

# **Annual Report of the WFEO Committee on Disaster Risk Management 2009-2011**

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The WFEO Committee on Disaster Risk Management (CDRM) was established at the General Assembly held in December 2009, Kuwait. The Committee has now 36 members from 15 countries, and consists of Sub-committee on Water-related Disaster Risk Management (WDRM) and Sub-committee on Earthquake-related Disaster Risk Management (EQDRM). Currently, CDRM has been engaging in constructive discussions and exchange of information and opinions on disaster investigation, disaster response, and disaster reduction, through which recommendations for disaster risk management are formulated and publicized eventually.

CDRM has been active in fulfilling its objectives as indicated below:

- Introducing important philosophy and basic concepts that disasters are social phenomena caused by natural or social ones. Recommending effective structural (hard) and non-structural (soft) measures, traditional and sophisticated technologies with good examples for risk management of water-related disasters and earthquake disasters to the engineers and the policy-makers.
- Promoting the exchange of information and opinions on the above mentioned disaster risk management.
- Merging and introducing knowledge and experiences to prevent and reduce disasters and promote sustainable development.
- Implementing field investigation of affected areas by disasters.

## **Activities of CDRM from 2009 to 2011**

### **(1) JFES-WFEO Joint Symposium on DRM**

CDRM was originated as a task group of Committee on Engineering and Environment (CEE) in 2008, which was then reorganized into a standing committee in 2009. During this period, JFES (The Japan Federation of Engineering Societies)-WFEO Joint Symposium on DRM was held in 2008, 2009, and 2010 in succession, incorporation with The Science Council of Japan and the Japan Society of Civil Engineers, as a venue for exchanging technological information on disaster response and disaster mitigation between countries in the world.

The 5<sup>th</sup> joint symposium on DRM is being held at Matsuyama, Japan. It will focus on “The 2011 off the Pacific Coast of Tohoku Earthquake” or “The East Japan Great Earthquake”.

<2009 JFES-WFEO Joint Symposium on DRM (in the proceedings)>

- The 2008 Sichuan Great Earthquake Disaster and Technological Restoration and Recovery Support Activities of Interdisciplinary Liaison Council led by JSCE
- Scenario-Based Seismic Risk Assessment and Its Applications 26 Chin-Hsun YEH, National Center for Research on Earthquake Engineering (Taiwan)

- Seismic Retrofitting of Bridge Columns Using Carbon Fiber Reinforced Plastics in Taiwan
- Seismic Performance of RC Bridge Columns Based on Full-scale Excitation Tests
- Features of Super Cyclone Sidr to Hit Bangladesh in Nov. and Measures for Disaster - from Results of JSCE Investigation
- Proposal on Adaptation to Water-related Disasters Induced by Global Environmental Change
- Integrated Basin Management Through Comprehensive Flood Control Schemes in Japan
- Response of the People After Receiving the Tsunami Warning
- Tsunami Vulnerability Assessment of Cox's Bazar District, Bangladesh
- Policies and Practices of Storm-water Storage and Infiltration and their Successes in Comprehensive Urban River Basin Management in Japan
- Flood Disasters due to Recent Abnormal Rainfall and Preventive Measures
- Estimating Probability Density Functions for Tsunami Evacuation Activity Durations from Expert Panel Interviews

<2010 JFES-WFEO Joint Symposium on DRM (in the proceedings)>

- The catastrophic disasters caused by the Typhoon Morakot in Taiwan
- Damage of Bridge due to 2010 Chili Earthquake
- Seismic Performance of Kashiwazaki-Kariha Nuclear Power Plant on 2007 Chuetsu-Oki Earthquake
- Proposed Guideline for Pre- and Post-Earthquake Countermeasures
- Sanitation, Water Supply and Storm-water Management in Incheon Metropolitan City
- Analysis of the "Needs" of the Users for the Newly Introduced X Band MP (Multi Parameter) Radar
- Resilience Strategies as Adaptation to Flood Risks

## **(2) Panel on DRM**

The Panel on DRM to discuss disaster risk mitigation and disaster reduction technologies was held in 2008 WEC Convention in Brazil and in 2010 WEW Congress in Argentina. At the Urban Drainage Panel of WEW, presentation on flood risk management was made. Further, Draft Guidelines for Water Related Disaster Risk Management (Fundamentals, Floods, Tsunamis) was published in 2009. The results of discussions in past symposiums and panel sessions were partially included in this guideline.

## **(3) Field Investigation**

Following the major earthquake disasters occurred recently, namely, the 2010 Chile Earthquake, the 2011 New Zealand Earthquake, and "The 2011 off the Pacific Coast of Tohoku Earthquake" or "The Great East Japan Earthquake", delegations were dispatched to investigate the status of the disasters and the extent of damage. The results of these investigations will be utilized in developing a guideline for earthquake disaster risk management to be published in near future.

## **(4) CECAR-5 Presentation**

In August 2010, a lecture titled “An Integrated Framework of Flood Risk Management for Climate Change Adaptation” was given in CECAR-5 (The 5th International Civil Engineering Conference in the Asian Region, Engineers Australia, together with the Australasian Structural Engineering Conference) .

#### **(5) UN-ISDR Presentation**

In the 3rd Session of the Global Platform for Disaster Risk Reduction and the World Reconstruction Conference held from 9th to 13th May 2011 in Geneva, Switzerland, which was organized by the UN International Strategy for Disaster Reduction (UN-ISDR), a lecture was given on the state of the Great East Japan Earthquake. In line with the Draft Guideline for Water-related Disaster Risk Management published by CDRM, the report on this disaster was made with an emphasis on the indirect damage in particular, taking account of the fact that the disaster is a threefold catastrophe caused by earthquake, tsunami, and radiation. In this connection, the traditional evaluation system of project feasibility by B/C analysis recognized as not applicable to disaster risk reduction project.

#### **(6) Revising the Vision and Mission OF WFEO Committee on Disaster Risk Management**

The draft Vision and Mission was proposed to the committee meeting at Buenos Aires in October, 2010 and is being revised.

#### **(7) Revising the Guidelines on DRM**

The draft DRM guideline is being revised to include earthquake, tsunami, and drought, etc.

#### **Action plan in 2011 to 2012**

CDRM is planning to take the following action;

- Improving the information network and HP.
- Revising the Vision and Mission OF WFEO Committee on Disaster Risk Management.
- Publishing the Revised Guidelines on Disaster Risk Management for Water-related and Earthquake-related disasters.
- Organizing the 6<sup>th</sup> Joint International Symposium on Disaster Risk Management.
- Implementing the field investigation of disasters.
- Organizing the panel on DRM and the CDRM meeting at Executive Council meeting and Engineers Congress in Slovenia in September, 2012.
- Studying the new appraisal method appropriate for disaster risk management projects.