

CANADIAN NORTHERN CORRIDOR: RECENT RESEARCH OVERVIEW

OCTOBER 2021

ACCESS

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ACKNOWLEDGMENTS

The Canadian Northern Corridor Research Team gratefully acknowledges funding from the Government of Alberta, Prairies Economic Development Canada (formerly Western Economic Diversification) and the Social Sciences and Humanities Research Council. This funding enables us to undertake research until Fall 2022 and complete two-thirds of our planned research program.

The Canadian Northern Corridor Research Program operates within the University of Calgary in Calgary, Alberta. We acknowledge the traditional territories of the people of the Treaty 7 region in Southern Alberta, which includes the Blackfoot Confederacy (comprising the Siksika, Piikani, and Kainai First Nations), as well as the Tsuut'ina First Nation, and the Stoney Nakoda (including the Chiniki, Bearspaw, and Wesley First Nations). The City of Calgary is also home to Métis Nation of Alberta, Region 3.

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LETTER FROM THE PROGRAM DIRECTOR

In 2015, the School of Public Policy at the University of Calgary commenced an ambitious national initiative: the Canadian Northern Corridor (CNC) Research Program. We are investigating the feasibility, desirability and acceptability of a corridor concept to advance integrated, long term infrastructure planning and development in Canada. The Corridor Concept includes a conceptual network of multi-modal rights-of-way across middle and Northern Canada, with an accompanying policy, regulatory and governance structure. The Corridor Concept would provide a space for the co-ordinated development of infrastructure such as road, rail, transmission, pipeline and telecommunications. Although a route is not yet determined, if implemented the Corridor Concept would connect northern communities along an east-west axis to ports on all three coasts. It would also integrate with existing and forthcoming energy and transportation infrastructure, including southern transportation corridors.



To launch the School's CNC Research Program, we published an initial concept paper in 2016, and School of Public Policy researchers presented testimony to the Standing Senate Committee on Banking, Trade and Commerce. In 2017, the Senate of Canada endorsed exploration of the Corridor Concept and recommended \$5 million in funding for the School of Public Policy to create a corridor research program.

With partial research funding secured, the School's CNC Research Program is engaging in academically-led and peer-reviewed research on the Corridor Concept. Our work is guided by researchers at The School of Public Policy and draws on the expertise of academics and industry professionals from across Canada. Presented in an approachable style and deliberately industry- and infrastructure-agnostic, the CNC Research Program provides the knowledge base required for informed dialogue, planning and decision-making within government, industry and community circles.

INTENT AND SCOPE

Effective infrastructure planning advances social, economic and environmental goals. Many countries use long-term approaches to national infrastructure planning. The current development process in Canada focuses on planning and developing infrastructure one project at a time and is not guided by a national long-term strategy.

The Canadian Northern Corridor Research Program provides research and analysis to inform a long-term coordinated approach to infrastructure planning. Our research is based on the concept of a multi-modal infrastructure corridor and crosses eight themes:

- Economic Outcomes
- Environmental Impacts
- Funding and Financing
- Geography and Engineering
- Legal and Regulatory
- Organization and Governance
- Social Benefits and Costs
- Strategic and Trade Dimension



PROGRESS TO DATE

We began the CNC Research Program with a set of foundational studies to scope the benefits and challenges of implementing the Corridor Concept, and have since completed research under six of eight themes. Our latest foundational paper, *The Canadian Northern Corridor: Planning for National Prosperity*, provides a follow-up to The School of Public Policy’s initial publication presenting the Corridor Concept in 2016. The paper’s authors summarize the broad scope of the Canadian Northern Corridor Concept and Research Program and identify how a corridor development could benefit people and businesses across Canada, including those in regions with high degrees of existing transportation infrastructure connectivity.

This document, the *Canadian Northern Corridor: Recent Research Overview*, provides a concise snapshot of our research activity and findings in 2020 and 2021, building upon studies completed in previous years. We hope you find it a valuable resource in your planning and decision-making efforts.

NEXT STEPS

In 2021 and 2022, we will augment our academic research efforts with engagement sessions with stakeholders and Indigenous rights-holders, including 17 virtual roundtables and 19 on-the-ground engagement visits with communities across the country. The CNC Research Program will culminate in a final report that synthesizes all academic and engagement research and will include actionable policy recommendations for potential implementation of the Corridor Concept, including recommendations to advance infrastructure planning and development processes in Canada.

We encourage you to visit our website, www.canadiancorridor.ca, where you can access the full text of our research reports, join our mailing list, register for live webinars and follow our community and stakeholder engagement efforts.

Sincerely,

Dr. Jennifer Winter

Associate Professor of Economics
Scientific Director, Energy and Environmental Policy Research Division
Program Director, Canadian Northern Corridor Research Program
School of Public Policy, University of Calgary

An important takeaway from the Trump tariffs and Keystone XL cancellation is that Canada needs to think more strategically about the future of our own economy, our non-US international trade relationships and our internal trade relationships between Canadian provinces.

— Dr. G. Kent Fellows
Associate Program Director
Canadian Northern Corridor Research Program
Source: The Globe and Mail, February 3, 2021

CANADIAN NORTHERN CORRIDOR RESEARCH THEME OVERVIEW

THEME	RESEARCH AREAS
 FOUNDATIONAL STUDIES	<ul style="list-style-type: none">• Canadian Northern Corridor Concept description and overview• Development of underlying context and foundations for future Canadian Northern Corridor research• Identification of research direction and themes
 ECONOMIC OUTCOMES	<ul style="list-style-type: none">• Potential overall impact on the Canadian economy• Potential regional economic impacts• Potential Indigenous economic impacts• Potential industrial impacts by sector
 ENVIRONMENTAL IMPACTS	<ul style="list-style-type: none">• Potential net overall environmental impact• Policy options for mitigating impacts• Policy options for environmental assessment
 FUNDING AND FINANCING DIMENSIONS	<ul style="list-style-type: none">• Private- and public-sector business cases• Equity and debt financing options• Potential private-sector, government and Indigenous participation
 GEOGRAPHY AND ENGINEERING	<ul style="list-style-type: none">• Mapping and visualization of corridor dimensions (resource deposits, population centres, existing infrastructure, climate, topography, etc.)• Engineering challenges and routing options• The potential for transportation system rationalization• Potential construction timelines and costs
 LEGAL AND REGULATORY DIMENSIONS	<ul style="list-style-type: none">• Federal, Indigenous, provincial and territorial legislative and regulatory approaches• Land ownership and right-of-way issues• The case for project-specific expenditure programs
 ORGANIZATION AND GOVERNANCE	<ul style="list-style-type: none">• Oversight and accountability• Community consultation and engagement mechanisms• Indigenous partnerships• The case for inclusive project-specific institutional arrangements
 SOCIAL BENEFITS AND COSTS	<ul style="list-style-type: none">• Potential impact on life in the North — jobs, cost of living, social amenities• Potential impact on Indigenous groups and communities• Potential impact on life in the south from transportation system rationalization
 STRATEGIC AND TRADE DIMENSIONS	<ul style="list-style-type: none">• Arctic sovereignty and national purpose benefits• The case for transportation systems in northern development• International trade and investment implications



THE CANADIAN NORTHERN CORRIDOR: PLANNING FOR NATIONAL PROSPERITY

G. Kent Fellows, Katharina Koch, Alaz Munzur, Robert Mansell and Pierre-Gerlier Forest

The School of Public Policy Publications • Volume 13 • Issue 28 • December 2020

This paper summarizes the broad scope of the Canadian Northern Corridor (CNC) concept and its benefits for Canada, and The School of Public Policy's CNC Research Program. It provides an essential update to the program's 2016 concept paper, *Planning for Infrastructure to Realize Canada's Potential: The Corridor Concept*, by Andrei Sulzenko and G. Kent Fellows.

KEY FINDINGS

- Canada's current infrastructure approach is ineffective and piecemeal; projects are planned and implemented in isolation from one another and regulatory and governance frameworks are specifically designed for individual projects and their purposes. This reliance on one-off projects comes with little or no consideration of a long-term national strategy or integration with other infrastructure initiatives. It can also lead to uncertain outcomes for proponents and extended timelines for applications and approvals, deterring private investors and potentially reducing public infrastructure investment.
- Absent comprehensive and integrated planning, the future of Canada's North and Near North will most likely follow the pattern of the last 50 years: a lack of project certainty and continued proposals for one-off investments in roads to service the needs of individual projects or goals without concern for the positive spillovers that could accrue to communities or other users.
- As a concept, the Canadian Northern Corridor (CNC) is multi-modal and involves a set of pre-approved and administered rights-of-way, combined with an institutional framework for its development and operation, improving the economics and decreasing the environmental footprint of infrastructure investments that cross regional boundaries. It allows for integration across multiple infrastructure initiatives, facilitating a long-term national strategy for inter-regional infrastructure.
- By facilitating international market growth and diversification, reducing barriers to interregional trade and improving access to resources, the potential benefits to Canadians are large and wide-ranging. These include job and income creation, decreases in the cost of living, better accessibility to goods and services and an overall improvement to Canadians' well-being associated with higher real incomes.
- The establishment of a single comprehensive and integrated body for corridor regulation and operation under a CNC Concept could enhance the capacity of local communities to plan and participate in long-term infrastructure projects.

- The CNC Concept aims to deliver new economic benefits and participation opportunities for Indigenous communities.
- Even regions with high degrees of existing transportation infrastructure connectivity will benefit from reduced congestion and linkages to new regions.
- The purpose of the CNC research program is to provide the information and analysis necessary to establish the feasibility and desirability of, and most advantageous choices for, the implementation of the corridor concept. The program takes the form of original peer-reviewed academic studies; formal engagement with potentially affected communities, businesses and governments; and an accompanying research dissemination strategy.
- The School of Public Policy's CNC Research Program provides the information base, analysis and evaluation required to assess the feasibility and desirability of establishing permissible corridors in Canada. Integrating formal academic research and a strategy of engagement with potentially impacted communities, the program is working to address key issues such as geographic and engineering feasibility, legal and governance issues, and financial and economic viability.





OPENING CANADA'S NORTH: A STUDY OF TRADE COSTS IN THE TERRITORIES

G. Kent Fellows and Trevor Tombe

The School of Public Policy Publications • Volume 11 • Issue 17 • November 2018

This paper presents several measures of the internal and international trade costs faced by Canadian provinces and territories and the economic benefits from lowering these trade costs. The annual GDP of Nunavut, Yukon and Northwest Territories could increase by nearly \$4.7 billion — a massive increase of roughly 50 per cent — if transportation infrastructure in the territories improves to the same level as in the provinces.

KEY FINDINGS

- The northern Canadian territories of Yukon, Nunavut and the Northwest Territories (NWT) rely disproportionately on extra-territorial trade compared to the more southerly Canadian provinces: imports account for between 35 and 40 per cent of spending by the territories, compared to 28 per cent by the provinces, while exports account for 80 per cent of production in the territories compared to two-thirds in the provinces. The territories thus stand to gain more from reductions to internal trade barriers relative to their provincial neighbours.
- Trade costs, broadly understood, are anything that inhibits trade that would otherwise have occurred between two regions. For the territories, these trade costs include regulatory difference, time delays and infrastructure quality, amounting to a tax of 100 to 190 per cent on goods traded to and from the region.
- While shipping distances are a critical determinant of trade costs, we also find that distances matter much more for the territories. Trade costs for trading pairs involving at least one territory are 45 per cent higher compared to trade between pairs of provinces even where distances are similar, suggesting lower quality infrastructure as an important barrier to gains from trade.
- Most shipments to and from the territories are by truck, with an average shipping distance over 2,100 kilometres (compared to 1,400 km for shipments to provinces). Shipments to territories also generally have a lower value compared to those to provinces while the cost of shipping is higher.
- In recent years, the season for ice roads, currently used in much of the North to transport goods to and from remotely located industrial/mining production and communities, has become shorter and less predictable, implying greater reliance on air transport with a higher associated per tonne-km cost compared to trucking.
- The potential gains from trade liberalization and improved infrastructure quality are significant. The annual combined GDP of Nunavut, Yukon and Northwest Territories could be increased by

between \$4.5 billion – \$6 billion — a productivity gain of roughly 50 per cent or \$40,000 per territorial resident. Additionally, potential gains would represent a reduction in the overall cost of living in the territories of roughly one-third.

- Potential gains would also have benefits for the rest of Canada, with a net spill-over effect worth roughly \$2 billion per year.
- Though further study in this area is needed, the results presented here support the priorities identified by the Senate of Canada in its recent reports advocating for the reduction of internal trade barriers.





IMPLICATIONS OF AN INFRASTRUCTURE CORRIDOR FOR ALBERTA'S ECONOMY

Trevor Tombe, Alaz Munzur and G. Kent Fellows

The School of Public Policy Publications • Volume 14 • Issue 7 • February 2021

This paper quantifies the potential impact of increased transportation infrastructure on trade costs by combining data on interprovincial trade flows and mode-specific shipping data. Infrastructure development is particularly valuable for increasing Alberta's GDP: improved rail capacity could increase provincial GDP by up to \$9 billion per year.

KEY FINDINGS

- The benefits of increased pipeline access for Alberta's economy are well known. The benefits of infrastructure corridors, however, go far beyond pipelines. By reducing interprovincial and international trade costs, multimodal infrastructure corridors of road, rail, utilities and communications can potentially create large economic benefits.
- Given that expanded transportation infrastructure capacity can lower trade costs, governments hoping to expand internal trade should explore means of increasing such capacity, especially the possibility of increased rail shipment capacity.
- Priority should be given to infrastructure capacity and policy changes that promote increased trade to underserved markets within the United States and to other international markets.
- Combining rich data on interprovincial trade flows with mode-specific shipment data on volumes, values and shipment costs, we find that rail shipments are a lower-cost means of exporting goods for long-distance trade. We estimate that increased rail penetration lowers trade costs by roughly 0.3 per cent for each percentage point of rail's share of shipments.
- We find that lowering trade costs substantially increases Alberta's real GDP through its effect on international and interprovincial trade flows. Infrastructure capacity is particularly valuable, as we find that increasing the share of exports shipped by rail by 10 percentage points may increase Alberta's GDP by nearly 1.5 per cent in the short- run and over 2.5 per cent in the long- run — equivalent to over \$9 billion per year in economic activity.
- Governments should expand support for research activities into the feasibility and potential benefits of dedicated multimodal infrastructure corridors in Canada and increase the collection and reporting of relevant data on internal trade to facilitate research into the costs producers and consumers face, and the potential gains from internal trade liberalization.



CLIMATE CHANGE AND IMPLICATIONS FOR THE PROPOSED CANADIAN NORTHERN CORRIDOR

Tristan Pearce, James D. Ford and David Fawcett

The School of Public Policy Publications • Volume 13 • Issue 26 • November 2020

This paper reviews scientific evidence on the documented and anticipated impacts of climate change on Northern Canada and examines the implications for future corridor development. Current impacts are expected to continue and intensify in the future, putting existing and new infrastructure in Northern Canada at greater risk of damage.

KEY FINDINGS

- Climate change is already impacting Northern Canada and infrastructure in the region. This includes infrastructure that is similar to what would exist in the proposed Canadian Northern Corridor, or other infrastructure that is a part of industries that drive the demand for expanded transportation through a corridor.
- Based on future climate change projections, current impacts are expected to continue and intensify in the future. This means that existing and new infrastructure in Northern Canada will be at greater risk of damage.
- Climate change impacts are likely to affect the construction of transportation infrastructure in the Corridor. Future climate change projections must be integrated into regulations, codes and standards, design and route planning.
- Maintenance of infrastructure in the Corridor would need to be more robust to mitigate expected climate change impacts. This will likely increase the costs of maintenance, and maintenance procedures will need to be responsive to dynamic conditions over time.
- Climate change could adversely impact and even halt the continuous operation of the Corridor. Climate change could accelerate the deterioration of, and in some instances severely damage, corridor infrastructure. How changing climate conditions could affect “chokepoints” within the Corridor system will be an important consideration.
- The Corridor will need to be responsive to the political economy of climate change. This includes the global movement to reduce greenhouse gas emissions and implications for the global economy that the movement of resources through the Corridor depends on.
- Local communities and Indigenous Peoples must be meaningfully consulted early and often. Early and ongoing communication is necessary to identify if a corridor is desirable and relevant and how it might be impacted by climate change.



FINANCING AND FUNDING APPROACHES FOR ESTABLISHMENT, GOVERNANCE AND REGULATORY OVERSIGHT OF THE CANADIAN NORTHERN CORRIDOR

Anthony E. Boardman, Mark A. Moore and Aidan R. Vining

The School of Public Policy Publications • Volume 13 • Issue 25 • October 2020

This paper examines the public and private funding and financing options for corridor development. The federal government, or a consortium of governments, is central in gathering rights-of-way and providing corridor access to infrastructure providers. Within this model, there are numerous options for funding, including user fees, government financing and auctioning access.

KEY FINDINGS

- The federal government or a consortium of governments should constitute an “assembler” that assembles the land rights and grants use rights to infrastructure providers.
- This assembler would be financed by government(s) through debt, taxes, or by reducing other spending. If multiple governments participate in assembling the corridor, each government’s share of financing should be agreed upon ex ante.
- The assembler could be funded by auctioning corridor access to infrastructure providers, if the latter can earn sufficient profits, or by value captured through property, sales, corporate or personal income taxes or resource royalties.
- Assembler funding could come from charges to end-users. These charges could be per period access fees or based on usage. We recommend the former, especially in the absence of congestion.
- Financing of private infrastructure is possible if there are sufficient anticipated profits. Potential sources of financing include private corporations, public pension funds, private equity and public-private partnerships (PPPs).
- Funding of infrastructure may be from charges imposed on end-users or from government.
- All infrastructure projects will be natural monopolies and will be regulated to reduce inefficiency. Regulation will be best performed by existing sectoral regulators, which can be funded as they are now.
- PPPs can be funded through availability payments or shadow tolls from government or through usage charges (usually tolls). We do not recommend the use of PPPs due to their higher cost of finance and their reluctance to assume revenue risk. Nevertheless, we recognize that they may be more politically palatable than government provision and funding, and sometimes they are the only feasible option.
- The international evidence provides no novel sources of financing or funding.



CROSS-CANADA INFRASTRUCTURE CORRIDOR, THE RIGHTS OF INDIGENOUS PEOPLES AND ‘MEANINGFUL CONSULTATION’

David V. Wright

The School of Public Policy Publications • Volume 13 • Issue 24 • October 2020

This paper presents the diverse contexts of Indigenous rights and interests present in Canada today, clarifies the concept of “meaningful consultation” in contemporary Canadian jurisprudence and relates this body of law to the Corridor concept. Although it may be possible to consult in advance with Indigenous peoples on the most likely uses of the Corridor, significant project-specific consultation will still be required. Details regarding the Corridor’s legal form may clarify the extent of these specific consultations.

KEY FINDINGS

- The Canadian legal landscape pertaining to the rights of Indigenous peoples has evolved significantly in the decades since the northern corridor concept was first conceived.
- The Corridor Concept’s linear nature would directly and indirectly affect many diverse Indigenous communities that are situated in non-treaty, modern treaty and historical treaty contexts, each with different established or asserted rights, and with each context attracting different consultation obligations on the Crown’s part (i.e., the federal or provincial government, or both).
- The duty to consult and accommodate arises in situations where the Crown has actual or constructive knowledge of the existence or potential existence of Indigenous rights or title and contemplates conduct that might adversely affect those rights or title, such as the approval of major infrastructure projects.
- Pursuit of the Corridor Concept, to the extent that it involves Crown action that may adversely affect established or asserted Aboriginal rights or title, would trigger the Crown’s duty to consult, as would the review and approval of specific infrastructure projects that may eventually fall within the Corridor.
- Significant clarity now exists in the case law with respect to the duty to consult, including with respect to what constitutes meaningful consultation. As the Federal Court of Appeal recently stated in *Coldwater First Nation v. Canada (Attorney General)*, the “case law is replete with indicia” of what constitutes meaningful consultation.
- In practical terms, meaningful consultation includes, for example, the Crown consulting in good faith, the existence of two-way dialogue, the opportunity to participate in the process and to make submissions, open-mindedness by the Crown about accommodation of Indigenous rights, demonstrable integration of Indigenous communities’ concerns, substantive responses



GOVERNANCE OPTIONS FOR A CANADIAN NORTHERN CORRIDOR

Andrei Sulzenko and Katharina Koch

The School of Public Policy Publications • Volume 13 • Issue 27 • November 2020

This paper outlines and critically examines a corridor governance process at four stages: developing the initial policy framework; deciding on a corridor route; reviewing and implementing project proposals; and managing ongoing operations and oversight. The Corridor Concept allows for top-down and bottom-up governance options; however, successful implementation will depend on federal government involvement and a segmented development strategy.

KEY FINDINGS

- Governance issues should be considered at an early stage of CNC development in order to facilitate the establishment of a consensus on substantive questions that include corridor routing, Indigenous participation, implementation and oversight.
- CNC planning and implementation will involve a large stakeholder network spanning most provinces and territories and consisting of federal, provincial, territorial and municipal governments, as well as Indigenous communities, private corporations and the Canadian public.
- The experiences learned from previous Canadian and international infrastructure projects can provide valuable insights into effective policy frameworks, timelines and costs, routings and implementation procedures, as well as engagement of relevant stakeholders.
- Five operating principles inform the governance strategies laid out in the paper: the initial policy framework cannot be developed without the support of the federal government; implementation should be based on a cooperative relationship between governments, Indigenous communities and private corporations; stakeholder involvement must be a central focus during all stages of corridor development; CNC implementation is a long-term process that may take place in various segments and timeframes; and the CNC governance framework must be flexible enough to withstand political, economic and social transformations beyond legislative mandates.
- CNC governance can be divided into four stages of development and implementation: beginning with the development of the policy framework; deciding on a corridor route; reviewing and implementing project proposals; and managing operations and oversight. The stages are not necessarily consecutive; some may overlap.
- There are different approaches to CNC governance that vary from centralized, top-down to disaggregated, bottom-up sets of structure and processes. Most of the options throughout the

to information requests (including translation in some contexts), participation funding and a view to accommodation of conflicting interests.

- Crown consultation obligations are highly context-dependent, driven in significant part by the nature of the proposed activity (e.g., a pipeline, a hydro dam, a road, regulatory or licensing regime changes, etc.) and potential impacts that such activities would have on each community's specific set of asserted or existing rights. In contrast, the Corridor Concept, even if eventually proposed as a legal rights-of-way that follows a specific route, is a relatively abstract undertaking. It would be very challenging to anticipate all specific potential impacts and then consult on all of them.
- A significant challenge for governments pursuing the Corridor Concept is the disconnect that arises when overlaying an inherently abstract corridor concept with very diverse Indigenous rights and interests and a highly context-dependent duty to consult framework.
- While it is conceivable that the Corridor consultation process employs some kind of envelope approach and attempts to consult on the most likely uses of the Corridor (e.g., road, rail, pipeline, electrical transmission and communication networks), significant additional consultation will almost certainly be required as each specific infrastructure project is pursued.
- Once details regarding the Corridor Concept's legal form are clarified, further research may generate additional clarity regarding consultation and accommodation duties and potential forums and processes for fulfilling those duties.





CONSTRAINTS IN THE CANADIAN TRANSPORT INFRASTRUCTURE GRID

Jean-Paul Rodrigue

The School of Public Policy Publications • Volume 14 • Issue 6 • February 2021

This paper identifies the infrastructure, regulatory and operational constraints affecting transportation infrastructure development in Canada. Canadian transport infrastructure grids are not a fully integrated system because of Canada's inherent geographical and economic characteristics; corridor identification and development is a potential strategy to co-ordinate infrastructure investment and alleviate these constraints.

KEY FINDINGS

- The corridor as a bottleneck co-ordination mechanism. The core foundation of corridor development is to maximize the density of flows along an axis by identifying and mitigating bottlenecks. Canadian transport infrastructure grids are not a fully integrated system because of Canada's inherent geographical and economic characteristics. Corridor identification and development becomes a strategy to co-ordinate infrastructure investment.
- Limited latent demand of northern corridors. Developing and operating a transport corridor in northern areas is more costly and has much more limited commercial opportunities than a similar corridor in lower latitudes. Population and economic density are unavoidable constraints in corridor development. Outside punctual resource development, there is limited latent demand that a northern corridor could unleash.
- Development of latitudinal corridors in the medium term and longitudinal corridors in the long term. Developing a northern corridor is challenging to integrate with the existing transportation infrastructure pattern, while latent demand benefits appear marginal. There are no apparent commercial incentives to build a northern corridor, but segments can be considered on a case-by-case basis. Developing latitudinal corridors that would eventually be reinforced by longitudinal corridors appears to be a more effective strategy.
- Enduring opposition and governance issues to corridor development. Different levels of opposition and delays to infrastructure projects undermine the co-ordination potential of corridor development and the commercial viability of crucial infrastructure. Outside specific northern connectors to resources such as mining, energy and logging, the private sector has limited incentives to provide infrastructure or services to low-density areas. Sole private ownership and operation of infrastructure are unlikely unless supported by massive subsidies.

four stages include a choice between new federal/provincial crown corporations, not-for-profit corporations or the deployment of existing institutions and regulatory processes.

- Developing a policy framework will most likely involve the federal government as it is the ultimate articulator of national goals and can serve as a broker among stakeholders with a view to achieving acceptable outcomes.
- In order to make corridor routing negotiations manageable, they could be divided into segments, concentrating on relevant key stakeholders within a dedicated geographic area. This would also divide CNC implementation into segments.
- At the project proposal stage there is a choice to be made on governance structures and processes: deploy existing institutions and regulatory processes; or establish a special corridor agency that reviews all projects within the designated right-of-way. Approval of proposals and their subsequent oversight would similarly be vested in the special agency or existing bodies.
- Further research related to CNC governance should focus on the creation of detailed scenarios for CNC development in terms of geographic and modal priorities; an up-to-date inventory and assessment of actual and proposed transportation infrastructure projects along the notional CNC route; an in-depth assessment of the views of Indigenous communities; and a detailing of the relative merits of a crown corporation or a not-for-profit as the key governance structure.





NORTHERN AND ARCTIC SECURITY AND SOVEREIGNTY: CHALLENGES AND OPPORTUNITIES FOR A NORTHERN CORRIDOR

P. Whitney Lackenbauer and Katharina Koch

The School of Public Policy Publications • Volume 14 • Issue 20 • August 2021

This paper draws upon the Arctic and Northern Policy Framework (CIRNAC 2019) and Canada's current security and defence priorities to identify security concerns related to the Canadian Northern Corridor (CNC) Concept. With its potential to improve accessibility within and to Canada's northern remote regions, the CNC would become part of Canada's Arctic sovereignty and defence strategies and drive the need for improvements to existing surveillance technologies and search-and-rescue capacities.

KEY FINDINGS

- Key issues related to Canada's security and defence agenda, which involve critical and essential infrastructure development, must be considered in the development and implementation of a Canadian Northern Corridor (CNC).
- Canada's Arctic security and defence agenda is related to several key policy domains that are relevant from a Canadian Northern Corridor (CNC) perspective. These include infrastructure development, climate change, Indigenous sovereignty and natural resource development.
- The CNC will gain international attention and be internationally recognized as a strategy for Canada to assert its sovereignty over its Arctic territory, including the internationally disputed Northwest Passage.
- The CNC advocates for the inclusion and participation of Indigenous communities. Thus, Indigenous Peoples will also carry a significant role in the monitoring and surveillance of accessibility within and to the North, improved through enhanced infrastructure development.
- Canada's investments in Arctic defence infrastructure are modest compared to those of its Russian and American neighbours. The CNC, potentially adding strategically important infrastructure in the Canadian North, will directly tie into the discourse of Arctic security and power relations.
- In addition to natural disasters, the Canadian North is at significant risk of human-made disasters that pose serious prospective challenges for northerners and for federal and territorial governments. The CNC will likely foster the development of surveillance and monitoring assets.
- The CNC rights-of-way could trigger security concerns regarding the impact of foreign investment as a security threat, especially if natural resource development is coupled with the development of strategic transportation hubs, such as ports along the coast of the Arctic Ocean.

- CNC transportation infrastructure would also become a part of Canada's defence strategy as it forms a potential key asset in the defence and safeguarding of Canada's northern and Arctic regions.
- Future research should identify the role of dual-use infrastructure (infrastructure that satisfies both military and civilian purposes) in the CNC context and also examine to what extent security and defence stakeholders should be involved in the CNC's planning and implementation.



CANADIAN NORTHERN CORRIDOR RESEARCH PROGRAM

SCHOOL OF PUBLIC POLICY SPECIAL PUBLICATION SERIES — OCTOBER 2021

RECENT POLICY PAPERS AND WEBINARS*

1. [Canadian Northern Corridor: Planning for Prosperity](#)
 - December 2020: *G. Kent Fellows, Katharina Koch, Alaz Munzur, Robert Mansell and Pierre-Gerlier Forest*
 - Webinar: November 12, 2020
2. [Implications of an Infrastructure Corridor for Alberta's Economy](#)
 - February 2021: *Trevor Tombe, Alaz Munzur and G. Kent Fellows*
 - Webinar: March 17, 2021
3. [Constraints in the Canadian Transport Infrastructure Grid](#)
 - February 2021: *Jean-Paul Rodrigue*
 - Webinar: March 10, 2021
4. [Governance Options for a Canadian Northern Corridor](#)
 - February 2021: *Andrei Sulzenko and Katharina Koch*
 - Webinar: December 10, 2020
5. [Climate Change and Implications for the Proposed Canadian Northern Corridor](#)
 - November 2020: *Tristan Pearce, James D. Ford and David Fawcett*
 - Webinar: November 19, 2020
6. [Cross-Canada Infrastructure Corridor, The Rights of Indigenous Peoples and 'Meaningful Consultation'](#)
 - October 2020: *David V. Wright*
 - Webinar: December 1, 2020
7. [Financing and Funding Approaches for Establishment, Governance and Regulatory Oversight of the Canadian Northern Corridor](#)
 - October 2020: *Anthony Boardman, Mark A. Moore and Aidan Vining*
 - Webinar: November 26, 2020
8. [Northern and Arctic Security and Sovereignty: Challenges and Opportunities for a Northern Corridor](#)
 - August 2021: *P. Whitney Lackenbauer and Katharina Koch*
 - Webinar: October 26, 2021

* Key Messages and Summaries for SPP policy papers are available in English and French on the CNC website. *Canadian Northern Corridor: Planning for Prosperity* has been fully translated into French.

POLICY TRENDS AND COMMUNIQUE

1. [Infrastructure Policy Trends: A Canary in Panda's Clothing?](#)
 - July 2020: *G. Kent Fellows and Alaz Munzur*
2. [Infrastructure Policy Trends: The Digital Divide and the Lack of Broadband Access During COVID-19](#)
 - July 2020: *Katharina Koch*
3. [Mackenzie Valley Gas Pipeline in Retrospect \[Forthcoming\]](#)

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