



## The Earth and Energy Round-Up: December 12th/15th 2007

Posted by [Stoneleigh](#) on December 15, 2007 - 3:06pm in [The Oil Drum: Canada](#)

Topic: [Miscellaneous](#)

### [Oil focus shifts eastward](#)

"We have no plans at all to raise royalties," said Mr. Boyd, a grain farmer from Eston, a town in west-central Saskatchewan where there are large heavy oil operations. "We feel that Saskatchewan has tremendous advantages now. We think that Saskatchewan is the place to be in terms of energy development immediately and into the future."

It's true that Saskatchewan has less potential as an oil producer than Alberta. Saskatchewan produces 425,000 barrels a day, all conventional oil, while Alberta yields 1.9 million b/d, including conventional oil and oilsands.

But when only conventional oil production is taken into account, Saskatchewan is a close second to Alberta, which yields 540,000 b/d. That's one of the areas most penalized by Alberta's new royalty terms, making it vulnerable to a flight of capital.

Besides, Saskatchewan's industry-friendly message is sure to resonate in the Canadian oil community, where scores of leaders, including Murray Edwards, Canada's top oil entrepreneur, are from Saskatchewan.

While many upset with Mr. Stelmach's royalty strategy feel they have nowhere to go politically (both the provincial Liberals and NDP opposition parties in Alberta are advocating even more punitive measures against the sector), they are still making a political statement by moving capital to Saskatchewan. Already, land sales and drilling activity in the province are booming, bolstered by the discovery of the Bakken play and oilsands deposits, while they have collapsed in Alberta.

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### [Bakken black gold](#)

Saskatchewan could be sitting on 25 billion to 100 billion barrels of sweet, light crude oil in the Bakken formation in the southeast part of the province, according to industry and government estimates.

By comparison, the heavy oil resource in west-central Saskatchewan, which is considered to have the greatest potential for future production, is estimated to be 25 billion barrels of oil in place.

The huge potential of the Bakken play has industry and government officials gushing with superlatives.

"We're excited about it," said Ed Dancsok of Saskatchewan Energy and Resources. "It's

### [The name of the game is Survivor](#)

The winds have shifted in the oil patch, as stubbornly low natural gas prices, higher production costs, a less friendly royalty regime and fleeing investors force smaller players to batten down the hatches or call it a day.

Just 24 months ago, Canada's junior oil and natural gas explorers were riding a massive boom. Now the good times have vanished and today's question is stark: Whether to struggle through, holding out till better times, or simply sell now, pack it in and get what you can before things get worse.

The decision will be a top priority in executive suites and boardrooms right now and through this winter for roughly half of Calgary's 450 or so juniors, most of which are losing money.

Going through door No. 1 means a company must be financially strong enough to keep afloat after the body blows inflicted by low natural gas prices, high costs and increasing royalties. Opting for door No. 2 means acknowledging the gig is up and that selling low is the best option as debt piles higher, growth rates slow and gas prices remain low.

### [EnCana to double its dividend](#)

EnCana Corp., Canada's biggest independent oil and gas producer, is cutting its planned capital spending in Alberta next year by \$500-million because of the province's new and costlier royalty regime — only half the amount it threatened to this fall.

However, unlike some other major Canadian energy producers that have been chopping their global budgets, EnCana also said early Wednesday that its total capital outlay will rise by about 13 per cent to \$6.9-billion (U.S.) next year.

The company said in a news release that the budget will show an increased emphasis on natural gas, both in the United States and the Deep Panuke project off Nova Scotia, and on its integrated oil sands, where spending is expected to double to about \$1.2-billion, split evenly between boosting production by 25 per cent to about 34,000 barrels a day and expanding capacity at the Wood River, Ill., refinery it co-owns with ConocoPhillips Co.

### [Petro-Canada to sign \\$7-billion Libyan development agreement](#)

Petro-Canada has signed a \$7-billion (U.S.) long-term deal with the Libyan National Oil Corp. on energy production sharing in the North African country....

....In an investor day session last month, Mr. Brenneman said his company was

interested in pursuing exploration opportunities outside Alberta, which is set to introduce a \$1.4-billion royalty hike this spring.

He cited Libya as a possible location, along with the eastern Arctic, the U.S. Rockies and the Baltic Sea.

### [Fraser Institute Global Petroleum Survey 2007](#) (PDF warning)

Newfoundland & Labrador is considered by petroleum industry experts as the worst province in Canada for investment in oil and gas exploration and development, according to the first global survey of upstream petroleum companies released today by independent research organization The Fraser Institute.

The Global Petroleum Survey 2007 ranks Newfoundland & Labrador in the same company as Russia, Iran, Pakistan, and Cuba as areas with policies that discourage investment in oil and gas exploration and development.

“Survey respondents were clear that the dispute between the government of Newfoundland & Labrador and companies looking to develop the Hebron field is not encouraging investment. They were especially critical of the government’s desire to have an equity position in the Hebron development,” said Gerry Angevine, senior economist with The Fraser Institute’s Centre for Energy Policy Studies and lead author of the survey.

Provincial taxation policies and a lack of available skilled labour were also cited as negative factors affecting Newfoundland & Labrador’s ranking, he added.

### [Grabbing for oil](#)

Like a great silver snake, the Athabasca River glides though a spongy-wet wilderness of spindly forests, lakes and marshes 650 miles north of the U.S.-Canada border.

Breathe deeply, though, and you catch a whiff of fresh, hot tar. In the river, fish are speckled with shiny, wart-like blisters. And in the tiny Indian village of Fort Chipewyan, people are coming down with leukemia, bile duct cancer and other diseases.

Those who aren't physically sick are worried sick. Much of their unease is directed upstream at a moonscape of strip mines, tailings ponds and clouds of dust and gases, including climate-warming carbon dioxide.

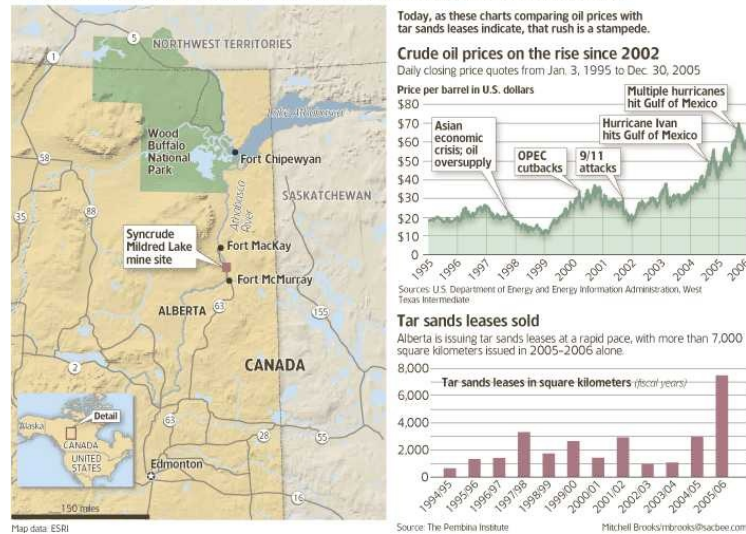
What's being clawed from the earth there may surprise you. It's America's next tank of gas....

....In coming years, oil development is expected to spider-web across a landscape more than three times as large as Lake Tahoe, making the Alberta oil field the largest industrial zone on Earth. Wetlands vital to migratory ducks and geese, trails worn smooth by centuries of wood buffalo and wilderness ponds where loons lift their crazy laughs will be lost.

"There is nothing on this planet that compares with the destruction going on there," said David Schindler, an ecology professor at the University of Alberta, Edmonton. "If there were a global prize for unsustainable development, the oil sands would be the clear winner."

### Pulling crude from the tar sands

As conventional reserves of crude oil tighten, the race is on in northeast Alberta, where fleets of dinosaur-sized trucks are tearing apart a rich mosaic of woods and wetlands to extract some of the dirtiest fossil fuel on the planet – more than two-thirds of which is exported to the United States. When crude oil prices climbed over \$50 in 2004, companies began rushing to the tar sands of Alberta as if it were a new Persian Gulf.



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## [Water Woes](#)

In a province rooted in entrepreneurialism, built on big dreams and bravado, millions of dollars in development plans are stalled today because of simple H<sub>2</sub>O.

Blessed with an abundance of riches in land, gas and oil, southern Alberta has encountered its first true geological limit: There simply isn't enough water to go around.

The breaking point arrived last year amid an unprecedented economic and population boom. In August 2006, the provincial government closed all strained rivers, streams and lakes south of the Red Deer River Basin to new water withdrawals.

Few people expected the province to turn off the tap so tightly or so quickly.

The ripple effect has not only disrupted the racetrack and megamall at Balzac. Dozens of land developers, businesses and municipalities are idling with uncertainty, their projects and growth plans stuck in limbo.

Once essentially free for the taking, water in southern Alberta now comes at a price that's inching higher by the day.

"Water is going to be the next oil," farmer Fred Munchrath said after one of the myriad votes concerning the Balzac development.

## [The Oilsands' Insatiable Thirst](#)

As Alberta's energy boom attracts new workers and investment to the province, it also strains a water supply already stretched to the limit, presenting a stark choice: What's more important, oil or water?....

....For four decades, the Athabasca has been a lifeline for oilsands companies, providing water crucial to the processes that produce black gold from tarry sands.

But the shores are getting increasingly crowded.

Several oilsands developments are poised to launch in the coming years -- about \$100 billion of investment clamouring to join Canada's great oilsands rush.

All need vast amounts of water.

Petroleum producers already use as much of the province's

water as every resident, business and industry in Calgary and Edmonton combined. And they have rights to triple that amount.

"The scale of development needs the world's attention," said Don van Hout, who led a canoe expedition this summer from the Athabasca's headwaters to its final destination in Lake Athabasca.

"It needs the world's help."

Once considered in abundance in the northern half of the province, water -- a key ingredient in oil and gas extraction -- is becoming a precious resource.

Some believe the water issue could eventually force Alberta to make a stark choice: water or oil.

### [Searching for hope on the Parched Prairie](#)

Water has always been scarce east of Drumheller, in the desert-like region nearly four times the size of Prince Edward Island.

The reverberations created by the province's economic boom are barely felt here.

Communities are withering away, but not without a fight.

A century-old battle to bring water to this starved prairie has gained a new life and is expected to head to cabinet again in the next few years.

But a long-standing proposal to divert water from the Red Deer River to the region remains as controversial as ever.

Some critics believe the Special Areas should remain as is -- that it was never meant to expand.

As other parts of southern Alberta now experience supply worries, they need look no further than the Special Areas to understand what a water-short future looks like.



### [Rethinking water use down to the last drop](#)

Many solutions to southern Alberta's supply crunch are being touted, from drilling for groundwater to creating regional water pipelines to building more dams and reservoirs. All of these proposals have drawbacks and critics.

Like the province's conventional oil and gas reserves, easily available water sources have been exhausted in southern Alberta.

And with a rapidly growing economy and population, the province can't afford to waste time to plan for alternatives, contends former environment minister Lorne Taylor, who led the creation of Alberta's Water for Life strategy.

If Alberta waits, Taylor believes the province could find itself in a water crisis.

"These are big problems. They are important problems," says the retired politician, now chairman of the Alberta government's new \$30-million Water Research Institute.

"We can't leave it alone. We don't have time to leave it alone."

### [The biggest environmental crime in history'](#)

BP, the British oil giant that pledged to move "Beyond Petroleum" by finding cleaner ways to produce fossil fuels, is being accused of abandoning its "green sheen" by investing nearly £1.5bn to extract oil from the Canadian wilderness using methods which environmentalists say are part of the "biggest global warming crime" in history.

The multinational oil and gas producer, which last year made a profit of £11bn, is facing a head-on confrontation with the green lobby in the pristine forests of North America after Greenpeace pledged a direct action campaign against BP following its decision to reverse a long-standing policy and invest heavily in extracting so-called "oil sands" that lie beneath the Canadian province of Alberta and form the world's second-largest proven oil reserves after Saudi Arabia.

Producing crude oil from the tar sands – a heavy mixture of bitumen, water, sand and clay – found beneath more than 54,000 square miles of prime forest in northern Alberta – an area the size of England and Wales combined – generates up to four times more carbon dioxide, the principal global warming gas, than conventional drilling. The booming oil sands industry will produce 100 million tonnes of CO<sub>2</sub> (equivalent to a fifth of the UK's entire annual emissions) a year by 2012, ensuring that Canada will miss its emission targets under the Kyoto treaty, according to environmentalist activists.

### [A cautionary tale of carbon capture](#)

Bachu's professional caution highlighted a stumbling block faced by global efforts to reduce waste-gas emissions blamed for global warming.

Who is responsible for making repairs, cleaning up damages and compensating victims if waste-gas storage sites spring leaks?

Alberta has nearly two decades of successes with about 50 disposal wells for "acid gas," a nasty byproduct of tapping natural gas contaminated with hydrogen sulphide and carbon dioxide. The oldest site has operated safely near the Edmonton suburb of Spruce Grove since 1990.

But greenhouse gas underground storage involves vastly higher volumes of waste, much larger geological containers, and coping with technical risks that will last for the rest of human history.

Alberta could store up to 10.3 billion tonnes of carbon-dioxide in porous rock reservoirs that have been tapped by oil and natural gas wells, the geological survey estimates.

### [Big Auto's race to get green](#)

The 1.8-litre Civic with a five-speed manual transmission had low-rolling-resistance tires, new panels under the chassis to improve airflow, new alloy wheels and a spoiler. The goal was to get to 6.5 litres of gas or less for every 100 kilometres travelled. They made it.

The Civic is one of 28 gasoline-powered 2008 model-year vehicles eligible for the credit. That's a significant increase from the 17 vehicles that generated rebates in the 2007 model year in a program that all auto makers but one have criticized as distorting the market and giving preference to buyers of vehicles from Toyota Canada Inc.

But even as they were blasting Transport Canada's ecoAuto rebate scheme and lobbying to have it overturned, vehicle companies were working feverishly on changes that got some vehicles on the rebate list, or eliminated levies of up to \$4,000 on the penalty side of the federal program.

### [Canada brings back climate funding](#)

After shutting down a federal climate research network last summer, the Harper government announced Monday that it would restore \$85.9 million in funding over four years to protect Canadians from the impacts of global warming.

The money will be used to help various communities and economic sectors adapt to impacts such as severe weather, the pine beetle infestations in Western Canada as well as crumbling infrastructure in the north.

But Environment Minister John Baird was unable to say whether the program would be any different than the Canadian Climate Adaptation and Impacts Research Network that it shut down last July.

Prime Minister Stephen Harper and the Conservative government are "hindering" the global campaign to reduce greenhouse gas emissions when Canada should be leading the fight, Ontario Premier Dalton McGuinty charged today.

McGuinty said privileged countries like Canada have a responsibility to deal with a climate change problem they helped create, but complained that the Conservatives are allowing greenhouse gas emissions to increase with their so-called intensity-based approach.

### [UN's top environment official blasts Canada on climate](#)

The head of the UN's climate change agency is a careful diplomat. So when he took the unusual step of firing a barb at Canada yesterday, it was a sign of how far the country's reputation has sunk.

Yvo de Boer portrayed Canada as a climate hypocrite whose demands might be received poorly by other nations. Ottawa is demanding cuts in emissions by Third World countries after failing to meet its own commitments, he said.

"I personally find it interesting to hear Canada, just a little while ago, indicating it would not meet its commitments under the Kyoto Protocol and now calling on developing countries to take binding reduction targets," he told a press conference yesterday at the Bali climate change conference.

"So I wonder how that's going to be received," he added.

### [Drought spurs creative thinking](#)

Georgia's water crisis would be worse if the state Environmental Protection Division weren't relaxing its rules so more water can be pulled from streams and more water can be sold from one utility to another.

As a result, the Bear Creek Reservoir in Jackson County, which serves Athens as well as other cities, is actually filling back up in the middle of a historic drought and could be full, without rain, by the end of February.

In Douglas County — where night patrols still prowl streets and turn off the meters of outdoor waterers — the county is making up for its water shortage by buying 6.5 million gallons a day from the Cobb County-Marietta Water Authority.

"If the EPD enforced the 10 percent reduction of water sales mandated by Gov. Sonny Perdue and we couldn't buy that water, our reservoir would already be dry," said Douglasville-Douglas County Water and Sewer Authority spokesman Michael Patton.

Across the state, the EPD is wielding newfound magnanimity in its role as the overseer of Georgia's water supply. It's speeding up the water permitting process, loosening water withdrawal regulations, and advising local authorities how to deal with the



### [Western States Agree to Water-Sharing Pact](#)



Facing the worst drought in a century and the prospect that climate change could yield long-term changes on the Colorado River, the lifeline for several Western states, federal officials have reached a new pact with the states on how to allocate water if the river runs short.

State and federal officials praised the agreement as a landmark akin to the Colorado River Compact of 1922, which first outlined how much water the seven states served by the river — California, Nevada, Arizona, Colorado, Utah, New Mexico and Wyoming — would receive annually.

The new accord, outlined by federal officials in a telephone news conference Friday, spells out how three downriver states — California, Arizona and Nevada — will share the impact of water shortages. It puts in place new measures to encourage conservation and manage the two primary reservoirs, Lake Mead and Lake Powell, which have gone from nearly full to just about half-empty since 1999.

The accord is expected to forestall litigation that was likely to have arisen as fast-growing states jockey for the best way to keep the water flowing to their residents and businesses in increasingly dry times.

### [L.A.'s water savings are just a drop in the bucket](#)

Cities throughout Southern California are urging conservation this year amid gloomy reports of a long-running drought in the Colorado River Basin and a near-record-low snowpack in the Sierra Nevada. A judge's August ruling to protect endangered smelt in the Sacramento-San Joaquin Delta could further curtail water deliveries from Northern California

Although rains have dampened the Los Angeles Basin several times in the last two weeks, the rainwater will do little for the many local cities that rely heavily on imported water. Los Angeles, for instance, traditionally pipes most of its water from the Eastern Sierra Nevada.

When Villaraigosa called for a 10% cut, he warned that a confluence of weather events-- such as a record-dry year and low snowpack -- threatened the city's water supply.

### Water from the Eastern Sierra

A diminishing snowpack and environmental concerns in recent years have led to less water being delivered to Los Angeles.

Annual deliveries from the Los Angeles aqueducts, in acre-feet of water

(Scale in thousands)



Source: Los Angeles Department of Water and Power

Los Angeles Times

### [Exxon plans LNG terminal offshore New Jersey](#)

Exxon Mobil Corp. hopes to build a \$1-billion (U.S.) facility off the New Jersey coast to receive and regasify liquefied natural gas, which could ease concerns of a natural gas supply crunch in the U.S. Northeast.

The largest U.S. oil and gas company said Tuesday it would file for regulatory approval for a floating liquefied natural gas (LNG) receiving terminal with the capacity to supply about 1.2 billion cubic feet per day to New Jersey and New York.

It plans to anchor the terminal, which it calls BlueOcean Energy, about 32 kilometres off the New Jersey coast and 48 kilometres offshore New York state.

Proposed LNG terminals around the country have been derailed or delayed due to security and environmental concerns, but Exxon's planned project's distance from shore could allay some of those concerns.

### [Ethanol plant's bankruptcy shows new risk for farmers](#)

The Mead bankruptcy case is evidence of a new risk for farmers as they stray from

their normal grain-selling channels to take advantage of higher bids from ethanol plants.

Unlike ethanol plants, grain elevators are licensed and bonded with the Nebraska Public Service Commission, which performs periodic inspections. If a grain elevator goes bust, the PSC takes control of the grain, property and bond proceeds, and distributes what is available to the grain sellers.

"Ethanol plants should at least carry a grain dealer's bond," said Gordon Ganz, owner of the Alvo Grain, an elevator in Ashland that is owed more than \$98,000 by E3 BioFuels. "Without a doubt."

A grain dealer's bond offers up to \$300,000 worth of protection for grain sellers.

### [More farmers seeing wind as cash crop](#)

At a time when most people choose to avoid the harsh winter winds that roar past corn stubble and whip up billowing dust clouds over table-flat fields, farmers in the Thumb of Michigan now talk about catching the wind and all the money that comes with it.

Michigan's first commercial wind farm--a collection of 32 towering turbines that conjure visions of H.G. Wells' "The War of the Worlds"--is scheduled to begin operating in a few weeks, spurring for some a near-gold rush mentality in this sparsely populated area.

Thousands of dollars in a guaranteed annual harvest come with each windmill placed on a farmer's land, and that lure has gone a long way toward interrupting the horizontal sameness of vast corn and bean fields.

### [Britain's wind power revolution](#)

Britain is to embark on a wind power revolution that will produce enough electricity to power every home in the country, ministers will reveal tomorrow.

The Independent on Sunday has learnt that, in an astonishing U-turn, the Secretary of State for Business, John Hutton, will announce that he is opening up the seas around Britain to wind farms in the biggest ever renewable energy initiative. Only weeks ago he was resisting a major expansion of renewable sources, on the grounds that it would interfere with plans to build new nuclear power stations....

....It means that within only eight years, Britain's offshore wind industry will be twice the size of that of any other nation in the world.

### [UK govt wind plan costly, misguided - Ecotricity](#)

The British government's latest plan to power every UK home with offshore turbines is a costly fantasy and ignores the potential of onshore wind, the CEO of green power

company Ecotricity said in an interview. On Monday the government said Britain could have up to 33 gigawatts of turbines churning out carbon-free power around its blustery coastline by 2020.

The target, enough to supply every home in Britain with clean energy, was met with widespread scepticism over cost, grid management issues, and the difficulty in obtaining enough turbines and labour in a market already struggling to meet demand.

### [Mother Russia seen as top dog among emerging markets](#)

Mr. Seymour expects that fiscal prudence to act as a buffer if global oil prices slide. Much of Russia's spectacular growth - like Canada's - has been driven by high oil prices. Oil, natural gas, metals and timber account for 80 per cent of Russia's exports. However, Mr. Seymour says that's all changing. "We are starting to see real contributions from light industry and the consumer sector." ....

...However, when many investors think of Russia they think of Yukos - the country's largest oil company before it was declared bankrupt by a Russian court last year after the Putin government charged management with tax evasion and its chief executive was sent to a Siberian prison. "There's a better relationship between government and industry now," Mr. Seymour says.

### [Russia forms state nuclear giant to compete with overseas rivals](#)

The Kremlin is seeking to restore Russia as a leading player in the global atomic power industry with a drive to create a state nuclear energy giant to compete directly with Areva, of France, and Westinghouse, which is owned by Toshiba.

President Putin is consolidating Russian civilian nuclear assets, including everything from uranium mining and enrichment to the design and construction of power stations, into a single company - Atomenergoprom.

With annual sales of about \$8 billion (£3.9 billion), Atomenergoprom is designed to be a nuclear equivalent to Gazprom, the state-controlled Russian gas monopoly, and forms part of a strategy to bolster the country's position in key international industries in which it has resources and expertise.

Atomenergoprom is set for rapid growth over the coming years, assisted by plans to build two nuclear power stations every year within Russia, starting in 2012 - a policy that will nearly double the share of nuclear energy capacity from 16 per cent to up to 30 per cent - as well as a renewed effort to land big nuclear contracts overseas.

### [Australia: Power sell-off 'is price rise insurance'](#)

The drought and renewable energy targets will continue to push electricity prices up

unless the NSW government moves forward with its privatisation scheme, Premier Morris Iemma said.

The NSW Government cabinet and caucus yesterday voted in favour of a proposal that would result in the Government leasing out its current power stations and selling all but the poles and wires assets of Energy Australia, Integral Energy and Country Energy.

The sell-off and leasing agreements will enable the private sector to build the new baseload generator, either gas or coal, required to meet demand by 2014 - saving taxpayers \$15 billion over the next 10 to 15 years.

The sale of the retail assets could also generate about \$10 billion, the report commissioned into the industry by the Government has suggested, bringing total savings to taxpayers of \$25 billion.

### [Australia: Consumers will be forced to get smart with energy use](#)

Every household and business in the state will be fitted with "smart meters" that tell people how much greenhouse gas they are using at half-hourly intervals, the State Government announced yesterday.

In theory, people with smart meters can calculate how many lumps of coal or turns of a wind turbine it takes to run a load of washing, although the Government was unable yesterday to say when the promised "early roll-out" of the smart electricity meters would take place.

### [Climate Change to Hit Australia Farm Exports - Report](#)

Climate change could hit Australian agriculture hard, cutting production of a wide range of goods by almost 20 percent and causing a significant impact on international trade, a report said.

The Australian Bureau of Agricultural and Resource Economics said in a study that Australian production of wheat, beef, dairy and sugar could decline by 9-10 percent by 2030 and by 13-19 percent by 2050 because of climate change.

"Australia is projected to be one of the most adversely affected regions from future changes in climate in terms of reductions in agricultural production and exports," it said.

"These changes would also have significant implications for international agricultural trade."

### [For peat's sake](#)





Initially, there was vehement denial. But, increasingly there is gradual admission. The facts that peat is a vital carbon sink and that disturbed peat is a significant source of carbon emission are being accepted by the oil palm industry.

Expansion of landbank by major industry players is the order of the day. More land – forested or degraded – is being converted into plantations. Spurred by escalating crude palm oil (CPO) prices and the hype over biofuel, oil palm ventures are spreading rapidly across Sarawak, Indonesia and Papua New Guinea.

Peat swamp forests, a feature of lowland forests, especially in Sarawak and the Riau, Jambi and Kalimantan provinces of Indonesia, are prime targets.

Although the industry has set up the voluntary compliance body called the Roundtable on Sustainable Palm Oil (RSPO) to tackle the harmful effects of their activities which include clearing, burning and draining of the water-logged forest that spew carbon dioxide into the atmosphere, there remain some quarters within the industry that are reluctant to assume responsibility for their actions.

### [WHO: Health sector needs to wake up to effects of climate change](#)

Rising temperatures have already directly or indirectly killed more than 1 million people worldwide since 2000, WHO has said, more than half in the Asia-Pacific, the world's most populous region. Those figures do not include deaths linked to urban air pollution, which kills about 800,000 worldwide each year.

Countries such as Nepal and Bhutan have already reported vector-borne diseases like malaria for the first time in higher elevations – probably because rising temperatures are pushing mosquitoes to those areas.

Elsewhere, rising sea levels caused by melting ice caps will contribute to salt water intrusion into clean drinking water, said Poonam Khetrpal Singh, WHO's deputy director of the region.

### [South Korea Counts Cost of National Park Oil Spill](#)

South Korea on Monday was tallying the environmental and economic cost of the worst oil spill in its history as thousands of workers struggled to protect an area known for its



nature reserve and vibrant marine economy.

The slick spread from a very large crude carrier on Friday after it was holed by a barge. Oil has now washed up in an area spanning more than 40 km (25 miles) of the region of Taean on the Korean peninsula's west coast, about 150 km southwest of Seoul.

The region is home to the Taean Haean national park, famous for its sandy beaches popular with tourists, marine farms and oyster beds.

### [Cashing in on climate](#)

China expects to raise \$1.5 billion by 2012 from a levy on sales of carbon credits, which it will channel into a government fund to raise awareness of climate change and cut emissions.

Chen Huan, acting director of the Clean Development Mechanism fund, said it would invest some of the cash in projects such as efficiency improvements at major industrial plants.

The Clean Development Mechanism, part of the Kyoto Protocol, allows developed nations, such as Canada, to pay for emissions credits from countries such as China so they can maintain greenhouse gas emissions back home.

China has been the top producer of the lucrative emissions credits under the system. Chen hopes money from international lenders, such as the World Bank and central government cash eventually will boost its coffers.

### [Hong Kong Stock Exchange may enlist in pollution fight](#)

As this city struggles under a daily cloud of noxious fumes belched from a combination of local traffic and factories and power plants across the nearby border with mainland China, the Hong Kong Stock Exchange is considering using its financial muscle as part of a solution.

The board of the exchange is due to weigh a proposal Wednesday for a pollution emissions trading system that could serve as a financial platform for mainland China and other Asian countries entering a burgeoning new business.

A feasibility study delivered to the board this week charts the way for Hong Kong to gain a share of the fast-growing international market in trading carbon emissions, implicated in global warming, and the types of local industrial pollutants that turn the skies here murky gray for most of the year.

For one of the region's leading financial centers, emissions trading is a potentially valuable new kind of product. Estimates of the size of the global emissions trading market by 2010 vary between \$40 billion and \$100 billion.

But it might also make a significant contribution to solving the city's alarming air quality problem in a way that suits its love affair with the free market and helps to develop an

effective emissions trading system in China, now thought to be the world's leading carbon emitter.

### [China's Mother River Under Threat](#)



The Yellow River snakes through northern China for more than 3,000 miles and is known as the country's mother river. Thousands of years ago, Chinese civilization grew up along its banks.

But it's also known by another name: China's sorrow. Over the centuries, its floodwaters have claimed millions of Chinese lives.

Now, though, the problem has reversed. For three years in the 1990s, the Yellow River — which 140 million people depend on for water — actually dried up before it reached the sea, due to overuse. And pollution on the river has reached horrific levels.

### [China, Iran sign \\$2B oilfield deal](#)

Iran said China's Sinopec would invest around \$2 billion US under a deal signed on Sunday to develop the huge Yadavaran oilfield, the kind of energy deal the United States has been trying to prevent.

Sinopec Group agreed in 2004 to take the lead in developing Yadavaran and to buy 10 million tonnes of liquefied natural gas (LNG) a year for 25 years. But talks to finalize the contract have been protracted, as in other Iranian energy deals.

China's apparently insatiable thirst for energy to fuel its industrialising economy is having severe consequences for international security and the global environment. In both areas, Beijing needs to develop and then demonstrate a sense of responsibility to match its awe-inspiring demand for oil and electricity.

To secure supplies of oil since the country became a net importer 14 years ago, Chinese companies have scoured the globe and not hesitated to strike deals with unsavoury regimes such as the one in Sudan. This week, Gholam-Hosseini Nozari, Iranian oil minister, announced a \$2bn contract with China's Sinopec to help develop the Yadavaran oil field. Mr Nozari issued a pointed warning to other countries that hesitated to invest. "They will lose opportunities," he said.

The effect of China's indiscriminate dealmaking in energy is often to undermine concerted international efforts to make resource-exporting countries change their behaviour, whether the target is Iran's nuclear programme or suspected genocide in Sudan.

Another victim of China's energy demands is the global environment. So far this year, China has added 90 gigawatts of new electricity generating capacity, more than the entire installed capacity of the UK grid. Almost all the new capacity is in coal-fired power stations, which produce large amounts of carbon dioxide (a contributor to global warming) and other pollutants.

### [Living the Diesel Shortages in China](#)



Long lines at petrol stations are common countrywide, and this is not limited to the east coast, as some western media have reported. All cities and all provinces are experiencing lack of adequate diesel. The obvious slowdowns in delivery of imported materials to factories from ports, missed loading dates for containerized shipment.

There are now holes in delivery drivers' pockets, since they are no longer able to earn a month's wage. Drivers paid by the trip are waiting up to 5-6 hours for a rationed 200

yuan of diesel per stop. This will buy them 40 litres of fuel – but first they have to drive around the city until they find an open station with diesel to sell. Truck drivers are basically working part-time now. They do not get paid to wait in line. Frequent talk about drivers changing occupations to earn a wage is common. They have to do something else for work to feed the family.

Contracts signed with a specified delivery date and late charges penalties and no longer valid. If your delivery is late by days or a week, that's life. Cancelled orders and partial delivery to customers overseas are now standard. A number of logistics company vehicles are grounded all along the coast from Shanghai to Shenzhen waiting for their 40 litres of fuel as lines spill out onto highways creating traffic jams on interstates or company vehicles parked in a lot not moving at all.

### [Timbuktu's climate change fight](#)

Despite some scientists' concerns that eucalyptus trees can drain large amounts of water out of the soil, Daouda Diarra from the World Food Programme in Mali says they are a good choice in the desert environment.

"Eucalyptus is especially recommended for its rapid growth and the protection it gives against strong winds," Mr Diarra says.

"In dry zones, a five-year-old tree's root system actually pumps water back into the water table."

The co-operative's president, Zeinabi Maiga, says they can now grow beans and other vegetables on land which was previously useless.

"Before the co-operative project started, our husbands were always away from home looking for work," she says.

"But now they don't have to go because we can grow food here."

Mrs Maiga says there have been other benefits too: "The men always used to take decisions for the family, now the women are also making a contribution."

### [More than half of Amazon will be lost by 2030, report warns](#)



Climate change could speed up the large-scale destruction of the Amazon rainforest and bring the "point of no return" much closer than previously thought, conservationists warned today.

Almost 60% of the region's forests could be wiped out or severely damaged by 2030, as a result of climate change and deforestation, according to a report published today by WWF.

The damage could release somewhere between 55.5bn-96.9bn tons of carbon dioxide into the atmosphere from the Amazon's forests and speed up global warming, according to the report, Amazon's Vicious Cycles: Drought and Fire.

Trends in agriculture and livestock expansion, fire, drought and logging could severely damage 55% of the Amazon rainforest by 2030, the report says. And, in turn, climate change could speed up the process of destruction by reducing rainfall by as much as 10% by 2030, damaging an extra 4% of the forests during that time.

### [UN warns on climate change-related conflict](#)

Governments must invest more in preventing climate change-related conflict or else face myriad crises around the world as global warming triggers disputes and exacerbates existing insecurity, the United Nations warned in a report launched on Monday.

Water scarcity, falling crop yields, rising sea levels, more frequent extreme weather events and mass migration are just some of the potential sources of tension if governments do not develop and implement a credible strategy to combat climate change, described the UN Environment Programme study released on the sidelines of climate negotiations in Bali, Indonesia....

....Potential examples given in the report, titled Climate Change as a Security Risk, ranged from the drought-induced tension in Africa's Sahel zone to glacial melt in the Himalayas and Andes and increased storms and floods in South Asia and the Caribbean.

Hans Schellnhuber, one of the authors, said many parts of Africa are especially vulnerable. "From Senegal to the Horn of Africa, the predictions on climate change are



very bleak so we will have no chance to stabilise the situation unless we have an environmental policy that works,” he said.

### [India on climate conflict list](#)

India, Bangladesh and Pakistan are among potential hot spots where climate change could aggravate tensions, trigger violence and spawn conflict, a report released at the Bali climate meet warned today.

Extreme weather events, melting glaciers and sea-level rise, and an increasing number of climate refugees could overwhelm countries, according to the report prepared by German and Swiss researchers.

“Climate change will overstress many societies’ adaptive capacities... this could result in violence jeopardising national and international security to a new degree,” said Hans Schellnhuber, the director of the Potsdam Institute for Climate Impact Research and lead author of the report.

In South Asia, Himalayan glacial retreat will threaten water supply, monsoon changes could harm crops, and sea-level rise and cyclones could threaten towns along the densely populated Bay of Bengal, the report said.

“These dynamics will increase the social crisis potential in a region already characterised by cross-border conflicts (India and Pakistan), unstable governments (Pakistan and Bangladesh) and Islamism,” it said.

### [Current Melting Of Greenland Ice Mimics 1920s-1940s Event](#)

Two researchers here spent months scouring through old expedition logs and reports, and reviewing 70-year-old maps and photos before making a surprising discovery. They found that the effects of the current warming and melting of Greenland 's glaciers that has alarmed the world's climate scientists occurred in the decades following an abrupt warming in the 1920s.

Their evidence reinforces the belief that glaciers and other bodies of ice are exquisitely hyper-sensitive to climate change and bolsters the concern that rising temperatures will speed the demise of that island's ice fields, hastening sea level rise.

### [A hawk-eyed addition to Canada's Arctic arsenal](#)

A Canadian satellite is to blast into orbit this week with the explicit goal of monitoring the country's environment and natural resources from space.

But in the age of global warming, the high tech eye-in-sky, called Radarsat-2, could soon be playing a pivotal role in defending Canada's territorial claims in the high Arctic.



"The ice in the north will continue to melt and that means ... international ships will be going through the Northwest Passage," said Luc Brulé, who is project manager for Radarsat-2 at the Canadian Space Agency. "So we need ways and means to control that passage because these are Canadian waters ... and Radarsat will help us better monitor what's happening up north."

From an altitude of 800 kilometres, the Canadian satellite will be able to pinpoint any foreign vessels - and neither the darkness of night nor stormy weather can obstruct its view.

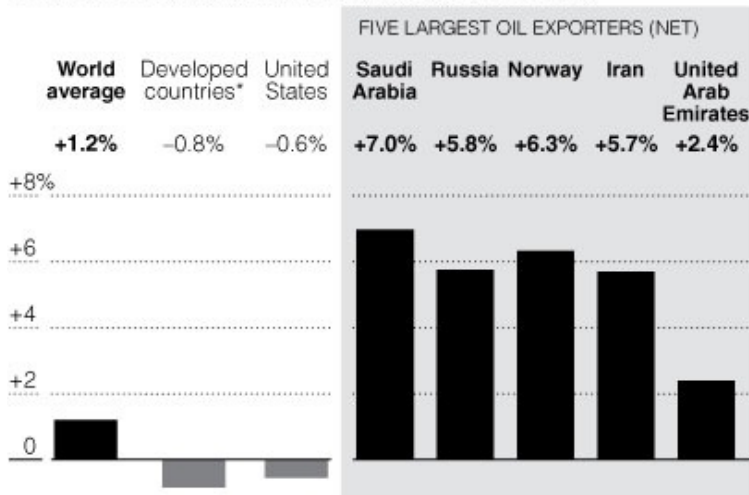
The satellite will use cloud-penetrating radar, rather than a conventional optical camera, to capture images of what's happening on the ground. Nothing bigger than a family car can hide from its gaze.

[Oil-Rich Nations Use More Energy, Cutting Exports](#)

**In Oil States, Homegrown Demand**

Oil consumption grew sharply last year in many of the biggest oil-producing countries, driven by rapid economic growth. Analysts say this is adding to pressure on global supplies.

CHANGE IN PETROLEUM CONSUMPTION FROM 2005 TO 2006



\*30 countries in the Organization for Economic Cooperation and Development.

Source: Energy Information Administration

THE NEW YORK TIMES

The economies of many big oil-exporting countries are growing so fast that their need for energy within their borders is crimping how much they can sell abroad, adding new strains to the global oil market.

Experts say the sharp growth, if it continues, means several of the world's most important suppliers may need to start importing oil within a decade to power all the new cars, houses and businesses they are buying and creating with their oil wealth.

Indonesia has already made this flip. By some projections, the same thing could happen within five years to Mexico, the No. 2 source of foreign oil for the United States, and soon after that to Iran, the world's fourth-largest exporter. In some cases, the governments of these countries subsidize gasoline heavily for their citizens, selling it for as little as 7 cents a gallon, a practice that industry experts say fosters wasteful habits.

“It is a very serious threat that a lot of major exporters that we count on today for international oil supply are no longer going to be net exporters any more in 5 to 10 years,” said Amy Myers Jaffe, an oil analyst at Rice University.

## [The Ethyl-Poisoned Earth](#)

Some historians have argued that Midgley's tetra-ethyl lead was a necessary evil; one which hastened the progress of efficient engines, thereby advancing the economy and contributing to victory in World War II. It is worth noting, however, that in the early years of Ethyl's availability, basic refinery advances boosted the base octane of fuel by 20-30 points, whereas Ethyl additive only boosted it by about nine points.

In retrospect, Ethyl's octane improvements were somewhat overstated, and the product owed most of its success to crafty marketing, misleading research, and chronic government incompetence. Whatever Ethyl's benefits, it saturated the planet with an insidious poison, and the true magnitude of its past, present, and future harm are yet to be known.



## [The garden of the future?](#)

Imagine a garden that needs no weeding, watering, digging or feeding and can be left to look after itself for weeks, even months, on end. Go further: it's organic, wildlife-friendly, disease resistant, reduces your weekly food bill and brings fashionable foraging to your doorstep.

It might sound too good to be true, but this garden can be a reality for anyone with some outdoor space, whether it's the backyard of an inner-city terrace or the grounds of a country vicarage.

Just over a year ago Jennifer Lauruol's modest garden at her home on a new housing estate in Lancaster amounted to little more than a lawn that the previous owner's dog had been peeing on for the past four years. Others may have seen stained grass, but Lauruol's vision was to mimic a system of planting that goes back to the Aztecs but was reinterpreted by the late Robert Hart, a visionary gardener who brought the idea to Britain in the 1960s and named it "forest gardening".

Studying the woodlands and forest around his Wenlock Edge home on the Shropshire/Wales border, Hart realised that they were both productive and self-maintaining. He set about rearranging his own garden on forest principles with edible layers of self-sustaining perennials that would provide food, fuel and medicines, as well

as support wildlife. His philosophy was recorded in two books, *The Forest Garden* and *Beyond the Forest Garden* (Green Books), both published shortly before he died in 2000.

### [Parents should pay climate change tax on extra kids: expert](#)

Parents who have more than two children should be charged a lifelong climate change tax to offset the effect of their extra greenhouse gas emissions, an Australian medical expert has proposed.

They should pay 5,000 dollars (4,400 US) a head for each extra child and up to 800 dollars every year thereafter, according to the plan published in the *Medical Journal of Australia*.

In contrast, contraceptives and sterilisation procedures would be eligible for carbon credits, suggested Professor Barry Walters at the King Edward Memorial Hospital in Perth.

"Every family choosing to have more than a defined number of children should be charged a carbon tax that would fund the planting of enough trees to offset the carbon cost generated by a new human being," he wrote.

### [Carbon cost of Christmas dinner](#)

A carbon footprint equivalent to 6,000 car journeys around the world will be produced by the UK tucking into Christmas dinner, researchers say.

It is claimed the UK's love of the traditional turkey dinner will generate 51,000 tonnes of carbon dioxide.



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