



Climate Action
Accelerator



Climate Resilient & Environmentally Sustainable Healthcare Facility (CRESH) Pilot Project

Ngouri, Chad





Why Chad, why Ngouri ?

Most **vulnerable** and **least prepared** to climate change
(ND-GAIN 2023)

190th of 191

Chad's rank on the Human Development Index

2 million

people affected by
flooding in 2024

47°C

heat extremes recorded,
weighing on living
conditions and access to care

El Niño (ENSO) tends to **weaken the West African monsoon and dry the Sahel**: heat, drought, failed harvests, food insecurity and malnutrition.



Ngouri District Hospital

120 beds + 210,000 people across 3 districts + 36 referring health centres

Fragile infrastructure and unstable power, flooding, recurrent malaria, malnutrition and trauma peaks, armed insecurity and population displacement.



How can we combine improved healthcare, resilience in the face of the climate crisis and a reduction in environmental impact?

- 1 Meet the health needs that already exist**
- 2 Build resilience**
- 3 Improve the quality of care**
- 4 Minimise the environmental footprint**

This is primarily an **adaptation project** that applies climate-smart / low-carbon technologies and processes. Reducing environmental footprint is a co-benefit as opposed to primary objective



CRESH Steps

CRESH Team

Establish and train a multidisciplinary CRESH operational team within the hospital, responsible for implementing the initiative on a day-to-day basis

Baseline

Assess the initial situation using the *Resilience and Sustainability Scorecard*

Adaptation Plan

Develop an adaptation plan based on a participatory assessment of **climate vulnerabilities and adaptive capacities (VCA)**

Implementation

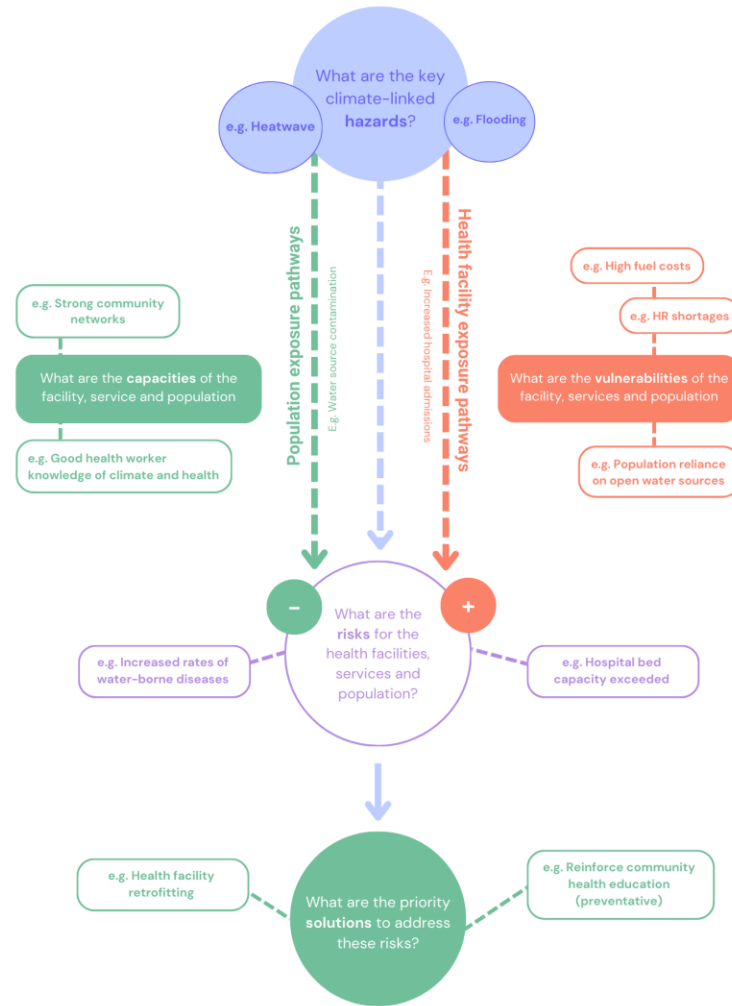
Deploy climate-smart, low-carbon technologies to minimize the environmental impact.

Monitoring & Evaluation

Track progress on environmental resilience and sustainability, using the *scorecard* as a guide



Assessment of climate vulnerabilities and capacities of a healthcare facility





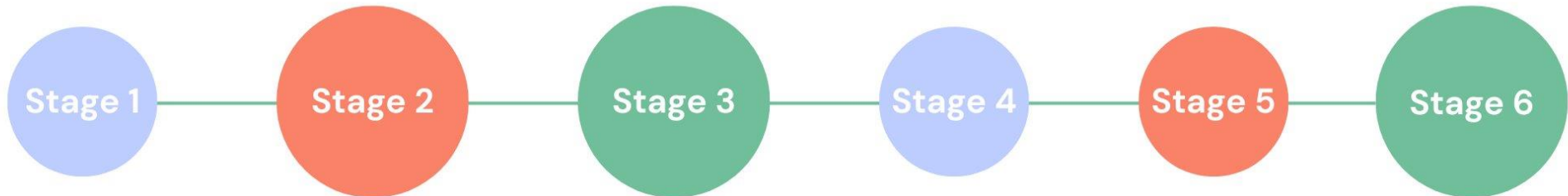
Stages

Climate Action Accelerator's VCA Stages

1. Desktop review
Contextualisation
of existing data

3. Quantitative data collection
Facts and practical audit of
what already exists

5. Risk & solution matrix
• Collate identified risks
• Identify feasible solutions



2. Contextualise the tools
Adapt the CAA VCA tool
to the context and facility
Agree output(s)

4. Qualitative data collection
Focus groups to gather
perceptions & lived
experience from diverse
stakeholders

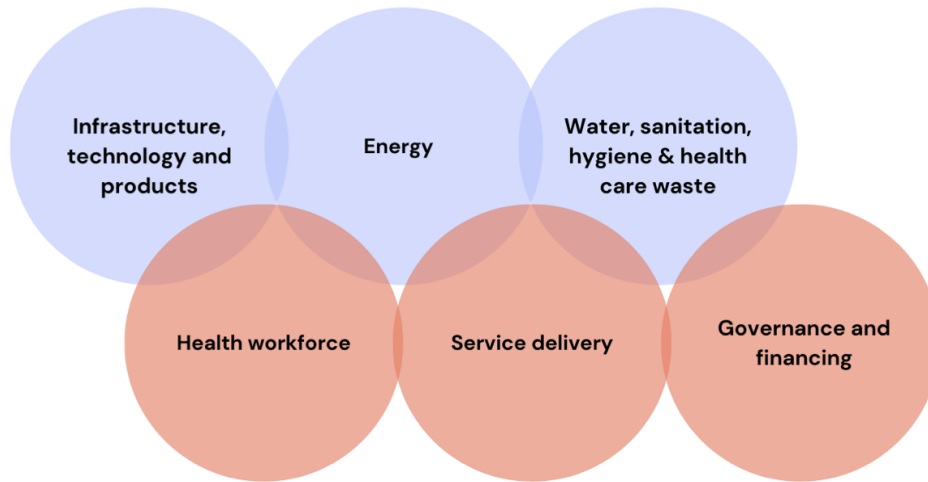
6. Prioritisation

Climate Health VCA output
1 A **prioritised** risk & solution matrix
+ / - another chosen output

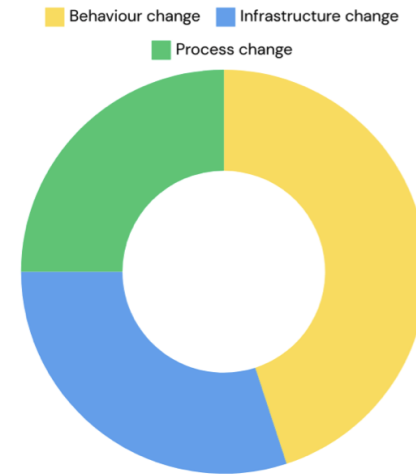


VCA Results

Climate Action Accelerator's CRESH Modules



Adaptation and solutions Where change comes from



22
solutions
prioritised out
of **35** identified

Rating criteria:

Feasibility; duration and complexity of implementation; budget; impact on resilience; environmental impact; other climate impacts

From the Climate VCA to the Scorecard

Each of the 27 indicators, across 6 modules, is scored against a written anchor. The same team applies the same scoring guide every year.

0

Not implemented / not functional

1

Partially implemented / significant gaps

2

Implemented but could be improved

3

Fully implemented / functional

Example indicator	Module	Baseline 2023-24	2024-25	Weighted 2024-25
Reliable energy supply → no outages over 15 min	Energy	0	2	2.0
Constant, monitored access to clean water	WASH & waste	0	1	1.0
Waste management includes sorting & recycling	WASH & waste	0	2	1.0
Services match local needs and epidemiology (blood bank, IPC, nutrition)	Service delivery	0	2	2.0
Buildings are flood protected	Infrastructure, technology & products	1	1	0.8
Staff trained in environmental health, safety and emergency response	Health workforce	0	0	0.0

Weighting reflects each indicator's importance for continuity of care during a climate shock, set by expert consensus.

Adaptation Plan



Solar panels



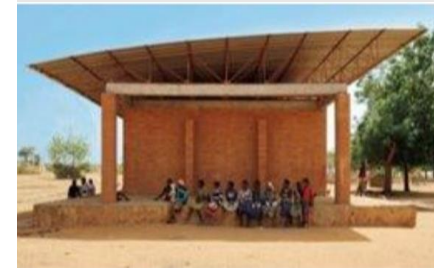
**Thermo-protection paint
Cool Roof®**



**Hot air exhaust via
mechanical
turbines**



**Eco-conception
buildings**



**Solar-powered
blood bank**



**Hospital Disaster
Management
Committee**



**Waste Treatment
Facility and
Incinerator**



Personnel training



**Community
outreach**



**Extended service
hours**





Resilience & sustainability score doubled in one year

Two scorecard metrics taken one year apart

17,6 % → **35,2 %**
2023-24 2024-25

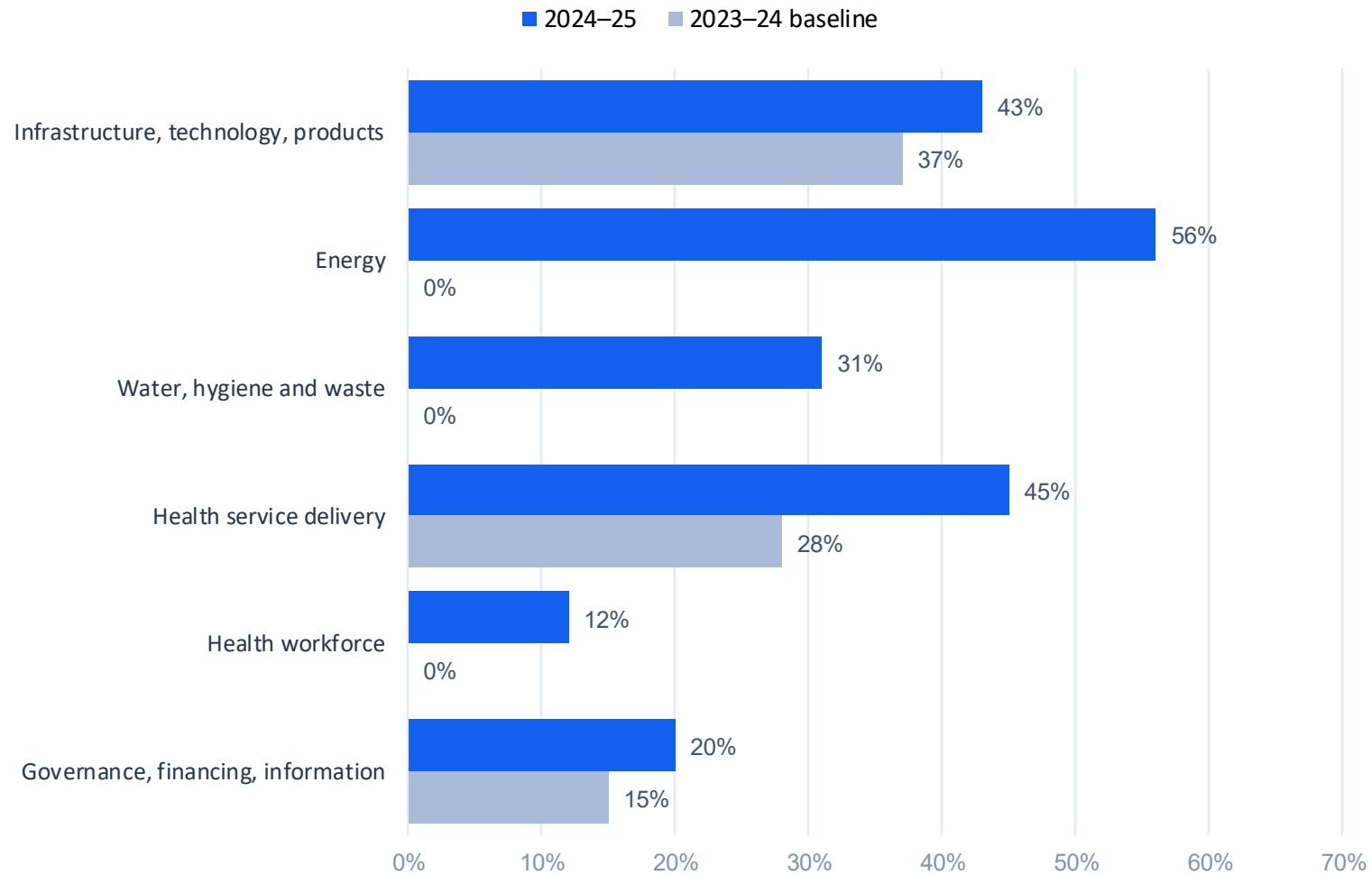
Weighted score: 9.5 → 19 out of 54 possible points
(27 indicators, 6 modules)

January 2025 – April 2025

Diesel use decreased, while **solar energy fully met the facility's consumption**. Energy use per medical unit increased, reflecting **expanded service utilization** (pediatrics, emergency & laboratory)



Progression by module



Weighted score achieved by area, expressed as a percentage of the maximum possible (rounded values).
Scorecard 2023–24 and 2024–25.

One committee, every hazard

ENSO shifts seasonal risks, but the specific hazard and timing remain uncertain. **The response mechanism must work regardless.**

Established: Multisectoral District Disaster Management Committee

Trained: 23 members trained (16 men and 7 women).

Tested: A two-day, full-scale **simulation of a cholera outbreak following flooding.**

From no standing mechanism for record **flooding in 2024** to a **trained, tested, and multi-risk operational system in 2026**, informed by **participatory risk mapping.**





1

An integrated and participatory approach

Infrastructure, processes and practices moved together; with hospital teams and the community.

2

Climate intelligence → anticipatory action

A disaster management committee is what lets a hospital turn a seasonal forecast into a decision

3

Reinforce heat preparedness for 2026–27

An El Niño is under way and expected to persist into early 2027, which points the risks towards the heat and drought tail.

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