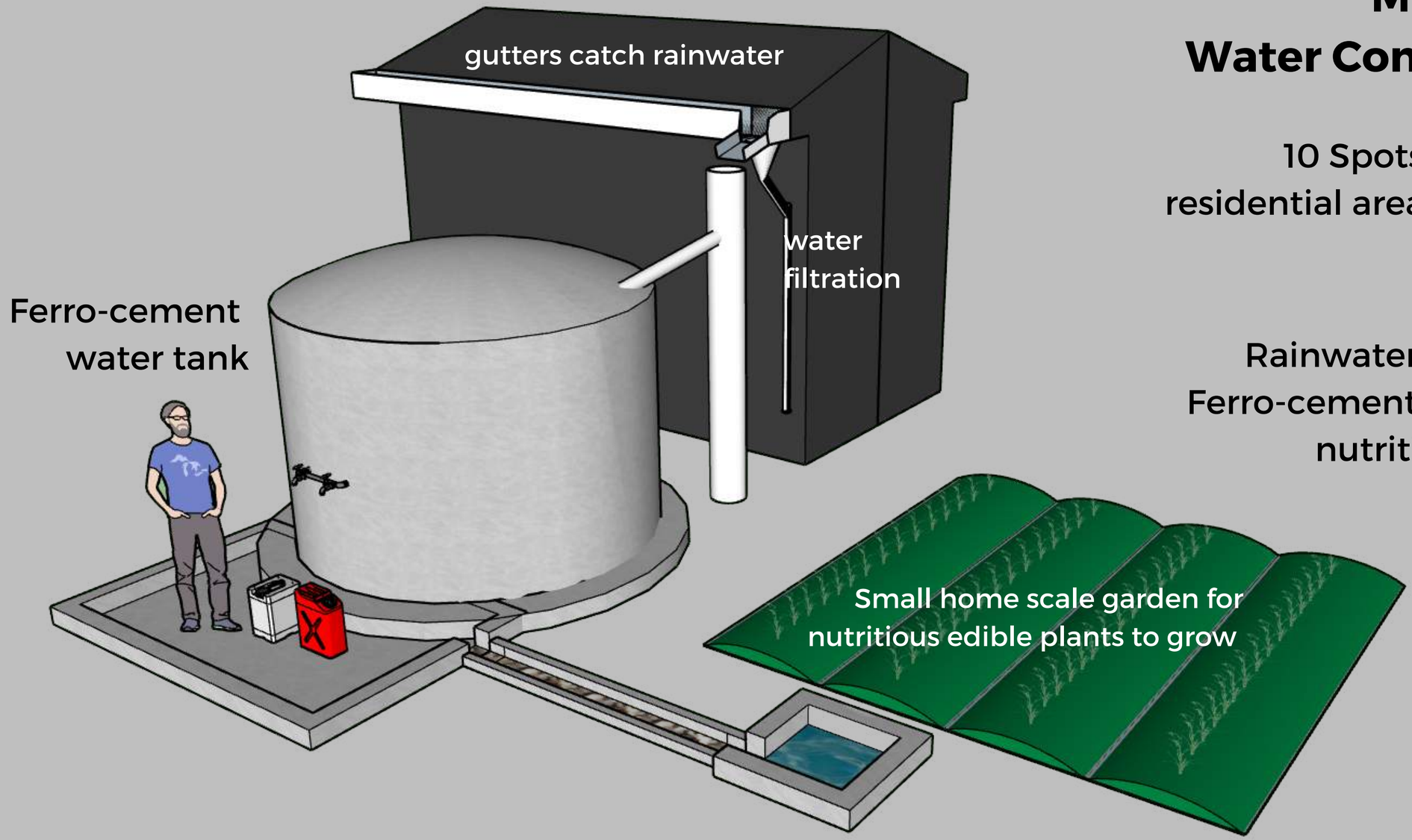
Drilling wells & Water distribution illustration


Villagers
RT03
SD Mbinu Dita
SD Mbinu Dita
School
Villagers
RT04
The Wells
153 M
52 M
189 M
SCHOOL
TANK
32 M
134 M
18 M
WATER SURFACE
45 M
DRILLING LEVEL PIPE CASING
Pipe up to the hill
205 meter
High Elevation
32-70 meter
Drilling Deep 45 meter
Water Surface 18 meter
Pipe to another water tank
500 meters per each
Image © 2021 Maxar Technologies
Google Earth

Mbinudita
Water Connections

10 Spots location -
residential area Mbinudita

Rainwater Harvesting
Ferro-cement water tank
nutritions garden



THE SUSTAINABLE DEVELOPMENT GOALS

NO POVERTY

Construction of water facilities to improve quality of life, overcome inaccessibility due to poverty

CLEAN WATER AND SANITATION

Availability of access to clean and quality water that is not polluted, healthy sanitation with good waste treatment standards

GOOD HEALTH AND WELL BEING

With the provision of clean water and healthy sanitation, a healthy lifestyle can be implemented in a sustainable manner

PARTNERSHIP FOR THE GOALS

Involving the Mbinudita village community to form a clean water committee from and by residents, the goal is achieved and maintained together

Budget Plan

Mbinudita Water Connections

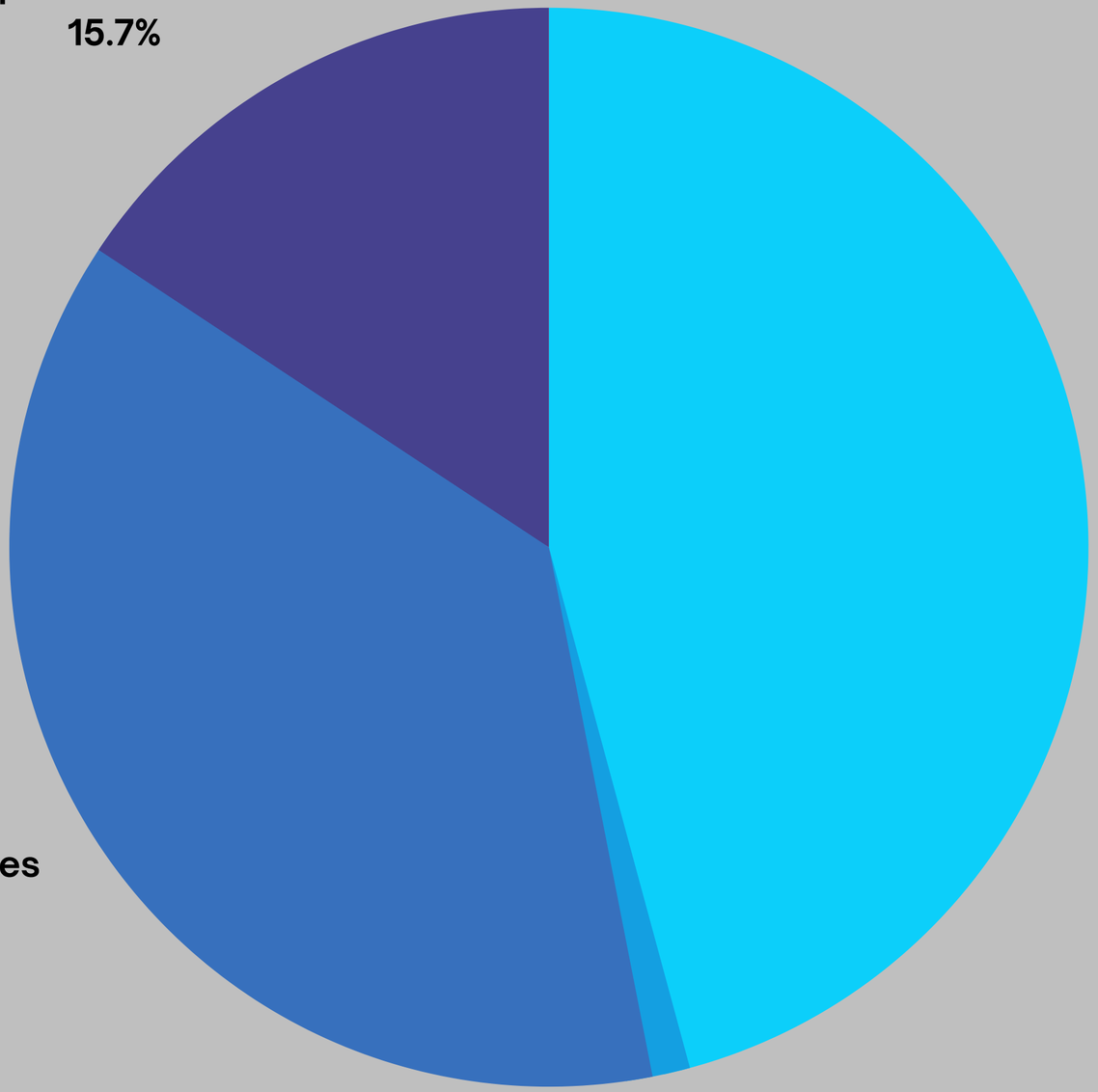
	Activities	IDR	CHF	QTY	IDR	CHF
1	**Providing access to clean water for school residents and local residents in Mbinudita**					
1.	Drilling Well	104,949,000.00	6,837	1	104,949,000	6,837
2.	Survey and socialization of clean water infrastructure development activities at school area points	5,980,000.00	390	1	5,980,000	390
3.	Construction of water tanks near the school area and at well points	35,600,500.00	2,319	1	35,600,500	2,319
4.	Construction of electricity supply installations and pumping of well water to reservoirs on school hills	79,524,250.00	5,181	1	79,524,250	5,181
5.	Pipeline from well to water tank in school	9,100,000.00	593	1	9,100,000	593
6.	Construction of a resident's water tank in RT 04	17,153,500.00	1,117	1	17,153,500	1,117
7.	Pipeline from school water tanks to water tanks at people's homes	29,900,000.00	1,948	1	29,900,000	1,948
8.	Construction of water tanks and rainwater harvesting installations for community groups by themselves	8,950,500.00	583	10	89,505,000	5,831
9.	Utilization of springs using hydram technology	62,546,250.00	4,075	1	62,546,250	4,075
10.	Pipeline from spring to main water tank	31,200,000.00	2,033	1	31,200,000	2,033
11.	Construction of the water tank from the hydram pump	17,153,500.00	1,117	1	17,153,500	1,117
			Sub Total		482,612,000	**31,441**

	Activities	IDR	CHF	QTY	IDR	CHF
2	**Training to build clean water infrastructure using appropriated technology**					
	1. Community training on appropriate technology in the use of water sources for fulfilling daily needs	11,895,000.00	775	1	11,895,000	775
			Sub Total		**11,895,000**	**775**
3	**Healthy lifestyle training and provision of sanitation facilities**					
	1. Provide knowledge about appropriate technology for the development of clean water and healthy sanitation infrastructure	35,938,500.00	2,341	10	359,385,000	23,413
	2. Training on healthy lifestyle	34,450,000.00	2,244	1	34,450,000	2,244
			Sub Total		**393,835,000**	**25,657**

	Activities	IDR		CHF		
4	**Operational cost: Travel go to site to run the program**	38,480,000.00	2,507	1	38,480,000	2,507
5	**Operational cost: Accommodation for staff at site during the program**	127,140,000.00	8,283	1	127,140,000	8,283
				Sub Total	**165,620,000**	**10,790**

Total Cost Project **1,053,962,000 IDR**

68,662 CHF



Percentage of project financial

45.8%

The biggest cost is the provision of clean water facilities and distribution to bring water closer to the community

You can give impact through this project, your contribution is your commitment to support Kawan Baik Indonesia Foundation in helping us bring clean, safe water to people in need on a continual basis.

Help the 46% of them to get water!

Permata Bank (013)
122.4093.140
(IDR-USD-EUR-CHF)
Pura Bagus Taruna Branch
Legian - Bali

Thank you!

kawan baik

Rumah Sanur, Jalan Danau Poso 51A -
Banjar Semawang, Sanur,
Kec. Denpasar Selatan - 80228
Denpasar, Bali - Indonesia

fb.com/kawanbaikfoundation

@kawanbaikindonesia

kawanbaikindonesia.org

info@kawanbaikindonesia.org