
Part III : Panel Discussion 15:30 - 17:40

Chair:

Prof Hiroshi Takeda, Executive Vice President, Kobe University

Panelists:

Speakers from part I & II and;

Dr Denis Peter, European Commission

Prof Hormoz Modaressi, BRGM

Prof Jochen Zschau, GFZ German Research Centre for Geosciences

Prof David Alexander, Global Risk Forum GRF Davos



Part 3 looked into the aspects and initiatives taken by the European institutions followed by a panel session among Japanese and European specialists. Professor Hiroshi Takeda, Executive Vice President of Kobe University chaired this session. The former part was an individual presentation on each initiative by the respective institutions.

Dr Denis Peter from the European Commission presented an overview of their activities related to natural hazards/disasters in three parts:

1. Policy context

The role of the European Commission in the disaster policy is

more coordination or stimulating cooperation between the member states and the agencies both at the international level and European level.

2. Research dimension

A description and breakdown of the Seventh Framework Programme for Research and Technological Development or FP7, which is a seven-year (2007-2013) research programme in Europe. The objectives of FP7 are grouped into the four instruments: 1) COOPERATION, the highest budgeted programme, is for collaboration between certain number of research institutions, universities and enterprises on projects including those in the field of natural hazards; 2) IDEAS is for

new frontier research; 3) PEOPLE is best known for the Marie Curie Actions, a fellowship programme for post doc in a form of training networks; and 4) CAPACITIES is a programme to optimize the use and development of the best research infrastructures in Europe. In addition to those four instruments, the Commission also has Joint Research Centers (JRC) to conduct nuclear and non-nuclear research activities, as well as the European Atomic Energy Community (Euratom) to coordinate the Member States' research programmes for the peaceful use of nuclear energy.

3. Research related and pre-operational

The Commission intends to respond to emergency situations in the European capacity through "Global Monitoring for Environment and Security (GMES) Emergency Response Service". It has developed a common web-based platform "Global disaster and alert coordination system (GDACS) with UN to quickly estimate hazards and give alerts through the joint research centre "Ispra".

Professor Hormoz Modaressi of BRGM, France, presented the scientific perspectives following the GEJET in which BRGM is involved. Examples included two recent collaboration with Japan on Tohoku earthquake, the ONAMAZU and DYNTOHOKU; and SYNER-G (Systemic Seismic Vulnerability and Risk Analysis for Buildings, Lifeline Networks and Infrastructures Safety Gain), one of the FP7 research projects in which Kobe University is one of its 14 participants from 11

countries.

ONAMAZU is the quantitative assessment of nonlinear soil response during the 2011 Tohoku earthquake and DYNTOHOKU is its dynamics from long term stress accumulation to asperities. SYNER-G focuses on systemic vulnerability, like those which occurred in Japan. There are 3 main objectives for this project. The first is to select the most advanced fragility functions to assess the physical and societal-economic vulnerability of all assets, improving and further developing new ones where necessary, considering European distinctive features of the buildings, which are different from countries. The second point is to develop a unified methodology to assess vulnerability at different levels. And finally, to build an appropriate open source software and tool that would be made available to scientific and other communities, if they wish to use it or implement it for different purposes.

Professor Jochen Zschau of GFZ German Research Centre for Geosciences first explained the activities of the centre which focuses its research on earth system dynamics. The centre is conducting a number of projects including its Earth Systems Analysis, SAFER (Seismic Early Warning for Europe), MATRIX (Multi-Hazard and Multi-Risk Assessment Methods) and REAKT (Real-Time Earthquake Risk Reduction) for FP7.



Another project, the Global Earthquake Model (GEM) is a public/private partnership for mapping and communicating complex earthquake risk globally, an OECD initiative which now involves governments, industry, science organizations and institutions, World Bank, ISDR and UNESCO. Japan's membership is currently being negotiated. Professor Zschau pointed out in the last part of his presentation that it is not enough to just quantify risk hazard and risk; there is also a need to quantify the changes of hazard and risk, because vulnerability is a very dynamic quantity. He also stated that there is a need to update risk quickly. Classical risk assessment methods would take years, GFZ is developing a method that combines satellite, remote sensing tools, with ground based panoramic street view with mobile 3-D cameras, similar to the system used by Google.

Professor David Alexander of Global Risk Forum (GRF) Davos started with an overview of his organization. GRF is an organization founded in 2008 which is funded by a variety of sources including the Swiss federal, cantonal and local government, private sector and others. GRF has a network of collaboration with a dozen UN organizations, 40 international organizations and many academic and research institutions around the world. GRF is based upon three pillars: The International Disaster and Risk Conferences (IDRC) and Workshops; Risk Academy; and Planet@risk.

IDRC is a biennial conference on disaster and risk reduction and climate change adaption that is complemented with regional conferences and workshops in the intervening year. There have been three IDRC conferences held so far, and the next will be held in August, 2012. The Risk Academy is the knowledge sharing and know-how transfer pillar of GRF. A think tank is organized within Risk Academy to exchange knowledge and information, and also to launch teaching and research initiatives in the study of disasters, risk and climate change. There are four aspects to it. 1) The raising of awareness, which is done in a variety of ways through discussions, films, exhibitions, etc.; 2) Education such as training courses, workshops and publication; 3) Service & Products, which include regular updates on global risk and editing books; 4) Research & Development, which include project development on integrated risk management. The third pillar, Planet@risk is a web-based networking platform which is used to showcase some of the best non-academic or sub-academic literature. These are specifically useful to stakeholders who deal directly with risk and disaster problems.





Prof. Takeda, the chairman, has started the second part of Panel session by inviting panelists to comment on the two aspects of GEJET; the damage states and the effects of the damage. Panelists have given various comments on these points and the conclusions may be summarized as follows:

- Hazard assessment: One of the most important lessons learnt from this tragic event is how to prepare for the most improbable case. Prehistoric information is also very important. Obtaining information about the areas previously visited and investigated by researchers; we should do more research on the lack of utilization of research, or on how to better utilize research.
- Government involvement: The government of Japan provide hazard map to the public to promote preparedness and prevention. Politics plays an important role here; therefore the map should be politically explainable and most likely to be realized. As for the EU, basically land management policy is in the hands of the member states, however there was a document released last year for risk assessment and mapping guidelines for risk management. This document is not something meant to impose on member states, but is intended to provide them with guidelines and to help them. An example can be the hazard map that was prepared by a municipality in Tohoku area after GEJET, which was very accurate because it incorporated scientific knowledge in the administrative planning. However, the problem was that the disaster reduction plan was not adequately incorporated in

the city planning, which might be due to the difficulty of incorporating it into the long-term city planning. One way to solve this problem may be to build a true sense of local autonomy. On the other hand, regulations are normally for life duration and we cannot change the hazard map every year. Hence, the flexibility, transferability and adaptability are indeed needed to be included at the very beginning of the planning.

- Communication: Communication is also a very important aspect that we learnt from GEJET. People are the ones who receive the information, and to whom the governments and scientists should communicate to prepare for the safety. Before the Kobe Earthquake, many scientists talked to the government only about the safety, not to the citizens. This communication process is not a very good style, and we scientists have to change our attitude from this bad style to communicating better to the citizens.