

Insurers' disaster files suggest climate is culprit

MUNICH

Insurance companies, acutely aware of the dramatic increase in losses caused by natural disasters in recent decades, have been convinced that global warming is partly to blame. Now their data seem to be persuading scientists, too. At a recent meeting of climate and insurance experts, delegates reached a cautious consensus: climate change is helping to drive the upward trend in catastrophes.

The meeting, held near Munich on 25–26 May, was jointly organized by Munich Re, the world's largest reinsurance company, and the University of Colorado in Boulder. It brought together climate, atmosphere and weather researchers with economists and insurance experts to discuss what could be behind recent disaster losses, both economic and human. Insurers have been outspoken in blaming global warming. But scientists have tended to be more cautious, with many arguing that the rise could be primarily due to socioeconomic changes and natural climate variability.

Under discussion were data compiled by Munich Re, whose NatCatservice database, comprising 22,000 natural disasters dating

back to AD 79, is the largest of its kind. NatCatservice shows that the frequency of weather-related catastrophes has increased sixfold since the 1950s. The number of non-weather disasters, such as earthquakes, tsunamis and volcanic eruptions, has only marginally increased during the same period.

Delegates seem to have found the record persuasive. Their consensus statement, to be released on 8 June, says there is "evidence that changing patterns of extreme events are drivers for recent increases in global losses".

There was no agreement on how big a role global warming has played, however. "Because of issues related to data quality, it is still not possible to determine the portion of the increase in damages that might be attributed to climate change," the workshop concluded.

"Dissent over the issue is clearly waning," says Peter H ppe, head of Munich Re's Geo Risks department, who co-chaired the workshop with Roger Pielke Jr, director of the University of Colorado's Center of Science and Technology Policy Research. "Climate change may not be the dominant factor, but it has become clear that a relevant portion of



damages can be attributed to global warming."

Previously sceptical, Pielke says that he is now convinced that at least some of the increased losses can be blamed on climate: "Clearly, since 1970 climate change has shaped the disaster loss record."

He adds a note of caution, however: "Disaster damage is not the place to look for early indications of climate change," he says. "Policy advocates should exercise caution in using

Politicians chastise Australia's science institute

SYDNEY

Australia's biggest research organization has faced tough questioning in the national parliament over its financial management after it had to reduce its estimates of future external earnings. But the organization says the fall is just a blip caused by legal tussles over its intellectual property and the fact that much of its income is now in the form of people and equipment rather than cash.

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) has a turnover of nearly Aus\$1 billion (US\$750 million),

two-thirds of which comes from the government. Earnings from non-governmental sources, such as industry, are estimated to fall by nearly Aus\$184 million over the next four years — a humbling blow, critics say, to chief executive Geoff Garrett, who had pledged to boost such external revenue.

The opposition Labor party also attacked the agency, at a parliamentary hearing on 31 May, for frittering away funds on entertainment and the chief executive's home renovations. "The Australian community is rightly asking: what's going on with CSIRO?" says Jenny Macklin, Labor's

shadow minister for science. "It's time we got an answer."

This bad publicity for the agency follows earlier criticism of its controversial diet book

"'Hospitality' is not about executives going off to restaurants and drinking top-shelf wine."

and accusations that its climate scientists were prevented from speaking out about climate change (see *Nature* 438, 1060–1061; 2005 and *Nature* 439, 896–897; 2006).

But CSIRO management has hit back, arguing that there are

sound reasons for the revised forecasts. About Aus\$121 million of the shortfall is due to delays in earning money from the agency's patents, it says. Legal cases over patent infringement, including a battle with information-technology giants Microsoft, Dell and Hewlett-Packard over a patent on wireless technology, are partly to blame. "Until we know the outcomes of those legal cases, we have recalibrated so as not to take into account revenue from those sources," says CSIRO's chief finance officer, Mike Whelan. "When we know the outcomes, we will revise the estimates."



An ill wind: an April storm destroyed this house in Tennessee, and the weather seems set to worsen.

The group ranked countries according to four indicators — the number of casualties from extreme weather events, the number of casualties per 100,000 population, total economic damages, and economic damages relative to the country's gross domestic product. It combined those rankings to give a final "climate risk index". The ranking is topped by Somalia and other underdeveloped countries. But the United States and Japan, where natural disasters in 2004 caused considerable economic losses, also ranked highly.

The list has been criticized by experts, who say that data for a single year are largely influenced by random events and reveal little about how climate change is affecting different countries. But Sven Anemüller, co-author of the report and senior adviser for climate and development with Germanwatch, counters that the 2004 list is just the beginning of a longer-term analysis. "We're not saying that the countries listed this time are the ones that will lastingly be hit hardest by climate change," he says.

The group's approach, if continued, does make sense, agrees Höpfe. Looking at the rankings over years or decades could eventually provide much-needed information as to which countries are most at risk from climate change, he says. ■

Quirin Schiermeier

disaster losses to justify climate mitigation, lest they go beyond what science can support."

But environmental groups are already using the rise in extreme weather events to help their campaigns about climate change. For example, Germanwatch, an environmental and developmental watchdog group, has used the Munich Re data to compile a ranking of the countries most badly affected by weather-related disasters in 2004.

M. BROWN/AP

Officials say the rest of the shortfall results from industry giving people or lab equipment, rather than cash, to collaborative research programmes. Whelan says this practice is increasing and isn't counted as revenue.

Of the Aus\$750,000 spent on renovating the chief executive's abode in Canberra, CSIRO officials say it was entirely reasonable to renovate the "run-down" building, which is heritage-listed, and to transform it from offices into a liveable residence.

They also took umbrage at accusations of corporate excess after it was revealed that the organization racked up a Aus\$1.4-million 'hospitality' bill in the past

financial year. According to Whelan, most of the money was spent on scientific conferences and meetings to plan research. "It's not about executives going off to restaurants and drinking top-shelf wine," says Whelan. "It involves bringing scientific collaborators together — and, yes, sometimes we give them a cup of tea."

Staff morale, already low according to annual staff surveys, may dip further with these recent developments, says Michael Borgas, president of CSIRO's staff association. CSIRO has undergone significant changes since Garrett took the helm in January 2001, with more priority-driven

research and pressure for commercial outcomes. The biggest concern, according to Borgas, is that the organization may be pushing ahead too quickly before having successfully persuaded staff of the need for change. Notably, no staff survey is being conducted this year.

Perhaps most galling for staff — who face more job cuts over the next few years — is the revelation that Garrett earns Aus\$478,980 a year, whereas senior researchers' wages typically fall below Aus\$100,000. And, according to Labor, more CSIRO senior executives than ever are earning over Aus\$300,000. ■
Carina Dennis