Research Documents Pollution from Alberta's Tar Sands and Calls for the Urgent Attention of the World's Scientific Community

Large scale, unacceptable, unreported impacts to biodiversity, ecosystem function, and public health

Edmonton, October 22 2009. A new study, published in *The Open Conservation Biology Journal*, documents that physical and ecological changes that result from tar sands industrial activities are detectable and that the effects of these activities on ecosystem and public health deserve immediate and systematic study.

The lead author, Dr. Kevin Timoney states, "The evidence reveals ecological and environmental health impacts from tar sands exploitation." Industry and government have thus far neglected to provide such information to the public.

The study analyzed a diverse set of environmental data on water and sediment chemistry, contaminants in wildlife, air emissions, pollution incidents, traditional ecological observations, human health, and landscape changes from the Athabasca Tar Sands region, Canada.

The study documents how government agencies and energy companies have failed to provide timely, accurate and comprehensive environmental studies. The industry-led Regional Aquatics Monitoring Program was found unable to measure and assess development-related change locally or in a cumulative way.

"Present levels of some contaminants from tar sands development pose a human health risk," says Dr. Timoney. Elevated levels of mercury and arsenic in the local fishes pose a dilemma due to the nutritional value of fish and the traditional-cultural and economic importance of fish to Ft. Chipewyan residents.

The study found that air particulates pose health concerns, as they contain not only organic contaminants such as PAHs but also a suite of metals such as vanadium and arsenic.

For years, the people of Ft. Chipewyan have believed that they are suffering increased rates of cancer, diabetes, and heart problems. Recent studies have found that incidences of several forms of cancer, type II diabetes, lupus, renal failure, and hypertension are elevated in Fort Chipewyan.

The study examined old and new satellite images in order to map industrial conversion of 65,000 ha of boreal landscape. Peter Lee, of Global Forest Watch Canada and a study co-author, states, "Between 1992 and 2008, the extent of tailings ponds grew by 422% while the extent of mine pits, facilities, and infrastructure grew by 383%. These ecosystem conversions have resulted in the loss of many tens of thousands, and perhaps hundreds of thousands of birds, in addition to losses of other wildlife species."

Dr. Timoney concludes: "The effects of these pollutants on ecosystem and public health deserve immediate and systematic study. Projected tripling of tar sands activities over the next decade may result in unacceptably large and unforeseen impacts to biodiversity, ecosystem function, and public health. The attention of the world's scientific community is urgently needed. We are encouraged by the recent

announcement from the Royal Society of Canada of its plans to study the environmental and health impacts of Canada's oil sands industry."

The research paper is available from Global Forest Watch Canada at: www.globalforestwatch.ca

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