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Title of the Session: Arid regions face risks of flooding – the case of Algeria

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Summary

Flooding is a recurrent event in the world. This phenomenon affects most parts of countries with similar climatic conditions, impermeable geological formations. Poor infrastructure in terms of protection of man and the environment increases the risk of flooding. In Bangladesh, in November 1970 floods have caused human losses estimated at 500,000 victims. In France 3-4% of the population and 7,600 municipalities are affected by frequent flooding. The floods of June 17, 2007 in China resulted in 128 mortalities and 24 persons missing.

In November 2001, torrential rains that fell on the city of Algiers caused flooding in Bab El Wadi. The toll was catastrophic. In arid areas, where the climate is very dry with generally little rain, the onset of flooding seems a paradox. However, the aridity combined with the lack of ground cover, accelerates runoff, and thus promotes flooding. The mapping of flood zones, sustainable management and training against disasters are essential for better resilience to major flooding risks.

Context

Floods are one of the most common climatic hazards in the world. It is a natural phenomenon that affects great numbers of people. Algeria is no exception, and has similar hazards as other countries with a mainly semi-arid to arid climate. The climate is generally very dry and when it rains, the occurrence of floods may seem to be a paradox. Flash floods are the most common hazard in this country. On the basis of international and national data records, the impact of these events are aggravating. For detailed information, a study by Bourj Bou Araridj (1994), Bab -El Oued in Algiers (November 2001), Adrar (in October 2004 and January 2009), Béchar (2008), Ghardaia (October 2008) and Biskra (September 2009), provides an analysis of the substantial extent of human damage and equipment.

The objective of this study was to analyze the occurrence of floods in Algeria's arid regions, highlighting the factors that govern the onset of this type of disaster, and to propose appropriate solutions to ensure greater resilience civil society to this risk.

Our expertise showed that the main factors favoring the outbreak of floods in arid regions are:

- Climatic conditions (rainfall).
- The lack of vegetation cover.
- Land use and spatial and temporal variation.
- Morphological parameters.
- Lithological parameters.
- The lack of protection works against floods.

Possible solutions to mitigate the flooding in arid areas are:

- The mapping of flood areas.
- The mapping of risk areas.
- The education and training of civil society against major risks (before the crisis, during the crisis, after the crisis).
- Consider special mechanisms for fragile fringe security (disability, students and old people) against major risks.
- The layout of the wadis and sustainable management of arid regions.
- The establishment of plants in watersheds.
- Refinement of flood risk prevention plans (IRPP).
- Refining relief organization plans and identification of public and private resources that could be implemented disaster (ORSEC).
- Compilation of Documents Communal Information Major Hazards (DICRIM).