WaterStep

LIBERIA WASH INITIATIVE | The story so far

One pump. One record. Safe water that lasts.

How WaterStep and Kijani Group set out to keep Liberia's hand pumps working: where the idea came from, what the field team found when they opened the pumps, and how the work is growing into a national system led by Liberia's government.

282

of 383 public water points counted were reported broken by communities

152

water points inspected with the WaterStep app so far

iMIS

a national WASH system, led by the National WASH Commission

Where it goes next: from two counties, Bong and Grand Bassa, to every water point in Liberia.



Video filmed during the LWI feasibility study, 2025



WaterStep

Why we do this

Water points should keep working, year after year.

WaterStep has spent many years on one problem: water points that are built, then break, and are never fixed. Keeping them working is what drives the team, one repair, one record and one community at a time. The work in Liberia puts that commitment into practice.

> **A pump is only as good as its next repair.**

OUR COMMITMENT

Keep them working

Water points that keep giving water long after they are built.

2025

Liberia

A feasibility study maps why pumps fail.

2026

The census

Public water points counted in Bong and Grand Bassa.

FROM APRIL 2026

Into the field

A Liberian team opens pumps with the app.

NOW

Scaling up

A national WASH iMIS with the government.

Fix, don't just build

Building water points is not enough if nobody can fix them.

Small faults stay small

A worn seal fixed today is a pump not abandoned next year.

Communities keep it flowing

The people who drink the water are the best people to care for it.

WaterStep

The problem

Liberia's water points break, and stay broken.

Across Liberia national data

18%

of Liberia's improved water points were broken down

2017 national water point mapping, Ministry of Public Works (WASH Liberia)

Only 64%

of improved water points were fully working and in use. Another 17% worked with problems or were not used for drinking.

2017 national water point mapping, Ministry of Public Works (WASH Liberia)

77%

of deaths from diarrhoea in Liberia are attributable to unsafe drinking water, sanitation and hygiene

WHO 2023, 2019 estimates (Annex 6, Table A6.1)

86 per 1,000

children born in Liberia die before their fifth birthday (2024)

UN IGME, 2024 estimate

What we found Bong and Grand Bassa counties, 2026

282 of 383 **water points reported broken by communities, about 74%**

across 64 communities



Reported broken · 282 Reported working · 101

Bong County 41 communities		**153** of 207 reported broken
Grand Bassa 23 communities		**129** of 176 reported broken

Far above the national 18% because it counts what communities reported in the areas LWI targets, not a national sample. Our own first-visit test points the same way: only 17 of 121 water points produced water. It also shows why we test: 3 reported broken were actually working.

Where a pump is broken, families go back to **open wells and creeks**.

Why water points fail root causes from our 2025 feasibility study, and how LWI answers each

1 No data or coordination with government

↓ **The WaterStep app** feeds the government-led national WASH iMIS

2 No skills or tools for quick fixes

↓ **WaterStep visual learning** teaches communities to repair

3 No money for repairs

↓ **Carbon credits** earn revenue that pays for upkeep

Findings: WaterStep advance-team census, 2026 (status of public water points as reported by communities). National figures: 2017 national water point mapping (Ministry of Public Works), WHO 2023, UN IGME 2025.

WaterStep

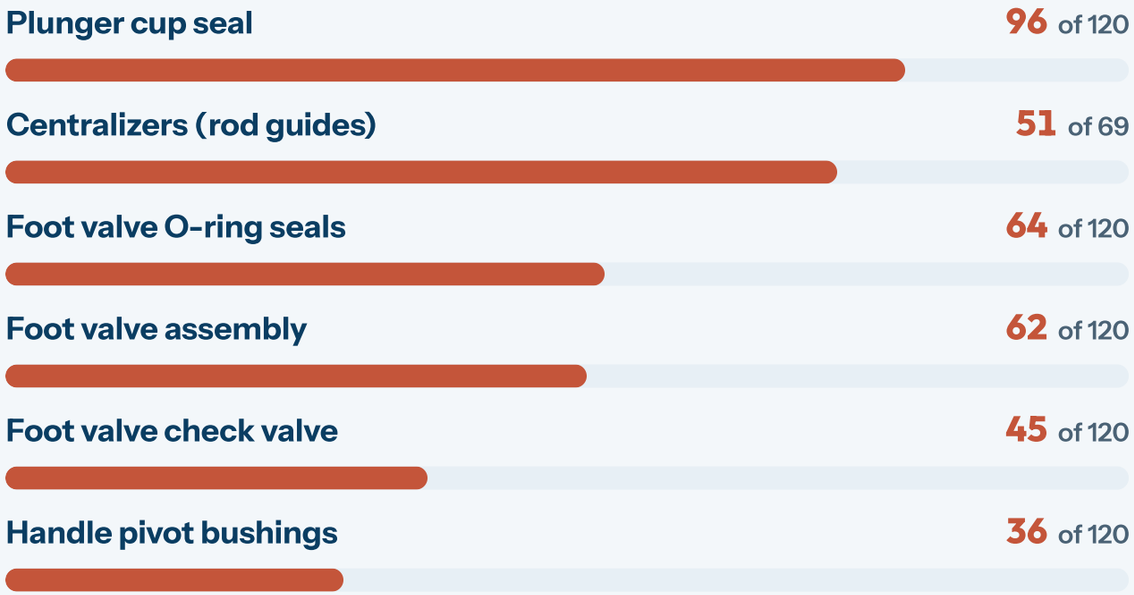
What we found inside the pumps

WaterStep app data · 7 Nov 2026

Most breakdowns are small, cheap parts. Not a reason to drill again.

Parts flagged for replacement

share of water points opened up



Why we test, not just ask

first visit, Bong and Grand Bassa

17 of 121 water points tested on the first visit actually produced water



Produced water · 17 Did not · 104

3 water points **reported broken were actually working**, and 1 reported working failed the test. A test on the spot turns what people remember into a fact anyone can check.

152
water points inspected

1,440
pump parts checked one by one

27
water points with repairs recorded

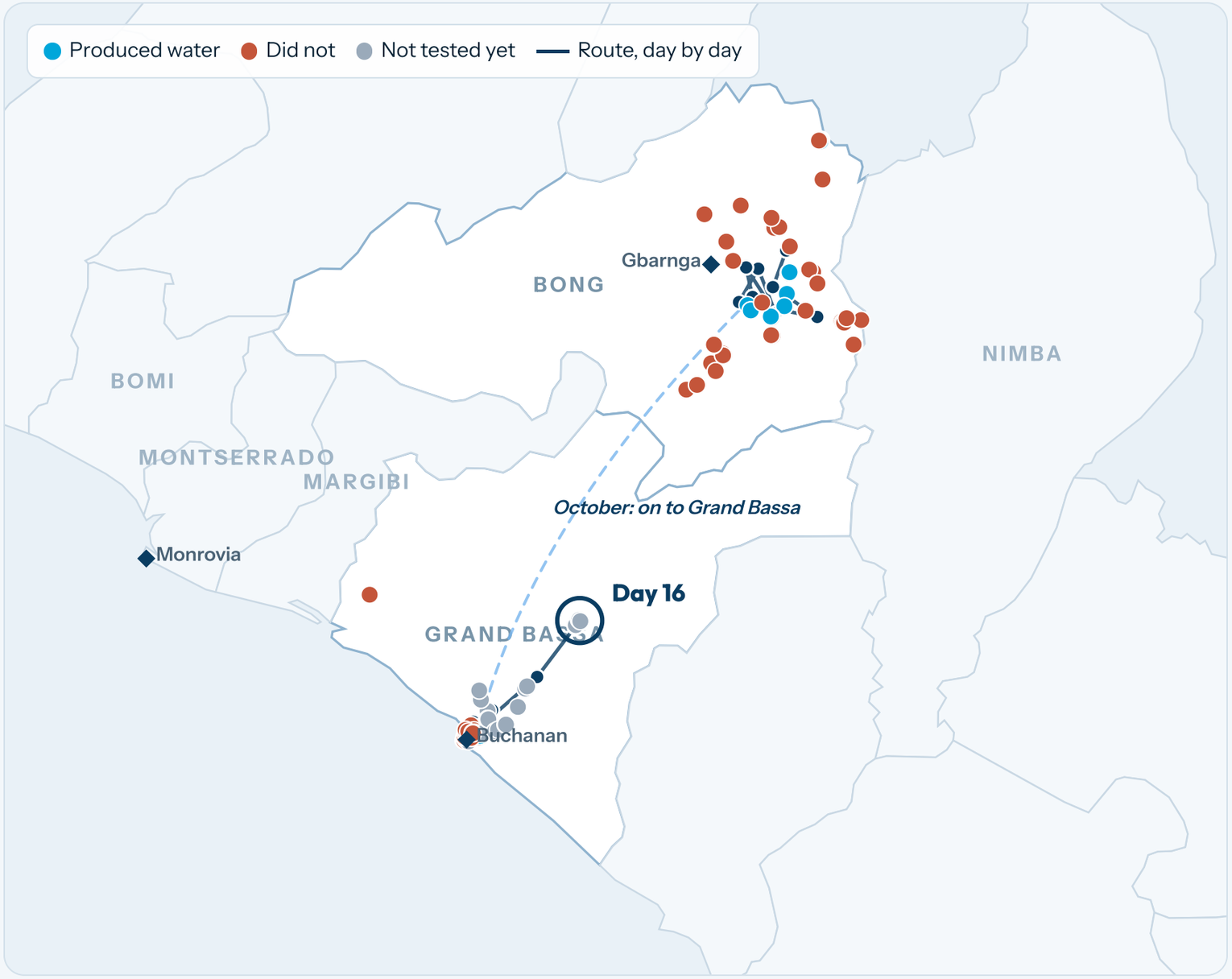
2
counties: Bong and Grand Bassa

WaterStep app, snapshot of 7 Nov 2026: submitted inspections only (drafts, test and staff accounts and the training site excluded). Early figures from a Liberian field team still learning the app: they show what the app can capture, not final results.

WaterStep

The scoping journey

GPS from the WaterStep app · 7 Nov 2026



Town by town, pump by pump.

Each dot is a hand pump the field team opened, placed where its GPS was recorded. Full route, 9 Apr 2026 to 27 Oct 2026, through the communities of Bong in April and Grand Bassa in October. The line joins the centre of each day's work, as several teams worked in parallel.

LATEST · FIELD DAY 16 · GRAND BASSA

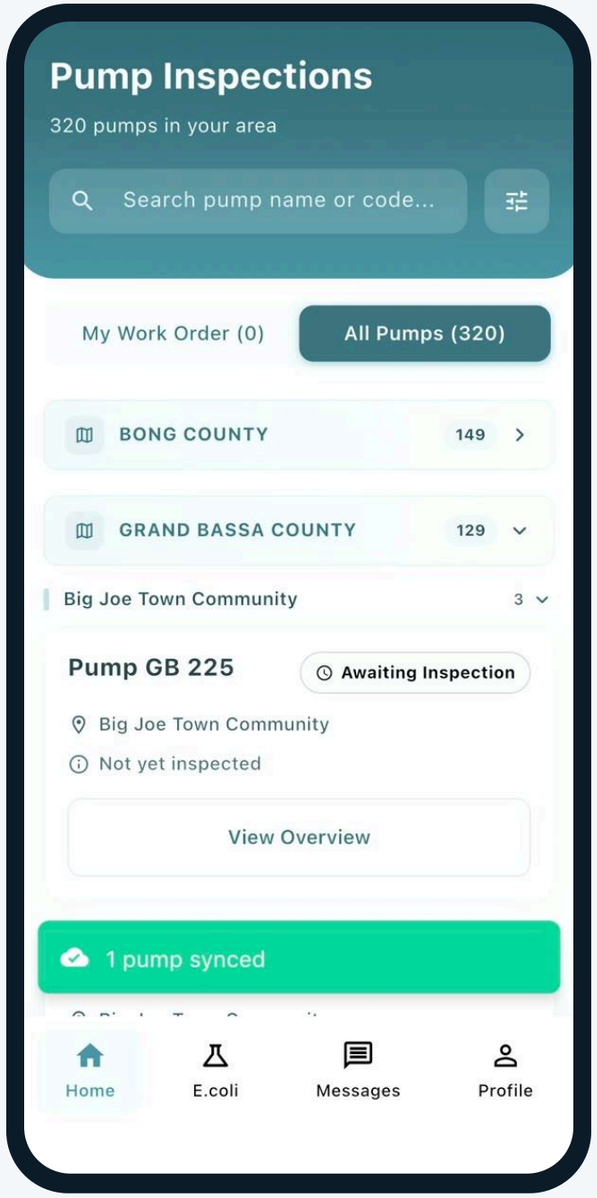
27 Oct 2026

2 water points in 1 community: Compound Three

151	50	16
water points	communities	field days

151 of 152 water points shown. One has no GPS fix. Positions as captured on the phone; a few have low accuracy.

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The app lists every registered water point, including ones not yet inspected.

Our solution · the WaterStep app

1 Solves: no data or coordination

A repair manual in every community pocket.

The WaterStep app walks a trained person through inspecting and repairing a hand pump, step by step, and works offline. Every visit leaves a verified record behind, and reviewed records feed the government-led national WASH iMIS.

Register

Each water point gets one record: GPS location, photos, a part-by-part check, a flow test and water samples for the lab.

Track performance

Every visit adds to the record, so a fault is caught and fixed before the water point is abandoned.

Report to government

Reviewed records feed the national WASH iMIS led by the National WASH Commission, so the government sees which water points work and where to act.

Prove what was done

Before and after are saved together, so partners and an independent auditor can check what was found and what was fixed.

Water point
Inspector or caretaker on site

Offline app
Photos, GPS, checks

Cloud database
Syncs when online

Reviewed record
One per water point

Reports
WASH iMIS, partners, auditors

WaterStep



Our solution · visual learning in the app

2 **Solves: no skills or tools for quick fixes**

Communities learn to fix their own water points.

The app's 3D models let community members explore a hand pump part by part, so they can spot a fault and make simple repairs themselves instead of waiting weeks for outside help.

1. **See it, then fix it.**
   Community members study every part on screen before they open a real pump.
2. **Simple repairs, done locally.**
   Worn seals and valves, the most common faults, can be replaced by a trained caretaker in hours.
3. **Water that stays on.**
   Fast local repairs stop small faults becoming abandoned water points, which is what keeps water points working for years.

Empowerment is the sustainability plan: the skills stay in the community after the project team leaves.

WaterStep

What comes next · the national WASH iMIS

A government-led platform for every water point in Liberia.

Led by the Government of Liberia

The WASH Integrated Management Information System (iMIS) is a national platform led by the National WASH Commission, the government institution that coordinates and regulates Liberia's water, sanitation and hygiene sector.

IN THE FIELD

Communities and caretakers

Inspect and repair with the WaterStep app, offline

→

GOVERNMENT PLATFORM

National WASH iMIS

One national record for every water point, led by the National WASH Commission

→

DECISIONS

Government and sector partners

See which water points work and where to act

Monitor

Water infrastructure across Liberia

Identify

Breakdowns as they happen

Coordinate

Repairs before a pump is abandoned

Decide

Better-informed choices on water services



Morris Gono Jr. (National WASH Commission), Wani Mwangu (Kijani Group) and Mark Hogg (WaterStep) at the signing, October 2026.

> **The goal is to bring data from many agencies into one place, to "centralize and feed up to a national system."**
>
> Morris Gono Jr., National WASH Commission, Spectrum News 1, 30 Oct 2026

In October 2026 the National WASH Commission, WaterStep and Kijani Group signed a memorandum of understanding to develop the WASH iMIS, building on the WaterStep platform piloted in Liberia. Press release, 30 Oct 2026.



Recording a hand pump with the WaterStep app, alongside the community.

WaterStep

Communities · the WaterStep platform

Empowering communities to keep their own water flowing.

> **Give a community a repaired water point and it has water for a while. Teach it to care for that water point and it has water for years.**

Every community gets WaterStep's tools to maintain and fix its own water point, with support coordinated by the government.

1 Learn

3D lessons in the app show caretakers each part of the water point before they touch it.

2 Check

Caretakers inspect their water point with the app; every visit updates its record.

3 Fix

Most faults are worn seals and valves that a trained caretaker can replace locally.

4 Report and get support

If a fault is beyond them, the water point is flagged so support can step in.

Government-led coordination: reviewed records feed the national WASH iMIS run by the National WASH Commission.

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Our solution · carbon credits, explained simply

3 Solves: no money for repairs

Safe water can earn carbon credits that pay for upkeep.

What is a carbon credit? A certificate for one tonne of CO_2 kept out of the air. Companies buy them, and the revenue goes back into the communities.

1 Without safe water, families must boil it

Boiling burns wood and charcoal. Many families cannot afford the fuel, so they drink it untreated.

2 A working water point removes that need

Tested water needs no boiling. The wood no longer burned is the emission cut.

3 Credits are paid for results

An auditor checks every year that water points work. If one stops, its credits stop.

Built to earn credits from day one: every water point is registered, tested and monitored in the WaterStep app, following Gold Standard's safe drinking water method.

What the credits do for communities

Pay for upkeep
Technicians and spare parts, year after year

Keep monitoring
Water tests every year

Benefit communities
A direct share of the revenue

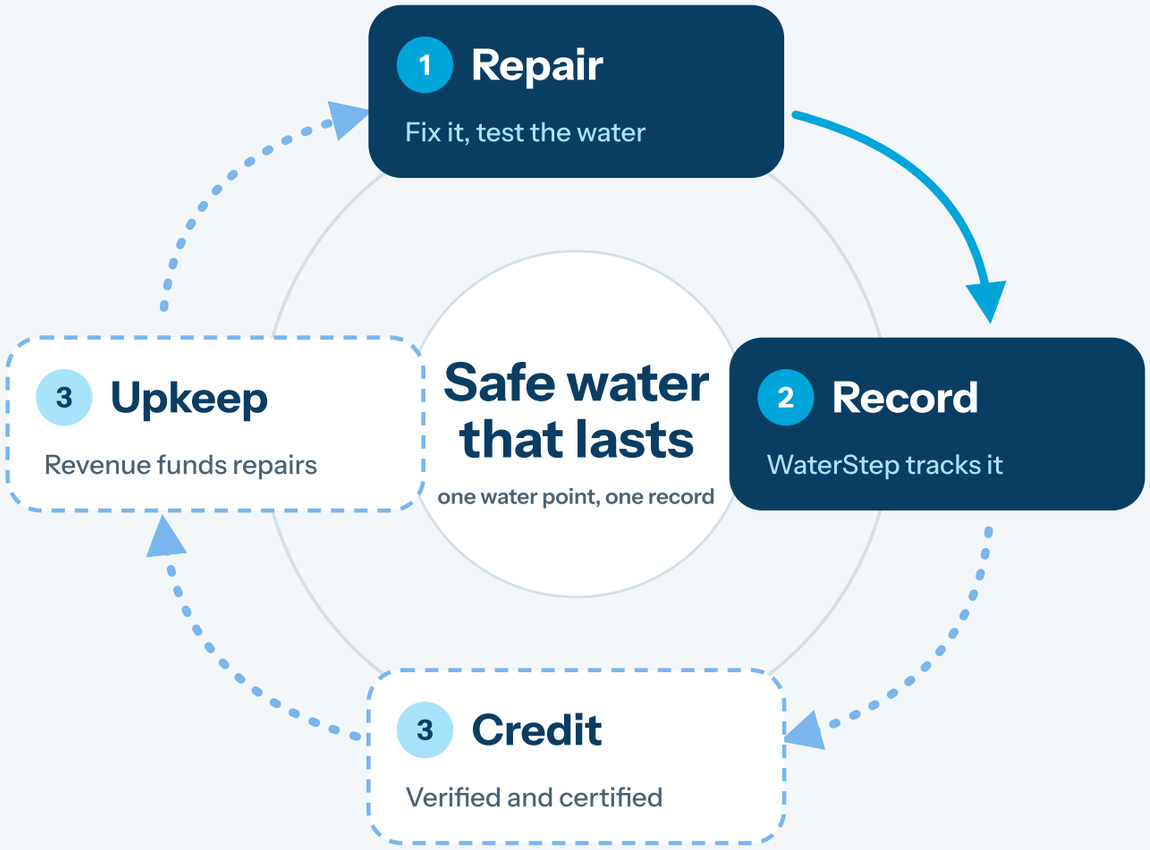
Stay accountable
Paid only for checked results

LWI is not yet certified. Carbon revenue depends on Gold Standard certification, Liberia's authorisation, yearly verification and buyers.

WaterStep

How it lasts

A working pump can help pay for its own repairs.



1 Repair and maintain

Each water point is diagnosed part by part and repaired, and its water is tested before we call it safe. A trained caretaker handles routine upkeep.

27 water points with repairs recorded

2 Record every water point in WaterStep

One record per water point: GPS, photos, parts and water samples. Each visit updates its status, so faults are caught early and the government can see them.

152 water points recorded **Feeds the national WASH iMIS**

3 Carbon revenue funds the upkeep

The project is designed to produce its own revenue from carbon credits. That money pays technicians, spare parts and monitoring, so restored water points stay in service.

Potential: depends on certification and buyers

Partners

Groundwork done. Partners in place.

ALREADY DONE **383** water points counted · **152** recorded in the app · **1,440** parts checked · **2025** feasibility study · **Oct 2026** MoU on the national WASH iMIS

Lead partners

WaterStep — USA
The WaterStep app, water point registration, community training and technical support

Kijani Group — Spain · Liberia
Project developer: local implementation, technology development, carbon finance and partner coordination

Government of Liberia

National WASH Commission — Liberia
Leads the national WASH iMIS and coordinates Liberia's water sector

Carbon Markets Authority — Liberia
Carbon-market authorisation pathway and national carbon registry

Carbon and market partners

CO2balance — UK
Carbon methodology, monitoring design and certification expertise

Martello Partners — UK
Financial advisory and carbon-market relationships

Liberian civil society

Children House — DR Congo · Liberia
Local engagement, community mobilisation and field coordination

United Youth — Liberia
WASH NGO: fieldwork, community engagement and technical scoping

WaterStep app data as of 7 Nov 2026; WaterStep advance-team census, 2026; LWI feasibility study, 2025. The project is registered with the Carbon Markets Authority; Letter of Authorisation pending.









The Liberia field team

From two counties to every water point. One record for each.

- **Repair:** find the fault part by part, fix it, and test the water before calling it safe.
- **Record:** one record per water point in the WaterStep app, feeding the government-led national WASH iMIS.
- **Teach:** caretakers learn to keep their own water point working.
- **Sustain:** verified safe water can earn carbon revenue for upkeep, once certified.

> **The goal is not simply to give communities water today. It is to give them the means to keep it flowing tomorrow.**

One pump. One record. Safe water that lasts.

WaterStep

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Field figures are early results from a team in training. LWI is not yet certified; carbon revenue depends on Gold Standard certification, Liberian authorisation, yearly verification and buyers.