Statement for the Sendai Framework Risk Reduction Hub[1]
Accelerating Implementation of DRR and Resilience in Infrastructure
UN Headquarters, New York
May 17, 2023

Good afternoon colleagues. I am William E. Kelly representing the World Federation of Engineering Organization (WFEO) Committee on Disaster Risk Management (CDRM). I was asked to present a statement on what the WFEO-CDRM is currently doing and planning to do. For my comments I have drawn on the Side Event at the 2022 Science, Technology Innovation Multi Stakeholder Forum organized by WFEO, UNESCO, the International Science Council (ISC), and the American Society of Civil Engineers (ASCE),[2] the booklet released at the Side Event,[3] and the International Science Council (ISC) - Science Technological Community Major Group (STC MG) report.[4] WFEO is co organizer of the STC MG with the ISC.[5]

The 2022 Side Event was recorded and is available on YouTube with a link on the WFEO website. In her closing comments for the Side Event, Dr. Marlene Kanga pointed out that publication of the booklet is a good example of how WFEO mobilizes and can mobilize the global engineering profession (SDG 17).

The organizers of this Hub session asked for real-world examples if possible. The booklet is organized into an introduction and five chapters: Land Use Planning; Resilient Infrastructure Systems; Data and Information Management; Capacity Building; and Institutional Framework and Public Policies. Two or three case histories are provided for most of the chapters. Equally important for informing decision makers are the key messages at the end of each chapter.

For the chapter on institutional framework and public policies, the case histories are for Chile and New Zealand. One of the key points is that communication that engenders public trust is an essential component of effective disaster risk management.

Examples for land-use planning are from Australia, Hong Kong, and Japan and include wildfires, tsunamis, coastal flooding, and earthquakes. Key messages include the importance of engineering input early in the land-use planning process and the critical importance of community engagement.

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[1] UNDRR Midterm Review Sendai Framework Risk Reduction Hub
https://sendaiframework-mtr.undrr.org/risk-reduction-hub
[2] WFEO-CDRM Side event at the UN STI Forum – Engineering Resilience in Disaster Risk Management for Sustainable Development
[3] Engineering Resilience in Disaster Risk Management for Sustainable Development
https://www.wfeo.org/wp-content/uploads/stc-disaster_risk/2022/Engineering_Resilience_in_DRM_for_Sustainable_Development.pdf
[4] International Science Council. 2023. Report for the Mid-term Review of the Sendai Framework for Disaster Risk Reduction. Paris, France. International Science Council.
https://council.science/publications/mtr-sendai-framework-disaster-risk-reduction/
[5] STC MG https://council.science/science-technology-major-group/

For the chapter on resilient infrastructure systems, the case histories are earthquakes for New Zealand and power grids in Europe and South America. Some key messages: different infrastructure system components (hard and soft) have different resiliencies and this must be clearly understood; the best time to reduce risk and increase resilience is durng planning for new infrastructure and planning to rebuild damaged infrastructure. Decisions on rebuilding damaged infrastructure that was poorly located can be especially challenging.

The key message from the chapter on data and information management is that the digital revolution has greatly expanded the data and information available for disaster risk management but improved accessibility and standardization of data and data collection processes is needed to take full advantage of these expanded resources.

The chapter on capacity building includes case histories on: cyclones in India; volcanic hazards in Peru; and earthquakes in the Philippines. Key messages include the need to update engineering codes of practice. For more on this, see the WFEO Model Code of Practice on Principles of Climate Change Adaptation for Engineers.[6]

In summary, the WFEO-CDRM has and will continue to contribute to advancing engineering practice for DRM in the context of achieving the UN Sustainable Development Goals and looks forward to continuing to collaborate with all its partners (SDG 17).

[6] WFEO Model Code of Practice on Principles of Climate Change Adapdation for Engineers
http://www.wfeo.org/code-of-practice-on-principles-of-climate-change-adaptation-for-engineers/