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Asking the Big Questions:

Reflections on a Sustainable Post Oil-dependent Newfoundland and Labrador

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Acknowledgements

These reflections grew out of a series of events organized in fall 2016 with financial support from the Royal Society Atlantic and Memorial University. Planning committee members for these events included Barb Neis, Dept. of Sociology, Bojan Furst, Harris Centre, and Ellen Steinhauer, Office of the Vice-President Research at Memorial University. Coordination support was provided by Tina Windsor and Jeff Green of the Office of the Vice-President Research. Janet Harron of the Faculty of Humanities and Social Sciences provided help with communications.

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4.1 A Sustainable Post Oil-dependent Newfoundland and Labrador: The Environmental Perspective

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The first rule of sustainability is to align with natural forces, or at least not try to defy them. ~Paul Hawken

The Context

Today, we face complex and interdependent global challenges of unprecedented magnitude including population growth, growing water scarcity, threats to food security, wastage and increasing demands for energy, and a changing climate. Climate change looms as perhaps the largest threat facing humanity. As noted in the first reflection in this document, climate change presents critical challenges for humanity and, to avoid potentially catastrophic consequences for the world, all countries and jurisdictions must develop policies that avoid a global temperature increase of more than 2 degrees Centigrade during this century.

In 2015, *Sustainable Canada Dialogues* (SCD), a group of over 60 researchers from every province, worked collectively to identify a possible pathway to a low carbon economy in Canada. They produced a Report --*Acting on Climate Change: Solutions from Canadian Scholars* -- that received national and global media attention for its focus on solutions for Canada for a low-carbon future. Potvin et al. (2015: 7) suggested that in addition to putting a price on carbon, Canada can reduce its greenhouse gas emissions (GHGs) by:

1. producing electricity with low carbon emissions sources;
2. modifying energy consumption through evolving urban design and a transportation revolution; and
3. linking transition to a low-carbon economy with a broader sustainability agenda, through creation of participatory and open governance institutions that engage the Canadian public.

Using the SCD document as a starting point for our discussion, our team engaged in an exercise to collectively construct a vision of what an environmentally sustainable post oil dependent NL could look like. We then worked backwards to identify the kinds of perspectives, orientations, skills, expertise and infrastructure we would need to get there. Studies suggest that people view scientific evidence about human impact on the natural environment through lenses that are shaped by their cultural values (Hoffmann, 2105). Thus, to effect any significant sustainability improvements in our province, we will need to shift cultural values towards more environmentally sustainable ones.

What Could an Environmentally Sustainable Post Oil Dependent NL Look Like?

The year is 2050. Newfoundland and Labrador is recognized nationally and globally as a leader in environmental sustainability. We have built on our place-based assets to respond to the complex global challenges listed above. We have mitigated the risks these trends present and have seized opportunities arising from them in a way that is aligned with the natural environment. In a post oil-dependent NL, the way we live and work contributes to social-ecological well-being. We have developed strong governance processes that allow environmental decisions to be made holistically with the participation of various sectors and stakeholders. We have effective, visionary leadership at the provincial and municipal levels to address environmental challenges. We are engaging in more regionally-based forms of decision-making and governance that are attentive to the particular circumstances of the province, including our coastal communities and rural areas.

The NL government has taken a rigorous ‘polluter pays’ approach and has adopted carbon pricing that has created incentives for businesses and individuals to reduce their carbon footprints and seek out sources of green energy. It has also found other ways to improve social well-being while reducing our environmental footprint, including the development of alternative energy sources, and supporting other forms of organizing, such as social enterprises and cooperatives, which seek to address social issues using business approaches, such that social and economic goals are better balanced.

Culturally, there has been a shift in values, away from a culture of over-consumption, low density suburban sprawl, and private car use, towards an ethic of environmental responsibility, well-being, and quality of life. Citizens have strong environmental values and are aware of how the natural environment sustains our communities and society as a whole. Within an effective institutional environment, the behaviour of individuals and organizations supports these values.

People spend more time ‘in nature’, for instance, hiking the province’s many beautiful trails. They also use carbon neutral modes of transportation and passive transportation such as walking and biking, while Metrobus provides functional and appealing alternatives to private car use in metro St. John’s. Homes are smaller and more energy efficient, powered by carbon-neutral renewable energy such as wind power and hydro power, as are businesses. Energy projects have been developed in ways that respect Indigenous rights and downstream environmental health and sustainability, and include a thriving wind-power industry.

More people are composting, and growing their own food, and farmers’ markets that supply local seafood as well as agricultural products, have sprung up across the province. We have developed effective waste-diverting systems throughout the province. Urban planning has created more green spaces, and reduced transportation congestion. Many rural places have been revitalized by industries (e.g. the fishery and tourism) that are environmentally sustainable and support communities. In a post oil-dependent NL, our whole economy is built around industries that capitalize on our strengths, and importantly, we have regulations and practices in place that allow us to not only gain wealth from these industries but to do so in ways that respect and enhance the natural environment. We have found sustainable ways to develop many of our core industries: the fishery, agriculture and nutraceuticals, tourism, arts and culture, and technology. Let us examine each of these in turn.

A Fishery that Sustains Community

We have built a fishery that sets sustainable baselines for quotas, developed using multispecies considerations as part of an ecosystem-based fisheries management and science. Young people are returning to the fishery, creating employment, well-being, and food security in coastal communities. We rely more on small-scale fisheries and our new fisheries are focused more on quality supported by “best practices” fishing rather than on quantity. We process the fish in NL, and we are feeding ourselves as well as exporting high-quality fish to high-end markets, as with Fogo Island hand-lined cod.

Place-based Agriculture and Nutraceuticals

Berries are harvested for personal consumption, using techniques that protect and enhance the environment, public health, and communities, and wild organic berries and berry products are exported. We also produce and export place-branded nutraceuticals (food that contains health-giving additives and has medicinal benefits) to demanding global markets. In addition we harvest

locally a variety of food products that enhance the quality of the food we consume, increasing our food security and reducing the carbon footprint of importing food.

Tourism that Benefits Communities

We are a national and international tourism destination for people who want to experience our stunning and pristine natural environment and the appealing cultural environments of our communities. We have protected our natural and cultural assets despite the overwhelming homogenizing pressures of globalization. This provides us with a tremendous advantage as a unique destination in an increasingly urbanized world. Tourism development is focused on creating infrastructure and amenities that benefit local communities, thereby contributing to community sustainability and well-being throughout the province. Recognizing that the tourism industry can create benefits and challenges for communities and environments, we have developed anticipatory strategies for managing tourism impacts in parallel with promoting the province as a tourism destination.

Arts and Culture

Artists have a way of knowing that the rest of us don't have. They know things from first principles; they interact with the world on first principles. (Zita Cobb, Co-Founder and CEO of the Shorefast Foundation).

Our artists and our cultural industries are thriving and contributing to our cultural tourism industry. Not only are our cultural industries respectful of the natural environment, they also help shape our province's environmental ethic and encourage us to think critically about our relationship with nature and with one another.

Technology Sector

The province, Memorial University and our technology sector have shown leadership in transforming the expertise and skills that we developed in technological research. Development in the oil sector has supported the emergence of a strong presence in technology research and in the renewable energy and other sectors. In addition, we have developed ocean technology expertise that allows us to produce environmentally-friendly technologies. With our abundance of renewable hydroelectric power, we have attracted energy-intensive industries such as data centres that require large amounts of clean energy.

The Kinds of Perspectives, Orientations, Skills, Expertise, Infrastructure, and Institutions We Need

It is not enough for politicians and business and civil society leaders to claim to be bound by the rules of the game, because we humans made up the rules and the game, and we can remake them as we deem necessary for our own good (Kurucz, Colbert & Wheeler, 2013: 254).

An environmentally sustainable NL requires “re-visionary” thinking. We need to be mindful of global trends while being keenly aware of our social and environmental strengths. While looking to the future, we can also learn from the past by “hind-casting” to 50 years ago to pre-oil NL. We need to question the economic activities in which we currently engage. For example, we need to find better ways to do what we do, including how we fish. We need to ask bold questions like *what kind of fishery should we have that would be competitive in the world and sustainable?* We should also decentralize some of our institutions to ensure better decision-making, closer to where the costs and benefits are felt.

We need to develop skills that transform our technology sector (which is tied to oil) and then leverage those skills for other industries in environmentally sustainable ways. We need to attract venture capitalists who are willing to invest in green technology or other environmentally sustainable businesses. The provincial government has a role to play in this.

With our demographic challenges, which include an aging population, and low birth rates, we will need to become a place that is increasingly attractive and welcoming for immigrants. NL already does very well in terms of amenities and quality of life with respect to air quality, drinking water quality, access to outdoor recreational amenities, proximity to wilderness and wildlife, and a thriving arts and culture scene. We can better promote and support these strengths to attract new residents and business ventures to the province.

We also need to overcome challenges such as having a geographically isolated and dispersed population and turn these into opportunities. We will need to make tough choices along the way that may negatively impact some industries and/or communities, such as picking winners. Since resources are limited, we will need to be strategic in how we allocate resources.

There is a large role for public education (including our school systems and Memorial University) to teach the critical thinking and skills needed to build a sustainable future for NL. In the past Memorial’s Extension Service played a key and important role by facilitating community dialogue; to get to a post-oil sustainable provincial economy, Memorial University

will need to play key leadership and collaboration roles in contributing to more environmentally and socially sustainable development pathways. For example, it can facilitate dialogue around how to find a path forward for communities that is respectful of the natural environment. This will allow communities to come together to determine what an environmentally sustainable post-oil future looks like. Such conversations, for example, might include the role of social enterprise in bringing opportunities to rural communities.

We need institutional leadership that eliminates governmental and other institutional siloes in order to cross-fertilize ideas and improve decision-making. We need to create institutional spaces for planning and for conversations across sectors. For example, all stakeholders need to be brought to the table to work together to develop the sustainable fishery of the future. These stakeholders should include all levels of government, the Union, the processors, and others who might have a different perspective on the fishery. Each of these main players has very specific and somewhat selfish interests and they all must be tempered by the needs of the whole province for a fishery that provides for the maximum environmental, social, and economic benefit. Greater engagement across the key sectors we've discussed here – fishery, agriculture, tourism, arts and culture, and technology – will make a vital contribution to better develop landscape-level planning for environmental and social sustainability.

Leadership is also needed to provide incentives for making good decisions while changing pathways that people can live with daily. In the St. John's area, for example, this could include making parking more expensive, encouraging the use of public transportation by, for example, including a bus pass in tuition. This extra income could then be used to improve our transit system.

Strong environmental governance also means having robust environmental protection laws reflecting key guiding principles such as sustainability, equity, public participation and transparency, precautionary principle, prevention. In addition, there needs to be a meaningful role for citizen-led environmental groups in the environmental assessment process.

Finally, and most importantly, we need leadership that will challenge us to reconstruct our values so that we can transform our currently unsustainable systems of production and consumption. We live in a world where we face daunting interrelated problems with population growth, growing water scarcity, threats to food security, wastage coupled with increasing demand for energy, and a changing climate. But if we have the courage to lead, we can turn these challenges into opportunities. Leadership for sustainability requires each and every one of us “to work to understand our major sustainability challenges, to help others in developing a shared

understanding, and to engage people broadly in constructive conversation and action towards the goal of all of us living better lives” (Kurucz et al., 2013: p. x).

We end this thought piece (and these diverse reflections) with the poem *It's the Dream* by Norwegian poet Olav H. Hauge (translated by Robin Fulton) that reflects on building a sustainable future.

It's the dream we carry in secret
that something miraculous will happen,
that it must happen -
that time will open
that the heart will open
that doors will open
that the mountains will open
that spring will gush --
that the dream will open,
that one morning we will glide into
some little harbour that we did not know was there.

<http://www.boloji.com/index.cfm?md=Content&sd=PoemArticle&PoemArticleID=78>

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