



## The Earth and Energy Round-Up: November 28th 2007

Posted by [Stoneleigh](#) on November 28, 2007 - 7:22am in [The Oil Drum: Canada](#)

Topic: [Miscellaneous](#)

### [We Face Worldwide Drought with No Contingency Plan](#)

As droughts reach record levels from Atlanta to Australia, no one is asking the tough question: What happens when there is not enough water to go around?....



...It's not just the Southeast of the United States. Europe has had its great droughts and water shortages. Australia is in the grip of a drought that's almost unbelievable in its ferocity. Again, this is a global picture. We're just getting much less usable water than we did a decade or two or three decades ago. It's a sort of thing again that the climate models are predicting. In terms of the floods, again we see the same thing. You know, a warmer atmosphere is just a more energetic atmosphere. So if you ask me about a single flood event or a single fire event, it's really hard to make the connection, but take the bigger picture and you can see very clearly what's happening.



### [Apocalyptic vision of a post-fossil fuel world](#)

Richard Heinberg, one of the world's leading experts on oil reserves, warned that the lives of billions of people were threatened by a food crisis caused by our dependence on dwindling supplies of fossil fuels.

Higher oil prices, the loss of farmland to biofuel crops, climate change and the loss of natural resources would combine with population growth to create an unprecedented food shortage, he claimed.

The only way to avoid a world food crisis was a planned and rapid reduction of fossil fuel

use - oil, coal and gas - and a switch to more organic methods in the growing and delivery of food. It would mean a return to living off the land not seen for 150 years.

### [The Myth of Canada's Water Abundance](#)

I learned a new word today: "Akrasia." To the ancient Greeks, it meant "knowing the right thing to do, and not doing it." Judging by the four very different discussions of water and our future that I've just read (OK, at 572 pages, the United Nation's latest state-of-the-planet report got more of a skim), we in Canada, and especially in the west, have a bad case of it when it comes to preparing for our new climate reality.

### [Autumn Rain Down 90 Percent in China Rice Belt](#)

Large areas of south China are suffering from serious drought, with water levels on two major rivers in rice-growing provinces dropping to historic lows, state media said on Tuesday.

Rainfall since the beginning of October had dropped by 90 percent in Jiangxi and 86 percent in neighbouring Hunan, the country's largest rice-growing province, from average figures, Xinhua news agency said.

Rice is a staple for most Chinese and a crop which needs a constant supply of water. The Gan and Xiang rivers running through the two provinces had seen their lowest water levels in history, Xinhua said. The shallow water has caused a jam of barges in some sections of the Gan.

Authorities had rushed to ensure drinking water supplies in big cities along the rivers and irrigation of fields by diverting water from reservoirs and installing pumps, Xinhua said.

### [Scientists warn of agrarian crisis from climate change](#)

An agrarian crisis is brewing because of climate change that could jeopardise global food supplies and increase the risk of hunger for a billion poorest of the poor, scientists warned Thursday.

South Asia and Africa would be hardest hit by the crisis, which would shift the world's priorities away from boosting food output year after year to bolstering the resilience of crops to cope with warm weather, they said.

Rice, the staple for billions of people, is most vulnerable to global warming, said Dyno Keatinge, deputy director general of research at the International Crops Research Institute for the Semi-Arid Tropics.

"It is the world's most consumed crop and it makes everything else pale in comparison," Keatinge told reporters in Hyderabad, southern India, where the research institute has

### [Asia needs to grow while fighting climate change: UN official](#)

Developing Asian nations must find ways to pursue economic growth while reducing harmful greenhouse gas emissions, the UN's special envoy on climate change said Friday.

"The top priority of the countries in the region is the eradication of poverty through possible growth," Han Seung-soo told a forum on climate change in Bangkok.

He said Asian countries emit 34 percent of the carbon fumes that cause global warming, mostly due to increasing energy consumption and deforestation, he said. Developing nations were taking steps to curb emissions, he said, adding that on their own, they would not be able to do enough to fight climate change.

### [Far From Beijing's Reach, Officials Bend Energy Rules](#)



When the central government in Beijing announced an ambitious nationwide campaign to reduce energy consumption two years ago, officials in this western regional capital got right to work: not to comply, but to engineer creative schemes to evade the requirements.

The energy campaign required local officials to raise electricity prices as a way of discouraging the growth of large energy-consuming industries and forcing the least efficient of these users out of business. Instead, fearing the impact on the local economy, the regional government brokered a special deal for the Qingtongxia Aluminum Group, which accounts for 20 percent of this region's industrial consumption and roughly 10 percent of its gross domestic product.

Local officials arranged for the company to be removed from the national electrical grid and supplied directly by the local company, exempting it from expensive fees, according to an electricity company official who asked not to be named, an official of the aluminum company and the official Web site of the nearby city of Shizuishan. As a result, Qingtongxia continued to get its power at the lowest price available.

It was a cat-and-mouse game grimly familiar to Chinese officials, who have a long tradition of spearheading ambitious nationwide campaigns that are all too often thwarted at the local level, partly because local priorities clash with national ones.

### [How China is eating the world](#)

Research from IEA suggests that marginal Chinese demand for oil, as a percentage of the growth in total consumption, rose to around 72 percent in 2006, from 10 percent in the 1980s. This marginal demand could grow to close to 100 percent of total consumption growth in 2007.

Such an appetite brings with it its own dangers, both to China and the rest of the world....

....This is all developing because commodity inflation is spreading into a second phase covering the so-called "soft commodities", as China's burgeoning middle classes develop a taste for a more Western style of eating, enjoying foods such as milk, pork and beef that were once scarce.

Like other nations suddenly able to expunge the memories of socialist starvation, the Chinese are overcompensating for their malnourished past.

Thus they have become a net food importer, probably for the first time in their very long history....

....The world is seeing some dairy prices up 200%, the cost of wheat doubling and pork up 50 percent.

### [The needle and the damage done](#)

If anything, the sticker shock motorists have experienced at the pumps in recent years doesn't yet reflect the enormity of a crisis in oil that even industry and pro-industry government agencies are beginning, finally, to acknowledge.

The world is not running out of oil. But, sooner than expected, it will run short of the kind that is easily and cheaply tapped, a day of reckoning some experts predict will be upon us early next decade - in the blink of an eye for a capital-intensive industry that thinks decades into the future.

Long before that point, before pools of conventional oil already in decline are depleted altogether, consumers, governments and the industry will have to make some very tough decisions. We are close to a tipping point.

### [A culture fights for survival](#)



Since the vast sheet of year-round ice retreated from this part of the world 7,500 years ago, Hudson Bay has been fertile ground for Inuit hunters living along the shores of Nunavut, northern Manitoba, Ontario and Quebec. Seven months of snow and ice cover still keeps things cool enough for polar bears, barren ground caribou, beluga whales and other Arctic species to thrive.

But the polar world of Hudson Bay is warming.

Capelin are now overtaking cod as the main fish in the region. Killer whales, once blocked by ice in Hudson Strait, are beginning to prey on beluga and narwhal. Unable to hunt seals as long as they could previously, polar bear numbers are declining.

Virtually every facet of Inuit life in Hudson Bay and other parts of the Arctic is being affected. Not only are some hunters finding travel more dangerous, many are having difficulty tracking the caribou and other animals because their migrations routes are changing and their numbers are dropping.

While most agree on the need to help preserve the Inuit way of life, Inuit leaders and government policy-makers have struggled to find practical solutions. The "right to be cold" – a term coined two years ago to describe what the Inuit risk losing in a warming world – is a vexing problem that can't be solved by simply cutting greenhouse gas emissions.

### [Inuit 'face cultural genocide' as planet heats up](#)

Griffiths travelled extensively throughout the Arctic last spring to interview Inuit hunters and elders about their attitudes on climate change. A small but strong minority is concerned climate change will kill the traditional Inuit way of life -- based on hunting and fishing on sea ice -- that in turn threatens their identity as a people.

"There's a real worry that the physical basis for the culture will be wiped out," Griffiths said. "Hunting will become the equivalent of picnics. It's all over, that way. No longer are they Inuit."



"We've documented a 22 per cent decline in the western Hudson Bay population between 1987 and 2004," notes Stirling, the first Canadian to be elected president of the Society for Marine Mammalogy, one of the largest international scientific organizations.

"The animals that we see there now are younger and thinner than the typical bear you'd see 20 or 30 years ago. Martyn Obbard from the Ministry of Natural Resources in Ontario has observed a similar situation in southern Hudson Bay. The reason why is pretty simple. Bears pile on the fat they need to make it through the year by catching seals on the ice. With the ice melting two or three weeks sooner in spring, as has been happening in western and southern Hudson Bay, the animals are spending more time on land and getting less opportunity to put on the reserves they need to successfully reproduce and to make it through the year. It's a double-edged sword. Less time feeding also means more time burning up stored fat."

### [Arctic area 'torn to pieces' as heat triggers landslides](#)



Queen's University researchers watched in awe and dismay this summer as landslides blamed on climate change mangled wide swaths of a remote Arctic valley in mere hours.

"When a week was up the landscape had been torn to pieces in dozens of places. We were surprised by both the speed and the scale of the changes," said geography professor Scott Lamoureux.

He warned that such large-scale environmental upheaval could throw fragile Arctic ecosystems off-kilter by interfering with the flow of vital organic material and nutrients carried by water during the brief summer months.

"We expected this would happen in the future to some extent but to see it taking place already is a bit of a shock," Lamoureux said.

### [Our shrinking coastlines](#)

Coastal communities around the world are just beginning to come to terms with the possibility that climate change, rising sea levels and melting permafrost might some day threaten their homes and cities. But people living in the western Arctic are already getting a taste of the nightmares coming their way. Storm-driven waves that are no longer being buffered by thick sheets of Arctic sea ice are slowly eroding coastlines, destroying buildings and washing dozens of archeological sites into the sea.

Some parts of the western Arctic are so vulnerable to the changes that five communities in Alaska and the Northwest Territories may have to be relocated.

### [An Alaskan island is losing ground](#)

Kivalina is disappearing, the victim of a warming world and a steady natural erosion that probably began long before the Eskimos settled here 100 years ago.

"You see the white water out there?" Swan said, pointing to some ripples a couple hundred feet offshore. "That's where the beach used to be."

When he was growing up here in the 1970s, the ocean would freeze each fall into a slush the thickness of mashed potatoes. Waves from the storms would crash into the ice, not the shore.

Lately, the autumn ocean has been a vast, iceless expanse that leaves the beach vulnerable to waves. The island is now a sliver of sand and permafrost less than 600 feet across at its widest point. The Army Corps of Engineers estimates it will be 10 to 15 years before the ground beneath the clump of clapboard houses washes away.

The prospect of Kivalina's disappearance has set off its own storm, jarring a place that, like most of global warming's early victims, has long struggled on the fringes of the planet.

### [Northerners eyeing new riches](#)

The residents of Churchill aren't the only northerners eager to exploit the commercial opportunities that climate change promises. In the Yukon, Northwest Territories and Nunavut, many in the business community are hoping to begin tapping the trillions of dollars in resources that have so far gone unexploited because there has been no economical way of getting them out.

"Nunavut has at least 10 per cent of Canada's total oil reserves and more than 20 per cent of its natural gas reserves," says Paul Okalik, the premier of Nunavut. "The Geological Survey of Canada estimates that the reserves in the Sverdrup Basin alone are worth over a trillion dollars. That's trillion with a T.

"Up until now, the challenge was to get it to market. But now innovative technologies and perhaps even climate change are making these and other resources more accessible."

It's difficult to say how much oil and gas lies buried beneath the Arctic ice and permafrost. The U.S. Geological Survey estimates that 25 per cent of all the untapped energy reserves in the world will be found within the Arctic Circle. Many energy experts believe that percentage could be much higher because the American analysis was based on crude estimates and didn't take into account vast unexplored areas. It also doesn't include gas hydrates, bands of highly concentrated methane gas frozen in the permafrost, which could be the world's next great source of energy.

In light of British Petroleum's recent \$17 billion exploration agreement with Russia, some of those experts are privately suggesting that the Arctic could produce a world class petroleum reserve similar to that which has made Norway one of the richest countries in the northern hemisphere. The small Scandinavian country of 4.7 million people has \$350 billion in its petroleum trust fund (now called the State Pension Fund), more than 20 times the \$16.1 billion that oil-rich Alberta has salted away.

### [Who's guarding our back door?'](#)



For Col. Pierre Leblanc, commander of Canada's northern forces at the time, the significance of the incident became clear the following year when a Chinese research ship, armed with machine guns, showed up unannounced at the tiny Inuit community of Tuktoyaktuk, ostensibly to meet a Chinese tour guide who had claimed refugee status in 1993.

If Canada's back door is vulnerable to suspicious entries like these two incidents, Leblanc wondered, what might it be like in 20 or 30 years if climate change melts sea ice sufficiently to open the country's Arctic waterways. Could the military or the Canadian Coast Guard stop a rogue ship if it took a run through the Northwest Passage to save 9,000 kilometres of ocean travel? Or stop a tanker from taking a load of fresh water from an Arctic river or lake?

Could Transport or Environment Canada clean up an oil or fuel spill if a tanker like the Exxon Valdez was damaged by ice and spilled its cargo? And what about a ship that might be trying to smuggle in illegal immigrants?



The biological world is changing because of global warming. Most non-specialists are familiar with poleward shifts — migration routes and species distributions that are creeping north in the Northern Hemisphere and south in the Southern Hemisphere as the equator-facing edges of these historic ranges become too hot for species to handle.

The same phenomenon is happening in three dimensions, though there is less data and less media coverage for these upward trends. As the climate warms, there is a corresponding increase in temperature at any given elevation. And any species unable to take the heat — or related changes in, for example, precipitation — will generally move up the mountain towards colder climes, until they reach the top.

Complicating the picture is the observation that not all species adjust to temperature shifts at the same rate. Bird species may flee uncomfortably hot altitudes far before a tree-line shifts uphill. And many species may move not because they can't take the temperatures themselves, but because of the impact of climate change on other species they rely on, or because the creeping heat favours pathogens that kill them off.

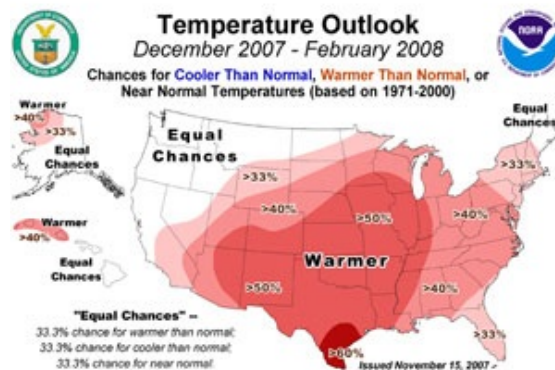
"I am most concerned about species' communities being torn apart," says Stanford ecologist Terry Root. "It is all going to be quite a mishmash of things."

### [2007 Shaping Up as Warmest Ever for Northern Hemisphere](#)

The forecast for 2007: a record breaker.

That's the prognosis, for the Northern Hemisphere anyway, according to USA Today, as the calendar year inches toward a close.

If the forecast for a warm winter holds, then 2007 will go down as the warmest ever recorded in the Northern Hemisphere, another indication that global warming isn't an issue to be discussed in the future tense, but the present tense.



### [Winter forecast a mild one as temperatures get toastier](#)

The recently updated U.S. winter forecast by the Climate Prediction Center calls for unusual warmth to persist across most of the nation, continuing a decade-long trend of milder winters.

Temperatures for December through February should be similar to last winter — 4% warmer than the 30-year average, the prediction center says.

"U.S. winters have been milder-than-average for the past 10 years," reports Michael

Halpert, deputy director of the prediction center. Northern states have been particularly warm. He cautions that no link can be made between this string of mild winters and man-made climate change.

As for rain, "La Niña strengthened during October, making it even more likely that the USA will see below-average precipitation in the already drought-stricken regions of the Southwest and the Southeast this winter," Halpert says.

Besides the Southeast, where 76% of the region has experienced drought, dry conditions also plague the West, where 57% of the region is in drought. Jay Lawrimore of the national data center says the drought in the West can be traced to 1999, "although the expanse and severity of the drought has changed over time."

Last winter, normally the wettest time of year in the Southwest, was unusually dry. Los Angeles had its driest "water year" (July to June) on record with 3.21 inches of rain.

### [Drought kills Atlanta's grand old trees](#)

Atlanta -- a "City of Trees" -- prides itself on the leafy canopy that shades many neighborhoods.

In urban areas, however, the drought just makes a hardwood's life harder. Concrete and asphalt already stress trees by confining roots and branches as they reach for water, light and good soil...

....But alas, gallons of water is what trees crave, and water in high volume is what we cannot give them. Coder said 80 percent of the variation in tree growth is tied to how much water they get.

Their plight is compounded by the fact that when homeowners were allowed to water outdoors, they focused on keeping short-term investments like annuals alive when they should have worried about big trees, he said.

### [Owners of thirsty lawns, beware, the water cops are here](#)

Each "water cop" drives a white Toyota Prius (complete with "Drought buster" logo) and wields a polite smile, handshake, and an armload of bulging information packets.

"Hi, I'm with the Department of Water and Power, and as I was driving by, I noticed a lot of overspray into the street," says Mr. Crossley to Margarita Rojas, a housekeeper who answers the door of a house on Norton Avenue. The sidewalk in front of the house is soaked, and a two-inch-deep puddle of water has gathered.

"Maybe you can inform the gardener to taper down those sprinkler heads," says Crossley gently, as he hands Ms. Rojas a packet of pamphlets.

The pamphlets include water-saving tips, from fixing leaky faucets ("saves 20 gallons a day") to using a broom instead of a hose to sweep driveways (150 gallons). But one also makes clear that L.A.'s Prohibited Water Use Ordinance -- in force since the early 1990s

– forbids watering lawns between 11 a.m. and 3 p.m. from October through March and prohibits excess water from sprinklers from flooding streets and sidewalks.

### [Canada blocking consensus on climate change](#)

Canada was accused yesterday of being the major obstacle to a Commonwealth consensus on climate change as the Harper government resisted the wording of a proposed statement that would bind Canada to cutting greenhouse gas emissions substantially.

"My understanding is that there is pretty much unanimous agreement except for Canada and Australia, but Canada is the major objector," said a well-placed Commonwealth government source, adding that he was surprised by the "vehemence" of the Canadian position.

"It's not a casual position," the source continued. "It's a strong personal view of Harper himself."

### [Harper dubs Kyoto accord a mistake at end of Commonwealth summit](#)

Stephen Harper concluded a Commonwealth summit Sunday by bluntly describing the Kyoto accord as a mistake the world must never repeat.

The prime minister characterized the landmark climate change deal as a flawed document and served notice that Canada will not support any new international treaty that carries its fatal flaw. Harper said the key error of Kyoto was slapping binding targets on three-dozen countries but not the rest, including some of the world's biggest polluters like the United States, China and India.

So Canada will enter key negotiations on a post-Kyoto deal next month with a relatively simple position: all major polluters must be included, or there's no deal. Harper came under fire from some quarters for promoting that view at the Commonwealth summit but was adamant that the everyone-in approach is the only solution....

....Five years ago he described it as a money-sucking socialist scheme and ridiculed the science of global warming when the previous Liberal government ratified the treaty. More recently, he's simply described its targets as unattainable because of the Liberals' well-documented failure to cut emissions, a view that was reflected in his government's policy-setting throne speech.

### [PM forces amendment to climate change deal](#)

Small states that say rising sea levels caused by global warming could drown their islands within a decade had been pushing Canada farther than Harper wanted to go.

Harper helped block a deal that would have excluded developing countries from binding targets on greenhouse gas emissions. The amended declaration states that all countries have a responsibility to reduce emissions.

At a news conference, Harper said that the 53-country summit has delivered a substantive deal that will set the stage for the United Nations climate talks next month in Indonesia.

"If we're all to believe that climate change is a major problem caused by greenhouse gas emissions, then we have to reduce greenhouse gas emissions," Harper said. "And the only way we can do that, is if all major emitters reduce their emissions. It's that simple. So we're not going to settle for anything less."

### ['Rich' owe 'poor' \\$86B for global warming: UN](#)

Canada and other rich countries must immediately start backing their promises to combat climate change with tough action and hard cash, says a new United Nations study.

The 2007 Human Development Report calls on wealthy nations to not only slash their greenhouse gas emissions but also to provide \$86 billion by 2015 to help the world's poor adapt to global warming.

"We have less than a decade to avoid dangerous climate change," UN official Papa Seck of Senegal told an Ottawa news conference.

"That doesn't mean safe climate change, there is no such thing. It just means not a catastrophe."

### [The heat was on](#)

What happened to the bright hopes of 1988? Optimists at the time pointed to the relatively rapid response to the threat of ozone depletion. In the face of clear scientific evidence of a threat-and with cooperation from the most affected industries- the international community had come together in just a few years to sign an agreement to phase out the worst ozone-damaging chemicals. Climate change is a far larger threat, and as with ozone, scientific evidence pointed to a clear need to act. But the economic scale of the needed transition was vastly larger in the case of climate, and those who felt they would be disadvantaged were quickly mobilized....

....Compared with 1988, we now have a much better understanding of the potentially catastrophic nature of climate change. The latest science suggests that even small changes in the energy balance of the planet can cause a cascade of secondary changes. There was a time when tropical palms grew at the North Pole and the sea level was 60 meters higher than it is today. But it is not a world we would recognize-or with which we are prepared to cope.

Humanity got to where it is today by being an adaptable species. But we have never confronted a problem whose scope is global and time frame is intergenerational. In his most recent research, Jim Hansen has concluded that in order to avoid catastrophic



climate change, the world has a decade at most to turn greenhouse gas emission trends around. And because of the prior two decades of inaction, today's effort will need to be more ambitious—at least a 50 percent cut in global emissions by 2050, with an 80-90 percent reduction in industrial nations.

### [UN climate circus rolls in on CO2 cloud](#)

It has been billed as the summit that could help save the planet, but the latest United Nations climate change conference on the paradise island of Bali has itself become a major contributor to global warming.

Calculations suggest flying the 15,000 politicians, civil servants, green campaigners and television crews into Indonesia will generate the equivalent of 100,000 tonnes of extra CO<sub>2</sub>. That is similar to the entire annual emissions of the African state of Chad.

When it was first conceived, only a few thousand politicians civil servants and environmentalists were expected to attend the conference — about normal for such an event.

The meeting, which runs from December 3-14, aims to create the framework for a successor to the Kyoto treaty on reducing global greenhouse gas emissions, which expires in 2012.

However, climate change's growing political importance has led to a surge in interest in the conference, which is being held in the luxury holiday resort of Nusa Dua on Bali's palm-fringed southern coast.

Attendees are expected to include celebrities such as Leonardo DiCaprio, the actor, as well as Arnold Schwarzenegger, governor of California, and Al Gore, the former US vice-president.

Many are merely "observers" who have no formal role to play in the talks, which largely involve government ministers and officials. Among these observers are 20 MEPs and 18 assistants whose itinerary includes a daytrip to the idyllic fishing and surfing village of Serangan.

The UN has also recently received thousands of new registrations from groups campaigning for the environment or fighting against poverty. WWF, one of the largest, is sending more than 32 staff to the meeting.

Thousands more are coming from businesses, especially the burgeoning carbon trading sector, which already carries out global transactions worth £12 billion a year and has an acute interest in the outcome of Bali.

Indonesian officials say the final tally could reach 20,000 — and fear it could stretch the resort's infrastructure to the limit. About 90% of the emissions will be generated by delegates flying thousands of miles to Bali, with the rest coming from the facilities they will be using.

### [Years of living dangerously: the wild, wild world](#)

It has been unmistakable to the millions caught up in the biblical downpours that cut off an entire region of Mexico this year. Many Australians have been sufficiently convinced of it to change the way they vote. It has been obvious to the home owners of middle England who have stood knee deep in their flooded sitting rooms. And it can't have escaped the notice of the millionaire's on Malibu beach who have watched their luxury beach homes burn like matchsticks.

Weather related disasters are increasing in both frequency and savagery and the expansion of human communities into vulnerable habitats along with the increasingly apparent effects of climate change are to blame. A leading British charity has discovered that there has been a fourfold increase in catastrophes such as the floods that swept through South Asia this year affecting more than 250m people.

In a new report, Oxfam says that from an average of 120 such annual disasters in the early 1980s, there are now as many as 500 every year. It called on governments to take more convincing steps to reduce the emission of greenhouse gases that a consensus of scientists blame for the temperature increases.

### [Take over our rainforest](#)

Man-made climate change is a clear and present danger. Decision-makers from around the globe will converge on Bali in a fortnight in an attempt to do something about it. And the call has gone out for the world's leaders to take bold action to avoid a catastrophe.

Enter Guyana. The former British colony, sandwiched between Venezuela and Brazil, is home to fewer than a million people but it is also home to an intact rainforest larger than England. In a dramatic offer, the government of Guyana has said it is willing to place its entire standing forest under the control of a British-led, international body in return for a bilateral deal with the UK that would secure development aid and the technical assistance needed to make the change to a green economy.

The deal would represent potentially the largest carbon offset ever undertaken, securing the vast carbon sinks of Guyana's pristine forest in return for assisting the economic growth of South America's poorest economy.

### [Palm Spreads its Wings in Brazil, Plantings Rise](#)

Palm plantations in Brazil are likely to expand at least three-fold in the coming years as demand rises and the nation seeks to benefit from soaring prices of the commodity, a top producer said on Tuesday....

...The official said palm oil use in Brazil was increasing because it was considered as a healthy alternative to hydrogenated fats and as a source of biodiesel.

"Potential for palm oil continues to be really big, right new studies for plantations are going on (related to the biodiesel expansion)," he said....

....Brazil will need additional one million tonnes of vegetable oils in 2008 because the country has made it mandatory to blend 2 percent edible oil-based biodiesel from January, Brito said.

### [Fuel crops cultivate hopes and fears](#)

In the south of Mumbai, on a site that used to house an explosives factory, Prashant Kothari is now producing biofuel from jatropha, a robust bush whose cultivation is expanding rapidly across Asia.

Growing jatropha has allowed Mr Kothari to make use of the vast but arid plot of land surrounding the factory and switch out of explosives production following a ban on an active ingredient, nitroglycerin.

India alone is hoping to plant 33.5m acres of jatropha by 2012. From the Philippines to Burma , several Asian governments are setting equally ambitious targets for a crop whose fuel efficiency remains largely untested.

Jatropha's development is a potential challenge to some countries that are much more advanced in planting other biofuel crops, notably Malaysia, which accounts for 57 per cent of the world trade in palm oil.

While palm oil is the most energy-efficient crop, it is also more taxing on the soil, leading Greenpeace to warn this month of "a climate bomb" in Indonesia, where forests and swamps are being stripped to make way for palm plantations.

### [Carbon Capture: Miracle Cure for Global Warming, or Deadly Liability?](#)

Technology to siphon off carbon dioxide from power plants and insert it into rock formations has the government, industry and many leading environmental groups wiping their brows and sighing, "phew." They say "carbon capture and storage" could be one of the central keys to unlocking how the world beats back climate change.

But for a growing list of critics, injecting carbon dioxide into the earth is as risky as sticking a Botox needle into a brow -- who really knows what's going on under the skin? And because this climate cure comes with no prescription to radically change the world's energy diet, skeptics say carbon capture and storage (CCS) is a diversion and a false solution....

...."Coal-fired power stations are being built with the promise that this technology will be there one day in the future," Kill said. "It's a very dangerous way of spending a lot of money on a very risky technology and financing new coal-fired power stations, when that supposed remedy is very far-off into the future, and we may well find that it isn't going to work. And then there are all those coal-fired power stations that shouldn't have been built in the first place."

### [Nuclear industry may be running out of steam](#)

Rumours of a nuclear power renaissance have been greatly exaggerated. So says an audit of the nuclear power industry released on Wednesday.

The report, commissioned by The Greens, a European parliamentary group, points out that many ageing reactors are due to close before 2030, and that 338 new ones would have to be built just to replace them.

The Paris-based nuclear consultants who compiled the report argue that the industry is growing too slowly to meet this target, and may even be shrinking. The world has five fewer reactors operating today than it did in 2002, they say. Only 91 reactors are now being planned, and a further 32 are under construction, mostly in Asia and eastern Europe. Construction work on 11 of those has been under way for 20 years or more.

The idea that nuclear power is about to experience major growth is "pure fantasy", says the report's author, Mycle Schneider. The industry is facing "a dramatic loss of competence, sceptical financial markets and the severe shortage of manufacturing capacity", he says.

### [Dim prospects that 'energy efficient' will pay off: CIBC](#)

Improvements in efficiency have done little to reduce actual energy consumption, as consumers take advantage of those gains to drive bigger cars farther, or heat larger homes, CIBC World Markets Inc. economist Jeff Rubin says in a new report.

In a study released today, Mr. Rubin described an "efficiency paradox" in which technology improvements allow for better energy efficiency, but those savings are lost to greater consumption....

...“The problem is that energy efficiency is not the final objective — reducing energy consumption must be the final objective to both the challenges of conventional oil depletion and to greenhouse gas emissions,” he said.

### [Canadian Natural slashes spending, blames royalty hike](#)

Canadian Natural Resources Ltd., one of the country's top energy producers, will slash its capital spending on conventional crude and natural gas by one-third to \$1.7-billion next year and is blaming most of the reduction on the new royalty regime adopted last month by the Alberta government.

Putting hard numbers to an earlier threat, the Calgary company said early Tuesday that 78 per cent or \$645-million of the \$827-million reduction stems from the new regime, which is to take effect in 2009 and has set off a storm of criticism from the oil and gas industry.

“The new royalty regime ... will [absorb] the vast majority of any increases in natural gas prices for most of our natural gas wells,” John Langille, vice-chairman of the Calgary



company, said in a news release Tuesday. "As such, the ability to increase natural gas drilling activity with increasing gas prices is severely impacted."

### [CNQ declares end to era of massive projects](#)

Canadian Natural Resources Ltd. is slowing down its oil sands developments – declaring the era of “megaprojects” over for the company – as it hopes to tame the cost of labour in the overheated construction market around Fort McMurray, Alta.

“There will be no megaproject. Megaprojects create a frenzy and cause inflation,” Steve Laut, CNQ president, said Tuesday. “We will not add to that fire.”

The company has nearly finished building its \$7.75-billion Horizon oil sands mine and yesterday said plans for two subsequent phases would be broken into four pieces, pushing completion back two years to 2013.

CNQ's strategy could become a new standard in the oil sands, where the emphasis on building huge projects has caused more headaches than successes.

### [Getting the geothermal ball rolling](#)

If embracing geothermal is a no-brainer, then why isn't it happening? Why all the talk, all the agreement, but no action?

"It's because of institutional barriers," said Dembo, explaining that a combination of government bureaucracy and a lack of access to capital tend to block or discourage action.

You can add lack of political will, outdated building codes and standards and inertia to the list. Major stakeholders – property developers and financial institutions and governments – are also working in silos and not properly communicating their needs to each other.

"People continue to sell what they know. There's a huge knowledge gap here," said Dembo.

### [First Nations Leader to Premier: Carbon Credits 'Belong to Us'](#)

As "the landowners of British Columbia," First Nations are entitled to profits from the potential sale of carbon credits, a First Nations Summit leader says.

"If there is going to be a recognition of carbon credits as a trading commodity, then we believe that those credits should belong to us, right?" Dave Porter told The Tyee. "Clear and simple."

The international drive to lower greenhouse gas emissions has created a multi-billion-

dollar global market for carbon credits. Although carbon trading schemes are at a very early stage in Canada, the provincial government is looking at ways of selling credits.

For example, because forests absorb carbon dioxide from the atmosphere, polluters might be able to offset their emissions by paying for reforestation in B.C.

It's not clear at this point, however, how such a system would work or who should get the cash.

### [After 27 years, a farewell to farms](#)



It's the end of an era, not just for Andrews, but also for agriculture in the Toronto area. This is the best farmland in the country. But we're quickly paving it over. The Greater Toronto Area – including Durham, Halton, Peel and York regions – lost 16 per cent of its farms between 1996 and 2001. Since then, another five per cent have disappeared.

There's a sign nailed beside the door of Andrews' barn that reads: "Farmers Feed Cities." It should say: "Cities Eat Farms."

Up to 80 per cent of the produce we buy travels thousands of kilometres by truck or plane. Even apples – which are quintessentially Ontarian and can keep in cold storage for months – travel 5,900 kilometres on average to get to us, according to a recent Region of Waterloo Health study....

....Domestic farmers make less than half of what Toronto garbage collectors earn. (The average farm earns less than \$25,000 a year before expenses, according to the latest census report.)....

....Faced with a future of long hours, little respect and less pay, is it surprising that young farmers are leaving the land in droves?

### [Old McDonald Had a Farm...and He Got Arrested?](#)

These should be happy times for owners of small farms. Not only are commodity prices way up, but the buy-local movement has caught fire around the country. Rapidly growing numbers of people are embracing the romantic notion of buying food directly from area farmers, sometimes driving hours into the countryside to buy veggies, meat and milk....

....But as the re-emergence of a farm-to-consumer economy draws increasing amounts of cash out of the mass-production factory system, the new movement is bumping up against suddenly energized regulators who claim they want to "protect" us from pathogens and other dangers.

Federal and state agriculture and health authorities say farmers are violating all kinds of regulations to meet fast-growing consumer demand, such as slaughtering their own hogs and cattle instead of using state and federally inspected facilities, and selling unpasteurized dairy products and cider without the proper permits....

....Nor do any of the regulators like to talk much about the new economic model that is emerging in the farm-to-consumer model. Farmers who sell their cattle to processors may receive \$2 a pound, compared to anywhere from \$5 to \$18 a pound, depending on the quantity purchased and the cut of meat, when they do their own slaughtering. Similarly, when dairy farmers sell milk to processors for pasteurization, they receive in the neighborhood of \$1.50 to \$2.50 a gallon (depending on bacteria counts and whether the milk is organic). When they sell direct, they receive \$5 to \$10 a gallon.

### [A house built of shipping containers](#)



Due to the high cost of sending empty containers - deadheads - back to their original shipping points (usually China), tens of millions of decertified shipping containers now litter the ports of North America, a not-so-subtle reminder of our Asian trade imbalance.

Since they are readily available, with an infrastructure already in place, a homeowner is looking at less assembly time, lower labour costs, and less additional material than traditional building methods.

Compared to traditional timber or concrete constructions, shipping containers offer superior structural strength at a fraction of the cost because they are pre-assembled and durable....

....Joel Egan, a Seattle-based architect and one of the founders of HyBrid, the sustainable architectural firm that coined the term "cargotecture" in 2003, also believes in the benefits of using shipping containers for housing.

"What cargotecture does better than anything else is lend itself as a building system that can move and move again so that entire buildings can be relocated," said Egan.

"Because we're starting with a container that is a shippable object, it becomes very easy for us to conceive of the dismantling of such a project at the end of its useful life."

According to Egan, who has been experimenting with cargotecture since 2003, because of its steel-alloy exterior, a shipping container house could last hundreds of years.

### [Help save the planet - insulate your home and seal the leaks](#)

To understand why insulating and sealing are critical to any hope we might have of mitigating climate change and the effects of impending energy shortages, we need to look at our overall energy use. About 10 percent of America's energy is used for heating and cooling homes. Estimates vary, but the consensus among energy experts is that as much as 50 percent of that energy is wasted through uninsulated or poorly insulated building envelopes and air leaks. By properly insulating and sealing our existing homes, we can save most of that energy and reduce America's energy consumption by 4 to 5 percent. (If we insulate and seal our commercial and public buildings, we can almost double that number.)

While a 5 percent reduction might not seem like much, it is, in fact, enormous. The United States uses about one-third of the world's energy, so even a small cutback in our consumption can make a big difference to the global energy picture. Discussions of the world's "energy crisis" usually focus on finding new energy sources, missing the fact that conservation is the key to energy efficiency and should be our priority. It takes money and energy to get energy, and it will take time to develop new energy sources. If we don't take immediate and drastic measures to conserve energy, we'll run out of time, energy and money.

### [The eco-home evangelist who cut her electric bill to just £5 a year](#)

Sue Roaf is an enviable woman. Not only is she professor of architectural engineering at Scotland's prestigious Heriot Watt University but she also has an annual home electricity bill of just £5.

The astonishingly low bill comes from Roaf's former home near Oxford where she lived



before moving to Scotland to take up her new academic position earlier this year.

Built in 1995 as a pioneering example of an 'eco-home', the six-bedroom house incorporates many of the simple features that cut down on the use of electricity and gas, keeping it heated and powered for a fraction of the average bills generated by most other houses.

Roaf, who is helping to develop designs for an eco-house that is suitable for the Scottish climate, is now planning to build a new home near Edinburgh to put her ideas into practice and create Scotland's first eco-community.

She wants to provide an example of how new homes could be built both to cut down on the carbon emissions produced by power generation and save owners hundreds of pounds a year in fuel costs.

### [Rise of the great green wash](#)

Virgin is not the only company to jump on the green marketing bandwagon. The use of words and terms such as "natural", "carbon-neutral" and "environmentally friendly" in ads is rising, anecdotal evidence put forward by marketing experts shows. Phone companies, manufacturers and supermarkets are using the colour green as a visual shorthand to communicate their green credentials. Even the Minister for the Environment, Malcolm Turnbull, is using a green backdrop in newspaper ads running in his Wentworth seat.

And if the marketing experts and overseas trends are anything to go by the current flow of green ads - much of it green wash - will soon become a torrent as more smaller businesses tap into a rich emotional vein.

The British advertising watchdog reports that in September it received 93 complaints about green claims in 40 ads, compared with 10 complaints about eight ads in September last year. Respected companies such as Volkswagen, Lexus, the supermarket chain Tesco and the budget airline Ryanair have all been caught making empty claims about their green credentials by the Advertising Standards Authority. In America, the situation has reached almost epidemic proportions. A recent study by the marketing consultants TerraChoice Environmental Marketing found that of 1018 consumer products bearing 1753 environmental claims, all but one made demonstrably false or potentially misleading claims.

### [Earth's Eighth Continent](#)

Located in the Pacific Ocean between California and Hawaii and measuring in at roughly twice the size of Texas, this elusive mass is home to hundreds of species of marine life and is constantly expanding. It has tripled in size since the middle of the 1990s and could grow tenfold in the next decade.

Although no official title has been given to the mass yet, a popular label thus far has been "The Great Pacific Garbage Patch."

As suggested by the name, the island is almost entirely comprised of human-made trash. It currently weighs approximately 3.5 million tons with a concentration of 3.34 million pieces of garbage per square kilometer, 80 per cent of which is plastic.

Due to the Patch's location in the North Pacific Gyre, its growth is guaranteed to continue as this Africa-sized section of ocean spins in a vortex that effectively traps flotsam.

### [Prion discovery surprises](#)

Judd Aiken was pretty sure he knew what happens when prions, the misshapen proteins that cause chronic wasting disease in deer, bind to soil.

The prions must become less infectious, he figured. But an experiment he conducted found the opposite -- big time: Soil-bound prions were 700 times more infectious than prions alone.

"We were about as wrong as we could be," said Aiken, a UW-Madison professor of animal health and biomedical sciences. "But that's what makes science fun."

It's also what makes prions, which also cause mad cow disease, scrapie in sheep and Creutzfeldt-Jakob disease in people, mysterious. "There's so much we don't know about these diseases," he said....

....Aiken has teamed up with Joel Pedersen, an associate professor of soil science at UW-Madison, to study the interaction between prions and soil.

Their study, published in July, found that prions tightly adhere to montmorillonite, a common soil mineral. In hamsters fed prions mixed with the mineral, the bond increased the prions' infectivity 700 fold.

Since deer consume dirt as they graze and forage, the finding supports the idea that soil is a reservoir for CWD infection, Aiken said.

### [The deer factor or Bambi vs. the collapse of civilization](#)

We on the top have been spared the most brutal and overt consequences of our actions for so long now that we have forgotten that there are any. We close our eyes and click our heels and zip up our No Fear hoodies and we're good to go, confident that all that wishin' and hopin' will work today just like it worked yesterday.

Which is, of course, why Peak Oil whacks us so devastatingly upside the head. Because when we begin to look closely at the situation, it becomes very clear, very quickly, that wishin' and hopin' are about to go the way of the Yangtze River Dolphin and the Miss Waldron's Red Colobus Monkey in terms of effective life strategies.

It burns, doesn't it? It galls and vexes and maddens. I mean, isn't this what we spent ten thousand years trying to control? Haven't we worked long hours for low pay killing off everything we could that might chase us or bite us or poison us or eat us or claw us or

irritate us or scare us or make us feel all creepy and oogy inside? Didn't we arrange things so that we could know where our next meal is coming from, and where our warm bed will be at the end of the day? Aren't we, by virtue of our millennia of effort, and by virtue of our exalted position at the very tip-top of the Great Chain of Being, actually and in no uncertain terms ENTITLED to not feel fear?



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