

Doomed by iceberg



PHOTO : AFP

This undated photo shows a skua (L) trying to chase an Adelle penguin away from its egg at Cape Royds, Antarctica. The celebrated penguin colony is facing extinction due to a couple of massive icebergs which have since 2000 blocked the sea ice around Ross Island and McMurdo Sound, preventing the Adelle penguins of Cape Royds from having direct access to the sea, and food. The last chance of survival for the colony will be a United States coastguard icebreaker, which was due yesterday.

AFP, Auckland

A United States coastguard, scheduled to arrive yesterday, promised the last chance survival for a celebrated penguin colony.

A couple of massive icebergs in the Ross Sea since 2000 have blocked the sea ice around Ross Island and McMurdo Sound, preventing the Adelle penguins of Cape Royds from having direct access to the sea, and food.

The failure of the sea ice to break up has effectively destroyed the penguins' current breeding season and scientists studying the colony say skua seabirds are now plundering the colony survivors.

Last week University of Auckland's Emma Marks told AFP from New Zealand's Scott Base that only the arrival of icebreakers or a

strong southerly storm pushing out the sea ice could save the colony.

Californian ecological consultant David Ainley told the Antarctic Sun newspaper at the US McMurdo Base that the colony's survival was dependent on icebreakers.

"We're in a big race now between hunger and how fast the icebreaker can get here and do it's thing," said Ainley. "Although it's coming to save McMurdo, not penguins."

The southernmost Adelle colony, next to a base built by Briton Ernst Shackleton in 1908, is relatively small by penguin standards but has been a highlight for visiting explorers and dignitaries for nearly a century.

An official at the US logistics base in Christchurch, New Zealand, said the United States Coastguard icebreaker Polar Star had entered the pack ice in Ross Sea and was

working on carving a channel through to the base. It was likely to reach there around Thursday.

The US research icebreaker Nathaniel B Palmer, a supply ship and a tanker would follow it in.

The ice channel would be kept clear and, as it passed close to Cape Royds, it would dramatically improve short-term prospects for the penguins.

The official said the ships would only be at McMurdo for a couple of days before being forced out by the ice.

Ainley said last week that the icebreaker could not really save the Adelle chicks because they were hatching too late this year. There was almost no chance they would survive with the onset of winter, he said.

Aren't these yellow pages on water?

The just published global Water Poverty Index may indeed turn out to be a book of yellow pages, throwing up ideas on trade and investment in the water sector instead, writes Dr Sudhiredar Sharma

DEVELOPED by a team of 31 researchers from the Centre for Ecology and Hydrology in Britain and the World Water Council, the Water Poverty Index (WPI) is a veritable who's who on who possesses how much water and who wastes how much.

Of the 147 countries indexed, Finland tops the list with best per capita access, efficient usage and environmental valuation of water. For a highest per capita consumption and an overall inefficient water use, the United States has justifiably been ranked 32. And by virtue of its very poor per capita access and weak environmental components, India has been placed at the bottom half of the table.

Like previous indices of the kind, notably the yearly Human Development Index released by the United Nations Development Programme (UNDP), the WPI might embarrass countries for being classified into water have-nots category. If past experience with the HDI is any indication, have-nots often seek additional resources and technologies to move up the ladder. Often, it means securing soft development loans and foreign direct investments.

The significant change the WPI brings to the existing global donor-recipient dynamics is that of 'additional emphasis' on water-related investments. Consequently, developing countries with lowest scores on the WPI provide justifiable ground for investment of resources and technologies by the water-rich nations and technology-rich multinational water companies.

Tossing up opportunities for the developing world, William Cosgrove, vice-president of the World Water Council, made it clear: "The economies of the countries at the lower end of the Water Poverty Index, and many others, are unable to generate the user fees or tax revenues needed for infrastructure development." Such countries will certainly require assistance from the developed world, he remarked.

By providing a holistic perspective on water, the WPI unfolds investment opportunities in the health and sanitation sector as well. According to Dr Caroline Sullivan, the key author of WPI, "... targeting people who suffer the greatest on account of water poverty will help the global community meet its commitment of cutting the proportion of people without access to water and sanitation by half by 2015."

Even though the information given in the WPI is average at the national level only, major policy decisions are being pegged around it. This kind of macro assessment does not address local variability, which is crucial for effective management, and yet the upcoming World Water Forum in Kyoto in March 2003 is expecting strong political commitment based on the findings of the WPI.

Unless the long-term implications of water poverty indices get carefully examined, any attempt at developing policy decisions around these will be fraught with uncertainties. Given the fact that export of food essentially means export of scarce water resources, the WPI may influence trade in food across the globe thereby impacting food-security of poor countries.

Ideally, water-haves should start producing food for water have-not countries rather than buying from them to preserve a water balance. Cosgrove said that in buying food from other places, countries such as the US and Canada "are really purchasing a water resource". However, any shift in the present food trade system will put additional pressure on the poor countries, further aggravating poverty.

The implications of the WPI are far-stretched and overwhelming. The fact that water is now being linked to food trade opens up window of opportunities for the developed world to arm-twist developing countries under the already skewed world trade regime. By establishing a clear link between water scarcity and poverty, the WPI may trigger a move to reduce "colossal movement of water around the planet".

While the WPI may have far-reaching impact, Dr Sullivan is clear that it is not a definitive statement. The links between poverty, social deprivation, environmental integrity, water availability and health becomes clear in the WPI, enabling policy makers and stakeholders to identify problems and to deal with their causes. However, if it is interpreted otherwise should the WPI be held accountable?

Clearly, not! But by unfolding new linkage of water-poverty with income-poverty and by creating a new breed of water have-nots, the WPI creates a water-divide around which a New World order may finally emerge. At the present times when corporate interests are guiding political decisions, any new tool may indeed prove to be counter-productive to the interests of the poor and the marginalised.

However, if the poor and the marginalised are considered a resource, the conditions could be reversed. "The reality is that marginalised people are usually highly motivated to help themselves," says Cosgrove. "They are very often held back by constraints imposed on them by society. In every case, these people should be looked upon as an important resource to be involved in planning and implementing solutions."

Given the present conditions, warn experts, the number of people without access to safe water may increase to 2.3 billion by 2025. While it an imposing challenge for the world community to rally around to reverse the trend, tools like the WPI provide yellow pages of opportunities for the others to make the best out of a water-stressed conditions. Clearly, battle lines have been drawn up!

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Global warming

Warning goes unheard

Md ASADULLAH KHAN

FOR more than a decade, climatologists have been sounding the alarm: continued release of greenhouse gases will almost certainly warm the world. Average annual temperatures for the earth's surface are already up 1 degree Fahrenheit in the last 100 years. And the pattern of warming - more in the Arctic than near the equator, more at night than day, more in winter than summer - fits the one predicted by computer models of manmade climate change better than it does natural climate variability. Such findings spurred the United Nations Intergovernmental Panel on Climate Change (IPCC) - some 2570 scientists from academia, environmental groups, industry and government from 150 nations - to conclude in 1996 that man-made warming has already been discerned.

Gases such as carbon dioxide from deforestation and burning of coal, oil and natural gas act like little panes of glass in a greenhouse. With nations pouring at least seven billion tonnes of carbon into the atmosphere every year there is 30 per cent more carbon dioxide in the air today than in 1860. Scientists reached this conclusion by analysing pockets of air trapped in ice cores. They determine the age of the core by counting layers of ice deposition much like counting tree rings. So much warming is built into the atmosphere already that the planet will heat up another half degree in the next 20 years. Paradoxically, global temperatures are like bank rates. A small change can make a big difference. One per cent rise in surface temperature could cause major disruptions in weather patterns that could produce flash floods and unexpected droughts. It could also melt the ice shelves in Arctic and Antarctica that could raise sea levels with catastrophic consequences to island nations.

Such freak weather conditions were widespread throughout the globe over the last few years. Across the globe countries were reeling under its arching trajectory. The grimmest warning came from Professor Rajendra Pachauri, now head of the IPCC. Professor Pachauri says, "There is a high probability that the freaky weather we are seeing now has a direct relationship with the phenomenon of global warming that we are screaming about". Set up in 1988 - after the 1980s saw six of the warmest years in weather record - the IPCC has in the past decade been analysing scientific information on climate change across the globe. In its most recent assessment, presented late last year, the IPCC confirmed that there was strong evidence to prove that global average temperature would go up by 1.4 to 5.8 degrees Celsius in the next few decades. Compare this with a rise of 0.4 degrees Celsius in the entire 20th century. Much of the warming is caused by doubling of carbon dioxide levels in the atmosphere, which in turn is the result of excessive consumption of fossil fuels such as coal, petroleum and natural gas. Such large layers of gas act like a globe of glass around the planet and reflect back radiated heat from the sun, raising the earth's temperature to debilitating levels.

Apart from wreaking havoc on life and property, global warming is likely to have a major impact on food grain production. Rice production in our region is expected to fall by 15 to 20 percent over the next decade because of unfavourable climatic conditions. Global warming would also melt giant ice shelves in the Arctic and Antarctica, pushing sea levels by over a metre or two. That would swallow up the coastline of many countries such as Bangladesh. This has been revealed by studies of water level in coastline areas of Cox's Bazar and water level in the Hiron Point in the Sunderbans shows an annual rise of 4mm. It would also threaten coastal cities such as Mumbai, Miami and New York, leading to vast losses in prime economic zones. As if to remind that global warming is for real, two massive ice shelves in Antarctica, each over 1,000 square kilometres, collapsed and formed giant floating icebergs in the Indian oceans a few months ago.

The situation may be so grim that we may have difficulty in finding the Maldives on a map of the world. They look like flyspecks on the Indian Ocean: corals and sand atolls where 2,70,000 people live at a maximum altitude of about five feet above sea level. Ever since President Maumoon Abdul Gayoom's car got swept into water by a freak wave in 1987 and he almost drowned, he felt convinced about the possibility that manmade pollution is behind the world's warming, the polar ice cap's melting and the sea's encroaching. In 1992, he told US President George HW Bush, "A few feet of rise is the end of my country". Bush the father replied, "Mr

President, the U.S. will not allow that to happen to the Maldives." Bush the son has failed to make good on that promise, rather his "Clear Skies Initiative" and other related measures calling for voluntary reduction of greenhouse gases, instead of mandatory cut, scientists reckon, would increase actual gas emissions by almost 30 per cent over 1990 levels.

Maybe, rich countries in temperate climates will adapt faster, but poorer countries near the equator will face new hardships. Climate change, to be more precise, may widen the gap between haves and have-nots. Very bleak future haunts most countries of Asia, Africa and even South America. Tropical diseases like malaria and dengue may spread in these regions. Rising sea levels could kill fish and put most of Egypt's cropland under water. Hotter summer and less winter now could reduce the appeal of European vacation spots. A two-degree rise in temperature could make Uganda too hot to grow coffee. The clear skies part of the Bush plan calls for a cap on the emissions of sulphur oxides (SO2), nitrous oxides (NOx) and mercury from American power plants. But Kyoto focuses on carbon dioxide (CO2), which accounts for about 80 per cent of gas emissions.

The Japanese are important advocates of the Kyoto Protocol, despite the real pain to their economy the plan would inflict. But Japan can possibly sustain any such untoward disaster it suffers. But poor and overcrowded Bangladesh faces flooding rivers, rising seas and fiercer cyclones. As for the Maldives a rumour is circulating that president Gayoom has made a deal with Australia to take in his people 30 years from now. "In exchange Australia would get the fishing rights." However, Maldivians are not happy about such "International refugee status". But sure enough, there is no such escape route for Bangladesh. Ironically such ice melts may actually be beneficial in a leaner summer. But in the long run, this would prove catastrophic. In the initial years, it would cause massive floods as rivers would be unable to cope with the tons of water released. Meanwhile, declining snow cover over the Himalayas could dramatically alter the ecology of the region causing desertification of fertile mountain valleys and even affecting progress of the monsoon.

Presumably, Big Oil's influence in having no limit on curbing emissions is quite apparent. The linkage of growth and emissions feature prominently in their planning and policy actions and executives of Exxon talk about solutions like carbon storage through wise forest and agricultural processes". These new and growing plants are called "sinks" because they absorb carbon from the atmosphere and hold on to it for a long time. This, advocates argue, reduces a country's net emissions. On this argument, reforestation and ending deforestation deserve credit for strengthening carbon sinks. Scientists agree that sinks are important but their properties are not well understood. Two new studies highlight some of the uncertainties. Researchers at Britain's Hadley Centre, a leader in climate modelling have used their analysis to show that sinks may not be as permanent as their proponents argue.

In a study just published in "Nature" the groups models show that as temperatures rise forest may emit more CO2 leading to greater warming. One of the groups, Peter Cox explains that vegetation and soils, which currently absorb about a quarter of human-made carbon dioxide emissions could accelerate future climate change by releasing carbon to the atmosphere as the "planet warms". Another team of French and American researchers suggests that forests, oceans and other sinks might be highly variable in their effects from year to year - perhaps because of the effect of El Nino weather pattern. The tough stands taken by some countries except the US is possibly a way out from this catastrophic situation: imposing economic sanctions on countries that fail to meet their targets by 2008-12. The Americans accept that compliance is essential but reject financial penalties.

There are other rancorous issues, most of them centred on developing countries. America insists on "meaningful participation" by poor countries, who retort with some justice that it was the rich world that put nearly all the man-made pollutants in the air through industrialisation. Low-lying islands, coastal regions and countries that are probable victims want compensation and technology transfers. Hypocritically, the big oil producing countries are demanding compensation for the harm they will suffer from lost oil sales. More so, they are trying to block the Kyoto process as a conspiracy to damage their economies.