

Roads: More than lines on a map
Backgrounder
by CPAWS Wildlands League

Roads are one of the greatest “stealth” environmental issues of our times. As small lines on a map or ribbons of asphalt or gravel through a forest, they may seem far less important than vast clearcuts or giant open-pit mines in terms of their ecological impact. But this is the very reason that roads are such a key environmental and social issue: It is the landscape-scale changes triggered by new roads that make it critically important that we pay much closer attention to the impact of roads on wild landscapes.

In fact, the density of roads in any given area has become widely accepted as a good measure of the “intactness” or wildness of a forest area. This reflects the fact that roads, in the context of remote forests, are not being built to connect cities or communities; they are being built to access resources. (On occasion, improving access for a remote community may be an ancillary reason for road construction, but access to resources usually remains the prime driver even in these circumstances.)

It is also really more accurate to talk about road networks rather than individual roads. Once a new primary road has been punched into a previously un-roaded area, it will quickly spawn a series of secondary and tertiary branches that reach deep into the forest. Primary roads – wide and sturdy enough to support high-speed truck traffic – feed smaller operational roads that, in turn, feed rough skid or bush roads – all with the goal of extracting resources as quickly and efficiently as possible.

Across Canada, large roadless areas have been disappearing at a rapid rate and today large (over 10,000 km²) road-free forest areas are largely restricted to the northern boreal region that has not yet been heavily exploited for trees, minerals or oil and gas. The ecology of the area south of this intact region, unfortunately, has already been heavily disrupted by roads and the activities they bring -- from increased human hunting pressure and changes in predator-prey and species balances to the loss of older forests and the disruption or pollution of water systems. This, in turn, has led to the disappearance of species such as woodland caribou, wolverine and lake trout that do not fair well in areas with too much human access.

But despite the increasingly clear understanding of road impacts in conservation science -- including their effect of dividing the forest into smaller less functional fragments -- there is still little effort being made to undertake comprehensive road planning in landscape or resource planning processes in most Canadian jurisdictions. In fact, efforts to protect road-free areas or to mitigate road impacts are most notable by their absence in just about every province and territory.

With this in mind and what’s new in our findings is that we mapped out the potential for new primary roads across the intact northern boreal region in order to assess the potential for further loss of intact wild forests over the next decade.

We mapped the potential for new primary road corridors using over 20 sources and based on the following criteria:

- The project has been publicly discussed by government or industry in the media, in official reports or in other similar proposals (e.g., environmental assessment, land use or forestry plan or engineering study).
- There is a strong possibility in the view of CPAWS chapter staff and/or other knowledgeable observers of the project proceeding in the next 10 years.

The result is a map that indicates that as much as 30-50% of our best remaining wild forest may be opened up by new roads in the next 10 years. It is important to remember that the primary roads on this map really represent just the thin edge of a very large wedge – once established, they will feed an expanding network of secondary and tertiary roads designed to get at previously inaccessible resources as quickly as possible.

We also profiled roads issues from five different regions across Canada: Yukon, Northwest Territories, Alberta, Manitoba and Newfoundland Labrador. Our case studies show that no ecosystem or region is immune from the impacts of roads and that even with careful selection of a less environmentally damaging route, there is still a need to carefully consider the impacts of a road as in the case of the Phase III of the Trans Labrador Highway (see case study #2 on Newfoundland Labrador). Our case studies also demonstrate that there are some places where roads should just not be permitted e.g., on the edge of a national park (see case study #4 from NWT) and there are tools that can help us lessen the impacts of roads if this were a priority (see the Alberta, Yukon and Manitoba case studies).

Given that we already know that species such as woodland caribou and wolverine simply cannot survive in areas with high road densities, the CPAWS Wildlands road map paints a bleak picture of the survival chances of these already threatened species, and of intact boreal forests in general.

However, Canada – and particularly our provincial and territorial governments that control land and resource planning – still has a chance to ensure that we do not embark on this “road to ruin.” By acting immediately to develop policies for the protection of large roadless areas and to mitigate the impact of road development where it does occur, we can pursue a much different path than has been previously taken – with dire results – in the southern boreal.

While there is a need to address the issue of better access for many remote communities (the vast majority of which are Aboriginal), while also addressing the need for new community development opportunities, ad hoc road development is not the answer. Not only do roads have ecological implications, including potential negative impacts on fish and wildlife that support aboriginal communities, the thin soils of the boreal forest can result in devastating impacts to cultural heritage sites if proper research and planning is not available.

Instead, we need to look at roads in the context of protecting the immensely valuable intact nature of the larger northern boreal landscape. We need to take steps like coordinating road planning and development among industries to avoid unnecessary roads; to require the full decommissioning of

roads once they are no longer being used for their primary purpose; to put in place strict access controls, especially in sensitive areas, during use; and, most of all, to clearly recognize in policy and practice the ever-increasing value of road-free areas in a world where it has become a serious challenge to “get off the beaten track.” We need to provide remote aboriginal communities with the funding required to evaluate “least impact” road opportunities.

Finally, we must take a longer-term view of the impacts and benefits of resource exploitation and recognize the cumulative impact of many different human activities, including road construction, on our forests in order to find ways to significantly reduce the weight of our footprint on one of the last great wild forest ecosystems on the planet.