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REPORT

HAMBARITA WATER CONNECTIONS - PHASE I

HAMBARITA NEIGHBORHOOD, MBATAKAPIDU VILLAGE

Field Implementer and donor

kawan baik

FAIR FUTURE FOUNDATION

2025

Report Summary

Hambarita, a small neighbourhood located in Mbatakapidu Village, East Sumba, East Nusa Tenggara, is home to **151 people** from **34 families**. Residents have relied heavily on rainwater harvesting for their clean water needs, although much of it does not meet standards.

During the dry season, they typically collect water from Kullup or purchase water from a tank truck. However, impassable road conditions often hamper water delivery, preventing residents from consistently meeting their needs.

To address this challenge, Hambarita received **eight ferrocement water tanks** from the **Fair Future Foundation,** with capacities of **4,400 litres** and **5,300 litres**. The Foundation constructed the water tanks based on a field survey.

Construction activities proceeded smoothly thanks to close collaboration between the community, the implementation team, and various stakeholders. The process began with site preparation, road repairs to the construction site, and construction work, all the way to completion. Residents were also actively involved in **community work**, which not only expedited the job but also fostered a sense of shared ownership of the new facility.

With the completion of this project, Hambarita Village now has a more **adequate**, **robust**, and **durable** water storage facility. Those ferrocement water tanks are expected to increase the availability of clean water for daily needs, support community health, and enhance the village's resilience during the dry season.

Community **participation** and **commitment** to maintaining and properly utilising the ferrocement water tank will be key to the program's continued benefits.

List of Contents

In tropical areas or when the weather is very hot, the body loses fluids more quickly through sweat so that water requirements can increase to 3–4 liters per day just for drinking.

Survey and Coordination

Beneficiaries

For each ferrocement water tank, communication and coordination have been established with the beneficiary group, which typically consists of **3-5 families with 15-25 people**. They have committed to participating in the ferrocement water tank construction and rainwater harvesting process, as well as taking responsibility for its future maintenance. This is crucial for the sustainability of the clean water facility maintenance program.

Measurement

During the survey, measurements were also taken at each construction point. These measurements included the distance between the nearest and furthest houses, the location of the ferrocement water tank and the rainwater catchment roof, the height of the rainwater catchment roof, and the length of the rainwater catchment roof. This is **crucial** because it determines the required materials, as each house varies greatly.

Some houses also have roofs used to collect rainwater, but they aren't high enough to require excavation for the foundations. This requires effective **communication** and **coordination** with the community, who will work together to secure all necessary materials before construction begins.

Ferrocement Water Tank Distribution Area and Rainwater Harvesting

For realtime distribution of ferrocement tanks and rainwater reservoirs, please visit the link below:

https://bit.ly/hambaritawaterconnections

Work implementation

Survey and Coordination
26 June - 5 July 2025

Wai Ma Hammu
5 June 2025

Wai Kahingir
15 June 2025

Wai Ma Njanjar
26 June 2025

Wai La Wurung
5 July 2025

Wai Maringu
15 July 2025

Wai Pandulang
25 July 2025

Wai Pa Luri Wangu
6 August 2025

Wai La Padang
7 August 2025

Finishing
- Lid cover installation
- Tank testing
- Gutter testing
- Information board installation

WAI MA HAMMU$_{4.400\ liter}$

Ferrocement Water Tank Data

1	Subdistrict	Waingapu City
2	Village	Mbatakapidu
3	Neighborhood	Hambarita
4	RT / RW	09/05
5	Number of Houses	3
6	Number of Families	3
7	Total Residents	15
8	Name of Regional Head/Community Leader	Jhoni Mbulu Mangal
9	Phone Number of Regional Head/Community Leader	+6282322584559
10	Number of people present at the meeting	11
11	Number of Existing Water Source Points	The available water sources are seepage water collected in stone excavations (Kullup) and these water sources will dry up in the dry season, so people maximize their rainwater harvesting and buy tank water during the dry season.
12	Problems Faced	Lack of sufficient storage for daily clean water needs
13	Assistance that Hambarita residents have received regarding clean water	Sanitation Assistance *(Unused condition due to water shortage)*
14	Distance from Rumah Kambera - Location (km)	28 KM
15	GPS Location Link	74XX+GH2 Pambotanjara, Kabupaten Sumba Timur, Nusa Tenggara Tim.
16	Name of Person in Charge of the Ferrocement Water Tank	Loda Ana Amah
17	Whose land is the land used for construction on?	Ndawa Kahindu
18	Distance from the ferrocement water tank to the nearest house (meters)	10 Meter
19	Distance from the ferrocement water tank to the farthest house (meters)	15 Meter
20	How far is the ferrocement water tank from the nearest house roof (meters)	4
21	House Size	9 meter X 12 meter
22	Roof Rain Gutter Requirements	3 pieces
23	Are residents willing to cooperate in the construction of the reservoir?	Residents are ready to cooperate and be actively involved

The Story of the Wai Ma Hammu

The first week focused on material distribution, site clearing, foundation assembly, tank mold installation, interior and exterior plastering, and pipe installation.

Nine people participated in construction and 15 in unloading materials. Roof rain gutter installation took place on May 27–28 with the assistance of professionals.

Work was delayed due to rain and a bereavement, but was rescheduled. By the end of the second week, progress had reached 70%.

The second week focused on finishing, casting the ferrocement water tank cap, and painting. With favorable weather, the work was fully completed by June 8, 2025.

WAI KAHINGIR 4.400 liter
Ferrocement Water Tank Data

1	Subdistrict	Waingapu City
2	Village	Pambota Njara
3	Neighborhood	Hambarita
4	RT / RW	06/03
5	Number of Houses	3
6	Number of Families	4
7	Total Residents	16
8	Name of Regional Head/Community Leader	Diki Takanjanji
9	Phone Number of Regional Head/Community Leader	+6282266267520
10	Number of people present at the meeting	7
11	Number of Existing Water Source Points	The available water sources are seepage water collected in stone excavations (Kullup) and these water sources will dry up in the dry season, so people maximize their rainwater harvesting and buy tank water during the dry season.
12	Problems Faced	Lack of sufficient storage for daily clean water needs
13	Assistance that Hambarita residents have received regarding clean water	-
14	Distance from Rumah Kambera - Location (km)	28 KM
15	GPS Location Link	74XV+WHJ Pambotanjara, Kabupaten Sumba Timur, Nusa Tenggara Tim.
16	Name of Person in Charge of the Ferrocement Water Tank	Nggada Yabu
17	Whose land is the land used for construction on?	Nggada Yabu
18	Distance from the ferrocement water tank to the nearest house (meters)	16
19	Distance from the ferrocement water tank to the farthest house (meters)	4
20	How far is the ferrocement water tank from the nearest house roof (meters)	5 meter
21	House Size	4 meter X 6 meter
22	Roof Rain Gutter Requirements	3 pieces
23	Are residents willing to cooperate in the construction of the reservoir?	Ready to work together and actively participate

The Story of the Wai Kahingir

Construction of the second ferrocement water tank commenced on June 5, 2025, and within four days, it had reached 70% completion. The stages included site clearing, foundation construction, installation of the mall and reinforcement, and exterior plastering. A parallel work strategy and active community participation accelerated the process.

The main obstacle was two days of heavy rain, which delayed casting and plastering. The team adjusted the schedule to accommodate the weather conditions, ensuring quality was maintained.

Work continued the following week, focusing on pipe installation, cap casting, plastering, and painting, with a target completion date of mid-June.

WAI MA NJANJAR 5.300 liter

Ferrocement Water Tank Data

1	Subdistrict	Waingapu City
2	Village	Pambota Njara
3	Neighborhood	Hambarita
4	RT / RW	06/03
5	Number of Houses	3
6	Number of Families	3
7	Total Residents	13
8	Name of Regional Head/Community Leader	Diki Takanjanji
9	Phone Number of Regional Head/Community Leader	+6282266267520
10	Number of people present at the meeting	8
11	Number of Existing Water Source Points	The available water sources are seepage water collected in stone excavations (Kullup) and these water sources will dry up in the dry season, so people maximize their rainwater harvesting and buy tank water during the dry season.
12	Problems Faced	Lack of sufficient storage for daily clean water needs
13	Assistance that Hambarita residents have received regarding clean water	-
14	Distance from Rumah Kambera - Location (km)	28 KM
15	GPS Location Link	75X2+WF4 Pambotanjara, Kabupaten Sumba Timur, Nusa Tenggara Tim.
16	Name of Person in Charge of the Ferrocement Water Tank	Kaita Rina
17	Whose land is the land used for construction on?	Kaita Rina
18	Distance from the ferrocement water tank to the nearest house (meters)	19
19	Distance from the ferrocement water tank to the farthest house (meters)	4
20	How far is the ferrocement water tank from the nearest house roof (meters)	2
21	House Size	12 meter X 9 meter
22	Roof Rain Gutter Requirements	3 pieces
23	Are residents willing to cooperate in the construction of the reservoir?	Ready to work together and actively participate

The Story of the Wai Ma Njanjar

Construction of the ferrocement water tank at Wai Ma Njanjar* began with the construction of the frame, spokes, and the casting of the foundation.

The design was adjusted by increasing the spokes to 85 cm + 85 cm to achieve a capacity of 5,300 litres. The size change created gaps in the mould, so two 35 cm wide planks were added to widen the perimeter of the basin.

The second week focused on finishing, painting, piping installation, faucet installation, and cleaning the surrounding area. The ferrocement water tank was completed at optimal capacity and is ready for public use.

WAI LA WURUNG 5.300 liter

Ferrocement Water Tank Data

1	Subdistrict	Waingapu City
2	Village	Mbatakapidu
3	Neighborhood	Laindatang
4	RT / RW	10/05
5	Number of Houses	3
6	Number of Families	4
7	Total Residents	24
8	Name of Regional Head/Community Leader	Keba Lamu
9	Phone Number of Regional Head/Community Leader	+6281232370362
10	Number of people present at the meeting	10
11	Number of Existing Water Source Points	The available water sources are seepage water collected in stone excavations (Kullup) and these water sources will dry up in the dry season, so people maximize their rainwater harvesting and buy tank water during the dry season.
12	Problems Faced	Lack of sufficient storage for daily clean water needs
13	Assistance that Hambarita residents have received regarding clean water	Sanitation Assistance (Unused condition due to lack of water)
14	Distance from Rumah Kambera - Location (km)	28 KM
15	GPS Location Link	74VV+RHV Pambotanjara, Kabupaten Sumba Timur, Nusa Tenggara Tim.
16	Name of Person in Charge of the Ferrocement Water Tank	Ndilu Hamba Meha
17	Whose land is the land used for construction on?	Ndilu Hamba Meha
18	Distance from the ferrocement water tank to the nearest house (meters)	24
19	Distance from the ferrocement water tank to the farthest house (meters)	4
20	How far is the ferrocement water tank from the nearest house roof (meters)	4 meter
21	House Size	7 meter X 9 meter
22	Roof Rain Gutter Requirements	3 pieces
23	Are residents willing to cooperate in the construction of the reservoir?	Residents are ready to cooperate and be actively involved

The Story of the Wai La Wurung

Construction of the ferrocement water tank at Wai La Wurung has been completed, measuring 85 cm in diameter and 241 cm in height.

Work began with site clearing, excavation, foundation casting, reinforcement installation, and the final casting of the cover on June 28, 2025.

The entire process was technically supervised to ensure the quality of the mix and structural accuracy, and community participation was encouraged in transporting materials. In the second week, the finishing phase, which included polishing, painting, and cleaning the area, was completed, declaring the entire project finished.

WAI MARINGU 5.300 liter

Ferrocement Water Tank Data

1	Subdistrict	Waingapu City
2	Village	Mbatakapidu
3	Neighborhood	Laindatang
4	RT / RW	10/05
5	Number of Houses	3
6	Number of Families	3
7	Total Residents	14
8	Name of Regional Head/Community Leader	Keba Lamu
9	Phone Number of Regional Head/Community Leader	+6281232370362
10	Number of people present at the meeting	6
11	Number of Existing Water Source Points	The available water sources are seepage water collected in stone excavations (Kullup) and these water sources will dry up in the dry season, so people maximize their rainwater harvesting and buy tank water during the dry season.
12	Problems Faced	Lack of sufficient storage for daily clean water needs
13	Assistance that Hambarita residents have received regarding clean water	Sanitation Assistance (Unused condition due to lack of water)
14	Distance from Rumah Kambera - Location (km)	28 KM
15	GPS Location Link	74WX+Q88 Pambotanjara, Kabupaten Sumba Timur, Nusa Tenggara Tim.
16	Name of Person in Charge of the Ferrocement Water Tank	Nggada Yabu
17	Whose land is the land used for construction on?	Nggada Yabu
18	Distance from the ferrocement water tank to the nearest house (meters)	14
19	Distance from the ferrocement water tank to the farthest house (meters)	3
20	How far is the ferrocement water tank from the nearest house roof (meters)	4 meter
21	House Size	5 meter X 6 meter
22	Roof Rain Gutter Requirements	3 pieces
23	Are residents willing to cooperate in the construction of the reservoir?	Residents are ready to cooperate and be actively involved

The Story of the Wai Maringu

In the first week, the Wai Maringu group's construction of the ferrocement water tank reached the second layer of plastering on the inside. The process progressed quickly thanks to the active participation of the community, who worked together until late at night, and favourable weather conditions, ensuring smooth and efficient work.

The 5th ferrocement water tank was completed on July 14-16, 2025, after a delay of several days while the technical team focused on constructing the 6th ferrocement water tank in Wai Pandulang.

As progress at that location neared completion, the team returned to Wai Maringu to complete the work. Thus, both ferrocement water tanks were completed simultaneously.

WAI PANDULANG 5.300 liter

Ferrocement Water Tank Data

1	Subdistrict	Waingapu City
2	Village	Mbatakapidu
3	Neighborhood	Laindatang
4	RT / RW	10/05
5	Number of Houses	3
6	Number of Families	3
7	Total Residents	17
8	Name of Regional Head/Community Leader	Keba Lamu
9	Phone Number of Regional Head/Community Leader	+6281232370362
10	Number of people present at the meeting	11
11	Number of Existing Water Source Points	The available water sources are seepage water collected in stone excavations (Kullup) and these water sources will dry up in the dry season, so people maximize their rainwater harvesting and buy tank water during the dry season.
12	Problems Faced	Lack of sufficient storage for daily clean water needs
13	Assistance that Hambarita residents have received regarding clean water	Sanitation Assistance (Unused condition due to lack of water)
14	Distance from Rumah Kambera - Location (km)	28 KM
15	GPS Location Link	74WQ+H75 Pambotanjara, Kabupaten Sumba Timur, Nusa Tenggara Tim.
16	Name of Person in Charge of the Ferrocement Water Tank	Kaita Lepir
17	Whose land is the land used for construction on?	Kaita Lepir
18	Distance from the ferrocement water tank to the nearest house (meters)	17
19	Distance from the ferrocement water tank to the farthest house (meters)	3
20	How far is the ferrocement water tank from the nearest house roof (meters)	4
21	House Size	7 meter X 7 meter
22	Roof Rain Gutter Requirements	3 pieces
23	Are residents willing to cooperate in the construction of the reservoir?	Residents are ready to cooperate and be actively involved

The Story of the Wai Pandulang

Construction of the ferrocement water tank in Wai Pandulang has reached approximately 90% completion, including material distribution, formwork installation, plastering, and piping installation.

Technical constraints on the diameter of the ferrocement water tank were resolved by adjusting the formwork installation method to achieve a more precise shape.

The second week focused on completing the topside, including casting and installing the lid, vents, manholes, and final finishing.

With the completion of this phase, the main structure of the ferrocement water tank was declared complete.

WAI PA LURI WANGU 5.300 liter

Ferrocement Water Tank Data

1	Subdistrict	Waingapu City
2	Village	Mbatakapidu
3	Neighborhood	Hambarita
4	RT / RW	09/05
5	Number of Houses	3
6	Number of Families	4
7	Total Residents	16
8	Name of Regional Head/Community Leader	Jhoni Mbulu Mangal
9	Phone Number of Regional Head/Community Leader	+6282322584559
10	Number of people present at the meeting	8
11	Number of Existing Water Source Points	The available water sources are seepage water collected in stone excavations (Kullup) and these water sources will dry up in the dry season, so people maximize their rainwater harvesting and buy tank water during the dry season.
12	Problems Faced	Lack of sufficient storage for daily clean water needs
13	Assistance that Hambarita residents have received regarding clean water	Sanitation Assistance (Unused condition due to lack of water)
14	Distance from Rumah Kambera - Location (km)	28 KM
15	GPS Location Link	844W+G37 Pambotanjara, Kabupaten Sumba Timur, Nusa Tenggara Tim.
16	Name of Person in Charge of the Ferrocement Water Tank	Huhu Tanggu Mara
17	Whose land is the land used for construction on?	Huhu Tanggu Mara
18	Distance from the ferrocement water tank to the nearest house (meters)	16
19	Distance from the ferrocement water tank to the farthest house (meters)	4
20	How far is the ferrocement water tank from the nearest house roof (meters)	4 meter
21	House Size	5 meter X 7 meter
22	Roof Rain Gutter Requirements	3 pieces
23	Are residents willing to cooperate in the construction of the reservoir?	Residents are ready to cooperate and be actively involved

The Story of the Wai Pa Luri Wangu

Work took place from July 22 to August 6, 2025. The stages included material delivery, foundation construction, steel frame construction, mall installation, double-sided plastering, and pipe installation.

The second week continued with the construction of the enclosure, painting, and finishing work, including the fireplace, cleaning, and final inspection.

All work proceeded smoothly with community support, without any significant obstacles.

WAI LA PADANG 5.300 liter

Ferrocement Water Tank Data

1	Subdistrict	Waingapu City
2	Village	Mbatakapidu
3	Neighborhood	Hambarita
4	RT / RW	09/05
5	Number of Houses	3
6	Number of Families	3
7	Total Residents	15
8	Name of Regional Head/Community Leader	Jhoni Mbulu Mangal
9	Phone Number of Regional Head/Community Leader	+6282322584559
10	Number of people present at the meeting	7
11	Number of Existing Water Source Points	The available water sources are seepage water collected in stone excavations (Kullup) and these water sources will dry up in the dry season, so people maximize their rainwater harvesting and buy tank water during the dry season.
12	Problems Faced	Lack of sufficient storage for daily clean water needs
13	Assistance that Hambarita residents have received regarding clean water	Sanitation Assistance (Unused condition due to lack of water)
14	Distance from Rumah Kambera - Location (km)	28 KM
15	GPS Location Link	843W+G83 Pambotanjara, Kabupaten Sumba Timur, Nusa Tenggara Tim.
16	Name of Person in Charge of the Ferrocement Water Tank	Jhoni Mbulu Manggal
17	Whose land is the land used for construction on?	Jhoni Mbulu Manggal
18	Distance from the ferrocement water tank to the nearest house (meters)	15
19	Distance from the ferrocement water tank to the farthest house (meters)	3
20	How far is the ferrocement water tank from the nearest house roof (meters)	4 meter
21	House Size	4 meter X 6 meter
22	Roof Rain Gutter Requirements	3 pieces
23	Are residents willing to cooperate in the construction of the reservoir?	Residents are ready to cooperate and be actively involved

The Story of Wai La Padang

The ferrocement water tank's construction began with the constraints of narrow road access and a hilly location. Materials couldn't be transported directly, so residents worked together to repair the road and manually transport cement, sand, and iron for approximately 100 meters.

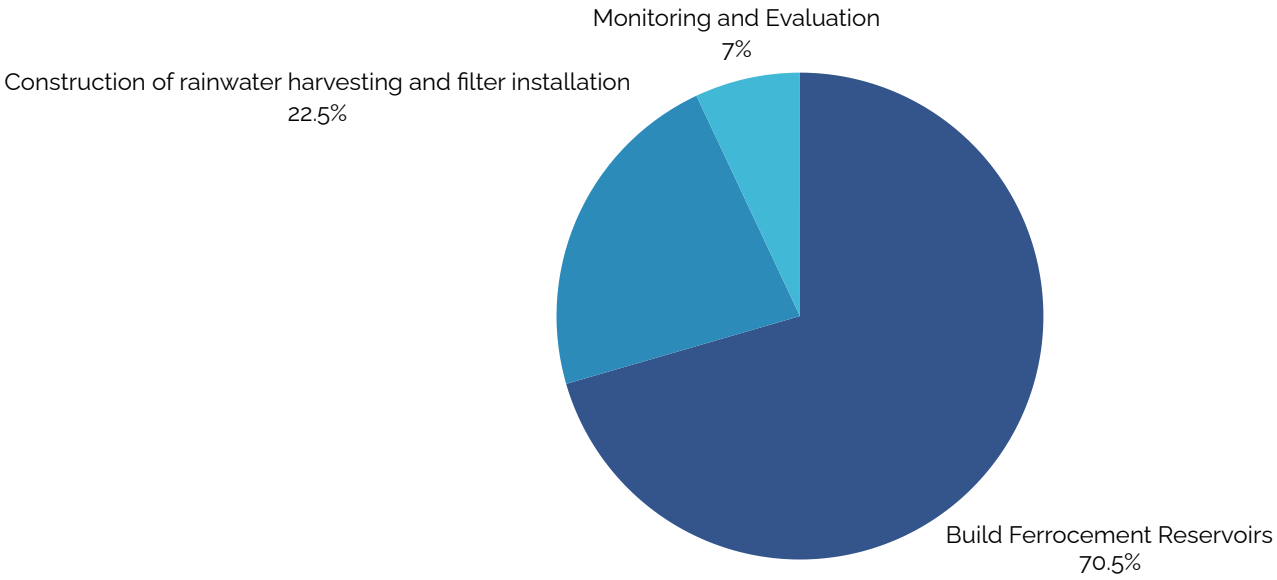
To ensure smooth progress, this process was carried out concurrently with work at Wai Pa Luri Wangu. Once the materials were ready, construction continued with foundation work, iron framing, mall installation, plastering, and pipe installation. Thanks to the residents' solidarity, the work proceeded smoothly.

The final phase focused on constructing the formwork, iron frame, and casting the ferrocement water tank lid, as well as applying leak-proof paint to the exterior and interior. Good weather facilitated the work. This phase concluded with the construction of a fire pit for the work area, a pipe inspection, and initial testing of the ferrocement water tank's functionality.

Cost Absorption

The Fair Future Foundation fund the construction of these eight ferrocement water tanks. **CHF. 2'200.**- was allocated for each tank, bringing the total for the eight tanks to **CHF. 16'544.-**, which includes the following costs:

- Ferrocement Tanks *(8 units)* **CHF. 10'668.-**
- Rainwater harvesters and water filters *(8 sets)* **CHF 4'166.-**
- Monitoring and evaluation of **CHF. 1'720.-**



Water Tank Names	Building Ferrocement Water Tank	Construction of rainwater harvesting and filter installation	Monitoring and Evaluation	TOTAL BUDGET
WAI MA HAMMU	Chf. 1353	Chf. 480	Chf. 215	**Chf. 2048**
WAI KAHINGIR	Chf. 1307	Chf. 527	Chf. 215	**Chf. 2049**
WAI MA NJANJAR	Chf. 1301	Chf. 534	Chf. 215	**Chf. 2050**
WAI LA WURUNG	Chf. 1337	Chf. 507	Chf. 215	**Chf. 2059**
WAI MARINGU	Chf. 1335	Chf. 515	Chf. 215	**Chf. 2065**
WAI PANDULANG	Chf. 1339	Chf. 520	Chf. 215	**Chf. 2074**
WAI PA LURI WANGU	Chf. 1326	Chf. 545	Chf. 215	**Chf. 2086**
WAI LA PADANG	Chf. 1370	Chf. 538	Chf. 215	**Chf. 2123**

Monitoring and Evaluation

Monitoring

Monitoring is carried out directly by donors in the field, accompanied by the foundation team. This includes material preparation and planning, construction processes, community involvement, coordination and support from relevant parties, specifically beneficiaries, as well as time and scheduling, and documentation and reporting *(administrative and financial).* All of these are key elements in monitoring the procurement of ferrocement tanks and rainwater harvesters.

Evaluation

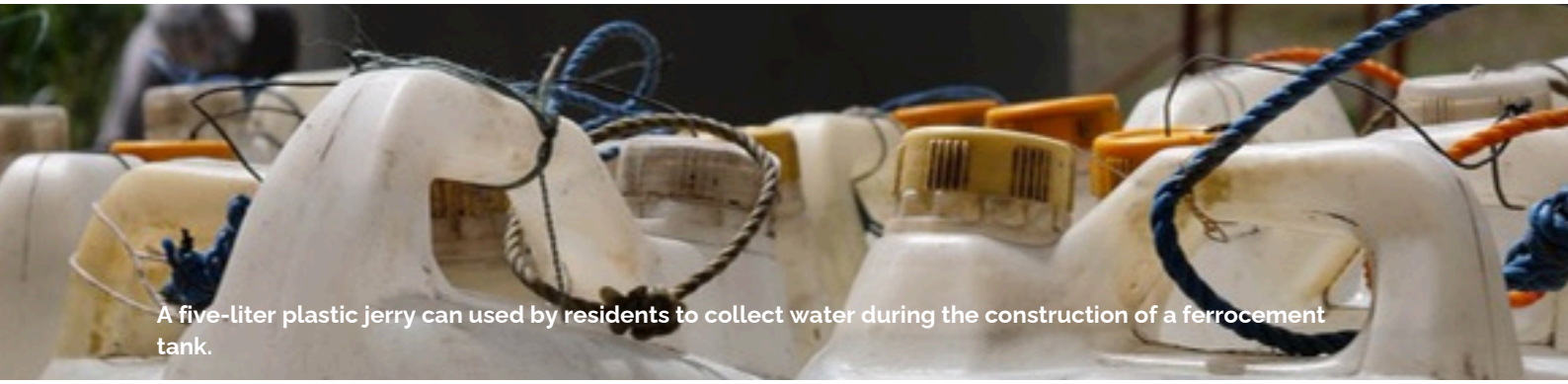
Some of the things that are the focus of this evaluation are the quality of construction, function and utilisation of clean water facilities, community involvement, benefits and impacts, as well as maintenance and sustainability.

activity documentation

Documentation of the road repair process so that vehicles carrying materials can pass

Documentation of the process of making the ferrocement tank cover frame

Aerial documentation of Hambarita village during the reservoir location survey



A five-liter plastic jerry can used by residents to collect water during the construction of a ferrocement tank.

The ferrocement tank has been completed and the iron tank cover has been installed.

Eight Water Tanks in Hambarita Village

Thank you very much

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