

Adaptation to a Changing Climate in the Arab World

Fact Sheet

- Climate models show that over the last 30 years temperatures in the Arab region have been increasing 50% faster than global averages.
- 2010 was the hottest year since record keeping began in the 1800s, with 19 cities around the world setting new records in high temperatures. Five of them were in the Arab region.
- The Intergovernmental Panel on Climate Change identifies the Middle East and North Africa region as the region most severely affected by climate change, particularly because the effects will accentuate already severe water scarcity. 90% of people in the Arab region in 2009 agreed that climate change is occurring and is largely due to human activity. The already water-scarce region may not have enough water to irrigate crops, support industry, or provide drinking water.
- Climate change will affect most of the 340 million people in the Arab region – 100 million of whom are poor and least resilient to these changes. Over the past 30 years, climate disasters affected 50 million people in the Arab region, with a reported cost of US\$11.5 billion, although this estimate is clearly low because the costs of damages are reported for only 17 percent of disasters and rarely capture the suffering that follows loss.
- The Arab region will remain predominately arid, with some areas becoming even drier and hotter, but rainfall patterns will change, and the increase in flooding events already being observed is likely to continue in the future. In a region ranging from southwestern Algeria to western Egypt, no rain at all was observed during the 20th century.
- Environmental challenges in the Arab world include water scarcity, with the lowest freshwater resource endowment in the world; very low and variable precipitation; and excessive exposure to extreme events, including drought and desertification. Climate Variability of Arab countries will increase and lead to unprecedented weather extremes. Temperatures will reach record highs in many places, and there will be less rainfall. Water availability will be reduced because of lower precipitation, increased temperatures, and a growing population.
- The record high temperatures of 2010, the warmest year in the Arab region since the late 1800s, were broken by a new record in 2011. For Morocco and Mauritania, a temperature increase of about 5°C is projected by the end of the century, with a maximum during the summer. This is related to a decrease in soil moisture attributable to decreasing rainfall and consequently an enhanced risk of droughts.
- The data shows a steady increase in the number of flash floods, with more than 500,000 people affected in the 2000s compared with only 100,000 in the 1990s. Flash Floods are up across the Arab region due to more intense rainfall events – affecting 2x the number of people over the past 10 years.

- In 2006, flooding of the Nile River Basin affected 118,000 individuals – and led to 600 flood-related deaths. In the Jordan River Basin, 2008 was the 5th consecutive year of drought; access to water is limited there for most of the day. Floods may become more frequent as a result of climate variability—leading to heavy economic losses and spikes in food insecurity. Sea levels at 0.5 meters higher may flood 30% of Alexandria, Egypt – displacing 1.5 million people and causing US\$30 trillion in damages. June 2010's Cyclone Phet was the 2nd-strongest tropical cyclone ever, killing 44 people and damaging US\$700M in Oman.
- 40% of jobs in the Arab region are derived from Agriculture. By 2050 production may decline due to less rainfall and hotter conditions. ~100 fruit, crop, and livestock species were 1st domesticated in the Arab region. 30% could face extinction from warming of just 1-2°C. Tunisian farmers are projected to lose US\$700 million from climate change by the year 2050. By 2050 it is estimated that climate change will reduce water runoff by 10%, increasing pressure on the Arab region's water deficit.
- Rural nonfarm households—the poorest group in Yemen—are projected to lose US\$3.5 billion due to climate variability and climate change. Over the next 30-40 years, climate change is likely to lead to a reduction in household income: down 7% in Tunisia to 24% in Yemen.
- Tourism in the Arab region – 3% of total GDP (US\$50billion) – will be affected as climate change threatens fragile cultural and eco-sites.
- In northeast Syria, the current multiyear drought has forced hundreds of thousands of people to move to the outskirts of major cities, leaving their livelihoods and social networks behind. In countries such as the Yemen, one of the least developed countries, women and children travel farther and farther distances to fetch dwindling water supplies. This additional labor often forces girls in rural areas to drop out of school, which deprives them of lifelong skills. They urgently need help in preparing for drought, managing water resources, addressing the impacts from rising sea levels, improving agricultural productivity, containing disease, and building climate-resilient infrastructure.
- Arab countries have biodiversity and ecosystems of global importance that are at risk from climate variability and climate change. National governments have a key role in developing climate change strategies and in collaboration and cooperation among Arab countries. Frameworks exist on how Arab countries can bring climate change risks and opportunities into development activities.
- Governments have a critical role to play in making climate change a national priority and leading the effort to create resilient countries and communities.
- An investment in national strategies for managing the effects of climate is an investment in inclusive and sustainable, long-term development.