

WHO GUIDANCE FOR CLIMATE-RESILIENT AND ENVIRONMENTALLY SUSTAINABLE HEALTH CARE FACILITIES

Interventions listed below can be rated as follows:

	Indicates either low performance, or unavailable activity, or unable to complete.
	Indicates either medium performance, or activity in progress, or incomplete.
	Indicates either high performance or completed activity, or achieved and tested.

The complete **WHO guidance for climate resilient and environmentally sustainable health care facilities**, along with other intervention tables, are available in English, French and Spanish on the WHO website at who.int/publications/i/item/9789240012226.

Water, sanitation and health care waste interventions – climate resilience

Interventions on climate resilience

Monitoring and assessment: Information regarding water, sanitation, chemical and health care waste management considers climate resilience and environmental sustainability for promoting action.

Water, sanitation and health care waste – climate resilience

Interventions (level of achievement)	Action level			Observations
	<div style="display: flex; align-items: center;"> <div style="width: 15px; height: 15px; background-color: red; margin-right: 5px;"></div> <div style="width: 15px; height: 15px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 15px; height: 15px; background-color: green;"></div> </div>			
<div style="background-color: red; width: 15px; height: 15px; display: inline-block; margin-right: 5px;"></div> Low: unavailable, unable <div style="background-color: yellow; width: 15px; height: 15px; display: inline-block; margin-right: 5px;"></div> Medium: in progress, incomplete <div style="background-color: green; width: 15px; height: 15px; display: inline-block; margin-right: 5px;"></div> High: completed, achieved				
Verified safety conditions and proper functioning of all elements of the water distribution system, including storage tanks, valves, pipes and connections, and water disinfection*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water pipe connections checked regularly for signs of deterioration*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Developed a monitoring mechanism to verify compliance with national standards, including the operation and maintenance of water and sanitation facilities*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Developed climate resilient water safety plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water quality supply monitored regularly, including in emergencies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water supply monitored regularly during emergencies to ensure adequate access throughout the duration of the event, ensuring that protocols are in place to guide rationing if required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Identifying current or historical climate related hazardous events known to pose significant health risks to the collection, treatment, reuse and/or disposal of sanitation wastes (such as overflowing of pit latrines contaminating drinking water sources)*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Monitoring of sewer overflows to fix pumps in advance of flood seasons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Risk management: Strengthened capacity of health care facilities to manage water, sanitation, chemicals and health care waste risks to workers, patients and served communities, by including assessments of climate resilience and environmental sustainability in responding to hazards and identifying and reducing exposures and vulnerabilities.




Water, sanitation and health care waste – climate resilience

Interventions (level of achievement)	Action level			Observations
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<div><input type="checkbox"/> Low: unavailable, unable</div> <div><input type="checkbox"/> Medium: in progress, incomplete</div> <div><input type="checkbox"/> High: completed, achieved</div>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Developed a long-term drought management plan, including the identification of available alternative safe water sources*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Health care facility conserves and manages water to reduce water usage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water services not affected by seasonality or climate change related weather extremes*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
WASH climate risk management plan implemented*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Improved training and support to health workforce on how and when to deliver water messaging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Safe water storage available, avoiding mosquito breeding sites*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water is not contaminated in the health care setting during storage, distribution and handling*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Kitchens have adequate supplies of clean potable water*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water storage tanks have appropriate covers to prevent access or contamination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Non-return valves on water supply pipes installed to prevent back flows*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water storage in the health care facility sufficient to meet the needs of the facility in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

case of an extreme weather event*				
Storm water safely managed (avoiding standing water near the facility or affecting nearby households)*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Health care facility drinking water treated with a residual disinfectant to ensure microbial safety up to the point of consumption or use, especially after a flood related disaster	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Water storage tanks not located in areas susceptible to flooding, reducing the risk of contamination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Plastic water storage tanks supported and anchored to resist strong winds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Natural floodwater infiltration in place to reduce risk of facility flooding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Assessments and mapping of climate change risks to the sanitation infrastructure of health care facilities in place to identify where services could be disrupted from floods, water scarcity, landslides, sea-level rise*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Planned schedule for emptying latrines in advance of flood seasons to avoid overflows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Installation of sealed covers for septic tanks and non-return valves on pipes to prevent back flows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Vents on sewers and septic tanks are above expected flood lines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Waste issues resulting from climate related hazards assessed to establish safe procedures and specialized treatment, when needed*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Health care waste transport (including health care facility hazardous waste) properly managed in case of extreme weather events*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Health and safety regulation: Water, sanitation, chemical and health care waste regulations are implemented taking into consideration climate variability and change, and environmental sustainability.

Water, sanitation, chemical safety and health care waste – climate resilience

Interventions (level of achievement)	Action level			Observations
	 Low: unavailable, unable	 Medium: in progress, incomplete	 High: completed, achieved	
Water of appropriate quality supplied for medical activities as well as for vulnerable patients (certain procedures should meet strict criteria and additional treatment or source, concerning microbial and chemical contaminants, including cyanobacterial toxins, and chlorine and aluminum which are commonly used in drinking water treatment)*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Rainwater harvesting (with safe storage) installed, in places where rainfall is sufficient and regular or when possible to collect, and regularly inspected for damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Collaboration with public health management or other responsible sector to reduce vector breeding sites (such as pools of water) on facility property and surrounding areas*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
No possibility that health care facility wastewater disposal contaminates local serviceable drinking water *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Health care facility able to provide clean water for patients and the health workforce during climate related disasters *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Readily available disaster response and recovery plan for the water system with adequate supplies (such as chlorine, filters or other water treatment technology, rapid water testing kit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Long term water collection system in place to ensure water access during extreme climate events (such as capturing rain during the monsoon season and storing water in tanks for use during the dry season)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ensured effective and timely delivery of safe water during emergencies over the short- and long-term*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Improved storage areas for storing extra waste generated through higher demands on health care facilities (such as in outbreaks or impacts from climate related events)*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Waste pits are built to withstand climate events and emergencies*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Health care facility waste disposal is safe during climate-related emergencies or disasters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sanitation technologies designed to be more resistant to climate hazards and able to operate under a range of climate conditions, ensuring that failure in one part of the service chain does not cause the entire service to fail*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

* Actions that need the support of local or national governments, or of other sectors