

Building resilience to hazards in the MENA region through enhancing use of weather and climate information

**A summary of the WISER MENA Scoping Report
August 2022**



Weather and Climate in the Middle East and North Africa

The Middle East and North Africa (MENA) region already experiences a range of weather and climate hazards, which expose huge numbers of vulnerable people to potentially deadly impacts.

These hazards will increase in frequency and intensity as the climate changes, so being able to prepare through the use of timely, relevant and accurate forecasts can:

- save lives and livelihoods
- strengthen investment and policy decisions
- build resilience

The UK Government's Foreign, Commonwealth and Development Office (FCDO) is investing £5 million over the next four years to support this objective through the Weather and Climate Information Services (WISER) MENA programme, run by the Met Office, the UK's National Meteorological Service.



Insights from WISER MENA Scoping Report

An evidence gathering phase for the programme looked at key needs and opportunities for improved weather and climate information across the MENA region. Initial target countries included: Egypt, Iraq, Morocco, Palestine, Syria and Yemen following FCDO guidance on geographic focus for the programme.

Through a combination of literature reviews and key informant interviews, the main insights from this included:

- Extremely high temperatures, limited groundwater and rainfall are already experienced in the MENA region. There has been a substantial escalation in the number of meteorological, climatological, and hydrological disasters in last two decades.
- Poverty, state fragility, internal displacement, and conflict in some countries in the region have compounded the increased vulnerability and exposure of populations to the impacts of climate hazards.
- MENA is already one of the most water stressed regions in the world and changes to the climate will exacerbate this further. Water scarcity is compounded by the underlying geopolitical struggles around access to this vital resource, with relevant impacts on agriculture/food security, health, energy, conflict, and migration within and between countries.



Insights from WISER MENA Scoping Report

- Heat stress represents a key hazard, which does and will continue to make some areas uninhabitable, and impacts health and productivity for those in other areas who don't have access to cooling.
- The climate of the region and increasing urbanisation means that the most populated areas are by the sea or rivers, putting a disproportionate percentage of the populations in regions that will experience of sea level risk.
- There are estimated to be over 10 million internally displaced (IDPs) in the MENA region who are likely to be living in precarious conditions which make them highly vulnerable to the impacts of climate change.



Using weather and climate information to build resilience

- The understanding of how weather and climate information could be used to inform actions which address the impacts of extreme weather seems to be highest within the humanitarian sector, where plans for Forecast Based Action (which involves taking action ahead of a hazard based on a forecast) are evolving among a range of actors.
- Users in agriculture, food security, water, energy, and a range of other sectors could also benefit from integrating weather and climate information into their decision making as it will enable them to plan and prepare for unexpected events and changes in the weather.

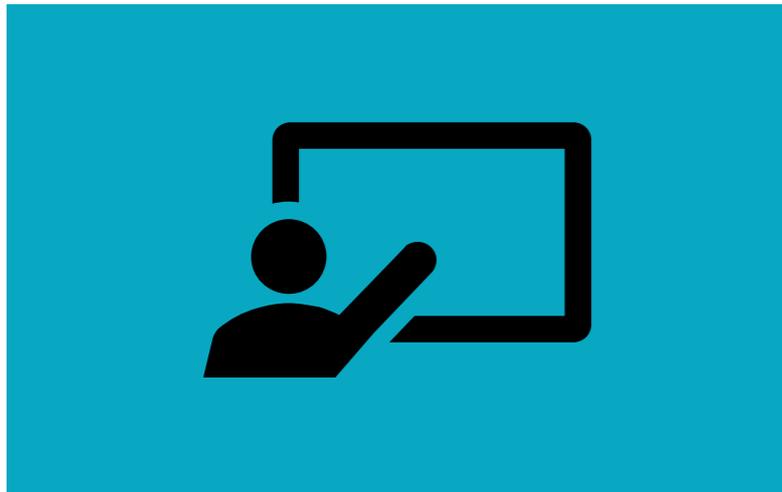


Weather and climate information provision in MENA

- National Meteorological Services (NMS) operate in most MENA countries with exceptions in those affected by civil war (e.g., Yemen and Syria). Enhanced dialogue between users and producers of climate information, through coproduction, could support more useful, usable, and used services where there is appetite to do so and resources available.
- There is limited evidence of short-range forecast verification/accuracy being assessed. This is a key area that needs to be understood to ensure integrity and assess the viability of developing early warning services and forecast-based financing in the region.
- The provision of outlooks for the season ahead could transform the use of weather and climate information by providing a longer window of time to act. Whilst seasonal outlooks are available, they could be made more usable if they were more understandable and tailored to the needs of different users.
- There are numerous examples of national and regional initiatives to enhance weather and climate information already ongoing in the MENA region, and there is scope for these to be supported and/or strengthened by WISER MENA.



Thematic areas of opportunity for WISER MENA



Build understanding of, and demand for weather and climate information in the MENA region

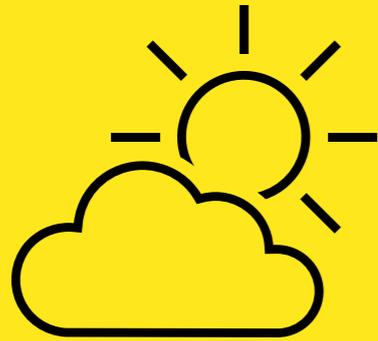
Raising the profile of weather and climate information within the region has the potential to improve a country's resilience and support its adaptation. The value of coproducing weather and climate information between those who produce it and those who use it could be illustrated, and support provided for co-production. Understanding could also be developed about short range, sub-seasonal and seasonal forecasts and how they can be used.



Build resilience to extremes by supporting vulnerable communities

The humanitarian community is well placed to provide support to those most at risk from the impacts of weather and climate change. Through WISER MENA, support could be provided to humanitarian organisations to implement Forecast Based Action plans and to obtain the weather and climate information needed to underpin these.

Thematic areas of opportunity for WISER MENA



Enhance seasonal forecasting in the region

WISER MENA could support Regional Climate Centres in enhancing the production, dissemination, and assessment of seasonal forecasts. This could include the development of prototype forecasts that aim to improve forecast accuracy, co-production with key users to tailor the format of distributed forecasts for maximum uptake, and the production of robust methods for assessing the performance of new and existing outlooks.



Support to other weather and climate service initiatives in the region

- Provision of technical assistance
- Scientific support

Next Steps

WISER MENA is currently in its inception phase, which included the production of the Scoping Report.

The programme will further consult with regional stakeholders to test and update evidence and assumptions on regional needs.

The process of consultation will enable an initial set of activities to commence in the second half of 2022.



For the full ‘WISER MENA Scoping Report: Opportunities for improved weather and climate information in the Middle East and North Africa’, please visit:

<https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/business/international/wiser/wiser-mena-scoping-study-external-v2.pdf>

If you have any questions about the WISER MENA programme, please contact wiser@metoffice.gov.uk

