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Waiting for Disasters: A Risk Reduction Assessment of Technological Disasters

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This session provides a risk reduction/mitigation assessment of natural hazards causation of technological disasters and possible solution. People use technology in an attempt to not only control their environment but nature itself in order to make them feel safe and productive. Most strategies for managing hazards followed a traditional planning model i.e. study the problem, identify and implement a solution, and move on to the next problem. This approach is often viewed as static model and risk reduction is more of an upward, positive, linear trend. However, technological disasters do not allow risk reduction action to neatly fit this upward, positive, linear trend with actual or potential threats to the environment and society.

There are different types of technological disasters, including industrial accidents; pipeline ruptures; accidents at power, water and heat supply systems and other lines of communication; sudden collapse of buildings and mines; air crashes; shipwrecks; automobile and railway accidents to name a few. Natural factors can play an essential role in triggering or magnifying technological disasters. They can result from the direct destruction of given technical objects by a hazardous natural process such as the destruction of an atomic power plant or chemical plant due to an earthquake. Other examples would include the destruction of communications or infrastructure systems by heavy snowfalls, strong winds, avalanches. Events in the past ten years clearly demonstrate that natural disasters and the technological disasters that accompany them are not problems that can be solved in isolation and risk reduction can play an important part.

Risk reduction was designed to head off the continuing rising financial and structural tolls from disasters. All Hazard Risk Reduction planning was supposed to include not only natural, but technological, and human-made disasters as well. The subsequent disaster risk reduction (DRR) indicators were to provide the corner stone to sustained risk reduction. We are able to look at
the ongoing work by UNISDR and other partners to develop DRR indicators to track progress toward the goals outlined in the Hyogo Framework for Action adopted by 168 countries in Kobe, Japan in January 2005. In addition, we can look at various global examples. Therefore the true question we shall address is whether or not the DRR indicators form a virtuous circle was created with risk reduction with a series of positive events triggering a self-perpetuating pattern of other positive occurrences or a vicious circle.