



WORLD FEDERATION OF ENGINEERING ORGANIZATIONS

PROGRESS REPORT STANDING TECHNICAL COMMITTEE ON DISASTER RISK MANAGEMENT 2019 ACTIVITIES

Dr. Jorge Alva Hurtado
WFEO/CDRM Chairman

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Lima, Peru

1. INTRODUCTION

This report to the WFEO Executive Council gives a brief outline of the activities that the Committee on Disaster Risk Management (CDRM) has performed from October 2018 to October 2019, and of the activities planned for the year 2020. The committee's activities were focused on exchange and training by means of the organization of the 13th International Symposium on DRM and implementing the online training platform, as well as the CDRM-WFEO website.

2. BRIEF BACKGROUND

The Engineering Association of Peru (CIP, *Colegio de Ingenieros del Perú*) became the chair of the WFEO-CDRM on December 2017 in Rome, Italy. In order to organize their activities, the Peruvian members of the CDRM prepared the 2018-2021 Strategic Plan, which was circulated among all the committee members for their input. The plan was approved at the General Assembly meeting in Rome.

3. PLANNED AND EXECUTED ACTIVITIES

For the second year of activities, the CDRM's Peru headquarters proposed to carry out the following activities:

Activities	Status
Organize 13 th International event on Risk Reduction in Lifelines Systems	Finished
Design a platform for online courses in DRM	Finished
Encourage WFEO national members to establish their national DRM committees	In process
Channeling funds from national and international institutions to support committee's activities	Finished
Virtual committee meeting	Finished
Prepare the annual newsletter of the activities of the committee	Pending

3.1 Organize the 13th Symposium on Risk Reduction in Lifelines Systems

The committee wanted to follow up on the event organized by the previous Japan headquarters since 2009, has organized for the second consecutive year the Symposium in its 13th edition. In this opportunity, the event's theme was Risk Reduction in Lifelines Systems, because the interruption of them would generate severe and sensitive losses, especially in case of destructive events, such as earthquakes and floods.

The 13ISDRM joined specialists with the objectives of disseminating vulnerability analysis methodologies, identifying applied technologies to reduce risk in lifelines, as well as identifying risk scenarios and business continuity plans for lifelines.

The Symposium took place the 9th and 10th of October, 2019 at the SENCICO auditorium (Lima) and included the participation of 310 real attendees and 70 virtual attendees from the public sector, the country's regional and municipal governments, academia, the private sector, and the general public.

The event's keynote speakers from Austria, Chile, Ecuador and Mexico presented experiences and studies regarding risk reduction in water and energy services, as well as in transport infrastructure. These topics were widely discussed in thematic sessions composed of national and international specialists.

The event was opened by Peru's Minister of Housing, Construction and Sanitation. Welcome words to the event were given by Dr Jorge Alva, president of the WFEO-CDRM. During his closing remarks, Eng Carlos Herrera, president of CIP, stressed the importance of establishing national DRM committees in every country, with an in-country focus, as Peru had yet done.

The Symposium ended with the reading of the conclusions of the 3 technical workgroups. The symposium was successfully ended with greatly valuable talks by the speakers and their constructive discussions with the audience.



Dr. Alva's opening remarks



Participants at the Symposium



Dr. Gustavo Ayala Keynote speaker, Mexico



Dr. Rodrigo Moreno
Keynote speaker, Chile



Dr. Stefan Schauer
Keynote speaker, Austria



Eng. Ricardo Peñaherrera,
Keynote speaker, Ecuador



Thematic panels



Eng. Carlos Herrera, closing remarks

3.2 Design a platform for online courses in DRM

With the aim of promoting DRM capacity-strengthening programs and achieving a higher number of participants, the WFEO-CDRM proposes the use of technology to design an international platform of on-line DRM courses. The objective of the platform will be to provide a forum where engineers and specialists in other areas and from different countries may share DRM knowledge and experiences.

The proposed courses will be available on a platform based on the Moodle system, will be free of charge, however the issuance of the certificate of participation would cost 50 dollars. Courses will be offered in English and Spanish.

Soon the course of "Development of a Seismic Hazard Project" will begin with the collaboration of CERESIS and the National Geographic Institute. This course, taught by three Spanish specialists, will comprise 10 modules.

The tsunami course is also planned, which will comprise 6 modules and will be taught by specialists from Japan, Canada and France.

M1	Lessons from the past tsunami events and future perspectives Dr. Shunichi Koshimura (Tohoku University, Japan)
M2	Tsunamis: modeling technology and its application for tsunami warning Dr. Anawat Suppasri (Tohoku University, Japan)
M3	Tsunami impact to infrastructures. Dr. Ioan Nistor (University of Ottawa, Canada)
M4	Artificial Intelligence and remote sensing technology for tsunami damage Dr. Bruno Adriano (RIKEN, Japan)
M5	Modeling tsunami evacuations Dr. Erick Mas (Tohoku University, Japan)
M6	Social organization. Preparedness, early warning systems and evacuation Bernardo Aliaga (Tsunami Unit. IOC UNESCO-Paris, France)

WFEO-CDRM

Each course considers an evaluation system so that participants can access the attendance certificate.

3.3 Encourage WFEO national members to establish their national DRM committees

Letters were sent to 21 WFEO national members reporting on the WFEO-CDRM and proposing to consider implementing their DRM committees. There were responses from Portugal and the United Kingdom, expressing interest and at the same time the need to have a budget for a possible committee. The CIP approved the creation of a national committee in DRM, in Peru.

3.4 Virtual Committee meeting

The second online meeting of the WFEO-CDRM was held on Wednesday 10 April, at 8pm Peru time. Dr. Jorge Alva presented the proposal of the first online course, which would deal on management of the risk related to tsunamis. It was welcome by all the participants who offered contributions to improve the contents and to ensure a high quality of the course. Participants of the online meeting: Dr. Jorge Alva Hurtado, Dr. Kenichi Tsukahara, Dr. Javier Arrieta, Dr. José Macharé, Loren Ruiz P.E., Dr. Jing Peng, Dr. Jorge Vargas, MSc. Richard Pehovaz, Juvenal Medina P.E. and Dr. Lizett López.

4. PROJECTIONS FOR 2020

For the year 2020, the committee propose the following course of actions:

4.1 Specialized online courses on DRM

After the experience gained this year, organizing the course on Tsunami-related disaster risk management, we will continue with this capacity building task because it looks a very fruitful one. WFEO-CDRM members are being convoked into a task group to define which regions, hazards and/or processes should be treated as a priority. Such extended committee should also recommend strategic allied institutions that may support the initiative via technical agreements. We have received suggestions of themes as Early warning systems; Good practices in building; Seismic isolation systems; Volcano-related disaster risk management, among others.

4.2 Expert advisory group

The CDRM will continue identifying and contacting outstanding specialists in different fields of the DRM to build an interactive expert network. This should be a space for exchange and discussion about important issues of the DRM. This group should release agreed and coordinated opinion and recommendations, in the case of imminent danger or the occurrence of a disastrous event. They can also constitute intervention bodies when requested for preparedness or response phases around a high risk event. Finally, this group may work as advisory panel for any linear or transverse processes related to DRM.

4.3 Scientific and technical cooperation agreements

International cooperation on science, technology and innovation is a relevant issue of the disaster risk management processes. The knowledge provided by specialized institutions or specialized sections of international bodies represent a valuable support to strengthen DRM capacities in the WFEO countries. That is why the CDRM is determined to achieve the signing of cooperation agreements with the Regional South America Center for Seismology (CERESIS) and the United Nations Office for Disaster Risk Reduction (UNDRR), in 2020. Also, the CDRM will explore possibilities for cooperation with UNESCO, the World Bank, USAID, and GIZ, among others.

5. DETAILED BUDGET AND SOURCES OF FUNDS

The financial statement of the WFEO-CDRM from January to October 2019 is shown below.

The budget for Mid-FY2019 was spent as planned the previous year. The funds were used mainly in the organization of the 13th International Symposium and in the Online platform for courses, as well as participation in the WEC2019 (including registration fees) and the WFEO General Assembly in Melbourne, Australia, November 18-24, 2019.

WFEO-CDRM Financial Statements for Mid-FY2019

Revenue		
Content	Unit	Amount
WFEO allocation	EUR	0.00
CIP allocation	US\$	90,000
Income generated by the 13 th International Symposium	US\$	6,325
Sponsorship	US\$	0.00
Expenditures		
Content	Unit	Amount
1. 13th International Symposium (Lima, Peru, October 9-10, 2019)	US\$	13,282
- Invitation costs for guest speakers (accommodation, airfare, etc.)	US\$	3,939
- Printing and advertising	US\$	1,020
- Audio and video equipment	US\$	796
- Coffee break	US\$	4,182
- Others	US\$	3,345
2. Platform online courses	US\$	2,450
- Design and implementation	US\$	2,450
3. Report on WFEO-CDRM activity	US\$	15
- Consumable office supplies (e.g., envelopes)	US\$	15
4. WFEO General Assembly and WEC2019	US\$	11,886
- Airfare, accommodation and per diem	US\$	11,886
Total revenue	US\$	96,325
Total expenditures	US\$	28,032
Balance	US\$	68,293

WFEO-CDRM Secretary

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ANNEX

1. SYMPOSIUM PROGRAM

9 October			
16:00-16:30	Opening remarks Dr. Jorge Alva, WFEO-CDRM chair Dr. Rodolfo Eugenio Yañez Wendorff, Minister of Housing, Construction, and Sanitation of Peru		
16:30-17:10	Keynote Dr. Gustavo Ayala <i>Seismic resilience of water distribution networks in Mexico City. Challenges and opportunities</i>		Mexico
17:10-18:30	Thematic sessions Speaker: MSc. Jorge Luis Rucoba Tello, SEDAPAL Panel: Eng. Fernando Chiok Chang, SUNASS Eng. César Quintanilla Cacho, EPS GRAU S.A. Eng. Pablo Silverio Urbina Arias, PNSU-MVCS Dr. Gustavo Ayala, UNAM		
18:45-19:25	Keynote Dr. Rodrigo Moreno <i>Planning the electricity grid against the extreme</i>		Chile
19:25-20:25	Thematic sessions Speaker: Eng. Simone Botton, ENEL PERÚ Panel: Eng. Máximo Cárdenas Arbieto, OSINERGMIN MSc. Ronald Orellana Paucar, COES-SINAC Dr. Rodrigo Moreno, UC		

10 October			
18:00-18:10	Welcome remarks		
	Dr. José Macharé, member WFEO-CDRM		
18:10-18:50	Keynote		
	Dr. Stefan Schauer <i>Choosing Optimal Ways to Increase Resilience of Critical Infrastructures</i>		Austria
18:50-19:30	Keynote		
	Eng. Ricardo Peñaherrera <i>Production, reproduction and risk reduction in transport systems - Ecuadorian Case</i>		Ecuador
19:30-20:50	Thematic sessions		
	Speaker: Eng. Fanny Eto Chero Panel: Eng. Raúl Delgado Sayán, CESEL INGENIEROS Eng. Gisselle Principe Bayona, PROVIAS-MTC Eng. Saúl Castillo Izquierdo, LAP Eng. Ricardo Peñaherrera León		
20:50-21:15	Round table conclusions		
	Reading the conclusions of the three thematic sessions		
21:15-21:30	Closing remarks		
	Eng. Carlos Herrera, CIP president		

2. WFEO-CDRM CURRENT AND NEW MEMBERS

Country	Name and title	Position
Peru	Dr. Jorge E Alva Hurtado	Chair, WFEO-CDRM
Japan	Prof. Syunsuke Ikeda	Vice Chair, WFEO-CDRM
USA	Dr. Vilas Mujumdar	Vice Chair, WFEO-CDRM
Subcommittee on Water and climate-related Disaster Risk Management (WCDRM)		
Japan	Prof. Kenichi Tsukahara	Leader
Canada	Prof. S. Chan Wirasinghe	Member
China	Dr. Jing Peng	Member
Japan	Dr. Yumio Ishii	Member
Japan	Dr. Kazumasa Ito	Member
Japan	Prof. Kazutoshi Kan	Member
Japan	Dr. Son Hung Nguyen	Member
Kuwait	Eng. Talal M. Al-Qahtani	Member
Peru	Eng. Loren M. Ruiz Garcia	Member
Peru	MSc. Richard Pehovaz	New member
Peru	Dr Jorge Vargas	New member
Subcommittee on Earthquake and tsunami-related Disaster Risk Management (ETDRM)		
Peru	Dr. Javier Piqué del Pozo	Leader-New member
Peru	Dr. Alberto Delgado	Member
USA	Dr. Vilas Mujumdar	Member
Japan	Dr. Kimiro Meguro	New member
Japan	Dr. Masayuki Nagano	New member
Japan	Dr. Taiki Saito	New member
Japan	Dr. Yoshikazu Takahashi	New member
Peru	Dr. Miguel Estrada Mendoza	New member
Peru	Dr. José Macharé Ordóñez	New member
Peru	Dr Nicola Tarque	New member
USA	Mikaël Gartner, PE	New member
	Javier Arrieta Freyre	
Subcommittee on Capacity Building for Disaster Risk Management (CBDRM)		
India	Er. Ashok K Basa	Leader
Canada	Prof. S. Chan Wirasinghe	Member
China	Prof. Fang Chen	Member
Kuwait	Eng. Ahmad H. Bahman	Member
USA	Prof. Vilas Mujumdar	Member
	Juvenal	
Secretary and Deputy secretary WFEO-CDRM		
Peru	Dr. Javier Arrieta Freyre	New member
Peru	Dr. Lizett Lopez Suarez	New member