The Oil Drum: Canada
DISCUSSIONS ABOUT ENERGY AND OUR FUTURE

The Round-Up: July 6th 2007

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Today's headlines lead with coverage of the on-going crisis in the debt markets, and an explanation of the financial engineering underlying much of the global liquidity bubble. Debt ratings have not been adjusted to reflect current market conditions, meaning that 'asset' valuations are over-stated. No institution wants to force asset sales for fear of revealing just how much real valuations differ from nominal ones, but eventually such a sale will occur - with the potential to cause an abrupt repricing of a wide range of 'assets' (many of which will actualy be revealed to be essentially worthless). Leverage will magnify the losses, leading to a very serious financial crisis. One estimate (below) puts the potential losses, once assets are eventually marked to market, at 20 times the sum involved in the LTCM crisis in 1998 - so far, and getting worse by the day.

The Round-Up is also convering the Canadian energy scene, as well as environmental and international news, in that order. Oil companies leaving Venezuela and aiming for the oil sands are finding that all is not clear sailing, while China is entering the oil sands for the first time. Nunavut seeks control over future oil and gas revenues, Newfoundland and Labrador wants to bypass Quebec in selling electricity to the US, and the slow down in natural gas drilling is hurting frontier communities in Alberta and BC.

Credit crunch will 'shred investment portfolios to ribbons'

> The near collapse of two Bear Stearns hedge funds has lifted the rock on our 21st century mutant capitalism, exposing the bugs beneath to a rare shock of naked light.
>
> When creditors led by Merrill Lynch forced a fire-sale of assets, they inadvertently revealed that up to $2 trillion of debt linked to the crumbling US sub-prime and "Alt A" property market was falsely priced on books.
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> Even A-rated securities fetched just 85pc of face value. B-grades fell off a cliff. The banks halted the sale before "price discovery" set off a wider chain-reaction.
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> "It was a cover-up," says Charles Dumas, global strategist at Lombard Street Research. He believes the banks alone have $750bn in exposure. They may have to call in loans....
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> ....Wobbles are turning to fear. Just $3bn of the $20bn junk bonds planned for issue last week were actually sold. Lenders are refusing "covenant-lite" deals for leveraged buy-outs, especially those with "toggles" that allow debtors to pay bills with fresh bonds. Carlyle, Arcelor, MISC, and US Food Services are all shelving plans to raise money. This is how a credit crunch starts.
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> "This is the big one: all investment portfolios will be shredded to ribbons," said Albert

> Edwards, from Dresdner Kleinwort.

Economics and Finance:

New Pension Crisis Seen In Credit Markets Crash

> Credit conditions are now rapidly changing for the worse, and pension fundswith between 3% and 5% of their investments in hedge funds (including hedge "funds of funds") alone, depending on the reportare directly in the path of disaster. In the past two years, many public pension funds in the United States have added to their hedge-fund investments, their own direct purchase of the super-risky mortgage-backed securities (MBS) and their derivative collateralized debt obligations (CDOs) with which hedge funds and investment banks play. Analysts at real estate investment trusts and banks, warn EIR that the huge losses seen coming in these housing-bubble securities (losses in the hundreds of billions of dollars) are going to create a second-wave pension crisis in the United States.
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> The first wave was low returns and corporate cutbacks of pension contributions from the 1997-98 financial crises through 2005, worsened by Fed chairman Alan Greenspan's drastic lowering of interest rates. The second wave will be outright losses, stemming from pension funds' efforts to "make up" for the earlier crisis by plunging into hedge funds and private equity funds, looking for high-return "junk" to invest in. From junk, they have progressed to "toxic waste."....
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> ....Some 40% of the new flow of assets into the hedge funds is currently coming from pensions. And in fact, the overall flow of capital into hedge funds has dropped dramatically at the same timefrom $40 billion each quarter over January-September 2006, to just $12 billion in fourth quarter 2006, and $20.7 billion in first quarter 2007. **In other words, pension fund money coming in, is allowing "smart" money to get out of the hedge funds. Numerous reports, including a new one from Chicago-based Hedge Fund Research, Inc., have shown "high net-worth individuals" reducing their net hedge fund investments by half, between 2006 and 2007 investing instead into real property and stocks.** They now account for only about 20% of the assets of hedge funds, which were supposedly made for them.

(emphasis added)

CDO Hedge Funds = Enron?

> Wednesday night's discussion of the Bear Stearn's (BSC) Hedge Fund melt down was remarkably sanguine; I guess to those who look at the blow up of a small hedge fund -- it was only $684 million in equity, albeit leveraged up 10-to-1 to $6.8 billion. Hey, sometimes, losses happen.
>
> And Wall Street has been terrific about managing risk, haven't they? I mean, they did a great job with the dot coms, and they are doing a terrific job with housing, right? There may be 49 Trillion dollars worth of derivatives -- that's trillion with a "T" -- so what if 1 or 2% goes belly up? It's well contained.

> Um, not exactly.

[Buyers avoid Bear Stearns' cut-priced sale]

> Investors in the worse-hit of two stricken Bear Stearns hedge funds are offering to sell their holdings for as little as 11 cents on the dollar but still finding no buyers, according to unfilled trades on Hedgebay, a secondary market for funds.
>
> Vulture funds and others have been quick to bid for holdings in the two funds, but the best bid for Bear Stearns High-Grade Structured Credit Strategies Enhanced Leveraged Fund, the more geared of the two, is just 5 cents on the dollar.
>
> Private sales of stakes are the only way investors can exit the two Bear funds, after the bank suspended redemptions in May amid a wave of withdrawals.

[The Redemption Trap & Merrill Lynch Cover-Up]

> No takers at 11 cents on the dollar should put a new perspective on the meaning of marked to market. The best bid was 30 cents on the dollar for assets held by the High-Grade Structured Credit Strategies Fund and a mere 5 cents on the dollar for the High-Grade Structured Credit Strategies Enhanced Leveraged Fund.
>
> Wow. 5 cents on the dollar. That's quite an enhancement for something supposed to be High-Grade. Given that redemptions are suspended there is no escape for many investors caught in the jaws of this Bear Stearns Trap.

[Who's Holding The Bag?]

> In short, bagholders are everywhere you look. The big winners (in short supply) are those banking the fees , commissions, and profits rolling the dice with OPM (other people's money). Smaller winners will include anyone smart enough (or lucky enough) playing the greater fool's game to perfection then cashing out before the "time bomb" that Buffett described goes off. Everyone else is (or will be) left holding the bag.

[Investment Landfill: How Professionals Dump Their Toxic Waste on You]

> Long Term Capital Management failed in 1998. It was the last truly serious financial collapse which threatened the financial system. When LTCM went under, the bail-out fund required was $3.65 billion. The fund itself was leveraged to about $125 billion of assets using a similar style of wheel financing to the one described above for Bear Stearns' hedge funds.
>
> There was also the presence of off-balance sheet devices called interest rate swaps - not so different in principle from the CDS described above.
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> Last week's rescue package announced for Bear Stearns smaller fund has been

announced at $3.2 billion. We are awaiting the figures for the larger and more serious case. We believe the overall liabilities of both funds are in the $20-$25 billion range.

Back in 1998 LTCM was ploughing a lonely furrow. Its investment view was something to do with Russian bonds and the Japanese Yen. It was off the main investment spectrum, and there were few copy-cats putting the same market view into action in the same way.

That is where things are very different this time. The data produced by Standard and Poors above show just how conventional a strategy Bear Stearns has been following - all of it trailing the worldwide boom in housing markets. Many banks and funds are involved. Perhaps they are not quite so exposed as Bear Stearns, but it is only a matter of degree. This makes the size of the problem potentially much larger, and of much greater risk to the whole financial system.

How large? Well, the equity lost can be very roughly estimated from first principles. There are about 6,000,000 subprime mortgages in the USA. They typically result from re-financing deals - topping up to utilise whatever equity has accumulated in a house usually to pay off credit card debt; so they stay near 100% outstanding. The average house price in the USA is about $190,000, but we can reduce that to $150,000 on the assumption that we're at the lower end of the market. That gives us a principal sum of $900,000,000,000, which is 7 times the size of the LTCM exposure.

But the more serious figure - the housing equity lost to falling prices - is currently estimated at approaching 8% which is $72 billion. That doesn't include an adjustment for synthetic CDOs created by investment bankers to short the weakest MBSs, which is what they did with Delphi Corp.

Now you can see the difference in scale between LTCM and the subprime bust. This may be 20 times worse than LTCM. And it's getting worse - daily.

[What's Behind the Coming Market Crash?]()

Only a few weeks ago, markets around the world were hitting record highs, day after day. After two queasy weeks in the markets, the mood has quickly turned somber. Scan the strategy pieces of investment banks, and a coming market crash has become conventional wisdom virtually overnight. Morgan Stanley has predicted a "14% correction over the next six months." Rival banks place the odds of a market crash before the end of the year at one in four. Union Bancaire Prive, Switzerland's private banking giant, called all financial assets simply "jaded" -- recommending cash and commodities. Only Ravi Bahta -- (in)famous author of the "The Great Depression of 1990" -- appears unnervingly optimistic. He recently published a new book entitled: "The New Golden Age."

[Bear Stearns Left With Subprime Property as US Home Values Tumble]()

What’s Bear Stearns going to do with the places? It can let Mr Market do his work - putting the houses on the market and accepting whatever price he gives. But if it sells, it risks depressing prices of other homes in the area - many of which it owns! What’s worse, “it will have a decimating effect on the mortgage-backed securities market when

> lenders start facing the music and letting property go at whatever price people will pay," says a local lender. But what did Bear Stearns expect? When its collateral goes down in price, so do the financial abstractions that rested upon them.

[Finally, a voice of economic reason]

> For several months now, many folks have claimed that mortgage problems were "only" subprime -- and/or contained.
>
> Now, as the credit noose tightens at every level and facet of the mortgage business, it's pretty clear that anyone who made those claims had no understanding of what's gone on for the past several years or was not telling the truth.

[More Americans fall behind on debts]

> Slow job growth and declining home prices are causing financial problems for more Americans, who are falling behind on consumer debt, including home equity loans, at the highest rate since 2001, the American Bankers Assn. said Tuesday.
>
> Credit counselors said consumers were paying the price for reckless attitudes about debt fostered by years of easy credit, particularly in the mortgage market.
>
> "It's a monster we all created," said Todd Emerson, president of Springboard, a nonprofit consumer credit management organization in Riverside.

[How indebted Americans are giving up their independence]

> America may be referred to as the "Home of the Brave" because when the bills arrive it takes a lot of courage to open them up, especially when you must turn around and face your wife and kids with a straight face. When it comes to paying bills these days, America just doesn't feel like the land of the free any longer. To be truly free you must be debt-free; if you're not, your creditors own you.
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> Americans now owe a staggering $16 trillion dollars ($2.4 Trillion in personal loans, and $13.6 trillion borrowed from their house). Yet, as a society, we just can't seem to get away from accumulating debt, and have become nothing short of debt slaves. The American consumer continues to abuse credit that has been offered to them, and pay incredibly high interest charges every month, without blinking an eye. To maintain a certain lifestyle that would ordinarily be unattainable with their current income levels, our nation of consumers is slowly but surely being eaten alive by our own conspicuous consumption.

[Consumers are struggling]

> The signs of stress are all around.

> Prices are rising, but incomes and wealth aren't. With most households already overburdened with debt, consumers are being squeezed. There's only one thing to do, even though it goes against every fiber of their being: Cut back on expenses.
> Realtors are feeling it, retailers are feeling it, and so are automakers and bankers.

[New Scheme Preys on Desperate Homeowners]

> With the housing market in decline, financial predators are finding yet another way to take advantage of people who fall behind on their payments.
>
> The schemes take various forms and often involve promises to distressed homeowners of cash upfront, free monthly rent and a chance to retain their houses in the long run. But in the process, someone else takes over the deed, borrows as much as possible against the value of the house and pockets the cash. And, almost always, the homeowners still end up losing their homes.
>
> There are no nationwide numbers on this common fraud, known as equity stripping, but it has turned up in almost every state. Seven states have passed laws to try to stop it. Still, with foreclosure rates rising rapidly, it will be a growing problem, consumer advocates say.
>
> “Conditions now are perfect for these scams,” said Lauren K. Saunders, managing attorney at the National Consumer Law Center in Washington. “We are at the end of a period of rising real estate prices, so a lot of people have equity in their homes. But we also have a foreclosure crisis.”

[Mutually Assured Mayhem]

> It's white-knuckle time on Wall Street as firms try to prevent the subprime mess from spreading. The hedge fund blowup has suddenly thrown the world's biggest financial institutions into a game of brinkmanship that will end in one of three ways: a quick, brutal crash of the subprime mortgage market and possibly the broader corporate bond market; a slow, painful meltdown of one or both lasting many months; or a short-term blip that, over time, will be forgotten as conditions return to normal.
>
> Disaster has been averted so far. But pressure continues to come from all sides. The decisions made by Wall Street's bankers, hedge fund managers, and bond raters over the next several weeks will determine which way the game plays out. One twitchy move by any of them could lead to mutually assured destruction.

[Storm clouds rapidly form: Can subprime field troubles be contained?]

> So many worries, when just a few weeks ago it was all sunny skies amid galloping global growth.
>
> The warnings are now flowing thick and fast.
>
> Donald Coxe, global portfolio strategist for BMO Financial Group believes the market for

fiendishly clever debt instruments will implode like all previous financial fashions from Third World bank loans to derivatives dreamt up by Nobel laureates.

"In this decade it is collateralized debt products that seek to make risk disappear from cash markets into a tower inhabited by investment banks and hedge funds in which the shared language is algorithms," he wrote in his recent publication Basic Points. "Like all past Babels, this one will, at some point, self-destruct."

Collateralized debt obligations are securities backed by pools of bonds, loans or others assets. In this cycle of ultra-low interest rates the "other assets" have quite often been subprime loans which offer higher yields -- for higher risk.

Sales of CDOs soared to more than US$500-billion last year, compared with US$84-billion in 2002, according to data from Morgan Stanley.

Ontario Teachers' Group Buys BCE for C$34.2 Billion

Investors led by the Ontario Teachers' Pension Plan and Providence Equity Partners Inc. agreed to buy BCE Inc., Canada's biggest phone company, for C$34.2 billion ($32.1 billion) in the largest leveraged buyout....

....Including the assumption of C$16.9 billion in debt, preferred shares and minority interests, the deal is worth C$51.7 billion, topping February's $43.2 billion buyout offer for Texas power producer TXU Corp. by Kohlberg Kravis Roberts & Co. and TPG Inc., formerly Texas Pacific Group. Financing for the deal is "fully committed," the buyer group said. Excluding debt, the BCE sale is also bigger than the TXU deal....

...."This deal opens up the field in Canada for big takeovers coming from private equity," said Stephen Gauthier, a partner in Montreal-based investment firm Gauthier & Cie., which manages about $18 million, including BCE shares. "Five years ago I didn't think this could happen. Suddenly it's done. People think: Let's do another one."

Insiders will reap millions from sale (of BCE)

Bell Canada Inc. insiders stand to reap hundreds of millions of dollars in gains from their stock options and other long-term compensation in the proposed sale of the company to a group led by Ontario Teachers' Pension Plan for $42.75 per share.

Information in company filings shows that, as of March 31, an unspecified number of Bell employees had 23 million stock options outstanding, with an average strike price of $33, the price employees can pay to buy stock during the life of the options.

Since options are expected to automatically vest with the closing of the transaction, the gain will be an average of $9.75 per option, for a total of $224-million. That is a significant improvement over just four months ago, when the stock was trading for $30 and the majority of options held by employees were essentially worthless, after five years of flat performance by the stock.

IPO activity at standstill in first half 2007

> Fewer new stocks debuted on the Canadian equity markets in the first half of 2007 as companies reacted to the federal government's decision to tax income trusts, a new survey by PricewaterhouseCoopers (PwC) has shown. The value of new issues on Canada's equity markets fell by 78.6% from the same period last year to $855 million. More than half the $4-billion worth of new issues in the first half of 2006 was made up of income trusts, the survey said. The markets are still reeling from the October announcement of the income trust tax, with the number of new issues tumbling in the last quarter of 2006, offsetting robust activity earlier in the year. There were 116 new issues worth a total of $5.8 billion in all of 2006.

Canada discount in sights

> When Parliament resumes in the fall, Jim Flaherty, the Minister of Finance, says he will work to tear down internal trade barriers among the provinces -- such as the 13 separate securities regulators -- because they are depressing the value of Canadians' investment portfolios.

Energy:

Standing on the Summit of Hubbert's Peak (pdf warning, see page 23-24)

Oil sands no quick fix as Big Oil leaves Venezuela

> For Exxon Mobil Corp and ConocoPhillips it may appear simple: shift efforts, people and resources to Canada's oil sands now that the oil majors have retreated from Venezuela.
>
> In reality, it's no simple matter.
>
> The oil sands have their own set of risks: surging costs due to a squeezed labor force, technical complexity and a shrinking pool of attractive available properties.

China CNPC Wins First Rights to Explore Canada's Oil Sands

> China National Petroleum Corp. secured rights to explore oil sands in Canada's Alberta province, a breakthrough by the largest Chinese oil company in Canada, said a statement Friday on the Chinese Ministry of Commerce Web site.
>
> The company's access to the oil sands comes after more than two years of talks with the Canadian government and local energy companies.

First Phase of Fort Hills to Cost C$14.1B

> The massive Fort Hills integrated oil sands project will cost an estimated C$14.1 billion for the first phase, climbing to C$18.8 billion when including initial engineering and key infrastructure costs, the project partners said Thursday....

....The consortium plans to develop an oil sands mine and build a bitumen extraction plant north of Fort McMurray, Alberta. It also intends to build an upgrader to convert the bitumen into light synthetic crude oil in Sturgeon County--so-called Refinery Row due to the number of planned upgraders in the region--near Edmonton. Regulatory approval is expected in mid-2008.

First-phase synthetic crude output is seen at 140,000 barrels a day from the second quarter of 2012, following startup of bitumen production at the end of 2011.

Government powers up nuclear ad campaign

Ontario Power Generation spent nearly $1.2-million since 2004 on advertising the benefits of nuclear and other power sources - about eight times more than the government-owned utility spent extolling its conservation programs.

Residents urged to cut electricity use; Program will save money, help environment

Households in Brantford and Brant County are being invited to take part in a program to cut electricity use by 10 per cent during the high-demand summer months.

Brantford Power and Brant County Power, along with Ontario Power Authority, used the new transformer station on Powerline Road on Wednesday to launch the Summer Savings Program, designed to encourage customers to conserve electricity, save money and help the environment.

They also used the event as an opportunity for a local launch of another program, the Great Refrigerator Roundup, which involves the free pick up of old refrigerators that use more electricity than newer models.

It's all part of a provincial initiative designed to curb ever-escalating demands on Ontario's power grid.

Under the Summer Savings Program, eligible homeowners who reduce their energy use by 10 per cent during July and August compared to the same months last year, will receive a 10 per cent credit on a future electricity bill.

There is no paperwork involved in joining the program and all eligible residential customers have automatically been enrolled.

Power options

A deal between Newfoundland and Labrador and Rhode Island for the purchase of Lower Churchill power makes an undersea transmission route more viable, says Premier Danny Williams.

He says such a route — which would bypass Quebec — gives the province more options in the development of the Lower Churchill project.

Tories to unveil green fuel plan

> The Harper government is expected to unveil details today about the $1.5-billion in new spending for green fuels originally announced in the federal budget last March. Canadian producers of ethanol and other renewable fuels have said they expect a new federal strategy that would put them on a level playing field with foreign competitors who benefit from numerous incentives.

Unnatural gas costs

> They're keeping a brave face in frontier communities of northeastern British Columbia like Fort Nelson and Fort St. John that in the past few years saw their economies swell on a drawn-out natural gas drilling boom.
>
> Jim Eglinsky, for example, the retired police officer and mayor of Fort St. John, a city of 18,500 near the provincial boundary so steeped in oil and gas activity it has pondered joining Alberta, continues to take solace in the larger North American energy picture.
>
> Activity has hit the brakes in recent months, but Mr. Englinsky contends it's only a matter of time before demand for his region's gas comes roaring back.
>
> "Sure, costs in Northeastern B.C. are high, but North America needs our gas," he said. "Who is going to fire all those gas-fired electricity plants? No one seems to want nuclear, our province and a lot of the Western States say no to coal-fired power generation. So, where is it going to come from?"
>
> Yet the folks who make all the drilling decisions don't share Mr. Eglinsky's considerable optimism.

Anne Murray slams wind turbines

> Nova Scotia’s songbird wishes a proposed wind farm along the Gulf Shore would just fly away. Anne Murray, who has a summer home near the proposed wind farm, is joining other area residents in opposing a development by Atlantic Wind Power Corporation that, once completed in 2010, would see the construction of between 20 and 27 100-metre high wind turbines. “I just think it’s too close, it’s in all our backyards,” Murray said. “I think windpower is a good thing and I am all for them when they’re in the right place. I don’t believe these ones are in the right place.” The project is presently undergoing an environmental assessment. Depending on how that goes, construction could begin in 2009.
>
> Area residents have been fighting the project since it was first proposed and urged Cumberland County to set the distance between the turbines and their properties at a minimum of two kilometres. Instead, the municipality passed a bylaw setting the distance at the greater of three times the height of the turbine or 500 metres. Company president Charles Demond said a two-kilometre setback would kill the project.

Nunavut leader pushes for control over resources

> Canada's newest territory is using its first turn hosting the western premiers conference to push for a deal with the federal government for more control over its natural resources.
>
> Nunavut Premier Paul Okalik said he has strong support from his southern colleagues for a so-called devolution agreement, similar to the one the Yukon signed in 2003.
>
> "That is our hope — that we will run our own affairs and control our own resources," Okalik told reporters Thursday.
>
> Okalik compared his territory's situation to that of Alberta and Saskatchewan, which didn't get control of their own natural resources until 1930, 25 years after they became provinces. Alberta and Saskatchewan have parlayed that control into a massive revenue stream for provincial coffers.
>
> Okalik admitted Nunavut currently doesn't generate much resource revenue. It has only one diamond mine in operation and a handful of others in development.
>
> But high arctic oil and gas likely will be lucrative in the future and Okalik wants to see the money stay home rather than shipped to Ottawa.

Using photosynthesis to capture power-station exhaust gases

> For its supporters, the idea of growing single-celled algae on exhaust gas piped from power stations is the ultimate in recycling. For its detractors, it is a mere pipe dream. Whoever turns out to be right, though, it is an intriguing idea: instead of releasing the carbon dioxide produced by burning fossil fuels into the atmosphere, recapture it by photosynthesis. The result could then be turned into biodiesel (since many species of algae store their food reserves as oil), or even simply dried and fed back into the power station. Of course, if it were really that easy, someone would have done it already. But although no one has yet commercialised the technology, several groups are trying.

New battery packs powerful punch

> Batteries have long been vital to laptops and cellphones. They are increasingly supplying electricity to an unlikely recipient: the power grid itself.
> Until recently, large amounts of electricity could not be efficiently stored. Thus, when you turn on the living-room light, power is instantly drawn from a generator.
>
> A new type of a room-size battery, however, may be poised to store energy for the nation's vast electric grid almost as easily as a reservoir stockpiles water, transforming the way power is delivered to homes and businesses. Compared with other utility-scale batteries plagued by limited life spans or unwieldy bulk, the sodium-sulfur battery is compact, long-lasting and efficient.

Environment and Climate:

Around the Globe, Farmers Losing Ground

> The thin layer of topsoil that covers the planet's land surface is the foundation of civilisation. This soil, measured in inches over much of the earth, was formed over long stretches of geological time as new soil formation exceeded the natural rate of erosion. As soil accumulated over the eons, it provided a medium in which plants could grow. In turn, plants protect the soil from erosion. Human activity is disrupting this relationship.
>
> Sometime within the last century, soil erosion began to exceed new soil formation in large areas. Perhaps a third or more of all cropland is losing topsoil faster than new soil is forming, thereby reducing the land's inherent productivity. Today the foundation of civilisation is crumbling.

Humans use or abuse quarter of all energy from plants

> Nearly a quarter of the energy processed by land plants is either harvested by humans or lost due to our activities, according to a global analysis of agricultural production. In parts of the world where human activity is most intense, such as Europe and southern Asia, more than half the energy processed by plants is appropriated by people.
>
> The figures show the remarkable extent of humankind's stranglehold over nature, but the researchers say they also indicate how difficult it will be to increase agricultural production to feed an ever-growing global population or find sources of biofuel to replace oil and gas - seen by some as a way to reduce fossil fuel use and hence slow global warming.

UN official says biofuels raise food supply risk

> "What President Castro points to is something the U.N. Food and Agriculture Organization has also raised recently: That there is significant potential and risk for competition between food production and production for a global biofuels market," Steiner told Reuters during a environmental meeting in Havana.
>
> "We have to be aware that there are risks, and for some countries those risks may not be worth taking," he said.

Arctic spring advances

> As Arctic ice disappears at an alarming rate, spring in the far north is breezing in earlier and earlier every year. A new study published online June 18 in Current Biology (2007, 17, R449R451) shows that spring in Greenland is beginning 2 weeks earlier than it did 10 years ago and that organisms throughout the ecosystem are responding to this change....
>
> ....This clearly indicates that living things in this part of the world respond strongly and rapidly to climate changes, the authors write. And such changes are likely to disrupt interactions in the food chain, they add, thus affecting the reproduction of species and

the survival of this delicate ecosystem.

The Arctic, the tropics and Ottawa

They're worlds apart, but the circumpolar North and more than 40 countries in the Pacific, Caribbean and Indian oceans — known as Small Island Developing States — are on the front lines of climate change. Both regions have been significantly and increasingly affected by climate change, and both have been badly let down by unsuccessful efforts to implement the 1992 United Nations Framework Convention on Climate Change.

Elders and hunters of Athabaskan first nations in Yukon have reported invasions of new species of birds and fish, shorter seasons for ice roads, infestations of spruce bark beetles, concerns about water drawn from rivers fed by diminishing glaciers, the drying-up of the Old Crow Flats. Northern culture is threatened by climate change, a reality acknowledged by Western premiers meeting in Iqaluit this week.

A Sudden Change of State

Reading a scientific paper on the train this weekend, I found, to my amazement, that my hands were shaking. This has never happened to me before, but nor have I ever read anything like it. Published by a team led by James Hansen at Nasa, it suggests that the grim reports issued by the Intergovernmental Panel on Climate Change could be absurdly optimistic(1).

The IPCC predicts that sea levels could rise by as much as 59cm this century(2). Hansen's paper argues that the slow melting of ice sheets the panel expects doesn't fit the data. The geological record suggests that ice at the poles does not melt in a gradual and linear fashion, but flips suddenly from one state to another. When temperatures increased to 2-3 degrees above today's level 3.5 million years ago, sea levels rose not by 59 centimetres but by 25 metres. The ice responded immediately to changes in temperature(3).

We now have a pretty good idea of why ice sheets collapse. The buttresses that prevent them from sliding into the sea break up; meltwater trickles down to their base, causing them suddenly to slip; and pools of water form on the surface, making the ice darker so that it absorbs more heat. These processes are already taking place in Greenland and West Antarctica.

Rather than taking thousands of years to melt, as the IPCC predicts, Hansen and his team find it "implausible" that the expected warming before 2100 "would permit a West Antarctic ice sheet of present size to survive even for a century." As well as drowning most of the world's centres of population, a sudden disintegration could lead to much higher rises in global temperature, because less ice means less heat reflected back into space. The new paper suggests that the temperature could therefore be twice as sensitive to rising greenhouse gases than the IPCC assumes. "Civilization developed," Hansen writes, "during a period of unusual climate stability, the Holocene, now almost 12,000 years in duration. That period is about to end."(4)

International:

A look at some recent developments in Nigeria's restive oil region

> An upsurge of militant and criminal activity in southern Nigeria has cut production by about one quarter in Africa's biggest producer. Over 200 foreigners have been kidnapped in the oil-pumping region since December 2005, including over 100 this year alone. Most of those kidnapped are quickly released after ransoms are paid.

Zambia miners 'see little reward'

> African nations are used to being plundered - the West perfected the art. Now the new scramble for Africa's resources is coming from the east.
>
> With a voracious economy to feed, China is devouring raw materials - oil, copper, cobalt and zinc.
>
> And it is wooing governments, including those who trample on human rights, with soft loans, aid and arms sales.
>
> For all its taking out of Africa, it is putting a lot back in - creating jobs, making investments, building roads, railways, and hospitals.
>
> Beijing maintains it is a "win-win" situation.
>
> Many Zambians have their doubts, especially those in the Copperbelt.

China environment chief warns pollution fuelling unrest

> Chinese anger with worsening pollution is fuelling increasing protests, the nation's top environmental official said, criticising local governments who he said protected factories turning rivers into "sticky glue".
>
> Chief of the State Environmental Protection Administration (SEPA), Zhou Shengxian, said discontent with pollution "has resulted in a rising number of 'mass incidents'" -- an official euphemism for riots, protests and collective petitions -- the official Xinhua news agency reported late on Wednesday.

"Mass incidents" on rise as environment deteriorates

> "As people's living standards rise, they are focusing more on the environment and on quality of life," said Zhou, acknowledging that repeated environmental incidents have undermined public confidence.
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> Since May, blue-green algae outbreaks have been reported in eastern Taihu Lake, Chaohu Lake and southwestern Dianchi Lake, endangering local tap water supply.
>
> The local government said on Wednesday water supplies to 200,000 people in Shuyang

county in east China's Jiangsu Province had been halted for more than 40 hours after ammonia and azote polluted a local river.

An unending series of water pollution incidents has prompted environmental officials to suddenly become very outspoken.
"In China the environment is facing extremely difficult conditions," Zhou said.

Zhou also revealed that the administration would treat the prevention of pollution in the main rivers and lakes as the priority task in the last six months of the year.

750,000 a year killed by Chinese pollution

Beijing engineered the removal of nearly a third of a World Bank report on pollution in China because of concerns that findings on premature deaths could provoke “social unrest”.

The report, produced in co-operation with Chinese government ministries over several years, found about 750,000 people die prematurely in China each year, mainly from air pollution in large cities.