2025 International Training Workshop on Disaster Risk Reduction

Taipei, Taiwan | October, 2025

The National Science and Technology Council (NSTC), together with the National Science and Technology Center for Disaster Reduction (NCDR), successfully launched the "**2025 International Training Workshop on Disaster Risk Reduction Innovation: Digitalized Disaster Governance in the AI Era" from October 28 to 31 in Taipei**. The four-day workshop brought together 60 experts and participants from 14 countries, fostering international exchange on how advanced technologies are transforming modern disaster risk governance.

Strengthening International Collaboration Through Science and Technology

In the opening remarks, Dr. Wang-Long Li, Director General of the Department of International Cooperation and Science Education at NSTC, emphasized NSTC's long-standing commitment to international disaster risk reduction capacity-building. Since 2004, NSTC has supported a series of international workshops to promote Taiwan's research capabilities and practical tools. Dr. Li highlighted that as global risks evolve rapidly, disaster governance must shift from reactive response to proactive and anticipatory management—leveraging big data, AI-powered models, and high-performance computing to build long-term resilience.



Figure 1 NSTC D.G. Wang-Long Li delivered the opening remarks for 2525 ITW

Global Experts Share AI-Driven Innovations in Disaster Governance

This year's workshop features renowned speakers and specialists across government, academia, and international organizations. Distinguished speakers include:

Antonia Yulo Loyzaga, Former Secretary of the Department of Environment, the Philippines
Prof. Yih-Min Wu, National Taiwan University, Taiwan
Clyde Louchez, Center for Excellence in Disaster Management and Humanitarian Assistance, U.S.
Dr. Joseph Green, Pacific Disaster Center (PDC), U.S.
Dr. Do-Woo Kim, National Disaster Management Research Institute, Korea
Dr. Bruno Adriano, International Research Institute of Disaster Science, Tohoku University, Japan
Tan Chor Siong, Buddhist Tzu Chi Charity Foundation, Taiwan
Jay Chen, NVIDIA, Taiwan

Speakers presented cutting-edge applications covering **earthquake early warning**, **flood and extreme rainfall forecasting**, **remote sensing and IoT data governance**, **social vulnerability and risk propagation**, and **AI-powered decision support systems**.

NCDR researchers shared Taiwan's practical experience in establishing an end-to-end digital disaster information chain, linking **environmental monitoring, impact forecasting, early warning, and decision support**. Presentations showcased new advances in:

- AI-infused meteorological and climate modeling
- Mobile-phone-based population anomaly detection
- Smart earthquake scenario simulations
- Explainable AI for landslide susceptibility mapping
- Data-driven flood and river stage prediction models
- Cloud-based disaster dashboards and cross-agency coordination tools



Figure 2 2025 ITW brought 60 experts and participants from 14 countries together in Taiwan

NCDR Director Dr. Hongey Chen emphasized that NCDR is advancing a “Data / Model / Computing as a Service” framework to accelerate the application of scientific innovations in real-world disaster management. He noted that while AI technologies enhance prediction and decision-making, improving data quality, model usability, and operational interfaces remains essential to shortening the gap between early warning and action.

The workshop features keynote sessions, thematic talks, group exchanges, and technical demonstrations. Participants will also visit NCDR and Taiwan Central Emergency Operation Center (CEOC). These visits provide international participants with firsthand understanding of Taiwan’s mechanism for interagency coordination and real-time disaster response.

The 2025 workshop highlights how AI, data, and cross-sector collaboration can strengthen disaster risk governance. By providing a platform for technology sharing and partnership building, NSTC and NCDR aim to deepen regional cooperation and equip practitioners with actionable tools to address increasingly complex climate and disaster risks.



Figure 3 The ITW delegation visited NCDR and Taiwan CEOC

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