Climate change scenarios for Vietnam

Challenge

Climate change poses an increasing threat to socio-economic and environmental development. This has become one of the greatest challenges to sustainable development in Vietnam. The Government of Vietnam issued a national programme to actively respond to climate change and to strengthen natural resource management and environmental protection.

Solution

In response to the Government of Vietnam, the Ministry of Natural Resources and Environment (MONRE) in Vietnam, with funding from the United Nations Development Programme, set out to develop frameworks, mechanisms and capabilities to inform, guide and coordinate the analysis of climate change related risks.

The Met Office collaborated with the Institute of Meteorology, Hydrology and Environment in Vietnam (IMHEN – a department of MONRE). Together we generated high-resolution future climate scenarios for Vietnam, using the Met Office Hadley Centre’s regional climate modelling system, PRECIS (Providing RElational Climates for Impacts Studies). We enhanced relevant scientific and technological capabilities and provided support for:

- designing PRECIS experiments and interpreting the output;
- installing, maintaining and managing the PRECIS software component;
- data processing and analysis, as well as generating value-added climate products for specific applications; and
- training scientists and technicians in climate science including experimental design.

Benefits

PRECIS added high-resolution information to the large-scale projections of the global climate model. This detail enabled more accurate prediction of climate change impacts and associated weather extremes at a local level. The collaboration with the Met Office has enabled IMHEN scientists to provide policy relevant climate change information to stakeholders. The project supported the development and application of new climate scenarios to more comprehensively characterise how climate change will affect Vietnam. The scenarios presented an evidence base for decision-makers, enabling them to identify climate change risks and plan appropriate responses.