FACT SHEET

Resource Development in the North

IMPACTS OF THE CUMULATIVE EFFECTS OF OIL & GAS DEVELOPMENT

Cumulative Effects of Oil and Gas Development

While one well or one pipeline may not seem significant and may not result in dramatic change to an area, the first project is often the sign of many more to come.

When one company builds roads and facilities, it makes it more affordable for other companies to develop the areas nearby.

CREDIT: WAYNE SAWCHUK

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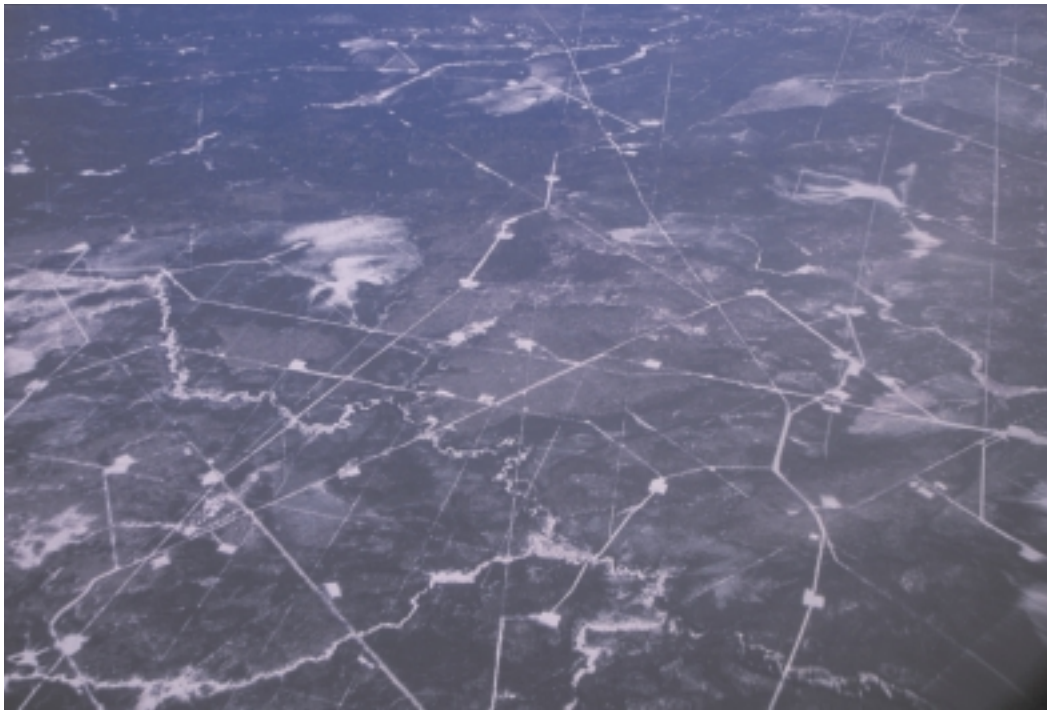
Over time, the effects of multiple projects on the land can result in serious long-term changes for people, wildlife and the land. These changes are called "cumulative effects" because the sum of their impacts is greater than the impacts of a single project.



How Cumulative Effects Happen

When one company builds roads and facilities, it makes it more affordable for other companies to develop the areas nearby. A pipeline may provide incentive to develop oil, gas or coalbed methane because now an easy way to ship these products to market exists. Once roads appear, forestry companies may ask if they can use them to access forest previously too expensive to build a road into. As oil and gas reserves decline, companies then look to extract other types of fuels such as coalbed methane, tight gas and shale gas (all found in northern British Columbia). The result is a spider web of development on the land with thousands of kilometres of roads and seismic lines and many cleared areas.

In 2003 alone, for example, an estimated 21,700 kilometres of seismic lines were cut in British Columbia, bringing the estimated total length of seismic lines in the province to 110,400 kilometres, the equivalent of crossing Canada more than 20 times.[1]

1 *Oil and Gas In British Columbia: 10 Steps to Responsible Development, West Coast Environmental Law et al, Vancouver, 2004, p. 15.*

Cumulative Effects and First Nations People

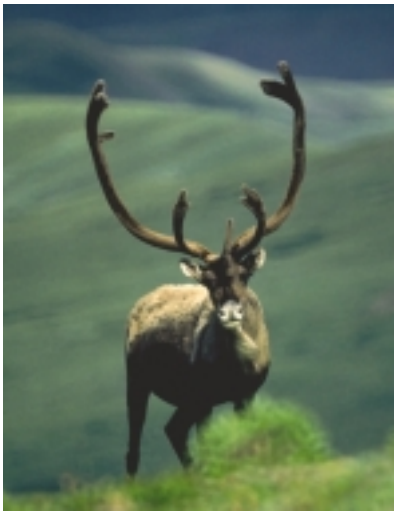
First Nations people are increasingly recognizing the cumulative impacts of development on their territories. In a study of other First Nations' experiences with pipeline and oil and gas development in their traditional territories, the Carrier Sekani Tribal Council found "patterns of impacts to First Nations":

> *"Overall, the effects of building pipelines and other energy developments through traditional territories have diminished First Nations communities' connections to their territories. The spin-off effects of this diminishment have been widespread. Access roads and infrastructure lead to more industrial development and the fragmentation of the landscape. Traditional trails became private roads. Trapping areas were fenced off, no longer accessible to trappers. Communities live in fear of the debilitating and lethal effects of sour gas or the devastating effects of pipeline failures."*[2]

What Happens to Wildlife and the Land?

With more roads, seismic lines and cleared areas, more people can access the land for work and recreation. Areas once too difficult to travel through become accessible by snowmobile, quads and trucks. This new access means possible collisions with wildlife and an increase in hunting and fishing. Some studies estimate that poachers kill as many fish and wildlife as are taken legally.[3] There is general concern in Canada that unlimited access to recreational fisheries could be causing the collapse of some populations.[4]

Impacts on wildlife range from loss of habitat to poisoning to a reduction in herd size and home range. Species in decline as a result of industrial development in Alberta include caribou, lynx, martin, fisher, wolverine and various bird species.[5]



▲ *Species in decline as a result of development in Alberta include lynx, caribou, martin, fisher, wolverine and various bird species.* CREDIT: CPAWS

The Legacy of Waste

Cumulative effects are not limited to active operations but also include what is left behind. Treaty 8 First Nations in northeastern British Columbia estimate there are over 1,800 sites on their territory that have not been rehabilitated after oil and gas activity and that 90% of these sites remain contaminated and badly in need of cleanup.[6] In Alberta, there are hundreds of abandoned well sites called "orphan wells" that no company is legally responsible to clean up and rehabilitate.[7]

Managing Cumulative Effects: Get Involved

Cumulative effects assessments should be done BEFORE development occurs. These assessments help communities weigh the cost and benefits of development. Scientific and traditional ecological knowledge should be used to determine how much development an ecosystem can sustain. Monitoring programs are critical in order to understand the changes on the land resulting from development.

For more information

on the impacts to fish and wildlife, see the fish and wildlife fact sheets in this series.

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2 *Aboriginal Interests & Use Study on the Enbridge Gateway Pipeline, Carrier Sekani Tribal Council, 2006, Prince George, British Columbia.*

3 *BC Ministry of the Environment, September 15, 2006, www.env.gov.bc.ca/cos/rapp/costs.html*

4 *Post, J.R., M. Sullivan, S. Cox, N. P. Lester, C. J. Walters, E. A. Parkinson, A. J. Paul, and B.J. Shuter 2002 "Canada's recreational fisheries; the invisible collapse?" Fisheries 22 (1):6-17.*

5 *The Pembina Institute and the Canadian Parks and Wilderness Society, Edmonton. 2006. Death by a Thousand Cuts: Impacts of in situ oil sands development on Alberta's boreal forest. p. 50.*

6 *Wildlife and Well-Site Contamination in Treaty 8 Territory Declaration, September 13, 2004, Treaty 8 Tribal Association.*

7 *www.orphanwell.ca*