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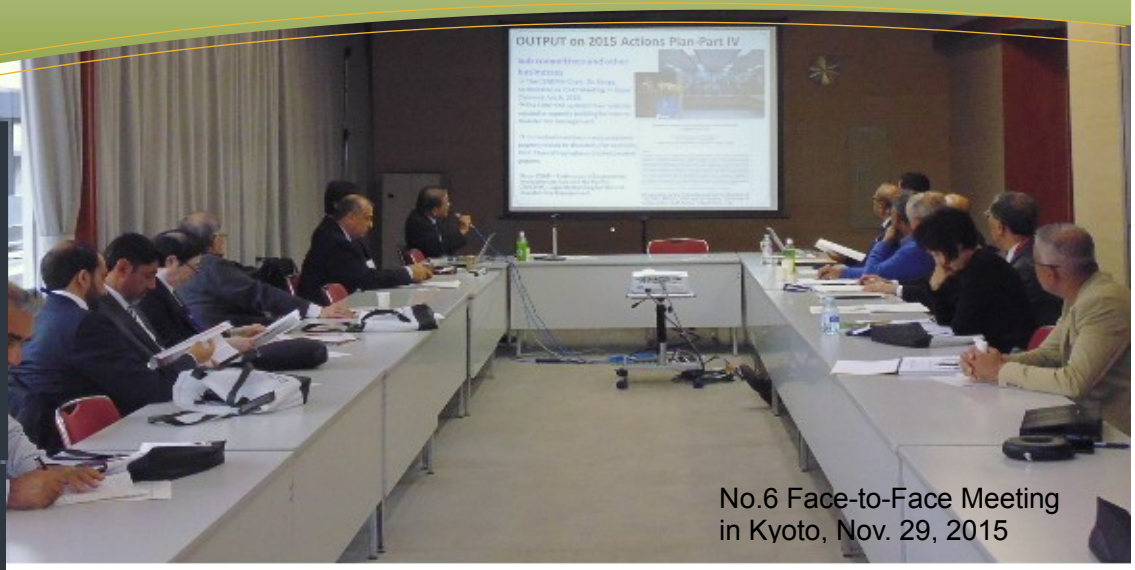
Committee on DRM Newsletter

Newsletter of Standing Technical Committee on Disaster Risk Management



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

In this issue

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.

Report on "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.

Organized by World Federation of Engineering Organizations (WFEO); Japan Society of Civil Engineers (JSCE); Architectural Institute of Japan (AIJ); Japan Federation of Engineering Societies (JFES); Japan River Restoration Network (JRRN).
Supported by Science Council of Japan (SCJ); Japan Ministry of Land, Infrastructure, Transport and Tourism (MLIT); Asian River Restoration Network (ARRN).

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, supported by Japanese government agencies and Asian regional organizations 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 Mayer, 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).

Report on the sixth face-to-face CDRM

The sixth face-to-face meeting for Committee on DRM was held at Kyoto International Conference Center (Room 555) in Kyoto from 14:00 to 16:00 on Sunday, November 29, 2015. Approximately 20 participants (including observers) engaged in many valuable discussions. The minutes are described as follows.

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 6th face-to- face meeting

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

4. 2015 activities report

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 nothing 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 business

- 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..

(Note) ACECC= Asian Civil Engineering Coordinating Council; CBNDRM= Subcommittee on Earthquake-related Disaster Risk Management; DRM= Disaster Risk Management; DRRR= Disaster Risk Reduction and Resilience; EQDRM= Subcommittee on Capacity Building for Natural Disaster Risk Management: FEIAP= Federation of Engineering Institutions in Asia and the Pacific; I3R2= International Institute for Infrastructure Renewal and Reconstruction; UN-ISDR= United Nations International Strategy for Disaster Reduction; WCDRR= World Conference on Disaster Risk Reduction, the 3rd conference in 2015 March, held in Sendai, Japan; WECC2015= World Engineering Conference and Convention in 2015, held in Kyoto, Japan.

Informing engineers in the Asia pacific region of the work of WFEO and the web-site for Capacity Building in Natural Disaster Risk Management (CBNDRM)

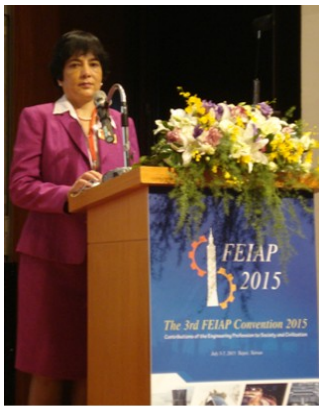
Dr. Marlene Kanga, Chair of the Sub-Committee for Capacity Building in Natural Disaster Risk management presented a paper at the 3rd FEIAP Convention 2015, held in Taipei, Taiwan from 5-6 July 2015. The FEIAP Convention had the theme of "Contributions of the Engineering Profession to Society and Civilization" 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.

Attendance at the FEIAP Convention was also an opportunity to collaborate with the FEIAP Committee for Disaster Risk management which held its 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 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.

reported by Dr. Marlene Kanga Hon. FIEAust Hon.FIChemE FIPENZ FIE CPEng AM; Deputy Chair, WFEO CDRM Committee; Chair, Subcommittee for Capacity Building for NDRM; President Elect World Federation of Engineering Organisations



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.

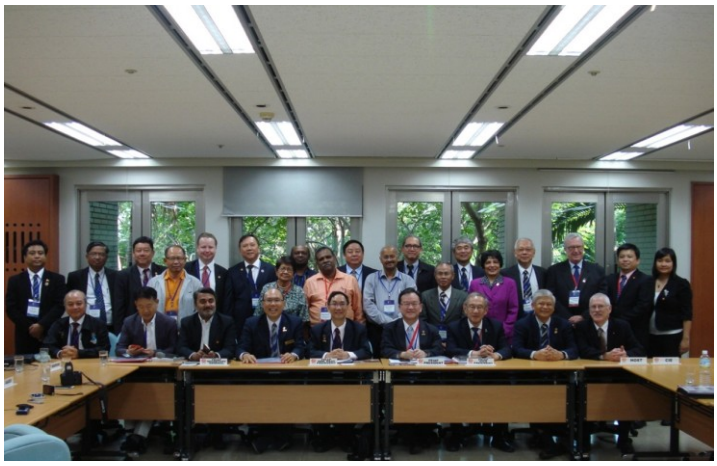
This sharing of knowledge is expected to result in significant humanitarian benefit and contribute to sustainable development by sharing knowledge and technology transfer to manage risks. The web resource covers a range of vital topics including:

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

Liberty International Underwriters

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.



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

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

Making a contribution to the WFEO Web resource for natural disaster risk management:
Engineers are invited to contribute to the WFEO web-based resource, based on their knowledge and expertise to build capacity for natural disaster risk management. The collection of will form an important library, accessible world-wide. It will provide valuable support to engineers around the world to develop sustainable solutions for natural disaster risk management. It should be noted that all information should be publicly available, copyright free and non-commercial. To add a resource: Please submit the following information on-line at
http://www.wfeo.net/ndrm/ - "Add Resources"
Information that will be required includes:

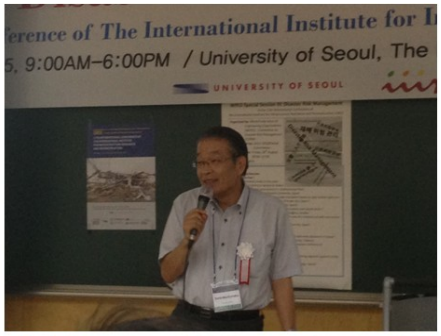
1. Title of the resource (e.g.: "New Zealand: Communicating risk to the community")
2. Description:(100 words maximum)
3. Specific area of natural disaster risk management (e.g. risk assessment, risk communication etc.)
4. Type of Natural Disaster (e.g. earthquake, flood etc.)
5. Geographic Region
6. Country where the resource was developed or used
7. Web page link to the resource so it can be accessed

Details of the provider of information are requested to confirm details of the information added to the database, but will not be made public. The Sub-Committee for Capacity Building
for Natural Disaster Risk Management
thanks you in anticipation of your
contribution.
by Dr. Marlene Kanga

Others business

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.
by Dr. Komatsu (CDRM Chair)


The presenter and the audience



Prof. Komatsu making the opening remarks.

Reports on "UNISDR Science and Technology Conference on the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030. Geneva Switzerland 27-29 January 2016": Prof. Tsukahara (CDRM Secretary) participated in the UNISDR Science and Technology Conference on the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 (the conference) on behalf of the IRDR Japan national committee as well as the WFEO Japan committee in the Science Council of Japan (SCJ). The conference is to discuss how the science and technology community contribute for the implementation of the Sendai Framework for Disaster Risk Redcution (SFDRR), and to establish a partnership of science and technology, by mobilizing relevant institutions, networks and initiatives to share and develop the assessment, synthesis, science advice, monitoring and review, capacity development, and communication and engagement initiatives identified in SFDRR. Prof. Tsukahara participated several sessions and to reiterate the importance of interdisciplinary approach among engineering, natural science and social science, as well as multi-disciplinary approach between the science and technology community and society including policy makers. Prof. Tsukahara joined the delegation from the SCJ and had a series of meetings with key persons including Mr. Robert Glasser, the Special Representative of the Secretary–General for Disaster Risk Reduction. At the conference, many aspects of engineering such as civil engineering and IT engineering were stressed as important player for implementation of SFDRR. by Prof. Tsukahara (CDRM Secretary)

Survey and upcoming events

How Would You Rate the Severity of Natural Disasters? The University of Calgary is interested in the views of Professional Engineers for a study of the perceived severity of natural disasters. Results are being used to develop an index of severity. The University of Calgary Conjoint Faculties Research Ethics Board has approved this survey. by Dr. Wirasinghe (Canada)
The survey link: http://www.surveygizmo.com/s3/2299884/a577a881e7e5

The 12th International Conference of The International Institute for Infrastructure Renewal and Reconstruction (I3R2): The CDRM Secretariat will cooperate with I3R2 for the 12th Annual Conference of the I3R2 to be held at University of Peradeniya (Sri Lanka), August 5–7, 2016. Prof. S. Chen Wirasinghe (a subcommittee member of the Capacity Building for Natural Disaster Risk Management) and Dr. Nobuaki Kimura (CDRM deputy secretary) may participate in the conference and have their presentations related to disaster risk management. For more information, please look at http://www.iiirr.org/iiirr/conference/index.html.
Note that The I3R2 is a natural disaster-related consortium, run by multiple universities in the world, which provides overall leadership in research, education, planning, design and implementation for natural disaster related mitigation, resilience enhancement, and reconstruction projects.

Committee on DRM Membership & Organization (As of January, 2016)
- Approximately 30 members from 11 countries.
- Chair: Prof. Toshimitsu Komatsu
- Vice chairs: Dr. Marlene Kanga, Prof. Syunsuke Ikeda, Prof. Vilas Mujumdar
- Subcommittees
  *Water-related Disaster Risk Management (WDRM), Leader: Prof. Kenichi Tsukahara
  *Earthquake-related Disaster Risk Management (EQDRM), Leader: Prof. Akira Wada
  *Capacity Building for Natural Disaster Risk Management (CBNDRM), Leader: Dr. Marlene Kanga

Detailed information is available on in the CDRM website:
http://www.wfeo.net/stc_disaster_risk_management/

WFEO Standing Technical Committee on Disaster Risk Management (DRM Committee)

Background

The CDRM was established at the General Assembly held in December 2009, Kuwait.

Vision

Introduce and recommend knowledge and experiences to avoid disasters and promote sustainable and sound development. Contribute to identification, evaluation and mitigation of, and adaptation to disasters which are related to all aspects of human life, economy, social activities and environment.

Mission

- Exchange, share and transfer knowledge, technologies and expertise which are useful for minimizing risks of disaster by identifying, evaluating and mitigating, and adapting to disaster risks.
- Foster studies and investigations which are useful to disaster risk management including examples of the best practice and implementation, and document the results in the form of recommendations, guidelines, reports and booklets.
- Gather and disseminate information and provide recommendations on the mitigation of and adaptation to disaster risks to WFEO member countries, engineering societies and leading engineers.
- Facilitate capacity building of engineers in these areas.

Goals

- Create awareness of disaster risk, and introduce knowledge and experience to avoid disasters.
- Document recommendations, guidelines, reports and booklets to foster disaster risk management.
- Disseminate the information through WFEO member country linkages to decision makers, governmental organizations, engineering societies and leading engineers.
- Coordinate international efforts related to disaster risk management
- Organize and support conferences, presentations and workshops related to disaster risk management

The CDRM has a role of minimizing the potential damage and risk to human life and damage through the proper application of technology. The disasters which are closely related to all aspects of human life, economy, social activities and environment should be considered in the CDRM. Because there are broad ranges of disaster, disasters to be focused on should be determined based on the interests and concerns of the members of CDRM taking account of its role and priority.

The CDRM has to contribute to preparation and implementation of the corresponding knowledge and practices for enhancing resilience of the society to disasters, and mobilization of every resource to minimize the potential risk. The extent and level of damage and risk have to be decided based on discussions in the CDRM. The risk is not necessarily restricted to “risk” in the probabilistic concept, but should apply in a wider concept related to mitigation of and adaptation to danger resulting from disasters. The disaster risk management includes all aspects of actions taken for identification, evaluation and mitigation of, and adaptation to disasters.