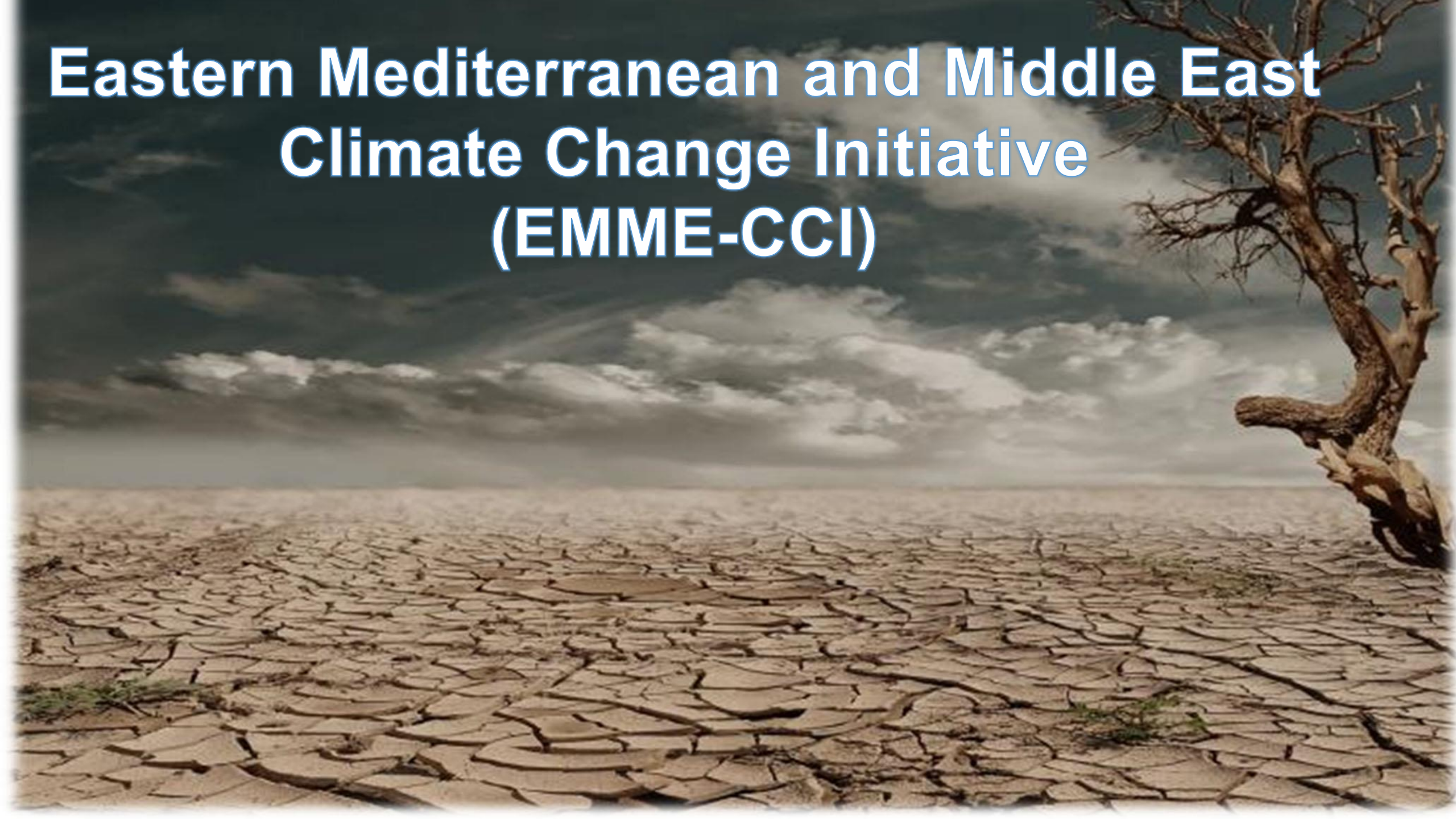
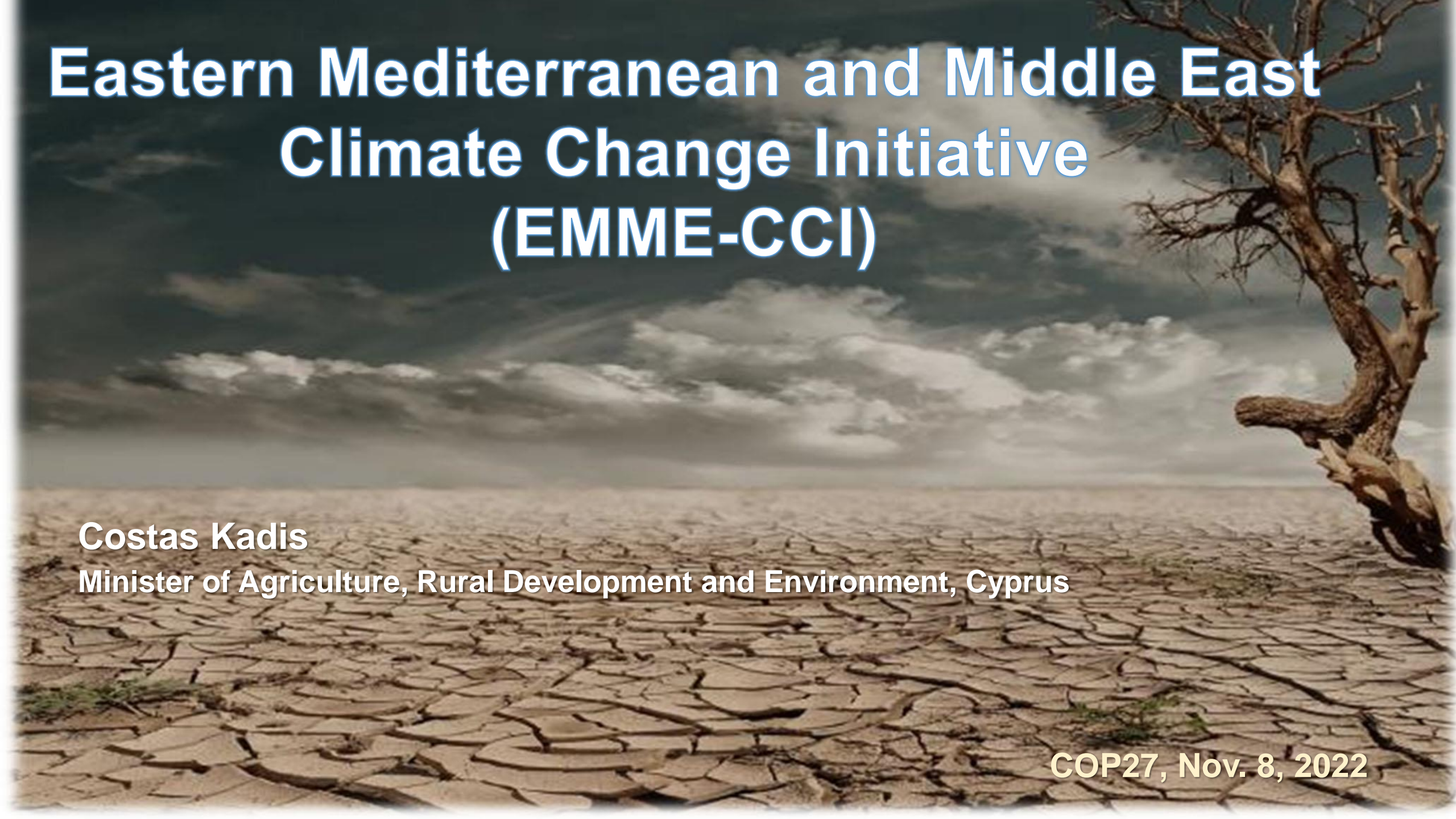


Eastern Mediterranean and Middle East Climate Change Initiative (EMME-CCI)





Eastern Mediterranean and Middle East Climate Change Initiative (EMME-CCI)

Costas Kadis

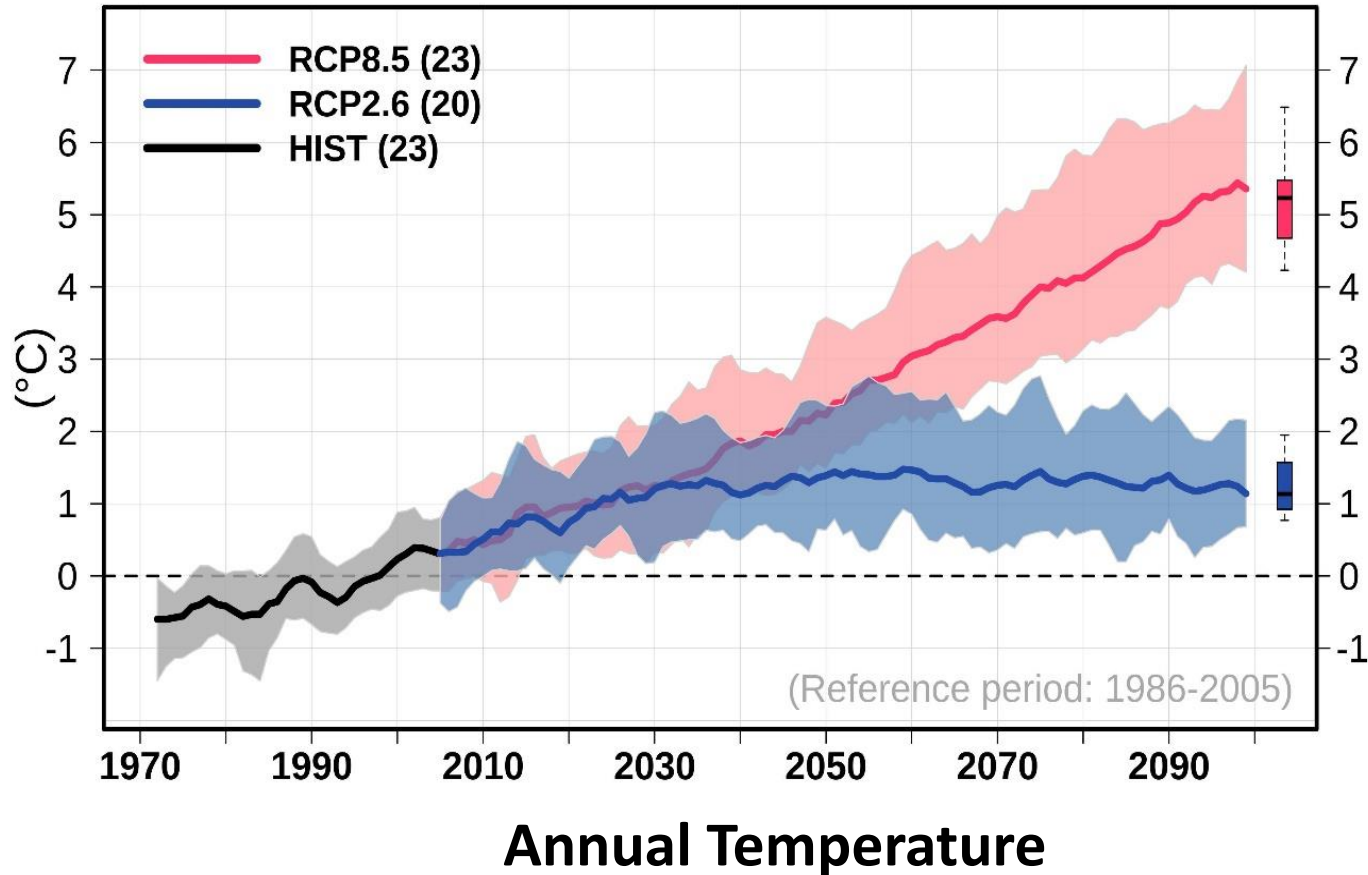
Minister of Agriculture, Rural Development and Environment, Cyprus

COP27, Nov. 8, 2022

EMME REGION is a Climate Hot SPOT!

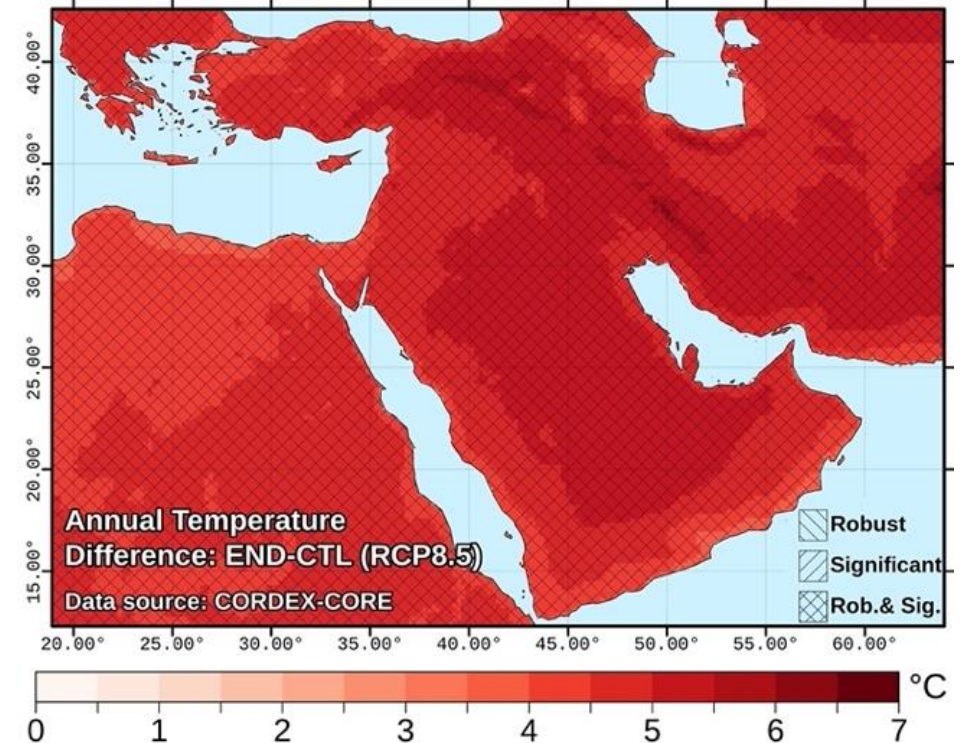
Climate Projections – temperature

Mean annual temperature anomalies, EMME (land only)



The latest scientific redictions 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

International Conference on “Climate Change in the Mediterranean and the Middle East”, Cyprus, May 2018

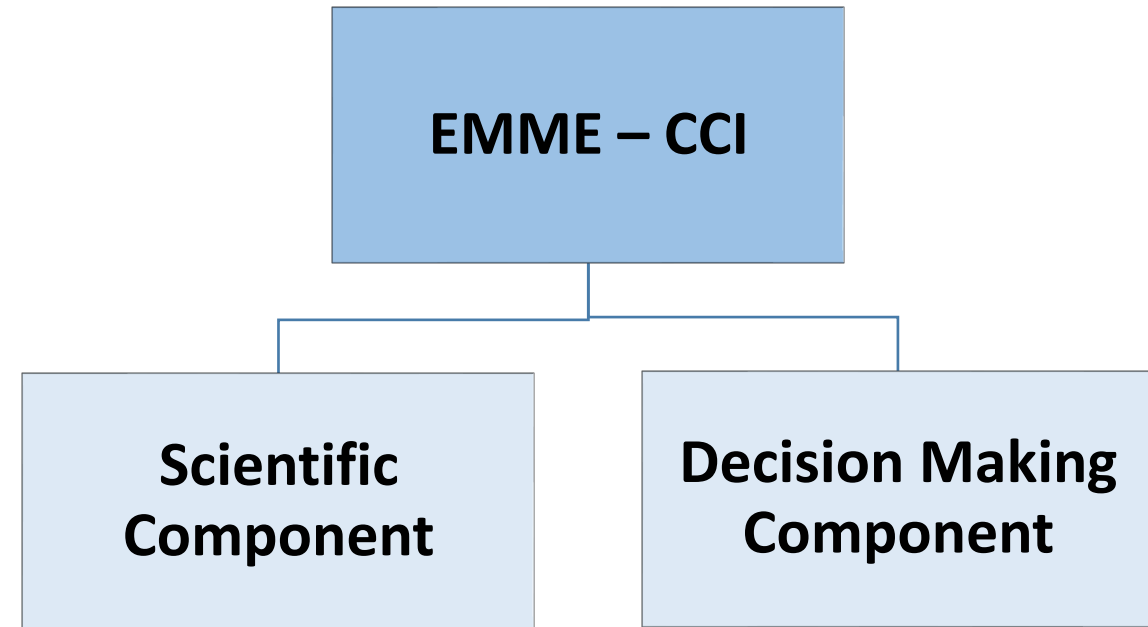


The Cyprus Government undertook the challenge to develop a Regional Initiative to address the Climate Crisis in the EMME region

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

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

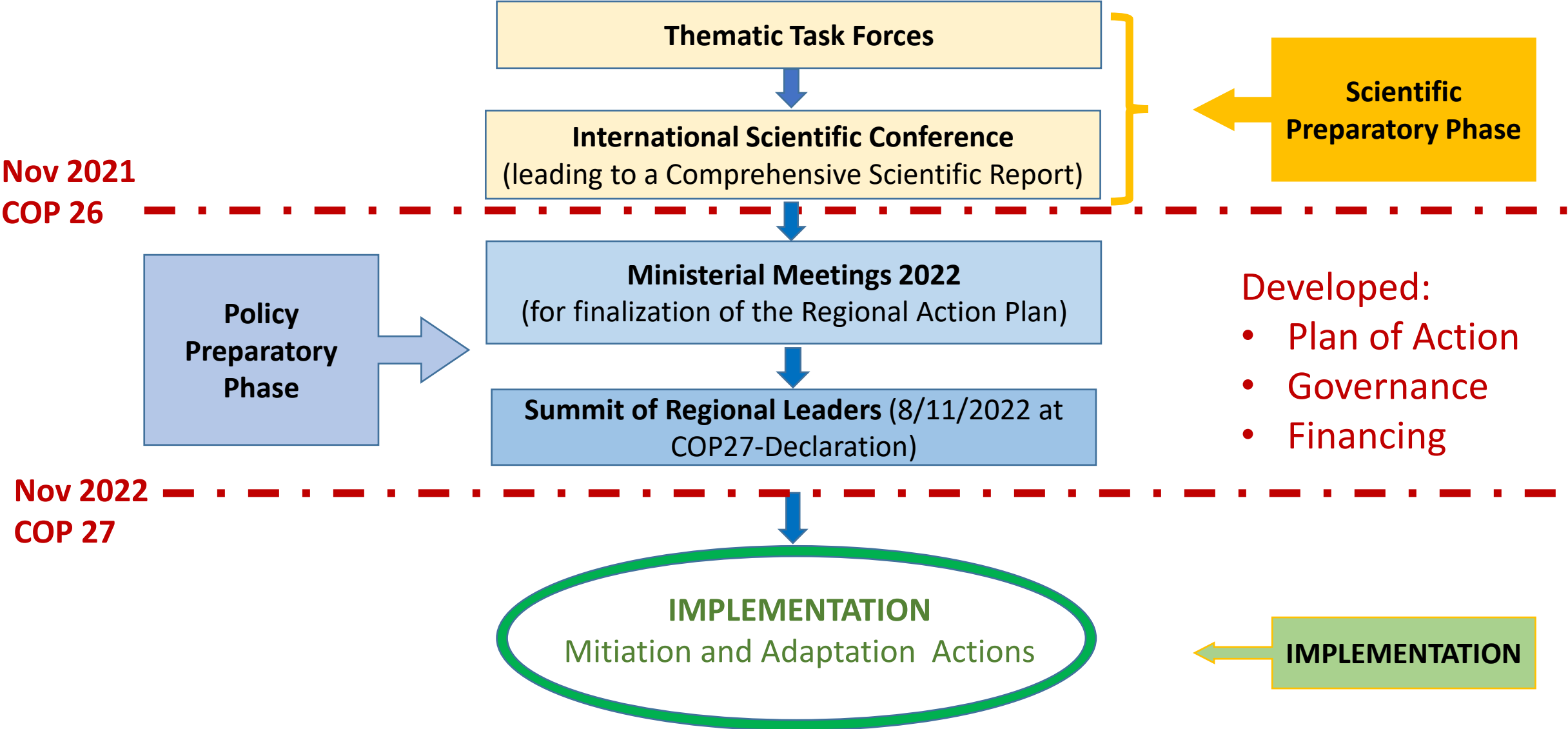
13. Cultural Heritage



240 Scientists from over 20 Countries and International Organizations.

Coordinated by the Cyprus Institute

EMME-CCI: Work plan



1st Ministerial Meeting, 2/2/2022, Nicosia (hybrid)

2nd Ministerial Meeting, 7/6/2022, Limassol, Cyprus

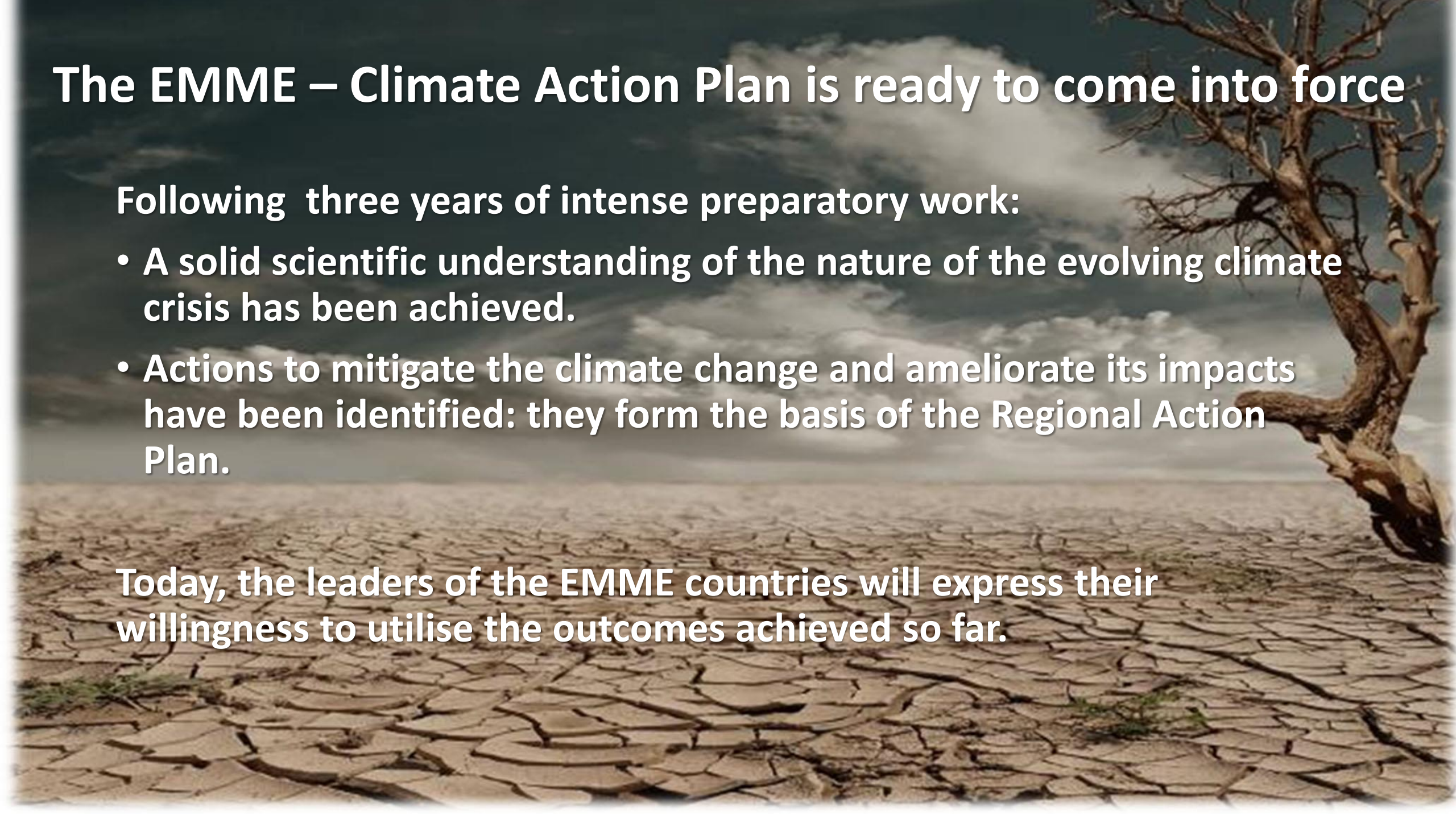


The EMME – Climate Action Plan is ready to come into force

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.

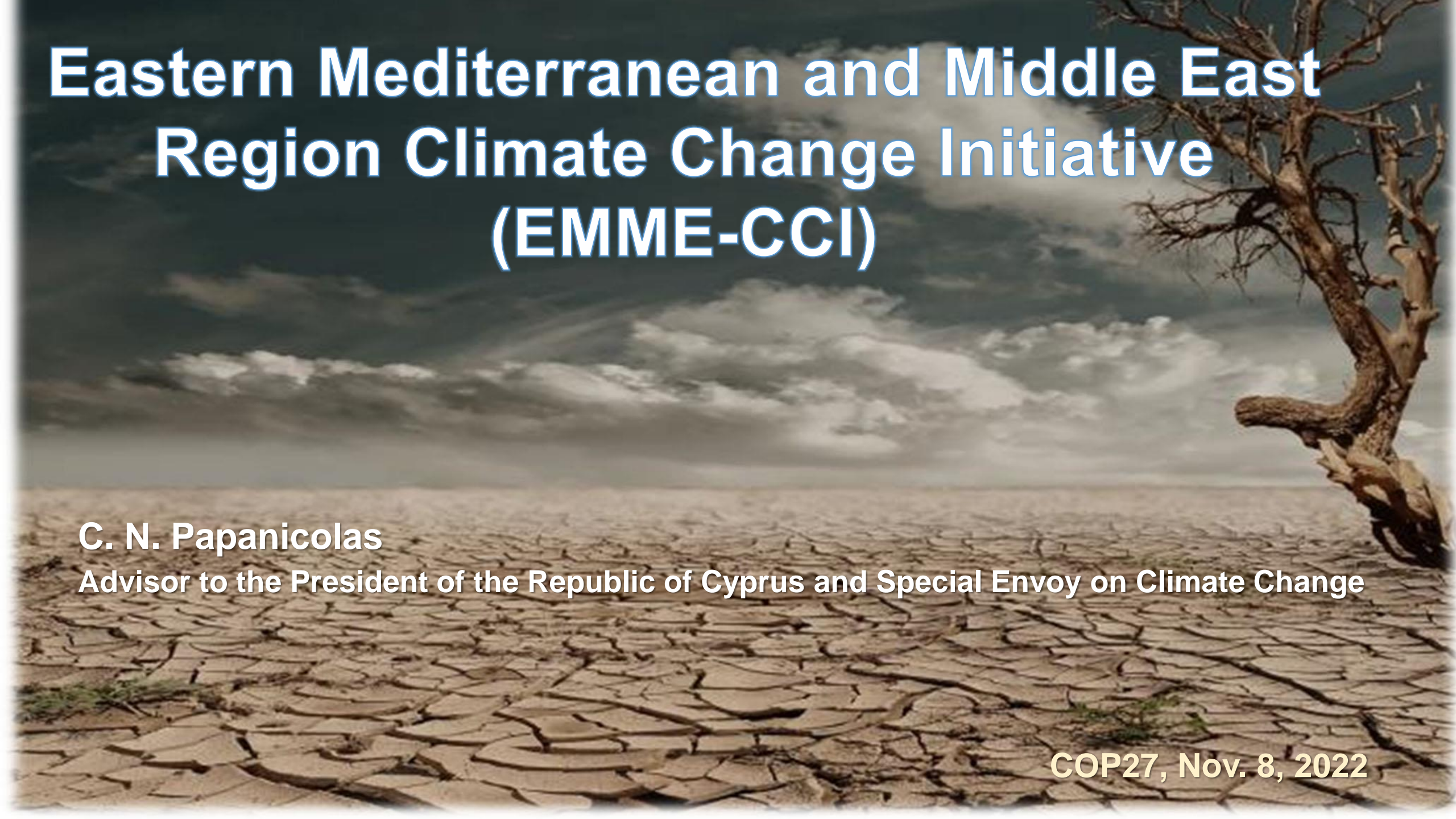
Today, the leaders of the EMME countries will express their willingness to utilise the outcomes achieved so far.





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)

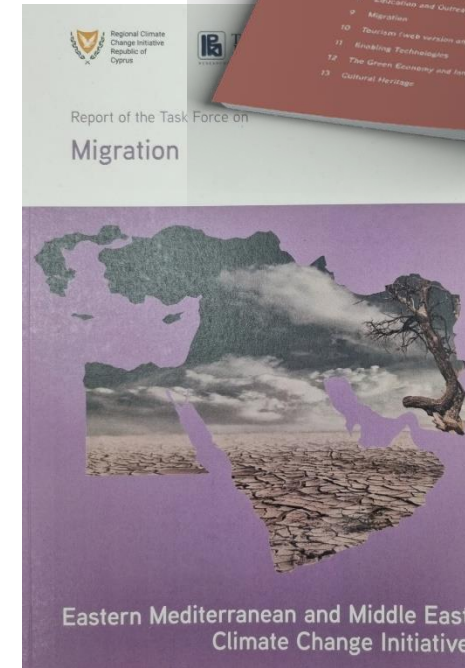
C. N. Papanicolas

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



The Washington Post
Democracy Dies in Darkness

The Middle East is warming up twice as fast as the rest of the world

By Karina Tsui
September 7, 2022 at 2:53 p.m. EDT

AP
U.S. News World News Politics Sports Entertainment Business Technology Health Science Oddities Life

East Med especially at risk as world heats up, report warns

September 6, 2022

Climate change could devastate Mideast, East Mediterranean -scientists

New Delhi 27°C

Hindustan Times

India World Cities Entertainment Cricket Lifestyle Astrology

Home / Environment / East Mediterranean, Middle East warming up twice as fast...

East Mediterranean, Middle East warming up twice as fast as global average: Study

Arab Weekly

East Med, Mideast especially at risk as world heats up

The eastern Mediterranean and the Middle East are more susceptible to warming trends because of their unique natural characteristics, such as large desert expanses and lower water levels.

Wednesday 07/09/2022

AL-AWSAT

East Med Especially at Risk as World Heats Up, Report Warns

Tuesday, 6 September, 2022 - 17:00

THE WALL STREET JOURNAL

Rising Temperatures Turn Middle East Region Into Climate Hot Spot

New study shows Middle East and Eastern Mediterranean are growing hotter twice as fast as the global average

euronews.

Green Next Ταξίδια Πολιτισμός Βίντεο

φαινόμενα αναμένεται να πλήξουν την περιοχή της Αν. Μεσογείου και Μέσης Ανατολής

THE NATIONAL HERALD

GREECE USA CYPRUS SPORTS HEALTH & SCIENCE FOOD & TRAVEL CULTURE & ARTS CLASSIFIEDS ARCHIVES

East Med Especially at Risk as World Heats Up, Report Warns

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.

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 costal systems due to sea level rise.

City emission reductions.

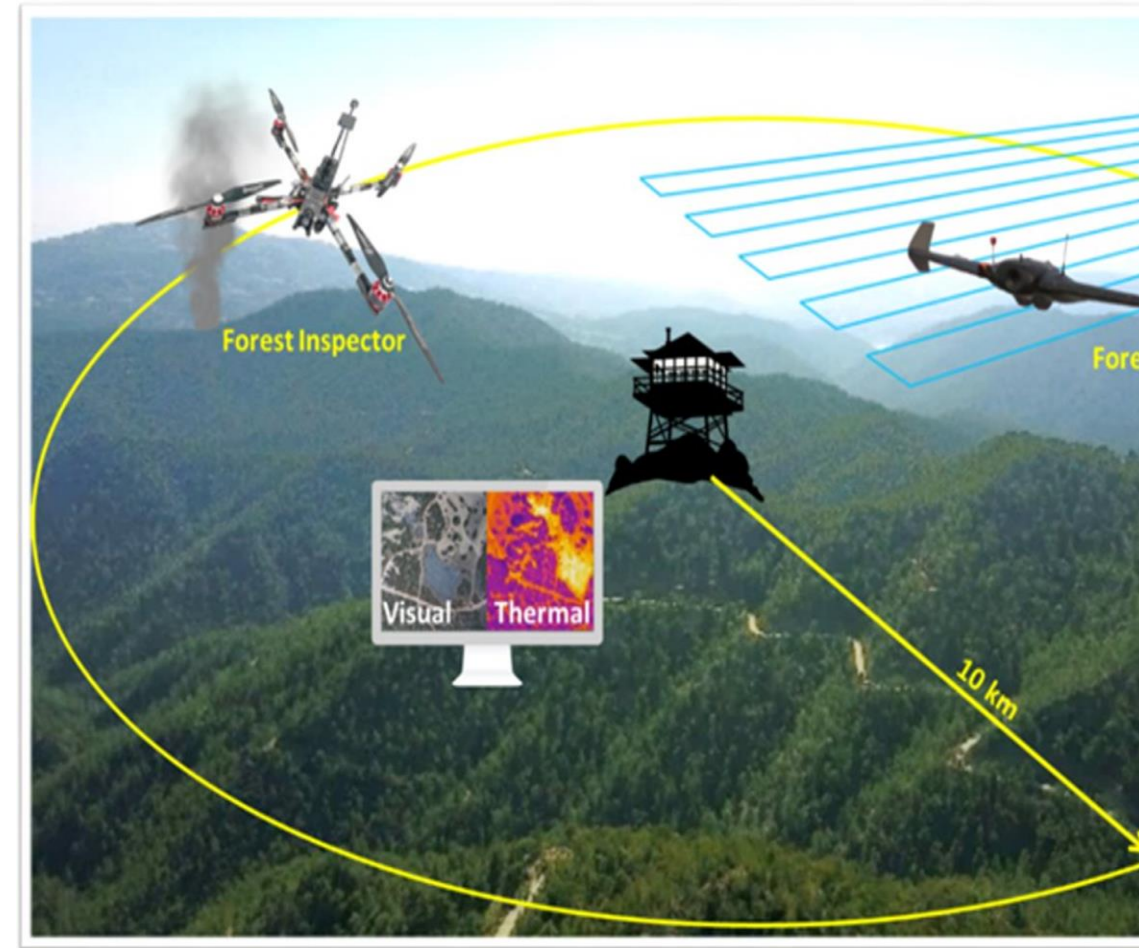
Forest fires prevention & protection.

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:

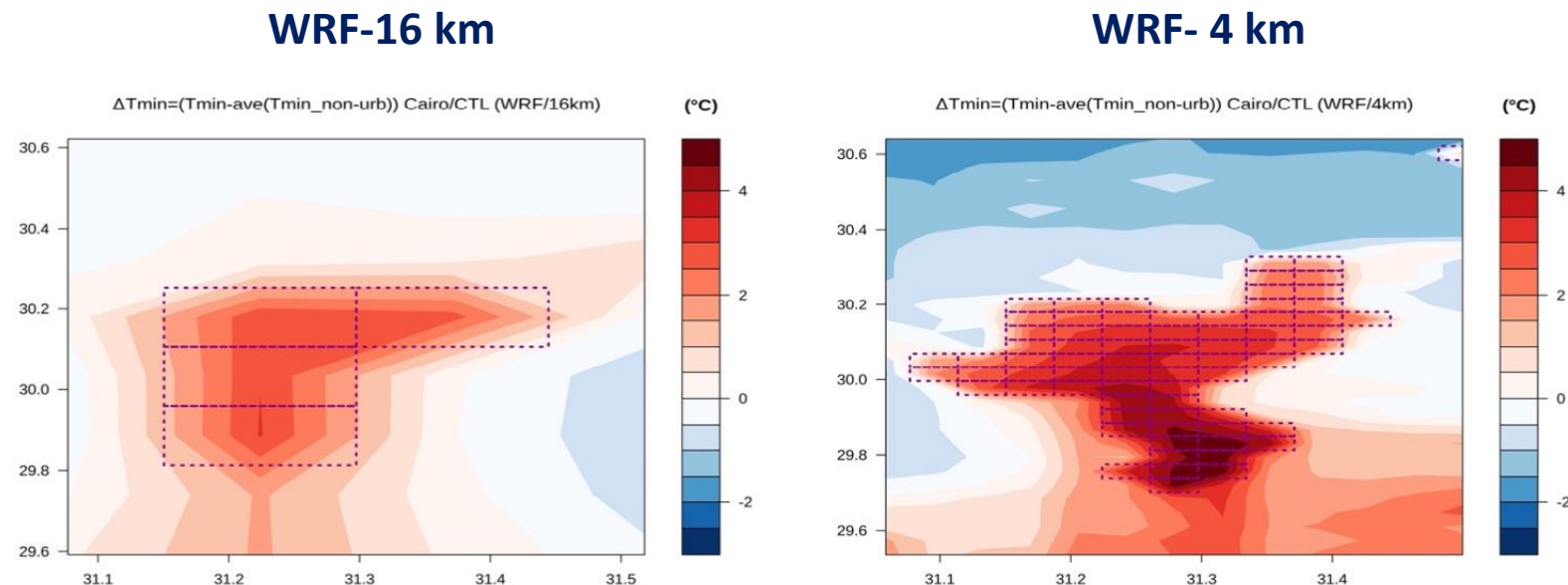
Most detailed modeling & Monitoring of impacts is essential

- 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.

Need for high-resolution climate data: Impact of extreme floods

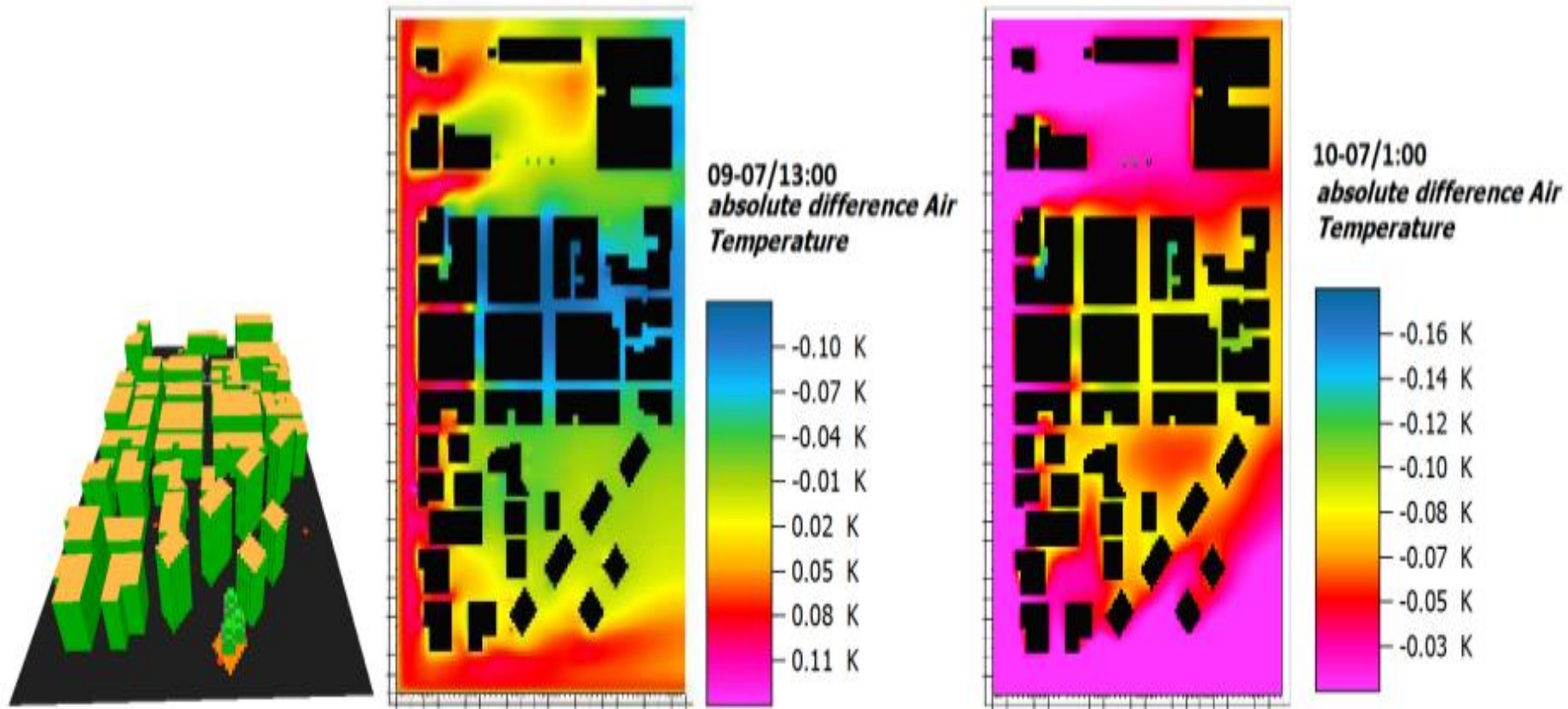


Dam
50% full



Flooded area in
Limassol for a 1-
in-100-year
rainfall event
under climate
change

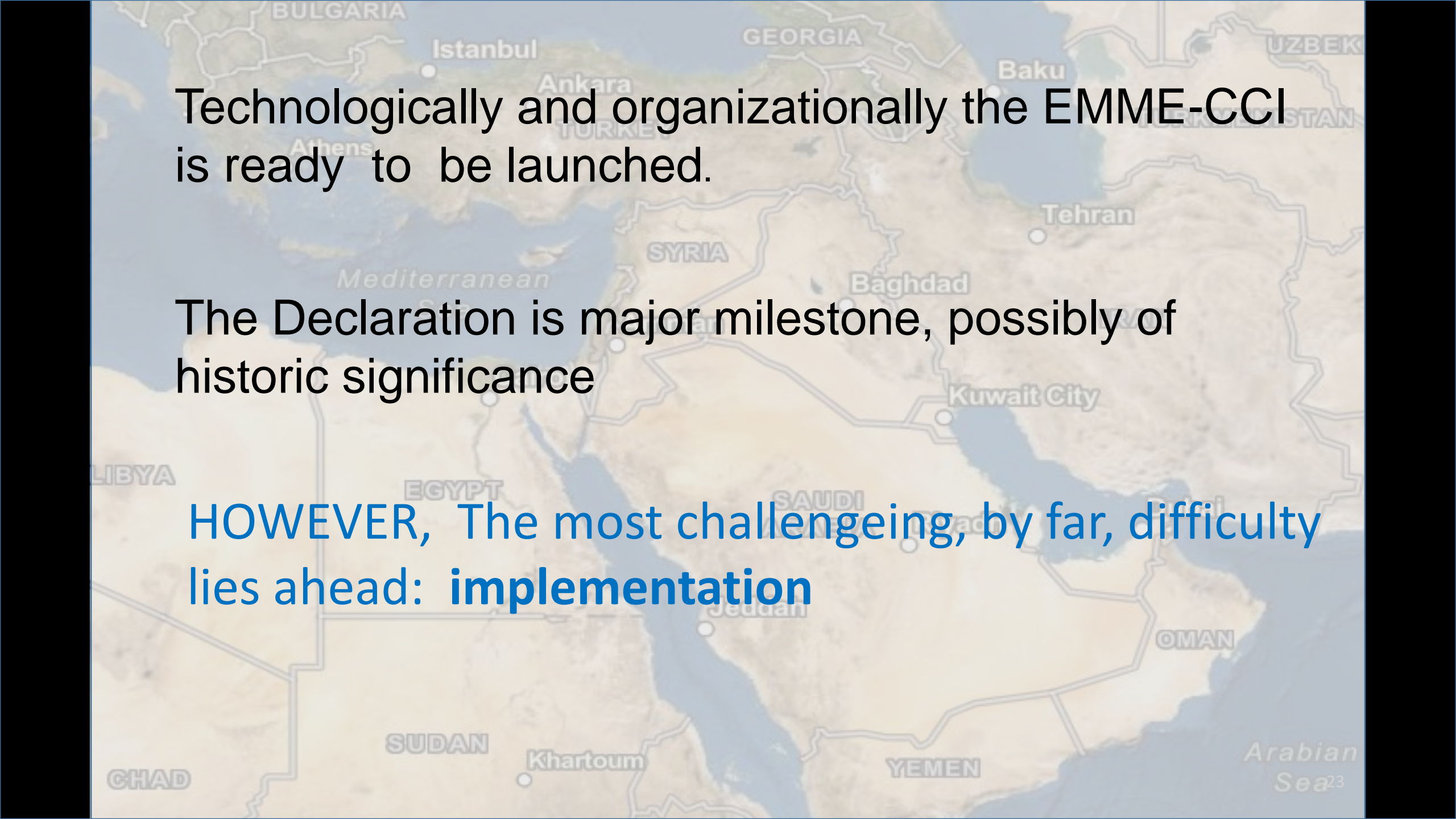
Detailed Planning for Urban development: A neighborhood in Beirut



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.

A map of the Middle East and surrounding regions, including parts of Europe, Africa, and Asia. Major cities like Istanbul, Ankara, Baku, Tehran, Baghdad, Kuwait City, Jeddah, and Khartoum are labeled. The Mediterranean Sea and Arabian Sea are also shown. The text is overlaid on the map.

Technologically and organizationally the EMME-CCI is ready to be launched.

The Declaration is major milestone, possibly of historic significance

HOWEVER, The most challenging, by far, difficulty lies ahead: **implementation**

THANK YOU!



C. N. PAPANICOLAS