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# Climate change in the Pacific - is it real or not?

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In this presentation, novel approaches and new ideas for students and young researchers to appreciate the importance of climate science are discussed. These approaches have been applied through conducting a number of training workshops in the Pacific Island Countries and teaching a course on climate change international law and climate change science at the University of the South Pacific (USP) - the first course on this type in the Pacific. Particular focus of this presentation is on broadening students' experience with application of web-based information tools for analysis of climatic extremes and natural hazards such as tropical cyclones.

Over the past few years, significant efforts of Australian climate scientists have been dedicated to improving understanding of climate in the Pacific through the International Climate Change Adaptation Initiative (the Australian Government Initiative to assist with high priority climate adaptation needs in vulnerable countries in the Asia-Pacific region). The first comprehensive scientific report about the Pacific climate has been published in 2011, as an outcome of the Pacific Climate Change Science Program (PCCSP). A range of web-based information tools such as the Pacific Tropical Cyclone Data Portal, the Pacific Climate Change Data Portal and the Pacific Seasonal Climate Prediction Portal has been also developed through the PCCSP and the Pacific Adaptation Strategy Assistance Program. Currently, further advancement in seasonal climate prediction science and developing enhanced software tools for the Pacific is undertaken through the Theme 1 of the Pacific Australia Climate Change Science and Adaptation Planning (PACCSAP) Program.

This new scientific knowledge needs to be transferred to students to provide them with true information about climate change and its impact on the Pacific Island Countries. Teachers and educators need their knowledge-base regularly updated and tools that will help their students critically evaluate information transmitted via the mass media. This is particularly important when educators present to students cutting edge science knowledge on climate change. Climate change skeptics through mass media attack climate scientists and dismiss their findings about magnitude of climate change. A novel approach implemented in our training workshops and teaching courses gives students practical hands on experience in examining climate data using the developed web-based information tools.

Using the tools, students can examine climate of the Pacific Island Countries, derive trends in climate variables such as temperature and rainfall and make their own conclusions. An open forum "Is climate change real or not?" has also been included as an integral part of these workshops and teaching, giving an opportunity for students to present their findings. They have also been asked to provide examples of observed change in the environment in their countries which may be related to climate change.

Tropical cyclones are the most destructive severe weather events in the Pacific which regularly affect countries in the region. Understanding importance of updating knowledge about cyclones, extensive training in using the Pacific Tropical Cyclone Data Portal (http://www.bom.gov.au/cyclone/history/tracks/) has also been provided. Using this sophisticated web-based tool, students can learn about occurrences of cyclones in waters around their countries and over the whole Pacific. Positive feedback from university students and participants of training workshops has been obtained and this approach may be recommended for educators to include in their courses.

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