

NTS Insight, no. IN22-04, August 2022

Expanding the Peaceful Uses of Nuclear Technology and Climate Change Adaptation: Opportunities and Challenges

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While ongoing debates on the critical role of nuclear power plants in achieving the goals established in the 2015 Paris Agreement remain unsettled, the peaceful applications of nuclear technology in climate change adaptation have been expanding in recent years. The peaceful uses of nuclear technology cannot be excluded from innovative approaches to addressing the world's most pressing and complex challenge— climate change. This NTS Insight examines how nuclear technology can be deployed to strengthen climate adaptation measures and presents case studies from several Southeast Asian countries that have nuclear research and scientific programmes. Nuclear technology is being utilised in adopting climate-smart agriculture, modernising water management, enhancing greenhouse gas emissions analysis, and combatting plastic pollution. This Insight offers agendas for action by Southeast Asian countries to address key challenges to expanding the role of nuclear technology in addressing climate change.



The author conducted a research tour at the Philippine Nuclear Research Institute in May 2022.

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