Addressing Technological Hazards in the post-2015 DRR Framework

Almost 30 years ago, in December 1984, a release of a toxic substance at a pesticide plant in Bhopal, India, resulted in the deadliest chemical disaster in history killing more than 3,000 and injuring 170,000. The plant was located in a crowded community which was ignorant about the potential risks and whose proximity unknowingly contributed to the disaster impacts. Technological accidents of all scales continue to happen frequently around the world. **To date, no global agreement is in place for preventing and preparing for technological disasters**.

Technological Hazard

A hazard originating from technological or industrial conditions, including accidents, dangerous procedures, infrastructure failures or specific human activities, that may cause loss of life, injury, illness or other health impacts, property damage, loss of livelihoods and services, social and economic disruption or environmental damage

The Zero Draft calls for multi-hazard management of disaster risk reduction at local, national, regional and global levels, and applies to natural hazards and related environmental and technological hazards and risks (Paragraph B.14). In this context, the 'Priorities for Action' need to provide strategic guidance for governments in order to adopt multi-hazard approaches including technological accidents.

The Post 2015 Framework for Disaster Risk Reduction should involve a renewed emphasis on guidance for governments regarding **Technological Hazard Prevention, Risk Reduction and Preparedness for response** that will support countries in strengthening national legislative frameworks and enhance capacity building of all stakeholders. This guidance should make reference to:

- Risk sensitive industrial development, including consideration for emerging risks
- Improved capacities for risk assessment, management and mitigation by all stakeholders including industry, at all levels
- Appropriate controls on industrial land use planning and efforts to strengthen community resilience
- Collecting data and sharing and adopting lessons learned from technological disasters
- Sustainable finance to support investment into prevention and preparedness for technological disasters

The Need to Address Technological Hazards

In the past couple of years the technological accidents that have received much attention are the Gulf of Mexico deep water oil spill, Fukushima triple disaster, and Bangladesh textile factory collapse. However, most technological disasters do not make international headlines: there have been many lesser-known accidents in countries worldwide, with significant adverse health, environmental and economic impacts.

Developing countries are often at greater risk of adverse effects from such accidents because of limited regulations or incomplete enforcement of existing rules, inadequate resources for prevention, preparedness and response. Such accidents can have devastating impacts on human health, the environment and economy:

- acute exposure to harmful chemicals can cause direct, immediate harm or can cause longer-term health consequences
- harm from indirect contact through diet as the result of contaminated drinking water, agricultural products, or fish
- impacts to the enterprise, supply chain disruptions and damage to local economy.

Further reading:

- A Flexible Framework for Addressing Chemical Accident Prevention and Preparedness: Guidance for Governments (UNEP,2010): www.unep.org/flexibleframework
- Awareness and Preparedness for Emergencies at Local Level – A Process for Responding to Technological Accidents (UNEP, 1988, 2014): www.unep.org/apell
- OECD Guiding Principles for Chemical Accident Prevention, Preparedness and Response (2003) http://www.oecd.org/chemicalsafety/chemical-accidents/
- Chemical Safety Board (US): www.csb.gov

RECENT TECHNOLOGICAL ACCIDENTS

Gulf of Mexico Oil Spill
- **April 2010**
- **Largest accidental marine oil spill**
- **Extensive environmental damage**

Ajka, Hungary
- **October 2010**
- **Collapse of a mining waste reservoir**
- **villages destroyed**
- **9 killed, 122 injured**
- **40 square kilometres of land affected**

Nairobi, Kenya
- **September 2011**
- **Pipeline fuel spill and fire**
- **120 killed, 117 injured**

Texas West, US
- **April 2013**
- **Pesticide plant explosion**
- **15 killed, 200 injured**

Lac Megantic, Canada
- **6 July 2013**
- **Crude oil train explosion**
- **47 killed, city zone destroyed**