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Making Cities Resilient: My City is Getting Ready! World Disaster Reduction Campaign 2010-2011

## Cairo is getting ready!

Cairo, Egypt



Population: 7062426 (IDSC, mid2009)

Type of Hazards: Geological (Earthquakes and Rock Slides) Metrological (Dust and Sand Storms)

**Cairo** is the largest city in the Middle East. Although Cairo itself is only about 1,000 years old, parts of the metropolis date back to the time of the Pharaohs. It is one of the world's most densely populated cities, with one of the lowest provisions of road space per capita and dramatic growth in the number of private vehicles. Government actions have only exacerbated this situation by spending on bridges and flyovers, and heavily subsidizing fuel, all of which promote the use of private automobiles.

Surface waters from the Nile River are the major source of bulk water supply in Cairo. However, its distribution system is inadequate. One of the largest sewerage projects in the world vastly improved the hydraulic capacity of the waste-water system of Cairo, and has nearly eliminated the problem of sewerage flooding. However, the lowest income groups in informal settlements on the periphery remain unserved by existing water and waste-water systems.

An earthquake measuring 5.8 magnitude jolted Egypt on Monday 12 October 1992. At least 541 people were killed and about 6 500 were injured. Totally, 8500 buildings were damaged in the Cairo area alone. An official investigation revealed that 1343 schools were damaged beyond any repair, 2544 needed major repair and 2248 needed repair maintenance.

On the other hand, ancient historical monuments suffered only minor damages, e.g., six Coptic churches and 140 Islamic buildings, including mosques, suffered some damage. One stone, 1500 kg of weight, moved and fell down from the Khefren pyramid. A number of surface distortions associated with the shock were noticed in the area just after the earthquake. The most common feature was surface fissures observed at epicentral distances of up to tens of kilometers with displacements of up to about 150 cm visible in the asphalt roads between Cairo and El-Faiyum.

Rock slides reported in many localities of Gebel El-Mokattam where these slides can be attributed to the retreat of the upper plateau. Slope failure characterizes the upper plateau as a result of vertical joints. The slope failure is a result of the sliding of large blocks detached from plateau onto potential failure surfaces. Several large blocks were detached from the edge in certain area (El Abajia and El Giyoushi) as a result of weathering and misused of lands. On early morning of Saturday 8 August 2008 the last accident took place.

Dust and Sand storms are markedly seasonal phenomena over Egypt. In Spring Egypt affected with desert depression normal of occurrence of sand storm over Cairo one per month namely Khamsin.

## **Disaster Risk Reduction Activities**

Greater Cairo Seismographic sub network had been deployed in September 1997 to monitor and record earthquakes in and around Cairo region. In case of felt earthquake, an alert message has been disseminated to media (newspaper, radio and television) for public awareness.

The Informal Settlements Development Facility (ISDF) was established by the Presidential Decree No.305 in 2008. Its main goal is to contribute to ensuring safe housing in Egypt and to improve the quality of life of the residents in unsafe/ vulnerable areas. ISDF prepares studies and action plans for the development of unsafe/ vulnerable areas in governorates (including Cairo Governorate) in cooperation with different stakeholders, academic institutions, and research centers. These studies provide the decision maker with required data and information for monitoring and assessment of risks of these areas supported with a geographical information database system of unsafe/ vulnerable areas.

A green belt around Cairo is a great project to reduce the associated hazard of dust and sand storms over Cairo.

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