

The Round-Up: February 20th 2007

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Virtual Water, Real Profits

"A typical meat-eating, milk-guzzling Westerner consumes as much as a hundred times their own weight in water every day," says Fred Pearce, former New Scientist news editor and author of When The Rivers Run Dry.

That's because it takes between 2,000 and 5,000 litres of water to grow one kilogram of rice, 11,000 litres to grow the feed for enough cow for a quarter-pound hamburger, 50 cups of water for a teaspoon of sugar and 140 litres of water to produce just one cup of coffee. The world today grows twice as much food as it did in the 1960s, but uses three times as much water to grow it. Two-thirds of all the water taken from the environment goes to irrigate crops. "This is massively unsustainable, and has led many people to conclude that the apocalypse wasn't averted, only postponed," says Pearce.

And the over-use of water doesn't just apply to food production. Every T-shirt you wear will take 25 bathtubs of water to produce. Every small car uses 450,000 litres. If what you wear or drive is imported, you in the West are helping to empty rivers across the world. Water used for growing food and making products is called "virtual water". Every tonne of wheat arriving at a dockside carries with it, in virtual form, the 1,000 tonnes of water needed to grow it, explains Pearce.

The global virtual-water trade is estimated at around a thousand cubic kilometres a year, or 20 river Niles. Two-thirds is in crops, a quarter in meat and dairy products, and just a tenth in industrial products. The biggest net exporter of virtual water is the US, which exports in grain and beef around a third of all the water it takes from the environment; Canada, Australia, Argentina and Thailand are all net exporters too.

Study sees harmful hunt for extra oil

All the world's extra oil supply is likely to come from expensive and environmentally damaging unconventional sources within 15 years, according to a detailed study.

This will mean increasing reliance on hard-to-develop sources of energy such as the Canadian oil sands and Venezuela's Orinoco tar belt. A report from Wood Mackenzie, the Edinburgh-based consultancy, calculates that the world holds 3,600 billion barrels of unconventional oil and gas that need a lot of energy to extract. So far only 8% of that has begun to be developed, because the world has relied on easier sources of oil and gas.

Only 15% of the 3,600 billion is heavy and extra-heavy oil, with the rest being even more challenging. The study makes clear the shift could come sooner than many people in the industry had expected, even though some major conventional oil fields will still be increasing their production in 2020. Those increases will not be enough to offset the decline at other fields. "It becomes unclear beyond 2020 that conventional oil will be able to meet any of the demand growth," Wood Mackenzie said. The report added that natural gas products such as liquids and condensate would also become important sources of growth. The increasing reliance on unconventional oil will require a substantial reshaping of the energy industry.

Oil giants expand in unconventional oil sector

The sector, including heavy oil, tight gas, coal bed methane and shale oil, is currently dominated by independent companies, which have pioneered development of these fuels in North America.

But this is beginning to change, with big oil companies now expanding in this area as the rise in commodity prices makes it economic to exploit some of these resources.

"With conventional non-OPEC supply expected to peak within the next decade and the difficulties in discovering accessible gas reserves, international oil companies withafford growth ambition cannot affort to ignore these unconventional reserves," said Phaedra Powilanska-Burnell of Wood Mackenzie.

The consultancy believes unconventional oil and gas from sources that traditionally have been hard to exploit will supply more than 20% of global demand by 2025. It also estimated they will make up more than 40% of U.S. gas supply by 2010.

Oilsands Gasification Will Help Unleash Energy Riches

Ben Anthony is a connoisseur of Canadian coals, intimately familiar with their individual characteristics. "Every coal is unique. After a quarter century of research, I've become quite fond of them," the federal researcher acknowledges with a smile. He expresses less affection for coke and asphaltenes, the black gunk left over after bitumen is upgraded, but the stuff is abundant and cheaper than dirt. According to the British-educated chemist, Canada is on the brink of transforming its lower-grade hydrocarbons into useful energy on a very large scale thanks to projects now under way in Alberta's oilsands.

As a senior scientist at the CANMET Energy Technology Centre in Ottawa, Anthony specializes in gasification. This industrial process uses heat and pressure to draw synthetic gas - including hydrogen, the cleanest of all fuels - from low-value coal and upgrading residues. Compared to just burning the stuff directly, gasification can be energy efficient, and it's also relatively easy to capture waste byproducts like carbon dioxide and ash.

CANMET estimates that in excess of \$4 billion dollars worth of gasification equipment will be installed in Alberta over the next five years. "We're entering a period of extraordinary development," Anthony comments. "Gasification of petroleum coke and asphaltenes is a highly significant energy development in itself. In addition, the

operation of large gasifiers for the oilsands will probably enable us to develop economic technologies for coal gasification in the near future."

Northern exposure

With the world again warming -- this time almost certainly because of human activity -the Arctic's subtropical past may soon play a role in shaping its climatic future: All of those animals and plants and microbes dying in swampy soil, sinking beneath layers and layers of mud and eventually being cooked by the heat and pressure deep beneath the surface, millions of years later became fossil fuels.

The presence of abundant stores of oil and gas near the North Pole is hardly a secret. The United States Geological Survey estimates that a quarter of the world's remaining oil and gas reserves are in the Arctic. The problem has always been getting to them, and getting their contents out of the ground. Drilling operations in the far north have to deal with subzero temperatures, marauding ice floes, violent seas, and the logistical difficulties that come with transporting oil and gas from remote, often offshore locations. The \$10 billion cost overrun at the mammoth oil and gas project being built along the coast of Sakhalin, an island off Siberia, give some taste of what working in the Arctic entails.

But the Arctic is changing, and faster than many climatologists expected. Indeed, parts of the Arctic and Antarctic are warming faster than anyplace else on Earth. Whole swaths of the Arctic Ocean that used to be solid ice year-round are now open water in the summer, freeing up formerly inaccessible potential drilling sites and new routes for tankers. A report published in 2004 by the Arctic Council, an intergovernmental body made up of the United States, Canada, Russia, and the Scandinavian nations, predicted that reduced sea ice in the Arctic is "likely to make trans-Arctic shipping during summer feasible within several decades" and "likely to allow increased offshore extraction of oil and gas, although increasing ice movement could hinder some operations."

Inuit climate change activist committed to cause

Sheila Watt-Cloutier, the former chair of the Inuit Circumpolar Conference, appeared on CTV's Question Period on Sunday.

She said she has been working on her objective for more than a decade, acting as an advocate for 155,000 polar Inuit people spread across Alaska, Greenland, Russia and Canada.

"I have been out doing this environmental work for the past 11 years in every forum possible, the United Nations forums, the Arctic council forums and working with the global community to try to get it to understand not only who we are but the negative impacts that globalization is having on our way of life in the Arctic as a hunting culture," she said.

As someone who grew up on the land, Watt-Cloutier said she has witnessed first-hand how climate change is affecting her people's traditional way of life.

A critical meltdown of ice sheets and severe sea level rise could be inevitable because of global warming, the world's scientists are preparing to warn their governments. New studies of Greenland and Antarctica have forced a UN expert panel to conclude there is a 50% chance that widespread ice sheet loss "may no longer be avoided" because of greenhouse gases in the atmosphere.

Such melting would raise sea levels by four to six metres, the scientists say. It would cause "major changes in coastline and inundation of low-lying areas" and require "costly and challenging" efforts to move millions of people and infrastructure from vulnerable areas. The previous official line, issued in 2001, was that the chance of such an event was "not well known, but probably very low".

Provinces say they're in the dark about Harper's climate change fund

Provinces and territories say they are being kept in the dark about a \$1.5 billion eco-Trust and Clean Air Fund announced by Prime Minister Stephen Harper last week that's supposed to be destined for their coffers.

Anne O'Hagan, a spokeswoman for Ontario Environment Minister Laurel Broten, said the province had not been consulted about the new climate and clean air fund, and has no idea how it will work.

Canadian firms are joining the carbon trading system

There's something counterintuitive about creating what amounts to a stock market for the thing we all exhale when we breathe, the thing that comes out of our car's tail pipe.

But that's what carbon trading is, putting a value on the emission of greenhouse gases -mainly carbon dioxide -- that scientists finger as the driving force behind man-made climate change.

Carbon trading is likely to figure in the B.C. government's ambitious, but still fuzzy plan to reduce the province's current greenhouse gas emissions by a third by 2020.

The Conservative government in Ottawa balks at meeting Canada's commitment under the 1997 Kyoto Protocol but its proposed Clean Air Act leaves room for carbon trading, a practice spawned by Kyoto.

Detractors dismiss carbon trading as nothing but a shell game that allows industries and even countries to avoid making real reductions in their own carbon emissions by buying someone else's.

Bangladesh: At the mercy of climate change

The Sundarbans nature reserve in Bangladesh's south-west is one of the last untouched places on Earth - and home to the largest population of tigers left in the wild. But the trees in the Sundarbans have suddenly started dying. And not just that: they have

started dying in a way nobody has seen before, from the top down.

Nobody is sure what the cause is, but the country's leading scientists think the trees are dying because, in recent years, the water has turned from fresh to salty. The Sundarbans is a massive mangrove swamp, and the sea has begun encroaching. What we are seeing may be one of the first casualties of rising sea levels caused by global warming. "Nobody can say for sure whether it is climate change because there haven't been proper in-depth studies," says Professor Ainun Nishat, one of the country's leading environmentalists, and one of those involved in the UN's recent climate change report. "But this is the sort of effect rising sea levels will have on Bangladesh. We are fighting climate change on the front line. But the battle has to be integrated across all countries."

Then there were the deaths of thousands of fishermen off Bangladesh last summer. The Bay of Bengal was unusually rough. Usually, the authorities only issue a storm warning to fishermen to stay at home once or twice a year. Last year, four warnings were issued in the space of two months. Every warning meant the fishermen lost valuable days at sea. When the last warning came, they could not afford to stay ashore and went to sea anyway. Officially 1,700 drowned, but many Bangladeshis believe the real number may be closer to 10,000.

Green conversion hard to swallow

Watching the Tories scramble to catch up with public opinion on global warming has been one of the most entertaining spectacles of the past few months.

It's like watching a gang of skinny-dippers scrambling for cover when someone flicks on the lights at the beach cabana. And then every now and again someone like Baird slips, and forgets to be green.

John, my lad, it's no longer optional. The Intergovernmental Panel on Climate Change revealed an overwhelming scientific consensus that the global climate really is warming, and that human activities are largely responsible.

Sir Nicholas Stern declared that the true recipe for economic disaster is to do nothing. Nobody believes that Kyoto would cause economic collapse — and everybody (except, perhaps, John Baird) knows that the power to breathe trumps the power to buy and sell.

People won't part with money to stop climate change: poll

British Columbians have bought into the reality of climate change like never before, but most wouldn't spend even \$100 a year extra in taxes to help save the world, results of a poll conducted by Ipsos Reid show.

Conducted Feb. 7-13 for the Vancouver Sun, the wide-ranging poll also tests British Columbians' commitment to changing their polluting ways in favour of a greener, more sustainable future, and their faith in government to help bring about that change.

According to the poll, the vast majority of residents (84 per cent) are convinced global warming is happening and have personally seen evidence of changes taking place in the environment.

And 77 per cent of respondents said they are willing to make significant changes to their lifestyle in order to stop climate change.

However, 53 per cent of those polled say they aren't willing to pay more in taxes - even as little as \$100 extra a year - in order to achieve greener results.

'Clean' energy dams may be dirty after all

Last month, Gov. Arnold Schwarzenegger announced a plan to borrow \$4.5 billion to build two massive new reservoirs. He pitched them as a vital response to climate change.

"With the impact that global warming will cause to our snowpacks," he said, "we need more infrastructure ... so the next generation of Californians is not faced with a shortage of this precious resource."

But new research suggests the governor's water plan may instead aggravate climate change. In recent years, scientists have documented that dams and hydropower -- long considered a "clean" energy source -- may actually pump greenhouse gases into the atmosphere in surprising ways.

The Battle of the Bubbles

The Battle of the Bubbles continued last week...with the housing bubble firing the loudest shot on Friday.

As you recall, dear reader, we're watching a gigantic struggle between two bubbles - one in residential real estate in the United States...the other in worldwide liquidity. One is losing air; the other is gaining it.

The big question is: Which bubble will win? The one that is deflating, or the one that is still inflating?

So far, since 2002, the inflating bubble has dominated world financial markets. More and more liquidity - money and credit in a variety of forms - has boosted prices all over the planet, not the least in U.S. housing. But now, the housing industry zeppelin is losing gas, and may be losing altitude.

Investors in mortgage-backed securities fail to react to market plunge

It's amazing how long it can take investors to see that the wheels are coming off a prized investment vehicle. Denial, after all, is a powerful thing.

But when an imperiled favorite happens to be a pool of asset-backed securities especially those involving home mortgages denial can be compounded by outright blindness to the real risks of that investment.

That may explain why, even as everyone concedes that the subprime or low-grade mortgage market has fallen into the sea, the vast pools of mortgage-backed securities

built in part on those risky mortgage loans still appear to be on solid ground. Investors, chasing the buzz of ever higher yields, have flocked into the mortgage-backed market in recent years. Nobody wants to think that the possibility of a wide-ranging subprime debacle is also a harbinger of looming problems for investments tied to those loans. But the reality is that these vehicles and the collateralized debt obligations that hold them are not as secure as many believe. And that has broad implications for the capital markets.

Robert Kiyosaki: Throwing Good Money After Bad

In a deflationary market, the value of your home can drop. If the value drops, the bank may call in your loan. Even if you've never missed a payment, and even if you're ahead on the payment schedule, the bank can call in your loan if they feel the value of the property is lower than the loan amount.

For example, say you buy a house for \$100,000 and put 20 percent down and borrow \$80,000. If the market deflates and the value of your home drops to \$70,000 (because everyone else is selling their homes to get out of debt), the lender may ask you to pay the \$80,000 you owe immediately.

If such deflation happens, cash will become king. There will be half-price sales on BMWs, expensive restaurants will close, and people will be out of work. And anybody who caters to people with dumb money will be in trouble. As I said before, deflation is much worse than inflation.

How Expansions Die -Credit cracks in the economic foundation

The delinquency rate on sub-prime mortgages, now above 10%, is near record levels. Banks that bought up those loans for securitization are now demanding to be repaid, meaning that smaller institutions who thought they'd sold off their exposure are finding themselves on the hook, in some cases forcing them into bankruptcy.

This accumulation of bad loans represents a crack in the foundations of the recovery. Typically, a housing downturn and the credit problems that accompany it are a result of underlying economic weakness, rather than their cause. The economy slows, people lose their jobs and are forced to sell under duress lest they default. The distressed selling drives prices down. But in this case, it may work the other way around.

The Fed's remarkably easy monetary policy helped goose house prices over several years. In turn, a large number of first-time buyers took advantage of low mortgage rates, especially on adjustable-rate loans, to stretch their buying power in the hopes of leveraging their way up the home-buying ladder. But someone finally blew the dog whistle in late 2005, and the buying dried up.

Now the housing market is flat to down across most of the country and loans with adjustable rates are adjusting upward. So even with unemployment low and the economy still humming, marginal buyers can suddenly find themselves forced to sell. And if they had little equity to begin with, they may not have much money left after they sell--if they can sell at all. If they can't, they fall behind on their payments and the

Subprime: The impact on Existing Home Sales in 2007

Nonprime originations were 33% of market in 2005, up from 11% in 2003.

Merrill researcher Kamal Abdullah raised the specter of a subprime "contagion" that could lead to the inability of the "bottom" 25% of all subprime borrowers to get loans. So if one fourth of potential subprime borrowers are unable to purchase homes in 2007, as compared to 2005 and 2006, then 25% of 20%, equals 5% of the total market. In 2006, there were 6.48 million existing homes sold, so 5% would be just over 300K homes.

But it's worse: The housing market is a sequence of chained reactions (just ask any agent or broker). If 300K buyers are excluded, the number of fewer houses sold in 2007, compared to 2006, is some multiple of that number. So this will probably have a significant impact on sales in 2007.

Home Prices Fall in More Than Half of Nations Biggest Markets

The figures from the National Association of Realtors show that the housing market weakened noticeably in many parts of the country at the end of last year and indicate that suggestions by some industry officials that the market has hit bottom could be premature. In the previous quarter, prices fell in one-third of all metropolitan areas.

The biggest price declines were concentrated primarily in two kinds of cities: the formerly booming markets along the coasts and in the Southwest, and in Midwest and Northeast cities hurting from the loss of manufacturing jobs. The biggest declines, for instance, were in Florida Sarasota-Bradenton (down 18 percent), Palm Bay-Melbourne (17 percent) and Cape Coral-Fort Myers (11.7 percent). The declines in prices were especially steep for condominiums.

TIC Tock

The US Treasury's latest report on international capital flows came as a shocker. Net foreign inflows into longer-term US securities fell to just \$15.6 billion in December 2006 -- the weakest monthly reading in nearly five years. This stands in sharp contrast to America's enormous external financing needs -- about \$3.5 billion of foreign capital inflows each business day required to fund a current account deficit that was running at close to an \$875 billion annual rate in the first three quarters of 2006. Does an external financing shortfall of this magnitude finally spell trouble for the seemingly Teflon-like US dollar?

Stop suspicious trades, investors urge

the announcement of many takeover deals, some of Canada's most powerful investors say.

Shares of Algoma Steel Inc. soared 21.6 per cent for three days last week before the company revealed late Wednesday that it was in talks with a potential buyer, later confirmed to be German steel maker Salzgitter AG.

Stephen Jarislowsky, chairman of Jarislowsky Fraser Ltd. in Montreal, doesn't own any Algoma shares but said the trading looked suspicious, noting abnormal moves before deals are announced "has been an ongoing issue for years" in Canada.

High-seas fishing a voyage to doom

Is it hard to fathom an environmental issue more dire than the predicted effects of global warming?

Well, marine biologists say the devastation to marine life caused by overfishing by factory trawlers will likely have a more profound and sudden effect on the world's ability to feed itself than the slow, planet-changing effects of greenhouse gases.

"(Within) a single human lifetime, we have inflicted a crisis on the oceans greater than any yet caused by pollution," says Charles Clover, the environmental editor of London's Daily Telegraph and the author of The End of the Line: How Overfishing Is Changing the World and What We Eat.

"As a method of mass destruction, fishing with modern technology is the most destructive activity on Earth."

Clover does not belittle the need to focus on the dangers of greenhouse-gas emissions. Instead, his argument and that of many biologists is that humans, especially those in wealthy countries, need to weave into our way of thinking an environmental calculation of the costs of everything we do.

Call to halt deep sea 'plunder'

Fuel subsidies that allow fishing fleets to "plunder" the deep seas should be scrapped, claim a group of leading international scientists.

They said more than \$150m (80m) was paid to trawler fleets, promoting overfishing of unviable resources.

In particular danger were slow-growing deep-sea fish and coral species caught by bottom trawling, they argued.

2006 UN talks failed to implement a ban on the method, which uses heavy nets and crushing rollers on the sea floor.

"Eliminating global subsidies would render these fleets economically unviable and would relieve tremendous pressure on overfishing and vulnerable deep-sea ecosystems," said Dr Rashid Sumaila, of the University of British Columbia.

Light Bulbs Are History Downunder

The Australian Federal Government is set to turn the lights out on Australians in an effort to introduce energy efficent technology. The power hungary standard incandescent light bulb – a metal filament which glows white-hot in a vacuum and wastes up to 95 per cent of the energy it uses – will be phased out within three years.

The end result according to Federal Environment Minister Malcolm Turnbull is big savings for both Australia and all Australians

"We are introducing new energy efficiency standards and these old lights simply won't comply, they will be phased out and basically over a period of time they will no longer be for sale," Federal Environment Minister Malcolm Turnbull said today.

Biggest carbon-burial test will hunt for leaks

The largest carbon burial experiment in the world began in earnest on Thursday when the drilling of a 2100-metre well began in the Otway Basin, on the coast of southern Australia. The project promised the most comprehensive monitoring for leaks to date.

If all goes well, researchers from the Canberra-based Cooperative Research Centre for Greenhouse Gas Technologies (CO₂CRC) will start injecting carbon dioxide into the new well in July. They will start by extracting CO₂ from a nearby natural geological reservoir and compressing it into a "supercritical fluid" a gas-liquid hybrid. This will be injected via the new well into a sandstone reservoir.

The reservoir is shaped liked an upside-down saucer that is partially-filled with methane gas, and covered by a series of impermeable rock layers. Over the following six to nine months, 100,000 tonnes of supercritical CO₂ will be injected.

Environment groups say Great Lakes legislation favours developers over public

Legislation to protect Great Lakes water from being siphoned to jurisdictions not immediately surrounding the lakes is being finalized by Ontario, Quebec and eight U.S. states.

Still, environmental advocates warn that the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement benefits developers rather than the public and isn't tough enough in key areas.

Intra-basin diversions, the legal transfer of Great Lakes water as long as it stays within the Great Lakes Basin, are not adequately addressed in the agreement, said Robert Wright, a lawyer with the Sierra Legal Defence Fund.

Ahmadinejad says Iran ready to halt enrichment program provided the West does the same

Iranian President Mahmoud Ahmadinejad on Tuesday said his country was ready to

stop its enrichment program and return to talks provided Western nations also stopped their own.

Ahmadinejad told a crowd of thousands in northern Iran one day ahead of a U.N. Security Council deadline that it was no problem for his country to stop, but that "fair talks" demanded a similar gesture from the West.

From the Wonderful Folks Who Brought You Iraq

In a clear reference to the Islamic Republic and its sometime ally Syria, Bush vowed to "seek out and destroy the networks providing advanced weaponry and training to our enemies." At about the same time his speech was taking place, U.S. troops stormed an Iranian liaison office in Erbil, a Kurdish-controlled city in northern Iraq, and arrested and detained five Iranians working there.

Already, hundreds of billions of dollars have been spent on the war in Iraq. Tens, perhaps hundreds, of thousands of people have been killed. Countless more are wounded or living as refugees. Launched with the intention of shoring up Israeli security and replacing rogue regimes in the Middle East with friendly, pro-Western allies, the war in Iraq has instead turned that country into a terrorist training ground. By eliminating Saddam Hussein, the U.S.-led coalition has sparked a Sunni-Shiite civil war, which threatens to spread throughout the entire Middle East. And, far from creating a secular democracy, the war has empowered Shiite fundamentalists aligned with Iran. The most powerful of these, Muqtada al-Sadr, commands both an anti-American sectarian militia and the largest voting bloc in the Iraqi parliament.

"Everything the advocates of war said would happen hasn't happened," says the president of Americans for Tax Reform, Grover Norquist, an influential conservative who backed the Iraq invasion. "And all the things the critics said would happen have happened. [The president's neoconservative advisers] are effectively saying, 'Invade Iran. Then everyone will see how smart we are.' But after you've lost x number of times at the roulette wheel, do you double-down?"

USS Stennis Carrier Group Deploys Into Gulf Region

The deployment of additional naval forces ``is here to help foster stability and security in the region," Rear Admiral Kevin Quinn, commander of the naval force, said in the statement.

Bush said on Feb. 14 that he's convinced the Qods Force of Iran's Revolutionary Guard Corps is supplying explosives to militants in neighboring Iraq who are attacking U.S. forces. The U.S. administration also accuses Iran of using its nuclear power plans to disguise a weapons program, an allegation Iran denies.

The U.S. has contingency plans to attack Iranian nuclear sites and military infrastructure if the Islamic Republic is confirmed to be developing a nuclear weapon or is linked to a major attack on U.S. forces in Iraq, the British Broadcasting Corp. said today, citing unidentified diplomatic officials.

"Certainly another carrier gives the U.S. the ability to act if they are provoked by Iran," Mustafa Alani, director of national security at the Dubai, United Arab Emirates-based

V. Putin & the Geopolitics of the New Cold War

This time round we are already deep in a New Cold War whose stakes are literally the future of life on this planet. The debacle in Iraq, or the prospect of a US tactical nuclear pre-emptive strike against Iran are ghastly enough. In comparison to what is at play in the US global military buildup against its most formidable remaining global rival, Russia, they loom relatively small. The US military policies since the end of the Soviet Union and emergence of the Republic of Russia in 1991 are in need of close examination in this context. Only then do Putin's frank remarks on February 10 at the Munich Conference on Security make sense.

Fears grow that gulls will spread flu far and wide

Experts fear that meat and packaging contaminated with the deadly H5N1 bird flu virus from the Bernard Matthews processing plant at Holton, Suffolk, may have found its way on to landfill sites, where wild birds might become infected. Meat carrying the virus could also have been used to make pet food, increasing the risk of the disease's spread.

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