

Roundtable Takeaways

How Can the Middle East and North Africa Adapt to Climate Change?

School of Government, Luiss Guido Carli, Viale Pola 12, Aula 12

26 April 2023, 15.00 – 16.30 (CET)

Moderating:

- Prof. Virginie Collombier, Mediterranean Platform, Luiss School of Government

Speakers:

- Matthew Brubacher, Independent Consultant specialised on Climate Change in Fragile States
- Carol Chouchani Cherfane, Director of the UN-ESCAW Climate Change and Natural Resource Sustainability Cluster and of the Arab Centre for Climate Change Policies in Beirut
- Nadim Farajalla, Program Director for Climate Change and Environment at the Issam Fares Institute for Public Policy and International Affairs, American University of Beirut

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Introduction

Extreme events such as heatwaves, severe precipitation and droughts are all expected to increase in a warming world. In the Middle East and North Africa (MENA), climate change is expected to result in sea level rise and an increase in heat extremes, which will put intense pressure on already scarce water resources. The time of “easy water” will be over this decade for most MENA countries. In turn, the region is set to experience significant challenges to regional food security, livelihoods and public health.

What are the hotspots of climate vulnerability in the region? How are states and local communities reacting to this change and preparing to address the major challenges of water and food security? How can MENA countries transform their economies and development models, with what political consequences at the regional level?

Climate Projections and Vulnerability Assessment

Carol Chouchani Cherfane

Overview of changes

- Intergovernmental Panel on Climate Change reported that mean temperature is increasing, and that precipitation is changing with more around the equator and less in the MENA region.
- RICCAR is an initiative that assesses climate change and its impact on water resources and socio-economic vulnerability in the Arab Region.
 - o It conducts research that identifies priorities to mitigate climate change at the local and regional levels.
- The temperatures and changes are linked. For example, changes in the Mediterranean affect what is happening in North Africa, changes in the Indian Ocean affect what is happening in Oman.

Scenarios of change and their impact on the vulnerable

- There are different scenarios: a more optimistic one of moderate emissions of 4.5 and a more pessimistic one with high emissions 8.5.
 - o It's very important to think about which scenario is being examined when you look at the impacts.
 - o In a low emissions scenario, we will see a 2-3°C increase by the end of the century. In a high emissions scenario, this goes up to a 4-5°C increase.
 - o Precipitation trends are also projected to decrease until the end of the century, with some areas expected to exhibit an increase in both intensity and volume.
- We created a new indicator to project the number of very hot days, where the temperature is above 40.
 - o In a low emissions scenario, there can be up to 60 days per year, and in a high emissions scenario up to 80 days per year.
- An increase in both heat and humidity is difficult for human health, particularly the elderly, young children, and those working outside.
- The information RICCAR produces could be used to understand changes in temperature and water availability in different seasons.
 - o This can be used for planning water management in the region.
- We must differentiate between extreme water-related disasters such as floods and droughts.
 - o Displacement, however, is most prominently linked to conflict.

- To measure vulnerability, we also conduct assessments that measure the capacity of place to adapt to climate change.
 - o Climate change can cause significant stress on people's livelihoods, where they rely on agricultural employment if adaptive capacity measures are not put in place.

Priority issue

- Adaptation for climate finance is the priority. There has to be more finances allocated for water and not just for mitigation.

Mitigation vs. Adaptation Strategy

Nadim Farajalla

Impact of changes on agriculture

- The rise in temperatures will cause increase the life span of certain insects.
- This means that crops will not produce the same yield merely due to reduced precipitation but also due to increased pest infestations.
- Higher temperatures also mean less animal and poultry production. This will affect the production of dairy and meat products.
- There will be a reduction in fishing and biodiversity.
- Some crops can grow well in the heat but not bear fruits.
- This means that the cost of production will rise.

Impact on the tourism sector

- The rise of temperatures will decrease the amount of snow on the mountain tops.
- High temperatures will dissuade people (especially Europeans) from visiting during the holiday season and the summers will be too hot for them.
- The increase of forest fires has also been an issue across the Mediterranean in Algeria, Morocco, Tunisia, Lebanon, Turkey, Syria.

Impact on the health sector

- Health is related to everything else. The elderly and the young will face more respiratory problems and cardiovascular problems, which risks stressing the health sector, due to its limited capacity.

Impact on infrastructure

- Infrastructure along the coastlines will suffer from hard-hitting storms and floods. This includes buildings, roads, electricity pylons, communication networks, and ultimately, the ability to produce power.
- Communities living around the coast will be devastated.

Impact on society and the environment

- In a study we conducted for UNICEF and the WFP, we predicted that poverty would increase due to the reduction in livelihood diversity.
 - o Women and children are especially vulnerable.
- Food security will be impacted.
- Population growth is the under-addressed elephant in the room.

- There will be erosion, due to forest fires, wind erosion, or floods.
- This will lead to competition of people on resources of water and land, and possibly conflict.
 - o The situation becomes more difficult when you add the factor of displaced people also being in this competition for resources.

Concluding thoughts

- We should finance adaptation and improve knowledge and nature-based solutions. They are low cost and high impact.
- Governance and accountability need to improve.
- We need to move away from divergence and coordinate policy making to address climate change.
- Behavioral change among our populations should also be a goal.

Critical Policy Choices and Approaches

Matthew Brubacher

Discourse on efforts countering climate change

- A 1.5°C is inevitable and there are now slogans to maintain a positive momentum such as “every degree matters” and “let’s keep it at 1.5”.
- We have passed a very important benchmark and need to prepare for what is coming.

On water in Libya

- In Libya, most of the people get their water from the man-made river which pumps water from the deep aquifers and then it flows by gravity to the cities in the north.
- There is an important question to ask in the country: how much water is left in Libya?
- In fragile states, people are locked in the tyranny of the immediate. They cannot think or plan 5-10 years ahead and if they can, they would not be able to act on it due to their circumstances.
- This mean that it might be necessary to guide them through a long-term process using steps that they may not immediately realize are part of this process.

Water stress and scarcity

- Saudi Arabia exhausted their aquifers in the 1980s but because of their wealth, they can invest in desalination.
- On the other hand, a country like Yemen, which will run out of fossil water during this decade do not have that capacity.
- Libya had some desalination plans but they all fell apart.
- A lot of the other countries do not have the capacity to desalinate water.
- It is very difficult for governments to issue a sustainable management policy for water. Everyone who uses more water gets more of it even if its price increases.
- It’s important for policy makers to start preparing for day zero because it will be very difficult to avoid it.
- The dominant driver is not water scarcity but socioeconomic demand, such as population and economic growth.
- A lot of the countries that face scarcity would continue to face it without climate change.
 - o The solution is better water management.
 - o In a country like UAE, water has a high tariff, and the infrastructure is strong; by contrast, in Libya, there is a low tariff on water and infrastructure is poor due to low maintenance.

Food security

- Climate change will impact agricultural production but many countries such as Tunisia, Algeria, Libya, and Egypt are net importers of food.
 - o However, when different crises such as the COVID-19 pandemic or the Ukraine War strike, many difficulties arise.
 - o Countries like Libya and Algeria were able to deal with crises like these, but other countries become much more vulnerable.
- One solution that is undermined is intraregional trade.
 - o In Africa in general 54 percent of the trade is intraregional, whereas in North Africa this figure drops to less than 3 percent.
 - o Countries in North Africa perpetuate this by looking more North-South than East-West and if they lower these barriers, their resilience to deal with crises can be much greater.

Improving Adaptivity

Carol Chouchani Cherfane

- Policy needs to be informed by science.
- Having a common science base could improve cooperation and decision-making on climate change.
- RICCAR now offers this science base to allow conversations among experts on common solutions.

Nadim Farajalla

- There is no policy coherence or consistency in the region as each political official comes with their own agenda.
- Comparative studies can be done to show policy makers the successes of certain policies.

Matthew Brubacher

- You can do a lot in terms of integrated water management at the local level in fragile states because they're more fragmented.
- Subsidies on the energy sector need to be changed as they crowd out any kind of private investment or power producing.
- The GCC countries are not yet investing in renewable energy, and there needs to be more of a political will to implement real reforms.