



THE CONSERVER



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SPRING EDITION

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LETTER FROM THE EDITOR

***Dear National Council of Women of Canada
and National Council of Women of Canada
Education Fund Members and Supporters,***

If you have read our first two newsletters, viewed our NCWC web site, filled out our Water/Energy Conservation survey, or received our steady stream of e-mail articles, you will no doubt be aware that the purpose of our project is to educate as many people as possible about the innumerable connections of water and energy, so that positive change may take place.

To do this, we aim to connect our readers to a great deal of solid information, through articles in the CONSERVER and on our web site, connections with good resource materials and networks e.g. the Riverkeepers, the Energy Vision Network, Minewatch, Great Lakes United, and the latest in up to date information from news sources and e mails from others across the country.

In this Spring issue of the CONSERVER, we hope you will get a taste of the excitement we feel about the upcoming June 6th NCWC Education Fund Annual General Meeting in Prince Albert, Saskatchewan, featuring well known writer Andrew Nikiforuk, who will speak on **“The Myth of Abundance: Water and the Future of the West.”** We know you will be shocked by his article (page 2) about the huge devastation caused to date- and the potential for disaster that lies ahead - if we don't solve the Tar Sands crisis.

Andrew Nikiforuk's message is then reinforced in a review of his dynamic 'call - to - arms' book, Tar Sands, Dirty Oil and the Future of the Continent, by our project researcher Dr. John Bacher; the speaking notes of Dick Peters, Prairies North Network Co-ordinator of KAIROS, who was a panelist at our NCW Education Fund 2007 AGM in Regina; and, Dr. Bacher's additional book review of William Marsden's book, 'Stupid to the Last Drop: How Alberta is Bringing Environmental Armageddon to Canada (and doesn't seem to care.)'

And finally, we attempt to lure you to our web survey (at www.ncwc.ca) by including Water/Energy Survey questions and some of your comments, related to our role in wasted energy and the ways we could try to move towards a better, hopefully, oil-free future.

***Gracia Janes, Water/Energy Connections
Project Co-ordinator &
President NCWC Education Fund***

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Quotables



Dirty Canadian Oil Vs America's Green Economy

Andrew Nikiforuk

"America's increasing reliance on Alberta's tar sands directly challenges President Obama's vow to break the US addiction to "dirty, dwindling and dangerously expensive" oil. For this reason, the world's largest energy project will likely dominate political discussions between Canada and the United States for a long time.

Seven years ago, Canada quietly surpassed Saudi Arabia as the United States' major supplier of oil by rapidly exploiting shallow deposits of a tarry bitumen that industry calls "difficult oil." This badly degraded unconventional resource has little market value unless extensively upgraded and refined. It won't even move through a pipeline without being diluted by light oil.

But switching from bloody light oil to dirty heavy oil has many defenders. For starters, Canada's tar sands, the world's second largest petroleum reserve, are a vast and secure resource. Better still, no money spent on Canadian bitumen can be redirected to fundamentalist sects or Middle East insurgencies.

But replacing Arabia's tainted light oil with bitumen is no direct pipeline to energy security. It's more like switching your family's mortgage from Countrywide Financial to Bear Stearns.

The million barrel a day project, the world's most expensive oil, has already created monstrous environmental problems. While dinosaur-sized shovels and trucks excavate city-sized mines, energy-guzzling steam operations must heat up deeper formations to 250 degree Celsius. Since the 1970s the open pit mines have moved enough earth to build seven Panama Canals. Incredibly, the steam operations will consume nearly \$200-billion (CDN) worth of natural gas in the next decade and now threaten groundwater throughout the world's third largest watershed.

One of the biggest costs of bitumen remains toxic waste. The bitumen mines make ungodly lakes of



Andrew Nikiforuk is a Calgary-based business reporter and the author of *Tar Sands: Dirty Oil and the Future of a Continent*. He grew up in California.

pollution that are as poorly regulated as coal mine tailings in the United States. Today more than a dozen toxic ponds --among the world's largest impoundment's of such waste- now occupy both sides of the Athabasca River. They contain bitumen, phenols, polycyclic aromatic hydrocarbons, cyanide and naphthenic acids (carcinogens and fish killers, all). These ponds occupy 120 square kilometres of forest along the Athabasca River and contain enough sludge to fill 300 Love Canals. Even Canada's timid National Energy Board, calls the buildup of these leaky ponds "daunting."

Unlike oil from Texas or the North Sea, bitumen contains a hellish number of carbon atoms and also requires brute amounts of energy to produce. Although no agency or government has yet done a reliable study on mine to car emissions from the tar sands, industry experts have a good idea. They estimate that North Sea oil has a carbon dioxide footprint of 10 kilograms per barrel. In contrast bitumen wrenched from the boreal forest ranges from 50 to 300 kilograms of carbon dioxide per barrel.

Meanwhile carbon intensity of the \$200-billion project has paralyzed the Canadian government. It now behaves much like Bush-Cheney clones or apologists for climate change deniers. In the last 10 years Canada has spent \$6-billion on climate change programs, but not met a single target. The tar sands now makes more carbon than the entire nation of New Zealand. In the absence of any national energy plan or even renewable energy targets, Canada has placed all of its hopes on an expensive and unproved funeral service: carbon capture and storage.

Quotables



Bitumen also eats water. It requires approximately three barrels of Athabasca river water to produce one barrel of bitumen. A US Congressional report issued last year wondered if there was enough water to keep the river healthy or “meet future needs of...industry.”

The project, which plans to grow to three million barrels a day, now runs on natural gas as a feed stock. Every day the steam plants gobble enough of the blue flame to warm six million Canadian homes in the tar sands. In many ways Canada is now sacrificing its energy security to fuel a continental addiction to oil. Many industry executives bluntly compare the using of natural gas to produce bitumen to burning all the Picassos in a museum in order to keep the visitors warm.

Global investors, environmentalists, aboriginals and Canadian auditors are asking hard questions about the unconventional water, energy and carbon footprint of bitumen. The US Congress recognizes that environmental liabilities created by Canada's tar sands extraction might well curtail excavation of the poorer grade deposits in Utah and Alabama.

In the end, Canada's tar sands won't solve any of America's critical energy problems or fund a greener and more independent economy. But, for the short term, the future of tar sands production really rests in the hands of US policy makers and consumers. In fact America's appetite for oil will likely determine the pace and scale of the tar sands production. With undisciplined consumption the American people will accelerate and expand this "environmental freakshow" (an industry expression) much the same way they funded Saudi extremism. But with limited use gasoline, buyers could transform the project into a temporary supply while the continent rapidly renews its economy with green power.

For Obama the choice should be clear: end the US slavery to oil or become a slave to the tar sands. If America is serious about lessening its deadly dependence on oil, dirty or bloody, then US dollars must buy green energy, locally, and with US technologies.

The alternative is to get stuck in Canada's sand box.”

Oil and Water- The True Cost of Tar Sands- notes from a presentation by Dick Peters in Regina at NCWC's 07 Annual General Meeting

“The wealthy, and some not so wealthy, countries have an almost unquenchable thirst for oil: and Canada is rushing to meet the demand through the Alberta's major oil producing projects---the tar sands. These projects are creating good jobs, huge profits for corporations and healthy government treasuries--and we're told North America's supply is more secure.

If these are the benefits, what are the costs? The impacts of this massive development are being felt beyond Alberta and the costs include climate change, watershed damage, and concerns about human rights, and the absence of public consultation. Without water, the tar sands wouldn't be worth much. The tar sands projects have an enormous impact on water quality, threatening watershed destruction, over-extraction, and contamination.

About Watershed Destruction: The thick black muck that is tar sands lies beneath a layer of boreal forest and bog. This “*overburden*” --trees, plants, soil, and waterways--must be stripped away from the top of the underlying deposits. Hundreds of square kilometers of forest and streams are vanishing. The industry claims that total restoration of the original forest is possible but it's difficult to see how a complex ecosystem, adapted to harsh, cold growing conditions, can be replaced. David Schindler, Professor of Ecology at the U of A, compares the reclaimed land to “*a golf course where the lawnmower is broken ---a hard land with a little pond at the bottom*”. According to Schindler, only about 2% of the wetland area have been reclaimed.

What about Over-Extraction? Enormous amounts of water are needed to separate oil from sand. In 2004, 30 the major corporations were allocated 138 billion litres of water for the year. Once the **projects are fully developed, they will use 175 million litres a day in an energy intensive** process that until recently was not considered economical.

One of the reasons extraction is so viable is the free access which the government provides to the Athabasca River. Running north through a very

fragile ecosystem, it's the only major river that has no dams, and until now no extensive water extraction. Steam and water are forced through the sands that have been mined, or are injected into the sands that lie beneath the forest. It takes approx 5 gallons of water to extract each gallon of oil; Water from this primary process is reused where possible, bringing the ratio to approximately 3 gallons of water for every gallon of oil.

What about the Contamination? By the time the water is ready for disposal, it's filled with silt and contaminated with a wide range of chemicals that can't be returned to the environment. It must be removed from the watershed and stored in enormous ponds, some of which are larger than the natural lakes in the area--If you know what used oil looks like, just imagine what these vast stretches of contaminated, dead water must be like --It's an incredibly devastating experience to actually see them .

Whose Land? Whose Health? The damage to the land and water is carried out by the oil and gas corporations, aided by the poor long range planning by government. Scrutiny is limited because the oil sands are relatively remote, and lie under Aboriginal treaty land in a fairly thinly populated area. Aboriginal communities are struggling to make themselves heard. Last year CBC carried stories focussing on the community of Fort Chipewyan on the shores of Lake Athabasca. The doctor in that community wonders if the large cluster of rare cancers and other diseases occurring among the population there are related to water contamination from tar sands----after this public exposure by the CBC, the Alberta government agreed to hold a review.

Whose Responsibility? The tar sands can't move ahead without federal oversight and approval, including legally required environmental impact assessments. Many of these have not been carried out. For instance, last year the Federal Court of Appeal allowed Petro - Canada to bypass a comprehensive environmental assessment of it's Fort Hills Oil Sands Project. Governments are approving expansion so rapidly that the Town of Fort Mc Murray has requested that the pace of development be slowed---in order to allow for more sustainable development of the tar sands and the infrastructure needed for the workers.

Groups from First Nations and the Province of Alberta are also resisting the pace of development and raising public awareness about the cost to the environment. They remind us that future generations rely on this land, and that Canada's promise to the international community is being broken largely due to tar sands operations. We live in an economy and consumer society that relies on oil, and that makes it hard for all of us to acknowledge it's true price.

Dick Peters is the Network Co-ordinator, KAIROS, Prairie North Region



Bits and Bytes

Water/Energy Connections Survey :

Questions about Transportation

10. When travelling to work (business or volunteer), I

- 5) always walk, use public transit or bicycle.
- 3) sometimes walk, use public transit or car pool.
- 0) always use the car and drive alone.

11. When running errands and making visits, I

- 5) always plan ahead to combine them in one trip.
- 3) sometimes plan ahead to combine them in one trip.
- 0) use the car whenever I need to.

12. When (if) next buying a car, I

- 5) will buy the most fuel efficient vehicle.
- 3) will buy as fuel efficient a car as I can afford.
- 0) will buy the kind I like regardless of its fuel efficiency.

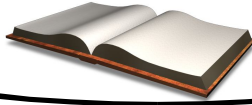
13. When buying food, I

- 5) buy as many foods grown as close to home (in season) as possible.
- 3) sometimes buy locally grown foods.
- 0) buy the cheapest no matter where they are grown

SOME COMMENTS FROM SURVEY RESPONDENTS

- * wear extra sweaters and socks to keep warm when sitting rather than turning the thermostat up.
- * put heavy blankets inside the garage door.
- * don't drive too fast and only shop at one store or plaza.
- * need more bike lanes and better public transportation

From the Pages of



Andrew Nikiforuk Tar Sands: Dirty Oil and the Future of the Continent

Co-published by the David Suzuki Foundation and Greystone Books-2008

Reviewed by Dr. John Bacher, Project Researcher

In "Tar Sands: Dirty Oil and the Future of a Continent", author Andrew Nikiforuk evocatively describes the blight of the Alberta Tar Sands upon the continent. Blessedly he is not content simply to curse the darkness, but in the end prescribes a reasonable 11 point solution as to how Canada can end its addiction to dirty oil.

Nikiforuk is not totally bleak either in his accounting of the various battles with tar sands development. He cites the successful struggle to save Marie Lake, "a jewel of clarity and quality", among Alberta's precious waters. The lake was threatened by schemes for underground tar melting and was about to receive "sonic blasts from floating air cannons". In response, "Hundreds of cottagers and local landowners mounted a battle for Marie Lake", which changed the mind of Alberta Premier Ed Stelmach. Even here however, it helps when the protestors are well connected. The leader of the fight was Don Savard, the retired senior Vice-President of the Enbridge Pipeline Corporation. In contrast, in Sarnia's Aamjiwanaang First Nation, which suffers from oil pollution from tar sands upgraders, where 40 per cent of pregnant women experience miscarriages, "calls for a federal investigation have gone unheeded."

In most cases, tar sands development proceeds unchallenged, like the rampaging riders in the Book of Revelation. Nikiforuk documents how Alberta's grim example encourages imitators in the area of "unconventional oil", through its approach of petroleum 'at any price'. For instance, there are those who would apply similar 'war-on-nature' strategies to Utah's Tar Sands, and Colorado's Shale Rock. While these unconventional oil sources have even less oil energy to extract than the tar sands and so offer more opportunity for diabolical horrors, Alberta's success is being touted as a justification for them by their backers.

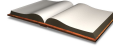
Nikiforuk shows how at least one of the futuristic scenarios of tar sands development, has actually

already been exceeded - that of the grand strategist of Tar Sands extraction in Alberta, the colourful defender of nuclear war, Herman Kahn, (who was the model for the mad scientist in the movie, Dr. Strangelove.) While Kahn suggested 50,000 guest workers be imported, the number for 2007 was 100,000. Such legal "guest workers" now work in the tar sands from places as far afield as Fiji and China. Regarding working conditions in the Tar Sands, Nikiforuk notes that, "Abuse of guest workers is so widespread that the Alberta government handled 800 complaints in just one three-month period in 2008." Although in 2007 the boom killed 154 people on the job and injured 34,000, here, "Prosecutions for workplace health and safety violations are as rare as environmental investigations."

What is not usually understood in the sunny calculations of tar sands production, is that the 'easier-to-mine', open pit and underground (steam assisted gravity drainage), methods for tar sands, now use the 'easier-to-exploit', and richer, resources. Hence, greater use of natural gas and water will be called upon to exploit the less bitumen-rich tars. With deeper deposits more aquifers will have to be drained for more water, and more natural gas used to boil them, to melt out the tar. This would create a situation where the entire natural gas supply of western Canada would be dedicated to the tar sands by 2025.

Nikiforuk provides a vivid description of the most horrific aspect of tar sands abuse of the earth, their tailings ponds, which now cover some twenty-three square miles of former boreal forest wetlands. Based simply on the projects that have been already approved, these will expand to eighty five square miles in only ten years. The largest pond covers 14 square miles and holds 19 billion cubic feet of toxic waste. Many duck deaths from the ponds go unreported and Nikiforuk points out that some birds struggle to survive after landing on the deadly waters, with native hunters finding birds 135 miles north of the ponds, nearing death.

One of the most bizarre aspects of the tar sands described by Nikiforuk, is that of tailings ponds located on a former island in the Athabaska, called



Tar Island because even before mining took place here bitumen would ooze down its banks. The “*ponds leak so routinely*”, that they “*are surrounded by medieval-looking moats equipped with pumping stations to return the seepage to the ponds.*” These measures are not very effective since toxins seep into the river at a rate of one million gallons a day. As a result, the toxic mixture is being moved to a new pond, and industry has congratulated itself on its “*incremental learning*”.

Part of the reason for the tar sands debacle is that the ecosystem of boreal forest wetlands has in the past been widely denigrated as “*mere muskeg*”. Nikiforuk outlines how these threatened swamps are actually important carbon sinks. which “*now sequester or bank twice as much carbon as a tropical forest*”. He eloquently describes tar sands projects as “*opening up a bank vault to a gang of thieves*”, destroying wetlands whose water cleaning properties bring ecological services worth \$1,064 an acre. Such folly amounts to “*Global freak economics*”, of excavating “*one of Canada’s best carbon sinks and weather stabilizers to produce a product with three times the carbon foot print of conventional oil.*”

Nikiforuk details how schemes to melt tar sands with atomic bombs have been replaced by proposals for nuclear reactors, to be placed on the Peace River, and Lake Diefenbaker, the source for 40 per cent of Saskatchewan’s water supplies. The reactors would help develop a lower grade form of tar sands than is now being extracted from , called the Carbonate Triangle. It is a 27,000 square mile area, where the bitumen is locked in dense limestone and heavily karsted rock. If this were to be developed, the favourite method by industry is electrical heaters with thousand foot vertical tubes. Only nuclear power could provide bitumen at production costs of \$30 a barrel, and some accounts estimate that 14 reactors would be required.

Nikiforuk quite properly dismisses what he terms “*idiotic notions of carbon capture and storage*”, being prompted by the Canadian and Alberta governments. The act of capturing the carbon can eat up nearly 30 per cent of the energy produced by a tar sands development. Carbon can also leak out

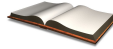
of such encasements.

Rejecting the \$16 billion boondoggle of carbon capture, Nikiforuk turns to what he calls the “*Twelve Steps to Energy Sanity.*” Indeed these are sane but, often difficult to achieve measures. One visionary step is to adopt a system similar to Norway’s dedicated pension fund for government revenues from oil. Another is “*funding a new passenger railway system...powered by hydro-generated electricity.*” A complimentary objective is the author’s hope that “*Instead of building more highways to suburbia, Canada should devote all infrastructure spending to low-carbon alternatives such as walkable communities.*” Unfortunately, residents of Ontario, faced with massive schemes of highway expansion, know that achieving such goals will not be easy. Nikiforuk is to be commended for exposing the many nasty faces of the tar sands, and showing Canadians very clearly that no matter how hard it will be to wean our selves from oil , it is necessary if we are to protect and preserve Canada’s water, air, soil and vital eco systems and species.

Stupid to the Last Drop: How Alberta is Bringing Environmental Armageddon to Canada

(And Doesn’t Seem To Care) by **William Marsden**, Vintage Canada. Published 2007, updated to 2008 edition -Reviewed by Dr. John Bacher

One of the nicest aspects of William Marsden’s book, “Stupid to the Last Drop” is how well the author puts Alberta’s tar sands mess into historical and global perspective. This is best done in his compelling account of past proposals to use underground nuclear explosions to help heat up the tar sands to get the oil out. Marsden exposes how it was only the federal government’s concerns about nuclear weapons, sparked by the Bomarc controversies of the late 1950s, that stopped such mad schemes. Marsden notes that the folly of today’s tar sands development, reflects the same dare devil attitude that was present during the age of atomic delusions. Oil companies risked the collapse of much of the province under what



geologists called *“the tired mountain syndrome”*. This was the danger, Marsden explains, *“that the earth would simply collapse under the strain of repeated subsurface nuclear explosions.”*

While nuclear engineering has not caused the feared mammoth scale collapse of the earth's crust, Marsden compellingly documents some of the consequences of its use in the former Soviet Union, where from 1965 to 1990 138 peaceful nuclear explosions were conducted and the result was widespread nuclear contamination of water and oil. Today oil from some regions is so contaminated that refineries will not accept it, and the Votkinsk water reservoir, the Kama River basin and the Volga River basin are all at risk from the continuing radioactive contamination. These dangers were not predicted in the laboratory studies conducted to justify nuclear explosions for oil development, and Marsden says this should serve as a good warning to those who defend nuclear use for tar sands development.

Marsden also warns that the difficulty in predicting the consequences of tar sands development is compounded by the Alberta government's narrow vision over the last twenty years i.e. to impose a moratorium on scientific research and new environmental regulations until the tar sands are all under commitment for development. This is especially worrisome because of the problem of Alberta's steadily increasing aridity, as has documented by the historical studies by aquatic ecology expert, David Schindler and others. Alberta's response to warnings of future water shortages, has been to hide the news. As a result of budget cuts, Marsden notes, *“The Alberta and federal government departments have greatly reduced their monitoring of river flows and snowpack cover. Alberta has gutted its environment department. Since 1993 it has eliminated about a third of its positions and closed its chemistry laboratory. So the department now has neither than manpower nor the tools to monitor climate change, or even enforce environmental laws.”* And, according to Schindler, *“It can't even patrol the once-thriving cold water fisheries because it doesn't have a budget for gas.”*

What makes Marsden's account of tar sands folly even more impressive, is that he puts it into the broader context - that of Alberta, being a province facing an increasingly more arid climate and having

the idiocy to have the weakest environmental regulations in Canada. For instance, Alberta follows an American approach to zoning and land use planning and Marsden points out that being threatened with desertification, Alberta should have the most restrictive regulations, not the easiest. *“To make things even worse”*, he laments, *“ Alberta has permitted and continues to permit the mass destruction of its wetlands in rural and urban areas. Almost half of Edmonton is paved-over lakes or wetlands.”*

The most horrific aspect of tar sands development as documented by Marsden, is the gradual leakage of oil waste slurry into the Athabaska River. Exact figures are not available except for the confession of Sun Cor, in 1997 that its Tar Island Pond leaks about 1,600 cubic metres of toxic waste into the Athabaska River daily. A more massive flood has been averted by a network of dams that makes it the largest such system in the world, at least until the completion of China's Three Gorges Dam. This however, just represents a thin layer of sand keeping back some 600 million cubic metres of liquified mine tailings. Alberta also permits every tar sands company to dump about sixty kilograms *“into the Athabaska River every year.”*

Leakage from the tar sands tailing ponds has already resulted in contamination of one of Canada's greatest inland seas, Lake Athabaska. Ever since 1982 native residents of this great lake have found that their fish tasted like gasoline and smelled like burning rubber boots when cooked. This problem has been coupled with the emergence of rare cancers not previously reported in communities dependent on Lake Athabaska. Fish have shown such signs of toxic stress to the point of where they change sex and experience a diminution of reproduction ability.

Marsden's dramatic and alarming book is not only a well documented history of the many horrendous impacts of tar sands development but a timely warning for those who might otherwise forge ahead without heeding the follies of the past and the absolute need for broader, better environmental planning in the future. It's a must read, not just for environmentalists, but for legislators, oil company executives and the general public.

From the Pages of

Reviewer's Postscript

Given the horrible ramifications of oil sand exploitation, as outlined in both of these excellent books i.e. **Tar Sands: Dirty Oil and the Future of the Continent**, by Andrew Nikiforuk, and **Stupid to the Last Drop, How Alberta is Bringing Environmental Armageddon to Canada** by William Marsden, it is to be hoped that the delay in tar sands exploitation caused by the crash in oil prices will be a time for Canadians to get their country out of the sticky mire of the tar sands..



Rays of Light Around the World

Norway 's Example Has Long Roots

Norway is properly lauded by author Andrew Nikiforuk for being one of the few country's in the world with the ability to properly manage great oil wealth. All of the country's oil royalties now go into a \$400 billion pension fund which is well managed and has helped to pioneer ethical investment strategies.

Norway's increased focus on climate change is a result of an agreement concluded between the country's governing parties, (led by the Norwegian Labour Party a social democratic party with close links to the national labour movement that has dominated the country's politics since its liberation from occupation by Nazi Germany) and three opposition parties. It was concluded on January 17th of this year, and seeks to have the country be carbon neutral by 2030, with two-thirds of the targeted reductions being achieved within the nation. Carbon credits for the one third of external reductions will be accomplished through programs to reduce deforestation in tropical nations.

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on recycled paper.**



Norwegian authorities plan to employ both carrots and sticks to encourage more environmentally sane behaviour and reduce greenhouse gas emissions. The national strategy has a budget to reward cities that invest in public transportation, whose funding is being doubled. Funds may be obtained however, only if municipalities also include agreements on measures to reduce motor vehicle usage.

The 2008 Environmental Performance Index put Norway in second place, after Switzerland, based on environmental performance of the country's policies. It has the second highest GDP per-capita in the world after Luxembourg, and the second highest in the Human Development Index, (after Iceland) Its unemployment rate is below two per cent and hourly productivity is among the highest in the world.

Norway's economy is even more heavily reliant on oil and natural gas than Canada's. One of the big differences is that to reduce over-heating from oil money and the uncertainty from oil price fluctuations, Norway in 1995 had all its public revenues from oil dedicated to a sovereign wealth fund. Its savings are equal to Norway's GDP and are the largest capital reserve of any nation and may become the largest capital fund in the world. The fund is guided by ethical principles. It cannot invest for instance, in companies that produce parts for nuclear weapons. Its highly transparent rules are lauded by the international community.

YOU CAN HELP !

If you would like to help with the important educational work of the NCWC Education Fund, donations are tax receiptable and will be issued promptly. Just make your cheque out to the NCWC Education Fund and send it to suite 506, 251 Bank Street, Ottawa, Ontario K2P 1X3