

WaterSafe

by FPS

SAFE WATER SAVES LIVES

MSU Food Aid
Sustainable Packaging
Solutions Workshop



MICHIGAN STATE
UNIVERSITY



partners for care



Flexible Packaging Solutions

FPS Flexible Packaging Solutions

- World's largest producer of Flexible Intermediate Bulk Containers (FIBC).
- Global presence in 16 countries, headquartered in Amstelveen, The Netherlands.
- Our purpose is to support the well-being of communities and stakeholders we impact, and improve the sustainability of all of our products and operations.
- Under our Omniversal Life Impact Program (OLIP) we have established a foundation to combat water insecurity.



19
Sales Offices



13
Production Locations



4211
Colleagues



The Largest FIBC
Recycling Hub in
the world



The Achilles' heel of the water insecurity problem is keeping safe water safe

In developing countries, 80% of illnesses are linked to poor water and sanitation

The jerry cans usually used to collect and transport water are causing waterborne illnesses, child mortality and physical strain

It is very costly for a nation to treat waterborne diseases, this accounts for 70% of all health costs

(WorldBank, 2023)



Case study of Kenya:

Kenya has an approximate population of 53.01 million people, and the approximate prevalence rate of diarrhea is 38.8%

In Kenya, 43% of the population has no access to clean water

An estimated 443 million school days are lost annually due to water-related illnesses

The problem of water insecurity in Kenya

- Women and young girls travel long distances to fetch water, amounting to more than 15 hours per week
- Jerry cans and buckets are the commonly used mode of transport and storage of water, originally used for petrol or chemicals, causing contamination of the water
- Jerry cans are extremely difficult to clean.
- New Jerry cans can become a petri dish for contamination within a short space of time
- Water-related diseases remain a leading cause of death
- Spinal and back injuries are common amongst people who carry water on their heads in jerry cans



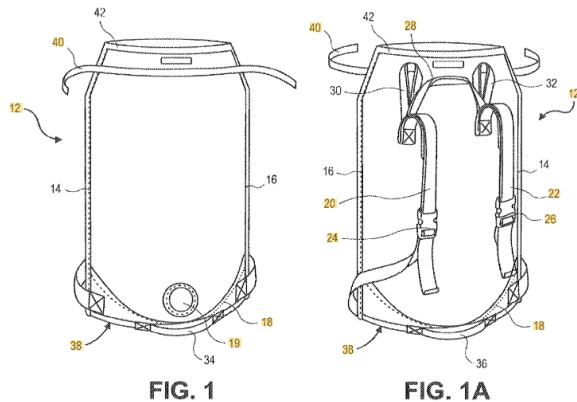
History of failing forward to a workable model

In 2012 - Patented the design of the water backpack and donated it to the public.

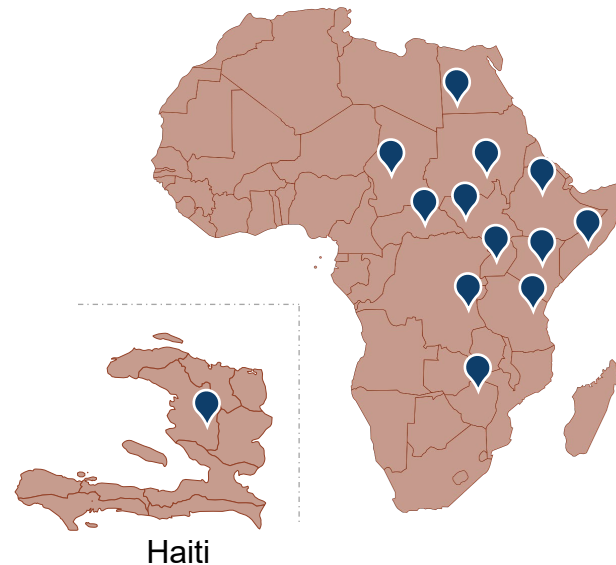
Over the last decade, we have distributed WaterSafe in over a dozen countries.

(Impact difficult to track)

Currently collaborating with Partners for Care, an NGO operating in Kenya that has introduced a successful model for the distribution and traction of the impact to the end user.



Application US14/354,416



partners for care

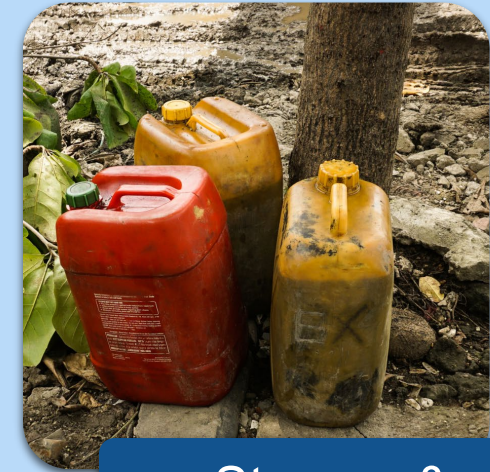
Framework



Access



Transportation



Storage & Dispensation

Keep
safe water safe



Solution

WaterSafe is designed with the purpose of ensuring the safe transportation, storage and dispensing of water.

This product is tailored to meet the needs of both end users and NGOs, while reducing the carbon footprint compared to other often used solutions.

Transport



Store



Dispense



Transport

Easy to carry with equally distributed weight



Storage

Flexible design, easy for logistics



Dispense

Easy to use water



Hygiene

Removable liner that can be solar sanitized



Ergonomic

Conforms to the wearer's body



Sustainable

Reduces CO₂ impact due to the durability (5-year lifespan)

Features



Fold to easily seal and open

Durable but lightweight outer material

Tap for dispensing

Removeable, easy to fill, clean, and disinfect liner with 20-liter volume

Strap for hanging to use as water dispenser

Backpack straps to carry water more ergonomically

Seven WaterSafe packs equal the same volume as one jerry can

Substantially high adoption rate and correct usage for extended period

- 6 months after the distribution of WaterSafe, jerry can usage decreased by 75%
- After switching to WaterSafe, 99.35% used water treatment vs 62% before.
- Water packs replaced all other sources of water storage with 99.35% of households adopting it for water storage after its introduction.

Table 8: Water storage containers before and after introduction of PackH2O

Container	pre-PackH2O	post-PackH2O
PackH2O	0	152
Plastic Jerry Can	84	0
Buckets	30	0
No answer	23	1
Barrel/Super	6	0
Other	10	0
Total	153	153

Source: Behavior change study on the acceptability of PackH2O in a rural community of Embu County, Kenya (2015)

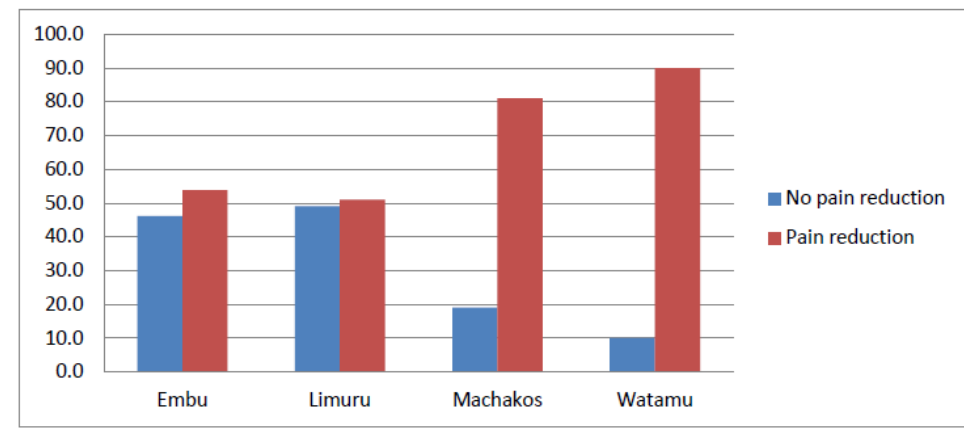
*PackH2O's previous branding of WaterSafe

Safe water saves lives and improves health

Significant reduction in back and spinal pain

- In Machakos and Kilifi County, over 98% of the respondents reported having experienced back and neck pains that they associated with the use of jerry cans before the use of WaterSafe. Of these, over 67% reported a marked reduction of pain since they started using the WaterSafe.

Fig 5: Rates of back and neck pain reduction after use of the water backpacks

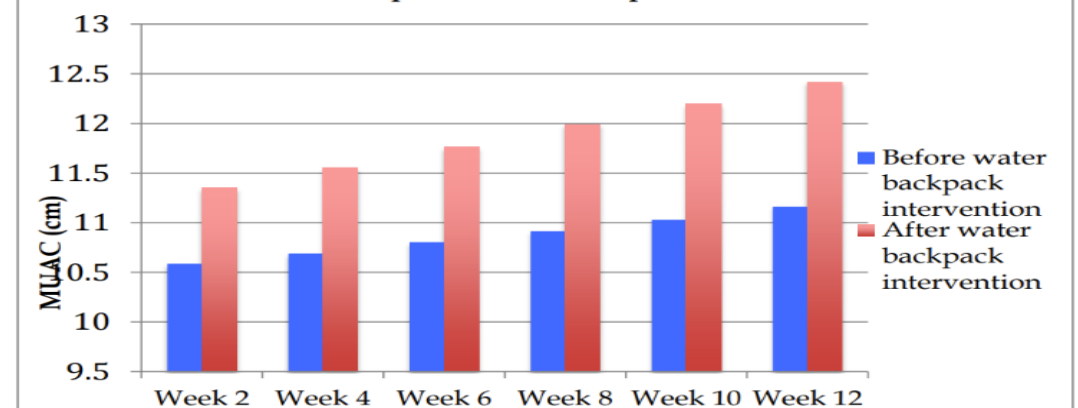


Source: An Evaluation of Water Backpack (PackH2O) Utilization in Kenya, (2016)

Improved health conditions due to a reduction in diseases

- The quality of water affects the recovery time of malnourished children. Despite consuming nutritional supplements, contaminated water counteracts gains and causes waterborne illnesses, most commonly diarrhea. After the introduction of WaterSafe, observations and measurements indicated a 14% increase of the mid-upper arm circumference (MUAC).

Comparison of MUAC against Time during pre-intervention and post intervention period

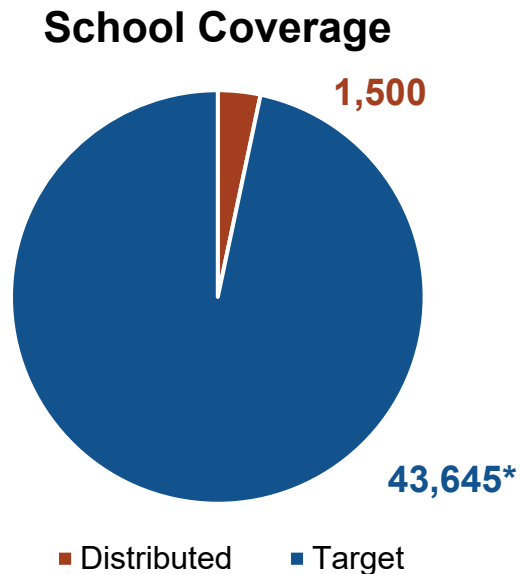


Source: Does the quality of water affect the recovery time of malnourished children enrolled in a nutritional feeding programme? Lessons from Parkishon Region, Marsabit County, Kenya (2018)

Deployment of WaterSafe

- Partners for Care has distributed 65,000 WaterSafe packs
 - Majority were distributed into the households.
 - 1500 out of 43,645 schools in Kenya have received WaterSafe packs.

Our goal is to work with Partners for Care to distribute WaterSafe to every school in Kenya!



Positively impacted:

914,887 lives

Goal impact target:

Minimum 25,000,000 lives

Key Learnings

1. Transporting and dispensing is the Achilles Heel of the global water crisis.
2. The use of new or used jerry cans equates to travelling Petri dishes, which propagate persistent and often deadly gut diseases.
3. Our studies and experience show that nutritional programs are negated when not accompanied by a clean water program.
4. The incredibly difficult task of fetching water to home falls to women and children over 90% of the time.
5. Engaging at the elementary and middle school level with a safe water educational program has a high impact.
6. Cultural acceptance of a backpack is a non-issue to those actually fetching the water.



Partner with us!



The purpose of our Omniversal Life Impact Program (OLIP) is to positively impact the lives of at least 25 million people by 2025

To realize our goals, we are seeking support from partners to help solve the issue of water insecurity.



Q&A session

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www.fps.com/watersafe-by-fps/