

Annex II

Nomination form for cities and local governments to participate in the campaign

Please send the nomination form and the mayor's letter to isdr-campaign@un.org. Nominations will be accepted on an ongoing basis throughout 2010-11.

City / Local Government (Please indicate the year the numbers were provided.)
City name AQABA, JORDAN
Location (short description) The City of Aqaba is strategically situated at the crossroads of four countries and three continents; encompassing Jordan's entire coastline. The Aqaba Special Economic Zone (ASEZ) was governed through the enactment of the ASEZ law number 32 for the year 2000, which in turn created in 2001 The Aqaba Special Economic Zone Authority (ASEZA) that is the Authority entrusted to act as a regulator within its boundaries rendering the services process under a one stop shop policy. ASEZ is served by both a deep-water seaport and an International Airport. In addition, a network of modern highways connects Aqaba to the surrounding region. Part of ASEZA responsibilities, is to transform the Zone into an attractive green city and to promote Aqaba as an international tourism destination which in return will strengthen and diversify Jordan's tourism product. ASEZA also deployed a highly flexible Internet and telecommunications connectivity solution for its various business units across the Zone. For more information about ASEZ see website address (www.aqabazone.com).
Size (year) 375 Km2 (2001)
Population (year) 103,100 (2010) Population can grow up to 160,000 during tourism season
GDP . Since 2001, 16bnUSD were invested
Hazard type(s) Earthquake, flash flood, heat wave, sandstorms
Name of Mayor / Commissioner / Governor / Community leader Engr. Mohamed Saqer, Chief Commissioner. The Aqaba Special Economic Zone Authority (ASEZA) is associated with the Prime Minister, and has its juridical personality with financial and administrative autonomy. The Authority is administered by a Board of Commissioners, composed of six full time members including the Chief Commissioner. The Commissioners are appointed by a decision of the Council of Ministers upon the recommendation of the Prime Minister, provided that such decision is endorsed by a Royal Decree. Each Commissioner is responsible for a major area of regulatory or operational activity. The Aqaba Special Economic Zone Law simplifies all procedures, licenses, and approvals enabling the Authority to provide a business-friendly environment from one single location in Aqaba
Which part of the city administration will be the focal point for the Campaign? ASEZA Commission for Environment and Health Control
Contact details Focal Point
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Which local institutions will be engaged in the Campaign? (In addition to the local government.)

- | | |
|---------------------------------------|-------------------------------------|
| - Aqaba Governorate | - Aqaba Civil Defense |
| - Aqaba Water Company | - Jordanian Engineering Association |
| - Aqaba Development Corporation | - Aqaba Electricity Company |
| - Jordan Communication Company | - Crises Management Center |
| - Department of Health | - Jordan Seismological Observatory |
| - Department of Education | - Balqa Applied University |
| - Jordan Red Crescent – Section Aqaba | |

Major Disaster Risks (Please indicate major disasters that have occurred, prevailing hazards and vulnerable conditions.)

Seismic Hazard:

The Middle East region is tectonically and seismically active (Figure 7) due to the continuous interaction between the Arabian, African and Eurasian Plates. Within this tectonic framework the Dead Sea Transform (DST) fault system defines the western edge of the Arabic plate and forms a 1000 km long continental transform fault extending from the spreading centers of the Red Sea northwards through Jordan, Syria, and Lebanon towards the collision zone in southern Turkey. The Dead Sea Rift Valley which extends along the western border of Jordan is a continuation of the East African Rift Valley and the Red Sea and it defines the single most important geological feature of seismic significance within the country.

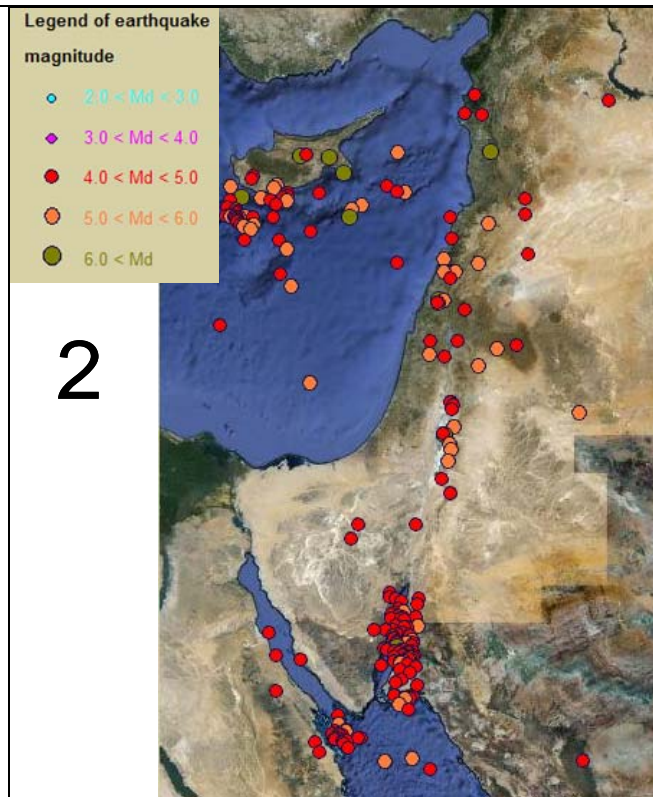


Figure 1: Earthquake events of magnitudes greater than 4.5 taking place during the period 1900-2008¹.

Jordan, as well as the surrounding nations is vulnerable to strong earthquakes due to the existence to a deep-seated transform fault, which marks the boundary between the Arabian and African plates. Earthquakes are reasonably common along the Rift Valley but become progressively rarer towards the interior deserts. Over 50 major earthquakes have affected the area in the past 2500 years, which have been responsible for the destruction of many historically known cultural centers. **Historical earthquakes have also caused tidal waves on the Dead Sea and landslides in adjacent areas.**

Some of the recent pronounced earthquakes occurred on 11th July 1927, magnitude 6.2 in which 242 people died (epicenter in Amman), 31 March 1969, magnitude 6.1 (Northern Red Sea), 22 November 1995, magnitude 7.1 located within the **Gulf of Aqaba, 90 Km to the SSW from the city of Aqaba**, and the 11th February 2004 earthquake epicentered 45 Km from the capital Amman. The final earthquake occurred at a shallow depth of 25.8 km and was strongly felt in Amman and the northern area of Jordan. Although no deaths were recorded from this earthquake, the initial panic and confusion it triggered suggest that more attention needs to be placed on preparedness and earthquake risk reduction.

¹ Data retrieved from the catalogue of the Geophysical Institute of Israel (GII): <http://www.gii.co.il>.

Flash Flooding:

Many developments in ASEZ are taking place on alluvial fans of wadis, which do not always have water, so the area will inevitably be hit by disasters when flood happen (Figure 8). In fact, a container company's yard at the mouth of Wadi Mabrak was struck by a disaster in February 2, 2006, causing a casualty. On the same day, the disaster hit the alluvial fan of Wadi Yutum and caused large scale sediment-related damage which included five deaths, the destruction of 18.5 km of water pipes and water production wells, and damage to the airport. Wadi Yutum is within the main development area in the Aqaba Special Economic Zone¹⁰.



Figure 2: Development area north of Aqaba city on the alluvial fan of Wadi Yutum.

The northern parts of Aqaba are the most vulnerable regions for flashflood hazards. These areas contain all the town residential expansion area, the Aqaba International Industrial Estate, the King Hussein International Airport, and all the northern light industries and logistics areas. The total development potential of that part of Aqaba required the construction of a rain water diversion flood channel along the new northern Aqaba airport parallel highway which connects with Dead Sea-Aqaba road (Figure 9). The total expected cost is JD 30 millions. The flood channel is near completion (96% of the work). Figure 10 shows an example of flood diversion channels in northern Aqaba.

² UNCCD 1999: United Nations Convention to Combat Desertification (Bonn: Secretariat for the Convention to Combat Desertification).

³ Bataresh, S. And H. Bruins (2008): The Impact of Drought on Agriculture in Jordan, Drylands, Deserts and Desertification Conference.

⁴ Disaster Risk Management Profile Amman-Jordan, 2008.

⁵ Executive Action Team-EXACT (1998): Overview of the Middle East Water Resources: http://www.exact-me.org/overview/images/p04_map.gif.

⁶ Disaster Risk Management Profile Amman-Jordan, 2008.



Figure 3: Flood diversion channel system of northern Aqaba city.

Drought:

Jordan is currently one of the world's four water poorest nations (JWA, 2008), with more than 90% of the country classified as desert to arid (semi-desert) areas (Figure 10). Approximately 80 percent of the country receives less than 100 mm of precipitation annually (Figure 11) (Nortcliff et al., 2008). Drought is defined as "...the naturally occurring phenomenon that exists when precipitation has been significantly below normal recorded levels, causing serious hydrological imbalances that adversely affect land resources production systems."² The potential for the occurrence of drought and associated adverse consequences for the economy and society are ever-present concerns in arid regions such as Jordan. Drought has been a prevalent feature of the Jordanian landscape during the latter part of the 1990s, producing serious socioeconomic and environmental consequences. In 2001 Jordan suffered eight successive years of drought, which led to international assistance by FAO (World Food Organization), WFP (The World Food Programme), USAID (United States Agency for International Development), the European Union, GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit GmbH) and others. According to Batarsh and Bruins (2008), the worst drought occurred in 1999³.

In 1999, severe drought cut rainfall in Jordan by up to 70% with declining rainfall levels and increased demand on water resources. The effective management of water resources is crucial for meeting the demands of the productive sectors and national households. During that period drought affected over 200,000 persons including small landholders who have lost their harvest and

their inputs, small-scale herders and landless rural households⁴.

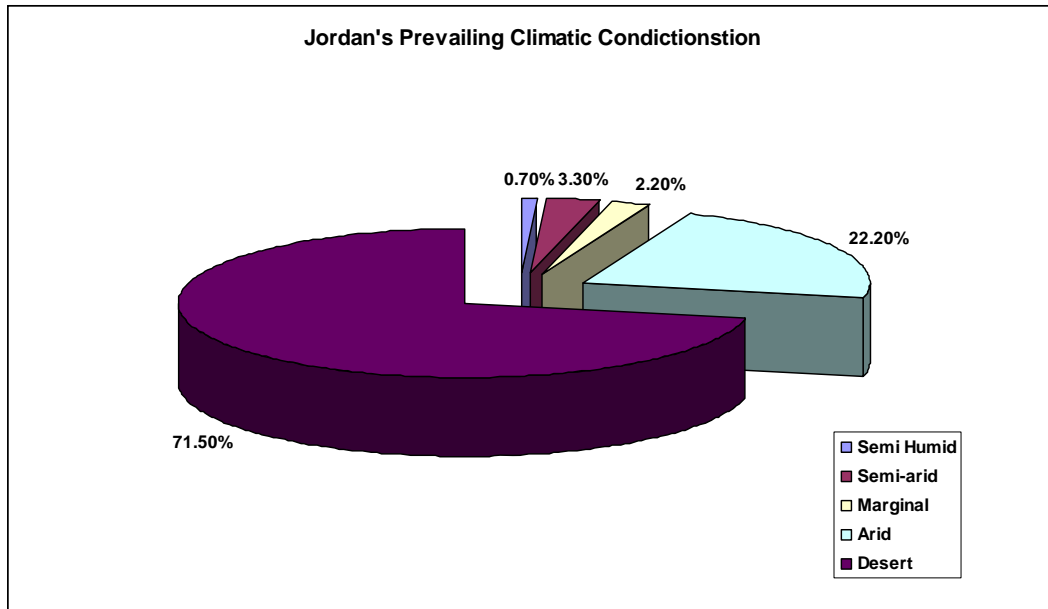


Figure 4: Jordan's prevailing climatic conditions.

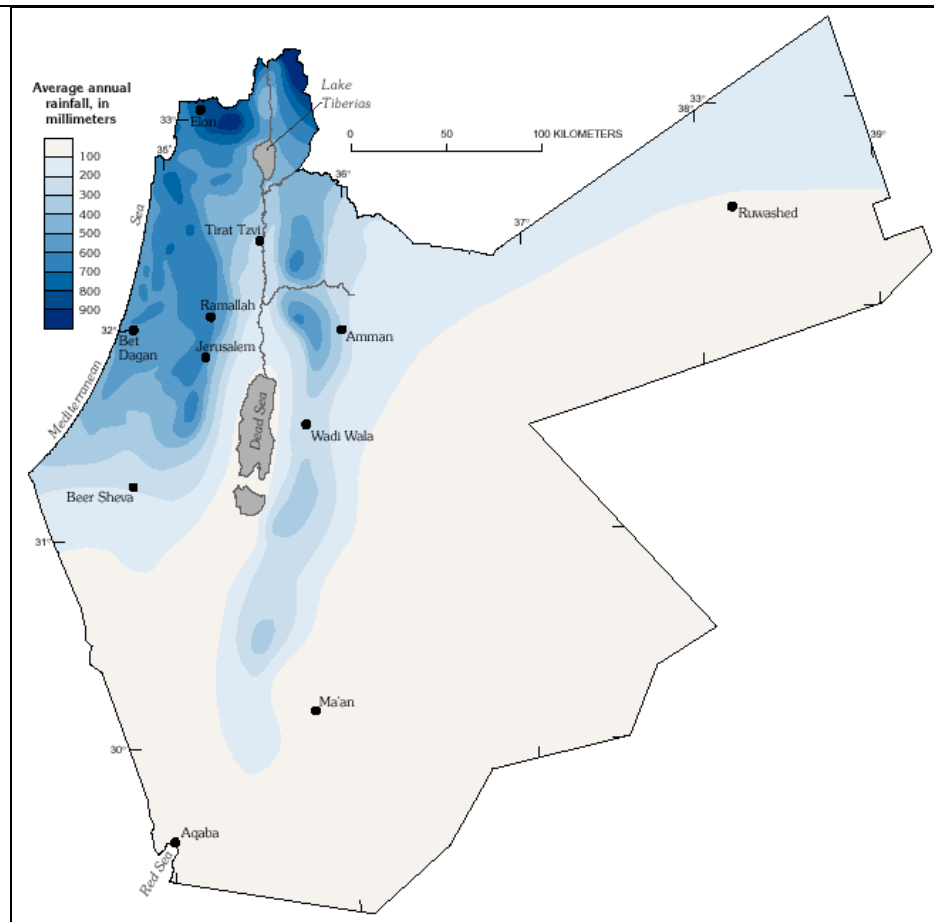


Figure 5: Annual rainfall distribution map of Jordan⁵.

Water shortage in Jordan has been compounded by recent droughts, over-exploitation of water resources and a high population growth which is another area of concern. The water use for household and municipal purposes per capita has decreased from 3600 m³ in 1946 to 160 m³ at the present time. Despite plans for additional water resources and the upgrading of the water supply infrastructure, the race between supply and demand will continue⁶.

The existing groundwater resources account for more than 60 million cubic meters per year, available for the purpose of domestic water supply for Southern Region of Jordan. The Al- Dissi water project also secures Aqaba demand for domestic and non-domestic demand.

Sandstorms

Sandstorms are fast winds loaded with grains coming from the soft sandy deserts; occur when the wind speed exceeds 5 meters per second.

Sandstorms may occur in the city of Aqaba in the autumn season from September to early spring in April.

Number of car accidents has been reported.

Steps taken towards disaster risk reduction:

UNDP is providing with the funding from ASEZA and the Swiss Development Cooperation, the technical support for the seismic risk assessment and the development of the framework for DRM master plan. UNDP already developed similar project in Amman with the Jordan Civil Defense in 2007-2009.

So far the following activities have been completed:

- The review of the current institutional and legislative mechanisms
- The City profile
- The seismic risk assessment
- The training and awareness programme. In particular, 25,000 children, 500 ASEZA employees and many housewives received information on natural hazards (earthquake, sandstorms, and flashfloods) and how to save lives.

ASEZA will lead in the coming weeks on the DRM Master Plan through focus groups and capacity development.

ASEZA board of Commissioners approved last January the proposal to establish a risk reduction unit within the organization. The main idea is to mainstream DRR in ASEZA operations as well as for all Aqaba based institutions and businesses.

For that purpose ASEZA request UNDP to prepare a phase 2 to ensure the institutionalization of DRR through our risk reduction unit. ASEZA will also consider best approaches for mitigation of the flash floods.

More information available on www.drmp-aqaba.com

Achievements and plans in relation to the ten essentials areas A - Make an estimation of the *status* per essential as follows:

1 - poor/nothing in place, 2 - some progress in place, 3 - in place, well functioning, or N/A

*B - Please describe main areas of **progress** and **achievements**.*

*C - Please identify **activities** and **plans** your city will pay special attention **to improve the current situation** during the campaign and beyond. Additionally, feel free to propose special events or activities your city would like undertake to raise awareness on disaster resilience. Please select the respective Essential(s).*

Essential 1 – Risk reducing organization and coordination in place	Status - 2
Progress and achievements – ASEZA approved the creation of a risk reduction unit	
Plans – Risk Reduction Unit will be operational in the coming 3 months	
Essential 2 – Budget assigned	Status - 2
Progress and achievements – ASEZA contributing to current project	
Plans – Under discussion	
Essential 3 – Risk assessment prepared	Status - 3
Progress and achievements – flash flood risk assessment completed, seismic risk assessment completed	
Plans – Impact of climate change	
Essential 4 – Investment in risk reducing infrastructure	Status - 2
Progress and achievements – Mitigation works for flash floods are in place	
Plans – Early warning system for flash flood	
Essential 5 – Safe schools and health facilities	Status - 2
Progress and achievements – Awareness campaign in schools and ASEZA was conducted in 2010	
Plans – Regular drill trainings in all public institutions	
Essential 6 – Risk-compliant building regulation and land use applied	Status - 2
Progress and achievements – Building code is earthquake sensitive	
Plans – Improving enforcement through field inspections	
Essential 7 – Education programmes and training in place	Status - 3
Progress and achievements – Public Awareness campaign	
Plans -	
Essential 8 – Ecosystems and natural buffers protected	Status - 3
Progress and achievements – ASEZA is currently working on protection of the coast.	
Plans -	
Essential 9 – Early warning systems installed	Status - 1
Progress and achievements -	
Plans – EWS for flash floods	
Essential 10 – Needs-based (survivors) reconstruction	Status - 1
Progress and achievements -	
Plans -	