

Main climate risks in the MENA region

Food security



Rising temperatures over all seasons, increased evapotranspiration, and, in some locations, more variable rainfall, will contribute to greater drought risk and harvest failure.

Agricultural production is constrained by limited water, temperature and suitable arable land. By the 2050s, this will be exacerbated to increase crop water stress, drought risk and harvest failure.

Shorter growing seasons in many areas is expected. This will be especially acute in already vulnerable agricultural systems that experience high temperatures in the present day.

Greater reliance on food imports will leave food systems vulnerable to price volatility in global markets, potentially raising food prices.

Increasing reliance on food imports also creates vulnerability to climate impacts on agricultural production in global breadbaskets.



Water security



Increasing temperatures and less or more variable rainfall leads to increased heat stress. This will raise human and animal demand for water.

Increasing demand for irrigation to maintain some agricultural production is a significant water stressor in the region.

Rising temperatures will impact springtime snowmelt which feeds many key rivers, decreasing freshwater availability.

Climate change in combination with poor water management and degradation of natural water stores, will reduce water supply.



Cities and infrastructure



Water demand and sanitation services will increasingly come under pressure as urban areas continue to grow.

Rising temperatures will reduce water supply and expanding urban areas will further increase water demand.

Extreme heat events place significant stress on power generation and transmission, roads, and other critical infrastructure, creating knock-on health and economic consequences.

Increased demand on energy for artificial cooling is expected where temperatures are above human tolerable limits of more than 50°C.



Health



Rising temperatures will increase heat stress, for example outdoor labour productivity is likely to be reduced in summer months, particularly where access to artificial cooling is limited.

Dust storms will remain a continued threat to human health with associated air pollution.

High summer temperatures and humidity are already a health issue in the region. Climate change will exacerbate this, threatening basic habitability of some areas, where outside conditions become life-threatening.

Demographic trends in the region such as an aging population and urban migration, combined with many workers working in unregulated employment, will mean that the poorest and most vulnerable will be disproportionately affected by increased heat stress risk.



Coasts



As sea levels rise and coastal storms increase with climate change there will be greater risks to cities and infrastructure situated in coastal areas, such as coastal flooding, inundation and erosion.

Intrusion of sea water with rising sea levels will increase salination of agricultural land and groundwater degradation.

Rising sea temperatures will have further impacts on marine life and present risks to the viability of fisheries and aquaculture.

