Investigating the social, economic, and environmental impacts of road infrastructure

A peek at the Labrador Road Study

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Overview of presentation

- Introduction to Coasts Under Stress
- The Labrador Road Study: who, what, where, when, and why
- Methodology of the study
- Key findings
- The culvert study
- Discussion of our approach
- Useful documents and websites

Intro to Coasts Under Stress

•Coasts Under Stress (CUS): The Impact of Social and Environmental Restructuring on Environmental and Human Health in Canada

•Based at Memorial University of Newfoundland and the University of Victoria in British Columbia.

•Five-year project (2000-05) funded by the Social Sciences and Humanities Research Council of Canada (SSHRC), the Natural Science and Engineering Research Council of Canada (NSERC), participating universities, and partners in government, business, non-governmental organizations, and First Nation groups.

•Multi-disciplinary, integrated analysis of the long- and short-term impacts of socio-environmental restructuring on the health of people, their communities and the environment. Projects and their structure often decided upon in conversation with community representatives.

The Labrador Road Study

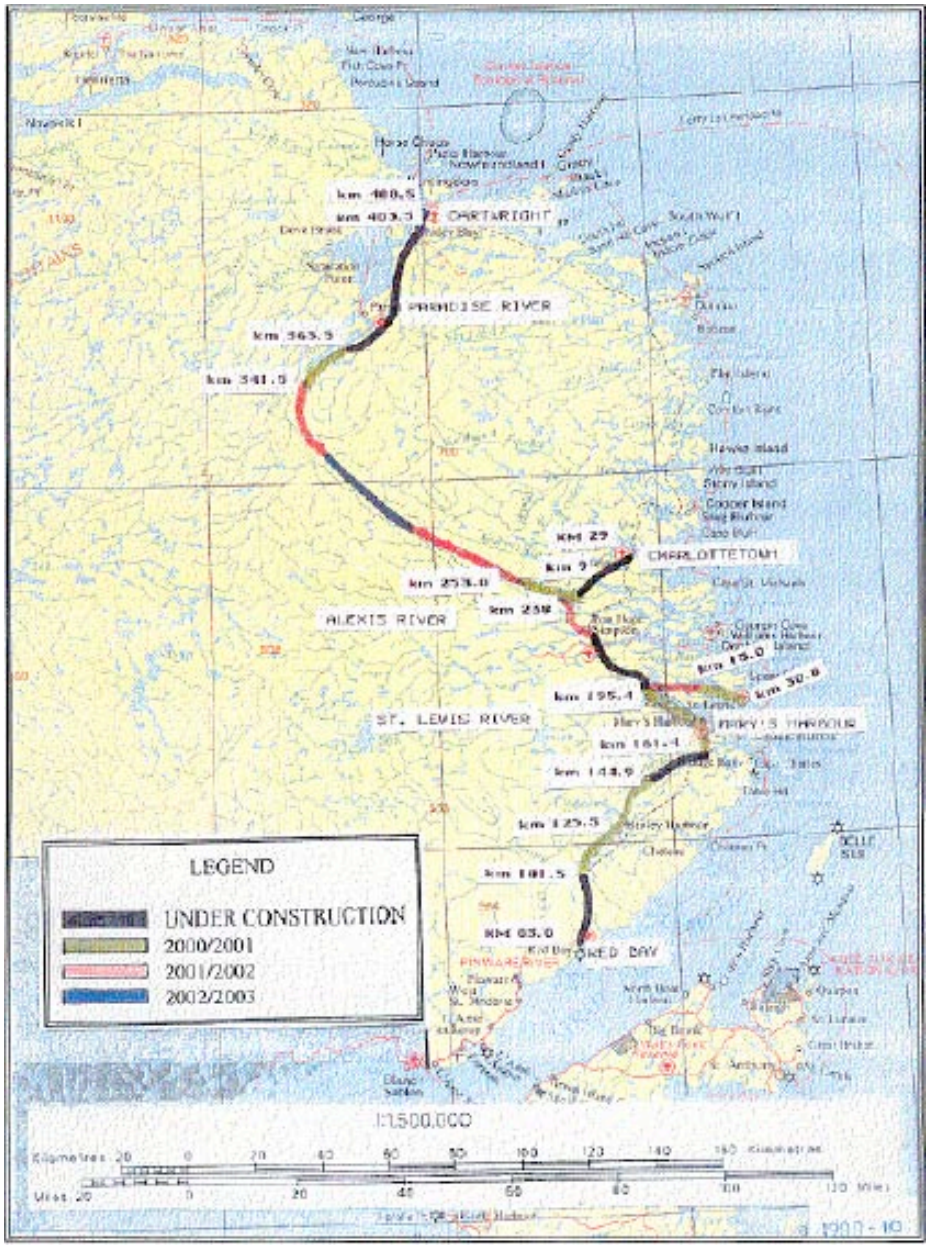
•Researchers and authors: Sara Russo Garrido and Jason Stanley

•What: Investigate locals' perspectives on social, economic, and environmental changes resulting from the construction of the Highway.

•Where: Southeastern Labrador, between Red Bay and Cartwright

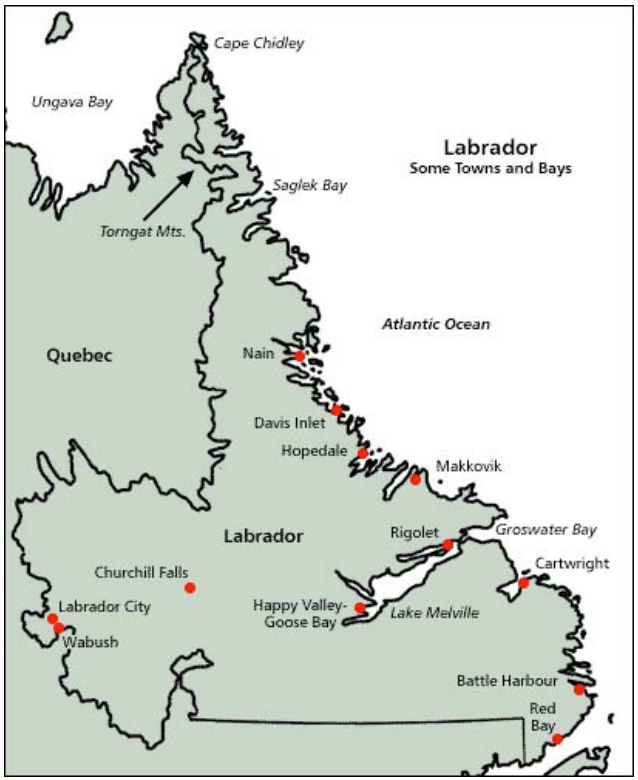
•When: July-August, 2002

•Why: Idea for study was driven by community representatives; generally, to understand how restructuring of this sort affects social, economic, and environmental circumstances at community, household, and individual levels.



Trans-Labrador Highway

Phase II: Red Bay - Cartwright



Sources: TLH map courtesy of NL Government; Labrador map taken from http://www.heritage.nf.ca/labrador_fullmap.html

Methodology

•Four weeks of fieldwork in Southeastern Labrador.

•58 random household interviews
  - •Open- and close-ended questions from pre-formulated questionnaire; roughly one hour each.
  - •6-8% of frame in each community, except Paradise River (15.8%) and Lodge Bay (10.3%) owing to small frame.
  - •Random number generator; sample selected from telephone listing.

•13 key-informant interviews
  - •Open-ended, far-ranging; roughly one hour each.
  - •Provincial Government officials; local/regional economic development board representatives; entrepreneurs; community leaders.
  - •In research area, but also in St. John's and some unconnected communities.

•Document research
  - •Government press releases; media reports; study commissioned by Government in early 1990s on potential routes of the Highway.

Key findings (1 of 2)

•Shift in mode of transportation, away from snowmobile, boat, and ATV, towards road vehicles.

•Greater freedom to leave community and region, with increased frequency. Trips covering same distance are now shorter and less costly.

•Easier access to other communities and resource areas within and outside region for consumption, recreational travel, and domestic harvesting activities.

•Easier access to communities and resource areas within region for outsiders, including tourists, health specialists, social workers, police officers, and resource users.

•Increased regulation of domestic land use activities, especially freshwater fishing, wood cutting, and cabin construction.

Key findings (2 of 2)

•Change in stocking patterns of retail stores in region as the number of months without a ferry connection to Newfoundland dropped from six to four and as stores gained access to retail outlets in the Straits during winter months.

•Lack of universal experience among retail stores: some lost, others gained. Success now closely tied to low prices and breadth of goods offered. Stores no longer have captive markets.

•Opening up of new territory for commercial logging operations. Considerable number of interviewees felt that this was driving force behind road's construction.

•Centralization of airstrips and dumps, and potential centralization of clinics and schools, between Lodge Bay and Charlottetown. Impacts of this will be felt in unconnected and connected communities. Centralization of airstrips will likely lead to worsening of transportation and freight links for unconnected communities, especially in winter months.

Discussion of our approach

- Reasons behind our choice of methodology
  - Four weeks enough time to talk to lots of people, experience road, see life in communities.
  - Documentary: necessary for context. No review of theory or comparative literature.
  - Random household interviews: necessary in understanding perceptions of change and impact; communities small enough to allow for balance of qualitative and quantitative rigor; open- and closed-ended questions gave us data comparable across communities and 'deep' data on opinions, feelings, perceptions; 6-8% driven by what we could fit in; choice of household due to easy and quick availability of telephone listing; access to 'all' community members.
  - Key-informant interviews: access to particular/specialized knowledge; testing of questionnaire.

- Problems with our approach
  - Households as complicated (un-interviewable?) sites; use of telephone listing and calling might have created biases; seen as outsiders or Government employees?

- What else was needed but lacking?
  - More time; techniques to measure facts/figures behind perceptions (e.g., extraction of wood); comparable studies at other points in time.

The culvert study

•Gibson, R. J., Luther, R. J., and Haedrich R. L. (2002) *Labrador Road Study: A survey of water crossings on a section of the Trans Labrador Highway, June 26 - July 10, 2002*. CUS Occasional Paper.

•Methodology
- •Measurement of conditions of 47 culverts over 210 km of Highway.
- •Requested by and done in cooperation with Labrador Métis Nation.

•Findings
- •53% of crossings on permanent streams presented barriers to fish migration; only two out of 47 culverts examined were of open bottom types, which are recommended by Department of Fisheries and Oceans; none of the culverts was embedded, as is required to conserve productive capacity of fish habitat, resulting in loss of 3000 m^2 of fish stream habitat; loss of spawning and rearing habitat; loss of small streams may be as detrimental to salmonid stocks as over-fishing, yet remains low priority.

Useful documents and websites

•Coasts Under Stress: http://www.coastsunderstress.ca

•Russo Garrido, S. and Stanley, J. (2002) *Labrador Road Study: Local knowledge on the social and environmental impacts of the newly constructed Trans-Labrador Highway in south-eastern Labrador*. CUS Occasional Paper. (http://www.coastsunderstress.ca/arm2/pubs/arm2_russo_garrido_stanley_lrs_report_oct_2002_v3.pdf)

•Gibson, R. J., Luther, R. J., and Haedrich R. L. (2002) *Labrador Road Study: A survey of water crossings on a section of the Trans Labrador Highway, June 26 - July 10, 2002*. CUS Occasional Paper. (http://www.coastsunderstress.ca/arm1/pubs/arm1_gibson_trans_labrador_road_jun_2004_v6.pdf)