

Bioreactor ozone technology for clean water in saline-affected Untia Village, Makassar

INDONESIA · South Sulawesi · Untia

CATEGORY **INFRASTRUCTURE** **WATER SUPPLIES**

PRIMARY HAZARDS

Water stress · Changes to marine conditions

MOBILITY DIMENSION

Avoided displacement

RICD RISK TIER

Medium



GRANT RECIPIENT

PT Sefactor Deos Maks (PUFFER)

PARTNERS

Hasanuddin University · Untia Youth
Community · YRC Foundation

TOTAL PROJECT VALUE

38,994 USD 8 months

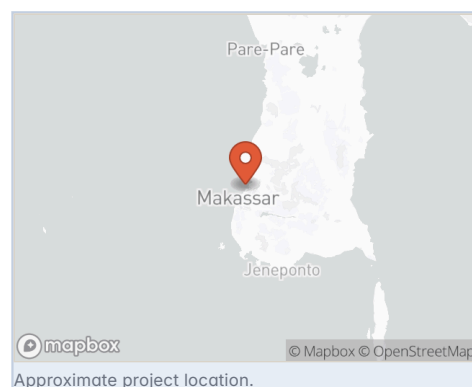
50% CCF GRANT 19,497 USD

50% MATCHING FUNDS 19,497 USD
PUFFER + Hasanuddin
University + Untia Youth (in-kind)

Context and approach

Sea level rise and tidal flooding are pushing seawater into Untia's shallow wells, leaving 1,438 residents with brackish, contaminated water. Families spend nearly a quarter of their income buying water from vendors, and diarrhoea and skin disease are common.

PUFFER, with Hasanuddin University and Untia youth, is installing a Bioreactor Ozone (BIZON) unit that combines ozone oxidation and multi-stage filtration to produce up to 50,000 litres of safe water daily, run as a community water enterprise managed by trained women and youth.



Approximate project location.

Project outputs

- Install and commission one BIZON unit producing 50,000 litres per day
- Train women and youth to operate and maintain the system
- Establish a community water enterprise with a blended-finance model
- Monitor water quality and household health outcomes
- 800 to 1,000 residents gain reliable access to safe, affordable water
- Household spending on water falls and waterborne illness declines
- A locally run enterprise sustains the service after the grant ends

Reach & deliverables

1,938 ESTIMATED POPULATION IMPACTED Untia Village	50,000 L CLEAN WATER A DAY from saline and contaminated sources	1 COMMUNITY WATER ENTERPRISE women and youth operators
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Milestones

8 MONTHS TOTAL

M.01 2 months Baseline assessment and community mobilisation	M.02 1 month System design, fabrication and logistics	M.03 1 month Installation and commissioning of BIZON unit	M.04 2 months Training, capacity building and initial operation	M.05 2 months Enterprise setup, monitoring and evaluation
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Co-funded by
the European Union