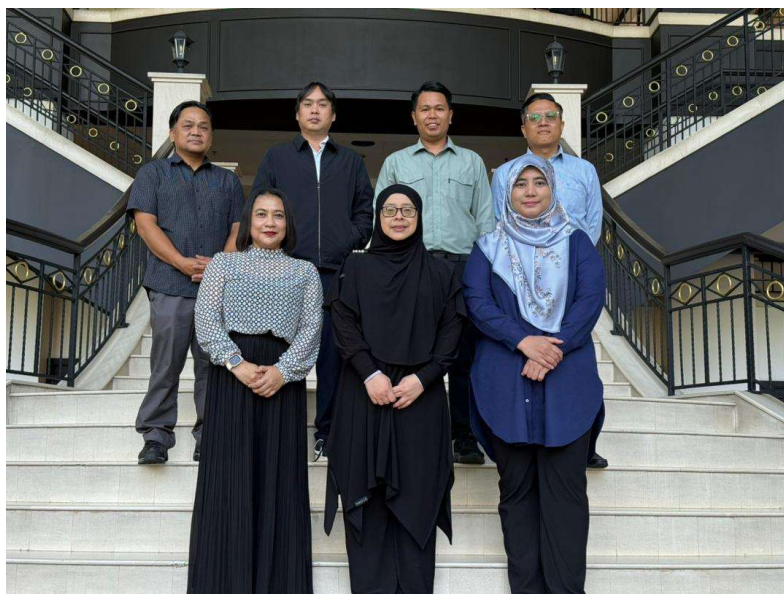

CLIMATE CHANGE CHALLENGES TO THE SAFETY OF NUCLEAR INSTALLATIONS

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The first Technical Meeting for the IAEA Coordinated Research Project (CRP) No. 28266, “Climate Change Challenges to the Safety of Nuclear Installations,” was convened at the Bangi Resort Hotel from 8 to 10 April 2026. Organised by the Malaysian CRP team, the session focused on the technical coordination and harmonization of national research inputs concerning the impact of climate change on nuclear safety. Although the project initially used Pakistan’s Chasma nuclear power plant as a benchmark, this phase of the project focused on incorporating local Malaysian data to strengthen national risk assessment capabilities. This initiative reinforces Malaysia’s strategic commitment to international nuclear safety frameworks. It also served as the primary preparation phase for the country’s technical submission to the upcoming IAEA meeting in South Korea, scheduled for June 22–26, 2026.

The project involves a multinational consortium including Malaysia, Canada, China, France, the United States, and the Republic of Korea, with Dr. Mark Dennis Usang serving as the designated national representative. Within the CRP framework, which is bifurcated into Riverine and Coastal focus groups, the Malaysian team is integrated into the Riverine cohort due to the inland location of the national research reactor.

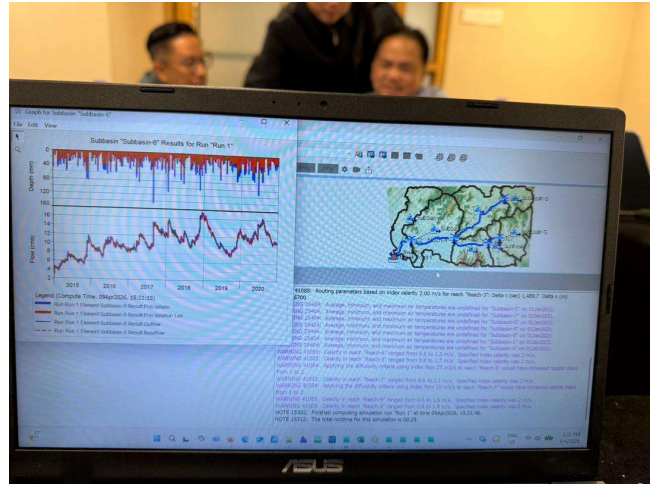


Project Leader Dr. Mazleha Maskin (centre) alongside members of the IAEA Coordinated Research Project (CRP No. 28266).

During the sessions, Dr. Mark Dennis conducted a dedicated technical training session to standardise hydrological and geospatial methodologies. This involved the integration of HEC-HMS (Hydrologic Modeling System) and QGIS (Quantum Geographic Information System) for advanced geospatial analysis.

Throughout the meeting, participants actively engaged in real-time document preparation and review to ensure the quality, consistency, and reliability of scientific outputs. Team members were tasked with developing flood simulations tailored to specific geographical variables, specifically focusing on

hydrological profiles for Sungai Semenyih and Sungai Langat.



A training session on data analysis and modelling using HEC-HMS and QGIS software, conducted by Dr. Mark Dennis.

Moving forward, the Malaysian CRP team will further analyse these scenarios using RCP 2.6 and RCP 8.5 climate change pathways applied to the existing terrain models. This initiative reflects Malaysia's continued commitment to supporting IAEA coordinated research while strengthening national expertise in nuclear safety and climate change impact assessment at an international level.