



COASTAL LANDSCAPES FROM PROTECTION TO PRODUCTION

Nature Based Solutions & Sustainable
Projects in the Mediterranean Countries

CONFERENCE MAY 9, 2025 - 9.30 a.m. - 6.00 p.m.
ANCE headquarters, via A. Guattani, 16, Rome, Italy



**BAUHAUS4MED MED_NET CONFERENCE
AND WORKSHOP 8-10 MAY 2025**

Challenges of Egypt's North Coast in the Absence of Landscape Architects

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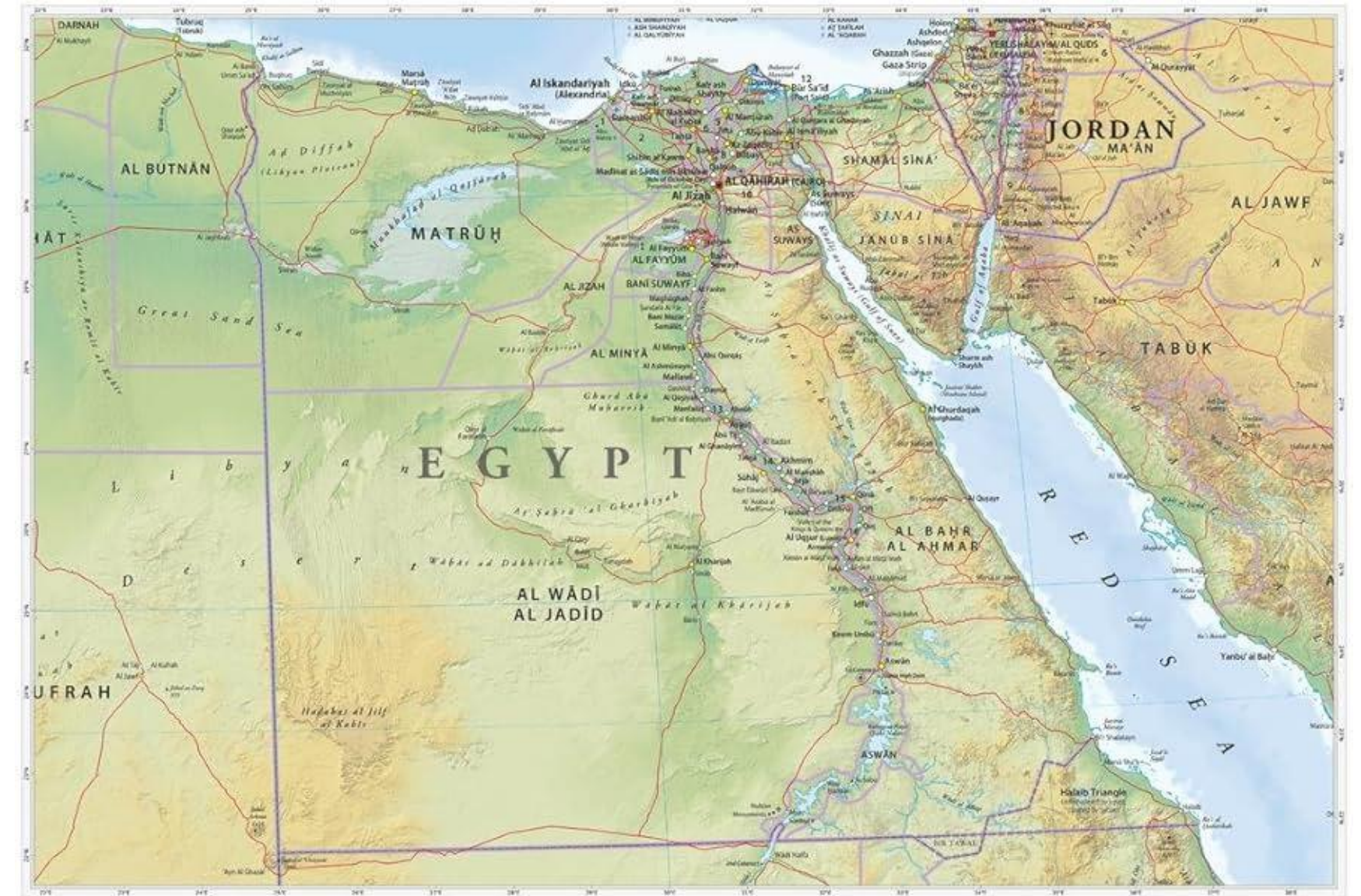


Outline

- **Climate Vulnerability in Egypt**
- **Climate Risks in Egypt Across Scales:**
 - Climate Risks at the National Scale
 - Climate Risks at the Regional Scale
 - Climate Risks at the Local Scale
- **The North Coast Region**
 - Sea-Level Rise
 - Coastal Erosion
 - Flooding
- **Ras el Hekma Development**
- **Egypt's Response to Climate Change**
- **Landscape Architects and Climate Change**

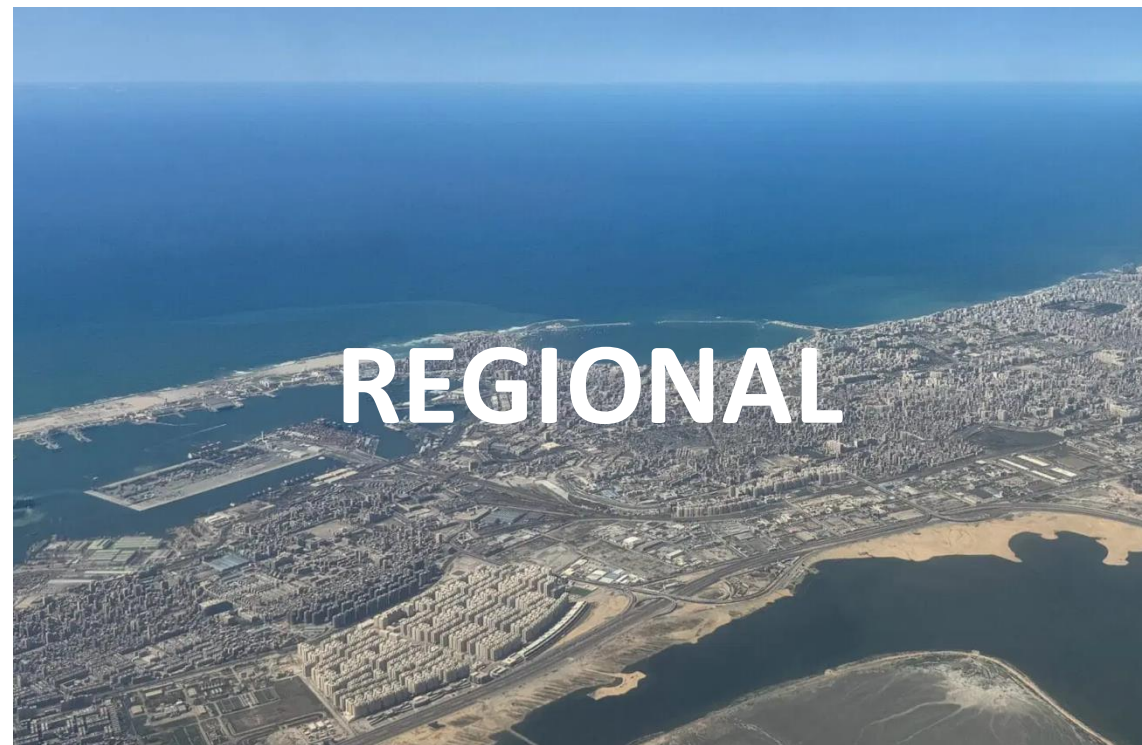
Climate Vulnerability in Egypt

- Egypt has a **diverse geography** that includes vast deserts, mountain ranges, coastal zones, and the fertile Nile Valley and Delta, each contributing **distinct environmental and climatic characteristics**.
- Over **90% of Egypt's population** lives in the Nile Valley and Delta, making up **only 4% of the country's area**.
- Climate disruptions such as **rising temperatures, sea-level rise, and biodiversity loss** threaten Egypt's natural systems, infrastructure, and economic sectors.



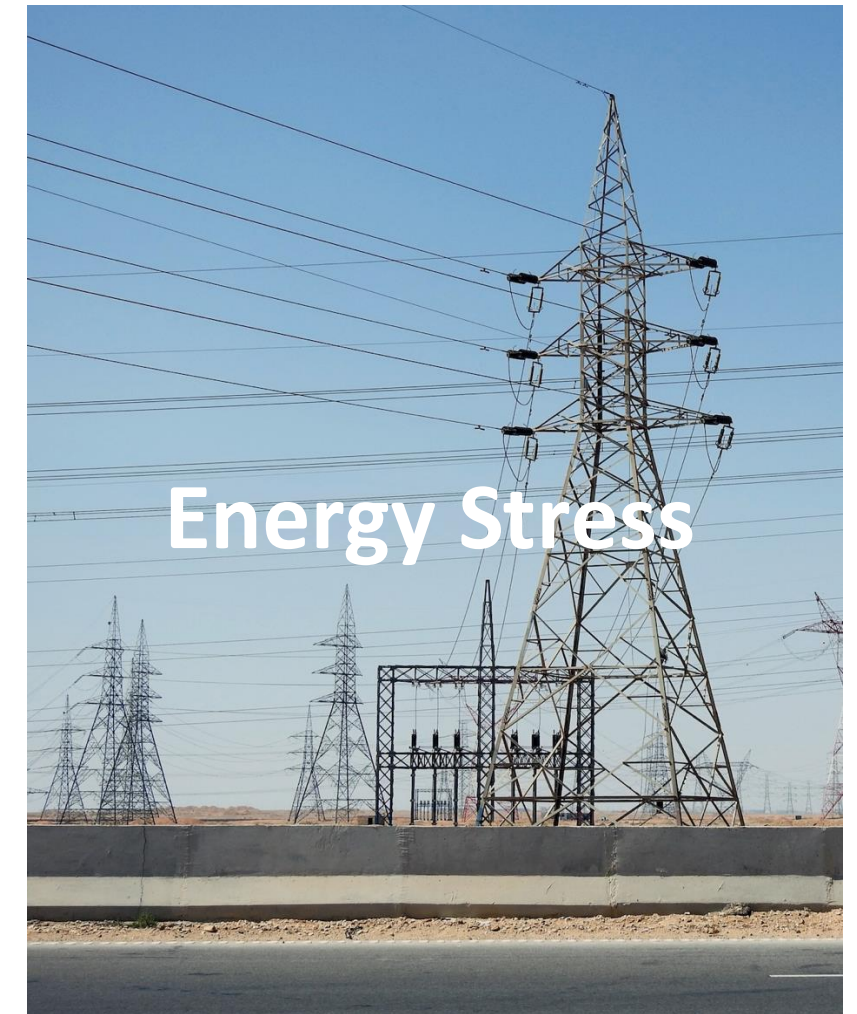
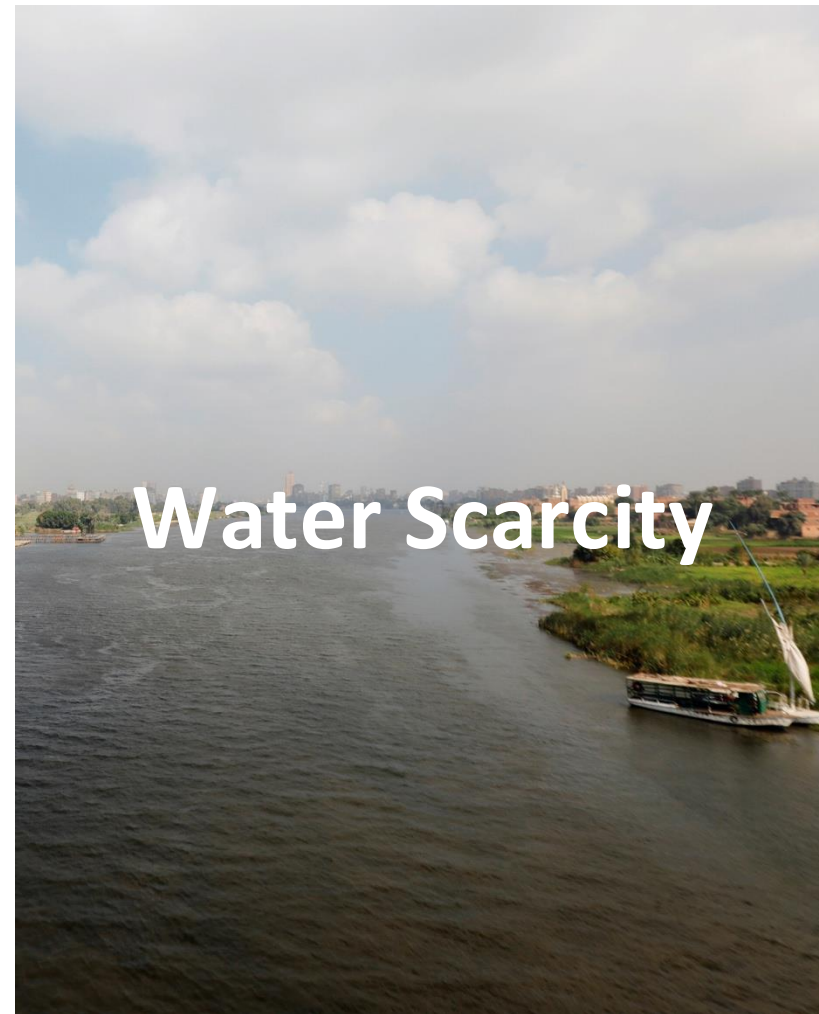
Climate Risks in Egypt Across Scales

- **Climate risks** in Egypt manifest **differently across national, regional, and local scales**, each presenting unique vulnerabilities and requiring context-specific responses.
- While the climate crisis is a shared reality, its impacts are **unevenly distributed**, demanding **tailored policies, interventions, and stakeholder collaborations** at each level.



Climate Risks at the National Level

Egypt faces several pressing climate risks that extend across its entire territory, impacting **both urban and rural areas**. Among the most critical are **extreme heatwaves, water scarcity, carbonization, and rising energy stress**, which endanger the country's environmental security, economic resilience, and quality of life.



Climate Risks at the Regional Level

At the regional scale, climate risks in Egypt vary **according to geography**, with distinct challenges **facing coastal zones, the Red Sea mountain range, and agricultural lands in the Nile Delta**. These areas experience localized threats such as **sea-level rise, flash floods, and soil salinization**, each requiring context-specific responses.



Climate Risks at the Local Level

Climate risks at the local scale manifest through site-specific challenges that **directly affect communities**, infrastructure, and ecosystems. Urban areas face issues **like heat islands, inefficient water systems, and biodiversity loss**, while rural and peri-urban zones encounter **resource inequities and environmental degradation**.



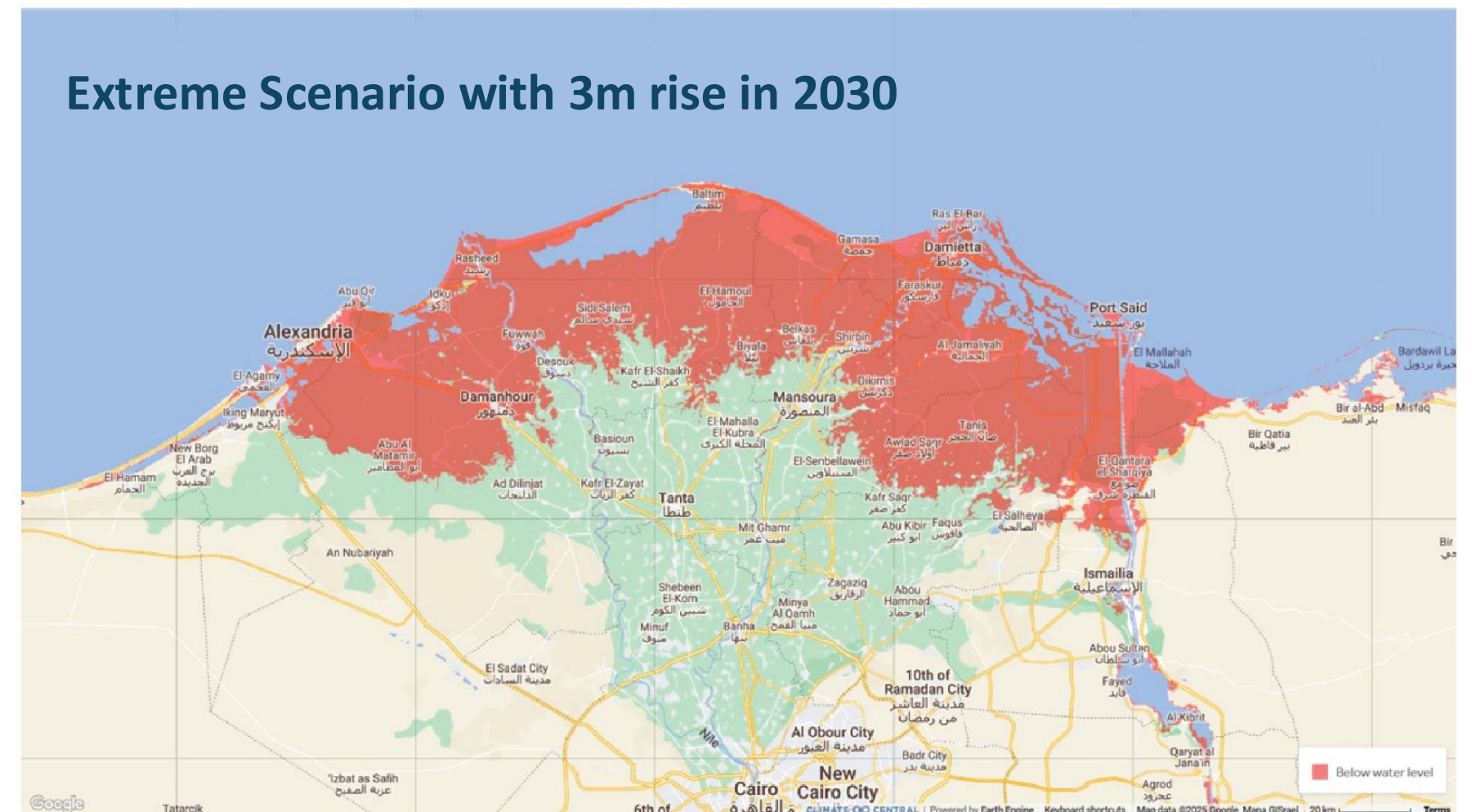
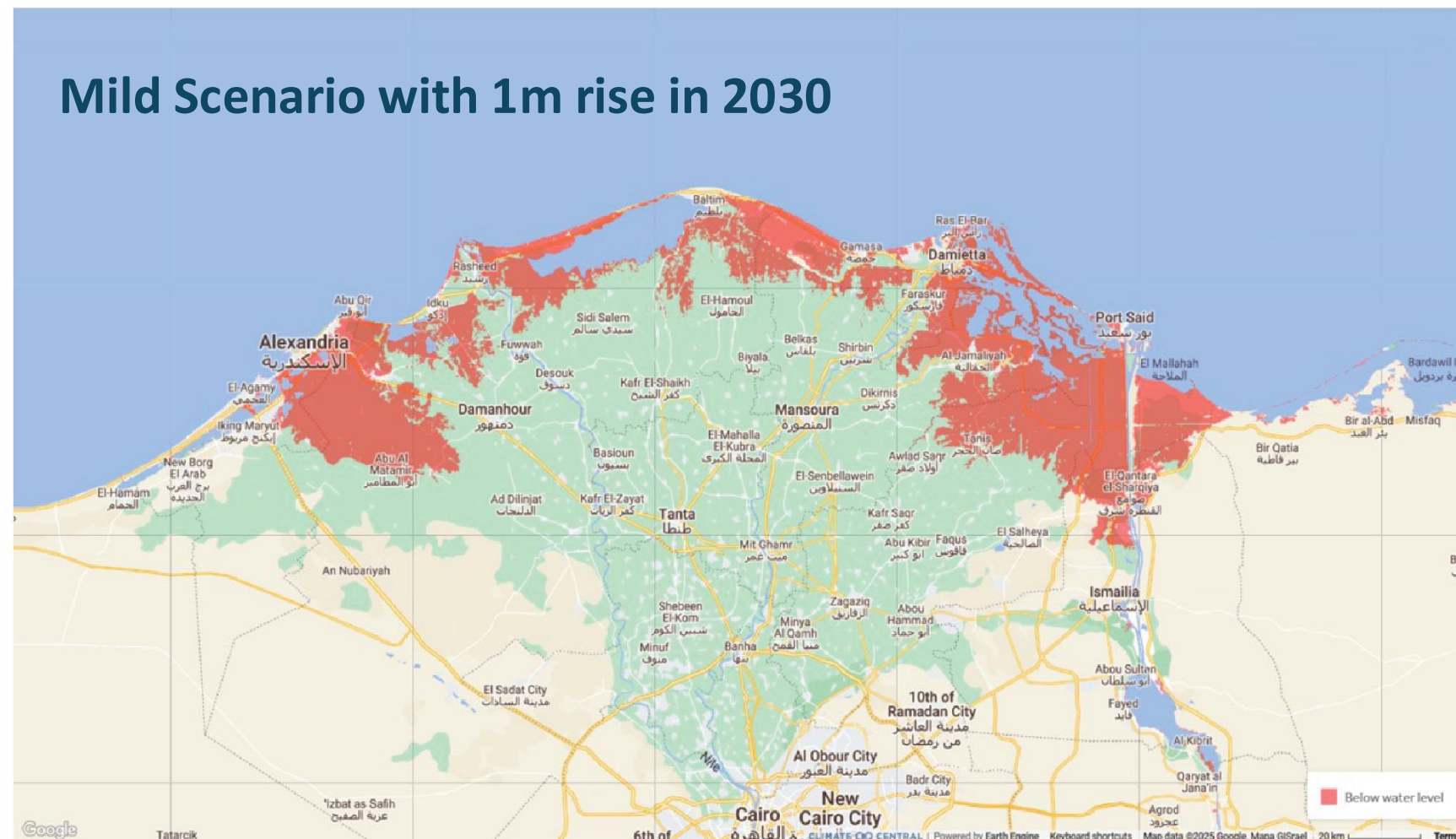
The Egyptian North Coast Region

Mediterranean Sea



Sea Level Rise – The North Coast

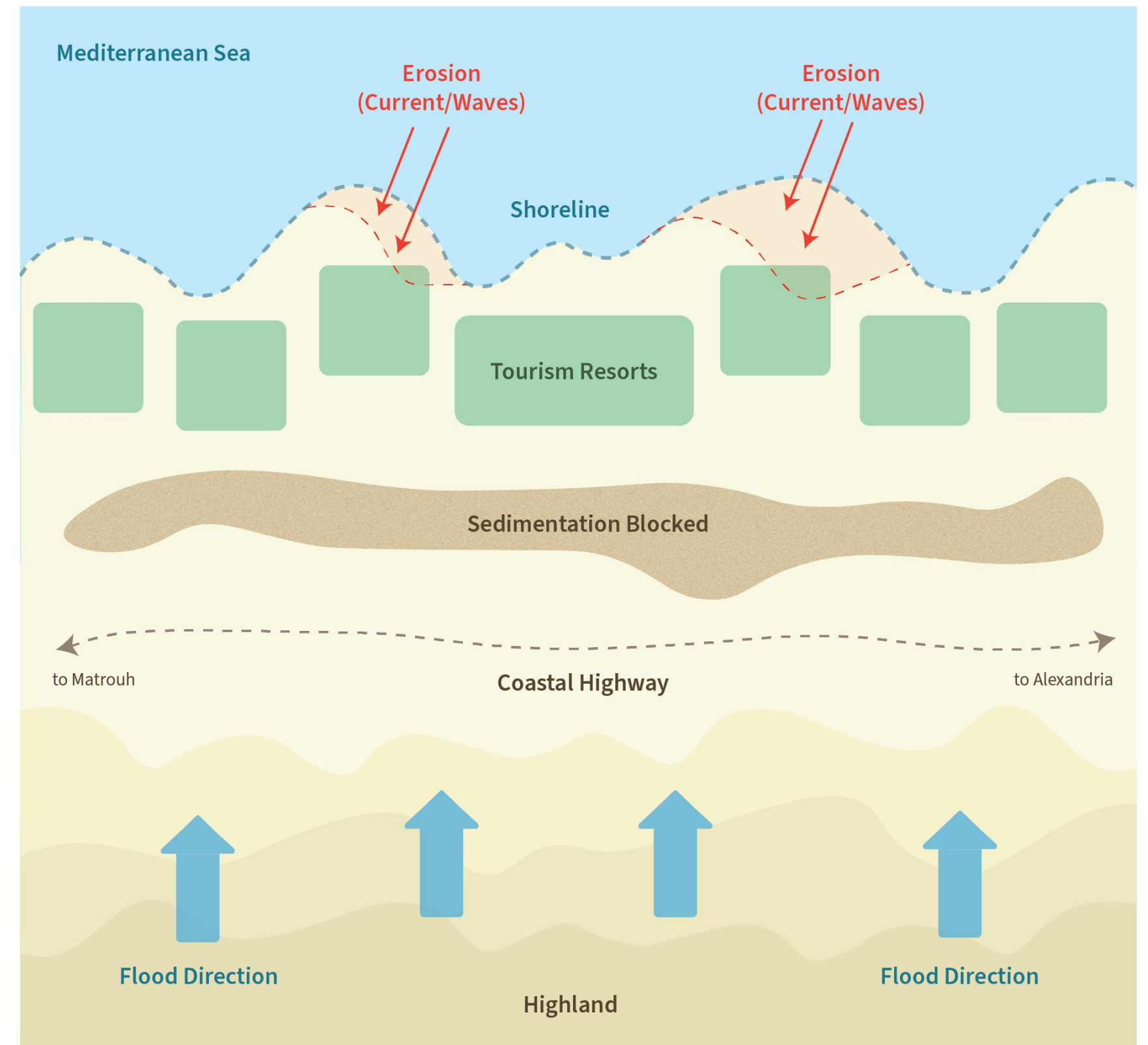
Sea-level rise across the Mediterranean could **displace 6 million citizens** in the northern part of the Nile Delta **by 2030** due to the expected loss of agricultural lands. **By 2100**, it is expected that **2,660 kilometers** (13.3 percent of the total delta area) in the **northern Nile Delta will be submerged**.



Projections for Sea Level Rise along the North Coast, Source: Climate Central

Flooding – The North

The North Coast is particularly **vulnerable to flooding** due to intense rainstorms and its topography. Parts of the coastal plain are bordered to the south by the mountain range, with altitude reaching approximately 600 meters above sea level. During heavy rainfall, **water flows northward from these elevations through wadis** (dry channels or valleys except during rainy seasons), directing water toward lower-lying coastal areas.



Coastal Erosion – The North

The port town of Marsa Matruh is witnessing **both coastal erosion and accretion**, with erosion observed at an average rate of approximately **3.5 meters per year between 2005 and 2015** (Moheb, 2021), driven by **hydrodynamic forces and ongoing urban expansion**.



Marsa Matrouh between 2007 and 2025

Development of Ras el Hekma The North Coast



Development of Ras el Hekma The North Coast

The planning of Ras El Hekma and similar coastal mega-projects often overlooks key climate risks such as sea-level rise, coastal erosion, and flood vulnerability, threatening the long-term viability of these investments.

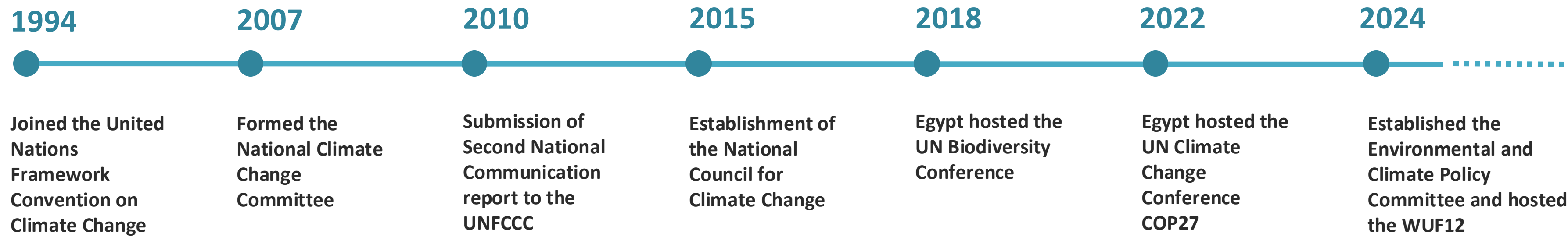
Landscape architects tend to be brought at a later stage to design the open spaces between buildings to improve the aesthetics and increase land & property values



Egypt's Current Policy Endeavors

GOVERNMENT-LED INITIATIVES

- Since 1994, Egypt has increasingly integrated **climate change into national policy**, addressing coastal protection, water management, renewable energy, and poverty reduction.
- **Hosting the 2024 World Urban Forum** signals the country's shift **from a passive observer to an active player** in global and local climate adaptation efforts.



Egypt's Current Policy Endeavors

INTERNATIONAL INITIATIVES

- International partners like the **World Bank** and **UNDP** are actively involved in **climate initiatives** across Egypt, focusing on areas such as **air quality enhancement**, climate data monitoring, and coastal resilience planning.
- **UNDP North Coast project** is backed by a \$31.4 million grant from the **Green Climate Fund**, which targets the **protection of vulnerable zones in the Nile Delta** from sea-level rise and extreme weather.

WORLD BANK GROUP

Trending Data

Each extra year of schooling boosts hourly earnings by 9%

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Greater Cairo Air Pollution Management and Climate Change Project

SUMMARY

Overview

NOTICE AT-A-GLANCE

Project ID	Project Title	Country	Notice No
P172548	Greater Cairo Air Pollution Management and Climate Change Project	Egypt, Arab Republic of	OP00295186
Notice Type	Notice Status	Borrower Bid Reference	Procurement Method
Request for Expression of Interest	Published	EG-EEAA-418890-CS-QCBS	Quality And Cost-Based Selection


UNDP

Climate Change Adaptation

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Enhancing Climate Change Adaptation in the North Coast of Egypt



Egypt's Current Policy Endeavors

NGOS AND START-UP INITIATIVES

- NGOs and start-ups across Egypt are **advancing climate solutions through innovative projects** in waste recycling, sustainable agriculture, renewable energy, and green mobility.
- These initiatives not only address environmental challenges but also **empower local communities, particularly women and underserved populations**, through training, job creation, and inclusive development.



BANLASTIC
Ban single-use plastic



Egypt's Current Policy Endeavors

GRASSROOTS COMMUNITY PRACTICES

- Many **Nile Delta** farmers are shifting to **salt-tolerant crops** like rice and beet, while adopting intercropping and improved irrigation methods.
- **Community-led household** practices include **recycling** used cooking oil, **reducing water and electricity** consumption, and **growing food on rooftops**.



The Status of Landscape Architecture in Egypt

- **Landscape architecture** remains largely marginalized in Egypt, often **limited to aesthetic concerns** rather than being seen as a tool for systemic change.
- Despite this, the field's multidisciplinary nature equips landscape architects to **work across ecological, cultural, and built systems**, integrating design with scientific reasoning.
- Their **collaborative potential** positions them to address **climate adaptation**, enhance **public health**, and support **socially and economically resilient communities**.



The Status of Landscape Architecture in Egypt

- The **International Federation of Landscape Architects (IFLA)** issued a “**Code Red for Earth**” declaration in 2024, calling for urgent action and recognizing landscape architects as key actors in climate resilience and sustainable development.
- Egypt’s **Egyptian Society of Landscape Architects (ESLA)** aims to advocate for the profession’s expanded role in planning, policy, and implementation across multiple scales and sectors.



Recommendations

- Addressing Egypt's escalating climate risks **requires a shift toward interdisciplinary, resilience-focused planning** that fully **integrates landscape architecture into national and local strategies.**
- Landscape architects have the capacity to **lead efforts in water management, biodiversity conservation, and climate-adaptive urban design.**
- **Organizations like ESLA** are working to **redefine the profession's role by promoting policy reform, educational integration, and collaboration with governmental and non-governmental actors** to support climate governance.



Thank you

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Egyptian Society of Landscape Architects



About Med_net Working Group

