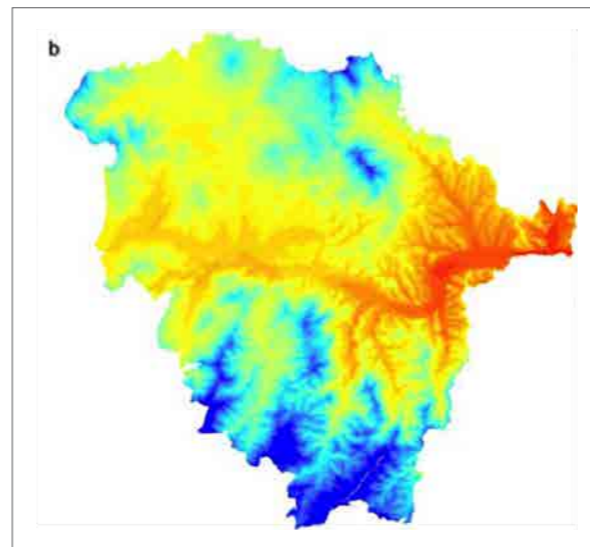## What is ClimateAP?

ClimateAP is a cutting edge modeling tool that provides high quality, high-resolution climate data for past (1901-2012) and future (2020's , 2050's , 2080's) time periods. It makes access to climate variables as easy as access to geographic variables, allowing users to generate climate data for any location within the Asia-Pacific.

The main advantage of ClimateAP compared to other modeling tools is that it provides data with higher resolution.This means that it:

- Provides more accurate climate predictions
- Incorporates the effects of elevation on climate variables
- Generates locally-specific data, as opposed to regional level data
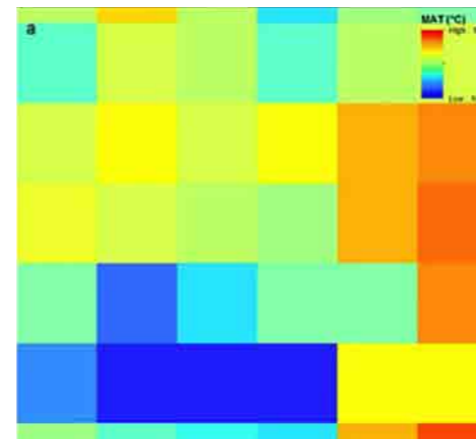
Resolution of previously available climate data (4x4 km)

The resolution of ClimateAP output data (80x80m) is much higher for an even smaller area, compared to data from previously available models (above).

The downloadable and online versions of ClimateAP are available here:

http://climateap.net/   **Go**

Why is ClimateAP important?

ClimateAP is an invaluable tool for climate change research and decision-making. The availability of a high quality, easy to use modeling tool will substantially increase and improve climate change related research in the Asia-Pacific. The high-resolution climate data generated by ClimateAP can be matched with locally specific vegetation data, allowing it to be used for:

- Modeling climate niches of ecosystems and species
- Determining population responses to climate change
- Generating accurate predictions of tree health and productivity

By predicting the impacts of climate change on ecosystems, species and populations, ClimateAP can help forest managers and policy makers to formulate more targeted and effective adaptation strategies.
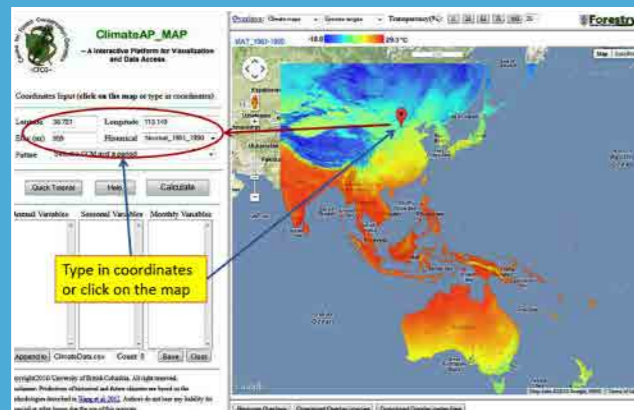
How is ClimateAP being used?

ClimateAP has been used extensively by researchers at UBC to develop ecological models and make forest management recommendations. It is an extension of the model ClimateBC, which was previously developed for the province of British Columbia (BC), Canada.

ClimateBC has predicted that the most important timber species in Canada, Douglas fir, is going to shift substantially northward and higher in elevation due to climate change. In response to this finding, the BC government developed a climate-based seed transfer system to mandate that Douglas fir be planted further north in the province to sustain economic growth and production.
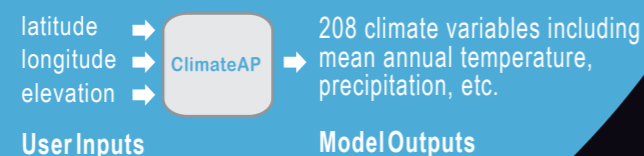
ClimateBC has also been used to develop an ecological model for BC ecosystems, which is currently used by the government as a basis for species selection. ClimateAP can now be used in a similar way by governments of all Asia-Pacific economies.

Who can use ClimateAP?

ClimateAP can be used by anyone, including researchers, forest managers, and policy makers. It has a straightforward, user-friendly interface, and requires no installation or mapping programs/abilities, making it easily accessible to a wide range of people. With only a few clicks, users can obtain data for multiple locations and multiple years.

ClimateAP's simple interface (web version) requires no installation or mapping skills.

latitude ➡ **ClimateAP** ➡ 208 climate variables including
longitude   mean annual temperature,
elevation   precipitation, etc.

User Inputs   **Model Outputs**

About the Adaptation of Asia-Pacific Forests to Climate Change project

ClimateAP was developed as part of the Adaptation of Asia-Pacific Forests to Climate Change research project.For more information on the project, visit:

http://asiapacific.forestry.ubc.ca/
or http://climateap.net/
or contact Tongli Wang
(tlwang@mail.ubc.ca).

This research project is a collaboration between the Faculty of Forestry, University of British Columbia and APFNet. The main objective of the project is to develop tools, such as ClimateAP, to help forest managers and policy makers develop effective management strategies to maintain resilient forest ecosystems in the Asia-Pacific.

ClimateAP

The best high-resolution climate model in the Asia-Pacific

An output of the Adaptation of Asia-Pacific Forests to Climate Change research project

Coverage of ClimateAP – a climate model that provides data with:

- High-resolution, high accuracy
- 208 climate variables for any specific location
- Historical and future time periods
- A time effective, user-friendly interface