Few Canadians know that Canada is home to one of the world’s largest dams and it is built to hold toxic waste from just one tar sands operation in northern Alberta. Everything about the tar sands happens on a massive scale. The enormous toxics problems go hand-in-hand with massive global warming pollution and the impending destruction of a boreal forest the size of Florida. Because of sheer scale, all Canadians are impacted by the tar sands, no matter where they live. If you live downstream, your water is being polluted, and your fish and wildlife may be dangerous to eat. If you live in Saskatchewan you are a victim of acid rain. If you live in BC, “supertankers” may soon be plying your shoreline carrying tar sands oil to Asia. If you live in Ontario, you are exposed to harmful emissions from the refining of tar sands oil. And the impacts do not stop at Canada’s border – US refineries are re-tooling to handle the dirty oil from Alberta.

Moreover, no matter where you live in Canada, your desire to tackle global warming is being held hostage to the tar sands. Instead of reducing greenhouse gas emissions, Canada is quickly increasing them, and fully half of that emissions growth is projected to come from the tar sands. Because Canada’s elected officials refuse to clamp down on tar sands operators, they also refuse to clamp down on industry across Canada for fear of a double standard.

And it is just beginning. Approvals have already been given that will double the size of existing operations, and our leaders have been talking with the US government to grow the tar sands five-fold in a “short time span.” The tar sands are now the biggest capital project anywhere on Earth and the biggest energy undertaking anywhere. Already, Canada is the largest foreign supplier of US oil.

In the service of growing the tar sands, the government gives tax breaks to the worst polluters; it fails to enforce its own environmental laws; and it is even trying to silence whistle-blowers who’ve tried to speak out on how the tar sands have harmed our health and our environment. With the tar sands, Canada has become the world’s dirty energy superpower.

It doesn’t need to be this way. Technologies are available to curb the damage, yet the Canadian government so far refuses to force industry to clean up. All Canadians should join the chorus of leading figures such as Peter Lougheed, the former Premier of Alberta, in calling for a moratorium on new projects and a clean up of the tar sands.

Premier Lougheed, originally instrumental in scaling up the tar sands in the late 1970s, now says: “...it is just a moonscape. It is wrong in my judgment, a major, major wrong... So it is a major, major federal and provincial issue.”

This is Canada’s problem. It’s time to clean it up or shut it down. Read on to find out more about the tar sands and what you can do, and then take action. There is only one atmosphere but there are many people who can take action to protect it.
The tar sands are holding Canada hostage in tackling global warming. In two years, it is the fastest growing source of new greenhouse gas emissions in Canada. Tar sands emissions — not counting burning the oil later — are estimated at about 40 million tonnes for 2007.4 The main reason is that extracting the oil from the sand is so energy intensive, from the large machines used for extracting and processing to the natural gas used to melt the bitumen out of the sand. It is estimated that by 2012 the tar sands will use as much gas as is needed to heat all the homes in Canada.10 To get this gas will require building new pipelines and drilling in wilderness areas like the Mackenzie Valley, and building new facilities to import liquefied natural gas to cover the shortfall since Canada’s own gas production is projected to decline starting now.7

First Nations Downriver

Toxics pollution from the tar sands has created what amounts to a slow motion oil spill in the region’s river systems. First Nations downstream see the impacts first hand: “There’s deformed pickled in Lake Athabasca. Pushed in fact, bulging eyes, humped back, coiled tail... never used to see that. Great big lumps on them... you poke that, it sprays water.”11 Fish frying in a pan smell like burning plastic.

Communities living downstream from the tar sands have seen unusual rates of cancer. A recent report for the health authority of one downstream community, Fort Chipewyan, found serious flaws in the monitoring programs and went on to discover dangerous and rising levels of mercury, arsenic and polycyclic aromatic hydrocarbons (PAHs).12

For years, Dr. John O’Connor, the family doctor for Fort Chipewyan, has been growing increasingly worried about the number of cases of bile duct cancer, colon cancer, lymphoma, leukemia, autoimmune diseases such as lupus, as well as thyroid cancer, osteoarthritis, and skin rashes. At the request of Health Canada and Alberta Environment, the Alberta College of Physicians launched investigations against Dr. O’Connor to stop him speaking out.

Saskatchewan — Raining Acid

I t is well known that Alberta is polluting itself, but what is less known is that this pollution is increasingly exported to other provinces too. Studies have estimated that 70% of the sulphur in Alberta’s air is transported into Saskatchewan.13

The pollutants that cause acid rain can travel hundreds or even thousands of kilometres.14 Environment Canada estimates that the current rates of acid forming pollution from the tar sands are 190,000 tonnes per year for sulphur oxides and 76,000 tonnes per year for nitrous oxides.15

At a Saskatchewan site 200 kilometers downstream from the tar sands, the mean level of acid in precipitation increased in the past 14 years, sliding from pH 5.3 to 4.1. Normal rainfall has a pH of 5.6.16 In 2005, Saskatchewan Environment ran a network of 10 monitoring stations in the northwestern part of the province — across from the tar sands — and found a build up of nitrogen from Alberta.17

Acid rain affects lakes, rivers, soils, forests, buildings, wildlife and human health. In rivers and lakes, acid deposition exacerbates the conversion of mercury to the more dangerous form of methyl mercury, which can be taken up by fish, and ultimately eaten by humans, animals and other fish.18

Photos clockwise from top left: The Syncrude mine from the air. The mining operations strip away boreal forest and mine up to 100 metres into the earth. Copyright © 2005 The Pembina Institute. Chris Evans. The Pembina Institute. Suncor Energy’s plant at Fort McMurray, Alberta. Source: Suncor Energy. Smokestacks spew emissions from tar sands processing (G. Irvin). An spillway by the Bluewater Bridges over the St. Clair River in Sarnia below the toxic water and air pollution caused by refineries in Ontario’s Chemical Valley. Athabasca River Grand Rapids (David Dodge, CPAWS). Woodland caribou (Terry Parker). The Clearwater River and surrounding boreal forest are threatened by kilometres of tar sands developments (Mark Levit). Suncor processing facilities and tailings ponds along the Athabasca River (David Dodge, The Pembina Institute). Orcas, also known as Killer Whales, are listed as a threatened species in Canada. Scientists and environmentalists are concerned that increased tanker traffic along the BC coast increases the risk of spills for this already stressed species. (Thomas Kitchin’s Light)
While it is a stretch to believe the tar sands can ever be truly sustainable, there is much that can be done to clean them up. A moratorium on new approvals must be put in place until these six issues are done by the federal government:

1. Pass a real cap on carbon emissions
   The federal government’s flawed “intensity” caps — based on the concentration rather than the overall amount of emissions — will ensure that tar sands emissions will at least triple. Hard caps need to be put immediately on tar sands emissions, and compliance with those caps must set a price on carbon that has industry pay at levels that provide a strong incentive to invest in capture and storage technology.

2. Ban toxic tailing ponds
   Tar sands waste can be put in a dry form rather than into wet tailing ponds that leach pollution into the groundwater and are a source of air pollution. Dry tailings would also reduce water withdrawals from the Athabasca River. Care must be taken to cap dry tailings to avoid wind erosion, though.

3. Require wildlife offsets
   By their very nature, tar sands operations cannot be made friendly to wildlife, so governments must compensate for this loss by creating new protected areas to protect the species in the area.

4. Clean up refineries and upgraders
   Facilities should not be so concentrated in an airshed as to pose a danger to human health. Refinery workers and nearby residents must be protected by mandating facilities that capture pollutants at the highest possible level that technology allows.

5. Ensure Aboriginal control and benefit
   Aboriginal Rights and Title exist in areas affected by the tar sands, both near and far. These legal obligations must be respected through meaningful control by First Nations over tar sands operations from the disposition to the reclamation and monitoring phases.

6. Regulation and independent monitoring
   Science-based limits must be placed by the Canadian government on all environmental aspects of tar sands operations — air, land and water — and aggressive enforcement actions taken against violations of these limits. Monitoring to ensure compliance must be arms-length from industry, run by independent scientists, with results available to the public.

Until these actions are taken, tar sands oil should remain safely underground until such time as humans are willing to develop them responsibly.

Environmental Defence, ForestEthics and the Wilderness Committee are calling on the Canadian government to:

- create and enforce clean air, clean water, and forest protection regulations;
- create new protected areas in the region;
- enforce hard caps on tar sands emissions and not ‘intensity’ targets that will allow overall emissions to continue to rise;
- respect Aboriginal rights and title in the region.

Take a moment to think about the tar sands development and their impacts across the country, then write to Canada’s Prime Minister to let him know how you feel!

Contact the Prime Minister of Canada
The Honourable Stephen Harper
313-5 Centre Block, Ottawa ON K1A 0A6
pm@pm.gc.ca | 1 800 622-6232