



NTS ALERT

Global warming

... is now a Weapon of Mass Destruction*

Predictions and Implications of Rising Temperatures for 2007

As many states struggle to meet their carbon emission targets, the signs of global warming fail to cease. Experts note that 2007 is set to be the warmest year due to a combination of global warming and the El Nino weather phenomenon.

China, has dealt with another blow of global warming as temperatures in neighbouring Tibet soar to record breaking levels; 1.7 deg C higher than the previous record set in the same period in 1996.

This has caused alarm amongst Chinese scientists who note that it could cause a great deal of damage to the fragile **Qinghai-Tibet Plateau**, which is home to the source of many big rivers in Asia, among them the Yangtze and Yellow rivers. Global warming would accelerate the melting of glaciers in the Himalayan region and consequently result in further “natural disasters” such as flooding – highly detrimental to the millions of lives that depend on the rivers and the surrounding areas as a source of livelihood.

Fortunately, the governments of China and India have reacted positively by undertaking a joint expedition to the Himalayas to study the impact of global warming on glaciers in the region. Researchers from the two

countries will conduct intensive study on the source of two rivers. Scientist and mountaineers from India and China are now planning to head for the source of two rivers, the Sutlej and the Brahmaputra.

The rate of volatile weather conditions is also on the rise as some scientists predict a cold snap from the North of China that would cause temperatures to drop by as much as 8 deg C.

Elsewhere in the region, strong winds and heavy snow had engulfed much of **Japan** and led to the cancellation of more than 170 flights arriving and departing from the Chuchu International Airport in Aichi. High speed bullet train services were also delayed. Winds of speeds up to 172km/h in Hokkaido tore roofs off houses and blew down power cable, causing a power failure in about 10,000 households. Intense snowfall was also experienced in **South Korea**, which also disrupted transport systems and gave rise to traffic accidents.

In **Hong Kong**, experts predict overcast skies, incessant smog, balmy nights and fluctuations between food and drought. While daytime temperatures remain largely unchanged, statistic indicate that night time temperatures have increased, with diurnal temperature range narrowing from more than 5.5 deg C in 1947 to about 4 deg C in 2002. The lack of clean air in Hong Kong would also pose hazardous health implications, especially for the country’s aging population who would find difficulty in adjusting to the erratic weather

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* Sir John Haugton, former Chief Executive of UK Meteorological Office & Co-Chair of the Scientific Assessment Working Group of IPCC – quoted from *The Guardian*, 28/7/03



conditions. Intense rainfall also poses a risk by increasing the occurrence of landslides – the most common cause of death by natural disaster in Hong Kong.

Global warming also spawns the spread of infectious diseases. According to Kampol Ruchiwit, an environmental biologist from Thammasat University in **Thailand**, rising temperatures have made cholera bacteria more widespread. Rather than just multiplying during summer, the bacterium is now produced year-round. Even a mere 0.5 deg C increase in water temperature can cause bacteria to proliferate. The consequence of this is that cholera no longer can be treated as a seasonal disease and thus requires more health immunization facilities to prevent any potential epidemic.

In **India**, 2007 has been declared as “Water Year” with a view to address the water related issues, ensure successful implementation of policies and programmes and to launch a massive awareness programme all over the country.

The inconsistent availability of water in India, both in space and time are well known. Most of the water resources of the country are generated from the rainfall during the monsoon period and that too, from a few spells of intense rainfall. As a result, the country continues to suffer from flood-drought-flood syndrome, which has led to numerous cases of suicides by farmers who were unable to cope with their loss of livelihood. Latest reports note a drought-like situation evolving in the southern province of Tamil Nadu. Insufficient rainfall from the south-west and north-east monsoons has pushed Dharmapuri and Krishnagiri districts has caused much despair for many, despite the province having received normal rainfall in 2006. The department of agriculture has even predicted severe water shortage by the first week of March.

It is, therefore, necessary to create infrastructure and adopt appropriate practices to augment the utilizable water resources and improve the efficiency of created facilities. At present the per capita storage capacity in India is only about 207 cubic metres as compared to 1111 cubic metres in China. As a result of growing population, the per capita water availability of India is declining every year and as per an estimate, it will be about 1,341 cubic meter by the year 2025. It would also be about 1,140 cubic meter by the year 2050

which is much below the water-stress threshold (point of water scarcity) of 1,700 cubic meters.

Sources

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 Future Not So Bright as Warming Kicks In, *The Standard*, 15 Jan 2007
 Global Warming Blamed as Tibet Temperatures Soar, *The Straits Times*, 8 Jan 2007
 India And China To Conduct Joint Study On Global Warming, *All Headline News*, 22 December 2006
 Year 2007 Declared as ‘Water Year’, *Press Information Bureau, Govt of India*, 5 Jan 2007

What is El Nino?

El Niño (Spanish for Christ Child) is the name given by Peruvian fisherfolk to the warming of the surface waters of the Pacific Ocean that tends to occur around Christmas. A natural event that recurs in more or less regular cycles (on average every four to five years), El Niño affects the Pacific from Peru to Indonesia. The local warming of the world's largest ocean also has repercussions for global atmospheric circulation of winds and waters.

Although some of its effects may be beneficial, the phenomenon is better known for the havoc it can wreak: harvests can be lost, fishery yields reduced and oceanic ecosystems endangered, threatening food security in many regions. The disturbance can produce droughts in southern Africa, parts of India, Indonesia, Australia and certain regions of the Americas, floods in Kenya, Argentina and the United States, erratic monsoons in South Asia and extremely high temperatures in Japan and some regions of Canada.

Although the warming of the waters may last from 12 months to five years, a time lag between the phenomenon itself and many of its most important climatic consequences means that repercussions are long term. The intense El Niño of 1982/83 brought devastation to more than 15 countries.

Source

Food and Agriculture Organisation of the United Nations, <http://www.fao.org/news/1997/971004-e.htm>

Extreme Weather Strikes Again

After a brief respite from a wave of floods that engulfed several parts of Malaysia, yet another wave of floods have hit the very same affected areas. The continuous rainfall led to rising water levels and forced evacuation centres to reopen, just days after many of them were closed.

As many as 110,000 people have been evacuated from their homes, namely from the states of Johor, Negeri Sembilan, Malacca, Trengganu and Pahang. A red alert has also been issued for the state of Sabah, signifying high wind speeds of up to 50km/h and heavy rains.

The damage so far has been devastating. Prime Minister Abdullah Badawi noted that loss caused by the floods had exceeded the initial estimate of RM100 million and this figure is expected to rise substantially.

Bailey bridges have been built by the army as temporary means for motorists. The floods, along with landslides, have caused several roads and bridges to collapse and seriously damage the surface of most roads.

The government has been appealing to corporations and individuals to help those most affected by the floods via an "Adopt a Village" scheme. Aid in this scheme would include clean up operations in villages, donating household items, food products or cash.

Families would also be given RM500 each by the government, though the exact number of families who would receive this financial aid has not been determined. The Community Development Ministry has however prepared an initial checklist of 74 villages – comprising of 7253 families – in desperate need of help.

Flood victims who have returned to their houses face other problems; rebuilding damaged homes amid stagnant waters and consequently the threat of diseases due to the increasing breed of mosquitoes.

Government officials expressed the problems in mitigating the floods. Datuk Keizrul Abdullah, Director-General of the Drainage and Irrigation Department (DID) noted that despite deploying all available resources – pumps and storage dams – water levels still remain high. The only possibility for now, according to him, was to clear away obstructions that prevented water from flowing out, such as debris under bridges or on the river mouth. It is estimated that RM19million would be needed to resolve the flooding crisis.

Assoc Prof Dr Fredolin Tangang says the extreme weather is linked to climate change brought about by global warming. Based at the School of Environmental & Natural Resource Sciences in Universiti Kebangsaan Malaysia, Tangang warns Malaysians to be prepared for the possibility of more extreme weather as little can be done to stop global warming save for reducing greenhouse gases. He adds that effective action requires global co-operation, which is often hampered to states refusal to commit themselves to the Kyoto Protocol.

"Earth is like a human being. When temperatures go up, it does not feel well and will react in ways we are not used to."

- Dr Fredolin Tangang, New Straits Times, 15 January 2007

Tagang also noted the importance of capacity building by engaging a pool of experts in regional cooperation strategies. Compared to experts in the US,

South East Asia lags behind on the hard science of climate related matters. It is therefore vital to tap on these sources of knowledge to better equip the region from further disasters. One strategy that has been suggested is determining how to optimise our natural resources and agricultural production in the light of climate change.

Professor Norazazi Zakaria, director of the River Engineering and Urban Drainage Research Centre at Universiti Sains Malaysia, offered a more detailed solution. He suggested that the government seriously consider building more dams. Not only would the dams assist in containing excess water, it would also provide as water storage facilities in times of drought, which he predicts will hit some Malaysian states later this year.

The wet weather also has economic security implications. In neighbouring Singapore, the incessant





rainfall has pushed up prices in the marketplace. Law Song Nam, vice-chairman of the Singapore Fruits and Vegetable Importers and Exporters Association noted that the rains resulted in a hike in vegetable prices by 30 cents per kilogram.

Sources

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- Build Dams to Ease Flooding, *The Sun*, 15 Jan 2007
- DIDL No Way To Mitigate Floods, *The Sun*, 15 Jan 2007
- Expert: Be Prepared For More Extreme Weather, *New Straits Times*, 15 Jan 2007
- Freak Weather and Flat Land, *The Straits Times*, 16 Jan 2007
- Wet, wet, wet, *The Straits Times*, 13 Jan 2007

Haze's effects on climate change

While global warming precipitates forests fire in Southeast Asia, it indirectly alters the climate of other regions. Studies done on climate change suggest that the haze experienced in Southeast Asia is a likely cause for some of the freak weather conditions experienced by Australia. According to the CSIRO Australia, the massive haze over Asia results in a cooling effect on the Asian continent and nearby oceans. As such, this changes the balance of temperature between the Asian region and Australia. This also changes the movements of monsoon winds. Consequently, more winds have flown towards Australia thus resulting in tropical rainfall in North and North Western Australia in the summer.

Source

Commonwealth Scientific and Industrial Research Organisation, Australia
www.csiro.au/csiro/content/file/pfor.html

Carbon comparison

The average British citizen produces 26kg of CO2 in a day. This breaks down as follows:

- 7.4 = electricity
- 1.6 = fuel production
- 3.8 = manufacturing and construction
- 7.4 = transport, of which: (5.2 road transport, 1.7 air travel, 0.1 railways and 0.4 shipping)
- 1.0 = office buildings
- 3.8 = residential heating
- 1.0 = Other industrial processes, agriculture, military travel, other

The average Kenyan citizen produces 0.7kg of CO2 in a day. This breaks down as follows:

- 0.08 = electricity
- 0.08 = fuel production
- 0.16 = manufacturing and construction
- 0.31 = transport
- 0.07 = other

Source

World Development Movement study in 'How richest fuel global warming - but poorest suffer most from it', *The Independent*, 14 January 2007

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