

## **Factsheet**

# **Overview of Disaster Risk Reduction in the Arab Region**

## **Background**

The total population of the Arab region is more than 357 million. Over 55 % of the Arab population lives in large cities and small towns. In some Arab countries the percentage of people living in urban areas is as high as 80% of the total population. The urban population is also growing at a faster rate than the overall growth in population. The overall population growth rate is amongst the highest in the world. Between 1970 and 2010, the urban population of the Arab region increased by more than four times and will probably double again over the next 40 years<sup>1</sup>.

Arab urban areas are a major source of economic and human development due to the opportunities they provide in the form of employment, education, health, communications facilities, transportation, trade and tourism. A number of Arab cities and towns hold major world cultural heritage sites and are a source of cultural identity.

## **What are the risks?**

During the past 30 years, the Arab region was affected by more than 270 disasters, resulting in more than 150,000 deaths and affecting approximately 10 million people<sup>2</sup>. The Arab region often experiences disasters from flash floods, droughts, storms, sandstorms and earthquakes. Climate change induced sea-level rise also pose a threat to many important urban centres in the region.

Seismic activity is a risk in the Arab region. For example, the Jordan rift valley system places a number of countries (Jordan, Lebanon, Palestine and Syria) at high risk from earthquakes. Similarly, some countries in the Maghreb region (Algeria, Morocco and Tunisia) have been exposed to seismic activity in the past. Devastating earthquakes have occurred in Palestine (1927), Lebanon (1956), Morocco (1960), Egypt (1992) and Algeria (2003).

Climate change has an impact on the frequency and intensity of extreme weather events. High variations of rainfall with an increase in flood events impact the Arab region. Severe floods affected Saudi Arabia and Yemen from 2008 to 2009 with an estimated total economic damage of approximately 1.3 billion USD<sup>3</sup>. In January 2013, the winter storm that hit Palestine caused more than \$50 million in economic damages and severely impacted the agricultural sector. In addition, several of the Arab region's major cities are in low-lying, coastal zones. A rise in sea level could be devastating for many of the region's densely populated coastal cities. Tropical cyclones pose a hazard in the Arab region. In 2007, the Cyclone Gonu struck the Arabian Peninsula, and especially Oman. Until then, the region was not considered prone to cyclones.

Summers have also become hotter and dryer. At the same time rainfall has decreased, leading to more intense and longer droughts. Drought risk is a major factor in the region, with GDP and in particular agricultural production affected on a regular basis. For example, Jordan and Syria had the worst recorded droughts in many years, during 2007 and 2010. Low precipitation which causes an increased lack of water along with restricted arable land resources leaves the region highly at risk to food insecurity<sup>4</sup>.

---

<sup>1</sup> United Nations Human Settlements Programme (UN-Habitat), 2012, *The State of Arab Cities 2012 – Challenges of Urban Transition*, UN-Habitat, Nairobi

<sup>2</sup> Source: EM-DAT ([www.emdat.be](http://www.emdat.be))

<sup>3</sup> Source: EM-DAT ([www.emdat.be](http://www.emdat.be))

<sup>4</sup> During the 2007-2008 droughts in the Syrian Arab Republic, 75% of the country's farmers suffered total crop failure, and the livestock population was still 50% below the pre-drought level more than a year after the drought ended (*Global Assessment Report on Disaster Risk Reduction 2011*, United Nations, 2011).

## Why cities are at risk

Rapid urbanisation has pushed people to settle in potential danger zones such as on unstable hills, flood-prone lowlands or coastal territories. Due to a lack of appropriate housing, people move into unsafe buildings, which do not withstand earthquakes or strong storms.

**Natural hazards** in the Arab regions affect cities in different ways:

- **Flash floods:** Are a growing urban hazard because sealed surfaces (asphalt streets, buildings, compacted earth etc.) do not absorb water. Inadequate drainage systems also increase risks of flooding.
- **Landslides:** Heavy rains or seismic activity are a danger to residents living in homes on/below steep slopes or cliffs.
- **Earthquakes:** Non-engineered and poorly-built buildings are unable to resist strong seismic shocks and may collapse. Most earthquake deaths are due to building collapses.
- **Tsunami:** Some areas in the Arab region are located along coasts where tsunamis could be a hazard. Buffer zones, early warning systems and evacuation plans are essential.
- **Droughts:** These can endanger food supply and often result in migration to urban areas, putting pressure on housing, services and employment opportunities.
- **Sandstorms:** These are among the most severe and unpredictable natural hazards. High winds lift sand into the air - releasing a turbulent, suffocating cloud of particulates and heavily decreasing visibility in a few of seconds. Nearly all sand storms are capable of causing property damage, injuries, and deaths.
- **Tropical cyclones:** Urban areas might be exposed to cyclones, strong winds and heavy rains. Therefore, wind resistant construction, early warning systems, adequate information communicated to households, and evacuation plans are measures that need to be in place.

## What are the drivers of disaster risk?

There are several factors which have an impact on disaster risks:

**Rising urban populations and an increased density** is a significant risk driver when the quality of housing, infrastructure and services are insufficient.

**Weak governance:** States with a centralised governance system can result in limited access to funds and authority at the local level, thus hindering local DRR action. Poor participation of communities in decision-making on DRR matters can also increase their vulnerability towards natural hazards.

**Poor urban planning:** Often urban expansion occurs without adherence to legal frameworks, building codes, or land use plans. Often an urban plan does not exist or is outdated. Urban development requires appropriate steps to manage risk and emergency plans to enforce regulations and building codes on the basis of realistic standards.

**Lack of available land for low-income populations:** The majority of the urban poor are exposed to hazards because they live on unsafe sites.

**Inappropriate construction quality:** Regulation and building codes should set minimum standards for safety, including resistance to natural hazards. Building practices and the enforcement of regulations are necessary for safe homes, schools, hospitals and infrastructure.

**Concentration of economic assets:** Economic assets often are concentrated in large cities. Disasters therefore, can have enormous effects on the local and national economy. A resilient city is much less exposed to economic losses.

**Ecosystems decline:** As a result of unplanned urban development and economic growth, many ecosystems have been considerably transformed and exploited. For example, deforestation has led to erosion, exposing people to landslides caused by heavy rainfalls.

### What is disaster risk reduction?

UNISDR defines disaster risk reduction (DRR) as ‘the concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events’<sup>5</sup>.

DRR covers analysing and managing hazards to reduce vulnerability to disasters. It includes actions that strengthen preparedness, prevention and mitigation. Community participation is essential to foster resilience.

DRR connects with climate change adaptation and poverty reduction approaches. Effective DRR decreases disaster losses, protecting the economic, social and cultural assets of a community and country.

### What are some of the achievements so far?

In order to reduce impacts of disasters and to be better prepared, a number of achievements have been attained in the Arab region:

**Political commitment** has increased. In 2012, Heads of Arab States adopted the Arab Strategy for Disaster Risk Reduction 2020, under the auspices of the League of Arab States. The Strategy had been adopted by the Council of Arab Ministers Responsible for the Environment (CAMRE) and the Socio-Economic Council of the League of Arab States in 2011. This blue print is currently being translated into a framework of action to facilitate regional and national implementation.

In early 2013, the Gulf Cooperation Council (GCC) committed itself to take steps to develop a risk reduction road map. The Secretary-General of the Cooperation Council for the Arab States of the Gulf has called for strong regional commitment towards development of a disaster risk reduction strategy to strengthen the resilience of nations and individuals to natural hazards.

**Awareness raising:** UNISDR has continued to promote the “Making Cities Resilient” campaign to support urban areas to become more resilient to disasters. Almost 300 cities and municipalities in the Arab region have joined the campaign (20% of all cities worldwide). The Mayors Handbook on “How to Make Cities More Resilient” was translated to Arabic and has been disseminated widely in the region. UNISDR provided a self-monitoring tool to all participating cities; the Local Government Self-Assessment Tool (LGSAT) assists local governments to assess DRR progress, and aids them in addressing gaps and challenges.

**Databases** to account for disaster losses have been established. A number of Arab countries have started to report on their disaster losses. This will provide a practical basis for informed risk analysis and the development of disaster risk reduction policies. The UNISDR supported disaster inventories ([www.desinventar.net](http://www.desinventar.net)) that enable countries to analyse disaster trends and their impacts in a systematic manner through the collection of historical disaster data. Nine out of the 22 Arab countries have either completed or initiated the development of national disaster loss databases. They include Djibouti, Egypt, Jordan, Lebanon, Morocco, Palestine, Syria, Yemen and Tunisia.

**Reporting:** A number of national partners drafted national progress reports on the implementation of the Hyogo Framework for Action (HFA). Algeria, Bahrain, Comoros, Djibouti, Egypt, Jordan, Lebanon, Mauritania, Morocco, Palestine, Syria, Tunisia and Yemen have provided progress reports in this regard. Cities began in 2012 to report on progress and challenges in reducing disaster risk locally through the Local Government Self-Assessment Tool.

<sup>5</sup> <http://www.unisdr.org/we/inform/terminology>

**Networks:** UNISDR launched a DRR Arab States coordination network as a community of practice to promote information sharing and joint action for DRR at regional and national level in the Arab States. It serves as a regional mechanism to discuss DRR issues among international partners working in/on Arab States to jointly plan implementation and monitoring of disaster risk reduction related activities.

**Knowledge sharing** is essential. UNISDR regularly supports the exchange of good practices and challenges in the region, including the implementation of the “Hyogo Framework of Action (2005-2015) – Building the Resilience of Nations and Communities to Disasters”. The “Regional Meeting to Advance Disaster Risk Reduction” held in April 2012 brought together experts from Algeria, Bahrain, Comoros, Djibouti, Egypt, Jordan, Lebanon, Mauritania, Morocco, Palestine, Sudan, Syria, Tunisia, Yemen and the United Arab Emirates, including important regional partners such as the Gulf Cooperation Council, the Arabian Gulf University and the Regional Centre for DRR Training and Research.

**Reviewing the Hyogo Framework for Action (HFA) and informing global consultations on HFA2 (post-2015 DRR Framework):** Lebanon and Algeria held national consultations of the Hyogo Framework for Action and developed recommendations for the HFA2. This is part of UNISDR's consultations efforts that are being undertaken around the world to develop a new global framework for disaster risk reduction post 2015.

## **Challenges for the future remain to be addressed:**

**National level coordination:** The ownership of disaster risk reduction requires further clarification at the national level. It is important to better define roles and responsibilities amongst national bodies to ensure that DRR is addressed comprehensively and effectively.

**Monitoring and baselines:** Development of reliable and standardised data collection, cost-benefit analysis, and disaster loss databases are required to effectively inform policy and decision makers. Local governments should make increased use of the Local Government Self-Assessment Tool (LGSAT).

**Implementation of cross-cutting issues:** Gender mainstreaming, cultural diversity, community participation and capacity building often fall behind. It is essential to collect gender disaggregated vulnerability and capacity related information in order to identify and better target DRR actions.

**Involvement of communities and local governments:** Creating strong linkages between the national level and the local levels is crucial. Often national governments establish useful laws and regulations, but local governments are not sufficiently informed or engaged in their implementation. Similarly, national planning and decision-making often fail to take into consideration the needs and capacities of communities and municipalities to implement DRR measurements.