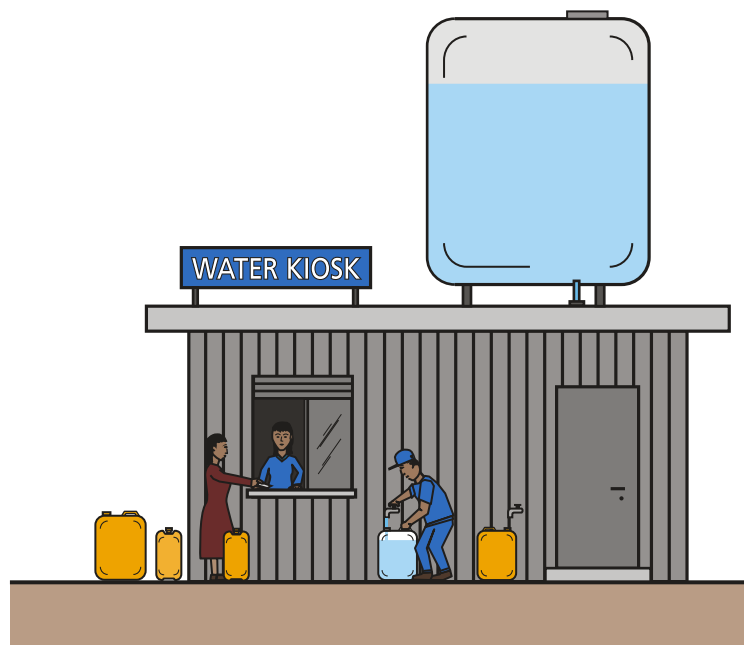


# Water Kiosk

<b>Response Phase</b> * Acute Response ** Stabilisation ** Recovery	<b>Application Level</b> * Household ** Neighbourhood City	<b>Management Level</b> ** Household ** Shared ** Public	<b>Objectives / Key Features</b> Commercial resale of water
<b>Local Availability</b> *** High	<b>Technical Complexity</b> ** Medium	<b>Maturity Level</b> *** High	



Water Kiosks are a type of direct water vendor (see D.2) that is located at a fixed location from which consumers purchase and collect water, as opposed to distributing vendors who deliver to the purchaser. This stationary vending location might also store and/or post-treat the water. Water Kiosks help fill the gap in water provision, allowing water to be accessible to households in areas with insufficient water distribution infrastructure. Where this service already exists, it will most likely to continue to function or can be rebuilt during an emergency. During acute emergencies, they are commonly not operated commercially.

Water Kiosks can be public or communally operated, though are often small-scale private water vending enterprises and represent the main source of water in many cities for households not connected to the network (more than those served by distributing vendors or tankers). Direct vendors can be categorised as standpipe vendors (small entrepreneurs operating standpipes installed by the city water concessionaire), licensed water providers (often small entrepreneurs contracted to resell water

pipled to their homes and who may invest in standpipe installation and network extension) and unlicensed household water resellers (individuals who resell water piped to their homes). The scope for selling water is mainly related to the stabilisation and recovery phase.

**Design Considerations:** Formal Water Kiosks are most often a building of some sort with taps either outside or inside that are operated only by the Kiosk attendants, though some Water Kiosks now have automatic mobile phone or card payment systems (water “ATMs”). Water Kiosks often have a storage tank that covers water sales in case of intermittent supply or water shortage periods, and some Kiosks might incorporate a treatment system. In urban areas, entrepreneurs are emerging that also invest in small, private piped networks that they connect to households not served by the main utility, while others have set up bottling services in addition to treatment. Kiosks are also sometimes used by operators for other commercial activities (e.g. selling groceries), which makes the business more profitable.

Where they exist, Water Kiosks perform an important role

in water distribution. Where possible, an emergency response strategy should work together with this existing network to restore livelihoods and increase speed of water provision to as many people as possible (see X.17), but the success of this may depend on the legal framework for water vending (in some cases it is not legally recognised). Regardless, a key aspect in an emergency will be to ensure water quality through chlorination at the source, monitoring chlorine levels at household level and getting water sources back online as quickly as possible. In some countries, it is also possible to shower with water provided by Water Kiosks.

**Materials:** Materials include the building and taps, as well as sometimes a storage and treatment facility.

**Applicability:** In the acute response phase, water vendors themselves could be affected by the emergency, and the Water Kiosks or source they rely on may have been damaged, though it is likely that services will resume at some point during an emergency. The demand for water vending of various types is more likely to occur after an emergency, as the number of people without a piped water connection may increase due to migration into urban areas. There may also be a decrease in functionality of existing water networks because of under-investment in infrastructure during the emergency or when pipes are damaged by a natural disaster.

**Operation and Maintenance:** The O&M of Water Kiosks is considerable due to high usage. Frequent routine maintenance is required, so there must be a clear understanding of who is responsible and who should pay. In an emergency, the water supply should have residual chlorine to reduce recontamination, and water should be continuously monitored at the household level via random checks. The occasional cleaning of water vendor storage tanks is encouraged during diarrhoea outbreaks to ensure that containers are not the source of recontamination. O&M of Water Kiosks could also just mean the upkeep of the building and taps. For Kiosks that involve storage, treatment or water bottling and distribution services, a higher level of skills will be required. Since the responsibility for O&M lies with the Kiosk operator and because Kiosks are most often run as private enterprises, they generally remain functional. This is one of the reasons why these types of Kiosks have been promoted by water utility companies in preference to unmanned public standpipes, as the risk of damage is reduced, while making fee collection easier.

**Health and Safety:** Water from direct vendors can be of good quality if it is drawn from the main water network. Water quality will still depend on the residual chlorine concentration, state of water storage facility, storage time, effectiveness of treatment process (where used) and water handling practices at the Water Kiosk. In an

emergency where water vendors are operational, ensuring water quality through adequate Chlorination dosing and monitoring procedures (see T.6, T.7) is essential.

**Costs:** Water from Kiosks is sold at either a flat monthly rate or per Water Container (D.1), although occasionally it is distributed for free. Water sold by formal or informal Kiosks tends to be around three to four times more expensive per volume compared to that from piped connections. However, it is cheaper than that sold by distributing vendors (about eight to ten times the cost). The high price markup is partly because the cost of bulk water supply is so low that there are no currency units small enough to pay for small containers of water. Usually, therefore, the poorest pay the most for water. In some cases, though, a deliberate government strategy can help regulate the price of water sold at Kiosks in low-income areas to make it the same price as that from piped connections. Here the cost might be cross subsidised from the sale of water to individual households and commercial connections. Since direct water vendors already have a water connection while some also invest in treatment and distribution, overall, they tend to be better off compared to distributing vendors.

**Social and Environmental Considerations:** Water Kiosks are usually well accepted, as they are a service that fills the gap where public infrastructure and services are insufficient, though this may not be the case where contaminated sources are readily available and where people do not understand why they should pay for higher quality water from a vendor. Users tend to buy water from Kiosks mostly out of convenience. They are sometimes closer (a benefit in areas of high crime where going out at night is dangerous), can have shorter queues than public standpipes, have more convenient hours of operation, can have a better water pressure level and sometimes provide more flexible payment mechanisms.

**Strengths and Weaknesses:**

- ⊕ Is financially sustainable
- ⊕ Households can purchase small quantities at flexible prices
- ⊕ Has more reliable water supply compared to piped network because of localised storage and treatment (in case of intermittent supply)
- ⊕ Has better management of water point compared to unmanned public water points
- ⊖ Available only for those who can afford it
- ⊖ Has higher consumer costs compared to water obtained through household piped connections
- ⊖ Lacks control over water quality and price
- ⊖ Water quality can deteriorate during storage

→ **References and further reading material for this technology can be found on page 220**