

An aerial photograph of a forest landscape. A dirt road winds through the terrain, which is a mix of green forest and brown, cleared areas. A stream flows through the lower part of the image. The overall scene suggests a natural environment that has been partially altered by human activity.

Boreal Alarm

A wake up call for action in Canada's
Endangered Forests

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Greenpeace is an independent, nonprofit, global campaigning organization that uses peaceful, creative confrontation to expose global environmental problems and their causes. We challenge government and industry to halt harmful practices. We negotiate solutions, conduct scientific research, introduce clean alternatives, and educate and engage the public.

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Five Endangered Forests in Quebec, Ontario and Manitoba are identified as being under a significant level of threat and must be prioritized for protection immediately. These areas supply forest products to the global marketplace.



HIGHLIGHTS

Only 10.7% of Canadian Forest lands allocated to the forest sector are permanently protected under government legislation.

With only 4.8% of its allocated forests protected, the province of Quebec is amongst the most vulnerable areas in the country.

Unless action is taken to protect them, all the remaining large intact areas will have disappeared from Quebec's managed forest by 2020, including the Montagnes Blanches Endangered Forest Area and the Broadback Valley Endangered Forest Area.

Woodland caribou habitat will decline in the Ogoki-Kenogami Endangered Forest Area by 57% if logging continues as planned. However, the new owners of Terrace Bay pulp mill are open to dialogue about how to better conserve the species.

According to a provincial forest audit of the Caribou Forest, woodland caribou habitat will decline in the forest by 42% over the planning cycle, if operations continue as planned.

Manitoba still boasts some of the largest remaining tracks of intact Boreal Forest.

A review of more than 159 scientific works shows that the scientific community recommends between 30% and 50% targets for conserving biodiversity and maintaining ecological functions in any given ecosystem.

Clearcuts in the Boreal Forest still run upwards of 10,000 hectares in size, or the size of 18,000 football fields.

EXECUTIVE SUMMARY

Canada's globally significant Boreal Forest provides a wealth of ecological, economic, social and cultural benefits. Yet the most biologically diverse areas in the Boreal Forest have been allocated to forestry, and most of these areas have been logged or roaded. The areas that remain untouched are rare and under increasing threat. These Endangered Forests represent some of the most ecologically valuable – and vulnerable – Boreal Forest in Canada.

Efforts are being made internationally to save the last remaining large landscape forests whether they be in tropical, temperate or boreal regions. Although the vegetation type varies amongst these very different ecosystems, the approach to saving these last areas of wilderness is similar. It involves getting forest managers, their customers, stakeholders and communities collaborating to implement real solutions in short timeframes.

The following report identifies Endangered Forest Areas that urgently need to be conserved and the risks they face; it draws on lessons from past conservation efforts; and it outlines a path forward to achieve real solutions that work for the forest, logging companies, their customers and communities. Although attempts have been made at creating frameworks for forest conservation, including the recent Canadian Boreal Forest Agreement, no successful model currently exists for the Boreal Forest.

Lasting conservation solutions in the Boreal Forest require both legislated protection of large areas of forest, as well as responsible forest management practices such as those enshrined in the Forest Stewardship Council (FSC) system. To date, too much emphasis has been placed on *how* logging should be done, and not *what* should be protected and then *where* logging should be done. Greenpeace recommends that logging be immediately suspended in the Endangered Forest Areas identified in this report. We believe that a robust network of protected areas which includes these Endangered Forests is vital to conserve the Boreal Forest.

“To date, too much emphasis has been placed on *how* logging should be done, and not *what* should be protected and then *where* logging should be done.”

Greenpeace invites new relationships with governments, logging companies that are ready to embrace on the ground change, and customers of Boreal forest products to work collaboratively to ensure these important areas are not degraded and destroyed, and to prevent a return to the controversy that has been associated with past Boreal forest operations.

To support the protection of Endangered Forest Areas, customers of Boreal forest products should:

- 1 Contact the Quebec government to request the immediate adoption of a large protected area of at least 13 000 km² in the Broadback Valley Endangered Forest Area;
- 2 Check supply chains to identify products from Endangered Forest Areas outlined in this report and restrict purchases from these areas;
- 3 Communicate to suppliers and request they immediately suspend logging in Endangered Forest Areas and engage in conservation planning to establish protected areas;
- 4 If your suppliers do not comply, move your business to more responsible companies; and
- 5 Once conservation plans are completed, reward your suppliers with enhanced business relationships.

To support and implement solutions, governments and logging companies must act:

- 1 The Quebec government must legally protect the Broadback Valley Endangered Forest Area, consistent with the Cree First Nation's land use plan;
- 2 As a first step, logging companies need to suspend operations in identified High Conservation Value areas in the Boreal Forest, prioritizing the Endangered Forest Areas in this report;
- 3 Conservation planning for each of the Endangered Forest Areas must be fast-tracked by companies in collaboration with Greenpeace and others, consistent with First Nations' rights and interests;
- 4 These plans should be immediately implemented by forest products companies while under review by First Nation and provincial governments.

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▲ Canada's Boreal Forest is part of the largest intact ecosystem on the planet.

FOREST FLAT LINE: CANADA'S INTACT FORESTS ARE MORE AT RISK THAN EVER BEFORE



▲ The farther north in the Boreal Forest, the smaller the trees. This means logging companies cut more trees to acquire large volumes.

Large undisturbed and intact forests – mainly found in the rainforests of the Amazon, Indonesia, Congo Basin and Canada's Great Bear Rainforest, but also in Canada and Russia's Boreal Forests – are among the richest ecosystems on the planet in terms of biodiversity and carbon storage. Many of their ecological processes are still largely unaltered by human activity¹.

“The world's largest intact forests are the rainforests of the Amazon, Indonesia and Congo Basin, the Great Bear Rainforest, and the Boreal Forest.”

Intact forests are increasingly rare and are disappearing at an alarming rate² mainly because of logging, the expansion of road networks³ and other industrial development. The best way to maintain biodiversity – animal and plant life – and support ecosystems

adapting to climate change is to conserve large natural areas.⁴ However, only a fraction of the world's land – 13 per cent – is protected from human disturbance⁵.

Canada, which has nearly a quarter of the world's remaining intact forests⁶, is rapidly losing its pristine ecosystems to development, including industrial logging⁷. While logging practices and markets for forest products are changing in ways that allow for more environmentally responsible use of forest resources, the primary focus has been on how logging is practiced, without addressing what must be preserved to ensure a healthy forest and economy over time. In contrast, the scientific community is increasingly emphasizing the importance of protecting large tracts of land from any industrial operations – even if it is FSC certified.⁸

Logging clears, on average, nearly 1 million hectares (over 2 million acres) of Canada's Boreal Forest each

CANADIAN BOREAL FOREST AGREEMENT – A MISSED OPPORTUNITY

Greenpeace expected that the Canadian Boreal Forest Agreement, announced in May 2010, would create lasting solutions in Canada's Boreal Forest. The ambitious agreement, covering 72 million hectares of Canada's Boreal Forest, mandated the creation of woodland caribou conservation and protected areas plans, as well as enhanced economic prosperity for the forest sector. However, more than 2 ½ years into the Agreement's three year workplan, only one caribou conservation plan (for 4% of the Agreement's area) is complete and no protected areas have been created. The vast majority of the area covered by the Agreement does not have any additional conservation in place. Meanwhile logging has begun to advance into the remaining critical habitat of woodland caribou. As a result Greenpeace called for an end to the truce in early December 2012.



▲ Clearcuts like this one are still standard practice in Canada's Boreal Forest.

year⁹, and 50% of the forest has been fragmented by highways and logging roads¹⁰. In provinces like Quebec, more than 85% of forests accessible to logging industry have been cut or fragmented¹¹. The construction of thousands of kilometres of roads every year contributes to ongoing fragmentation and landscape change. Clearcuts in the Boreal Forest can reach over 10,000 hectares in size, or the size of 18,000 football fields lined up one after the other. This equates to wholesale destruction of an extremely sensitive and important forest region.

“On average nearly 1 million hectares (over 2 million acres) is logged in Canada's Boreal Forest every year. Clearcuts can reach over 10,000 hectares or more in size.”

The heaviest development is concentrated in the southern reaches of the Boreal Forest, which are

also the most productive wildlife habitat. However, logging operations are now breaching new frontiers at the 51st and 52nd parallel, very close to where the subarctic region begins. Since trees in those areas are much smaller and grow very slowly, the logging industry needs to expand operations significantly to extract the same amount of wood as has been harvested historically. The sustainability of logging in areas where regeneration takes more than 150 years due to the cold climate and lower forest productivity is questionable.

Some of the impacts logging has on Boreal ecosystems include: changes in vegetative composition (due to “edge effect,” invasive species, etc.); loss of sensitive species (e.g., woodland caribou, wolverine, ovenbird, three-toed woodpecker); disappearance of old-growth forests, simplification of forest composition; loss of biodiversity; genetic simplification; loss of nutrients in the soil; decreased soil productivity; release of carbon; erosion, and changes to aquatic food chains due to runoff¹².



▲ Caribou tracks at the heart of a clearcut in the Boreal Forest.

Unfortunately, at this time there is no framework for Boreal Forest conservation that has been able to deliver on-the-ground results. If threats to the Boreal Forest are not immediately addressed and this degradation continues, Canada will soon cease to be home to one of the most magnificent forest ranges in the world.

This report spotlights areas of Boreal Forest that have exceptional conservation value, yet are threatened by fragmentation and degradation. These priority areas are not new for Greenpeace; they have previously been identified as having significant ecological, social and cultural importance. However, without a working process to conserve these areas, their existence is at risk. Plans to log these Endangered Forest Areas are currently underway.

While Forest Stewardship Council certification has expanded greatly in the Boreal Forest, there has not been a corresponding increase in the amount of legally protected forestland. Emerging scientific consensus concludes that some places should be protected from logging altogether because of their ecological value.

The following pages identify Endangered Forests where this is the case. We outline a clear path to realistic solutions to protect these invaluable forest areas from harm; solutions that can be broadly supported and recognized in the global marketplace.



Five Endangered Forest Areas for priority conservation in Canada's Boreal Forest.

ENDANGERED FOREST AREAS

In 2010, Greenpeace commissioned Global Forest Watch Canada to produce an analysis of the last large intact regions of Canada's Boreal Forest that are open to logging development. Areas with the most significant ecological value were identified. This analysis was based on 12 weighted values that are a starting point for conservation planning. These included: the presence of old-growth forest, wetlands, caribou habitat, diversity of plant and animal species, high concentrations of stored carbon and productivity of the ecosystem.¹

This analysis was further refined in 2012, and the areas were examined again for ecological significance and

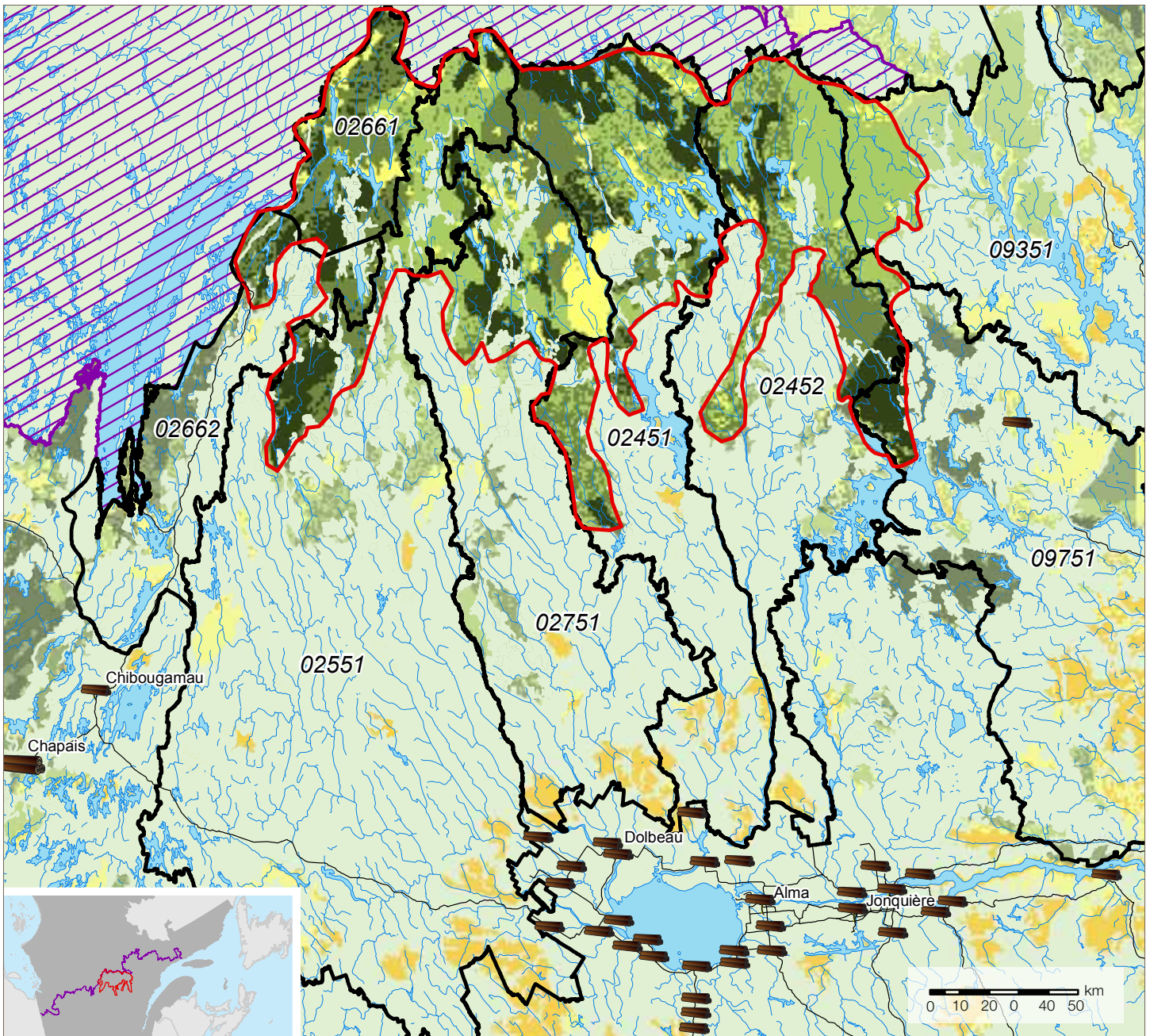
threats from encroaching development and logging in particular. Five Endangered Forest Areas in Quebec, Ontario and Manitoba were identified as being priorities for immediate protection. These areas supply forest products to the global marketplace.

As a first step, moratoria on logging and road-building in these areas must be implemented by forest products companies until conservation planning can be completed. Until then, products from these areas will threaten their High Conservation Values, will be a reputational risk for customers and will likely violate existing procurement policies.

“Until a moratoria on logging and road-building in these Endangered Forest Areas is implemented, products from these areas will be a reputational risk for customers and will likely violate existing procurement policies.”

¹ The 12 values are: presence of old-growth forest; woodland caribou habitat; presence of wetlands; proximity to protected areas; surface area of intact forest; diversity of mammals; diversity of bird species; diversity of reptiles and amphibians; diversity of tree species; concentration of carbon in the soil; net carbon; presence of lakes and rivers. Based on the scientific foundations described in this report, the following criteria were used for selecting areas in the allocated forest with the best opportunities for conservation: sites of more than 85 per cent intact forest; ecological values weighted mainly between three and five (GFW index); large area (minimum of 5,000 km²); connectivity with existing protected areas; existence of woodland caribou habitat or habitat capable of supporting the species.

MONTAGNES BLANCHES, QUEBEC



■ North of Managed Forest Area
 ■ Endangered Forest Areas
 Forest Management License
 ■ Mills (2004)
 Conservation value index for intact forests

 Higher Lower

SIZE:
2,307,743 hectares

INTACT:
85.7%

LEGALLY PROTECTED:
0.1%

INTERIM PROTECTED:
11.2%

HABITAT FOR SPECIES AT RISK?:
YES

LOGGING/MANAGEMENT COMPANY:

Resolute Forest Products, Produits Forestier Arbec, Produits Forestier Petit-Paris, Louisiana-Pacific Canada, Industries TLT.

MILLS SUPPLIED FROM THIS ENDANGERED FOREST AREA:

Resolute's Dolbeau-Mistassini, Girardville,

and Saint-Félicien mills, Petit-Paris' Petit Paris mill, Arbec's l'Ascension de Notre Seigneur sawmills, Louisiana-Pacific's Chambord pulp mill

OTHER MILLS THAT CAN RECEIVE WOODCHIPS AND FIBER FROM THE AREA:

Fibrex (pulp), Resolute Forest Product Alma

(commercial printing paper), **Resolute Forest Product Kenogami** (commercial printing paper), **Resolute Forest Product Clermont** (newsprint), **Resolute Forest Product Baie-Comeau** (newsprint), **Resolute Forest Product Abitibi-LP Larouche** (lumber), **Resolute Forest Product Abitibi-LP Saint Prime** (lumber)



▲ The beautiful Montagnes Blanches has the highest density of woodland caribou in all of Quebec.



▲ Destructive logging by Resolute

Almost all of Quebec's publicly owned forest has been allocated for logging, and only one tenth of this territory is in an intact state. Although the ecological footprint of the last few decades of logging operations is massive, some areas still hold tremendous ecological value and need immediate attention. With only 4.8% of its allocated forests protected, the province of Quebec is amongst the most vulnerable area in the country. Logging operations are rapidly moving northward, and remaining intact forests are vanishing at an increasing rate. Unless action is taken to protect them, all the remaining large intact areas will have disappeared from Quebec's managed forests by 2010.

“Unless action is taken to protect them, all the remaining large intact areas will have disappeared from Quebec's managed forests by 2010.”

Breathtaking landscapes, large swathes of pristine forest, no road access and a rich diversity of habitats make the Montagnes Blanches Endangered Forest Area one of the most impressive and important forests of Canada's Boreal Forest. Overlapping mostly with Innu Mashteuiatsh First Nation traditional land, it is also breeding ground for three known woodland caribou herds (Pipmouacan, Manouane and Manicouagan) in the northern part of Saguenay-Lac St. Jean. The area contains the beautiful Montagnes Blanches range of mountains and a high concentration of old-growth forests. The highest densities of woodland caribou in Quebec have been observed here. The Innu First Nation of Mashteuiatsh have an expressed interest in protecting intact areas in its traditional territory in this

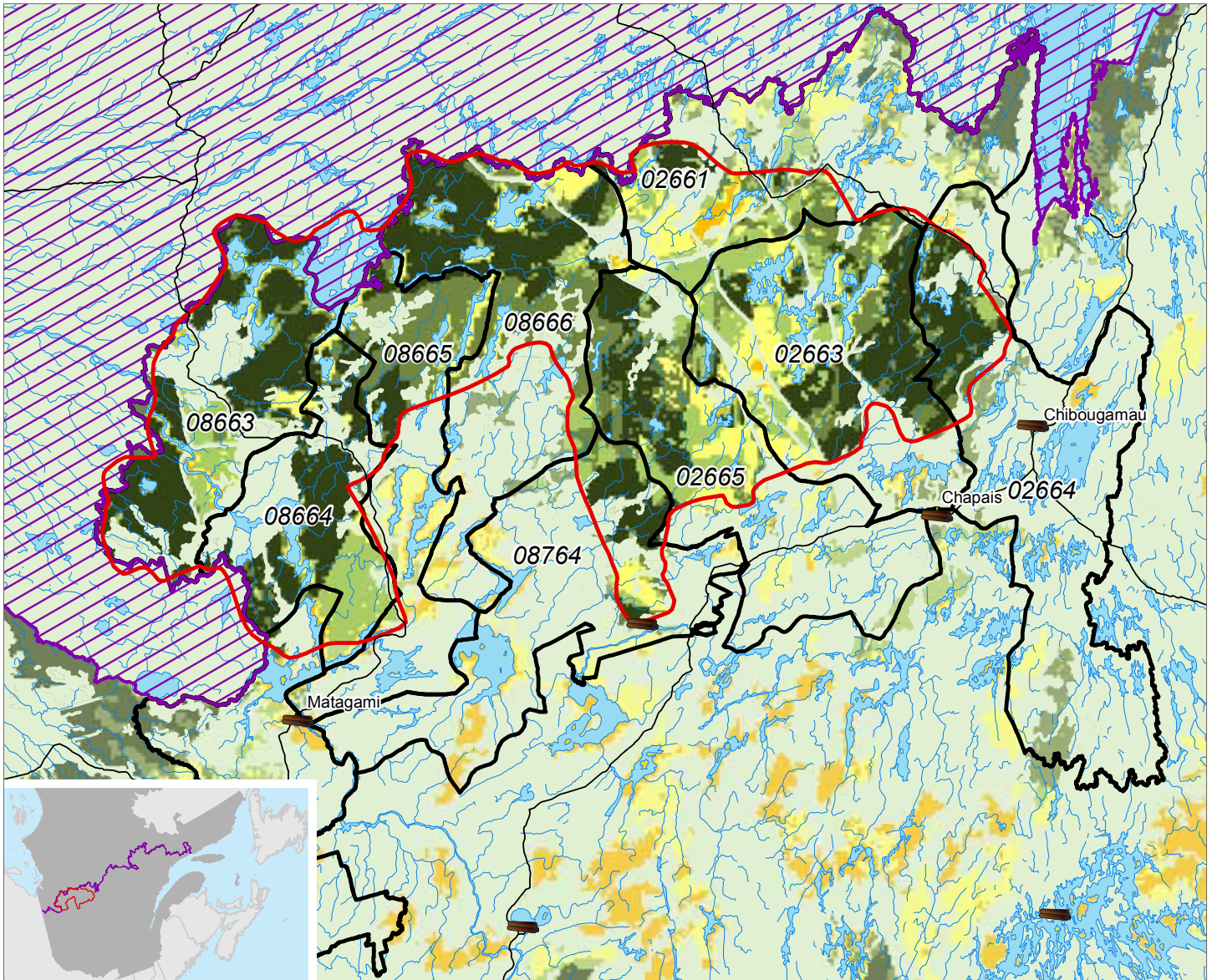
region in order to protect both natural and cultural values.

Encircled by clearcuts and encroached upon every year by roads and logging operations, the Montagnes Blanches Endangered Forest is at high risk. Companies like Resolute Forest Products (NYSE/TSX: RFP), supported by the Quebec government, have plans to go deep into this wild area within the next year.

Resolute Forest Product has obtained FSC certification in this area in recent years. However, Greenpeace has found that the FSC certificates for the area's forest tenures (24-51, 25-51 and 27-51) are out of compliance with the FSC National Boreal Standard for failing to set aside adequate protected areas and for adopting a caribou management plan that allows continued decline of the species. A complaints process was initiated in September 2012 for violation of FSC Principles 6, 7 and 9 of the FSC standard.

The area was under study by the Canadian Boreal Forest Agreement Quebec regional working group. The working group, which Greenpeace was part of, attempted for more than 2 years to conclude conservation and protected areas plans for the region. Unfortunately, Resolute Forest Products, the main logging company in the area, was reluctant to protect anything more than a small area in the Montagnes Blanches region and blocked progress towards finding solutions. Resolute currently has logging operations in critical caribou habitat.

BROADBACK VALLEY FOREST, QUEBEC



█ North of Managed Forest Area
 █ Endangered Forest Areas
 Forest Management License
 Mills (2004)

Conservation value index for intact forests

 Higher Lower

SIZE:
2,264,401 hectares

INTACT:
77.2%

LEGALLY PROTECTED:
0%

INTERIM PROTECTED:
14%

HABITAT FOR SPECIES AT RISK?:
YES

LOGGING/MANAGEMENT
 COMPANY:

**Resolute Forest Products,
 EACOM Timber
 Corporation,
 Matériaux Blanchet,
 Scierie Landrienne,
 Chantier Chibougamau,
 Barette-Chapais,
 Nordbord.**

MILLS SUPPLIED FROM THIS
 ENDANGERED FOREST AREA:

**Resolute Forest Products
 Comtois,
 EACOM Timber
 Corporation Matagami,
 Matériaux Blanchet
 Amos,
 Scierie Landrienne,
 Chantier Chibougamau,
 Barette-Chapais,
 Nordbord La Sarre
 sawmills**

OTHER MILLS THAT CAN RECEIVE
 WOODCHIPS AND FIBER FROM
 THE AREA:

**Resolute Forest Products
 Amos mill (newsprint),
 Kruger Trois-Rivières mill
 (Fine paper),
 EACOM Timber
 Corporation Val d'Or
 sawmill (lumber)**





▲ The Broadback Valley is one of the last intact areas in northwestern Quebec, and in the heart of Cree First Nations' territory.



▲ The threatened woodland caribou relies on habitat in the Broadback Valley for its survival.

In the heart of Cree traditional territory, the Eeyou Istchee, lies one of the last remaining intact forests of northwest Quebec. High ecological and cultural values make the Broadback Valley Forest a top priority for conservation in Canada's Boreal Forest. Greenpeace and the Waswanipi Cree First Nation have been working for several years to ensure that no more logging take place in this 22 000 km² pristine ecosystem, home to many species-at-risk, such as woodland caribou.

The Cree Nation has submitted three protected area proposals to the provincial government, covering more than 13 000 km² and supported by Greenpeace and other NGOs. Both EACOM Timber Corporation (TSX: ETR) and Rolute Forest Products have interests in the area and have agreed not to log in the area while the government makes a decision.

While this temporary halt to logging in the area was achieved in 2011, no permanent protection measures have been put in place to ensure the long-term survival of the Broadback Valley. And a new Quebec forest tenure reform, to be put in place in April 2013, creates additional uncertainty for the area.

In a recent independent scientific report commissioned by the Quebec Ministry of Natural Resources and the Cree Grand Council, a panel of university researchers recommended that all logging and road building should be stopped in this area and that First Nations' requests for protected areas should be implemented to ensure the survival of the iconic caribou in Cree land.¹³ Those recommendations are consistent with Greenpeace's own recommendations made three years ago,

when the Broadback Valley was identified as a key conservation hotspot.

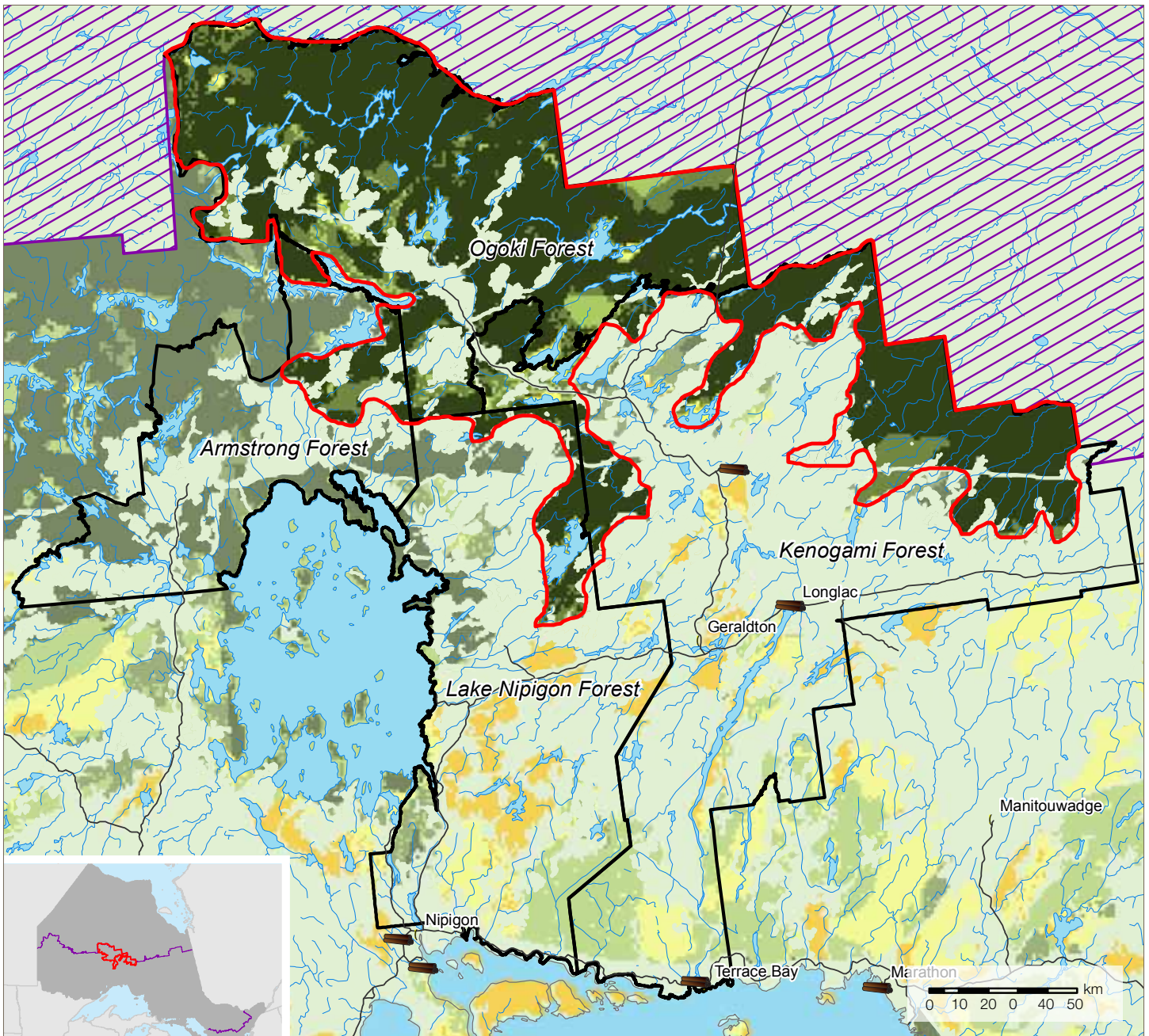
The Broadback Valley is a perfect example of an area that cannot be properly conserved through improved logging practices alone. The ecological and cultural values found in intact forest such as this one can only be conserved through the creation of permanent protected areas. Greenpeace encourages forest product customers, logging companies and government to comply with the wishes of First Nations and facilitate the creation of a large protected area so that this important Endangered Forest Area can be conserved forever.

Quebec's new tenure system could mean new hope or increased degradation for Endangered Forest Areas.

On April 1st, 2013, the Quebec government is taking over forest management and planning on public lands. While logging companies currently decide "where" and "how" they will extract wood volumes allocated by the government from the forest, tenure reform will now put this power back in the hands of the Ministry of Natural Resources (MNR) and its regional planning tables. FSC certificates will be transferred to the Quebec government and 25-30% of wood volumes will be made available through auctions. The goal is to apply Ecosystem Based Management (EBM) practices across all Quebec tenures.

In theory, this new reform could require that protected areas and conservation planning be included in forest management planning prior to the commencement of logging. However, there is yet no evidence that status quo management practices will actually change for the better in 2013, and currently companies are using the change as an excuse to not commit to conservation in their tenures.

THE OGOKI-KENOGAMI FOREST, ONTARIO



SIZE:
1,800,014 hectares

INTACT:
84.1%

LEGALLY PROTECTED:
5%

HABITAT FOR SPECIES AT RISK?:
YES

LOGGING/MANAGEMENT COMPANY:

Under management by Ontario Government (pending transfer)

MILLS SUPPLIED FROM THIS ENDANGERED FOREST AREA:

Terrace Bay pulp mill

Ontario has the third largest area of intact Boreal Forest in Canada, after Quebec and the Northwest Territories. As in Quebec, decades of logging have fragmented Ontario's forests. More than 70% of Ontario's commercial forest has already been fragmented by logging and other industrial development¹⁴, and unfortunately only 11.3% of the province's allocated forests are protected.¹⁵ If the current pace of development continues, the remaining intact forests in Ontario's commercial Boreal Forest will disappear by 2025.



▲ Only the northern portion of the precious Kenogami Forest remains intact. Species at risk, such as wolverine and woodland caribou, have already been pushed out of the majority of this Endangered Forest Area.



▲ The massive Terrace Bay pulp mill is under new management. The Aditya Birla Group has a demonstrated commitment to corporate social responsibility, and has indicated that it wishes to address the environmental and social issues that have plagued the mill.

In Ontario, the Ogoki Forest and the northern part of the Kenogami Forest are at the northern extent of the managed forest. At nearly 2 million hectares, this Endangered Forest Area has significant High Conservation Value due to the presence of threatened caribou herds and wolverine, its relative intactness, carbon storage, presence of wetlands, river and lakes, and its proximity to an existing large protected area.

The forest licenses for the Ogoki-Kenogami Endangered Forest Areas are currently held by the Ontario Government (pending transfer). Less than 5% of the region is protected and the forest's remaining intact areas have been allocated for logging. The Matawa Tribal Council, representing ten First Nations whose traditional territories overlap with this tenure, launched a lawsuit against the Ontario government in 2007 for failing to consult with them on logging operations.

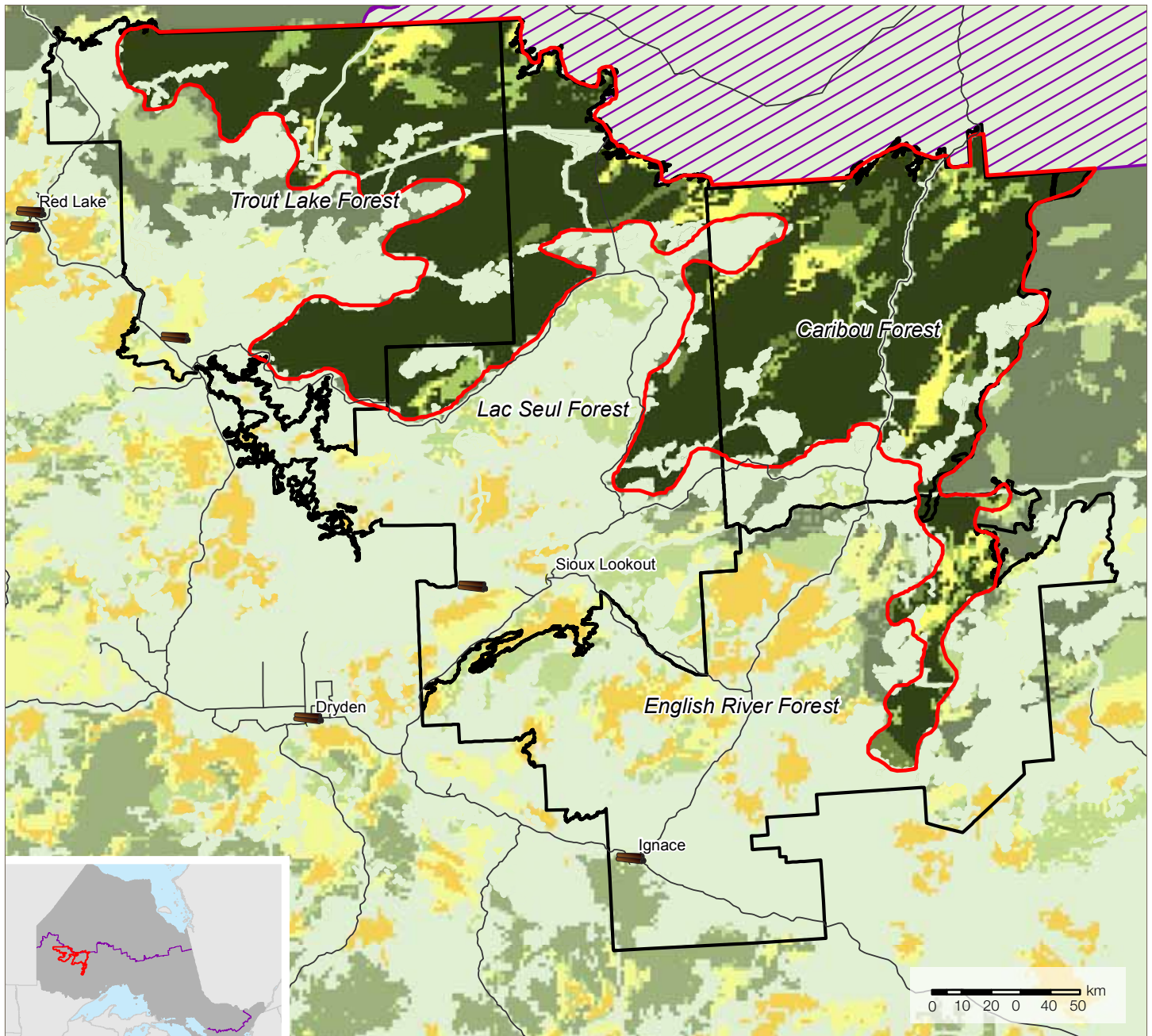
These forests supply the Terrace Bay pulp mill, recently purchased by rayon manufacturer Grasim Industries (BSE: 500300, NSE: GRASIM), a subsidiary of the multinational Aditya Birla Group. A new company, AV Terrace Bay, has been created to manage the mill. As part of the purchase agreement, the provincial government forgave a \$24.2 million loan that had been granted to the mill. The Terrace Bay mill, which re-opened in early October 2012, could viably operate using wood from areas already impacted by industrial activity and of lesser ecological value, yet intact areas are

currently allocated to supply this mill. The mill is currently geared for the production of northern bleached softwood kraft pulp but will be converted to produce dissolving pulp for the manufacture of viscose staple fiber to be used in textiles in the next two years.

“According to a provincial forest audit of the Ogoki Forest, woodland caribou habitat will decline in the forest by 57% over the planning period, if operations continue as planned.”¹⁶

Over the past 5 years, due to controversy surrounding the logging in this area, the mill has lost many important customers. In 2011, the mill lost its FSC chain of custody certification (SW-CW-004941) for being unable to prove that its non-FSC fiber was low risk. With a change in ownership and management of the mill in 2012, there are new opportunities to set a new course for this Endangered Forest Area. Greenpeace will engage collaboratively with the new owners to ensure the health of the forest, woodland caribou populations and compatible economic development are priorities moving forward.

TROUT LAKE-CARIBOU FOREST, ONTARIO



■ North of Managed Forest Area
 ■ Endangered Forest Areas
 Forest Management License
 Mills (2004)

Conservation value index for intact forests
 Higher
 Lower

SIZE:
1,617,536 hectares

INTACT:
86.6%

LEGALLY PROTECTED:
8%

HABITAT FOR SPECIES AT RISK?:
YES

LOGGING/MANAGEMENT COMPANY:

Resolute Forest Products, Domtar Corporation

MILLS SUPPLIED FROM THIS ENDANGERED FOREST AREA:

Resolute Forest Products Thunder Bay paper, pulp and saw mills, Domtar Dryden pulp mill

The Trout Lake-Caribou Endangered Forest Area is prized for its caribou habitat including important calving areas. Largely intact, relative to other areas of managed forest in Ontario, this Endangered Forest Area contains significant High Conservation Values currently under threat.



▲ The iconic woodland caribou



▲ Resolute's Thunder Bay mill complex sources wood from the Trout Lake-Caribou Endangered Forest Area

Trout Lake Forest is licensed to Domtar (NYSE/TSX: USF). The forest supplies the Dryden NBSK pulp mill, which has FSC chain of custody certification (SW-COC-001318). Due to the fact that High Conservation Values in this forest are under serious threat, in fall 2010 Greenpeace raised concerns with the company that wood from this forest is not compliant with the FSC controlled wood designation. The company subsequently agreed to pursue full FSC forest management certification on this forest to ensure ecological values are protected. However FSC alone will not be adequate - a large network of protected areas is required to preserve the values in this Endangered Forest.

“According to the current Forest Management Plan for Trout Lake, there will be a 27% loss of caribou habitat in the forest if planned logging operations proceed.”¹⁷

Connected by a thin band of intact forest along the northern limits of the allocated forest, the Trout Lake Forest is connected to the Caribou Forest. The Caribou Forest includes the entirety of the range of the Brightsand caribou herd. This forest, 718 217 hectares large, is valued for its intactness, carbon stores, and many other ecological values. Just to the south of the Caribou Forest, a small portion of the adjacent English River Forest also serves as important caribou habitat and a buffer to the Wabikimi Wilderness Park.

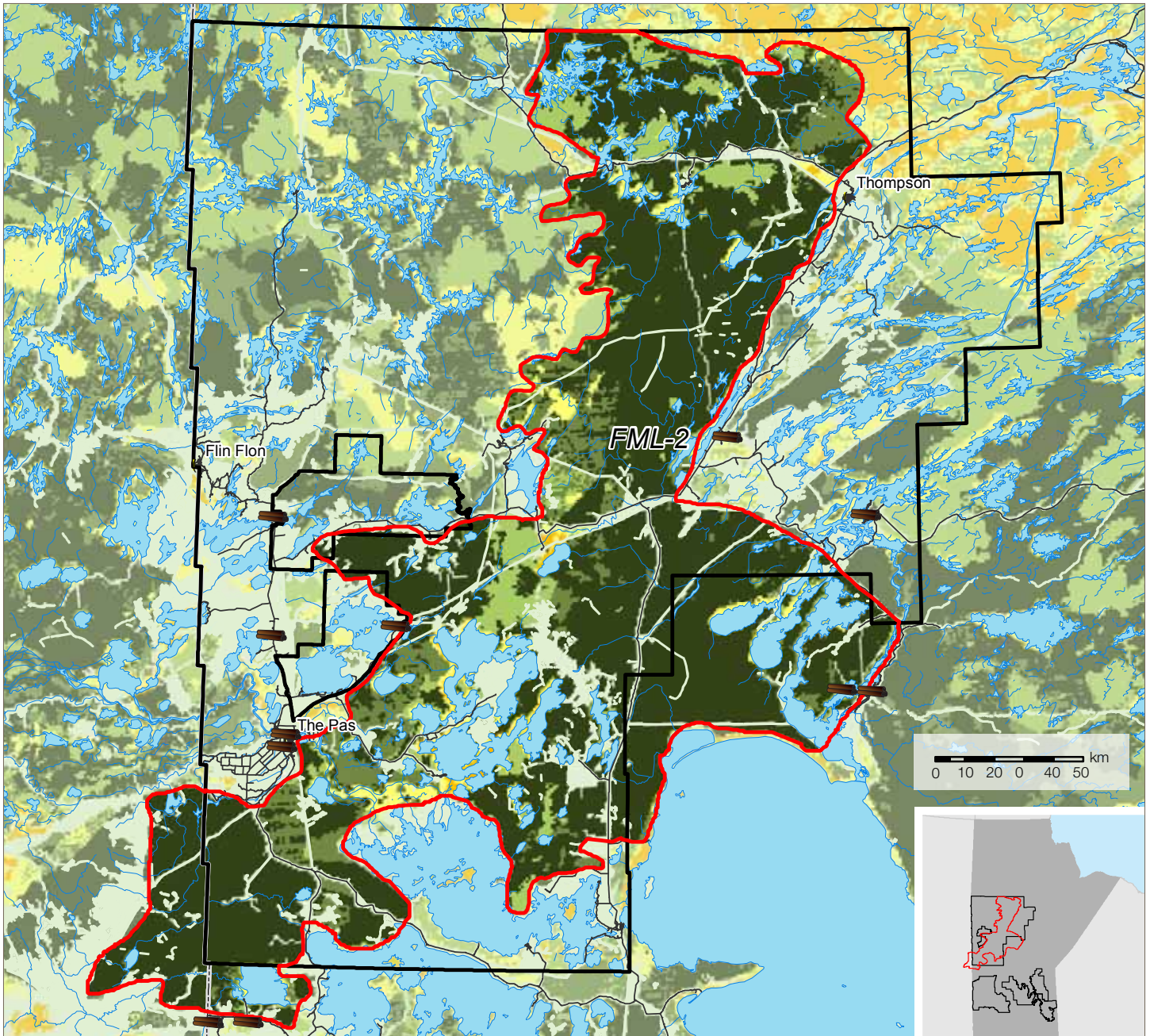
Less than 8% of these two forests are legally protected and logging threatens identified High Conservation Values. There is currently no science-based conservation plan completed for the area. The FSC certificate for the Caribou Forest (SW-FM/COC-004570) is not compliant with the FSC National Boreal Standard for failing to set aside adequate protected areas and for adopting a caribou management plan that allows continued decline of the species. A complaints process was initiated in August 2012 for violation FSC Principles 6, 7 and 9 of the FSC standard.

“The FSC certificate for the Caribou Forest (SW-FM/COC-004570) is not compliant with the FSC National Boreal Standard...”

Resolute Forest Products is the major operator in the Caribou and English River forests. The fiber collected is used to supply the company's Thunder Bay saw, pulp and paper mills with a capacity of 300 million board feet of lumber and 574,000 metric tonnes of market pulp, newsprint and commercial printing paper. It also supplies the Fort Frances pulp mill which produces 254,000 metric tons of market pulp and commercial printing paper per year.

“According to a provincial forest audit of the Caribou Forest, woodland caribou habitat will decline in the forest by 42% over the planning cycle, if operations continue as planned.”¹⁸

BOREAL GEM, MANITOBA



■ North of Managed Forest Area
 ■ Endangered Forest Areas
 ■ Forest Management License
 Mills (2004)
 Conservation value index for intact forests
■ Higher ■ Lower

SIZE:
4,528,240 hectares

INTACT:
87.1%

LEGALLY PROTECTED:
0.3%

HABITAT FOR SPECIES AT RISK?:
YES

LOGGING/MANAGEMENT
COMPANY:

Tolko

MILLS SUPPLIED FROM THIS
ENDANGERED FOREST AREA:

**Tolko's Pas sawmill and
pulp and paper mill**

Perhaps one of the most important Boreal Endangered Forest Areas in western Canada is found in Manitoba. While some of the western provinces, such as Alberta and British Columbia, have been heavily impacted by the cumulative effects of logging, oil and gas exploration, Manitoba still boasts some of the largest tracks of intact Boreal forests remaining on the planet. Yet, only 7.4% of the province's allocated forests are protected.



▲ The Boreal Gem offers one of best chances for Boreal conservation in western Canada.



▲ Studies suggest that threatened woodland caribou may never return to areas that have been industrially logged.

Like Quebec and Ontario, Manitoba's Boreal plays an extremely important ecological role in mitigating against climate change, purifying our air and water, and providing habitat for species at risk. Manitoba's "Boreal Gem," located in the northwest region of the province, is a largely pristine area that has yet to be extensively impacted by clear-cut logging. Ecological mapping in the area shows an abundance of rivers and wetlands, stored carbon, as well as wolverine and caribou habitat.

This Endangered Forest Area is particularly important for woodland caribou and provides both winter habitat and summer breeding grounds for the species. Whereas most of the Endangered Forest Areas identified in this report are home to caribou herds in dangerous decline requiring immediate action, the Boreal Gem hosts both stable and declining caribou herds. One of the herds in the region – the Naosop Lake herd – has been identified as being at high risk by the Manitoba government.¹⁹ Immediate steps must be taken to protect this habitat and prevent the loss of this herd. On the other hand, the areas with stable herds also present unique opportunities for conservation; careful planning can be done *in advance* of development to minimize threats to caribou and prevent a crisis situation from occurring in these areas.

“Manitoba's “Boreal Gem,” located in the northwest region of the province, is a largely pristine area that has yet to be extensively impacted by clear-cut logging.”

The Boreal Gem has significant overlap with Tolko's Forest management License Area # 2, which is a massive 9 million hectares, and supplies wood to The Pas saw and pulp and paper mill complex. The sawmill is currently idled, but is producing wood chips, and the pulp and paper mill produces 185,000 tonnes of kraft paper per year.

SEEING GREEN: SOLUTIONS FOR THE BOREAL FOREST



▲ Signatories announce the creation of the Great Bear Rainforest Agreement on March 31, 2009. The B.C. government called the agreement the “most significant environmental announcement in the province’s history.”

Canada’s last intact forests are critical for the conservation of biodiversity, mitigation of and adaptation to climate change, and the preservation of ecological services like water and air filtration. Protecting these forests is one of the most pressing environmental challenges facing us today.

Greenpeace’s vision for Canada’s Boreal Forest is that all human activity occurs within ecosystem limits so that forests, people, and economies can be mutually reinforcing, not competing. This vision includes a robust protected areas system that is an anchor for resilient ecosystems over time, prosperous communities, First Nations autonomy and decision making in their territories, continued sustainable economic development through access to growing green markets, and the preservation of intact ecosystems.

While a model for Boreal Forest protection that yields on-the-ground protection is not yet in place, we can learn from other models of successful collaborations. Partnerships, led by Greenpeace, such as the Great Bear Rainforest Agreements in British Columbia, the Amazon Alliance in Brazil and the Golden Agri Resources Agreements in Indonesia are delivering lasting solutions for forests. While Greenpeace had expected that a successful model would be created through the Canadian Boreal Forest Agreement, the Agreement failed to deliver concrete conservation outcomes.

Greenpeace invites logging companies and their customers to work collaboratively within meaningful timeframes to secure the protection of Endangered Forest Areas, while supporting sustainable economic development.

Together, we can contribute to the development of a sustainable model that meets the interests of all parties, before it’s too late for the Boreal Forest.

SUCCESSFUL COLLABORATIONS FOR FOREST PROTECTION

The Great Bear Rainforest Agreements span the coast of British Columbia, covering one of the last large intact tracts of coastal temperate rainforests in the world. After years of conflict, a 'peace in the woods' agreement was announced between Greenpeace, its allies and the logging industry. This opened the door to collaboration to define Ecosystem-Based Management (a land management approach based in science that ensures the long-term health of the rainforest), including a comprehensive protected areas network covering one-third of the region, improved logging practices and support for a sustainable future for First Nations communities.

Today, a vast portion of the Great Bear Rainforest is off-limits to logging through agreements endorsed by the B.C. government, First Nations, forest products companies and environmental organizations. Collaboration to meet the committed goal of 70% off-limits is on-going.

850,000 hectares of forest tenures in the Great Bear Rainforest are FSC-certified, a signal that the forest industry has responded to the growing market demand for environmentally responsible forest products.

An equally effective solution can be created for the Boreal Forest, drawing on the successes of other world leading collaborative efforts.

HOW MUCH NEEDS TO BE PROTECTED?

Large protected areas are required to preserve ecosystems²⁰. However, to date, the political will to protect what scientists recommend has been absent. For this reason, the Boreal Forest continues to face an unacceptably high level of risk.

“Large protected areas are required to preserve ecosystems.”²¹

Areas conserved should be considerably larger than the size of any possible natural disturbance²². In Boreal forests, natural fires commonly burn across 100,000 hectares and in some cases even exceed 500,000 hectares²³. Such a large-scale natural disturbance means that creating very large protected areas is needed in order to maintain the natural diversity of growth stages in forests (areas that are naturally disrupted, young forests, old-growth forests, etc.) and their associated biodiversity²⁴.

A review of more than 159 scientific works shows that the scientific community recommends between 30% and 50% targets for conserving biodiversity and maintaining ecological functions in any given ecosystem.²⁵ Studies in northeastern North America show that the average minimum area required to maintain large mammals is at least 500,000 hectares, or 5,000 km².²⁶ However, in Boreal forests, the area required to protect mammals is larger. Woodland caribou is the species with the largest range, from 150,000 hectares to more than 900,000 hectares (1,500 km² to 9,000 km²)²⁷. Therefore areas of this magnitude should be protected in the Boreal Forest to ensure their survival.

Conservation science and practical on-the-ground experience demonstrate that, in the absence of a comprehensive network of protected areas, simply improving *how* logging takes place is not sufficient in itself to preserve biodiversity and ecological functions over the long term in the Boreal Forest. Conservation planning must be carried out at multiple scales that, when combined, provide guidance on *where and how much* of the forest must be preserved to ensure ecological integrity. This should then be followed by the identification of a connected protected areas network, a reserve system and improved logging practices. Together, these elements provide the foundation for an integrated plan for managing the forest in a precautionary manner that is implemented by governments and verified by FSC. FSC must be paired with legal protection of intact forests if biodiversity and ecological function are to be maintained over time.

“FSC must be paired with legal protection of intact forests if biodiversity and ecological services are to be maintained over time.”

JOINING ECOLOGY AND ECONOMICS: HOW THE MARKETPLACE CAN DRIVE BOREAL FOREST CONSERVATION

Boreal forest products customers have been, and continue to be, part of the solution for this globally significant forest. Clearly articulated expectations from customers foster willingness by forest product companies to collaboratively work together with stakeholders and decision-makers. A renewed focus on Boreal Forest conservation in the marketplace is required to ensure the survival of this globally significant ecosystem.

Greenpeace has been at the forefront of successful conservation models around the world – from Indonesia to the Great Bear Rainforest – and the marketplace has played an integral role in the transformation of forest practices.

First Step: Customers Must Act

- 1 Contact Quebec's Minister of Environment to request the immediate adoption of protected areas in the Broadback Valley Forest, consistent with the Cree First Nation's land use plan;
- 2 Check your supply chain to identify products from Endangered Forest areas outlined in this report and suspend purchases from these areas;
- 3 Request your suppliers immediately suspend logging in Endangered Forest Areas and engage in conservation planning with Greenpeace that includes large protected areas and responsible management practices (FSC);
- 4 If your suppliers do not comply, move your business to more responsible companies;
- 5 Once conservation plans are completed, reward your suppliers with enhanced business relationships.

Second Step: What governments and the logging industry must do

- 1 The Quebec government must legally protect the Broadback Valley Forest, consistent with the Cree First Nation's land use plan and in a manner that respects the governance authority of the Cree Nation over their traditional territory.
- 2 As a first step, forest companies need to suspend logging in identified High Conservation Value areas in the Boreal Forest, prioritizing the Endangered Forest areas in this report.
- 3 Conservation planning for each of the Endangered Forest areas must be fast-tracked by governments and companies in collaboration with Greenpeace and others, based on independent science and traditional knowledge. These plans, which could be completed within six months, would ensure the long term resilience of ecosystems and the well-being of communities, including a sustainable economy. These plans should be consistent with First Nations' land use visions, and fully respect the rights enshrined in the *UN Declaration on the Rights of Indigenous Peoples*.
- 4 These plans should be immediately implemented by forest products companies while under review by appropriate First Nation and provincial governments for final approval and legal implementation.

PATHWAY TO SOLUTIONS

1 Suspend logging in Endangered Forest Areas

2 Adopt First Nations conservation proposals

3 Collaborate between stakeholders

5 Create recommendations for a Conservation Plan"

4 Utilize independent science

6 Implement Conservation Plan on the ground

7 Share with First Nations & Provincial governments

8 Achieve legal implementation with FSC verification

- 1 Immediate suspension of logging - or moratoria, in identified Endangered Forest areas
- 2 Immediate adoption of First Nations conservation proposals by logging companies
- 3 New collaboration between stakeholders on development of long-term conservation plans

- 4 Independent science to determine what how much needs to be conserved
- 5 Recommendation for a Conservation Plan based on Ecosystem-Based Management, including new protected areas and improved forestry practices

- 6 Conservation Plans implemented by logging companies
- 7 Recommendations to First Nations and Provincial governments
- 8 Legal implementation of plan, verified through FSC certification



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FOREST STEWARDSHIP COUNCIL CERTIFICATION:

NOT ALL CERTIFICATES ARE CREATED EQUAL

Forest Stewardship Council (FSC) is an international certification organization whose goal is to support the environmentally appropriate, socially beneficial and economically viable management of the world's remaining forests. It is the only forest certification system that currently enjoys broad support from leading forest products companies, their customers and the environmental community. Certification involves third party certifiers inspecting applicant forest management areas to determine whether they are being managed according to a pre-determined set of strict environmental and social standards.

But not all FSC certificates in the Boreal Forest are created equal.

Some FSC certificates fall short of meeting the FSC's National Boreal Forest standard's objectives. While the FSC Boreal Standard provides excellent guidance on a range of ecological values, it has not been updated to reflect the needs of sensitive threatened species such as woodland caribou. Moreover, there are significant problems with implementation of the Standard on the ground. Because of this, many of the principles central to the FSC are not being properly applied in some Canadian Boreal tenures, such as the Caribou Forest in Ontario, and the Montagnes Blanches region of Quebec, both managed by Resolute Forest Products. Challenges regarding non-compliance are beginning to emerge to either improve forestry practices and conservation or revoke certificates.

Forest protection and forest certification must go hand in hand - relying on FSC alone will not ensure that the world's remaining intact forests are protected.

THE BOREAL EFFECT: A REMINDER OF WHY THE BOREAL FOREST IS IMPORTANT

Biodiversity and Species at Risk:

In Canada, intact Boreal forests play an important role in maintaining healthy ecosystems and threatened species.

The Boreal Forest contains rich array of wildlife, including half of Canada's bird population, as well as wolves, bears, waterfowl, and species at risk such as woodland caribou and wolverine²⁸. Because of variation in soil, climate, and landscape over the boreal region, the forest has a wide variety of tree species and ages, which support a multitude of wildlife species²⁹. Woodland caribou are an iconic boreal species. With a low tolerance for human activity, they require up to 9,000 km² of undisturbed Boreal forest to survive³⁰. They are also considered an "umbrella species", meaning that maintaining caribou across the landscape ensures the survival of dozens of other species that share the same habitat³¹. The health of woodland caribou is a key indicator of the overall health of the Boreal.

Carbon:

Intact areas also play a critically important role in mitigating global climate change because of their capacity as carbon storehouses and sinks. The Boreal region holds some of the highest quantities of terrestrial carbon in the world³²; an estimated 208 billion tonnes of carbon are stored³³. In addition to these immense carbon reservoirs³⁴, recent studies show that old-growth areas in the Boreal Forest are active sinks that capture carbon from the atmosphere for hundreds of years³⁵.

Communities:

Maintaining healthy ecosystems is a key concern for many aboriginal peoples and communities in Canada's Boreal Forest. Industrial logging impacts hunting and trapping areas and the gathering of forest foods (particularly when herbicides are used in logging operations), and degrades water quality. Logging has also been linked with the destruction of sites with high cultural value and traditional use, and can cause profound changes to traditional territories without the consent of affected communities.



Greenpeace recognizes the central role of First Nations as governments in the development of conservation initiatives, as well as the right of indigenous people to make decisions concerning land-use on their traditional territories as enshrined in the United Nations Declaration on the Rights of Indigenous Peoples. In particular, the right to free, prior and informed consent prior to any industrial activity is key to socially and environmentally sustainable developments.

The Boreal Forest is also an important economic resource for other forest dependent communities, many of which are extremely remote. Not only is sustainable resource extraction an important economic driver, but so are other forest-related ventures such as the manufacture of value-added and specialty wood products, remote tourism and wilderness recreation, and food production³⁶.

Woodland caribou:

Woodland caribou, once abundant throughout Canada's Boreal Forest have suffered a dramatic decline in the last 100 years. Logging and road-building and the resulting fragmentation of the forest lead directly (loss of habitat, disturbance)³⁷ and indirectly (increase in predation)³⁸ to the extirpation of woodland caribou.

According to caribou scientists, 77 to 84% of a woodland caribou population's range must stay intact (without natural or human disturbance) for the species to have a 70% likelihood of survival over 100 years³⁹. Once the total disturbance in a given range has passed 38%, a population is no longer self-sustaining, and it will decline and eventually become extinct. The majority of caribou herds in Canada are no longer self-sustaining⁴⁰. This indicates that Canada's Boreal Forest is under severe stress and its ecological values at risk.

CONCLUSION

Endangered Forest Areas require immediate protection from industrial threats. The fate of threatened wildlife species, such as woodland caribou, as well other ecological values such as biodiversity, air and water quality and carbon storage, rest in the balance. Science indicates that not nearly enough of Canada's Boreal Forest is protected to ensure that these important ecological values are conserved.

Logging continues to be a primary threat to Boreal Forest in general, and to the Endangered Forest Areas identified in this report. At this moment, logging is degrading these last intact forests.

The time to act is now.

The urgency is especially great given that there is currently no process that is achieving on-the-ground conservation in this region. However, we believe that practical solutions that protect forests, ensure community prosperity, and create stability in the marketplace, are achievable. The market for truly green forest products has never been stronger.

Greenpeace is committed to decisive action to protect Endangered Forest Areas. We are looking forward to creating lasting solutions for Canada's Boreal Forest and collaborating with government, customers and logging companies who are ready to embrace on-the-ground change in a meaningful timeframe.

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