



Mount Kilimanjaro peak, highest mountain in Africa. Crop irrigation and hydro-electric power generation will be harmed by loss of the permanent snowpack, said a U.S. geologist.

## Snows of Kilimanjaro to vanish by 2020

### Scientist predicts African iccap's demise due to global warming

By DAVID DERYSHIRE

SAN FRANCISCO — The iccap of Mount Kilimanjaro, one of the most famous landmarks of Africa, will have melted within 20 years because of global warming.

At least one-third of the iccap

on the Tanzanian mountain has disappeared in the past 12 years. Since it was first mapped in 1912, 82 per cent has been lost.

"At this rate, all of the ice will be gone between 2002 and 2020," said Lonnie Thompson, a geologist at Ohio State University. "And that is probably a conserva-

tive estimate."

Thompson has conducted an aerial survey of the peak. He has also discovered that global warming was affecting the glaciers of the Andes. "These glaciers are very much like the canyons used to cool rivers," he said.

response to the changes in climate in the tropics."

Thompson and colleagues have been studying tropical glaciers in Africa, China, Tibet and South America for two decades. They have also examined ice cores from four sites in Tibet.

The Queloyca icecap in Peru has shrunk by one fifth since 1963. The annual rate of retreat for one of its main glaciers, Qori Kalla, has been 150 metres in the

past three years, 12 times greater than in the period 1962-78. Heat earth has been exposed for the first time in thousands of years.

"We have long predicted that the first signs of change caused by global warming would appear at the low-lying, high-altitude icecaps and glaciers within the tropics," said Thompson. "These findings confirm those predictions."

The Daily Telegraph

## UN report warns of potential disaster

### Scientific experts predict warming will bring about wide-scale human suffering

By THOMAS HARDING and CORON MORTON

LONDON — The world faces dramatic and potentially disastrous climate changes caused by global warming before the end of the century, a United Nations report warned Monday.

They will include melting polar icecaps and glaciers, the disappearance of countless species of animals, birds and plants, the formation of new desert, coral reefs and Caribbean and Pacific islands sinking.

The predictions came in the most comprehensive study conducted into the state of the world's environmental health. Europe and North America could experience the fall-out from harsh climatic conditions predicted for the underdeveloped world.

By the turn of the 21st century, humans suffering could increase dramatically with droughts, famines and floods on an unimaginable scale.

The potential disaster with its most impact on the global economy in the 21st century was set out in a 100-page report by the UN's Intergovernmental Panel on Climate Change.

It was drawn up by 700 scientists around the world who have been studying the warming problem since 1995.

The panel's work is said to have ended debate on whether warming is taking place and moving the issue on to the measures that need to be taken to tackle it.

It lists a series of big and irreversible impacts on natural systems. Billions of people may go thirsty, prompting an exodus from drought-stricken regions to the developed world.

A summary of the report said: "The effects of climate change are expected to be greatest in developing countries in terms of loss of life and relative effects on the economy."

"Projected climate change will be accompanied by an increase in hurricanes, droughts, floods, urban air pollution, which would cause an increase in heat-related deaths and illness."

It predicts within 25 years 54 billion people will live in areas where water is scarce. At present it is 1.7 billion.

Professor James McCarthy, co-chairman of the panel's working group, summed up the finding in Geneva.

"There are reasons to believe that the adverse effects that are experienced in some regions by the El Niño phenomenon today will become increasingly severe in the future," he said.

"We estimate that tens of millions will be at increased risk of

## ENVIRONMENT REPORT

Floods, famine, disease epidemics and other disasters could hit rich and poor countries around the world in coming decades if the current rate of global warming persists, United Nations-backed scientists warned on Monday.

KEY: Increased crop yields, Decreased water runoff, Increased water runoff, Extreme weather, Animal/plant extinctions, Coral bleaching, Rising sea level/floods, Drought/desertification, Melting icecaps/glaciers/permafrost.



Source: UN Intergovernmental Panel on Climate Change

At the Columbia icefield in the Rocky Mountains a marker sits at the spot where the line of the Athabasca Glacier once reached 80 years ago. The glacier, seen in the Aug. 4, 1998, photograph, has receded more than two kilometres since its discovery.

over the next century, mainly caused by human activity. Next month the body is to issue a third report looking at what can be done to slow the process and to help people, as well as animals and plants, to adapt to changes that are already irreversible.

In September, the final report will bring together the conclusions and recommendations in one document, which mentions oil and environmental, as well as insurance companies and clean energy industries, will pressure governments to act.

Fury said: "We have the skills and technological know-how to adapt to a lot of climate change but we haven't yet managed to act together to manage them. If we don't do that, then we know the consequences."

Their backers hope the new report will encourage governments to try harder after they failed at a meeting in The Hague in November to agree on reducing greenhouse gas emissions.

Last month, the panel predicted a potentially devastating global warming of between 1.4C to 5.8C and sea-level rises of between 0.09 and 0.88 metres

## Environmentalists not impressed by Ottawa initiatives

### Anderson talks about vehicles and fuel but critics want action on power plants

By BRUCE CHADLE

OTTAWA — The federal government, following the U.S. lead, is launching a clean air initiative that sets tough new standards for vehicle emissions and fuel clean-

lines. The Monday announcement, which will cost \$20 million over five years, set about lowering the maximum sulphur content in gasoline from 350 to 150 parts per million.

The announcement is seen as a major step in the fight against global warming and air pollution, but environmentalists are not impressed.

"I feel it's an important step in building the foundation that we need," said Rosemary Olivetti, CEO of Friends of the Earth.

Olivetti would like to see cleaner fuel standards extended to all liquid burning fuels, but says including transportation emissions in the plan is a start.

John Bennett of the Sierra Club of Canada said Monday's news conference, at a federal vehicle emissions testing lab, was a critical exercise in political cover.

"I think it was a big step," he announced today to cover the fact we have such a long way to go on climate change," said Bennett.

"Most of the media (Anderson) is talking about a roadshow, discussing the federal government's plan to issue a third report looking at what can be done to slow the process and to help people, as well as animals and plants, to adapt to changes that are already irreversible."

Anderson's plan proposes cutting among-causing nitrogen emissions from vehicles by 90 per cent.

The plan also reiterates a Canada-U.S. agreement signed last year that proposes cutting emissions from Ontario and Quebec electrical generators by 20 per cent.

But only \$2.7 million in the new



Environment Minister David Anderson in the Commons Monday when he announced clean air initiatives.

program is earmarked for implementation. "In cooperation with Ontario and Quebec," of an emission cap on electricity generation.

Anderson said Ontario's plan to use scrubbers on its coal-fired plants won't satisfy the Canada-U.S. deal, but was vague when asked what must be done. He said a switch to more expensive natural gas-burning plants is an option.

A spokesman for Ontario Environment Minister Elizabeth Wilson said the province already has a plan to make it compliant.

"The Sierra Club is not satisfied. A big deal would be if (Anderson) announced that we're going to require Ontario Power Generation to stop burning coal," Bennett complained.

"That would be the building block. Representatives of the automotive and petroleum products industries said the federal agency's 21.7 billion dollar vehicle and fuel standards are a competitive disadvantage in the North American market."

More than \$48 million of additional federal commitment will be spent on the transportation system, including monitoring, testing, and possibly even a program for scrapping high-polluting vehicles.

About \$70 million will be spent on air quality monitoring stations, including replacing worn out equipment that was neglected during the federal cuts of the 1990s.

Some \$21 million will be spent to replace the inventory of pollutants released, and almost \$10 million goes to a variety of projects, including Ontario and Quebec electrical generation.

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