



## Outcome of the Scientific Symposium

The Scientific Symposium was well attended by about 400 participants. The opening address by WMO's Secretary General Michel Jarraud outlined the framework for multi-hazard, multi-purpose early warning systems.

The read thread through all presentations and discussions was: Scientific knowledge, sophisticated technique is necessary. However, we have to realize: Early warning starts and ends with people.

The participation of politicians, community leaders, scientists non-governmental organizations and international financial institutions show that early warning has to be carried and is carried by all levels of society. The thematic structure of the symposium facilitated the cross-fertilization of between various disciplines and sectors.

The discussions in both, the Projects Forum and the Scientific Symposium focussed on the same topics coming from different angles. The scientists figured out how to improve the existing systems and methods and the politicians requested guidance on how to better implement the existing early warning methods and systems. Over 2 and a half days the discussions in the scientific symposium revolved around three most burning issues:

The first issue was **multi-hazard early warning**:

- \* multi-hazard approaches are necessary to arrive at more cost-effective and sustainable early warning systems, particularly in light of the fact that early warning systems for many hazards have a lot of components in common. For example, early warning for tsunamis as well as for storm surges can be handled by the same system given minor specific changes.

- \* such multi-hazards systems facilitate an improved functionality. Frequent usage of an early warning system is crucial for its functionality: processes are kept alive, people are trained, and the population under threat is made aware of and educated on the risk they are facing and how to react to the warning.

The second issue was **mega events**:

- \* the catastrophic events of the last 18 months underlined that we have to think the unthinkable. Therefore, the topic mega events was put on the agenda of the scientific symposium.

\* we have to realize that mega events will occur more frequently due to effects of global change. On one hand environmental change will lead to more severe natural phenomena. On the other hand, vulnerability is increasing due to uncontrolled urban growth. Within 20 years 80% of the world's population will be living in urban agglomerations.

\* we have to be aware that such mega events not only claim a large number of lives but can also have regional and even global implications. For example, an earthquake in Istanbul or Tokyo or a tsunami in the North Atlantic will have repercussions on the world economy, since in times of globalization society relies on free and undisturbed distribution of goods and information.

The third issue on the agenda of the scientific symposium was: **people, politics and economics.**

\* While the last mile is crucial we have to acknowledge that early warning starts and ends with people.

\* That is true from the global down to the local level, as was also emphasized in the plenary session the international community carries the responsibility to respond to early warnings in a timely fashion, which was too often not the case.

\* Early warning from one authoritative voice is highly desirable. But in this modern information age people will receive information from multiple sources. The informal sector is gaining more and more importance in this regard. Training, education, and awareness raising are needed to enable people to deal with the multitude of information sources and based on that take the right decision.

The scientific symposium provided relevant information on future needs for early warning systems. These essential information must be considered today for the design of the early warning systems to cover future needs. The participants welcomed the structure of the conference which provided an window of opportunity for an intense exchange between the United Nations, international financial institutions, politicians, decision makers, community leaders, practitioners, and the scientific community. This structure could serve as a role model for future international events and conferences.