

Global warming must be limited to 2°C, scientists say

Tony Juniper *Montreal*

The United Nations' negotiations on climate change reopened in Montreal, Canada, this week, against a backdrop of warnings from climatologists about the consequences of rising concentrations of "greenhouse" gases in the atmosphere.

Russia's ratification of the Kyoto protocol triggered the protocol's coming into force earlier this year, but the agreement will only slightly reduce the steepness of the rising curve of concentrations of gases and even then only if countries implement it.

Although the scientists and most countries are clear that the Kyoto protocol, agreed in 1997, is only a first step, the Bush administration remains firm in its opposition to Kyoto, let alone the more demanding cuts that some countries want to see implemented.

The European Union says the most recent climate change models show that a threshold exists of about 2°C above pre-industrial temperatures in average global warming—beyond this level of heating it is feared that positive feedbacks from nature, including the release of methane

from beneath melting permafrost, will begin to trigger additional warming, irrespective of pollution controls.

The World Conservation Union, formerly known as the International Union for the Conservation of Nature and Natural Resources, also believes that global warming must be kept to below 2°C. The union, a global coalition of governments and environmental and conservation organisations, claims that any rise above that would lead to extinctions of species on a massive scale and dramatic changes in ecosystems, with severe consequences for human wellbeing.

The challenge to minimise global warming comes amid rapid economic growth in China and India and projections for huge increases in the global energy demand.

Environmental campaigners are urging governments to use the Montreal meeting to set out the timetable and process for agreeing what the next phase of pollution cuts will be in the period after 2012. This process needs to be complete by 2008, environmental groups say. The year 2008



Polar bears will not be the only animals facing slow elimination if global warming increases by more than 2°C

is the first compliance year of the Kyoto protocol; the last is 2012. An average of each country's emissions of a group of six greenhouse gases over this five year period (2008-12) will be calculated to assess whether countries have met their Kyoto target. Collectively the target in emissions for the industrialised countries is 5% below 1990 levels.

Governments at the meeting will also review some aspects of

the Kyoto policy apparatus, including the so called clean development mechanism. This aspect of the Kyoto protocol permits industrialised countries to count the benefit of projects they fund in poorer countries to reduce emissions as part of their national obligation under the protocol to control pollution. □

Tony Juniper is executive director of Friends of the Earth.

Health economist cautions against new breast cancer drug

Lynn Eaton *London*

Healthcare organisations should not rush into using trastuzumab (Herceptin) for early breast cancer without first examining the implications on budgets of doing so, warns a Belgian health economist.

Mattias Neyt of Ghent University had carried out an economic analysis of the benefits of the new breast cancer treatment. He also says that doctors should wait until the final results of clinical

trials are published so that a full cost benefit analysis can be done.

His study, published online ahead of publication in the *Annals of Oncology* on 30 November (<http://annonc.oxfordjournals.org>; doi: 10.1093/annonc/mdj101), comes as pressure mounts in Britain for the National Institute for Health and Clinical Excellence, the organisation that advises on the use of

treatments by the NHS, to approve trastuzumab for use in certain types of early stage breast cancer. A breast cancer patient, Elaine Barber, recently managed to overturn her local NHS trust's decision to deny her the drug after the health secretary, Patricia Hewitt, stepped in to the debate (*BMJ* 2005;331:1162, 19 Nov).

Mr Neyt based his analysis on one of three trials of the drug, the Breast Cancer International Research Group (BCIRG) 006 trial. He estimates that 750 women in Belgium each year would be eligible for the new drug if it were offered in addition to chemotherapy in stages

II or III of the disease but says that the cost would rise dramatically if it were offered to women whose cancer was at earlier stages.

"The cost of providing this treatment [in stages II or III] in Belgium would be €25.5 million [£17.5m; \$30.1m], or around €34 000 per patient for the Herceptin drug costs alone, he wrote in the report. "Extending its use to stage I breast cancers would double the burden."

"The question is not whether a technology is cost effective in itself," he writes in the paper, "but whether it results in better outcomes than a certain comparator or benchmark." □