



# FEROCEMENT TANK 5,3 m<sup>3</sup> WAI LA PADANG

The Wai La Padang (Water in the Field) Ferrocement Tank, which was completed on August 7, 2025. is a water tank that was built manually by the hands of local residents, including its foundations.

Located in the home of **Jhoni Mbulu Manggal** family, this house can accommodate ±15 people. It was built using cement, sand, wire, water, and most importantly, mutual cooperation and solidarity.

### USAGE CAPACITY

# Daily water necessities: 15 people × 16 liters = 240 liters → 5.300 + 240 = around 23 days This means that this tank is sufficient for ±23 days.

### WHY IS THIS IMPORTANT?

- This tank is used for:
- Drinking & Cooking
   Bathing & Washing
   Basic Hygiene & Health Needs



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Wai La Padang Tank lius (r): 85 cm ght (h): 244 cm Radius (r) : Height (h) : Thickness (l): s (l): 3 cm π: 22/7 or 3,14

### Tank Volume Formula

 $V = \pi \, x \, r^2 \, x \, h$  To calculate the volume (V) in the tank, first find (r - l) before using the volume formula

Field Implementation Team:

Donations and Support by:







## WAI LA PADANG 5.300 litres

### **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<br>Leader                          | +6282322584559  |  |
| 10 | Number of people present at the meeting                                    | 7   |  |
| 11 | Number of Existing Water Source Points                                     | The available water sources are seepage wate collected in stone excavations (Kullup) and these wate sources will dry up in the dry season, so people maximize their rainwater harvesting and buy tank wate 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,<br>Nusa Tenggara Tim.   |  |
| 16 | Name of Person in Charge of the Ferrocement<br>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   |  |

## **Cost Summary of Wai La Padang**

| Water Tank Names | Building<br>Ferrocement<br>Water Tank | Construction of<br>rainwater<br>harvesting and<br>filter installation | Monitoring and<br>Evaluation | TOTAL<br>BUDGET |
|------------------|---------------------------------------|---|------------------------------|-----------------|
| WAI LA PADANG    | Chf. 1370                             | Chf. 538  | Chf. 215                     | Chf. 2123       |

## The Story of the 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.







