Canada’s boreal forest is one of the three largest remaining areas of intact wild forest left on the planet. If we want to protect the species, waters and ecosystems of this magnificent forest, we must quickly rethink the direction we are headed.

Roads act as triggers for development and major habitat changes. They open up wilderness and bring development activities like logging and oil exploration that eventually change the entire character of previously intact wild and remote areas.

There are now approximately 62,000 kilometres of logging roads with only a handful of large unroaded forest areas remaining in the southern boreal forests of Ontario. In Alberta, the impact of logging roads are multiplied by the additional oil and gas access roads and seismic lines – corridors cut through the forest as part of oil and gas exploration. The province’s forests are now mostly a patchwork.

The case studies on the reverse look at what has happened or could happen in a number of key areas in Canada’s globally important boreal forest. (For full versions of these case studies, please visit www.wildlandsleague.org).

The map to the left illustrates the growing threat posed by governments and industry to the world’s last large intact forests through the construction of new road networks that further development. The roads and potential new road corridors shown on this map are only the primary access routes: Each of these primary roads brings with it an extensive and often expanding network of secondary roads and trails that further fragment and degrade forest habitat. In some areas, the impact of these roads is compounded by the clearing of thousands of kilometres of seismic lines, pipeline and utility corridors.

In order to reduce the impact of roads and other developments on our globally important boreal forests we must fully embrace the concept of conservation-first planning. A good framework for such planning is set out in the Boreal Forest Conservation Framework, a voluntary agreement between First Nations, conservation organizations and industry that seeks to set a new more positive direction for our work to protect this magnificent wild place.

For more on the impact of roads and how we can better protect our boreal forest, please visit www.wildlandsleague.org
The Yukon Government's 2003 Roads to Resources report identifies 32 potential new access corridors throughout the Yukon. Rather than responding to any actual resource development proposals or access requirements, these corridors are purely speculative and are seen as a way for the government to drive increased resource development in the territory. This approach essentially pre-empt options for the designation of roadless wilderness and large protected areas. The Roads to Resources report itself ignores ecological values and criteria and does not consider the cumulative effects from resource exploration and development. None of the corridors are intended to access resources that are already known to be present.

Mining is often seen as having a small landscape "footprint." However, the proposed Prairie Creek silver-lead-zinc mine on the edge of Nahanni National Park Reserve is an example of how the access required by mining activities can dramatically increase landscape impact. In the early 1980s, construction began on a silver-lead-zinc mine immediately adjacent to Prairie Creek, 22 kilometres upstream from the Nahanni National Park Reserve. As part of the mine construction, a 165 kilometre winter road corridor was cleared to reach the mine site. However, shortly after the mine owners went bankrupt and the winter road was left unused for 20 years. Now the Canadian Zinc Corporation (CZC) is attempting to bring the mine into production and has applied for a permit to reconstruct the winter road.

The Prairie Creek mine site is located in an area of globally significant wilderness and natural features, which are recognized and protected by several national and international conservation designations.

The proposed winter road would cross lands within the South Nahanni watershed that were recently granted interim protection from industrial development by the federal government as part of the Deh Cho Process (a land and self-governance negotiating framework) because of their significant ecological and ecological values. The lands are also currently under consideration for inclusion in an expanded Nahanni National Park Reserve.

The Deh Cho Process is underway, in part, to clarify control over land-use in the Deh Cho region of the NWT. The federal government currently manages the land, while the Deh Cho First Nations assert that they are the keepers of the lands and waters of their ancestral homelands. Recently, CZC went to court and won their appeal to exempt the road from an environmental assessment.

The South Nahanni Watershed is fully protected according to new principles for development around the current park reserve and will continue to be submitted and, over time, the area will become increasingly fragmented. Additionally, as long as the Prairie Creek mine remains in the watershed, it will retain the ability to apply for and receive approvals for developments that may put the natural values and water quality of the Nahanni at risk.

Using a computer program (ALCES – Alberta Landscape Cumulative Effects Simulator) to simulate the cumulative landscape impacts of the many overlapping resource uses in northern Alberta, biologists from the University of Alberta are painting a bleak picture of the potential future condition of the region’s boreal forests if the province continues with a business-as-usual approach to development.

The area used in the study was the 59,014 square kilometre Forest Management Agreement Area controlled by Alberta Pacific Forest Industries (APFI). This area, which lies south of Wood Buffalo National Park, is one of the more intact boreal forest areas in a province.

The study found that forest "edge" created by industrial activities would increase from 1.8 km² to a maximum of 8.0 km². This finding points to a major increase in the fragmentation of the forest into smaller habitat blocks that are more accessible to hunters and predators and more prone to disturbance. The study found that habitat availability for woodland caribou in the area would decline from 43% to 6% under a business-as-usual scenario.

The study also found that there will be significant socio-economic impacts from a business-as-usual approach. The most obvious of these would be a major shortage of softwood available to the forestry industry within 60 years. However, the study concluded that some relatively modest changes in the way we currently manage our road and roadless corridors through forest and street lines on the region. Changes such as increasing the overlap between petroleum and forestry road networks from 10% to 50%, narrowing streets to one lane to one metre, using existing corridors for pipelines and reducing roads and landing areas with in-forestry operations, could increase the retention of old-growth forests and reduce forest fragmentation significantly.

As the area is within the oil and gas-rich Canadian Sedimentary Basin (WCSB) where industrial development is the most advanced, Alberta serves as an example – and a warning – of the potential future that may hold for the other provinces and territories that include portions of the WCSB.

The criteria for inclusion as a potential road corridor on this map were the following:

1. The project has been publicly discussed by government or industry. In addition, in places under similar processes: environmental assessment, land use or forest policy or environmental impact assessment.
2. There is a strong possibility in the view of CRWPs chapter staff and of knowledgeable observers of the project proceeding in the next 15 years.

The Manitoba government undertook a preliminary study to assess the need for and possible design of an all-weather road network for the East Side forest region in 2000. This region, which runs along the east side of Lake Winnipeg and into the province’s northeast, includes 20 million hectares of boreal forest lands and water. Most communities in the region lack year-round access road.

The huge costs associated with transporting a larger proportion of goods by air due to poor winter road conditions in recent years, however, has led to consideration of an all-season road network that would also open this remote area to forest harvesting and other resource exploration activities as well as hydro corridors, with associated potential benefits and impacts for communities in the region.

There are several perspectives on the costs and benefits of all-weather roads in the region. For some First Nations and Aboriginal communities, roads are equated with economic opportunity and are viewed as necessary for community economic development. Other communities approach the issue with more caution, citing some of the documented socio-economic and environmental impacts of roads.

Control over access is a fundamental concern for some communities, such as developments that could subvert the route of a road, control over secondary access routes, and how and by whom the road is used have been identified as important community concerns. Some communities also recognize the need for extensive planning in advance of all-weather roads to control and mitigate some of the negative impacts that can result from access. One of the largest questions is whether the road network will be extended to include communities through the remote forest service roads and seismic lines on the region. Changes such as increasing the overlap between petroleum and forestry road networks from 10% to 50%, narrowing streets to one lane to one metre, using existing corridors for pipelines and reducing roads and landing areas with in-forestry operations, could increase the retention of old-growth forests and reduce forest fragmentation significantly.

The land-use planning for a portion of this region was announced in 2000 and initiated in 2002 following two decades of discussion. After two-and-a-half years of meetings, the East Side Planning Initiative (ESPI) submitted a status report to the Minister of Conservation in November 2004. The East Side network is an excellent example of the potential cascading impacts of road networks. As of today, the road would open remote areas to forest harvesting. More easily access to remote communities may be quickly supplanted in actual use by the network to reach previously inaccessible forests and other resources.

The Canadian government’s commitment to the Convention on Biological Diversity, which calls for increasing the representation of natural ecosystems and the areas that contain them, is potentially in danger as the situation becomes increasingly fragmented due to access and other forms of development. The all-season road network would open the northern route, posing a number of threats to the intact forests of Central Labrador, including increased access to sensitive lakes and wetlands, increased disturbance of woodland caribou, increased risk to common caribou, and other wildlife. Central Labrador has significant areas of local Aboriginal groups and outfitters, and the soliciting of the proposed Mealy Mountains National Park. A more southern route that reduced these impacts was eventually selected as the preferred route with construction beginning in the summer of 2004.

It is hoped that the lessons learned from the first two stages of this project will be remembered with phase III. For example, following completion of phase I, locals observed that fish populations in coastal lakes and rivers adjacent to the road were severely depleted. A joint study done by the Labrador Metis Nation and Coasts Under Stress (Memorial University) on the TLH-Phase II confirmed that greater than 50% of coho were imbibed improperly. The TLH-Phase II project is a classic example of the cascading impacts of road networks as the road provides ready access to areas that were previously difficult to reach and makes the economics of resource exploration and exploitation much more attractive.

The Roads Project Team: This project is supported by CPAWS Wildlands League. There are three projects: a Canada-wide roadside fly-in, some local programs, and a public information document on the problem of roads. The TLH project was selected due by the Labrador Metis Nation and Coasts Under Stress (Memorial University). We are responsible for developing and implementing the project, and any errors that may have appeared in the project. The Roads Project Team responsible for the overall design and vision is Anne Baggio and Janet Sumner of CPAWS Wildlands League, and Tim Gray of CPAWS.