

The Round-Up: August 3rd 2007

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Topic: Miscellaneous

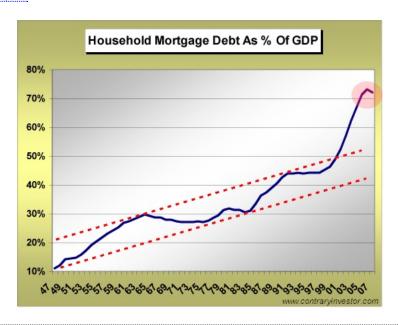
Tags: biochar, bioenergy, climate change, credit crunch, debt, derivatives, drought, efficiency, flooding, hedge funds, liquidity, mortgages, oil sands, resilience, risk, sovereignty, subprime, water, wind [list all tags]

The situation in the credit markets continues to worsen as a sudden attack of risk aversion rapidly dries up liquidity. And this is before the resetting of adjustable rate mortgages (ARMs) begins in earnest - to the tune of \$50 billion - in October. Watch this space.

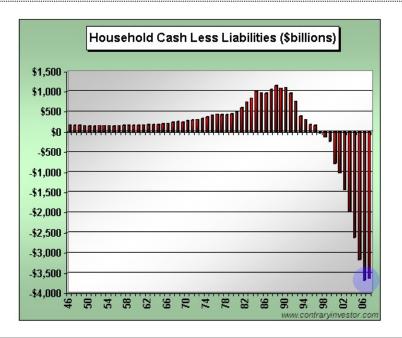
On the Canadian energy scene, Shell pumps \$27 billion into the oil sands, even as oil patch profitability falls. Abu Dhabi wants to invest in Canadian power plants, and there are plans for BC to host an LNG terminal. Wind power grows rapidly in Ontario and Quebec, making a few enemies along the way. In BC they ask: should public transit be free?

On the climate front, water is the issue - too little and too much. Finally, in the tug-of-war between efficiency and resilience, efficiency has the upper hand, but what price will we pay for allowing our life support system to become brittle?

Going With The Flow?



You may remember that our definition of household cash is as broad as can be. We include all household "banking products", per se, but also include all household holdings of bonds, inclusive of Treasuries, Agencies, corporates, muni's and mortgage backed paper. Implicitly, we are assuming bond holdings could be converted to cash at a moments notice. So what follows is simply total household cash less total household liabilities over the last six decades.



Finance chiefs vie to soothe mortgage, credit 'crisis'

Finance chiefs and international banks voiced caution Thursday, reminding investors that stock markets can fall as well as rise, as fears about the distressed US mortgage market and a credit "crisis" continued to unsettle global markets.

Stock markets in the United States, Europe, Asia and Central America have endured volatile trading this week as worries about America's multitrillion-dollar mortgage sector and tightening credit have triggered broader concern.

Analysts say market swings have been magnified because of US investments held by foreign investors and banks.

Cold feet becoming the factor: Fear of risk sending investors into retreat

The widening fallout in the U.S. mortgage industry has reminded investors of a risk they had forgotten: the fear of risk itself.

As unpaid mortgages and bankrupt lenders bring the weakest segments of the mortgage industry to its knees, investors have begun dumping debt and other investments that would seem to have nothing to do with home loans.

Corporations are paying higher interest rates on their bonds, some private-equity firms are having trouble raising money to close big purchases, and the stock market has lost 7 percent of its value in less than two weeks — all mainly because of an exodus from risk.

"I would characterize it as a loss of excessive risk appetite," said Ian Lyngen, an interest-rate strategist at RBS Greenwich Capital. "There is a lot more apprehension about layering on riskier assets."

For the markets, global chill

The 1970s British Broadcasting Corp comedy show Monty Python's Flying Circus once did a skit about a new way that council flats - public housing - were being built near the town of Peterborough in England. Instead of building these 25-story towers through the conventional employment of construction workers, concrete and steel, this council was employing the services of El Mystico (Terry Jones), a magician in cape and top hat, along with his curvaceous assistant, in her sequined leotard, the Amazing Janet....

....These flats constructed with the black arts were just as reliable and sturdy as those conventionally constructed - with one exception. According to Clement Onan, identified as an architect to the council, "They are as strong, solid and as safe as any other building method in this country - provided, of course, people believe in them."

If tenants did start to doubt the actual existence of the buildings they were then living in, the building would fall down, until their faiths were restored, then the buildings would magically reassemble themselves....

....If you want a contemporaneous example of something held up only by the faith of its participants, take a look at the corporate debt markets of the past few years. And if you want an example of what happens when that faith evaporates, look at the world's stock markets last week.

Bear, Lehman, Merrill, Goldman Traded as Junk, Derivatives Show

On Wall Street, Bear Stearns Cos., Lehman Brothers Holdings Inc., Merrill Lynch & Co. and Goldman Sachs Group Inc., are as good as junk.

Bonds of U.S. investment banks lost about \$1.5 billion of their face value this month as the risk of owning the securities increased the most since at least October 2004, according to Merrill indexes. Prices of credit-default swaps based on the debt imply that their credit ratings are below investment grade, data compiled by Moody's Investors Service show.

The highest level of defaults in 10 years on subprime mortgages and a \$33 billion pileup of unsold bonds and loans for funding acquisitions are driving investors away from debt of the New York-based securities firms. Concerns about credit quality may get worse because banks promised to provide \$300 billion in debt for leveraged buyouts announced this year.

Running Scared

Sign of the times: On a day when another mortgage lender, American Home Mortgage, teetered toward liquidation, Standard & Poor's said the U.S. corporate bond market was officially speculative grade.

The big ratings agency said 50.7% of the corporate bond market is now rated speculative grade, the first time this has happened, marking a decade-long shift toward more aggressive finance strategies and the evolution of the leveraged finance market. S&P calls anything below BBB- "speculative," but most people just call it junk. These days, the market calls it scary.

The report came out as another mortgage company fell to the mercy of its lenders after a big financial shock in the subprime mortgage market. American Home Mortgage isn't a subprime lender, but it did underwrite loans that require little or no documentation of a borrower's income, so-called Alt-A loans.

The company said Tuesday it was getting margin calls from its banks because loans and securities it was holding as collateral against those loans have dropped in value because of the broader credit market turmoil that began over a week ago.

Totally Discredited S&P

The S&P is sure right on top of things as this 3:42 PM headline shows: S&P Puts AHM Rankings on Negative Watch. Wow. What a bold, stunning, and timely move by the S&P. Let's take a look.

Standard & Poor's Ratings Services on Tuesday placed its "average" residential prime ranking for American Home Mortgage Investment Corp. on credit watch with negative implications.

The ratings agency also removed the home lender from its "select servicer list."

S&P believes the company's financial troubles could result in higher turnover in its servicing operation and hurt servicing performance.

How clever of the S&P to figure out that a company that has stopped doing business might experience "higher turnover in its servicing operation and hurt servicing performance". That is simply stunning analysis. Who else could have figured that out?

Now that American Home Mortgage has ceased doing business, I suppose it's safe for the S&P to remove AHM from its "select servicer list".

The Housing Finance Breakdown: Interview With Ml-implode.com

Q:Mozilo caused quite a stir recently when he announced that it's not just subprime borrowers who are defaulting on Countrywide, but also the borrowers with prime loans. If this is occurring at Countrywide, is it safe to assume this is an industrywide problem?

A: Yes. That's because this isn't really a mortgage problem per se, it is a consumer debt problem, and a deteriorating incomes problem. When you cut through the specious apologetics, real incomes for most Americans have been declining since the mid-70s. It is probably much worse than acknowledged because inflation rate estimates by the government are generous to say the least (again for obvious conflict-of-interest reasons), and those are what is used to normalize all of the relevant data series.

The trend has accelerated under the Bush admin. Interestingly, even four-year college grads are seeing declining starting incomes. The education canard, which the Fed loves to use, is a lie.

We as a country have been able to paper over the problem (no pun intended) through the unprecedented expansion of debt. It has turned the economy into a huge Ponzi scheme, with housing at the core.

We now are in manifest trouble because we have reached the point where the real income generated by society as a whole is no longer enough to service all of that debt. This goes for individuals and their mortgages and credit cards, it goes for corporations trying to fund LBOs and M&A, and it goes for the government and general spending.

Subprime Defaults Blamed for U.S. Earnings Setbacks

"The subprime slime is oozing," said Gary Shilling, president of A. Gary Shilling & Co. in Springfield, New Jersey, who correctly predicted the recession in 2001. "As home equity evaporates, that takes out the foundation of strong consumer spending growth, which has been the mainstay of the economy."

More on Alt-A

As I mentioned in the comments, it appears August rhymes with February. In February standards started to be tightened for many subprime products - or the products were eliminated completely. Now the same appears to be happening for Alt-A.

Keep Your Eyes on Adjustable-Rate Mortgages

So far, most of the loans gone bad were among the worst of the worst. Some were based on outright fraud, either by the lender or the borrower. In many cases, buyers were never going to be able to make their monthly payments and were instead banking on a rapid appreciation in home values.

But the pool of people falling behind on their house payments is starting to widen beyond this initial group, and adjustable-rate mortgages are the main reason. Starting in the spring of 2005, these mortgages began to get a lot more popular, largely because regular mortgages no longer allowed many buyers to afford the house they wanted.

They turned instead to a mortgage that had an artificially low interest rate for an initial period, before resetting to a higher rate. When the higher rate kicks in, the monthly mortgage bill typically jumps by hundreds of dollars. The initial period often lasted two years, and two plus 2005 equals right about now.

The peak month for the resetting of mortgages will come this October, according to Credit Suisse, when more than \$50 billion in mortgages will switch to a new rate for the

first time. The level will remain above \$30 billion a month through September 2008. In all, the interest rates on about \$1 trillion worth of mortgages, or 12 percent of the nation's total, will reset for the first time this year or next. A couple of years ago, by comparison, only a marginal amount of mortgage debt — a few billion dollars — was resetting each month.

So all the carnage in the mortgage market thus far has come even before the bulk of mortgages have reset. "The worst is not over in the subprime mortgage market," analysts at JPMorgan recently wrote to the firm's clients. "The reason for our pessimism is that loans originated in late 2005 and all of 2006, the period that saw peak origination volumes and sharply decreased underwriting quality, are only now starting to reset in large numbers."

Too big to fail: Germany rescues subprime lender

The German government has pulled together a rescue operation -- drawing in all three pillars of the country's banking system -- to shore up Europe's first major casualty of the subprime crisis.

The rescue of IKB, a specialist lender based in Dusseldorf, began on Sunday when Peer Steinbruck, the German finance minister, called leading banking executives to discuss a bailout. According to people who took part in the conference call, Jochen Sanio, head of Germany's financial regulator, is said to have warned of the worst banking crisis since 1931.

IKB announced a big fall in its earnings because of subprime exposure. The news sent its shares plunging and prompted KfW, the state-owned development bank, to step in with a pledge to guarantee obligations of more than E8 billion (\$10.93 billion) -- more than five times IKB's stock market value.

The intervention suggested that the problems at IKB are much worse than thought. Mr Steinbrück phoned several banking executives, including Josef Ackermann, chief executive of Deutsche Bank, on Sunday to bring them on board.

Credit derivatives 'performing poorly' in crisis

The cost of insurance against credit defaults hit record levels on both sides of the Atlantic on Monday amid concerns that some investors were being forced to sell assets to cover losses on subprime mortgages.

Investors rushed to buy contracts that would protect them against corporate credit defaults after it emerged that more European institutions had suffered losses following the crisis in the US subprime mortgage market.

IKB, a German lender specialising in providing credit to smaller companies, and Commerzbank, the country's second-biggest bank, both warned they would be hit by losses from risky US home loans to borrowers with poor credit histories.

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One sided coins and unwanted tools

Italian banks, including UniCredit and Banca Italease SpA, have sold swaps to as many as 100,000 small businesses, according to lawyers and industry groups. Concern about the contracts intensified last month, when Milan-based Italease said about 2,200 clients may lose 600 million euros on derivatives. Italy's central bank this week barred Italease from selling its most- profitable derivatives and ordered directors to resign.

The Bank of Italy estimates that non-financial companies had 3 billion euros of liabilities on derivatives at the end of 2006.

Bear Stearns hedge funds file for bankruptcy protection

Two Bear Stearns Cos. [BSC-N] hedge funds heavily exposed to the flagging mortgage industry filed for bankruptcy protection late Tuesday, two weeks after the company told investors one was essentially worthless and the other had lost more than 90 per cent of its value.

The Bear Stearns High-Grade Structured Credit Strategies Master Fund Ltd. and the Bear Stearns High-Grad Structured Credit Strategies Enhanced Leverage Master Fund Ltd. — which invested in securities backed by risky mortgages — filed for protection under Chapter 15 of the bankruptcy code, according to court documents.

3rd Bear Stearns fund in jeopardy

A Bear Stearns' hedge fund with about \$900 million in mortgage investments is reportedly facing huge losses and is refusing to return investors' money, according to a news report published online Tuesday.

Revelations of the imperiled hedge fund comes weeks after the investment bank closed two hedge funds that suffered losses arising from the subprime-mortgage market.

The value of the Bear Stearns Asset-Backed Securities Fund has fallen amid a flurry of mortgage markdowns, the Wall Street Journal reported, sparking fears the bank will have to close the fund as it has done to two others.

Dr Doom on stock markets, the Hindenburg Omen and what next

Marc Faber, aka Dr Doom, notes that Michael Kahn, who writes technical comments for Barron's, recently highlighted the fact that according to the Hindenburg Omen, the US stock market had given several strong sell signals in July.

"Normally a single signal is not of great significance, but when several signals occur

within a short period of time, the odds for a stock market crash increase", says Faber.

As of Tuesday, July 23, the Hindenburg signal had fired at least eight times over the previous six weeks. The Hindenburg Omen is the alignment of several technical factors that measure the underlying condition of the stock market and warns of either impending market crashes or severe declines.

Longer mortgages ease pain, report says

The heated competition has led to lower fees for consumers and products such as interest-only mortgages, as well as the extended 40-year amortization period. In Canada, anyone with less than a 20% down payment on a home must get mortgage insurance, if borrowing from a financial institution covered by the Bank Act.

The 20% down payment rule was lowered from 25% this year, another factor helping to fuel the housing market.

"All the changes have made a big difference in this housing cycle from the one in the 1980s. If rates go up one percentage point, consumers can just extend the amortization period," Mr. Holt says in the report.

The report suggests Canadians have been taking advantage of the longer amortization period. "There is enough evidence to convince us that a very material amount of mortgage originations are going for much longer amortization periods," it says.

The trend is also driving up housing prices because consumers can deal with what Mr. Holt calls "down payment shock" by increasing the amortization period.

Beazer Shares Plunge; Bankruptcy Speculation Denied

Shares of Beazer Homes USA Inc., the homebuilder facing investigations by the FBI and securities regulators, plunged the most ever on speculation the homebuilder may file for bankruptcy. Beazer said in a statement there was no truth to the rumor.

"We do not know where these scurrilous and unfounded rumors started," Beazer said in a statement distributed by Business Wire.

Atlanta-based Beazer's shares fell \$2.53, or 18 percent, to \$11.46 as of 11:59 a.m. in New York, after earlier dropping as much as 42 percent to \$8.10.

Beazer led shares of U.S. homebuilders lower. The worst housing slump in 16 years has left eight homebuilders nursing losses of \$1.97 billion and expenses of more than \$3.1 billion as property values fall and land purchases are abandoned.

Chapter 11 for BZH?

I do not know whether the chapter 11 story is a rumor or a fact as BZH is now down a mere 20%. What I do know is that congratulations are in order to BZH insider Ian J. McCarthy who on November 14, 2006 exercised an option to buy 179,535 shares at \$8.02 and on the same day unloaded all 179,535 shares for \$43.07.

On April 17,2006 Ian J. McCarthy did the same thing with 13,149 shares. Ian J. McCarthy is the president and CEO of Beazer Homes. No doubt this was all part of a broader diversification strategy.

Market catches debt flu

Worries about falling demand for corporate credit hammered bank stocks yesterday, while energy stocks dipped despite oil prices touching new highs on another wild day for the Toronto Stock Exchange.

The exchange's main index, the S&P/TSX composite index, fell 213.89 points, or 1.5%, at 13,645.74 in a volatile session. At one point, the benchmark plummeted 341 points.

The index has shed 992 points, or almost 7%, in the past two weeks over concerns from investors about falling demand for subprime lending, its potential impact on underwriting fees among banks and on big bank earnings.

Mounting earnings fears deal another blow to TSX

Two analyst reports, one questioning the health of Alberta's oil patch and the other on Canadian banks' exposure to the U.S. subprime market, plunged those heavily weighted stocks into a sea of red.

Fred Ketchen, director of equity trading for ScotiaMcLeod, said liquidity problems and credit-risk concerns are taking their toll on blue-chip stocks.

"We are worried where all the money has gone and where it hasn't been," he said. "Most of these problems are in the United States but the close interlink of our markets means that sooner or later, we are going to have to at least adjust."

Mogambo Guru: Negative Inflation - Courtesy of Coke Chocula

Investors who are still sitting on their stocks apparently have a Big Undying Belief (BUB) in the ability of the Fed, Wall Street and the Plunge Protection Team (that was created by an Executive Order issued by President Ronald Reagan to "manage" any stock market "surprise") to keep the markets from falling, or are very stupid, or are all playing with someone else's money, or are whacked out on drugs either prescription, over-the-counter or illegal (or all three at once), or something even more bizarre, like believing in the complete absence of counter-party risk in the hedge "insurance" provided by buying enormous amounts of mysterious derivatives at huge degrees of

leverage.

Dow Jones Industrials Skating on Thin Ice

Perhaps the most important market in the world today is the vast network of foreign currencies, where total trading volume, including derivatives and futures, average around \$2.9 trillion a day. This is ten times the size of the combined daily turnover on all the world's equity markets. And as world's economies have become increasingly integrated, so have the foreign exchange and global capital markets.

But the foreign exchange market is only one piece, albeit a very important one, of a bigger puzzle. Turnover of interest rate, currency and stock index derivative contracts rose 24% to a mind boggling \$533 trillion in the first quarter versus the previous quarter, underscoring the enormous leverage in the global markets. Thus, any major unexpected event in the currency markets can touch off a panic and violent market reactions in the global bond and stock markets, or gold.

Gold, Silver Fall as Equity Markets Tumble on Credit Concerns

Gold and silver fell in New York on speculation a decline in equity markets will reduce investment demand for precious metals.

Gold fell 3.6 percent last week when stocks worldwide suffered a \$2.1 trillion sell-off. Shares dropped today amid concern that defaults among U.S. subprime mortgages may be spilling over to other credit markets. Bear Stearns Cos. blocked investors from withdrawing money from a hedge fund, and Macquarie Bank Ltd. warned two of its funds may lose 25 percent.

Strong ARMing the Market

Is this what the deflating of a credit bubble looks like? Yes, it is. And there's plenty more where that came from.

Ludwig von Mises once said:

"There is no means of avoiding the final collapse of a boom brought about by credit expansion. The alternative is only whether the crisis should come sooner as a result of a voluntary abandonment of further credit expansion, or later as a final and total catastrophe of the currency system involved."

"Unfortunately, it's too late to stop the crackup," says our friend Mike "Mish" Shedlock. "All you can do is be ready for whatever market volatility is headed down the pike."

While debt is natural result of our modern banking system, debt's actual role in the modern banking economy is that of a parasite. Debt, in and of itself, cannot exist, it needs to be attached to something in order to survive; and, in modern banking, the host-body to debt is productivity and savings.

Eventually in a debt-based system, the increasing accumulation of debt, like free-radicals in the body, overwhelms the host-body and the system collapses. This is where the economy is today—the tipping point where the debt driven destruction of productivity and savings is gaining momentum....

....In savings-based economies, producers and savers are rewarded for producing and saving. In debt-based economies, they are penalized because in debt-based economies the value of money declines as increasing amounts of debt money are continually created; diluting and debasing the value of money held by producers and savers while benefiting those closest to credit.

While debt-based money looks and acts the same as savings based money, it is not. Debt-based money can be leveraged many times its original value by investment banks. This is why modern banking is on the verge of collapse today. Investment banks, those closest to the spigots of credit, have leveraged their proximity to credit by such high multiples that the global economy is now vulnerable to systemic risk.

Takeover going ahead: BCE

Shares of BCE closed down 39 cents yesterday at \$39.89 on the Toronto Stock Exchange as investors appear to be reacting to concerns over whether private equity suitors will be able to secure the cash necessary to close a rash of recent deals involving everything from pharmacy chains to car manufacturers.

Rising interest rates and a crisis in the U.S. subprime mortgage market has lenders scrutinizing borrowers more closely – particularly when it comes to higher-risk debt financings. Last week, for example, a group of U.S. banks was unsuccessful in marketing a \$12 billion debt package linked to the sale of Chrysler to Cerberus Capital Management LP.

Bank warns hedge funds of liquidity crunch

Credit Suisse has warned hedge funds that banks' risk appetite, credit availability and global liquidity is in danger of evaporating "as fast as water off the desert tarmac", leading to more collapses such as that suffered by Sowood Capital, a \$3bn (€2.2bn) US manager.

Credit Suisse warned in a paper by its fixed income analysts that banks are carrying a large exposure to new bond issues and, if they cannot sell them on, then "rightly or wrongly, the most natural response would be to sharply curtail other credit lines to

hedge funds and smaller counterparties. Beyond a certain point that could precipitate a cascade of position liquidation".

The warning came the day after Sowood Capital, a US hedge fund manager, said it was winding down its funds. Its assets under management had been worth \$3bn at the start of last month. It had been caught in a vicious circle of losses, margin calls and asset sales.

The U.S. Credit Crunch Reaches from Main Street to Wall Street

The "credit crunch" that started on Main Street with the U.S. housing market has now spread to Wall Street. But the next question is how bad this liquidity squeeze will get: At its worst, it could terminate the buyout wave that's been a big part of the reason U.S. stock prices have achieved record highs this summer — sending U.S. shares into a tailspin. And that, in turn, would turn into a bear-market contagion that spreads to international markets.

To understand just how bad things could get, it's important for us to look at how this liquidity squeeze got started, and then to see how it could affect the corporate debt market – for that will help determine the ultimate affect on the buyout market, and then stock prices.

How Much Liquidity is Enough?

Over the last year, fuel for the equity markets has largely been coming from cheap debt available to private equity firms mostly due to the yen carry trade. The Dow Jones "Private Equity Analyst" reports that the US private equity firms raised \$137 billion during the first half of 2007, a 42% increase over the first half of 2006. The cash from Leveraged Buyouts (LBOs) flooded the markets and was reinvested pushing stocks to their all-time highs. The key point here is - the stock market is being pushed up by borrowed funds. Since a lot of the debt will have to be repaid in yen, the sharp rise in the Japanese currency last week spooked all markets.

The crash that could come

Investors and ordinary citizens have good reason to worry about a perfect economic storm: a deepening loss of confidence in the dollar leading to higher interest rates; the higher rates bringing a crashing end to a hedge-fund, private equity, and merger binge that has depended heavily on cheap borrowed money; the boom in bait-and-switch mortgages ending in a morning-after of rising defaults and sinking housing values; inflationary pressures in food, oil, and other commodities leading to still higher interest rates -- all unsettling stock and credit markets and putting a new squeeze on consumers borrowed to the hilt.

It's not pretty out there. But a few basic lessons can help. It's still summer, but as the financial markets declared last week, back-to-school season for U.S. investors has arrived.

With the equity markets off sharply for the week and the credit markets seizing, investors are being forced to relearn some of the basics forgotten during the private-equity, easy-credit, corporate-buyout boom of recent years.

American moves to Canada reach record high

The number of Americans admitted to Canada last year reached a 30-year high, with a 20 per cent increase over the previous year and nearly double the number that arrived in 2000.

Oilpatch profits expected to drop, for now

Profits in Canada's oilpatch are expected to pull back from record levels this year, dropping nearly 25 per cent as costs for labour and materials soar, the Conference Board of Canada predicts.

With lower oil prices earlier this year and costs continuing to rise at a rapid pace, Canada's oil industry is expected to earn \$12.6 billion this year, down from a record of \$16.7 billion in 2006, the board said in a report released Wednesday.

Canadian oil industry profits seen tumbling in 2007

"Rising costs in Canada's oil sector are becoming increasingly problematic for energy companies," said the report. "Labour and material shortages in Alberta are pushing the cost of new investment projects to near-prohibitive levels."

Cost increases will moderate this year, but next year are expected to grow by double-digits on average over the next four years, the report said.

Beyond petroleum: It's time to rebrand Alberta

Forecasts show a continuing world demand for energy that fossil fuels alone are unlikely to satisfy. Last week, CIBC World Markets warned of \$100-a-barrel oil by the end of next year. Although Canada is self-sufficient, satisfying North American demand will

require exploitation of all forms of energy, including renewables.

Alberta could engage other Canadians in a positive dialogue, because all regions of the country have the potential to develop forms of bio-energy. Alberta could build strong alliances with Ontario, Quebec, Atlantic Canada, Saskatchewan and other regions, sharing an energy future by working together as key stakeholders.

Two years ago, the Energy Council of Canada brought together a coalition of 20 energy industry associations, which successfully persuaded energy ministers from across Canada to work with them in devising a Canadian energy policy. Their central message was simple: Supply is lagging behind demand.

Shell pumping \$27B to oilsands

In its first major move since privatizing Shell Canada Ltd., Royal Dutch Shell PLC said yesterday it will spend up to \$27-billion to build the biggest oilsands upgrader yet.

The Anglo-Dutch oil major said in a regulatory filing that it wants to build Scotford 2 in the Fort Saskatchewan area near Edmonton, beside its existing Scotford 1, where a multi-billion-dollar expansion is now underway. It will join a dozen other upgraders proposed or under construction in the region. Shell's mammoth structure will process up to 400,000 barrels a day of bitumen from its Athasca project as well as from in-situ projects in other parts of the province.

The price tag, one of the biggest spending plans in the country, reflects the scale of the oilsands business in Alberta and its rising costs. It comes on the heels of Petro-Canada's announcement last month that it will spend with its partners as much \$33.4-billion on its Fort Hills project, which involves a mine in Northern Alberta and upgrading facilities near Edmonton.

B.C. island proposed for new \$2B liquid natural gas terminal

Texada Island, located between Vancouver Island and the B.C. mainland, was proposed Tuesday as the site of an ambitious \$2-billion energy project incorporating an import terminal for liquid natural gas and a 600-megawatt electricity generating station.

WestPac LNG Corp. made the announcement in Vancouver, saying the project would meet future energy needs of residents of coastal B.C. communities as well as Vancouver Island residents.

The LNG (liquid natural gas) facility would be one of the first of its kind on the western coast of North America, serving as a receiving terminal for ships bringing in gas from other nations, possibly including Russia and Saudi Arabia.

The facility would be served by one ship coming in about every 10 days.

Abu Dhabi National Energy Co. (Taqa) is looking at both buying existing power plants in Canada and developing new generation capacity, the company's chief executive said vesterday.

Taqa plans to expand into the Canadian power market as part of its target to more than double its assets by 2012. The company aims to complete \$4-billion of acquisitions in the next year.

"We would look at buying existing power facilities and also select greenfield opportunities in Canada," chief executive Peter Barker-Homek said after the company announced its second-quarter results. "We're in discussions with a number of key players in Canada about co-operation on developing various power projects."

Mr. Barker-Homek said he hoped for progress on the deals this year. Taqa is also looking at the possibility of developing wind farms on land that it owns in Canada after it bought upstream oil and gas company Northrock Resources for \$2-billion in May.

Taqa is 75% owned by Abu Dhabi's government, which controls over 90% of the oil reserves of the United Arab Emirates. It aims to boost its assets to between \$40-billion and \$60-billion by 2012 from around \$16-billion as it plays its part in Abu Dhabi's drive to use record oil revenues to diversify.

Wind power ardour cools

Alongside the expansive hectares of traditional crops, mammoth steel towers with spinning blades are springing up from concrete roots planted firmly in the soil.

Wind turbines dwarf everything around them -- most are equipped with 40-metre blades and stand as high as the Peace Tower on Parliament Hill. The trend is no longer just one or two stray turbines scattered amid farmers' fields, but rather dozens of them clustered together in major power-generating operations across the countryside.

Canada has 77 wind farms, but that number is expected to rise to more than 100 with all the projects in the development stage or under negotiation for the next five years. Just last week, the first commercial wind project in Newfoundland and Labrador was launched.

Projects are picking up the most speed in Ontario, where the provincial government has embraced wind energy as a symbol of its green friendliness, and municipalities are signing on with a fervour because the province's above-market prices mean they can reap cash in land sales and tax revenues.

But as Canada experiences a rapid rise in these developments, there is a growing opposition to wind power as a clean energy alternative, with complaints that it is high-cost, energy-inefficient, causes noise pollution and even wreaks havoc on birds' migratory patterns.

The nationalization of Quebec's hydroelectric power in the 1960s was the crowning achievement of Rene Levesque, then a Liberal energy minister, who later became the first Parti Quebecois premier. More than 40 years later, some suggest the province should follow in his footstep and nationalize a booming new industry - wind power.

Government-owned Hydro-Quebec has become a symbol of Quebec's pride and know-how and developed into the largest single electricity producer in North America. The utility has a virtual monopoly on the distribution of electricity in the province, most of it produced by its own dams.

Quebec has been called the "Saudi Arabia of wind energy" and experts say it gives the province a bright future.

Ont. judge asks uranium firm, native protesters to compromise

A uranium mining exploration company that is suing Algonquin protesters in eastern Ontario is to appear in court Thursday after the two parties were asked by a judge to reach a temporary truce.

Frontenac Ventures Corp. is claiming \$77 million in damages against the protesters from the Ardoch and Shabot Obaadjiwan Algonquin First Nations, who have been blocking an area in North Frontenac Township that the company is interested in developing for uranium mining.

The company is also seeking a court order to remove the protesters from the site, which comprises mainly Crown land that is the subject of ongoing aboriginal land claim negotiations with the provincial and federal governments.

As talks proceeded between the company and the aboriginal group this week, Randy Cota, Chief of the Ardoch First Nation, told the CBC that local aboriginal people would never agree to allow drilling or brushing in the area.

"We're going to be open-minded and see what they have to say but our goal is to protect the watershed at all costs," he said.

No Fares! A Reader-funded Solutions Series

The project took him to Washington State for a look at a successful fare-free transit system, and all over the Internet and libraries in search of information about the pros and cons of offering the public a free ride. The outcome is this five-part series, which he says gives him hope for change. "The examples shown here are irrefutable and wholly applicable to B.C."

Free Transit? Experts Are Wary

Two weeks ago, the Tyee ran a five-part series that made the case why transit should be free of charge to riders.

The response to the series' main argument -- namely that to fight global warming we must cut out cars and pull down barriers to taking the bus -- was dramatic. Traffic crashed our site, series author Dave Olsen went on national and local radio, versions of the article went viral on the Internet, and Atlantic magazine columnist Andrew Sullivan praised Olsen's argument as "a great idea." In a nutshell, the series hit a nerve.

"Should people really be paying for something that's benefiting society?" asks Lawrence Frank, an urban transportation expert at the University of British Columbia. If anything, it's drivers who should shell out more for their dirty deeds, the logic goes.

Timely as the argument is, it remains to be seen that free transit can work where it's needed most: in big cities. While taking out the fare box makes sense in smaller communities, where the costs of collecting fares often outweigh the benefits, in the city fees keep systems on their feet.

So could they really do without charging riders? Asking a number of experts, The Tyee set out to discover why past attempts to go fare-free city-wide failed in cities in New Jersey and Texas, degraded services in downtown Miami, succeeded in portions of Portland and Seattle, and might yet bear fruit in San Francisco.

A revolutionary report on the future of oil

The IEA Medium Term Market Report is 82 pages long and contains much more of interest than I have summarised here.

The most pessimistic supporters of peak oil believe that decline of total world oil production is imminent. Indeed, I previously described how major figures in the industry such as energy investment banker Matt Simmons, oil entrepreneur T. Boone Pickens and retired National Iranian Oil Company Vice-President Ali Samsam Bakhtiari believe we are now at peak.

Nevertheless, the IEA Medium Term Report is refreshingly open and balanced in its approach to this most vital of topics. It is a further nail in the coffin for the irresponsibly optimistic future oil production scenarios painted by industry cheerleader Cambridge Energy Research Associates and the biggest of Big Oil - ExxonMobil. The publication of the IEA report means that the writing is now on the wall for all governments and industry to see.

Much higher oil prices can be expected within five years at best. Before this, a short, but deceptive, fall in oil prices may occur in 2008-9. It remains to be seen whether the political courage exists to openly discuss this issue and begin the painful process of weaning ourselves off oil. I am not optimistic.

Nine countries warn EU against energy unbundling

Nine European countries, including Germany and France, appear on a letter sent to the European Commission warning against a proposal to break-up utilities, the French environment and energy ministry said on Tuesday.

Germany's economy ministry on Monday confirmed a report that France, Germany and a group of allies had signed the letter.

France detailed the list of countries: France, Germany, Austria, Bulgaria, Slovakia, Cyprus, Greece, Luxembourg and Latvia.

"Along with eight other states, France believes that the ownership unbundling between network grids and commercial activities has not been successful," the ministry said, adding that break up brings no guarantee of low prices or sufficient investment.

It said the proposal had to remain optional.

Australia urged to focus on clean coal

Australia should focus its efforts on developing clean coal and helping other countries establish nuclear power ahead of cutting its own emissions, according to former Telstra boss and head of the Federal Government's taskforce on nuclear energy, Ziggy Switkowski.

Speaking to engineers at a University of Technology, Sydney, function this morning, Dr Switkowski said those efforts, in the long term, could include developing a global nuclear waste repository and a system of "nuclear leasing" in Australia.

However, nearer term, our influence on how other countries dealt with climate change was important, he said.

How Efficiency Maximizes Catastrophe: The Case for Resilience

Resilience. You may not have heard much about it, but brace yourself. You're going to hear that word a lot in the future. It is what we have too little of as our world slips into unpredictable climate chaos. "Resilience thinking," the cutting edge of environmental science, may someday replace "efficiency" as the organizing principle of our economy.

Our current economic system is designed to maximize outputs and minimize costs. (That's what we call efficiency.) Efficiency eliminates redundancy, which is abundant in nature, in favor of finding the one "best" way of doing something -- usually "best" means most profitable over the short run -- and then doing it that way and that way only. And we aim for control, too, because it is more efficient to command than just let things happen the way they will. Most of our knowledge about how natural systems work is focused on how to get what we want out of them as quickly and cheaply as possible -- things like timber, minerals, water, grain, fish, and so on. We're skilled at breaking systems apart and manipulating the pieces for short-term gain.

Think of resiliency, on the other hand, as the ability of a system to recover from a disturbance. Recovery requires options to that one "best" way of doing things in case

that way is blocked or disturbed. A resilient system is adaptable and diverse. It has some redundancy built in. A resilient perspective acknowledges that change is constant and prediction difficult in a world that is complex and dynamic. It understands that when you manipulate the individual pieces of a system, you change that system in unintended ways. Resilience thinking is a new lens for looking at the natural world we are embedded in and the manmade world we have imposed upon it.

Rethinking biochar

Imagine a simple agricultural soil amendment with the ability to double or triple plant yields while at the same time reducing the need for fertilizer and therefore decreasing nitrogen- and phosphorus-laden runoff. As if that's not enough, what if this amazing ingredient also had the potential to cut greenhouse gases on a vast scale? This revolutionary substance exists, and it isn't high-tech, or even novel—the history of its use can be traced back to pre-Columbian South America.

The ingredient is charcoal, in this context called biochar or agrichar, and if a growing number of scientists, entrepreneurs, farmers, and policy makers prevail, this persistent form of carbon will be finding its way into soils around the world. "Biochar has enormous potential," says John Mathews, a professor of strategic management at Macquarie University in Australia. "When scaled up, it can take out gigatons of carbon from the atmosphere," he adds.

Agrichar's benefits flow from two properties, says Cornell University soil scientist Johannes Lehmann. It makes plants grow well and is extremely stable, persisting for hundreds if not thousands of years. "Biochar can be used to address some of the most urgent environmental problems of our time—soil degradation, food insecurity, water pollution from agrichemicals, and climate change," he says.

Farmers negotiate water deal

The U.S. government appears poised to turn over the rights to billions of gallons of water to a politically connected group of farmers, even as residents across the West are being asked to let their lawns go brown and adopt other emergency measures to conserve water.

Under a proposed settlement that federal regulators are likely to present today in Washington, landowners in the Westlands Water District would gain the rights to 1 million acre-feet of water, or 15 percent of the federally controlled water in California. That would make it the largest grant to irrigators since the U.S. Bureau of Reclamation was created in 1903, agency officials said.

If droughtlike conditions persist, the deal would guarantee the farmers' irrigation pumps will flow, even if that means some Bay Area cities will get less drinking water. That prospect has alarmed environmentalists and others seeking to preserve the state's water supply for cities and an estuary inhabited by an imperiled species of fish.

High Plains Water Crisis Will Force Farmers to Think Like Environmentalists

If Midwest farmers continue pumping water at current rates, they'll be forced to revert to dry-land agriculture and livestock grazing within decades -- they could change their habits now and make the High Plains sustainable for the future.

Waterways, crops gasping in July heat

Near-record heat and persistent drought are shrinking lakes, baking crops and taxing water supplies.

The Mississippi River's headwaters in Minnesota are so dry that it is possible to cross on foot in some places, says an Army Corps of Engineers hydrologist.

Several cities in the West are close to setting records today for the warmest July. Boise is on track to break a 133-year-old record for its warmest July ever. Reno is one-tenth of a degree below its July record set in 2005. The Nevada city has not had any rain in eight weeks.

Nearly two-thirds of the contiguous USA is abnormally dry or in drought, according to the national Drought Monitor.

Despite recent showers in the Southeast, much of that region remains extraordinarily dry. The worst-hit area in the USA includes most of Alabama, Tennessee and Georgia. Topsoil moisture, critical for crops, is poor in half of Georgia, two-thirds of the Carolinas and Alabama and three-fourths of Tennessee.

Sunny California

There is no better year for farming in California than the first year of a drought. The lakes and reservoirs still hold ample water from the year before, and the farmer can go about his chores without inconvenient rains confounding his schedule. Sunlight pours down from a cloudless sky. The crops prosper. Life is good.

That's our situation in the Sacramento Valley at the moment. We've had an unusually dry year, and I had to start irrigating in January — ordinarily our rainiest month — and I've kept at it all through the spring and summer.

Even if I were housebound and someone else was doing the irrigating, I would know from one glance at the electric bill. It takes a lot of power to move that water around, and it's the single biggest expense on my farm. Some of my neighbors, who farm on a bigger scale than I do, have electric bills in the summer of \$8,000 a month.

This year I'm converting my irrigation to solar power, installing silicon panels that turn sunlight into electricity. This will drive the pumps that lift water from underground and push it through the eight miles of plastic pipes that make up my irrigation system. Even though the panels are expensive, the return on my investment is about 12 percent,

better than almost any stock or bond fund I could buy.

Extreme weather brings flood chaos round the world

People in countries across the world, from China to India and Sudan to Indonesia, are coping with severe wet weather, highlighting the position of flooding as the most deadly of all natural disasters.

While single events cannot be linked to climate change, the flooding come as research suggests that global warming will increase rainfall in some parts of the world, including the Indian monsoon, and increase the number of hurricanes — both due increased evaporation in a warmer world.

One person in 10 worldwide, including one in eight city-dwellers, lives less than 10 metres above sea-level and near the coast. This is an "at-risk zone" for flooding and stronger storms exacerbated by climate change, a recent study found.

China climate change storms 'have affected 200 million'

Violent storms and floods that experts say are a consequence of global warming have hit 200 million people in China.

Up to five million residents have been evacuated from their homes, while nearly 700 have lost their lives — a toll that threatened to climb yesterday as 69 miners remained trapped in a flooded shaft. Worse may be yet to come. Describing the floods as the most severe the country had suffered in a decade, Chinese officials cautioned that more deadly weather would wreak havoc before the end of the summer.

The floods, an annual threat for China, have affected nearly 20 per cent of the country's 1.3 billion population. The economic losses are estimated officially to be 52.5 billion yuan (£3.5 billion).

Dangerously high water levels along the main rivers have led to mass evacuations, while hundreds of thousands of homes and millions of hectares of crops have been destroyed. More flash floods, downpours and landslides are expected over the next few days, the Red Cross said, starting an emergency appeal for aid. High temperatures have made life even more uncomfortable for those displaced.

"Asian Brown Cloud" is speeding melt of Himalaya glaciers: study

The haze of pollution that blankets southern Asia is accelerating the loss of Himalayan glaciers, bequeathing an incalculable bill to China, India and other countries whose rivers flow from this source, scientists warned on Wednesday.

In a study released by the British journal Nature, the investigators say the so-called

Asian Brown Cloud is as much to blame as greenhouse gases for the warming observed in the Himalayas over the past half century.

Rapid melting among the 46,000 glaciers on the Tibetan Plateau, the third-largest ice mass on the planet, is already causing downstream flooding late summer. But long-term worries focus more on the danger of drought, as the glaciers shrink.

The new report triggered an appeal from UN Environment Programme (UNEP) chief Achim Steiner, who urged the international community "to ever greater action" on tackling climate change.

Traditional ways a solution for natives on thin ice

Canadian natives struggling to keep their traditions alive are being told that the old ways can be life-saving for aboriginals who are on thin ice.

A four-year study in six northern Quebec communities into climate change by the Kativik Regional Government is recommending that if people want to avoid falling through thinning ice being blamed on global warming, they should use dog teams instead of snowmobiles.

"The switch from dogsled to snowmobile has had an impact on the security of transport," the report notes. "To minimize the negative impact on travel security of thin and unstable ice due to global warming, the use of sleds pulled by dog teams could be favoured during some periods of winter, such as the beginning."

The report makes plain the impact global warming is having on the traditional trail network of the north.

It stresses that dogs represent a "very efficient navigation device," able to sniff around for trails, signal when the ice is thin, and can help pull a sled out of the water should it fall through. The report quotes Inuit elders saying that the number of accidents increased in the north with the introduction of snowmobiles.

Arctic players poles apart on bears, caribou

Global warming is reshaping the Arctic landscape, but the speed and consequences of those changes are still unclear.

In the face of that uncertainty, scientists, conservationists and Inuit are having a tough time agreeing on how best to protect the Arctic's iconic wildlife.

Controversies playing out over the polar bear and Peary caribou have brought those issues into greater focus.

Polar Melting May Raise Sea Level Sooner Than Expected

The Earth's warming temperatures are on track to melt the Greenland and Antarctic ice sheets sooner than previously thought and ultimately lead to a global sea level rise of at least 20 feet, according to new research.

If the current warming trends continue, by 2100 the Earth will likely be at least 4 degrees Fahrenheit warmer than present, with the Arctic at least as warm as it was nearly 130,000 years ago. At that time, significant portions of the Greenland and Antarctic Ice Sheets melted, resulting in a sea level about 20 feet (six meters) higher than present day.

These studies are the first to link Arctic and Antarctic melting during the Last Interglaciation, 129,000 to 116,000 years ago.

"This is a real eye-opener set of results," said study co-author Jonathan T. Overpeck of The University of Arizona in Tucson. "The last time the Arctic was significantly warmer than present day, the Greenland Ice Sheet melted back the equivalent of two to three meters (about six to ten feet) of sea level."

Nation's oldest trees undergo growth spurt

If a grandmother suddenly started growing, something would be amiss. Now research has found that something similar is happening to the nation's oldest trees.

Clues found in old-growth tree rings from Michigan to Maine show an increasing growth spurt during the last century, possibly from global climate change, according to Neil Pederson, an assistant professor at Eastern Kentucky University.

Normally, trees, like people, slow down growing as they age, said Pederson. But ring patterns in oaks, poplars and cedars -- some up to 400 years old -- instead show trees started growing faster in recent decades.

Brazil, Alarmed, Reconsiders Policy on Climate Change

Alarmed at recent indications of climate change here in the Amazon and in other regions of Brazil, the government of President Luiz Inácio Lula da Silva has begun showing signs of new flexibility in the tangled, politically volatile international negotiations to limit human-caused global warming.

The factors behind the re-evaluation range from a drought here in the Amazon rain forest, the world's largest, and the impact that it could have on agriculture if it recurs, to new phenomena like a hurricane in the south of Brazil. As a result, environmental advocates, scientists and some politicians say, Brazilian policy makers and the public they serve are increasingly seeing climate change not as a distant problem, but as one that could affect them too.

Jaguars, blue macaws and giant armadillos roam the fickle landscape of Brazil's Cerrado, a vast plateau where temperatures range from freezing to steaming hot and bushes and grasslands alternate with forests and the richest variety of flora of all the world's savannas.

That could soon come to an end. In the past four decades, more than half of the Cerrado has been transformed by the encroachment of cattle ranchers and soybean farmers. And now another demand is quickly eating into the landscape: sugarcane, the raw material for Brazilian ethanol.

"Deforestation in the Cerrado is actually happening at a higher rate than it has in the Amazon," said John Buchanan, senior director of business practices for Conservation International in Arlington. "If the actual deforestation rates continue, all the remaining vegetation in the Cerrado could be lost by the year 2030. That would be a huge loss of biodiversity."

Early springs show Siberia is warming fast

Siberia is experiencing earlier springs, a study of satellite images has revealed. The trend is likely to be triggering more forest fires, say researchers, and to be linked to global warming.

In a study of a wide range of Siberian ecosystems, Heiko Baltzer of the University of Leicester, UK, and his colleagues found that from 1982 to 1999 spring began and peaked increasingly earlier for almost all the ecosystems.

The advance was greatest in urban environments, where the start of the growing season advanced by an average of 0.7 days per year – a total of 12.6 days over the 18 years. The advance was also significant in non-evergreen broadleaf forests – an average of 0.5 days every year.

The growing season is starting earlier because of warmer temperatures, which are causing the snow to melt earlier. "Global warming in Siberia is happening faster than the global average," says Baltzer. "This has been documented by the UN's Intergovernmental Panel on Climate Change."

Food sovereignty and the collapse of nations

It seems that Mr. Gaidar is basically saying that the collapse happened because a large portion of the population of the Soviet Union moved from the country to the city and stopped growing their own grain. But what is even more interesting to me is that that the author of the article himself seems not to make the connection or just skips over it in a bit of conditioning and goes on to blame the collapse on economics- on the inability of the Soviets to feed themselves not because there weren't enough people growing grain in that country but because of their inability to *buy* enough grain from other people to feed themselves because of decreasing oil and natural gas revenues. The idea that the

Soviet collapse was due in part to the fact that the Soviet Union gave up on its capacity for food self sufficiency (food sovereignty) in an effort to pursue industrialization seems to elude the article's author. And then from there implications for the continuation of the American empire and parallels about our own situation regarding food sovereignty started to pour out into my mind.

Russia seeks to ban Exxon gas exports to Asia

Moscow wants Exxon Mobil to ship gas from Sakhalin to Russia rather than Asian markets, the energy ministry said on Thursday, signalling a new round of pressure on the country's last big foreign-led energy project.

"The state representatives informed the investors' consortium about Russia's priority to supply gas from Sakhalin-1 to the domestic market," the ministry said in a statement following a meeting of Sakhalin-1's supervisory committee.

Exxon signed a preliminary agreement in 2004 to supply 8 billion cubic metres (bcm) of Sakhalin-1 gas to China's CNPC but it has also held talks with Japan and India, which want to import Sakhalin's gas as liquefied natural gas (LNG).

Russia's Gazprom, which has monopoly right to export Russian gas, asked the government in June to block the plan saying it would create shortage on the Russian domestic market.

Turkmenistan

Since the death of Saparmurat Niyazov, the US has been maneuvering to take patronage of Turkmenistan away from Russia. The new ruler, President Gurbanguly Berdimuhammedow, is trying to play both sides against the middle. Half-loyalty will buy him time, but soon he will have to make decisions.

Turkmenistan is an important pawn because it has the second largest Caspian oil reserves: they are the only serious competitor to Russian oil and gas in Europe.

Russian Ships Reach North Pole

An expedition aimed at strengthening Russia's claim to much of oil and gas wealth beneath the Arctic Ocean reached the North Pole on Wednesday, and preparations immediately began for two mini-submarines to drop a capsule containing a Russian flag to the sea floor.

The Rossiya icebreaker had plowed a path to the pole through an unbroken sheet of multiyear ice, clearing the way for the Akademik Fedorov research ship to follow, said Sergei Balyasnikov, a spokesman for the Arctic and Antarctic research institute that prepared the expedition.

"For the first time in history people will go down to the sea bed under the North Pole," Balyasnikov told The Associated Press. "It's like putting flag on the moon."....

....The voyage, led by noted polar explorer and Russian legislator Artur Chilingarov, has some scientific goals, including the study of Arctic plants and animals. But its chief goal appears to be advancing Russia's political and economic influence by strengthening its legal claims to the gas and oil deposits thought to lie beneath the Arctic sea floor.

The symbolic gesture, along with geologic data being gathered by expedition scientists, is intended to prop up Moscow's claims to more than 460,000 square miles of the Arctic shelf - which by some estimates may contain 10 billion tons of oil and gas deposits.

MacKay dismisses Russia's Arctic claim

Russian explorers dived deep below the North Pole in a submersible on Thursday and planted a national flag on the seabed to stake a symbolic claim to the oil and gas wealth beneath the Arctic Ocean.

A mechanical arm dropped a rust-proof titanium Russian flag onto the Arctic seabed at a depth of 4,261 metres, Itar-Tass news agency quoted expedition officials as saying.

"Look, this isn't the 15th century. You can't go around the world and just plant flags and say 'We're claiming this territory," MacKay told CTV's Question Period co-host Jane Taber.

The foreign affairs minister asserted that there was no threat to Canadian sovereignty in the Arctic, despite the latest claims by Russia.

"Our claims over our Arctic are very well-established," MacKay said in Charlottetown, where the federal Conservative Caucus is meeting this week.

Arctic sovereignty operation Nanook set to launch in Nunavut

Canada's eastern Arctic will be the scene of a simulated environmental spill and counterdrug operation next week as part of the Canadian Forces' latest Arctic sovereignty exercise.

Operation Nanook, a \$3-million, 10-day sovereignty and security exercise that begins Tuesday, will bring more than 700 army, navy and air force members to Nunavut, along with 30 Canadian Inuit Rangers and members of the RCMP, coast guard and various government departments.

Frankenforests: GE Trees Threaten Ecosystem Collapse

GE forestry research is already alarmingly prevalent across the globe. The United

States leads the world in research projects, with 150 tree test plots -- two-thirds of the world's known research areas -- and they are joined by Australia, Brazil, Canada, Chile, China, Finland, France, Germany, Japan, New Zealand, Portugal, Spain, Sweden, the United Kingdom and the United States.

Despite the prevelance of the practice, GE forestry has remained somewhat obscured by GE crops, which have raised more immediate health concerns, as forestry "doesn't seem to affect the daily shopping trip -- or at least, less visibly," according to Larry Lohmann, a researcher with U.K.-based Corner House, a nonprofit that fights for social and environmental justice.

"But the problems transgenic trees pose are just as severe. Whether it's endangering wild species or pollen drift, the fact is we're in danger of setting off a chain of events that's irreversible. We don't know what we're messing with," he says.

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