



**B.C.'S FUTURE CARDINAL?**  
WESTCOAST NEWS | B1



**CRUISE SHIP ANATOMY**  
BUSINESS BC | D1



**MOZART FROM MADRAS**  
ARTS & LIFE | F1



**CRUNCH TIME IN OTTAWA**  
SPORTS | H1

WEEKEND EDITION

# THE VANCOUVER SUN

FINAL EDITION

www.vancouversun.com

SERIOUSLY WESTCOAST SINCE 1912

SATURDAY, JUNE 2, 2007

## B.C. 2050 What climate change will do to our province



### How trees can fuel cars

BY GORDON HAMILTON  
and SCOTT SIMPSON  
VANCOUVER SUN

At a pilot University trees killed by grade ethanol, a green...

Four hundred kilometres away, north of Kamloops, waste bark fed into a high-tech burner comes out as synthetic natural gas for heating water and drying veneer at a plywood mill.

And in BC Hydro's Vancouver office, staff are sorting through more than 80 expressions of interest from energy and forest companies. They want to produce power from mountains of wood going to waste alongside British Columbian logging roads.

Calling timber-rich B.C. the new, green Saudi Arabia without its polluting fossil fuels and gushing oil wells isn't just wild fantasy.

All over the world, scientists, businesses and governments are looking for ways to produce energy without increasing greenhouse gas emissions that are contributing to global warming.

Over the past few weeks, a *Vancouver Sun* team of reporters, editors and graphic artists has been sifting through interviews, scientific journals, government reports and private sector studies, asking how our province will be transformed in the coming decades by climate change.

We've chosen 2050 as our target date because scientists say it's a pivotal moment in the history of humanity — if we haven't curtailed our fossil fuel emissions by then, warming will be an irreversible trend.

"Whether or not you believe in global warming, we cannot afford to take that risk," deputy forests minister Doug Konkin told a recent Vancouver audience. "We have to start preparing for this. The fact is, be it short term, be it long term, our climate has changed right now."

WEEKEND EXTRA  
CONTINUES ON A6

WEEKEND  
EXTRA



### Forecasting a hotter future

What the province may be like at mid-century  
WEEKEND REVIEW | C6-7



**Picture of hope**  
Artist Robert Bateman refuses to give in to global-warming gloom  
WEEKEND REVIEW | C1

2007/02/06

**Quiet revolution**  
Surrey's mayor is determined to change her city's image. **B1**



**Firing a \$400,000 ticket for lotto head**

BY CHAD SKELTON  
VANCOUVER SUN

executive officer Vic Poleschuk. He also suggested more heads could roll after the conclusion of an independent audit he

**Champions of the poor or just malcontents?**

Its website says it exists to give a voice to the city's underprivileged — the poor, the drug-addicted and the homeless. Its members oppose capitalism and

# B.C. 2050 OUR CH

What will the province look like at mid-century? To answer that question, the Sun's B.C. 2050 sources. The stark picture that emerges on these pages will come as a shock to anyone expect

Climate change is about more than just longer summers and warmer winters. A transformation has begun that goes right to the heart of who we are and where we live. Icons of the West Coast - the rainforests we fought so hard to preserve, the salmon whose annual migration to our shores and rivers we celebrate - will be dying or dead. Our winters will no longer be cold enough to discourage diseases like malaria and dengue fever from finding a niche in new eco-systems. Massive dyking projects like those in Holland will be needed to keep Delta, Richmond and Vancouver International Airport from being inundated by rising sea levels. If climate change

models are accurate, temperatures in B.C. actually 3.5 degrees C. That's the difference between the benchmarks of the upper Fraser River idea taken place. Eco-systems that have been taken the void is anybody's guess.

## Picturing a warmer time

**B**RITISH COLUMBIA in the 2050s has undergone a temperature metamorphosis. The extreme differences in temperatures between the Lower Mainland and the northern Interior so evident by the swath of blue across the top and band of orange across the bottom in map of the 1970s, are not as pronounced by the 2050s.

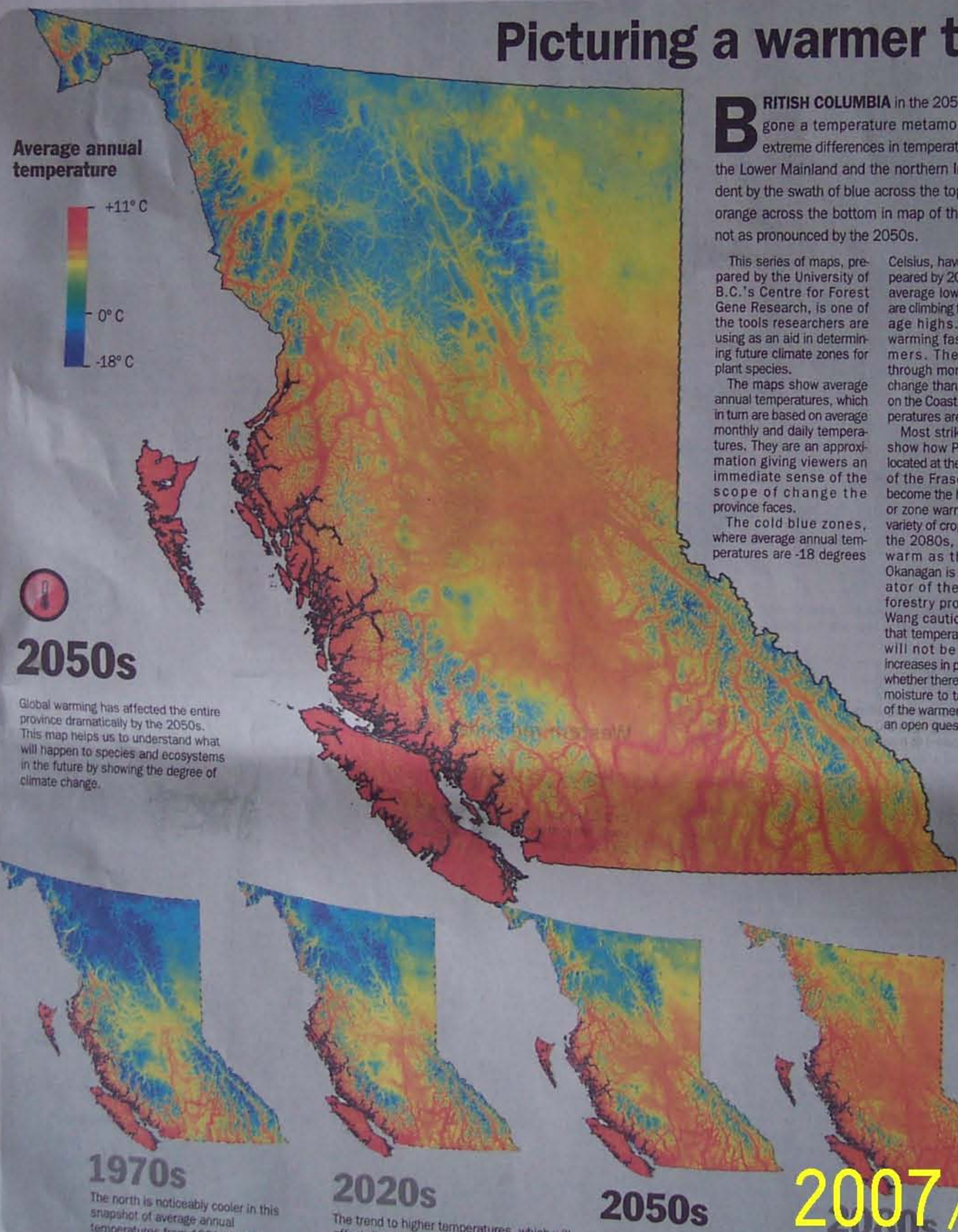
This series of maps, prepared by the University of B.C.'s Centre for Forest Gene Research, is one of the tools researchers are using as an aid in determining future climate zones for plant species.

The maps show average annual temperatures, which in turn are based on average monthly and daily temperatures. They are an approximation giving viewers an immediate sense of the scope of change the province faces.

The cold blue zones, where average annual temperatures are -18 degrees

Celsius, have almost disappeared by 2050, a sign that average low temperatures are climbing faster than average highs. Winters are warming faster than summers. The North goes through more temperature change than the South and on the Coast, mountain temperatures are climbing.

Most striking, the maps show how Prince George, located at the northern bend of the Fraser River, has become the hub of an Interior zone warm enough for a variety of crops by 2050. By the 2080s, the land is as warm as the southern Okanagan is today. The creator of the maps, UBC forestry professor Tongli Wang cautions, however, that temperature increases will not be matched by increases in precipitation, so whether there will be enough moisture to take advantage of the warmer climate is still an open question.



Average annual temperature  
+11°C  
0°C  
-18°C



### 2050s

Global warming has affected the entire province dramatically by the 2050s. This map helps us to understand what will happen to species and ecosystems in the future by showing the degree of climate change.

### 1970s

The north is noticeably cooler in this snapshot of average annual temperatures from 1961 to 1990.

### 2020s

The trend to higher temperatures, which will affect distribution of plants and animals, is already evident in this map of the near future.

### 2050s

2007/02/06

Climate zones will no longer fall within the climatic envelope of many of the species they currently support.

### Human health



### Forestry

Rising temperatures will disrupt the equilibrium of forest eco-systems that have taken millennia to fine-tune. From Victoria to Haida Gwaii, the giant cedars will be dying of thirst during the longer, drier summers. In the Interior, fires will be more frequent and more intense. In the north, a host of new fungi and insect pests will flourish in the warmer, moister winters.

Grasslands overtake previously forested lands. Deciduous trees take over coastal rainforest regions because the climate is not longer suited to evergreens.

### Snowpack

Snowfall will continue to vary from year to year as the climate naturally fluctuates, but the International Panel on Climate Change predicts decreasing snow cover in the Northern Hemisphere during the 21st century.



These maps show the projected change in the northerly part of the Columbia. Higher temperatures mean that the snowpack builds later in the year.