FloodNet Briefing
Results and Progress of the FloodNet Research Program

2018

A new local climate change data package for improved planning and disaster management

For city planners, this tool uses local data to help create precise scenarios of potential water and weather events – for improved planning and disaster management

A practical new tool to help local planners and municipal authorities to better forecast and plan for potential extreme weather and flooding events caused by climate change has been developed by the FloodNet Researcher Team.

This is a 'climate assessment package' that gives a local view for any location in Canada, that city planners can use to better assess potential local impacts of climate change – for example to identify local increases in warming. It gives quantitative estimates and spatial maps based on indicators that the user can define to forecast changes in temperature and precipitation. The package has been tested over the past two years by authorities in Hamilton, in the planning process to modernize the city's flood management plan.

Probably the first tool of its kind in Canada, the package offers a simple, low-cost solution for planners to use rich local geographic and environmental data to generate forecast scenarios.

The package benefits the work of local climate coordinators, whose task is to be well informed of upcoming climate conditions and potential risks, as they plan responses for future needs of their city – including – public health issues or urban storm water management. Using the tool, forecasting teams can prepare a range of plausible scenarios which can form the basis of specific solutions and policies. Here, high quality data is key.

For planners, the tool offers simple and low-cost solution that brings rapid gains in planning efficiency. It is designed for easy adoption by municipalities or conservation authorities to directly improve the quality of their climate forecast scenarios, to support better quality decisions. The benefits of more precise planning that is informed by more realistic scenarios that the package generates, include the mitigation of costs of system failures caused by extreme events and a public service that is more responsive to citizens' needs.

Select a region (example: Hamilton)
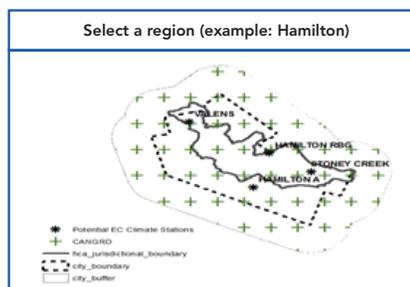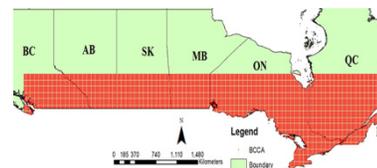
Example of local views: Red points represent the centroid where local data are available. Zooming in to municipal level in Hamilton.

Display of temporal and spatial variations of selected indices – Hamilton Ontario

Mean Total Precipitation (mm/year)
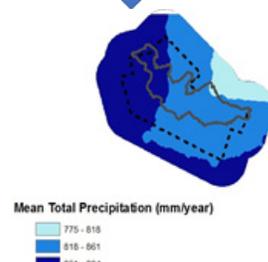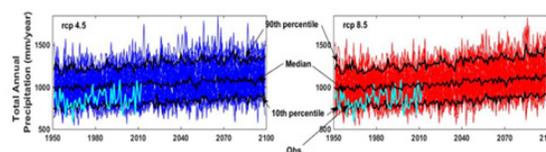
Example of a display from the tool - Temporal and spatial variation of Annual Total precipitation for Hamilton using available Global Climate Models for Representative Concentration Pathways (RCP) 4.5 and 8.5.

UNITED NATIONS UNIVERSITY
UNU-INWEH
Institute for Water, Environment and Health