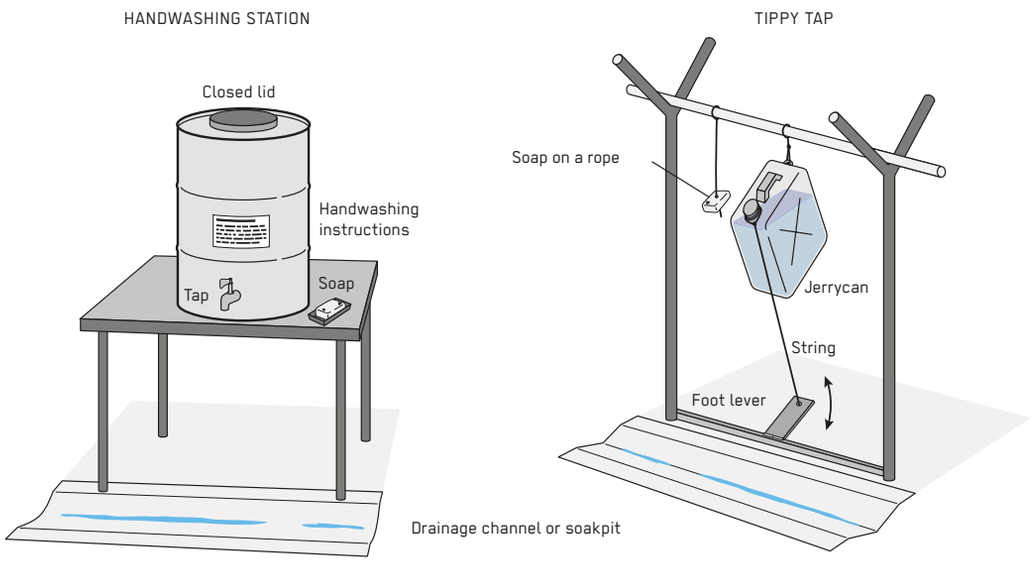
Handwashing Facility

Response Phase	Application Level	Management Level	Objectives / Key Features
** Acute Response ** Stabilisation ** Recovery	** Household ** Neighbourhood ** City	** Household ** Shared * Public	Reduction of public health risks and pathogen transmission
Local Availability	**Technical Complexity**	**Maturity Level**	
*** High	* Low	*** High	



Proper and frequent handwashing with soap is one of the most important measures to prevent the transmission of diarrhoea and respiratory diseases. Handwashing Facilities should be available next to toilets, food preparation areas and other critical locations in households, schools, health care facilities and other institutions and public spaces. When a piped water supply is not available, handwashing stations require constant refilling with water and a supply of soap.

Studies suggest that handwashing with soap reduces the morbidity rate due to diarrhoea and other water-related diseases by 35–45 %. The practise of handwashing must be strongly promoted in any emergency, and users should always have the means to wash their hands with soap and water. Handwashing stations must include a constant source of water and soap. If water and soap are not available, an alcohol-based hand sanitiser or ash may be used as an alternative.

Design Considerations: Handwashing stations need to be within a short radius (< 5 m) of each toilet (regardless if private, shared or public) and in all places where food is prepared or eaten, such as markets, kitchens and eateries. The recommended minimum handwashing water quantity at public toilets is 1–2 L per user per day. Usually around 500 ml is used per handwashing event when water is piped. The taps of Handwashing Facilities as well as the pressure in the pipe define the amount of water used and wasted. Water-saving taps can decrease this to about 100–250 ml. The minimum amount of soap required for personal hygiene including handwashing is 250 g per person per month. In public facilities, a constant supply of soap must be ensured, which are also a good point for distributing soap to the community. Drainage of effluent is required to keep the area around the Handwashing Facility clean, dry and hygienic. Effluent can be captured in a bucket for grey water or can be discharged into open drainage channels or a closed sewer. Where soil conditions permit, greywater can be disposed of on-site (e.g. pre-treated by

a sand and grease trap and disposed in soak pits). Handwashing stations must be inclusive, such that children and people with reduced mobility should be able to reach and use the Handwashing Facilities.

Materials: Handwashing Facilities include taps of different sorts connected to a pipe or a container. When piped water is not available, a standard bucket with a tap and soak away can be used, though re-filling must be assured. Containers need to have lids to protect from contamination. Simple low-cost solutions, like Tippy Taps, consist of a suspended jerrycan that can be tipped with a foot lever to allow water to flow out. Taps should be robust to prevent theft or breakage. Liquid, solid or powder soap can be used, or ash can substitute when soap is not available. Soap might need to be attached to a Handwashing Facility to prevent theft (e.g. soap on a rope). Handwashing Facilities must be robust to prevent theft and vandalism and should, whenever possible, be located in secured areas.

Applicability: During all emergency phases, it is essential that water, soap and the hardware for handwashing are available. In the acute phase, the distribution of soap and water containers, as well as establishing handwashing systems in critical places (e.g. next to toilets) should be prioritised. Furthermore, the practice of handwashing needs to be strongly promoted in any emergency situation **(see X.16)** using multiple communication channels, and users should always have the means to wash their hands with soap. Handwashing promotion is especially important if the affected community is not used to regular handwashing or is traumatised. Five critical times for handwashing with soap should always be promoted: after using the toilet, after cleaning the bottom of a child who has been defecating, before preparing food, before eating food and before and after looking after someone who is ill. During epidemics related to respiratory infections, handwashing is also recommended after coughing and blowing nose.

Operation and Maintenance: In public facilities, water containers must be refilled and the soap constantly restocked. For private households, soap is usually periodically distributed. Drainage channels and soak pits used for effluent disposal must be controlled for clogging, which can be reduced through simple grease and sand traps. Handwashing Facilities and the tanks used for storing water need to be kept clean. In the acute response phase, health workers may need to promote basic hygiene and handwashing **(see X.16)** next to the toilet blocks, in health centres or as a part of other public health support activates. During the stabilisation and recovery phase, more sophisticated behavioural change measures might be required where handwashing is rarely or inconsistently practiced.

Health and Safety: Water quality and the use of soap are important factors affecting the efficacy of handwashing. Studies show that handwashing with contaminated water and soap still reduces the risks of diarrhoea compared to no handwashing at all. Nevertheless, water quality in handwashing devices may be improved by regular cleaning, disinfection and using Safe Water Storage **(H.1)** devices. In health care facilities during disease outbreaks, chlorine is added to the handwashing water in a concentration of up to 0.05 % **(see X.14)**.

Costs: Soap and containers used for handwashing stations are usually cheap and locally available. They should be bought in large quantities at the beginning of an emergency and adapted for handwashing (e.g. installation of taps). Other costs involve personnel for hygiene promotion and the construction of drainage or soak pits.

Social and Environmental Considerations: The promotion of handwashing is crucial during an emergency, though to ensure the efficiency of these promotional activities, Handwashing Facilities first need to be provided that are adapted to local context needs. Promotional messages can include social pressure or emotional or aesthetic appeals. Drivers or barriers for certain behaviours need to be assessed to effectively promote handwashing, such as health risk perceptions, cost-benefit beliefs, emotions, experienced social pressure, abilities, and action and barrier-reduction planning **(see X.16)**. Simple 'nudges', such as the presence of a mirror at the Handwashing Facility or signs pointing to the handwashing device, might be effective to support handwashing behaviour along other behaviour change interventions, though the involvement of local champions and hygiene promoters is key to a successful campaign. The drainage of contaminated greywater generated during handwashing needs to be considered.

Strengths and Weaknesses:

⊕ Provides one of the most effective and low-cost methods to reduce diarrhoeal/respiratory disease outbreaks

⊖ Requires regular container refills when piped water is not available

⊖ If devices use too much water, containers may not be refilled if the water source is far away

⊖ Containers can be used for other purposes

→ **References and further reading material for this technology can be found on page 221**