WaterStep



LIBERIA WASH INITIATIVE · THE STORY SO FAR

One pump. One record. Safe water that lasts.

How WaterStep set out to keep Liberia's hand pumps working: why we do this, what the field team found when they opened the pumps, and how the work is set to grow.

READ THE STORY ↓



Filmed in rural Liberia, 2025

01 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.

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

Small faults should stay small.

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

Communities keep the water flowing.

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

02 THE ROAD SO FAR

From broken pumps to a national record.

OUR COMMITMENT

Keep them working

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

2025

Liberia

A feasibility study maps why Liberia's pumps fail. WaterStep films in rural communities.

2026

The census

An advance team counts public water points across Bong and Grand Bassa.

FROM APRIL 2026

Into the field

A Liberian team, in training, opens pumps with the WaterStep app and records every one.

NOW

Scaling up

From two counties to every water point in Liberia.

03 THE PROBLEM

1 in 4

hand pumps across sub-Saharan Africa aren't working at any given time.

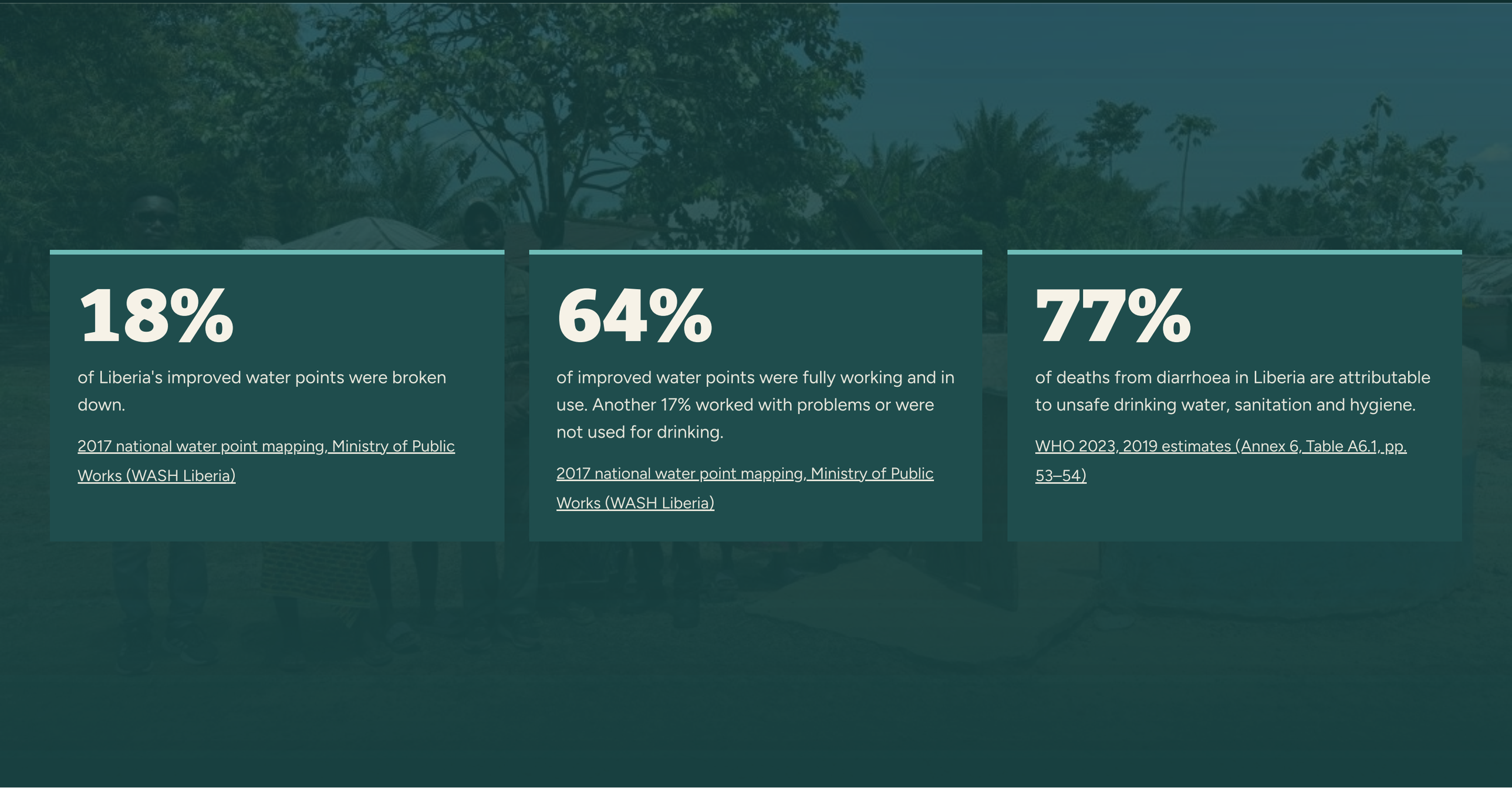
Source: Foster, Furey, Banks & Willetts, *International Journal of Water Resources Development*, 2019, doi:10.1080/07900627.2018.1543117.

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Well drilled. Pump installed. Too often, back to square one.

1. A worn seal or leaking valve stops the pump.
2. Nobody nearby knows how to fix it.
3. There's no budget for repairs.
4. A small issue becomes a big, long-term problem.
5. Someone drills a new well. The cycle starts again.

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18%

of Liberia's improved water points were broken down.

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

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.

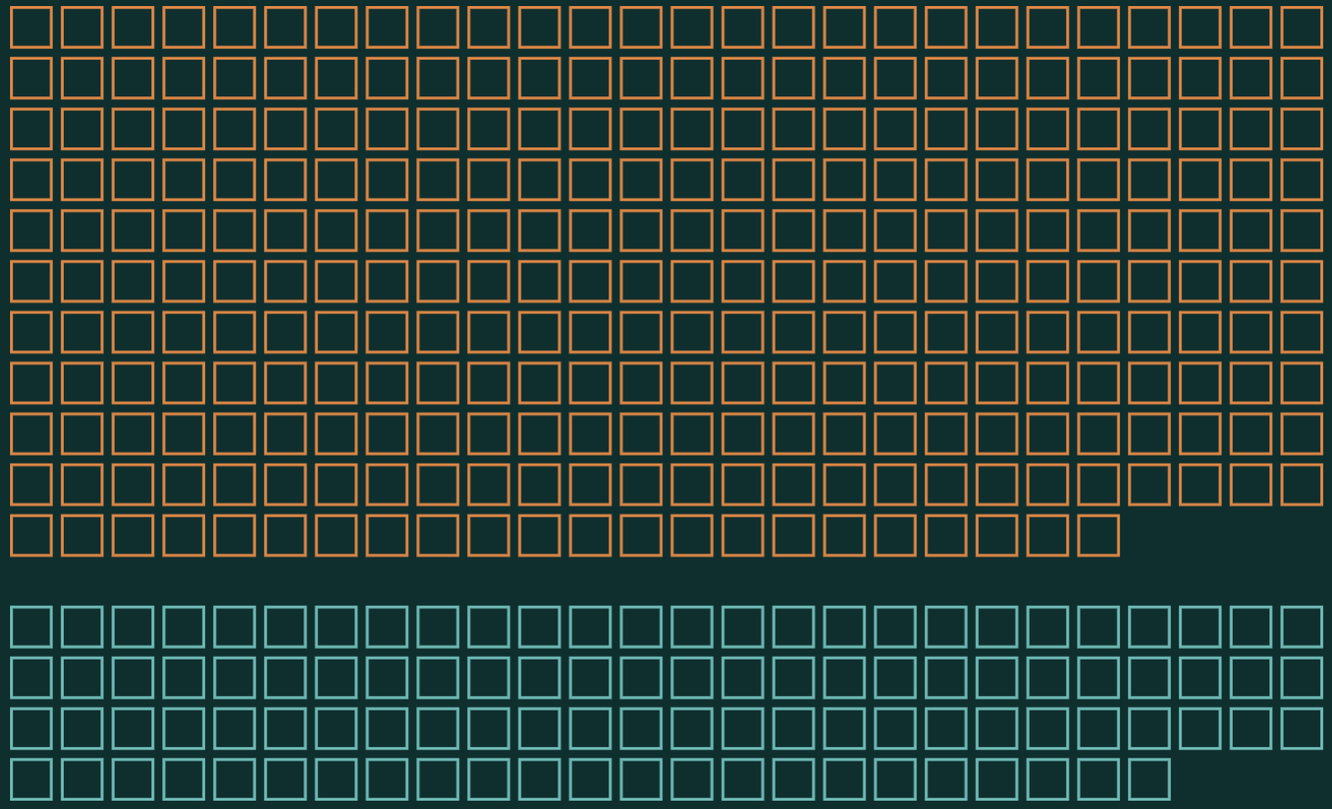
WHO 2023, 2019 estimates (Annex 6, Table A6.1, pp. 53–54)

04 WHAT WE FOUND IN LIBERIA

Most water points were reported broken.

In 64 communities across Bong and Grand Bassa, **282 of 383** public water points, about 74%, were reported broken by the communities themselves.

Far above the national 18% because it counts what communities reported in the areas LWI targets, not a national sample. Our own test on the first visit points the same way.



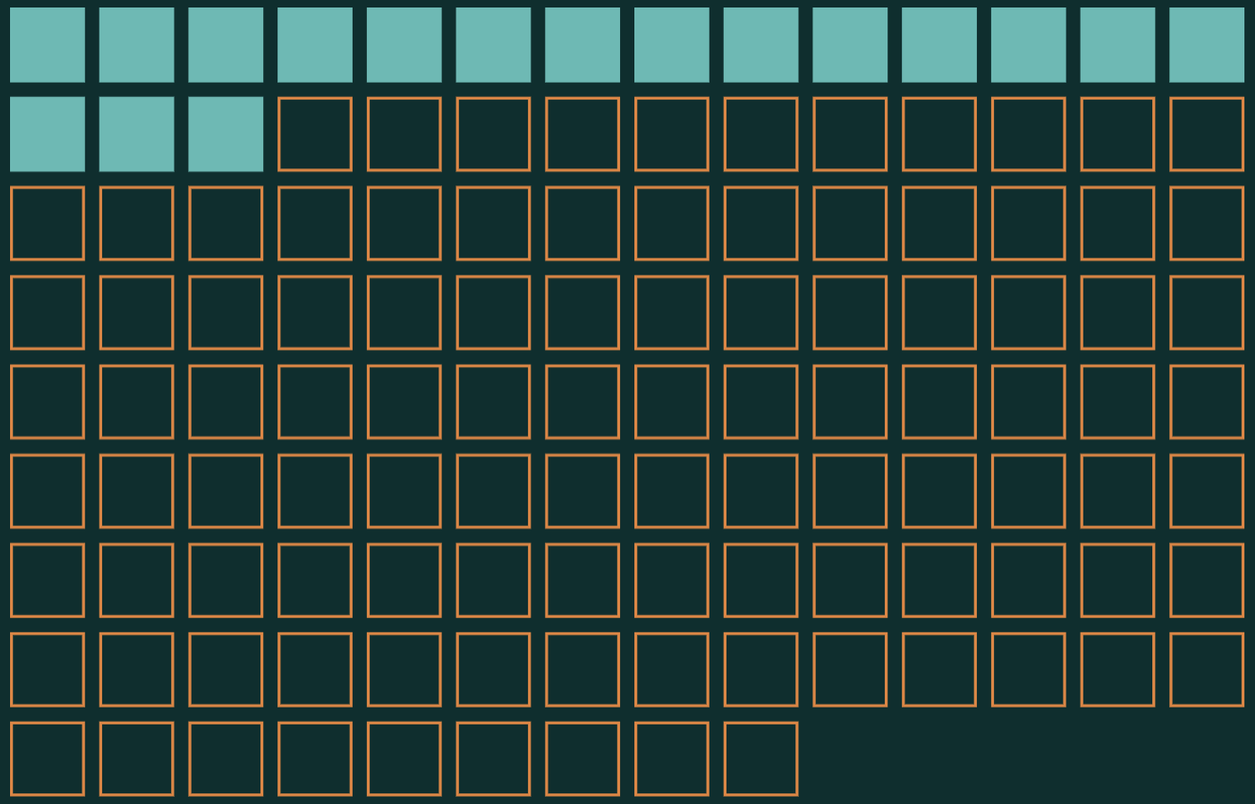
Reported broken · 282 Reported working · 101

Census: WaterStep advance team, 2026 (Bong County, 41 communities; Grand Bassa, 23 communities). Status of public water points as reported by communities.

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17 of 121

water points tested on the first visit actually produced water.



Produced water Did not

Each square is one water point. Live from the WaterStep app, updated 7 November 2026.

05 INSIDE THE PUMP

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

When the team opened the pumps, the same few parts kept coming up: seals, valves and guides that are cheap, light and can be carried to the village.

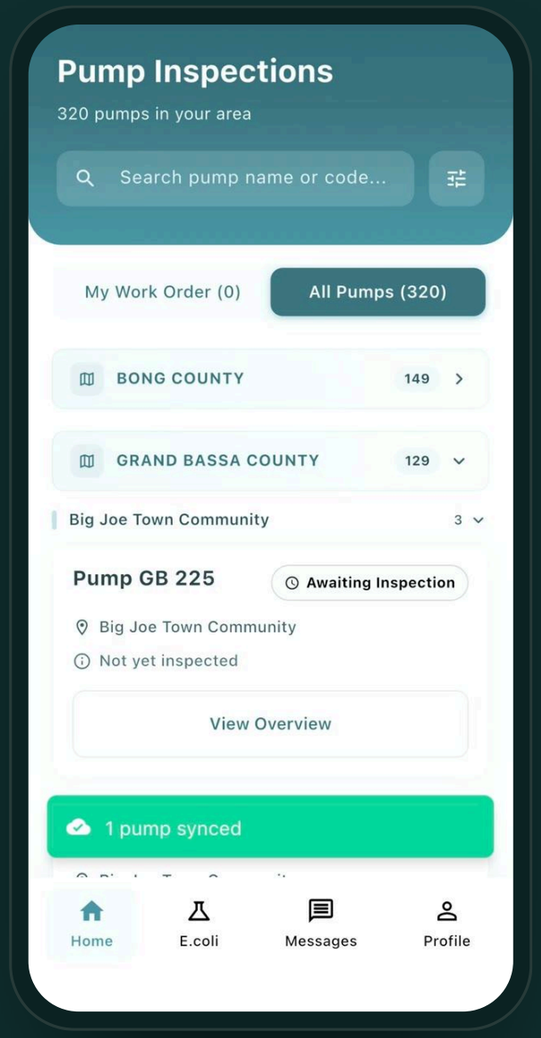


Share of water points opened up where the part was missing or worn and flagged for replacement. Live from the WaterStep app, updated 7 November 2026.

06 WHAT WE BUILT

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, so anyone can check what was found and what was fixed.



3D models and app screens show earlier test data.

01 **Follow the journey**

Guided steps take the inspector from arrival to repair.

02 **Find the fault**

The app ranks the likely problems and shows how to fix each one.

03 **Repair and test**

The pump goes back together with photos at every stage, then is tested again.

04 **Lock the record**

Before and after are saved together. Every later visit adds to the same record.

17
guided steps

4
journeys

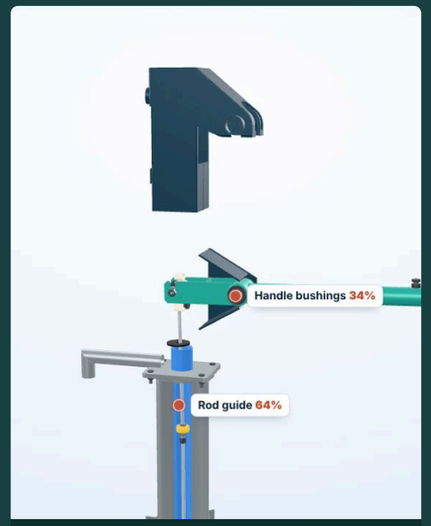
GPS
location captured in the field

0
signal needed

07 HOW COMMUNITIES LEARN

See it, then fix it.

3D models in the app 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.



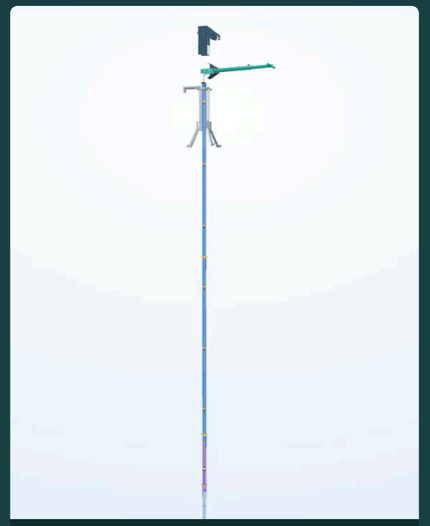
ABOVE GROUND



DOWN THE WELL



VALVE CLOSE-UP



WHOLE PUMP

3D models and app screens show earlier test data.

Learn on screen.

Community members study every part before they open a real pump.

Repair locally.

Worn seals and valves, the most common faults, can be replaced by a trained caretaker in hours.

Skills that stay.

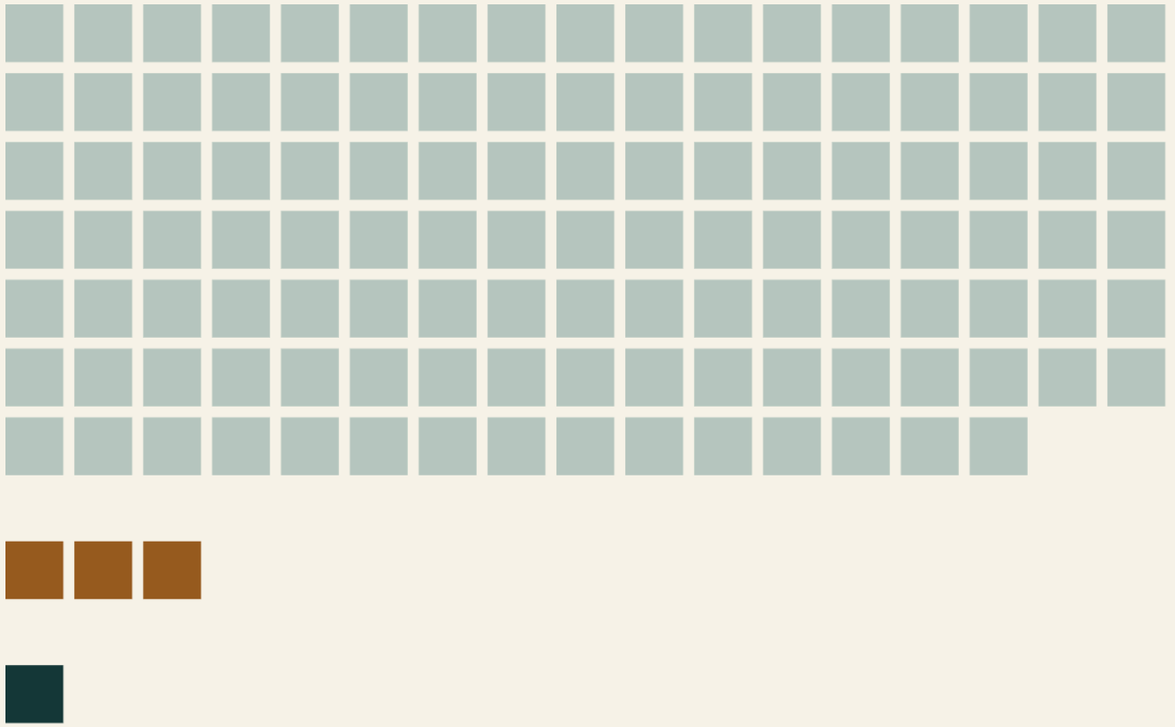
Empowerment is the sustainability plan: the knowledge stays after the project team leaves.

> **Every repair a community can make itself is a water point that does not go back to square one.**

08 WHY WE TEST, NOT JUST ASK

3

water points reported broken were actually working.



Community and test agree	117
Reported broken, but worked	3
Reported working, but failed	1

A test on the spot turns what people remember into a fact anyone can check.

Out of 121 water points where the community's report could be compared with the inspector's test. Live from the WaterStep app, updated 7 November 2026.

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09 REAL-WORLD VALIDATION

A team in training. Every water point recorded.

LIVE FROM THE WATERSTEP APP · 7 NOVEMBER 2026



Each square is a water point 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.

- Produced water
- Did not
- Not tested yet
- Route, day by day

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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LIVE FROM THE WATERSTEP APP · 7 NOVEMBER 2026

152	1,440	27	2
water points inspected	pump parts checked one by one	water points with repairs recorded	counties: Bong and Grand Bassa

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

10 WHAT COMES NEXT

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

The 383 water points counted so far in Bong and Grand Bassa are the first step toward the roughly 890 hand pumps the Liberia WASH Initiative plans to repair. The same approach, one verified record for every water point, is now set to grow into a national system that monitors water points, flags breakdowns and coordinates repairs across Liberia.

Source: Liberia WASH Initiative impact plan, 2026.

- Monitor water infrastructure across Liberia
- Identify breakdowns as they happen
- Coordinate repairs before a pump is abandoned
- Built on the WaterStep app already in use in the field

In October 2026, WaterStep, Kijani Group and Liberia's National WASH Commission signed a memorandum of understanding to develop it.

Watch the report
Spectrum News 1 covers the signing

Read the announcement
Press release, 30 October 2026



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

11 HOW IT LASTS

A working pump can help pay for its own repairs.

Without safe water, families boil what they drink, burning wood and charcoal. A working, tested water point removes that need, and the emissions it avoids can earn carbon credits. That revenue is meant to pay for upkeep, year after year.

1

Repair

Fix the water point and test the water before anyone calls it safe.

WORKING TODAY

2

Record

One record per water point in the WaterStep app, updated on every visit.

WORKING TODAY

3

Verify

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

NEXT STEP

4

Upkeep

Credit revenue pays technicians, spare parts and water testing.

NEXT STEP

The project is not yet certified. Carbon revenue depends on Gold Standard certification, authorisation, yearly verification and buyers.

WaterStep



THE LIBERIA FIELD TEAM

One pump. One record. Safe water that lasts.

Follow the work at waterstep.org.

waterstep.org