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## Case Study: BeFree 3L Water Filters – Emergency Relief Efforts Focussed on Safe Drinking Water and Sanitation

Katadyn BeFree 3L Filters deployed by first responders to the people of Puerto Rico after the category 4 hurricanes “Irma” and “Maria” largely destroyed the regions infrastructure.

### Customer:

WHI - World Hope International

US-based World Hope International is a Christian relief and development organisation working with vulnerable and exploited communities to alleviate poverty, suffering and injustice.

Their objective is to offer humanitarian help to all people, regardless of ethnicity, gender, race or religion. Currently working in 15 of the poorest countries in the world, WHI focuses on the poorest and weakest members of society while putting children first.

Their programs bring tangible and positive change to the individuals they work with, who then go on to transform their communities. In addition to charity, they provide resources and knowledge to the poor, so they can ultimately become agents of change within their communities.



### Country:

Puerto Rico

### Project Description:

In response to the devastating effects of the hurricanes “Irma” and “Maria” in Puerto Rico, World Hope sent relief supplies for distribution to people in an urgent operation to the capital city San Juan. As the fresh water infrastructure was destroyed in the area, the objective of the intervention was, amongst others, to distribute both water filters as well as sanitation kits to the Puerto Ricans. It was vital to the people in need to make contaminated surface water safe to drink and use for sanitation purposes in order to prevent the outbreak of infections and epidemics.

In order to achieve successful prevention of epidemics it is important to provide as many people as possible in a short period of time with safe drinking water. In the area of San Juan, spring and tap water was available to the people, but filtration systems were not in action. Filtration has to happen at peoples home until the local water infrastructure is fully restored and functioning again.



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The filters used have to meet the everyday needs for hydration and sanitation of a family.

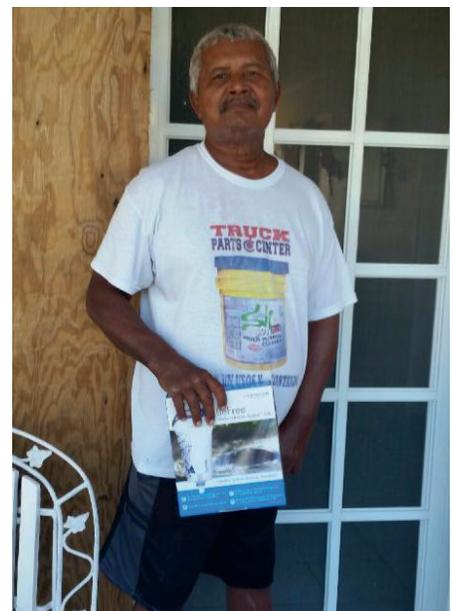
Therefore 1 filter per household had been disseminated together with sanitation kits. As this was meant to be a temporary fix for the people, the filter of choice was the Katadyn BeFree 3L.

## Key requirements to their filter units:

- Provision of safe drinking water as drinking water as well as clean water for sanitation purposes (e.g. basic washing)
- Extra easy and intuitive handling: There is no time to provide user training in such large numbers in short notice. Easy to understand filter manuals in local language are provided though.
- Minimal number of parts/components: Basically no assembly has to be done by the end- user in order to prevent faulty assembly.
- No accessories /no maintenance tools needed. As the Katadyn BeFree 3L doesn't require backflushing, there is no syringe needed for the device. This prevents handling mistakes and increases user friendliness. It also helps to make the product self-explanatory.
- Maximum logistical efficiency: as the filter units were flown into Puerto Rico, it is essential that capacity weight ratio per item is optimised to a practical minimum and that the packing of them is kept as small as possible. The filters themselves must be portable in case people have to fetch their water from further afield sources.
- Off-grid reliability: the filters must be operational without an external power source, as it has to be assumed that power is not available in the disaster area.

## Product Details:

The Product of choice to meet the requirements mentioned above is the Katadyn BeFree 3L. It is the most compact, lightweight and versatile water filter for small groups/families in the Katadyn portfolio. It can be used for 3 different purposes:



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## 1. Fill & drink straight from the filter:

The system provides practically instant safe drinking water to rehydrate if no water infrastructure is available. After drinking, the empty soffflask can be folded up until the next water source is encountered. When weight and pack size are a concern, this option offers the highest flexibility.

## 2. Use as a reservoir & drink later:

The integrated 3L Hydrapak soffflask can be filled up and used as a water reservoir for short-term hydration. 3L of safe drinking water are available instantly to the user, whenever needed.

## 3. Filter & fill additional reservoirs:

With its very simple operation and high flow rate the system operates faster than any pump filter or chemical filtration device. Therefore, it can be used to filter and fill water into larger water containers if safe storage containers are available.



The use of the Katadyn BeFree 3L Water Filter System is very simple and intuitive:

1. Fill up the Waterbag
2. Insert the filter cartridge (Screwtop)
3. Filter straight from the flask by squeezing the water through the filter membrane into the mouthpiece

### Maintenance:

With the EZ-Clean Membrane, field maintenance is very simple and ensures a lifetime of up to 1000L for the system. Just fill the flask with water (also works with contaminated water), fix the filter cartridge and shake the entire system. Alternatively, the filter cartridge can be removed and gently swished in any lake, river or stream. By doing so, any debris is washed off the membranes and the filter is ready to be used again. Backflushing is not necessary.



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The Katadyn BeFree 3L utilizes extra durable hollow fiber membranes, which remove bacteria, protozoa and other disease-causing agents with particles greater than 0.1 microns (pore size: 0.0001mm). The result is safe and clear drinking water.

If in doubt, the user can instantly check whether the system is still functioning by means of a very simple and quick integrity test.

## Summary:

Katadyn is proud to be the chosen supplier to World Hope International for many projects. No matter where and under which conditions, during each project the Katadyn water filters and desalinators have helped World Hope International to fulfill its mission.

## Reference:

John Lyon, CEO World Hope International

"Our mission is to provide help to people in need. It is essential to have the right tools, equipment and suppliers at hand to enable our Disaster Relief Teams to maximise their impact in the field. To be successful in that sense, we absolutely need to have equipment which is 100% reliable and easy to operate. To us, the Katadyn BeFree 3L Water Filter System has proven its suitability as an emergency water filter in Puerto Rico.

## For more information, please contact

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