

Too much for the Earth to bear

By KEVIN RAFFERTY

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HONG KONG — The global financial crisis that has sent economies teetering from recession toward slump is preoccupying politicians and families worldwide, who see their livelihoods being snatched away by the consequences of the inventive greed of financial whiz kids.

But a worse crisis lies waiting — involving the very future health and life of Earth. How long before human beings go the way of the dinosaurs?

Politicians and climate experts will meet in Poland's 1,200-year-old city of Poznan at the start of December, hoping to negotiate a successor agreement to the Kyoto Protocol and to bring growing carbon-dioxide emissions under control to prevent further global warming.

A troubling assessment of Earth's disastrous ecological imbalance came in late October with the "Living Planet Report 2008" — which claims that people are consuming resources so rapidly that by 2030 two Earths will be needed to support current lifestyles. The report, by WWF (the global conservation organization), the Zoological Society of London and the Global Footprint Network, calculates that global biocapacity — the area available to produce our resources and capture our emissions and keep Earth's biosystems in balance — is 2.1 hectares per person. The actual footprint is 2.7 hectares.

There are huge differences across the globe. U.S. citizens require 9.4 global hectares — meaning that if everyone on the planet lived like an American, we would need 4.5 Earths already — whereas average Chinese consumption is 2.1 hectares, so if everyone on Earth lived like a Chinese we would be OK, just.

Cynics might ask, "Why bother?" with Poznan or the successor meeting in Copenhagen next year because we are gobbling up Earth's resources so quickly that

we are not going to get to 2050 or any of the other target dates used in the proliferation of position papers. This world will probably end in a big bang of fighting over diminishing resources — what are the odds of the great U.S. fighting machine capturing them, or the more frugal Chinese, who have been assiduously wooing friends and their oil and other precious resources — rather than the whimpering of people slowly suffocating from global warming.

Even cynics would become more cynical if they read the Web site of the U.N. Framework Convention on Climate Control, which says that the Poznan conference "provides the opportunity to draw together the advances made in 2008 and move from discussion to negotiation mode in 2009."

Bureaucrats may find buzz phrases such as "plan of action," "significant progress," commonality of views on "shared vision," and "strengthen momentum and commitment" dynamic. But the agenda and position papers lack the blood and guts of the real world and fail to understand the dramatic changes in climate starting to occur faster than experts imagined.

British researchers reported in October that summer shrinkage of Arctic ice, which this year led to the opening of the Northwest Passage, is continuing in winter, suggesting radical melting. A world away in the highest Himalayas, glaciers are disappearing.

On the Chinese side, the World Bank's David Dollar said scientists project their glaciers will be 80 percent gone by 2035; in India, scientists predict that the glaciers may disappear in 20 to 30 years.

At stake is one of the world's great river systems; not just a single river but eight: the Yangtze and Yellow, the Brahmaputra, the Indus, Mekong, Irrawaddy and Salween, from the Tibetan plateau, and the Ganges on the Indian side.

Since the Industrial Revolution there has been a significant, albeit slow, change in Earth's atmosphere. The concentration of carbon dioxide has climbed from 280 parts per million (ppm) to 387 and is set to go higher. James Hansen, the father of global warming, warns, "We're toast if we don't get on a very different path."

He would like to reduce emissions to 350 ppm. The consensus is that the limit should be 400 to have a

good chance of restraining the temperature rise to 2 degrees Celsius. But some climate specialists warn that it will be impossible to restrict the rise in carbon dioxide levels to below 550 ppm, and probably difficult to keep them to 650 ppm, implying temperature rises of 4 C and higher and throwing the global cycle out of balance with potentially disastrous consequences — not merely for the climate but also for the very existence of some species and the whole of Earth's ecology.

John Donne's claim that "No man is an island" is proving prophetic: A small event in an insignificant place can send ripples far and wide. Plastic bags and toothbrushes discarded in the United States have turned up in the stomachs of albatrosses on remote Midway Island in the middle of the Pacific Ocean. China's pollution from factories has gone across the Pacific to Los Angeles. Cutting down of tropical rain forests adds more to global greenhouse gases than all the pollution caused by cars and aircraft, and almost as much as industry.

Against this, progress toward curbing greenhouse gas emissions has been slower than the modest ambitions of the Kyoto Protocol. Emissions of carbon dioxide have risen. Emissions from the U.S. rose by 16.3 percent between 1990 and 2005. The U.S. has not ratified Kyoto, so has no binding target.

Nor has China, which, thanks to double-digit economic growth, has passed the U.S. in total emissions. Global greenhouse gas emissions have increased by 75 percent since 1970. Perhaps the most worrying sign is that Japan, traditionally the most stingy developed country in energy efficiency, has shown a 7 percent increase in its gas emissions between 1990 and 2005 as Japanese changed their lifestyles. Japan's Kyoto target is for a 6 percent decrease.

The daunting size of the task has led some economists to say that it is too expensive, in social as well as economic terms, to dream of tackling climate change. Skeptic Bjorn Lomborg believes that there are better things to do with the money, and that there are benefits from higher temperatures — from farming in Greenland to immense oil, gas and mineral riches uncovered under the Arctic ice cap. The problem with this philosophy of complacency is that the people who will suffer most from global warming

are already poor, and those who will benefit are already rich.

The Arctic may hide 20 percent of the world's oil and gas resources, according to the U.S. Geological Survey. That oil is equivalent to a mere three years of global demand, or the estimated amount of Russia's huge reserves. But getting them out could trigger a potential world war over ownership, besides causing further damage to the environment.

The numbers of vulnerable people whose lives would be devastated by rising temperatures are awful. It is not just the less than cuddly majestic polar bear whose future is at stake, but also the Royal Bengal tiger along with 1.5 billion people in the threatened Tibetan-Himalayan eco system and up to half of humanity beyond. Imagine if Bangladesh and its 160 million people were squeezed by encroaching sea waters from the south and by desertification of green land as glaciers feeding the river system disappear. The poorest parts of Africa would also be especially at risk.

U.S. President-elect Barack Obama has put climate change on the front page of his agenda, but even if he can find the right policies, the president does not have a magic wand to change American lifestyles or to combat the immense strength of the industrial complex dedicated to gas guzzling.

The attitude from Beijing is, by these standards, measured. China has finally admitted that its greenhouse emissions have caught up with the U.S., but refused to give its own figures. China added that its emissions will not fall anytime soon and it will not allow the battle against emissions to impede its quest for growth.

Beijing also offered its solution — the rich countries should pay 0.7 to 1 percent of its gross domestic product to clean up the mess that their industrial pollution has caused and to transfer clean technology to the developing world. That would be about \$500 billion or more than five times total annual aid from the rich countries.

India's paper on long-term cooperative action to UNFCCC stresses equity, the rights of developing countries to be allowed to develop and the responsibility of industrialized countries for existing

greenhouse gases.

The Kyoto Protocol is a flawed document, not least because of what it omits as what it contains. The three biggest emitters, China, the U.S. and the relentless march of deforestation are effectively excluded, as are emissions from transport. It seems odd at a time of global meltdown, when financial markets have been manipulated and distorted by bright young things on the make, that leaders of industrialized countries pin so much faith in carbon markets that have already been shown to be open to distortion and manipulation and outright lying and cheating.

One of the flaws of Kyoto is the assumption that governments can make promises that will be instantly fulfilled. Climate change is a wickedly complicated issue. On the supply side, there is no easy new — or cheap — technology readily available to replace fossil energy. Even nuclear power, seen as a panacea by some who want a quick fix, may be in shorter supply than advocates imagine.

Expert Daniel B. Botkin cautions that known reserves of uranium are 5.5 million tons, enough for 80 years at current use in which nuclear power supplies 15 percent of world electricity. If decisions were made to build new plants to allow nuclear power to rise to 50 percent of the world's energy (and let issues of waste disposal and proliferation go hang), there would be enough known uranium reserves to last to 2019.

On the demand side, the writ of governments is still less certain. Americans were insistent as oil prices soared in 2008 on their right to gas at below \$3 a gallon (3.8 liters) even though that is a third of prices paid in Europe. As soon as prices started to fall, the enthusiasm for alternative energy began to fade. Do governments have the guts to challenge their own people and tax instant gratification that comes at the cost of the planet and make consumers pay for their gas and emissions?

There is, of course, the question of the cozy club of governments, the people who will take the decisions at Poznan and Copenhagen. Ex-U.S. President Bill Clinton, who no longer has to seek the votes of the electorate or of Congress, declared that there is no problem on Earth that any one country can solve on its own, even the U.S. His wisdom seems to have

eluded his own countrymen and the Chinese alike.

As I write this, the Financial Times is open at the paper's glossy 72-page "How to Spend It" magazine with an article featuring a virgin wool/alpaca sweater, attractive at £2,500. BBC news shows sad lines of refugees in the Congo living in the open rain and queuing for food handouts.

It is a reminder that Earth's climate is heating up, resources are being guzzled at an unsustainable rate, the really poor of the world do not have a fingertip grip on the necessities of water and food for survival, while the super rich gobble enough for every 100 people.

For all the hot air that will blow at Poznan, how can Earth be brought into balance until all of us reduce our ecological and carbon footprints?

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