

Climate hazards extend beyond financial impacts. They disrupt access to water, education, healthcare, and mobility, while also affecting GDP and consumption.

The long-term consequences of these disruptions can already be observed in Egypt, and climate impacts will continue to unfold over the coming decades.

2050

Affected people: 20.400

2020

**Financial losses:** 13 million US\$ in the electricity sector

due to the 2020 floods

The average temperature is expected to rise by 1.6°C under high-emission scenario

Using

Egypt is projected to face significant water stress

204C

The combined impact of climate change will represent between 2-6% of Egypt's GDP

How can we assess the benefits

2060

quantified and incorporated into

How can these impacts be

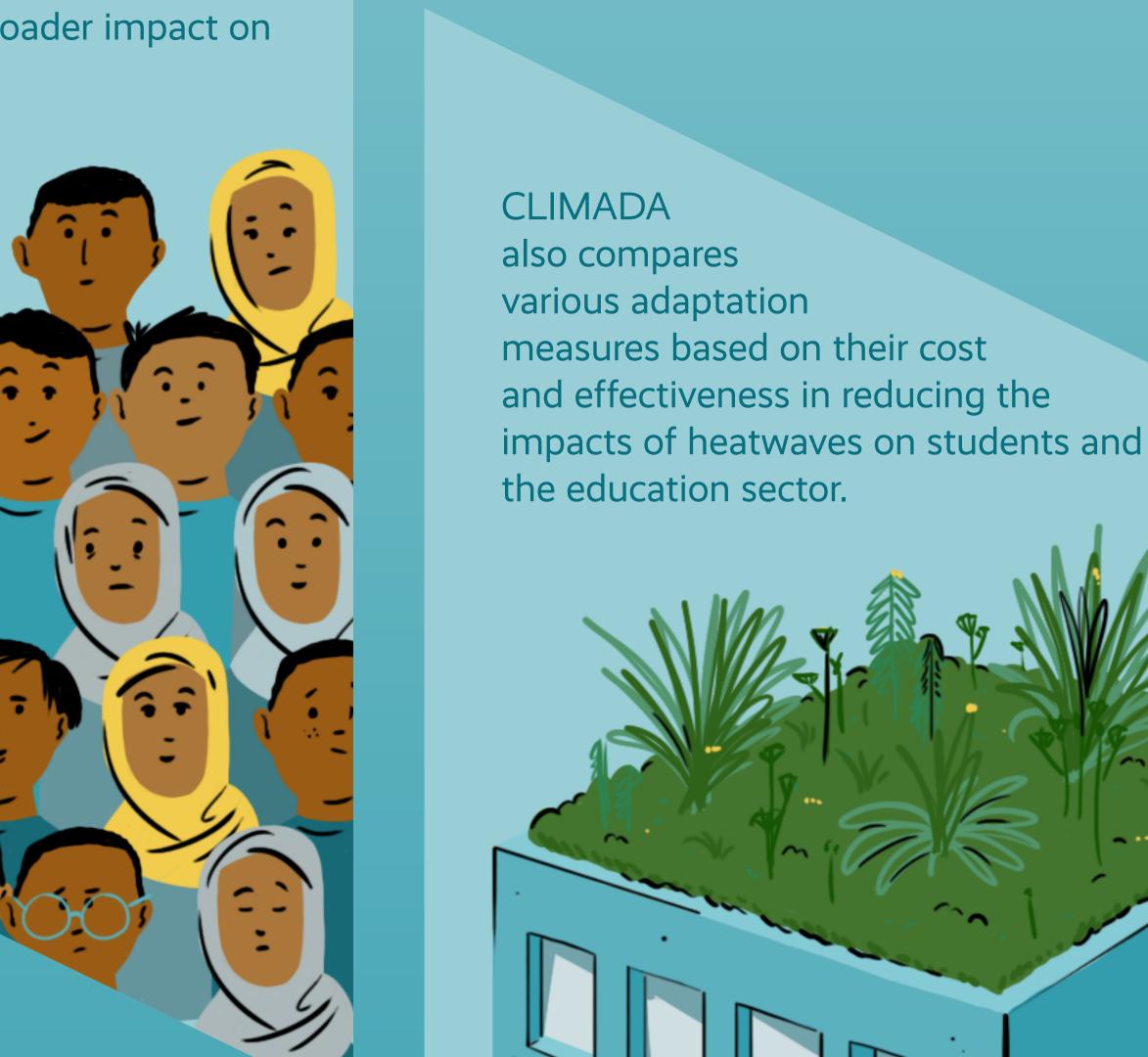
# RISK MANAGEMENT STRATEGIES?

of adaptation measures and analyze their COST-EFFECTIVENESS?

That is where the **Economics of Climate Adaptation** (ECA) framework can play a crucial role, enabling the quantification of risks and analysis of adaptation measures.



the CLIMADA modelling platform, ECA can assess damages to the education sector by estimating the number of students affected, highlighting a broader impact on the education system.



Climate Adaptation

Economics of

CLIMADA also compares various adaptation measures based on their cost and effectiveness in reducing the



How do we gather all the

## ECA prioritizes stakeholder engagement through workshops, to gather



for the modelling.

and open databases.

secondary sources

between parties.

with evidence-based decision-making

validation and exchanges



1,400

1,200

1,000

800

1.75

1.50

1.25

1.00

0.75

0.0

-0.2

Benefit / cost ratio (Students / US

672

212

+32%

1,150

CLIMADA

**Economics of Climate Adaptation** 

## **Expected Annual Impact in Egypt** CLIMADA assesses the Currently, over 670,000

students in Egypt face current and future number of disruptions to their students affected by

for adaptation planning and climate risk financing?

heatwaves, enabling decision education annually due to makers to develop heatwaves. This number is adaptation strategies and expected to increase by up to

Impact (x1,000 people) 600 400 200 Risk 2024 Popoulation Climate Risk 2050 change growth Benefit per cost ratio in Egypt 2.00

265

+40%

CLIMADA analyzes the benefit of adaptation

measures compared to the

facilitating the prioritization

investment required to

heatwaves on students,

reduce the impact of

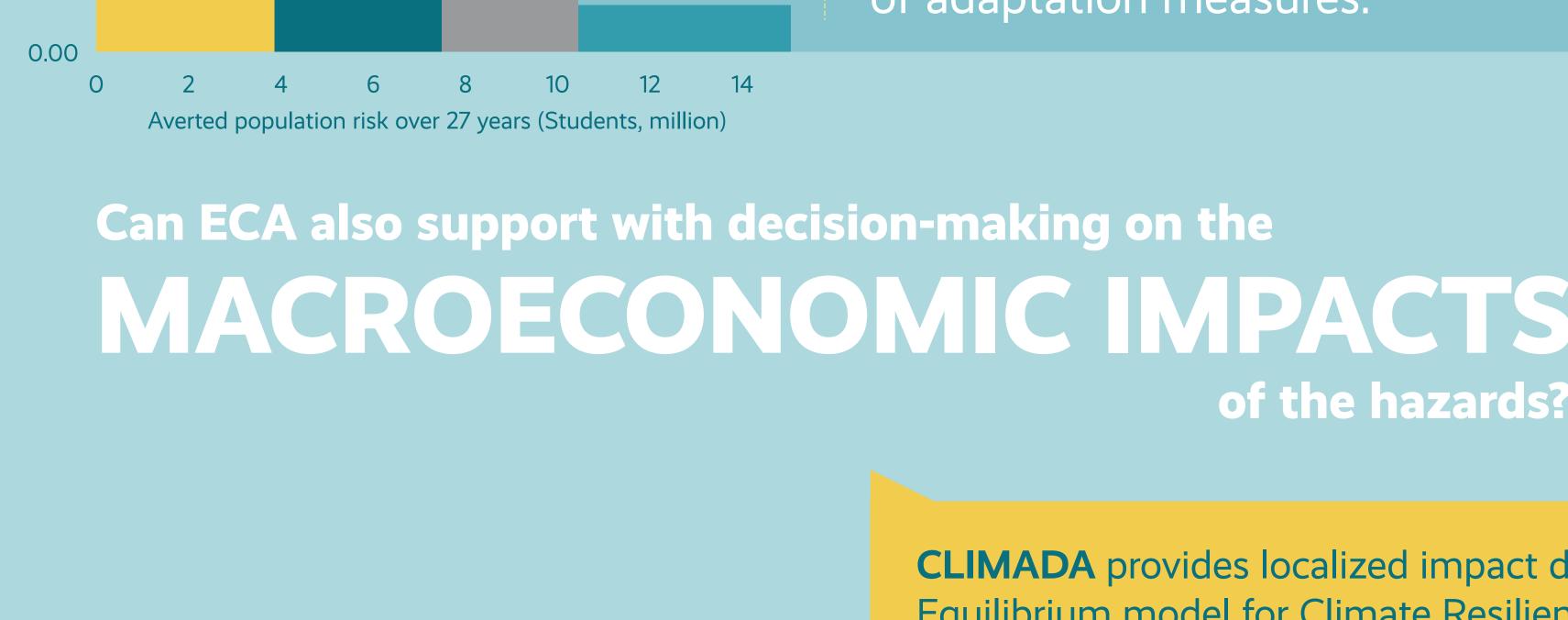
plan for risk financing.

Green roofs are among the most cost-effective strategies for enhancing the Egyptian education sector's resilience to heatwaves.

**72%** by 2050 under a

high-emission scenario.

0.50 Green **Building Trees** Green **Planting** Codes 0.25 roofs



of adaptation measures. of the hazards?

Equilibrium model for Climate Resilient Economic Development (DGE-CRED) uses to estimate the effects on macroeconomic variables such as GDP and household consumption, as well as the potential macroeconomic benefits of adaptation measures. **Current and Future Household Consumption in Egypt** 

**CLIMADA** provides localized impact data that the Dynamic General



2035

2040

2045

2050

No climate change

2030

**RCP 2.6** 

---- RCP 8.5

2025

CRED showcases the current

and future household

consumption using

CLIMADA risk data.

Climate hazards in Egypt

approximately 3.2 billion

people's economic capacity

USD, thereby limiting

to purchase goods and

services.

will also reduce con-

sumption by 1%, or



National Adaptation Plans Local Adaptation Plans

International cooperation Development banks Global funds

ECA, alongside its modeling platform CLIMADA, helps governments and financial institutions make data-driven decisions on adaptation investments and risk financing.









