Eastern Mediterranean and Middle East Climate Change Initiative (EMME-CCl)
EMME REGION is a Climate Hot SPOT!

The latest scientific predictions are dire:

- The region is heating up twice as fast as the rest of the planet.
- Under a “Business as Usual Scenario” the region may have reached temperatures 5 degrees higher than those at the beginning of the century.
All EMME countries expressed their willingness to comply with the Paris Agreement.

EMME region is lacking:

• Detailed environmental observations and modeling
• Adequate Mitigation and especially adaptation strategies
• Coordinated policy actions, sharing of good practices and common projects
The Cyprus Government undertook the challenge to develop a Regional Initiative to address the Climate Crisis in the EMME region

**Key Desired outcome:**

**Develop an Action Plan**

- to address the specific challenges of the countries in the region
- to ameliorate the impacts of climate change through scientifically sound and technologically vetted concerted actions
- to implement mitigation actions, in accordance with the Paris Agreement.
### Thematic Foci for the Scientific Task Forces

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240 Scientists from over 20 Countries and International Organizations.

Coordinated by the Cyprus Institute
EMME-CCI: Work plan

Thematic Task Forces

International Scientific Conference
(leading to a Comprehensive Scientific Report)

Ministerial Meetings 2022
(for finalization of the Regional Action Plan)

Summit of Regional Leaders (8/11/2022 at COP27-Declaration)

Implemented:
- Plan of Action
- Governance
- Financing

Policy Preparatory Phase

Scientific Preparatory Phase

IMPLEMENTATION
Mitigation and Adaptation Actions
1st Ministerial Meeting, 2/2/2022, Nicosia (hybrid)

2nd Ministerial Meeting, 7/6/2022, Limassol, Cyprus
The EMME – Climate Action Plan is ready to come into force

Following three years of intense preparatory work:

• A solid scientific understanding of the nature of the evolving climate crisis has been achieved.
• Actions to mitigate the climate change and ameliorate its impacts have been identified: they form the basis of the Regional Action Plan.

Today, the leaders of the EMME countries will express their willingness to utilise the outcomes achieved so far.
The message of the EMME Climate Change Initiative

Only by acting collectively, decisively and based on sound scientific knowledge can we avoid the worst consequences of climate change in our region.
Eastern Mediterranean and Middle East Region Climate Change Initiative (EMME-CCI)

C. N. Papanicolas
Advisor to the President of the Republic of Cyprus and Special Envoy on Climate Change

COP27, Nov. 8, 2022
Thematic Foci for the Scientific Task Forces

1. Physical Basis of the regional climate change
2. Energy
3. Built Environment
4. Health
5. Water Resources
6. Agriculture and Food Chain
7. Marine Environment / Resources
8. Education and Outreach
9. Migration
10. Tourism
11. Enabling Technologies
12. The Green Economy and Innovation
13. Cultural Heritage

The work of the Task Forces will continue and expand.

Provide the Foundations of the Regional Action Plan.
Forecasts are alarming, drawing regional and international attention. Alarming results based on the best science currently available. Effects will have world-wide repercussions (e.g., mass migration).
From Scientific studies to Action

• The EMME-CCI Initiative is about understanding & mapping the risks in every sector of the economy and social activity and primarily about planning & implementing measures to ameliorate them.

• It is about concerted actions of the countries of the region to engage in transboundary actions/projects which are necessary to achieve this goal.

The formidable scientific effort of the previous three years allows:
• To assess the situation in each thematic sector
• Identify gaps in understanding, research and policy needs

Allowed us to propose: technologically mature and affordable solutions for addressing the impacts of climate change in different sectors.
The EMEE – Climate Action Plan is ready to move into implementation

Technologically mature and affordable solutions for addressing the impacts of climate change in different sectors.

The recommendations are the basis of the Regional Action Plan
Indicative Priority Areas for the EMME region Action Plan

Detailed modeling of impacts.

Observation data acquisition and sharing.

Clean energy at affordable competitive prices.

Threat to coastal systems due to sea level rise.

City emission reductions.

Forest fires prevention & protection.

Job creation strategy for Green development.

Solar heat industrial processing.

Renewable Energy driven Desalination.

Minimization of Climate Change induced diseases.
Example of proposed transboundary action:

Most detailed modeling & Monitoring of impacts is essential

A. To have the **most detailed and precise modeling**. Otherwise planning will be imprecise, possibly wasteful and ineffective. It needs to be done on a regional basis.

B. **Measurements, Calibration and Verification** of causes (Green House Gas Emissions) are necessary for precise modelling and for gauging the effectiveness of policies and measures.
Need for high-resolution climate modeling: Urban Heat Island (Case Study: Cairo)

- Current state-of-the-art models do not resolve the urban environment.
- As a result, temperature projections are underestimated.

Example of the Urban Heat Island representation of Cairo in different climate model resolutions.

K. Constantinidou, P. Hadjinicolaou et al., 2022
Need for high-resolution climate data: Impact of extreme floods

Flooded area in Limassol for a 1-in-100-year rainfall event under climate change
Detailed Planning for Urban development: A neighborhood in Beirut

Source: Fahed, Cartalis et al., 2020
EXAMPLE OF TRANSBOUNDARY MITIGATION ACTION: Energy & Water Interconnections in the EMME Region

• Reduction of GHG Emissions (Mitigation)
• Allows higher and cheaper penetration of renewables
• Energy Security
• Cheaper Energy

Can be Electricity, Natural Gas, Water & Other resources.
Technologically and organizationally the EMME-CCI is ready to be launched.

The Declaration is a major milestone, possibly of historic significance.

**However**, the most challenging, by far, difficulty lies ahead: implementation.
THANK YOU!

COP 27
SHARM EL-SHEIKH
7-18 NOVEMBER 2022

C. N. PAPANICOLAS