

UNICEF Innovation Initiative: The burden of transporting, carrying and storing water



Description of the end-user problem:

Water sources should be located at a considerable distance from the community to minimise the risk of contamination by humans and animals, but this means that all water must be carried over long distances.

Current user problem and where it is taking place:

In many developing countries, it is the children and women who transport water for use at home. This can prevent the girls from attending school, and increase the risks of contracting related diseases and rape. The average distance a woman in Africa walks to get water is approximately 3.5 miles (5.5 kilometres). The total water needed per person is between 8–15 litres per day. Thus an average family with 6 members needs 48-90 litres per day fetched from the source. Children, the disabled and the elderly may need smaller or specially designed water carrying containers.

Containers should be clean, hygienic and easy to carry and be appropriate to local needs and habits, in terms of size, shape and design. The current water bags (often referred to as jerry cans) are not meeting this need, since they are designed with handles and are soft, and not easy to carry on the head or back, which is the traditional method in Africa.

Explain how solving this problem will improve life and for whom?

Sufficient quantity of water in the household is essential for proper hygiene. Potable water in the house reduces diarrhoea-related illnesses, cholera, etc. It will furthermore allow girls to attend school and minimise diseases.

Things to consider for water bags

- Affordable material
- Collapsible for logistic purposes
- Rigid for being able to carry on the head or back
- Waterproof
- Unsafe handling and storage of water compounds the problem. Often the water is not contaminated when received, but later in the house hold but dirty hands/ faecal contamination of drinking water, tab touching the ground floor.

Are there any possible drawbacks or considerations to take into account?

Carts, wheel barrows and bicycles are ways that are in use to minimise the burden. However, if the path to the water is rugged, hilly, mountainous, etc then this can make the task difficult. The use of appropriate containers for carrying water in combination with other methods is very useful.

At this time UNICEF does not yet have a website for submissions but you may contact Innovation Officer Diana Velasco with any questions or solutions:

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