



Supporting adaptation decisions to address climate related impacts and hazards in the Caribbean (the CARIWIG project)

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Managers and policy makers from regional and national institutions in the Caribbean require knowledge of the likely impacts and hazards arising from the present and future climate that are specific to their responsibility and geographical range, and relevant to their planning time-horizons. Knowledge, experience and the political support to develop appropriate adaptation strategies are also required.

However, the climate information available for the region is of limited use as: observational records are intermittent and typically of short duration; climate model projections of the weather suffer from scale and bias issues; and statistical downscaling to provide locally relevant unbiased climate change information remains sporadic. Tropical cyclone activity is a considerable sporadic hazard in the region and yet related weather information is limited to historic events. Further, there is a lack of guidance for managers and policy makers operating with very limited resources to utilize such information within their remit.

The CARIWIG project (June 2012 - May 2015) will be presented, reflecting on stakeholder impact, best practice and lessons learned. This project seeks to address the climate service needs of the Caribbean region through a combination of capacity building and improved provision of climate information services. An initial workshop with regional-scale stakeholders initiated a dialogue to develop a realistic shared vision of the needed information services which could be provided by the project. Capacity building is then achieved on a number of levels: knowledge and expertise sharing between project partners; raising understanding and knowledge of resources that support national and regional institutions' adaptation decisions; developing case studies in key sectors to test and demonstrate the information services; training for stakeholder technical staff in the use of the provided services; the development of a support network within and out-of-region between stakeholders and research institutes concerned with environmental hazards and impacts.

The project seeks to provide locally relevant present and future-scenario climatic data through an intuitive web service. Present climate summary data, based on meteorological station observations, is provided for locations across the region. Relatively high resolution (25km) PRECIS regional climate projections (1961-2100) are available for the region conditioned with the HadCM3Q0 and ECHAM5 GCM using the A1B SRES emissions scenario. Bias corrected control and future climate scenarios (for 30-year time slices centred on the 2020s, 2050s and 2080s) comprising timeseries of daily meteorological variables are then simulated using the EARWIG and UKCP09 statistical downscaling approach adapted for the Caribbean. A novel modelling tool provides a basis for testing vulnerability to tailored scenarios of tropical cyclone hazard.

The CARIWIG project seeks to provide a lasting impact through an emphasis on building regional stakeholder capacity and through technological design that allows the flexibility to include additional meteorological records and new climate projections as they become available.