

February 26, 2016

**World Federation of Engineering Organizations
Standing Technical Committees on Disaster Risk Management
2015 Activities, Annual Report (March 2015 to February 2016)**

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Reference 1 : Report on Special Session III, entitled "Disaster Risk Management", in the 11th International Conference of the I3R2

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Reference 3 : Front page of e-newsletter

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Table of Abbreviations

WFEO-CDRM Chair
Prof. Toshimitsu Komatsu



1. Name of Committee Secretary

CDRM Secretary

Kenichi Tsukahara

CDRM Deputy Secretary

Nobuaki Kimura

Dep. of Urban & Environmental Engineering,

Kyushu University,

W2-1011, 744 Motooka, Nishi-ku, Fukuoka City,

819-0395, JAPAN

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2. List of Committee Members with National Membership and their Affiliations

The committee has 30 active members from 11 countries and regions.

WFEO-CDRM MEMBER LIST

confirmed in February 2016

Chair, Vice Chair and leaders

Country	Name and title	Position and affiliation	Remark
Japan	Prof. Toshimitsu Komatsu	Chair, WFEO-CDRM; Vice President, WFEO; Chair, Committee on WFEO, Science Council of Japan; Professor Emeritus, Kyushu Univ.	
Australia	Dr. Marlene Kanga	Vice Chair, WFEO-CDRM; Leader, Subcommittee on CBNDRM; WFEO National Member Representative (Australia); Member, WFEO Executive Council and Special Adviser to the President of WFEO for the Asia-Pacific region, Member, New Zealand Local Government Risk Agency Establishment Board.	
Japan	Prof. Syunsuke Ikeda	Vice Chair, WFEO-CDRM; Member, Committee on WFEO, Science Council of Japan, Japan Cabinet Office; Professor Emeritus, Tokyo Institute of Technology.	
USA	Dr. Vilas Mujumdar	Vice Chair, WFEO-CDRM; USA Consulting Engineer, Retired Program Director, National Science Foundation; WFEO National Member Representative (USA); Member, WFEO Executive Council and Special Adviser to the President of WFEO for Marketing; President, UPADI, Committee on Disaster Risk Management and Resilience	
Japan	Prof. Kenichi Tsukahara	Leader, Subcommittee on WDRM; Secretary, WFEO-CDRM; Secretary, Committee on International Cooperation for Natural Disaster Risk Reduction, Science Council of Japan; Professor, Dept. of Civil Engr., Kyushu Univ.	
Japan	Prof. Akira Wada	Leader, Subcommittee on EQDRM; Professor Emeritus, Tokyo Institute of Technology; Council Member, Science Council of Japan; Vice-President, International Association for Bridge and Structural Engineering.	

Subcommittee on Water-related Disaster Risk Management (WDRM)

Country	Name and title	Position and affiliation	Remark
Bangladesh	Dr. Ashutosh Sutra Dhar	Associate Professor, Dept. of Civil Eng., Bangladesh Univ. of Engineering & Technology.	

Country	Name and title	Position and affiliation	Remark
Canada	Prof. Gordon McBean	Professor, Dept. of Geography, Institute for Catastrophic Loss Reduction, Univ. of Western Ontario. President, International Council for Science of Western Ontario.	
Canada	Prof. S. Chan Wirasinghe	Professor, Dept. of Civil Engr., Schulich School of Engr., Univ. of Calgary.	
China	Prof. Xiaotao Cheng	Professor of Dept. of Water Hazard Research, China Inst. of Water Resources and Hydropower Research (IWHR)	
India	Prof. Mohan Jagdish	Member, Institution of Engineers (India); Indian Member Committee, WFEO.	
Iran	Dr. Ali Chavoshian	Engineer, CTI Engineering Co. Ltd; Assistant Professor, Iran Univ. of Science and Technology.	
Japan	Prof. Syunsuke Ikeda	Same as above	
Japan	Prof. Fumihiko Imamura	Professor, International Research Institute of Disaster Science (IRIDeS), Tohoku Univ.	
Japan	Dr. Yumio Ishii	Former Chair, WFEO-CDRM; Senior corporate adviser, CTI Engineering Co. Ltd.	
Japan	Dr. Kazumasa Ito	Former Secretary, WFEO-CDRM; Chief Engineer, CTI Engineering Co. Ltd.	
Japan	Prof. Kazutoshi Kan	Professor Emeritus, Shibaura Institute of Technology.	
Japan	Mr. Tsuneyoshi Mochizuki	Councilor, Japan River Association	
Japan	Prof. Yasuyuki Shimizu	Professor, Faculty of Engr., Hokkaido Univ.	
Japan	Prof. Kuniyoshi Takeuchi	Advisor, the International Center for Water Hazard and Risk Management (ICHARM), Public Works Research Institute (PWRI); Professor Emeritus, Univ. of Yamanashi.	
Kuwait	Eng. Talal M. Al-Qahtani	Chair of Kuwaiti Society of Engineers.	
Kuwait	Eng. Abdullah E. Al-Otaibi	Team Leader of Planning.	
Kuwait	Eng. Ahmad Khaled Al-Qassar	Member of WFEO Bureau of Kuwait.	
Morocco	Mr. Mokhtar Bzioui	Water planning and management consultant	
Philippine	Prof. Leonardo Liongson	Chair of Philippine National Committee for the UNESCO IHP.	
Peru	Ing. Loren M. Ruiz García	Researcher, member of Capitulo de Ingenieria Agricola del, Consejo Departamental de Lima del, Colegio de Ingenieros del Peru.	
Vietnam	Dr. Son Hung Nguyen	Engineering Advisor, International Business Division, CTI Engineering Co. Ltd.; The former Secretary, CDRM in the first term (2008-2010).	

Subcommittee on Earthquake-related Disaster Risk Management (EQDRM)

Country	Name and title	Position and affiliation	Remark
Australia	Dr. Marlene Kanga	Same as above	
India	Er. Ashok Basa	Director, B Engineers & Builders Ltd; Immediate-Past President, Institution of Engineers (India).	
Japan	Prof. Masanori Hamada	Professor Emeritus, Waseda Univ.; Chair, the Asian Disaster Reduction Center.	
Japan	Prof. Muneo Hori	Professor, of Earthquake Research Institute, Univ. of Tokyo; Unit Leader, Advanced Institute for Computational Science, RIKEN	
Japan	Dr. Toshiaki Fujimori	President, International Institute for Construction Technology Information.	
Korea	Prof. Hyun Moo Koh	Professor, Dept. of Civil Eng., Seoul National Univ.	
Kuwait	Eng. Jalal Abudulmohsen Al-Tabtabaei	Director for Consultancy and Project Management, International Quality Center.	
Philippines	Prof. Andres W.C. Oreta	Professor, De La Salle Univ., Manila, Philippines; Chair, Philippines Group of International Association for Bridge & Structural Eng'g; Fellow, Association of Structural Engineers of the Philippines.	
Chinese Taipei	Prof. Tzu Ying Lee	Professor of Dept. of Civil Eng., National Central Univ.	
USA	Dr. Vilas Mujumdar	Same as above	

Collaborative Member of EQDRM

Country	Name and title	Position and affiliation	Remark
USA	Prof. Thomas D. O'Rourke	Thomas R. Briggs Professorship of Engineering, School of Civil and Environmental Engineering, Cornell University.	

Subcommittee on Capacity Building for Natural Disaster Risk Management (CBNDRM)

Country	Name and title	Position and affiliation	Remark
Canada	Prof. S. Chan Wirasinghe	Same as above	
India	Er. Ashok Basa	Same as above	
Lebanon	Ing. Paul Nacouzi	Prof. Engineers, Univ. Saint Joseph Beirut, ESIB.	
Kuwait	Eng. Abdullah E. Al-Otaibi	Team Leader of Planning	
Kuwait	Eng. Ahmad H. Bahman	Chair, Disaster Risk Management for the Kuwait Chapter, Kuwait Society of Engineers; Head, installation inspection Dept. of Prevention Sector of the Kuwait Fire Services Brigade.	

Country	Name and title	Position and affiliation	Remark
USA	Dr. Vilas Mujumdar	Same as above	

CDRM Secretariat

Country	Name and title	Position and affiliation	Remark
Japan	Prof. Kenichi Tsukahara	Same as above	
Japan	Dr. Nobuaki Kimura	Deputy Secretary of CDRM; Post-doctoral fellow of Dep. of Civil Eng., Kyushu Univ.	

3. Recruitment of New Members

The committee on disaster risk management (CDRM) has not gained any new members over the last six months, although the committee members keep trying to recruit new members.

4. Detailed Budget and Sources of Funds

The financial statement of the World Federation of Engineering Organizations (WFEO) CDRM from March to August 2015 is shown below.

4.1 Revenues and Expenditures for Midterm Fiscal Year 2015 (Mid-FY2015) from March 2015 to August 2015

The budget for Mid-FY2015 was spent as planned by the last year. Most of the funds were used for hosting the WFEO-CDRM special session at the International Conference of the 11th I3R2 (hereafter, I3R2 special session).

WFEO-CDRM Financial Statements for Mid-FY2015

Revenue

Content	Unit	Amount
WFEO allocation	EUR	0.00

Expenditure

Content	Unit	Amount
1. The I3R2 special session (Seoul, South Korea, August 28, 2015)		
- Registration fee (7 guest speakers, 3 staffs)	JPY	481,000
- Expendable printer supplies (e.g., ink, drums, papers, posters)	JPY	10,000
2. Report on CDRM activity		
- Editing and proofreading of the report	JPY	41,000
- Expendable office supplies (e.g., envelopes)	JPY	300
3. Other		
- Bank transfer fee		100
Total	JPY	532,400
Total	EUR	4,073.00
Balance (subtracted from WFEO allocation)	EUR	- 4,073.00

Note that 1 JPY = 0.0077 EUR (as of February 2016) and sales tax is included. The deficit cost and travel fees were covered by Kyushu University, SCJ, and JFES.

5. Report on the CDRM Webpage on the WFEO Homepage

Three updated areas and items uploaded to the website from March 2015 to August 2015 are as follows:

Membership lists updated (new members added)

updated April and September 2015

Submissions of the 2014 annual activity report for CDRM

uploaded April 2015

Announcement of the 11th International Conference of the I3R2, August 27–29, 2015, Seoul, South Korea

updated June 2015

Submissions of the minutes for the 6th annual face-to-face meeting for CDRM

uploaded January 2016

Submissions of the 2016 January e-newsletter for CDRM

uploaded January 2016

6. Organizational Structure in 2015

The CDRM currently consists of three subcommittees: Water-related Disaster Risk Management (WDRM), Earthquake-related Disaster Risk Management (EQDRM), and Capacity Building for Natural Disaster Risk Management (CBNDRM). The chair, vice chairs, and leaders of the subcommittees have not changed since September 2013. A detailed membership list can be found in section 2.

Chair

Prof. Toshimitsu Komatsu (Japan)

Vice-chairs

Prof. Syunsuke Ikeda (Japan), Prof. Vilas Mujumdar (United States), and Dr. Marlene Kanga (Australia)

Subcommittee on WDRM

The current leader of this subcommittee is Prof. Kenichi Tsukahara (Japan).

Subcommittee on EQDRM

The current leader of this subcommittee is Prof. Akira Wada (Japan).

Subcommittee on CBNDRM

The current leader of this subcommittee is Dr. Marlene Kanga (Australia).

Secretary and deputy secretary

The current secretary is Prof. Kenichi Tsukahara (Japan) and the deputy secretary is Dr. Nobuaki Kimura (Japan).

7. Action Plans for 2015

The action items for 2015 were planned in February 2015 and were approved at the extended executive council meeting (Paris, March 2015). They are as follows:

7.1 Renewal of Organizational Structure

The EQDRM subcommittee may be expanded to deal with mega-sized compounded disasters.

7.2 International Collaboration

7.2.1 We have planned and prepared actions related to international collaboration:

the DRM special session collaborated with the I3R2 in Seoul (South Korea) on August 28, 2015, and the River Technology international symposium collaborated with regional organizations (JFES, JRRN, AIJ, and JSCE) in Kyoto (Japan) on November 28, 2015.

7.2.2 We may coordinate with the DRM standing committee of FEIAP (FEIAP-CDRM) and the Cross-Cutting Thematic Unit on Disaster Risk Reduction (SC/DRR) of UNESCO to make a DRM-related guideline.

7.3 Routine Work

We will perform the following tasks annually or routinely:

- Recruit new members.
- Continuously update the information on the WFEO-CDRM homepage.
- Issue a CDRM e-newsletter annually.
- Hold an annual face-to-face meeting (Kyoto, November 29, 2015)

7.4 Other business

- We may change the current committee name (Committee on Disaster Risk Management) to a new one with fewer words (e.g., Resilience Committee). A discussion on the new name will be held at the next annual face-to-face meeting.

8. Results of the Proposed Activities

Based on the 2015 action plans (see section 7 above), the midterm status/progress on CDRM activities from March 2015 to August 2015 is as follows:

8.1 Renewal of Organizational Structure

The existing organizational structure has not changed. However, the CDRM is still considering the expansion of the EQDRM subcommittee's role into that of a mega-disaster subcommittee, which can study and investigate compounded disaster events such as the 2011 Tohoku earthquake, tsunami, and Fukushima nuclear disaster.

8.2 International Collaboration

We successfully held a half-day special session for DRM at the international conference, I3R2, held in Seoul (South Korea) on August 28, 2015. A detailed report is shown in Reference 1. In addition, an international symposium, entitled "River Technology for Innovations and Social Systems," was held in collaboration with regional organizations during the WECC2015 in Kyoto (Japan) on November 28, 2015. A part of the international symposium was the 9th Joint International Symposium on DRM as a CDRM annual symposium. It was successfully carried out (see Reference 2 in detail).

The CDRM chair and secretary met Mr. Sugk-Yong Yoon, chair of the FEIAP-CDRM at the I3R2, but we still need to think about how WFEO-CDRM can collaborate with Mr. Yoon. For a DRM-related guideline related to seismic standards of buildings, we kept preparing to collaborate with researchers from the SC/DRR of UNESCO.

8.3 Routine Work

We tried to actively recruit new members to our committee and regularly update the information on our website. We had no recruited member in 2015. The committee e-newsletter was issued in late January 2016 (see Reference 3). We held the CDRM annual face-to-face meeting on November 29, 2015, during the WECC2015 (Kyoto). The minutes were made in late January 2016 (see Reference 4).

8.4 Other Business

Based on a suggestion from WFEO headquarters (marketing adviser), we discussed a shorter name for the CDRM at the annual face-to-face meeting. Several members suggested that change name should be carefully considered. Therefore, the committee name (CDRM) still remains.

9. Subcommittee's and Individual Member's Activities

9.1 The CBNDRM subcommittee, which Dr. Marlene Kanga leads, performed three activities: an international collaboration (information exchange) with the FEIAP-CDRM; a presentation related to CBNDRM activities at the FEIAP Convention 2015, Taipei (Taiwan); and an update of the CBNDRM website. A detailed report is shown in Reference 5.

9.2 The CDRM chair, Prof. Komatsu, served as a chief editor of a special issue of the Journal of Disaster Research related to adaptation methods against climate change (ISSN: 1881-2473[Print] /1883-8030 [Online]), published on June 2015.

9.3 Prof. Chan Wirasinghe (a member of the CDRM subcommittees, WDRM and CBNDRM) and his group members have published the following academic papers related to DRM:

M. A. Esfeh, H. J. Caldera, S. Heshami, N. Moshahedi, and S.C. Wirasinghe, (2015) Severity of earthquake events – statistical analysis and classification. Proceedings of the 11th International Conference of The I3R2, WFEO-CDRM special session, University of Seoul, Seoul, South Korea, August 2015, 15p. Published and Presented by S.C. Wirasinghe.

O. Ebadi, M. Ghaffari, M. Salari, L. Wang, H. J. Caldera, and S.C. Wirasinghe, (2015) Statistical Analysis and Fatality-based Classification of the Historical Tsunami Events. CRHNet Annual Symposium, Calgary, Canada, 4-6 November 2015. (Abstract accepted). Presenters: H. J. Caldera and O. Ebadi

H. J. Caldera, S. C. Wirasinghe, and Ludo Zanzotto, (2015) Analysis and classification of tornado outbreaks. 4 University Conference (Calgary - Seoul - Kumamoto - Tongji), University of Calgary, Canada, 3-6 September 2015.

9.4 Dr. Kimura (CDRM deputy secretary) published the following DRM-related papers:

Kimura, N., A. Tai, and A. Hashimoto (2014) Simulation of driftwood-induced flooding during high-intensity rainfall using smoothed particle hydrodynamics method. Annual Journal of Applied Mechanics, JSCE, Vol.70, No.2, I_777-I_783.

Kimura, N., A. Tai, and A. Hashimoto (2015) Assessment of a key factor for mechanism of a river flood, caused by driftwood accumulation at a bridge. Proceedings of the 11th International Conference of The I3R2, University of Seoul, Seoul, South Korea, 28 August 2015, 10p.

10. Future Action Plans for 2016

The CDRM will propose 2016 action plans as follows:

10.1 CDRM will hold a joint international symposium on Disaster Risk Management in Taiwan (Tainan City), in 2016 fall (maybe November), organized by CDRM and Taiwan National Cheng Kung University.

10.2 CDRM will collaborate with the International Institute for Infrastructure Resilience and Reconstruction (I3R3) for an international conference held in Sri Lanka in early August, 2016. At least one member will be sent to the conference to work together with the I3R2 committee members.

10.3 CDRM will collaborate with a disaster-related committee in Federation of Engineering Institutions of Asia and the Pacific (FEIAP). We may establish a good relation with the FEIAP disaster-related committee through potential activities (e.g., collaboration with a CDRM international symposium). In the next FEIAP meeting in Perth (Australia) in July 2016, Dr. Kanga (CBNDRM subcommittee leader) will attend on behalf of the CDRM.

The above plans will be performed mainly by the CDRM secretariat.

10.4 Other potential action plans

10.4.1 CDRM may perform cooperation with Earth Sciences and Geo-Hazards Risk Reduction Section (SC/EES/EGR) in UNESCO for publication of a building seismic-standards handbook.

10.4.2 CDRM may perform cooperation with an Earthquake-related symposium, held in Lebanon, May 2016.

Reference 1

Report on Special Session III, entitled “Disaster Risk Management,” at the 11th International Conference of the I3R2.

A special session related to disaster risk management (DRM) was held by the Committee on DRM (CDRM) of the World Federation of Engineering Organizations (WFEO) with the cooperation of the I3R2 committee on August 28, 2015 from 9:00–12:30 in Seoul, South Korea during the 11th international conference of the I3R2. This special session was successfully held, with approximately 30 participants in attendance. The seven guest speakers, who were selected based on their academic papers that were closely reviewed by two reviewers, provided their presentations to the audience and then had meaningful Q&As. In his opening remarks, Dr. Komatsu (WFEO-CDRM chair) explained the background of this special session and talked about the current situation related to disasters in Japan. In addition, he announced a WFEO-CDRM-related side-event to be held in Kyoto (Japan) on November 28 during the World Engineering Conference and Convention 2015 for engineers all over the world. The first presenter, Dr. Oshikawa (a hydraulic engineer), presented a laboratory experiment on a mechanical device that removes driftwood from a river bridge. Next, Dr. Yokota (a coastal engineer) talked about the numerical simulation of storm-surge inundation in the innermost coastal region of the Ariake Sea. The third presenter, Dr. Wirasinghe (the I3R2 founder), talked about the earthquake fatality estimation based on the statistical analysis. Mr. Vilayvong (a PhD candidate) presented experimental results on the heavy-rainfall-induced soil erosion. After a short break, Dr. Lai (a geologist) talked about the severe-typhoon-induced landslide disasters. Then, Dr. Kachi (an urban designer) talked about the disaster recovery system in a landslide-vulnerable region. Finally, Dr. Kan (a senior hydraulic engineer) presented a proposal for the development of evacuation networks for mothers and children. In his closing remarks, Dr. Tsukahara (an urban planner) briefly talked about the new UN’s new sustainable development target regarding disasters and then closed the session. The program for this session can be found in the following supplement.



The presenter and the audience



Prof. Komatsu making the opening remarks.

Supplement for Reference 1

WFEO-CDRM Special Session on Disaster Risk Management at the 11th International Conference of the I3R2 in Seoul, South Korea

Catastrophic disasters such as earthquakes, tsunamis, and floods sometimes occur in the world. Recent climate change is likely to increase extreme weather events, which may cause severe wind/water-related disasters. To prevent and reduce these disasters and enhance resilience after these disasters, promoting disaster risk management (DRM) is important. The World Federation of Engineering Organizations - Committee on Disaster Risk Management (WFEO-CDRM) will hold a special session on DRM at the 11th I3R2 international conference. The session will provide the global community with an opportunity to discuss education, technical innovation, disaster/resilience prediction, and past-disaster experiences related to DRM.

Organized By: WFEO-CDRM

Collaborator: 2015-I3R2 in Seoul committees

Date and Time: Friday, August 28, 2015 from 09:00–12:30

Venue: University of Seoul, 21st Century Building 163 Seoulsiripdaero, Dongdaemu-gu, Seoul, Korea (<http://english.uos.ac.kr/>)

Admission: Please register on the website (<http://i3r2.uos.ac.kr/>)

Language: English

Note: This special session will be held during the 2015-I3R2 in Seoul.

Program

09:00 Start of the program
Opening remarks

09:15 Session I (25-minute Speech and Q&A)

S1. “Experimental study on the wake structure behind a cylindrical rotator with asymmetric protrusions in a unidirectional flow,” presented by Dr. Hideo Oshikawa.

S2. “Numerical simulations of storm-surge inundation based on past violent typhoons: Case studies along the innermost coast of Ariake Sea, Japan,” presented by Dr. Masaki Yokota.

S3. “Severity of earthquake events: Statistical analysis and classification,” presented by Dr. S. Chan Wirasinghe.

S4. “Rainfall-induced soil erosion and sediment sizes of a residual soil with soil suction monitoring during heavy rainfall,” presented by Mr. Khonesavanh Vilayvong.

10:55–11:05 Break

11:05 Session II

S5. “Developing a mitigation strategy for compound sediments disasters in Taiwan,” presented by Dr. Wen-Chi Lai.

S6. “Consideration of a disaster recovery system to improve resilience of frequent-landslide dangerous areas,” presented by Dr. Noriyasu Kachi.

S7. “Protection of the lives of mothers and children by utilizing regional supports in the event of a natural disaster,” presented by Dr. Kazutoshi Kan.

12:20 Closing remarks

12:30 End of the program

Special session, Guest speaker list

Name and title	Position and affiliation,	Research background
Dr. Hideo Oshikawa	Associate professor, Saga University, Japan	Hydraulic engineering
Dr. Masaki Yokota	Assistant professor, Kyushu University, Japan	Coastal engineering
Dr. S. Chan Wirasinghe	Professor, University of Calgary, Canada	Transportation, disaster risk management
Mr. Khonesavanh Vilayvong	PhD student, Kyushu University, Japan	Geotechnical engineering
Dr. Wen-Chi Lai	Senior researcher, National Cheng Kung University, Taiwan	Landslides, debris flow
Dr. Noriyasu Kachi	Assistant professor, Kyushu University, Japan	Urban planning, land use planning
Dr. Kazutoshi Kan	Professor emeritus, Shibaura Institute of Technology, Japan	Hydraulic engineering, disaster risk management

Special session, organizers

Name and title	Position and affiliation	Role
Dr. Toshimitsu Komatsu	Chair, WFEO-CDRM; Professor emeritus, Kyushu University, Japan	Opening remarks
Dr. Kenichi Tsukahara	Secretary, WFEO-CDRM; Professor, Kyushu University, Japan	Closing remarks
Dr. Nobuaki Kimura	Post-doc associate, Kyushu University, Japan	Moderator

Reference 2

Report on International Symposium (“*River Technologies for Innovations and Social Systems*” –Examples in disaster mitigation and environmental conservation– In conjunction with the 9th Joint International Symposium on Disaster Risk Management)

An international symposium on “River Technologies for Innovations and Social Systems” (hereafter, “River Technology”) attended by approximately 100 participants, was organized by the River Technology organizing committee, in collaboration with the WFEO-CDRM and local engineering organizations (JFES, JRRN, JSCE, and AIJ), supported by Japanese government agencies and Asian regional organizations (SCJ, Japan MLIT, and ARRN) on November 28, 2015 from 9:00–18:00 in Kyoto Japan, prior to the 2015 World Engineering Conference and Convention (WECC 2015). This symposium comprised opening and closing remarks, as well as three sessions, covering river/watershed disaster mitigation, environmental conservation, and a panel discussion to enhance worldwide information exchange on and public awareness of river technologies. The 10 guest speakers, whose backgrounds were related to disaster mitigation, river engineering, international collaboration, experts consultation with policy makers in regional and municipal governments, and who included a CEO in a ferry and resort complex, gave presentations followed by meaningful Q&As with the audience.

In the opening remarks, the organizing committee Chair and representatives of the collaborators and sponsors addressed the purpose and meaning of River Technology. In the first session, Dr. Isobe (President, Kochi Univ. of Technology) presented a keynote lecture on improved coastal zone planning to reduce the effects of tsunami disasters. Next, Dr. Mimura (Deputy Director General, JICA) talked about the implementation of Japanese practices related to flood management and water utilization in developing countries to achieve the UN-SDGs. The third presenter, Dr. Tsukahara (Professor, Kyushu Univ.), introduced an empirical study on the effect of investments to mitigate flood and sediment disasters in Japan. Dr. Chavoshian (Director, Iran UNESCO Regional Centre) then reported on the current state of a salt lake in the arid and semi-arid West-Asian region under climate change. Finally Dr. Lai (Senior researcher, Taiwan National Cheng-Kung Univ.) talked about deep-seated severe-typhoon-induced landslides and flood disasters, and the development of an early warning system in Taiwan. The second session was composed of five presentations. Mr. Stroeks (Senior Advisor, Embassy of Netherlands) reported on the Netherlands’ delta program for extreme weather under climate change and the utilization of hydropower. Dr. Tsuchiya (Secretary General, JRRN) then talked about the utilization and conservation of rivers in the modern age in Tokyo over approximately 150 years, including the management of landfills of disaster debris following the Great Kanto Earthquake and air strikes during the World War II. Following this, Dr. Jang (Professor, South Korea Daejin Univ.) talked about a flood control plan in the Seoul metropolitan area that considers the conservation of river aquatic systems. Dr. Wu (Deputy Mayor, Kaohsiung city, Taiwan) then reported on practical transformation in Kaohsiung, Taiwan, with a focus on greenery and water. Finally, Mrs. Pichaironarongsongkram (Chair, Chao-Phraya Express Boat, Thailand) discussed water transportation and its historical development

in the Chao-Phraya River.

The panel discussion in the third session, led by Dr. Tamai (Chair, River Technology) and including four other panelists, was based on the presentations of the prior sessions. They discussed innovative river technologies and concepts that can mitigate the severe impacts of climate change and maintain diversity in river environments. Finally, Dr. Tamai proposed a new concept in the field of river technologies that merges two challenging issues, namely risk management for severe floods and environmental conservation for river aquatic systems. A committee member gave a closing address at the end of the symposium. The material from the symposium can be accessed at <http://river-innovation.net/>.



This event was financially supported by the River Improvement Fund (Japan).

Reference 3

Front page of e-newsletter



World Federation of Engineering Organizations

ISSUE 01 January 2016

Committee on DRM Newsletter

Newsletter of Standing Technical Committee on Disaster Risk Management

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No.6 Face-to-Face Meeting in Kyoto, Nov. 29, 2015

DRM committee Action Plans for the 2nd-term (2013-2017)

- **Major purposes:**
 - (1) Active collaboration with other international organizations
 - (2) Awareness campaign though holding international symposiums
 - (3) Practical developments of disaster risk management (DRM) and adaptation technologies under global climate change
- **Subcommittee plans:**
 - (s1) Water-related DRM
 - Development of methods, tools, and guidelines for water-disaster risk management/prevention, warning systems etc. based on a standardized procedure
 - (s2) Earthquake-related DRM
 - Contributions/inputs to an international conference for DRM by engineering views.
 - (s3) Capacity Building for Natural DRM
 - Creation of practical and training manuals for Capacity Building
 - Establishment of web-based communication of information
 - Holding of seminars, etc.

Mid-term report of the CDRM, Mar. to Sept. 2015

The 2015 midterm report was submitted to the WFEO headquarters in Sept. 2015. The following is a summary of the report. For the full report, please visit the WFEO-CDRM website.

>Organization structure: The CDRM has maintained its structure in 2015: a Chair, three Vice-chairs, three subcommittee leaders, a secretary, a deputy secretary, and 30 members from 11 countries.

>DRM special session at the International Conference at I3R2: The CDRM held a special session related to DRM at the I3R2 in Seoul (South Korea), August 2016. The session included seven invited guest speakers from Canada, Japan, and Taiwan and attracted approximately 30 participants. The speakers presented local DRM-related studies based on engineering, science, and education, and discussed these with the audiences.

>Financial report: The accounting balance for CDRM activities in 2015 is not yet finalized. However, for March to August 2015, the status shows zero revenue due to no allocation from the WFEO, and spending of 3,912 EUR. Spending may increase by the final balance. Deficits will be covered by CDRM secretariat, SCJ, and JFES.

>2015 proposed plans and progress:

Plan included (a) routine tasks such as recruitment of new members, update of the official CDRM website, issue of the E-newsletter; (b) creation and update of DRM guidelines for earthquake, flood-debris, drought and storm-surge disasters; (c) holding a DRM special session at I3R2; (d) holding the 9th International Joint Symposium on DRM as part of the international symposium for River Technology in November 2015, in Kyoto; (e) international collaboration with UN-related and other international organizations; and (f) the sixth face-to-face CDRM meeting in November 2015, in Kyoto. Regarding progress toward these plans, (a) and (c) have been successfully completed, (e) and (f) are in preparation, and (b) remains ongoing.

>Near-future strategic plans: In 2016, the CDRM will continue to work towards international collaboration, such as holding the 10th international symposium on DRM in Taiwan in the autumn, supporting a special session at the I3R2 in Sri Lanka in August, and establishing a cooperative relationship with FEIAP.

FEIAP= Federation of Engineering Institutions in Asia and the Pacific; I3R2= International Institute for Infrastructure Renewal and Reconstruction; JFES= Japan Federation of Engineering Societies; SCJ= Science Council of Japan.

http://www.wfeo.net/stc_disaster_risk_management/

Reference 4

Minutes for CDRM face-to-face meeting

Minutes for 2015 annual face-to-face meeting:

World Federation of Engineering Organizations (WFEO)

- Standing Technical Committee on Disaster Risk Management (CDRM)

Annual Face-to-Face Meeting No. 6

When: November 29 (Sunday), 2015, 14:00 – 16:00

Where: Room 555 at Kyoto International Conference Center

Meeting materials: Agenda for CDRM Face-to-Face Meeting (three pages)

Agenda

1. Opening Remarks by Chair (Prof. Komatsu)
2. Self introductions (all participants)
3. No.5 Face-to-Face Meeting summary
WFEO-CDRM Annual Face-to-face meeting, No.5 in Paris, December 11, 2014 (Moderator)
4. 2015 activity reports
Reporter: Prof. Komatsu.
5. 2016 action plans
Reporter: Prof. Komatsu
6. Other businesses (all participants)
 - 6.1 Change of committee name: some listed “Disaster Committee”, “Resilience Committee”, etc.
 - 6.2 Relationship between CDRM and I3R2
7. Closing Remarks and Adjournment (Prof. Komatsu)
Note: Moderator and Recorder: Dr. Kimura

0. Attendance List

Chair

Prof Emer. Toshimitsu Komatsu Japan (Vice President at WFEO, Division Chair at SCJ)

Vice Chair

Dr. Marlene Kanga Australia (President Elect at WFEO, Leader of CBNDRM)

Prof Emer. Syunsuke Ikeda Japan (Vice Chair at CDRM, CTI Eng. Int. Co. Ltd.)

Dr. Vilas Mujumdar USA (Vice Chair at CDRM, AAES)

Water-related Disaster Risk Management (WDRM) Subcommittee Members

Prof. S. Chan Wirasinghe Canada (Professor at Univ. of Calgary)

Prof. Kenichi Tsukahara Japan (Leader of WDRM, Secretary of CDRM)

Prof Emer. Kuniyoshi Takeuchi Japan (Advisor at UNESCO-ICHARM)

Earthquake-related Disaster Risk Management (EQDRM) Subcommittee Members

Prof Emer. Akira Wada Japan (Leader of EQDRM, SCJ)

Capacity Building for Natural Disaster Risk Management (CBNDRM) Subcommittee Members

Eng. Ahamad Banman Kuwait (DRM Chair at Kuwait Society of Engineering)

Prof Eng. Paul S. Nacouzi Lebanon (Professor at Saint Joseph Univ.)

Observers

Eng. A. Majeed Al-Gassab Bahrain (Chair at CRPEP, Bahrain Society of Engineers)

Dr. Jing Peng China (Division Director at China IWHR)

Prof. Xila Liu China (Professor at Shanghai Jiaotong University, CAST)

Prof. Zhishen Wu China (Professor at Southeast Univ.)

Eng. Pratarp Singh Fiji (President at SPEA, Fiji Institute of Engineers)

Eng. Abdullah E. Al-Otaib Kuwait (Kuwait Society of Engineering)

Eng. Asma Al-Khaldi	Kuwait (Kuwait Society of Engineering)
Eng. Hanadi Alhai	Kuwait (Kuwait Society of Engineering)
Eng. Huda Aldehain	Kuwait (Kuwait Society of Engineering)
Eng. Cyril Gamede	South Africa (President at ECSA)
Dr. Sanzan Diarra	Zimbabwe (CEO at Zimbabwe Institution of Engineers)
Eng. Tendai Kapumha	Zimbabwe (Zimbabwe Institution of Engineers)
Eng. Ben Rafemoyo	Zimbabwe (CEO at Engineering Council of Zimbabwe)
<u>Secretariat</u>	
Dr. Nobuaki Kimura	Japan (Deputy secretary at CDRM)

1. Opening remarks

The Chair (Prof. Komatsu) extended welcoming greetings and emphasized that the vision and mission of the CDRM.

2. Self-introductions

Each participant briefly introduced him/herself by name and affiliation.

3. Summary of the 5th face-to- face meeting

The minutes of the previous face-to-face meeting in Paris, December 2014, were reported.

4. 2015 activity reports

The Chair began by talking about the mission and vision of the CDRM, and then reported the current membership status. He went on to report several outputs from CDRM activities, including routine activities (e.g., webpage update and E-newsletter issue) and special activities (e.g., UN-ISDR WCDRR-related conference, “Tokyo Conference DRRR”, international “River Technology” symposium at WECC 2015 in Kyoto, and collaborative “WFEO-CDRM Special Session” at I3R2 in Seoul). He also reported the results of CBNDRM subcommittee activities. Members made comments on membership enrollment and financial issues, particularly noting that financial support is crucial to make the CDRM more active.

5. 2016 action plans

As for the 2016 term, the Chair talked about international collaborations. A range of discussions followed: the issue of a deficit budget for extending CDRM activities; a high level international conference to earn revenue for such activities; a disaster concept for CDRM roles, excluding manmade disasters such as war and conflict, based on the Sendai Framework; the benefits of CDRM activities to committee members; implementation of DRM regional requirements; etc. The discussion of plans for 2016 remained incomplete, and the Chair ruled that the discussion would continue by email after the meeting.

Regarding potential plans for 2016, the committee Secretary expressed deep commitment to international collaboration such as via the 10th International Joint Symposium (Taiwan) and I3R2 (Sri Lanka). The committee Secretary will ask all members to submit their plans for local or international activities, and will organize and circulate this information to all members by email. The members will decide on approval or disapproval for such plans.

6. Other businesses

- Subcommittee CBNDRM leader, Dr. Kanga, requested that all members provide some information on the subcommittee website related to DRM. She also suggested that collaboration with FEIAP-CDRM could become more progressive.
- Subcommittee EQDRM leader, Dr. Wada, reported on his group’s activities, like the Joint Statement of 30 Disaster-Related Academic Societies of Japan, Global Sharing of Findings from Past Great Earthquake Disasters in Japan, which contributed to the UN-ISDR WCDRR.

- One member proposed that the CDRM may collaborate with the ACECC for practical implementations although the WFEO may be a policy-making organization.
- Members and observers suggested several methods to earn revenue and extend committee activities. For example, an attractive, high-level conference or workshop with registration fees could be held.
- In response to many comments from members and observers, the issue of changing the committee name was postponed, as such a name change is not currently a high priority in comparison to other activities.

7. Closing remarks and adjournment

The Chair expressed to us his appreciation to the participants who had contributed to valuable discussion and requested their ongoing contributions to committee activities.

Reference 5

Report on CBNDRM subcommittee's activities

WFEO Committee for Disaster Risk Management
Report of Sub-Committee for Natural Disaster Risk Management
Jan 2015-Sep 2015

Collaboration with Federation of Engineering Institutions in Asia and the Pacific (FEIAP) Committee for Disaster Risk Management

The FEIAP Committee for Disaster Risk Management held its 23rd General Assembly meeting in Taipei Taiwan on 7th July 2015. Dr. Marlene Kanga, Deputy Chair of the WFEO Committee for Disaster Risk management attended this meeting and shared information on the activities of the WFEO Committee with the Chair of the FEIAP CDRM Committee. Information was also provided on the I3R2 Conference to be held in Soul in August 2015, with an invitation to attend.

Delegates attending the FEIAP CDRM Committee meeting were also invited to contribute to the natural disaster web site was also made at the meeting of the FEIAP Disaster Risk management Committee. Delegates were invited to contribute resources to the web site. An on line tool is available to facilitate contributions. However, the information resources need to be publicly available at no cost and copyright free.

Presentation on work of the WFEO CDRM and Web-site for Capacity Building in Natural Disaster Risk Management at FEIAP Convention 2015, Taipei, Taiwan.

Dr. Marlene Kanga, Chair of the Sub-Committee for Capacity Building in Natural Disaster Risk management presented a paper at the 3rd FEIAP Convention 2015, held in Taipei, Taiwan from 5-6 July 2015. The FEIAP Convention had the theme of “Contributions of the Engineering Profession to Society and Civilization” and had subthemes of “Engineering Education”, “Environmental Engineering”, and “Natural Disaster Support Engineering”, which are associated with the Standing Committees of FEIAP.

Dr. Kanga made a technical presentation in the session on “Natural Disaster Support for Engineering” on “Natural Disaster Risk Management and Resilience – Systematic Methods, Tools and Technologies” with case studies from Australia and New Zealand. Her presentation also included information on the web-site established by the Sub-Committee for Capacity Building for Natural Disaster Risk Management. Delegates were invited to contribute resources directly via the WFEO web page.

Update on web page for capacity building for natural disaster risk management

The webpage established by the Sub Committee for Natural Disaster Risk management continues to grow with resources contributed by engineers from around the world. This is expected to become a valuable reference for engineers interested in natural disaster risk management. Access continues to be available at no cost from the WFEO website: www.wfeo.org/ndrm.

This sharing of knowledge is expected to result in significant humanitarian benefit and contribute to sustainable development by sharing knowledge and technology transfer to manage risks. The web resource covers a range of vital topics including:

- Governance for disaster risk management
- Risk Identification tools
- Risk Assessment
- Risk Mitigation
- Risk Communication
- Emergency Response

The resources can be searched by different types of natural disaster: earthquake, flood, tsunami, storm surge, landslip, hurricane, volcano, drought, extreme heat, fires, extreme cold and solar flares and by country or geographic region.

The web page continues to be supported by Liberty International Underwriters, which is a global insurer of engineering risks including those exposed to natural disasters. We are very appreciative of this ongoing support which is acknowledged with a display of their logo.



The above description of Reference 2 was written by
Dr. Marlene Kanga, Hon. FIEAust Hon.FICChemE FIPENZ FIE CPEng
AM, Deputy Chair, WFEO CDRM Committee
Leader, Subcommittee for Capacity Building for NDRM





Dr. Marlene Kanga presents at the 3rd FEIAP Convention 2015, Taipei Taiwan, 6th July 2015



23rd FEIAP General Assembly and Technical Committees (including CDRM) meeting 7th July 2015

Abbreviations

AAES	= American Association of Engineering Societies
ACECC	= Asian Civil Engineering Coordinating Council
AIJ	= Architectural Institute of Japan
ARRN	= Asian River Restoration Network
CAST	= China Association for Science and Technology
CBNDRM	= Capacity Building for Natural Disaster Risk Management (subcommittee of CDRM)
CDRM	= WFEO-Committee on Disaster Risk Management
CRPEP	= Council for Regulating the Practice of Engineering Professions
DRM	= Disaster Risk Management
DRRR	= Disaster Risk Reduction and Resilience
ECSA	= Engineering Council of South Africa
Eng.	= honorific title of Engineer
Er.	= honorific title of Engineer
EQDRM	= EarthQuake-related Disaster Risk Management (subcommittee of CDRM)
Ing.	= Ingenieur (French), Ingeniero (Spanish), honorific title of Engineer
FEIAP	= Federation of Engineering Institutions of Asia and the Pacific
I3R2	= International Institute for Infrastructure Renewal and Reconstruction
ICHARM	= International Center for Water Hazard and Risk Management
IWHR	= China Institute of Water Resources and Hydropower Research
JFES	= Japan Federation of Engineering Societies
JRRN	= Japan River Restoration Network
JSCE	= Japan Society of Civil Engineers
MLIT	= Ministry of Land, Infrastructure, Transport and Tourism
SCJ	= Science Council of Japan
SC/DRR	= Cross-Cutting Thematic Unit on Disaster Risk Reduction
SPEA	= South Pacific Engineers Association
UN-ISDR	= United Nations International Strategy for Disaster Reduction
UNESCO	= United Nations Educational, Scientific, and Cultural Organization
UN-SDGs	= United Nations - Sustainable Development Goals
WCDRR	= World Conference on Disaster Risk Reduction, the 3rd conference in 2015 March, held in Sendai, Japan
WDRM	= Water-related Disaster Risk Management (subcommittee of CDRM)
WFEO	= World Federation of Engineering Organizations
WECC2015	= World Engineering Conference and Convention in 2015, held in Kyoto, Japan