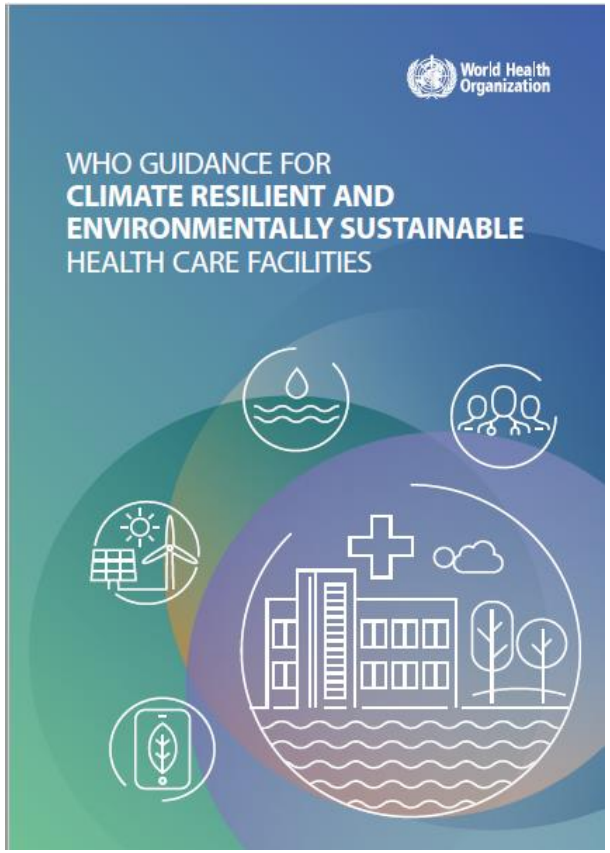
Climate resilient and environmentally sustainable health systems: special focus on health care facilities

World Health Organization

WHO Guidance on climate-resilient and environmentally sustainable health care facilities



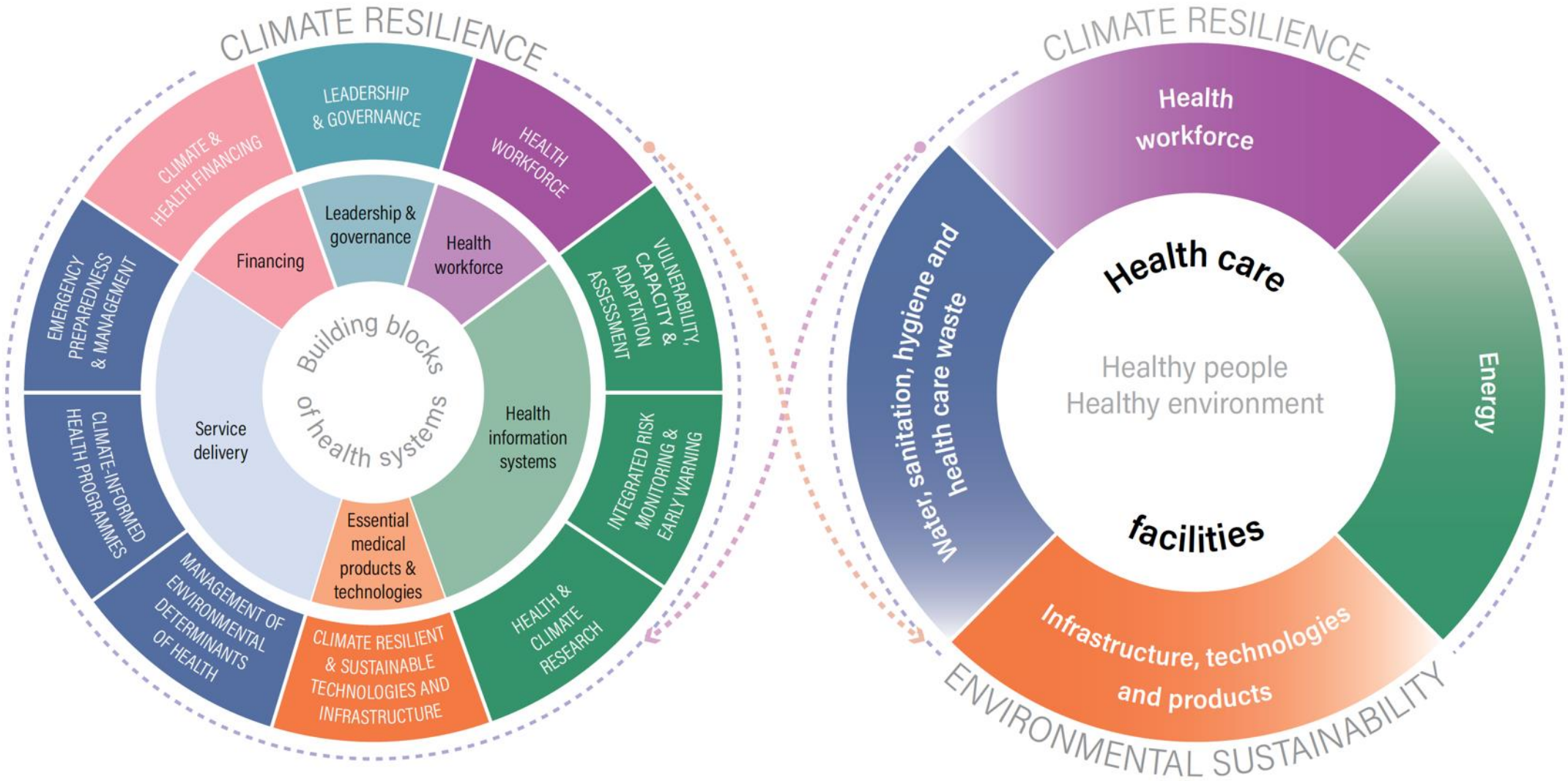
GOALS

To increase the climate resilience of health care facilities to protect and improve the health of their communities in an unstable and changing climate, while optimizing the use of resources and minimizing the release of wastes by becoming environmentally sustainable.

OBJECTIVES

- Guide professionals working in health care settings to understand and effectively prepare for the additional health risks posed by climate change.
- Monitor, anticipate, manage and adapt to the health risks associated with climate change.
- Guide health care facility officials to work with health determining sectors (including water and sanitation, energy, transportation, food, urban planning, environment).
- Provide tools to assist health care facility officials assess their resilience to climate change threats, and their environmental sustainability.
- Promote actions to ensure that health care facilities are constantly and increasingly strengthened and continue to be efficient and responsive to improve health and contribute to reducing inequities and vulnerability within their local settings.

Climate resilience and environmental sustainability in health care facilities



Four fundamental requirements for providing safe and quality care

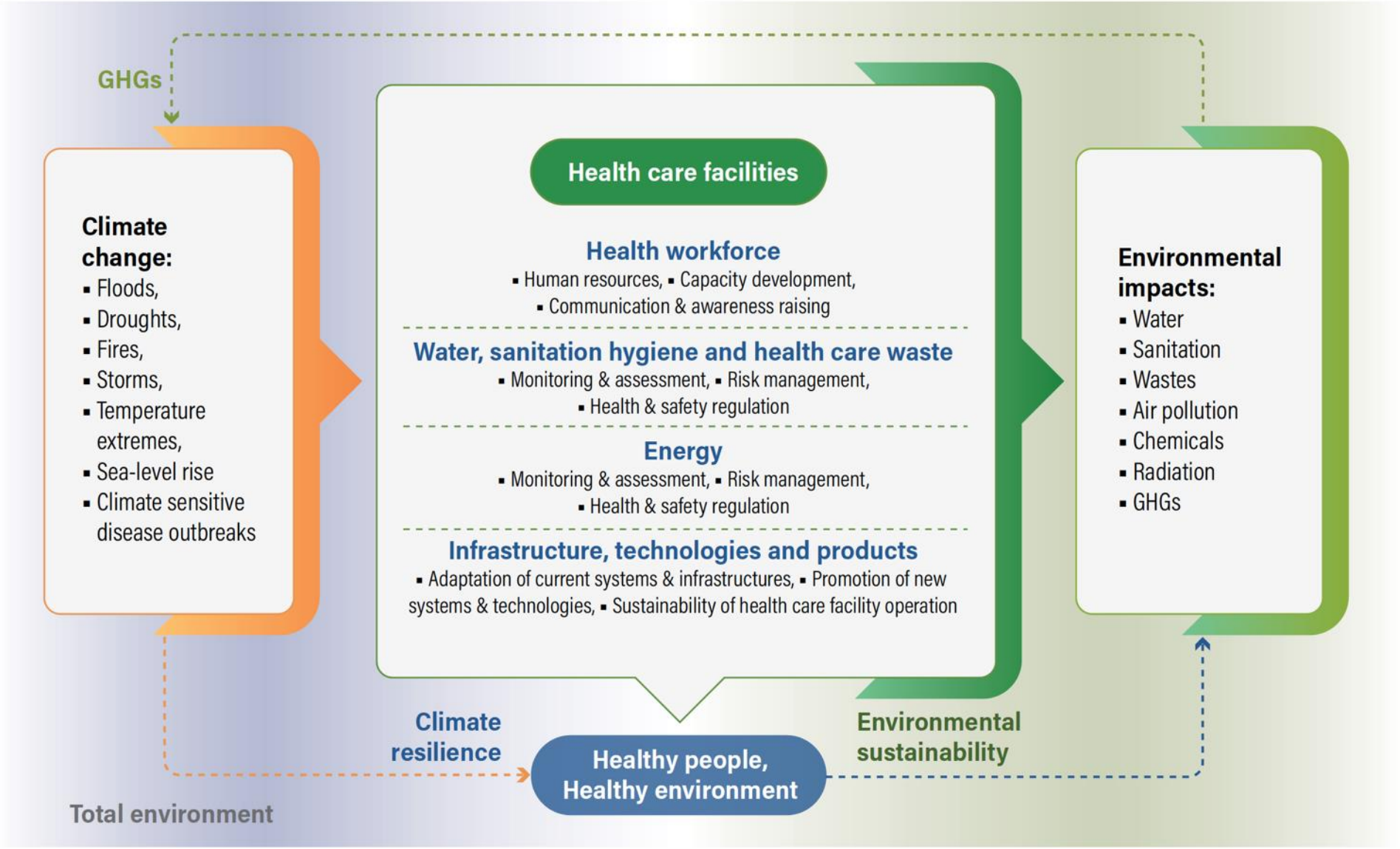
HEALTH WORKFORCE:
adequate numbers of skilled human resources with decent working conditions, empowered and informed to respond to these environmental challenges.

WATER, SANITATION, HYGIENE AND HEALTH CARE WASTE MANAGEMENT:
sustainable and safe management of water, sanitation and health care waste services.

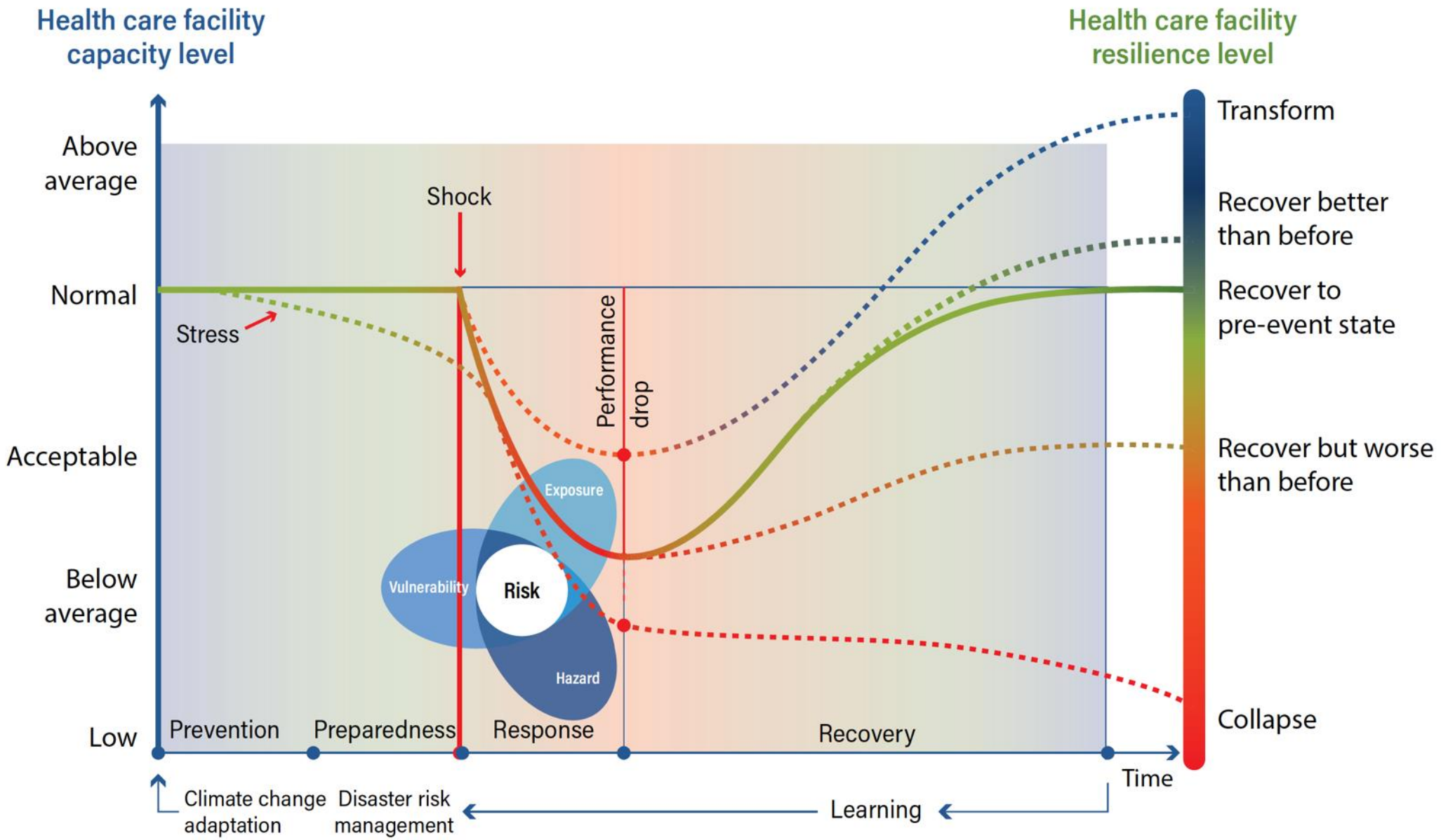
ENERGY:
sustainable energy services.

INFRASTRUCTURE, TECHNOLOGIES AND PRODUCTS:
appropriate infrastructure, technologies, products and processes, including all the operations that allow for the efficient functioning of the health care facility.

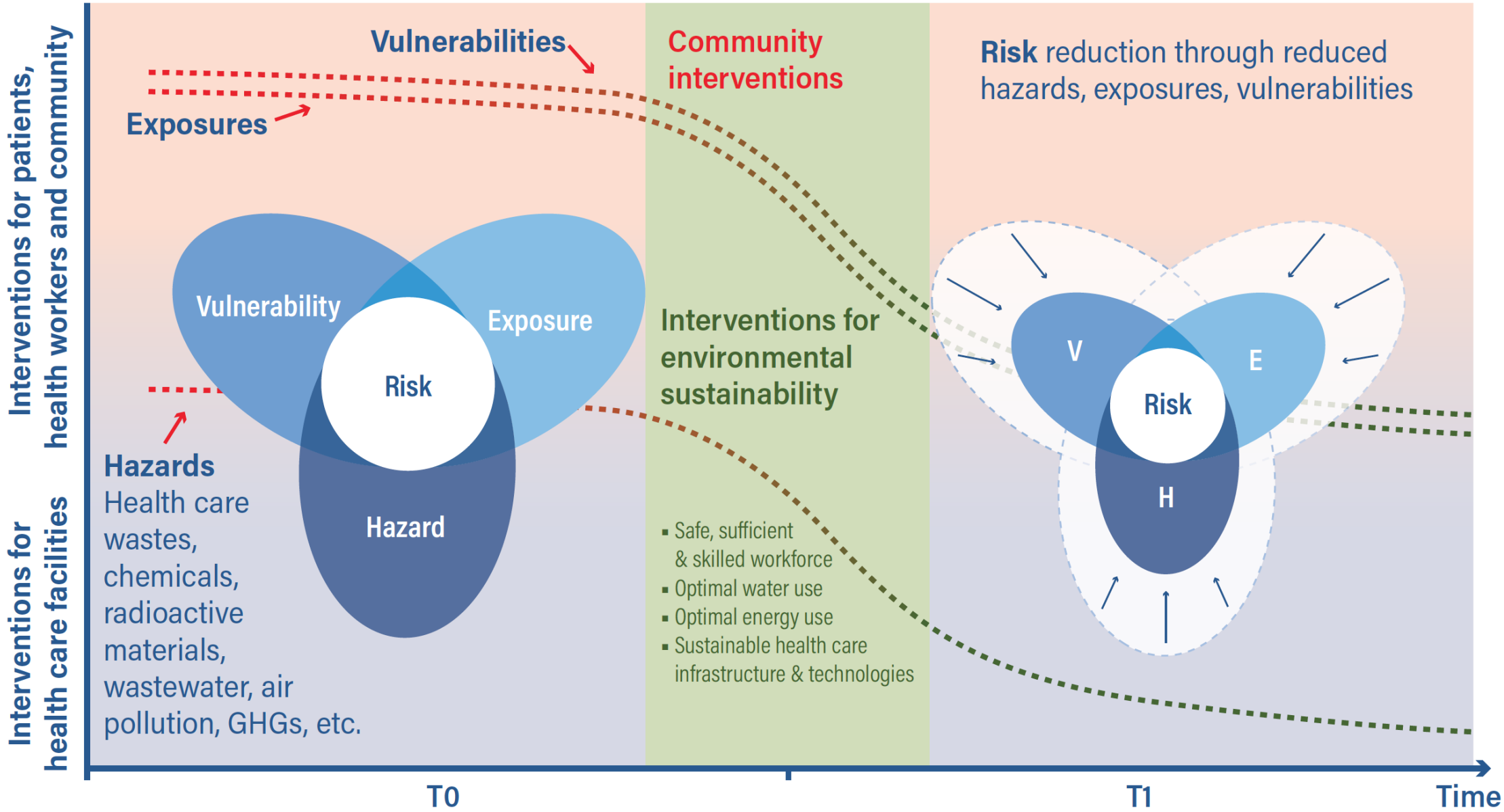
Framework for building climate resilient and environmentally sustainable health care facilities



Climate resilience in health care facilities



Risk Reduction in health care facilities



Example 1: HEALTH WORKFORCE OBJECTIVES

Health workers have a key role in building climate resilience and environmental sustainability of health care facilities. Because building climate resilience and environmental sustainability are relatively new approaches for health workers, building awareness, training and empowering health workers are key requirements for the successful implementation of interventions.

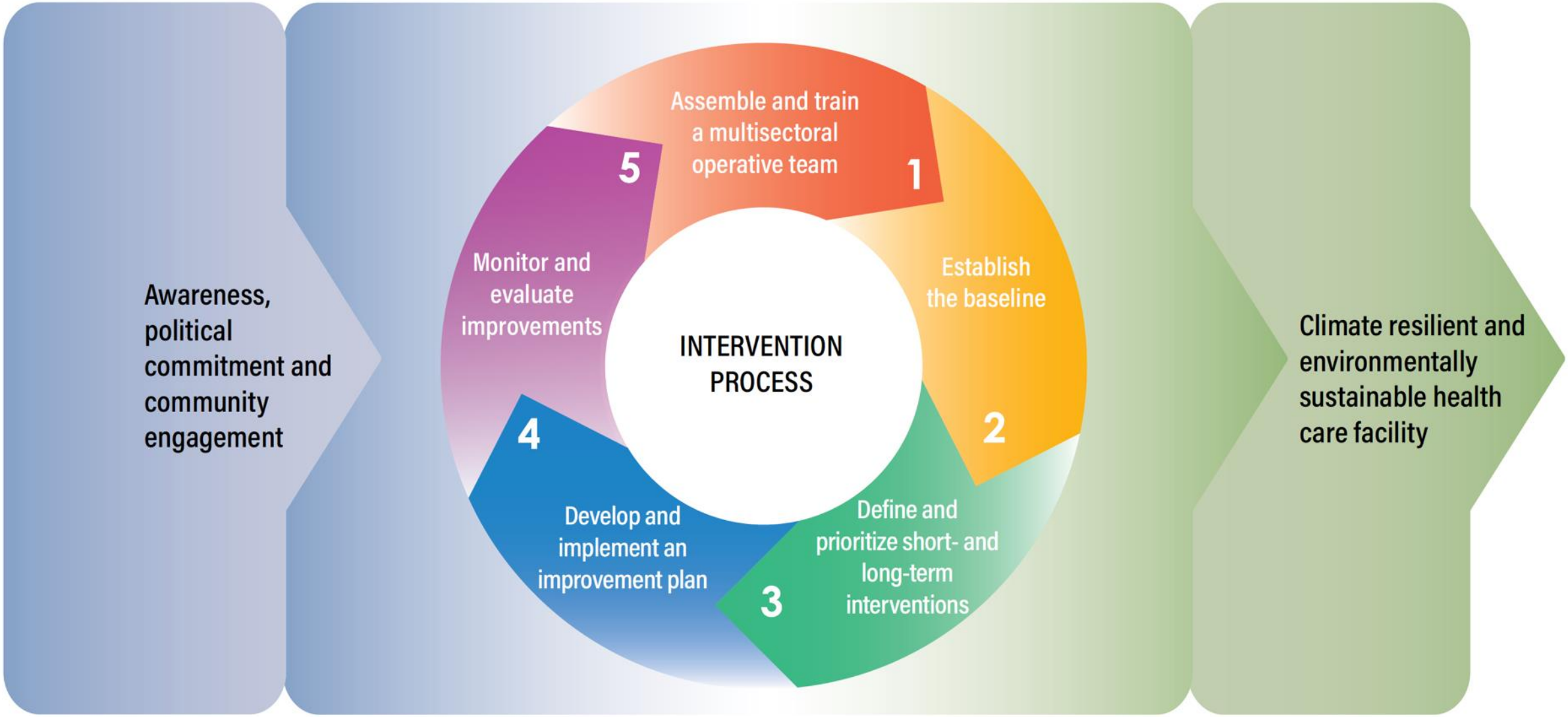
OBJECTIVES FOR THE IMPLEMENTATION OF THIS COMPONENT

Human resources: Health care facilities having sufficient number of health workers with healthy and safe working conditions, capacity to deal with health risks from climate change, as well as the awareness and empowerment to ensure environmentally sustainable actions.

Capacity development: Training, information and knowledge management targeted at health care workers to respond to climate risks and minimize environmental threats resulting from the operation of the health care facility.

Communication and awareness raising: Communicate, coordinate and increase awareness related to climate resilience and environmental sustainability among health workers, patients, visitors, target communities, and with other sectors.

Framework & process for action: *forthcoming tools to establish baselines (i.e. vulnerability of HCFs and tool to assess carbon/env footprint)*



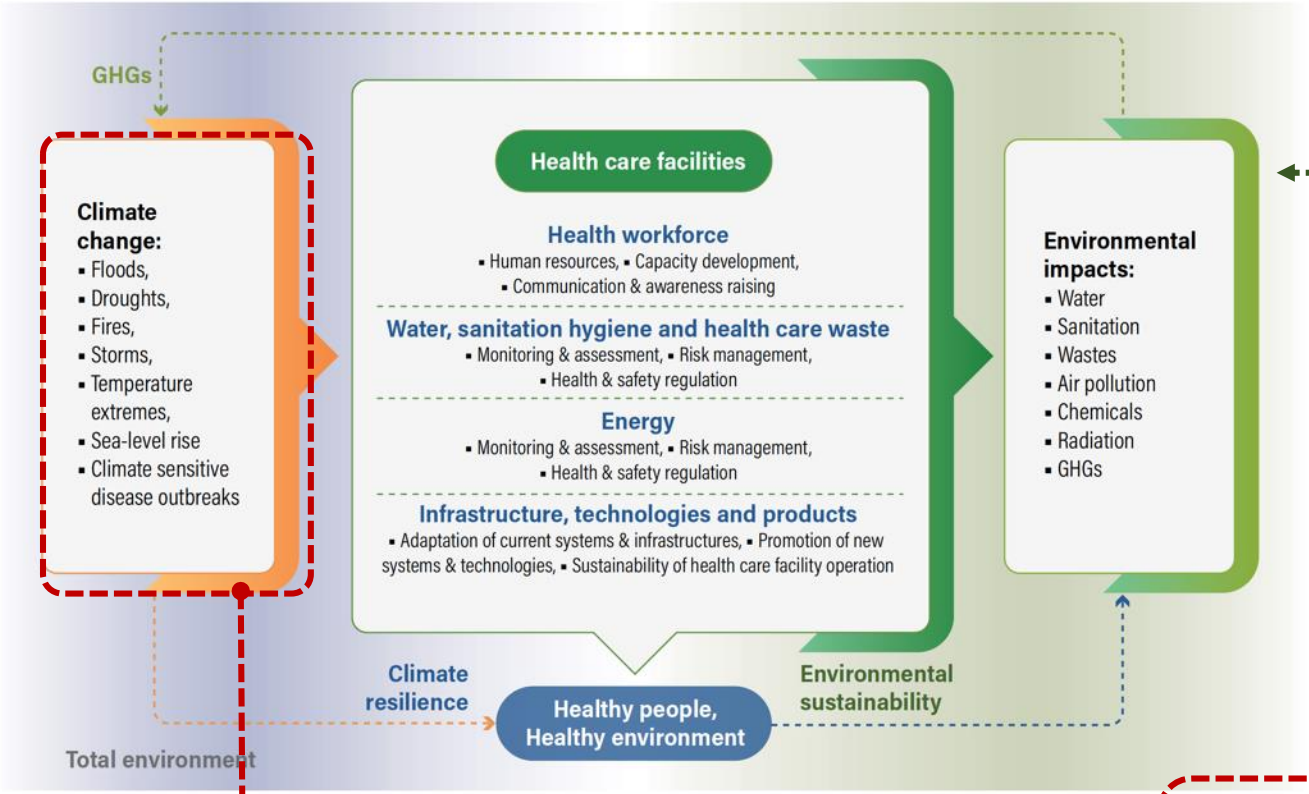
Example 3: INTERVENTIONS

(Water, sanitation and health care waste – climate resilience)

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

(Energy – environmental sustainability)

Interventions (level of achievement) **Low, unavailable, unable** **Medium, in progress, incomplete** **High, completed, achieved**	**Action level**			**Observations**
Prioritized energy sources and saving measures which are least costly to introduce and/or those which would bring the biggest saving	☐	☐	☐	
Installed energy-efficient lighting (such as light emitting diode (LED))	☐	☐	☐	
Natural light used wherever possible	☐	☐	☐	
Opening windows (with installed mosquito nets where required) and making use of natural air flow and light	☐	☐	☐	
Added occupancy sensor switches for lighting in frequently unoccupied spaces	☐	☐	☐	
Replaced older air conditioners, refrigerators and other appliances and medical equipment with energy efficient models	☐	☐	☐	
Improved energy efficiency of the health care facility vehicles fleet, and encouraging staff, patients and visitors to walk or use car pools, public transport, or bicycles whenever possible*	☐	☐	☐	
Health care facility fossil fuel consumption reduced by use of renewable energy sources, including solar (photovoltaic) power, wind power, hydro power and biofuels*	☐	☐	☐	

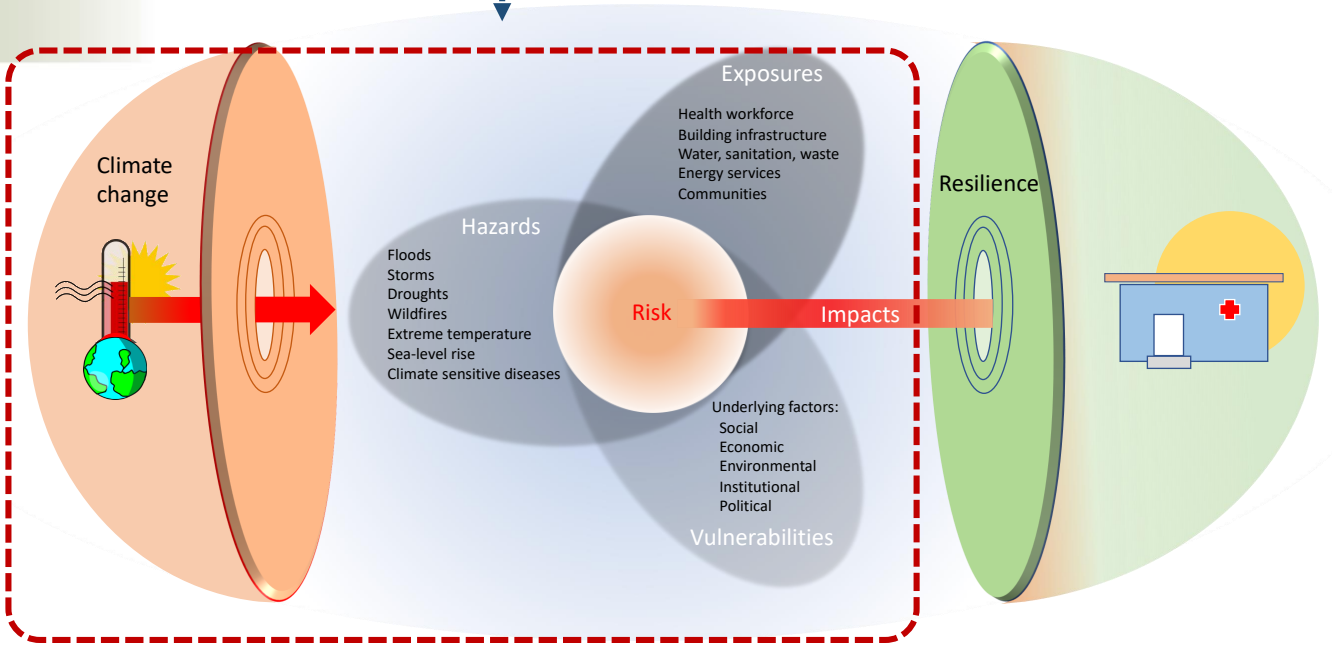


Framework for climate resilient and environmentally sustainable health care facilities

Proposes interventions for climate resilience and environmental sustainability

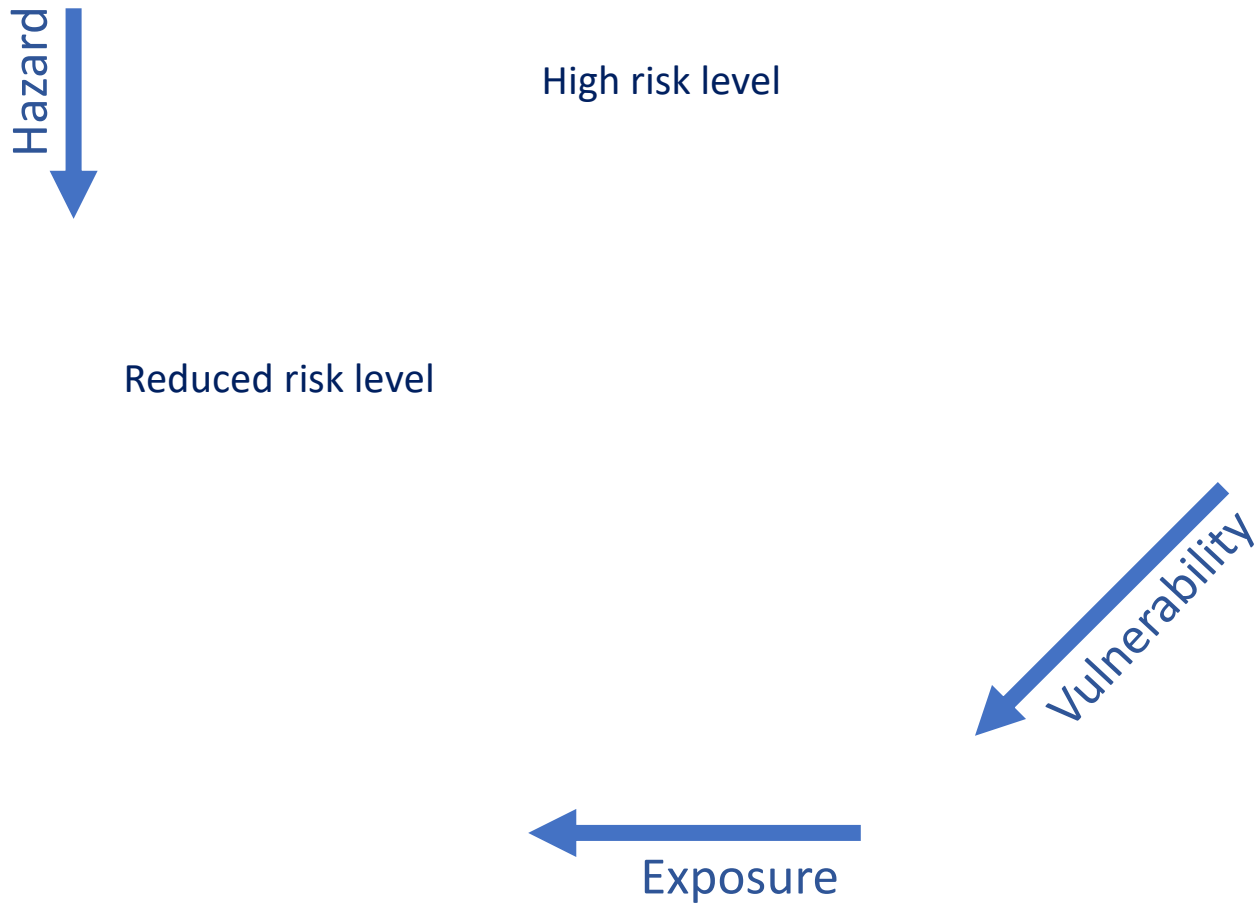
Framework to assess climate change impacts and vulnerabilities in health care facilities

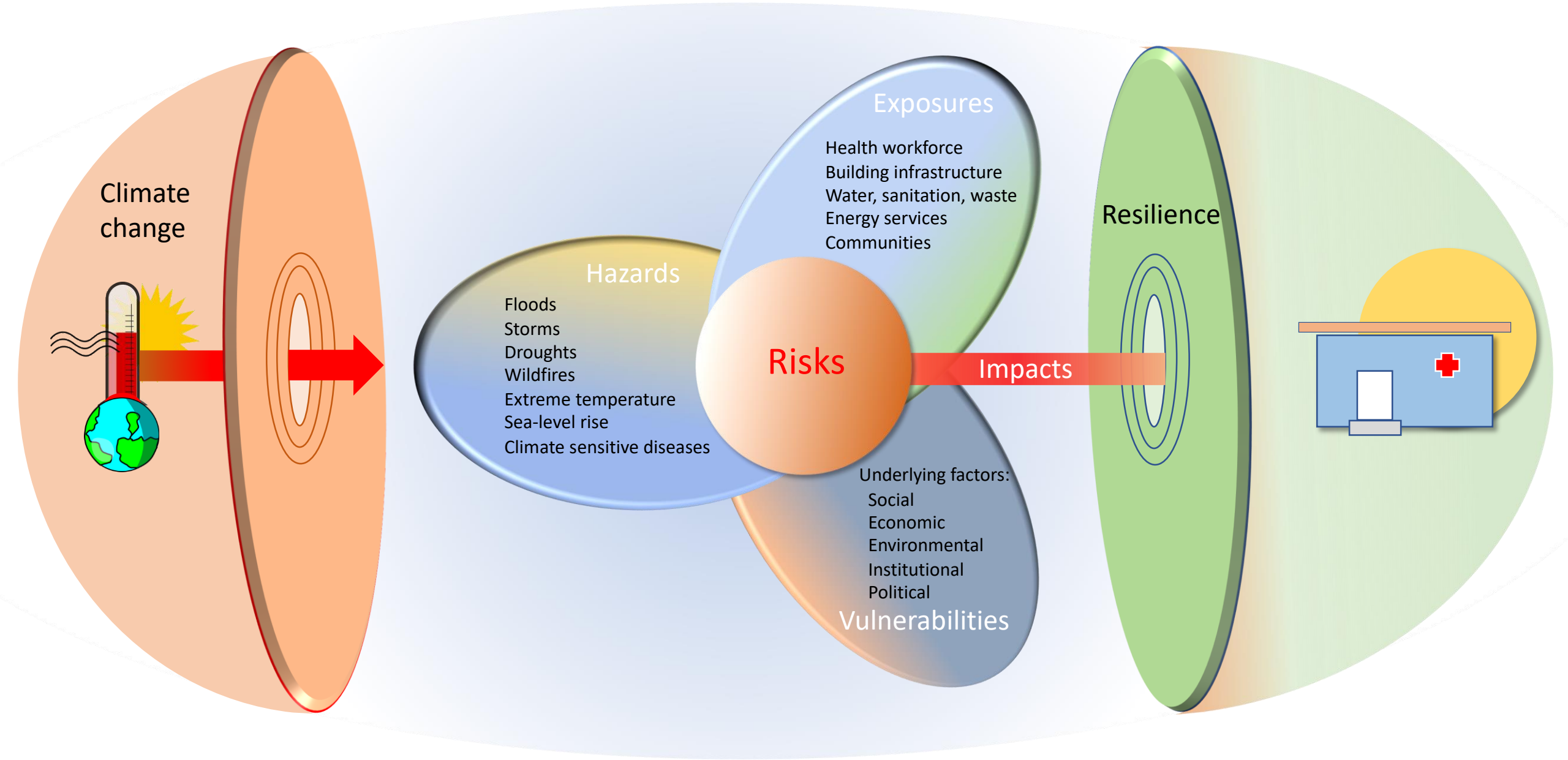
Provides checklists to identify and assess climate related impacts and vulnerabilities.



Reducing risks through

- Hazards
- Exposures
- Vulnerabilities




Climate change
Hazards
Floods
Storms
Droughts
Wildfires
Extreme temperature
Sea-level rise
Climate sensitive diseases
Exposures
Health workforce
Building infrastructure
Water, sanitation, waste
Energy services
Communities
Risks
Underlying factors:
Social
Economic
Environmental
Institutional
Political
Vulnerabilities
Impacts
Resilience

Objectives:

- to assist health care facility managers and staff to identify the main climate risks they face;
- to assess the main impacts by identifying the level of risk based on risk checklist tables; and
- to propose a set of questions that respond to the level of vulnerability of the HCF.

This work builds on WHO' *Operational framework for building climate resilient health systems* (WHO, 2015), and *WHO's guidance for climate resilient and environmentally sustainable health care facilities* (WHO, 2020).

THANK YOU FOR YOUR ATTENTION

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

https://apps.who.int/iris/handle/10665/335909

https://www.mdpi.com/1660-4601/17/23/8849