

*Experiences of Environmental Health Inequities in African Nova
Scotian Communities*

Principal Investigator & Author

Ingrid R. G. Waldron, Ph.D.
Associate Professor
School of Nursing
Faculty of Health Professions
Dalhousie University

Email: iwaldron@dal.ca

September 10, 2016

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Acknowledgements

I would like to thank the following individuals and organizations for their support.

Study Participants

African Nova Scotian participants in: Lincolnville, Shelburne, East Preston, North Preston, Truro, and Lucasville

Focus Group Recruiters & Facilitators

Abena Amoako-Tuffour (North Preston Focus Groups)
 Louise Delisle (Shelburne Focus Groups)
 James Desmond (Lincolnville Focus Groups)
 Mary Desmond (Lincolnville Focus Groups)
 Lynn Jones (Truro Focus Groups)
 Crystal Parsons (Lucasville Focus Groups)
 Dolly Williams (East Preston Focus Groups)

Funding Agency

Nova Scotia Health Research Foundation
 UNESCO

Social Media & Maps

ENRICH Project Website: www.enrichproject.org

ENRICH Facebook Page: <https://www.facebook.com/TheENRICHProject/>

ENRICH Twitter Page: <https://twitter.com/inwhosebackyard>

ENRICH Documentary: “In Whose Backyard?”:
<http://www.enrichproject.org/resources/#IWB-Video>

ENRICH Project Map: <http://www.enrichproject.org/map/>

Africville Story Map (created by Dalhousie Master of Planning Student Caitlin Hinton for use by ENRICH Project):
<https://dalspatial.maps.arcgis.com/apps/MapSeries/index.html?appid=8821561a4f2c44689bc02b172241883c>

Executive Summary

Study Description

The study presented in this report, entitled “**Experiences of Environmental Health Inequities in African Nova Scotian Communities**” examines African Nova Scotian community members’ perceptions of the health risks and psychological stressors associated with the community’s proximity to industries that produce toxic waste. The study also documents community members’ suggestions for how Nova Scotia Environment and other organizations can enhance environmental justice through more inclusive community engagement in environmental assessments and decision-making processes related to the location, regulation, and assessment of industries in their communities. Finally, the study provides an account of community members’ participation in mobilizing and resistance activities related to environmental racism. This study is, therefore, situated at the intersection of environmental justice and environmental health equity.

Environmental racism is a subset of the larger environmental justice movement that originated in the US. It refers to environmental policies, practices, or directives that disproportionately disadvantage individuals, groups, or communities (intentionally or unintentionally) based on race or colour (Bullard 2002). More specifically, environmental racism is racial discrimination in environmental policymaking; in the greater exposure of racialized and Indigenous communities to toxic waste disposal and the siting of polluting industries; and in the implementation of policies that sanction the harmful and, in many cases, life-threatening presence of poisons in these communities. Environmental health inequity across racial dimensions has been well-documented in the literature, which provides strong evidence that Indigenous and racialized communities in Canada are exposed to greater health risks compared to white communities because they are more likely to be spatially clustered around waste disposal sites and other environmental hazards

Research Objectives

The specific objectives of this study include the following:

- To examine perceptions of the health risks and psychological stressors associated with industries that produce toxic waste, as well as other potentially environmentally hazardous activities in African Nova Scotian communities;
- To shed light on community members’ views about decision-making processes related to the location, monitoring, regulation and assessment of these industries and activities in their communities; and
- To recommend strategies for enhancing an environmental justice lens that focuses on more inclusive community engagement and consultation processes related to environmental assessments and other decision-making processes about industries sited in African Nova Scotian communities.

Sample & Recruitment

A total of 60 adult African Nova Scotian women and men were recruited for the study using purposive sampling. A purposive sample is a sample that is selected based on characteristics of a population and the objective of the study. Purposive sampling is also known as judgmental, selective, or subjective sampling. This type of sampling can be very useful in situations when you need to reach a targeted sample quickly, and where sampling for proportionality is not the main concern. Ten participants were recruited from each of the following six communities:

- Lincolnville;
- East Preston;
- North Preston;
- Shelburne;
- Lucasville; and
- Truro

Data Collection

Two focus groups, each comprised of five participants, were conducted in each of the six communities, for a total of 12 focus groups. All focus groups were audio-recorded and took place at an accessible location in the community. A non-standardized focus group questionnaire was used to engage participants in a discussion on the issues.

A Multi-Pronged Strategy for Addressing Environmental Racism in Nova Scotia

While having strong environmental racism legislation is crucial for addressing environmental racism in Nova Scotia, it must be accompanied by a comprehensive, multi-pronged strategy that is premised the following factors:

- Creating legislation and policy that incorporate a structural racism lens and focuses on the disproportionate impacts of industry in African Nova Scotian and Mi'kmaw communities;
- Implementing participatory democracy approaches that involve African Nova Scotian and Mi'kmaw communities in decision-making processes related to the location and monitoring of industries in their communities;
- Initiating community education and capacity building activities with African Nova Scotian and Mi'kmaw communities;
- Forging alliances between African Nova Scotian and Mi'kmaw communities and between these communities and “mainstream” environmental justice organizations;
- Ensuring that race and other social determinants of health are central in the environmental assessment and approval process;
- Opening up a much-needed discussion in Nova Scotia about other environment-related issues that impact African Nova Scotian and Mi'kmaw communities, such as the disproportionate impacts of climate change in these communities.

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- To examine perceptions of the health risks and psychological stressors associated with industries that produce toxic waste, as well as other potentially environmentally hazardous activities in African Nova Scotian communities;
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- To recommend strategies for enhancing an environmental justice lens that focuses on more inclusive community engagement and consultation processes related to environmental assessments and other decision-making processes about industries sited in African Nova Scotian communities.

Research Questions

The study’s research questions include the following:

- What are community members’ perceptions of the health risks and psychological stressors associated with their community’s proximity to potentially environmentally hazardous industries, activities and sites, as well as their lived experiences of disease, illness, and psychological stress?;
- What are community members’ views about Nova Scotia Environment’s process for engaging and consulting with African Nova Scotian communities about environmental assessments and decision making processes related to the location, monitoring, regulation and assessment of these potentially hazardous industries and activities?; and

- How can evidence about health risk perceptions and health outcomes build on current knowledge among government and community about how environmental justice principles can be applied to decision-making processes related to the location, monitoring, regulation, and assessment of these industries and activities?

African Nova Scotians: A Brief Profile

There are 20,790 African Nova Scotians residing in Nova Scotia, according to the 2011 National Household Survey conducted by Statistics Canada. They make up the largest racially visible group in Nova Scotia, representing 44 percent of the racially visible population which constitutes 2.3 percent of the total Nova Scotian population. Two general categories of people of African descent can be identified in Nova Scotia: those often referred to as Indigenous African Nova Scotians who were among Nova Scotia's earliest inhabitants, and those immigrants that have arrived more recently from African and Caribbean countries (Maddalena, Thomas Bernard, Etowa, Davis-Murdoch, Smith & Marsh-Jarvis 2010). In terms of birthplace, 80.7 percent of Black people in the province were born in the province, while 6.7 percent were born elsewhere in Canada. Ten percent are new Canadians, having immigrated from Africa, the Caribbean, and the United States (African Nova Scotian Affairs, n.d.; Statistics Canada 2011).

People of African descent have been residing in Nova Scotia for almost 300 years. In Acadia, from the early to mid 1700s, there were more than 300 people of African descent in the French settlement of Louisbourg, Cape Breton. Between 100 and 150 people of African descent were among the new settlers, now known as the Planters, who came from New England after the British gained control over Nova Scotia in 1763. Planters were slaves who were used by plantation owners to do field work and other jobs (Waldron 2010; Waldron 2015). Between 1783 and 1785, over 3,000 Black people left New York and other ports for Nova Scotia as part of the Loyalist migration at the close of the American Revolution. They settled in Annapolis Royal and in areas such as Cornwallis/Horton, Weymouth, Digby, Windsor, Preston, Sydney, Fort Cumberland, Parrsboro, Halifax, Shelburne, Birchtown, and Port Mouton. In New Brunswick, Black Loyalists were settled in Saint John and along the Saint John River. They were promised freedom in exchange for fighting for Britain. However, once in the Maritimes, they were denied equal status, such as being cheated out of land and being forced to work on public projects such as roads and buildings. They were also taken to the West Indies, Quebec, England, Germany, and Belgium (Black Cultural Centre for Nova Scotia, n.d.; Maddalena, Thomas Bernard, Etowa, Davis-Murdoch, Smith & Marsh-Jarvis 2010; Nova Scotia Museum, n.d.; Waldron 2010; Waldron 2015).

In 1796, 550 people known as the Maroons were deported from Jamaica to Nova Scotia and were then relocated to Sierra Leone in 1800. Approximately 2,000 escaped slaves came from the United States during the War of 1812 (under conditions similar to those of the Black Loyalists) and were offered freedom and land in Nova Scotia. They moved into the Halifax area to settle in such areas as Preston, Hammonds Plains, Beechville, Porter's Lake, Lucasville Road, and the Windsor area. During the 1920s hundreds of Caribbean immigrants, referred to as the "later arrivals," flocked to Cape Breton to work in coal mines and the steel factory. The majority of Indigenous African Nova Scotians continue to reside in rural and isolated communities as a result of institutionalized racism during the province's early settlement (Black Cultural Centre

for Nova Scotia, n.d.; Maddalena, Thomas Bernard, Etowa, Davis-Murdoch, Smith & Marsh-Jarvis 2010; Nova Scotia Museum, n.d.; Waldron 2010; Waldron 2015).

Environmental Racism: Background & Context

Environmental racism is a subset of the larger environmental justice movement that originated in the US. It refers to environmental policies, practices, or directives that disproportionately disadvantage individuals, groups, or communities (intentionally or unintentionally) based on race or colour (Bullard 2002). More specifically, environmental racism is racial discrimination in environmental policymaking; in the greater exposure of racialized and Indigenous communities to toxic waste disposal and the siting of polluting industries; and in the implementation of policies that sanction the harmful and, in many cases, life-threatening presence of poisons in these communities.

The disproportionate location of industrial polluters such as landfills, trash incinerators, coal plants, toxic waste dumps, and other environmentally hazardous activities near Indigenous and racialized communities exposes these communities to numerous health risks. Environmental racism is also characterized by a number of other factors: the history of excluding Indigenous and racialized communities from mainstream environmental groups, decision-making boards, commissions, and regulatory bodies; the lack of organization and political power these communities have for resisting the siting of industrial polluters in their communities; the disproportionate negative impacts of environmental policies that result in differential rates of cleanup of environmental contaminants in these communities; and the disproportionate access to environmental services, such as garbage removal and transportation (Bullard, 2002).

There is a long history in North America of either targeting or disproportionately exposing low-income and minority communities to toxic and hazardous materials and waste facilities, such as landfills, industrial power generation stations, pulp and paper mills and hazardous waste storage. In Nova Scotia, toxic facilities and other environmentally hazardous activities are more likely to be sited closer to African Nova Scotian and Mi'kmaw communities. The toxins produced by these activities may be released into air, water or land, posing a long-term risk to the environment and exposing these communities to greater health risks than other communities (i.e. environmental health inequities) (Mascarenhas, 2007; Sharp, 2009; Teelucksingh, 2007; Waldron, 2015).

Environmental justice is concerned with challenging the disproportionate location of industries which produce toxic waste or pollution in low-income and/or racialized communities relative to other communities. Cutter (1995) conceptualizes environmental justice as having two components: 1) distributive/spatial; and 2) procedural. The first is concerned primarily with the inequitable distribution of health risks and health outcomes associated with environmental hazards; the second focuses on institutional mechanisms at the governmental level that perpetuate inequitable distribution of these sites. With limited evidence of distributive injustice, along with the lack of explicit regulations, environmental justice remains a nebulous concept for policy makers in Nova Scotia, who have yet to fully grapple with procedural justice issues related to the location of industries which produce toxic waste or pollution. Therefore, increased attention to environmental justice and health equity has been recommended as a promising strategy to improve the health and wellbeing of marginalized populations residing near to these sites (Masuda et al, 2010; Wakefield & Baxter, 2010).

The Environmental Noxiousness, Racial Inequities & Community Health Project (ENRICH)

The rationale for launching the Environmental Noxiousness, Racial Inequities & Community Health Project (ENRICH Project) in 2012 was based on a number of factors. The project is driven by the strong needs expressed by African Nova Scotian and Mi'kmaw community members about the need to address the impacts of polluting industries and other environmental hazards on the socio-economic well-being and health in these communities. Community members are also concerned about the lack of transparency and accessibility of Nova Scotia Environment's citizen engagement process, particularly as it relates to community participation in the environmental assessment process. At the same time, the ENRICH Project also acknowledges the importance of validating the histories, cultures, and local contexts of African Nova Scotian and Mi'kmaw communities through the integration of African-centered and Indigenous knowledge and traditions into all project activities.

From its inception, the ENRICH Project has used the following activities to support ongoing and new efforts undertaken by African Nova Scotian and Mi'kmaw communities to address disproportionate pollution and contaminants in their communities:

- Community-based participatory research;
- GIS analysis and mapping;
- Multi-disciplinary partnerships;
- Community engagement, mobilizing, and capacity building;
- Advocacy;
- Social action campaigns;
- Community workshops;
- Government consultations;
- Legislation;
- Peer-reviewed journal articles;
- Academic conference presentations;
- Student and volunteer training; and
- Knowledge sharing and mobilizing using traditional media (print, radio, and television interviews), social media (Facebook, Twitter, blogs etc.), art, and public engagement events.

Methodology

The study used an interpretive, narrative approach (Polkinghorne, 1988; 1995) to analyze focus group data. This qualitative approach enables participants to articulate and give meaning to their experiences. Within Polkinghorne's narrative methodology, humans are recognized as self-interpreting beings and their interpretation of phenomena is embodied in social, cultural and linguistic practices. Polkinghorne (1988) identifies that narratives are the "primary scheme by means of which human existence is rendered meaningful" (p.11). Narrative inquiry is not a mere retelling or description of another person's story, but, rather, a dynamic process of interpretation that alters and contributes to the meaning of the story. The importance of individual experience to reality is a key characteristic of an interpretive approach to narrative inquiry. Individuals come

to know themselves and others through stories and storytelling (Polkinghorne, 1988). Human experience is organized along a temporal dimension. Therefore, attention to the past, present and future is a key feature of narrative inquiry and temporality is an essential component of narrative theory (Polkinghorne, 1988).

The study also employed a community-based participatory research approach (CBPR). CBPR is a collaborative research approach that involves community members throughout the research process. It requires the involvement of community members at every stage of the research process, including research design, data collection and analysis, and knowledge dissemination and mobilization. Rather than a distinct method, CBPR is a research approach that values co-learning between partners, capacity building, systems change and balancing research and action (Israel, Schulz, Parker & Becker, 1998; Minkler & Wallerstein, 2011). It involves researchers and communities working in partnership in ways that enable power to be shared amongst all participants.

Therefore, CBPR must be premised on equitable power sharing with respect to how communities are engaged, how studies are conducted, and how knowledge and resources resulting from these studies are shared with community members (Israel, Schulz, Parker & Becker 1998; Minkler & Wallerstein 2011). Through this approach, partners contribute their expertise to enhance understanding of a given phenomenon and to integrate the knowledge gained with action to benefit the communities involved.

Sample & Recruitment

A total of 60 adult African Nova Scotian women and men were recruited for the study using purposive sampling. A purposive sample is a sample that is selected based on characteristics of a population and the objective of the study. Purposive sampling is also known as judgmental, selective, or subjective sampling. This type of sampling can be very useful in situations when you need to reach a targeted sample quickly, and where sampling for proportionality is not the main concern. Ten participants were recruited from each of the following six communities:

- Lincolnville;
- East Preston;
- North Preston;
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- Luscasville; and
- Truro

Data Collection

Two focus groups, each comprised of five participants, were conducted in each of the six communities, for a total of 12 focus groups. All focus groups were audio-recorded and took place at an accessible location in the community. A non-standardized focus group questionnaire was used to engage participants in a discussion on the issues.

Data Analysis

In keeping with the narrative methodology, the process of data analysis was guided by Polkinghorne's (1995) theory of narrative emplotment. The analytical process of narrative emplotment involves reading through the transcripts in their entirety to gain a sense of the whole story. The principal investigator developed initial narrative themes, plots, and subplots pertaining to people's experiences of health and the factors affecting their health. The term "theme" within the context of this narrative inquiry does not necessarily represent something that is stated repeatedly but instead reflects an understanding or significance. The principal investigator then examined the data for narrative descriptions. Similarities and exceptions in relation to people's experiences of and priorities related to the health effects of their close proximity to environmentally hazardous facilities, such as landfills and industrial plants across the data were identified. Finally, integration and synthesis were conducted, which involved integrating statements into a narrative hermeneutic in order that a meaningful account of participants' experiences emerged.

Findings

The Spatial Patterning of Polluting Industries in African Nova Scotian Communities

Decisions about where to locate a waste facility involve complex interactions among government, as well as legal and commercial actors that are informed by historically constituted institutional policies and practices (Bullard 1993). As Deacon and Baxter (2013) point out, it is important to shed light on the factors that collectively enable inequitable distribution of industries and other environmental hazards in Mi'kmaw and African Nova Scotian communities across Nova Scotia.

Over twenty years ago, Fryzuk (1996) isolated African Nova Scotian and Mi'kmaw population variables and concluded that environmental racism was, indeed, a reality in Nova Scotia. She found that 30 out of 65 waste sites (46.2 percent) were located near communities where African Nova Scotian and Mi'kmaw communities were higher in number than the provincial average. She also found that 5,230 (28.5 percent) of the 18,355 African Nova Scotian residents within Nova Scotia lived either within enumeration areas hosting a waste site or within the five kilometre impact zone.

Lincolntonville's First & Second-Generation Landfills

Lincolntonville represents one of the more serious cases of environmental racism in Nova Scotia. Lincolntonville is a small African Nova Scotian rural community situated in northeast Nova Scotia in Guysborough County. It was settled by Black Loyalists in 1784, after a land grant promised to them by Queen Victoria was never honoured. Driven from their promised land, they were forced to move inland away from the white population and to become squatters on a barren rocky piece of land (NSPIRG, n.d.).

In 1974, a first-generation landfill was opened one kilometer away from the community. According to community members, dangerous items and substances were thrown into the landfill at that time, including dead horses and other animals, transformers that leaked PCBs into the ground, and over 15,000 bags of industrial waste associated with beach cleanups. Since there

was no daily cover, the landfill emitted the stench of open pit burning. There was little concern at the time about wildlife since the landfill was small and catered to the Guysborough region. That would change when the first-generation landfill was replaced by the second-generation landfill. As Guysborough County struggled to maintain its tax base, the County Council expressed their interest in becoming a site for a second-generation landfill in the community in order to generate needed tax revenues.

In 2006, the Municipality of the District of Guysborough closed the first landfill and opened a second-generation landfill that accepts waste from across northern Nova Scotia and Cape Breton. The development of this landfill was based on the provincial government's need to decrease spending. Although Guysborough County determined the suitability of the landfill site and conducted extensive surface and ground water testing, they did not consider the negative social, justice, or cumulative impacts of their decision to site the landfill in the area. The Council proceeded with approvals and the construction of the landfill because the public did not substantively oppose the project throughout the official Environmental Impact and Assessment (EIA) process.

In the second-generation landfill's first month of opening, 55,780 tonnes of solid waste was received (Save Lincolnville Campaign, n.d.). In accordance with the province's waste management strategy as of 2006, all municipalities are required to dispose of waste in second-generation landfills, which incorporate special liners designed to prevent runoff into the surrounding environment. According to regional environmental organizations, hazardous items such as transformers and refuse from offshore oil spills have been deposited at the landfill. In light of this, the African Nova Scotian community in Lincolnville are concerned about traces of carcinogens, including cadmium, phenol, and toluene, being above the upper limits in the community's surface and groundwater, from which residents draw their potable water (Benjamin 2008).

Numerous studies have also documented evidence suggesting environmental risk impacts out-migration in neighborhoods proximate to polluting industries (Hunter 1998). For example, populations with a higher socioeconomic status that are near polluting industries tend to move out while lower income populations remain (Hunter, White, Little & Sutton 2003). Therefore, low-income and poverty are significant factors for why Black householders are less likely than white householders to leave environmentally hazardous neighbourhoods since it is less expensive to buy homes in environmentally hazardous neighbourhoods than in other neighbourhoods. According to one **community member in Lincolnville**, the community would like reparations for the economic fall-out the landfill has caused:

“And, also when we started getting into the nitty-gritty of saying that because of the amount of revenue being generated by this here facility, that some of the revenue should be going into an economic development fund. Since we're putting up with the fall-out, we should be benefitting from it. Money should be put into an economic development fund that would help economic development in the communities. Also, we talked about compensation for the people in the community.”

The landfill near Lincolnville has also brought with it everyday social stressors that impact the community's way of life. These social stressors include an increase in traffic in the

form of big tractor trailers and trucks hauling garbage to the landfill site from different regions across Nova Scotia on a daily basis, as well as an increase in bears, racoons, skunks, and insects.

Shelburne, Truro & Lucasville

Several other African Nova Scotian communities across the province are located near waste facilities. Shelburne, located in southwestern Nova Scotia, is approximately 1,500 meters from a recycling site, and approximately 900 meters from a hazardous household waste facility. African Nova Scotian residents in Truro, the shire town of Colchester County on the south side of the Salmon River (which is close to the river's mouth at the eastern end of Cobequid Bay), have been concerned for some time about flooding and a dump near their community. Truro has three main communities comprised of African Nova Scotian and other communities: the Marsh, the Island, and the Hill. The Marsh is comprised primarily of low-income and poor African Nova Scotians, low-income and poor Whites, and Mi'kmaq people; a primarily African Nova Scotian community lives on the Island; and finally, the Hill is comprised mainly of African Nova Scotians and low-income and poor people. Cherry Brook, located to the north of Trunk 7 between Lake Loon and Lake Major in Dartmouth, and Lake Loon, also located in Dartmouth, are approximately two kilometers and four kilometers from a recycling facility, respectively. Over the last fourteen years, the African Nova Scotian community of Lucasville, a suburban community in the Halifax Regional Municipality and just minutes from Lower Sackville, has been dealing with the smell of manure, dust, and manure runoff from Memento Farms, a large commercial equestrian farm in the community. An African Nova Scotian **community member in Lucasville** illustrates how white privilege confers a sense of entitlement to white industry owners, who come into her community and engage in activities without any consideration of how it affects the community:

“Well, I find myself personally, that things are done in a Black community without the knowledge of the people of the community a lot more than if you were in a white community because they could care less about what we feel, you know, about what’s being done in this community. You know, like you can’t go into a white community and do whatever you want. If a Black man went into a white community, he’d be arrested and locked up. A white man comes in our community, he does what he wants, and he’s backed up to do whatever he cares to do in our community with the knowledge of the people of HRM. You know, they grant him the permits he needs to do what he wants to do. And, even if he doesn’t get the permits, he still does whatever he wants and nothing’s said to him. If a Black man builds a house or puts a garage up without the permits, they want him to tear it down. The time for change is now. We want the same equal rights that is entitled to the white man. We want the same entitled to the Black man. Memento Farms comes in here, built the house, and that’s all they had a permit for. Then they put up barns and stuff without permits, and did what they want. And, nothing happens to them.”

Similarly, the following statement by an African Nova Scotian **community member in Truro** reveals how policy is used to support racial ideologies and hierarchies that shape perceptions of place:

“And as white people move into the communities, whether it’s the Island, the Hill or the Marsh, they start to do things to enhance...perception to enhance the area. Whereas, as long as it was predominantly a Black area, they just left it as it was and figured, you know, we don’t do anything to enhance the area or to improve the area. But, as soon as one white person moves into the area, then all of a sudden, ‘okay, let’s see what we can do”.

An African Nova Scotian **resident of Lucasville** sees similarities between her community and the African Nova Scotian community in the North End (a historical African Nova Scotian community in Halifax), arguing that her community is also being squeezed out:

“I just wanted to say that historically, this is the type of action that has been taken in African Nova Scotian communities. Our communities are being eradicated because of councillors and governments developing zoning and by-laws that are totally contrary to the way of life of African Nova Scotian communities. And in saying that, our community here in Lucasville is another example of how communities are being wiped off the face of the earth. African Nova Scotian communities are being just totally taken over by industry, big businesses, developers who want to come in. They see the value of our land without seeing the historic purposes or historic content of us being here for over 200 years. The first land grants in Lucasville were handed out in the late 1700s. So, our community was established. And now because the land is cheap and close to the city, people feel like they can come and do what they want. That is a problem. And that’s a historic injustice that needs to be changed.”

Environmental Health Inequities

Until recently, frameworks in medicine and health research attributed racial disparities in illness and disease to biological, genetic, cultural or lifestyle choice differences between racial groups. However, it is now believed that an analysis of the “social context of inequality” is important for understanding why social, economic, political, and environmental inequities are such important predictors of health status. In this context, environmental health inequities cannot be understood separate from these other social determinants of health since they combine to create greater exposure and vulnerability to environmental risks, particularly for low-income and Indigenous and racialized communities.

Therefore, it is important to contextualize environmental health inequities within a “social context of inequality” framework – one that points to the ways in which a number of intersecting structural (e.g. laws, policies), institutional (e.g. education, health, etc.) and every day inequalities (e.g. relationships and interactions with others) create, support, and sustain exposure to environmental risks and their health effects. These inequalities or social determinants of health include income insecurity, poverty, under-resourced neighbourhoods, poor quality housing, poor quality schools, food insecurity, everyday racism, as well as a number of other structural, institutional, and everyday factors.

Community members in Lincolnville, Lucasville, North Preston, and East Preston observed that good health is dependent on a number of social determinants, such as access to

health care (e.g. medical centers, homecare), services (e.g. stores), jobs, healthy and affordable food, good quality and low rental housing, exercise, access to reliable and low-cost transportation, accessibility of sidewalks, crosswalks, and parks (i.e. the built environment), community safety, community cohesiveness, and spirituality. For example, the significant relationship between health and poverty, food security, employment, and access to health services was not lost on one **Lincolnvill community member**:

“Income makes you healthy. Because I notice when you live in low poverty, you tend to not be able to eat well or afford your prescriptions. And, that happens a lot with the seniors in the community. So, if there's no jobs available, how are they going to eat tomorrow or how are they going to support their families and themselves and make sure they have okay health if they can't get their medicine? And that also causes depression and it causes anxiety and stress. And stress does bother you and it does kill you.”

Access to accessible and reliable transportation was discussed as a significant determinant of health by one **community member in East Preston**, who stressed how important it was for older community members, in particular:

“I also think that because of, I guess, people getting older and you don't have the money to do what you want to do, or some people don't have the vehicles to get to town when they want to get to town. We have a bus that runs, what, on the hour, every hour. And, some people can't take the bus. So, there should be some kind of shuttle bus around here that can pick up these elderly people that may want to go to the doctor, may want to go to a medical centre, they may want to go have a check-up, or maybe they want to go shopping for some food. And, we don't have that. There's a lot of things in this community that we don't have that we should have. The rest of the community got them but we don't have them. And they just say, 'oh, it's off the map, it doesn't matter'. And, there should be more. East Preston should be looked at more as a place like any other place around. Every other place has got buses that are running 24 hours, every 14 minutes. North Preston, Cherry Brook, the buses are running constantly. Here we got a bus that runs every hour. Some people, if you can't catch the bus on the hour, you've got to wait for a whole hour. It's wrong. We need more in East Preston than they're doing. There's not enough done in East Preston for the people, especially for the elderly. I'm one of the elderly people myself. And, if I didn't have means of getting around and healthy, I don't know what I would do.”

The environment is another important determinant of health that must be given attention. Environmental health inequity refers to the disproportionate health impacts associated with proximity to industries that emit pollutants and contaminants (Deacon & Baxter 2013; Pritchard 2009; Walker 2009). Environmental health inequity across racial dimensions has been well-documented in the literature, which provides strong evidence that Indigenous and racialized communities in Canada are exposed to greater health risks compared to white communities

because they are more likely to be spatially clustered around waste disposal sites and other environmental hazards (Atari, Luginaah, Gorey, Xu & Fung 2012; Mascarenhas 2007; Masuda, Zupancic, Poland & Cole 2008; Sharp 2009; Teelucksingh 2007). Epidemiological studies are increasingly examining the relative risk of cancer, upper respiratory disease, congenital anomalies, growth retardation, cardiovascular disease, skin diseases, and allergies in Indigenous and racialized communities compared to white communities (Bharadwaj, Nilson, Judd-Henry, Ouellette, Parenteau, Tournier, Watson, Bear, Ledoux & Bear 2006; Rowat 1999). A **Shelburne resident** attributes high rates of cancer and liver and kidney disorders to the waste dump in her community:

“Everyone knows that in all surrounding communities the dump can be seen in the south end of the community. A significant amount of people in close proximity to the dump have died from cancer and have, or are suffering from an array of other health problems such as various forms of cancer, increased blood pressure, changes in nerve reflexes, brain, liver, and kidney disorders. Immune system, digestive system.”

A **North Preston resident** shared her concerns about the relationship between water contamination and air pollution from the waste dump near the North Preston Community Center and high rates of cancer, diabetes, heart disease, respiratory illnesses, and skin rashes in the community:

“Reference has been made to the water system. I believe that because for years, part of the community was on a water system which was not flushed out for several decades and because the chemical treatment of that water supply was monitored... but I believe that there was too high a concentration of chlorine in the system. So I think that accounts for the high cancer rate over the last several decades. And, I also believe that in terms of environmental health, that it’s poor because of our community being associated with a local dump. And, therefore a lot of the fly ash in the air contributed to the high rate of respiratory illnesses.”

A **Lucasville resident** expressed her concerns about the link between cancer and the equestrian farm in her community:

“And it does probably have more of an effect on our physical health. But like I said, we don't know what we're breathing in. We don't know the moment when that reaches our well water, if there's E. coli. We don't know when we breathe that air in or that smell, which smells like it's smell you shouldn't be smelling... But we don't know when we breathe it in how harmful it is in our lungs. You know, every time we breathe that in, we're breathing something into our body that's going to manifest into a cancer five years down the road. And you keep remembering all these uncles and cousins and grandfathers and people that died from cancer over the years. And when you compare it to another sector down the road or over there in the next province that didn't have this problem, you see, well, they lived to be old and they

never had any health problems. So yes, it has a health impact. All these things have a health impact on us. It's stress, it's mental, it's mental harassment. It's harassing our health."

The cancer risks associated with landfill-based disposal methods are approximately five times higher than the risks associated with waste-to-energy (WTE) incineration (Moy, Krishnan, Ulloa, Cohen & Brandt-Rauf 2008). It is for this reason that community members in Lincolnville attribute high rates of prostate, stomach, lung, and skin cancers in their community to the landfill. According to a **Lincolnville community member**, her community has experienced worsening health since the first-generation landfill was placed in the community in 1974:

"If you look at the health of the community prior to 1974 before the landfill site was located in our community, our community seemed to be healthier. From 1974 on until the present day, we noticed our people's health seems to be going downhill. Our people seem to be passing on at a younger age. They are contracting different types of cancer that we never heard of prior to 1974. Our stomach cancer seems to be on the rise. Diabetes is on the rise. Our people end up with tumours in their body. And, we're at a loss of, you know of what's causing it. The Municipality says that there's no way that the landfill site is affecting us. But, if the landfill site located in other areas is having an impact on people's health, then shouldn't the landfill site located next to our community be having an impact on our health too?"

Studies indicating skewed birth rates, high frequency of asthma, and prominence of mental and physical disabilities suggest that children have already been denied the right to a healthy and safe environment in utero and after their birth. High rates of Down's Syndrome (one such mental disability) in her community was mentioned by a **Truro resident** as having a possible connection to environmental hazards:

"Well, you take even up the Hill, look at all the people up the Hill that are sick mentally...And I still say that came from the environment. There's too much of it not to say it wasn't. And that's for a small community. All that stuff causes Down's Syndrome. The mothers could have gotten it. And when they were born, that's what happened. Look at all the ones up the Hill."

There is emerging evidence on how psychological well-being in racialized communities might be disproportionately affected by hazardous activities in Nova Scotia. These studies indicate that the potential direct negative effects of pollution and contaminants on well-being, health and other concerns associated with living near to environmental hazards are often appraised by residents as stressful, and therefore, may also represent a chronic psychological stressor. These combined factors may contribute to reduced beliefs in personal and communal abilities to reach future goals, and higher levels of psychological distress. It has also been reported that those who live closer to industrial activity perceive greater neighbourhood disorder and personal powerlessness, which, in turn, accounts for greater symptoms of psychological distress in these neighbourhoods (Downey & Van Willigen 2005). The few studies that have

considered both types of stressors concurrently have suggested that the cumulative burden on the body's stress-response system may explain the self-reinforcing effects or synergies observed among environmental and psychosocial stressors (Morello-Frosch et al., 2011). For example, a **Lucasville resident** discussed the mental health impact of living near the equestrian farm in her community:

“And, then talking about these physical industries, there's also a mental cost to that as well – to our mental health and well-being. When we know that all this is happening around us and nobody is concerned enough to do anything about it, that takes a toll on your mental health. So it's not only your physical health that's being affected here, it's also our mental well-being.”

Mobilizing & Resistance in African Nova Scotian Communities

Lincolnton Reserve Land Voice Council: First & Second-Generation Landfills

Lincolnton community members have long voiced their concerns about the “unhealthy” or environmentally hazardous ways in which waste was handled at the first-generation landfill. In 2006, the Concerned Citizens of Lincolnton (now renamed the Lincolnton Reserve Land Voice Council) was formed to oppose the opening of the second-generation landfill. The community alleges that the Municipality of Guysborough improperly consulted them about this development. When the Concerned Citizens finally met with the Municipality, they discussed their desire to be compensated for the economic fallout from the landfill site, as well as for the impact the landfill has had on the community's health. They insisted that they receive a portion of the revenue if the landfill remained in their community. After persistent lobbying and a letter to the Minister of Environment, community members received a survey from the Municipality asking the community if they were willing to pay for a water well treatment and storage facility in Lincolnton. Not surprisingly, community members responded that they should not have to front the capital costs for clean-up efforts associated with someone else's garbage from a landfill they never wanted (Benjamin 2008). As one **Lincolnton community member** explained, her community has been organizing protests and demonstrations since the early 1970s to force the government to remove the landfill:

“We've had marches. We had the stand-off at the dump and a march in Halifax in 2006. We had all kinds of protests about this. And we protested in 1974 when they started just dumping the stuff in a hole. We had a big protest. The police were called on us and all that. I don't know how many times the police were called and how many demonstrations I've been to where the cops have been called on us just because we were walking, saying, you know, ‘take your garbage somewhere else and take the rats somewhere else’. You know?”

The Save Lincolnton Coalition - an alliance of community partners comprised of social justice and environmental groups throughout Nova Scotia – assisted residents in mounting the Save Lincolnton Campaign. These partners included former residents of Lincolnton, as well as organizations, such as Bound to Be Free, African Nova Scotian Brotherhood, Nova Scotia Public

Interest Research Group (NSPIRG), African United Baptist Association (AUBA), Halifax Coalition Against Poverty, and Halifax-Central Education Committee. The objective of this province-wide campaign was to expose and challenge institutionalized oppression in the province. The campaign also wanted to send a message to municipal and provincial levels of government (including the Guysborough Municipality and Natural Resources Canada) that they opposed the landfill, and that it was a clear example of environmental racism.

The Save Lincolnville Coalition demanded the following: that the Guysborough Municipality review alternative locations and commence the closure and relocation of the landfill site; that the land be redeveloped and recovered; that all municipal resource management programs and planned waste management infrastructure in Nova Scotia be preceded by an inclusive and transparent consultative process with all sectors of the community; that full reparations and compensation be given for land displacement, health costs, and environmental contamination; that public policy be grounded in mutual respect and justice for all peoples; and that all people are guaranteed universal protection against nuclear testing, extraction, production and disposal of toxic/hazardous wastes and poisons, regardless of race or class (Save Lincolnville Campaign, n.d.). Despite the considerable mobilizing the community has done over the last forty years, their requests continue to be ignored, as one **Lincolnville resident** explains:

“Opposition and fight has been going on for some years. A lot of people come to the conclusion, you know, they’re fed up with what they’re being dished out by the councillor and the Municipality of Guysborough. And, it seems like they’ve reached their wit’s end coming to the table and trying to hammer out some resolve to these here concerns that’s coming out of the community regarding these toxic waste facilities. And they say, ‘hey, you know, we’re sick and tired of beating our heads against the wall with no results’. And sooner or later, sometimes people feel defeated if they are not making any progress on an issue. Should they feel defeated? Yeah, they should feel defeated. Should they accept defeat? No, they shouldn’t accept defeat. Should they take action and try to make change? Yes, they should take action and try to make change. What should they do? Well, we should organize and put somebody in the position to take the position as councillor that’s going to give us a voice at the table. And yeah, we should start a letter writing campaign to our MLA and to our government that’s in power to say ‘hey, you know, we have some concerns here and we need those concerns addressed’.”

According to an **East Preston resident**, environmental racism and other community issues can only be addressed if residents develop a stronger sense of community:

“We need to sit down and do a focus group. And you know, years ago, that was one thing we talked about – our community, we did a lot of work at the church. People would sit around at the table. After they’d go to church on Sunday night, they would sit around the table with a coffee and sit down and discuss things to get things moving. That’s how I think our ratepayers got reactivated. But we have to start doing that stuff within our community. And we need to bring people together that care. Like you said, not self-motivated but we need to bring back that piece in the community about community. What is community? That’s what we’re lacking.”

A **North Preston community member** discussed how important it is for community members to become more assertive and proactive in getting the government's attention:

“The politicians will only respond to the community if there's some sort of mutiny. Because the community marches or they cause a riot or if they block off the road. But, then you'll get public attention. The politicians really do not have the interest of the community at heart. The politician might not have money in their funds per se but they have access to whatever funds that the government has, if they are willing to make the community's issues their priorities. But they're not.”

This sentiment was echoed by another **North Preston community member**, who expressed how important it is for community members to take back their community:

“So, if there's three people in the community who do read the paper and who are online, one person who's online, we need to make sure that everybody is aware of what's happening. And stop just sitting around our roundtables and discussing this stuff as opposed to inviting everybody into what's going on. Have more community meetings. Like get back to our Rate Payers Association and have our monthly meetings so that we can know what's happening and what's going on. Get people more actively involved and take back our own community. Like be more proactive in what's happening and what's going on instead of reactive to everything that is just forced down our throats.”

Dump the Dump Campaign: East Preston

In 2015, a group of concerned citizens residing in East Preston, Porter's Lake, Lake Echo, and Mineville came together to initiate the Dump the Dump Campaign. This campaign is opposing the application to rezone the 14.7 acre portion of the property on the north side of Highway 7, west of Parker Lane in Porter's Lake. Residents subsequently learned that there was a plan in place to relocate this C&D-2 material processing facility or dump to a parcel of crown land on the south side of Highway 107, which is across from Exit 17 near Lawrencetown and the African Nova Scotian community of East Preston.

There is a general sentiment among some members of the African Nova Scotian community in East Preston that the decision to relocate the dump in their community was made to squelch the uproar from the largely white communities of Porter's Lake, Lake Echo, and Mineville. This plan failed, however, when area residents and the East Preston Ratepayers Community Development Association contacted local, provincial, and municipal representatives about their concerns. A **community member in East Preston** discussed efforts in her community to halt the relocation of the dump:

“I know there's a movement out here, they're trying to put that construction debris site out here in Porters Lake, which is in our proximity. And that's what's happening now. And, there's communities combined to try to stop that.”

Lucasville Community Association: Memento Farms

Over the last fourteen years, the African Nova Scotian community of Lucasville has been dealing with the smell of manure, manure runoff, dust, increased traffic, noise, and rats from Memento Farms, a large commercial equestrian farm in the community. The Lucasville Community Association has been leading the fight to get the farm to leave the community and to preserve the two hundred-year old African Nova Scotian community. Several years ago, residents discovered that the farm was offering riding lessons and equestrian events illegally and was, therefore, not compliant with zoning for the area. Although the farm stopped offering these lessons and events, it continues to board horses. However, residents remain concerned that the development department has yet to address the smell, dust, and manure runoff. A petition was subsequently circulated in the community and a number of community meetings held after City Hall failed to address these issues.

Community members are concerned about the failure of the owners to consult them when the farm was built. They also contend that government officials have continued to ignore their concerns. They see similarities between their situation and the experiences of African Nova Scotians in the North End, and fear that their community will also be squeezed out by big business development (Devet 2015a, 2015b, 2016). Actions taken by **Lucasville residents** to address the farm have been to no avail, as one community member explained:

“Well, in the beginning when they first went there, my first call was to the Municipality, telling them that they should have never let these people go in behind me without contacting me first to see how I felt about it. And, I told them then ‘if I see any rats running on my property, you guys are going to have a big problem because I am scared to death of them’. And I also called the Department of Environment. I called the Department of Agriculture. I contacted Clean Nova Scotia. I talked to so many people, to no avail. No answer, nothing. And, I was even told at one time that if I didn’t like the smell there that I should move. I don’t see why I should move. I was born here. I was raised here. This is my homestead.”

Lucasville residents have also tried to address the issue as a collective, with little results, according to another community member:

“We did a petition in our community. We had over 150 petitions, if not more. And our councillor and I guess the MLAs, they didn’t hear us at a community meeting at all. They just went and did what they felt as though they had to. But, they didn’t listen to the people of the community. They didn’t come out and talk with the people of the community. But yet, we went to a meeting they had down in Sackville about this issue with Memento Farms. And they listened to a number of people not only in the community, outside the community - advocates for Black communities. And they just went straight ahead and did what they wanted to do. And when we found out, it was months later. Months later, we found out that they had granted them some grandfather status or they gave them what they were looking for. And that’s part of the problem we have in our Black community.”

African Nova Scotian Truro Residents: Flooding & the Dump

The Marsh, an area in Truro with a high proportion of African Nova Scotian residents, has experienced issues with flooding, which caused community members to move into rental housing because they were unable to afford to repair their homes, and were ineligible for flood insurance. Today, the Marsh is a primarily white community since many African Nova Scotians left the community. Community members residing on the Island are concerned about flooding from the Cobequid. They are also concerned about health risks associated with a nearby dump, as are those residing on the Hill. Despite these ongoing concerns, **community members in Truro** have had little success getting the government to address these issues, according to one community member:

“Every year I try to address the flood with government. And even to the Town representatives. And, it gets back with trying – ‘We’re trying’. That’s been going on for over 60 years. And, the big problem with that is we have no political clout. We have no political organizations in our community. But, if we had an organization speaking on behalf of the communities, that would have a lot more clout.”

In August 2015, African Nova Scotian community members in Truro organized a conference to address their community’s ongoing failure to work together in addressing the many issues affecting their community. They acknowledge that the lack of African Nova Scotian representation on various boards and commissions in Truro, as well as their community’s lack of involvement in the political process make it difficult for their voices to be heard and to impact policy decisions. As one community member stated, encouraging more community involvement by **African Nova Scotians in Truro** is key, if African Nova Scotians wish to have a more powerful voice in the issues facing the community:

“I’d just like to see the people in our community get more involved with each other. Like, there’s three Black communities, and we don’t have any communication. And if we all got together then it would be a bigger voice. And, you know, I visit all communities. I can recall coming down there and helping the people in the floods. To help them and the older people. It was appreciated. People from the Hill, I always got along with people from the Hill. But, it just seems like something’s got to happen in the community, like a death or something, before we can get together and be all on one accord.”

The South End Environmental Injustice Society: The Shelburne Town Dump

Shelburne provides another excellent case study of how “grassroots” activism can effectively address environmental racism. In early 2016, members of the African Nova Scotian community in Shelburne banded together to form the South End Environmental Injustice Society (SEED), a non-profit organization registered with Joint Stocks and Deeds. Since then, SEED has been addressing a number of concerns related to what they refer to as the “Shelburne Town Dump”. This waste dump is located near the south end of the community, where the majority of

African Nova Scotian families were placed after they were promised freedom and land. The dump is administered, financed, and controlled by the Town of Shelburne and its employees.

Since meeting with the members of the ENRICH Project team in April 2016, SEED has been collaborating with concerned citizens, Dalhousie University, social, environmental, and health organizations, as well as federal, provincial, and municipal governments to ensure proper clean-up and closure of the dump. SEED also hopes to carry out the following activities in the future: addressing mold in homes; identifying which pollutants from the dump community members are being exposed to; conducting soil and water testing; determining who is monitoring the dump; and taking steps to get the South End community on town water. Currently, the South End is the only area in Shelburne that is not on town water. Not surprisingly, the South End is where large number of African Nova Scotians reside. There is also mounting concern in the community about the impact the dump has had on the health of community members over the past 60 years or more. Therefore, the community is also interested in determining if there is a relationship between the dump and high rates of cancer in the community. One of their main objectives is to seek compensation for residents who have contracted cancer over the last several decades.

Although factual and accurate information is not currently available about the type and quantity of waste deposits made at the dump over the past century or about the background to its establishment, anecdotal evidence indicates that, over the years, the dump accepted municipal and medical waste from the adjacent hospital, the community college, the former naval base, and the Municipality's industrial park, with little record keeping or documentation. In recent decades the dump has "officially" been more restricted, but, with little supervision of day to day administration and control by the Town of Shelburne, which is responsible for the location and operation of the dump. More recently the Town has "re-opened" the dump, although it has not consulted in any meaningful way with community members about this. Visual investigation conducted by community members, as well as recent photos taken by one community member show evidence of continued, poorly regulated use of the dump as an uncontrolled or poorly controlled repository for assorted materials not intended for the facility for at least the past twenty years (South End Environmental Injustice Society, 2016).

In June 2016, Nova Scotia Environment conducted an inspection of the dump and found a number of environmental concerns, including a recent oil spill. This prompted them to issue an inspector's direction of problems the Shelburne Town Council is required to address. Nova Scotia Environment also hired engineers from the private sector to follow up and investigate the site. In the interim, SEED has been pursuing a collaboration with the Town to initiate the following activities: establish a reliable database on the relationship between the dump and its socio-economic, health, and environmental effects; implement a plan for environmental, health, and community infrastructure and associated remedial issues; identify potential federal and provincial funding sources for the necessary remedial work required; and close the dump while the community and the Town await results from Nova Scotia Environment (South End Environmental Injustice Society, 2016).

SEED also plans to collaborate with various partners to do the following activities in the near future: document the chronological development of the dump, its use and administration, as well as results from any previous testing undertaken; conduct a study on ongoing health impacts of the dump in the African Nova Scotian community, including cancer rates; investigate the economic impacts of the dump on local property values – past, present, future; investigate current conditions at the dump, including hydro-geology; test the site, including water table

testing and leaching rates; and build the community's capacity to test their own water and soil (South End Environmental Injustice Society, 2016).

The community mobilizing efforts and activism demonstrated by African Nova Scotian communities to transform their communities over the past several decades reflect Freire's (2000) characterization of transformation in *Pedagogy of the Oppressed*:

"One of the gravest obstacles to the achievement of liberation is that oppressive reality absorbs those within it and thereby acts to submerge men's consciousness. Functionally, oppression is domesticating. To no longer be prey to its force, one must emerge from it and turn upon it. This can be done only by means of the praxis: reflection and action upon the world in order to transform it." (p. 36)

Discussion

A sound environmental justice framework should be based on three main principles: procedural equity; geographic equity; and social equity. Procedural equity makes explicit the extent to which rules, regulations, evaluation criteria, and enforcement are applied fairly, uniformly, and in a non-discriminatory way in all communities. Several factors may account for why communities may not experience equal protection from environmental hazards. These include non-scientific and undemocratic decisions, exclusionary practices, public hearings held in remote locations and at inconvenient times, and use of English-only material when communicating and conduct hearings for a non-English-speaking public. Geographic equity describes the geographic location and spatial configuration of communities, including their proximity to polluting industries and other environmental hazards. Finally, social equity focuses on how sociological factors (race, ethnicity, class, culture, life style, political power, etc.) influence environmental decision making, such as the disproportionate location of poor and racialized people in the most dangerous jobs and in the most polluted neighbourhoods, as well as the exposure of children to a variety of environmental toxins in playgrounds and in homes (Bullard, 2002).

A Multi-Pronged Strategy for Addressing Environmental Racism in Nova Scotia

While having strong environmental racism legislation is crucial for addressing environmental racism in Nova Scotia, it must be accompanied by a comprehensive, multi-pronged strategy that is premised the following factors:

- Creating legislation and policy that incorporate a structural racism lens and focuses on the disproportionate impacts of industry in African Nova Scotian and Mi'kmaw communities;
- Implementing participatory democracy approaches that involve African Nova Scotian and Mi'kmaw communities in decision-making processes related to the location and monitoring of industries in their communities;
- Initiating community education and capacity building activities with African Nova Scotian and Mi'kmaw communities;
- Forging alliances between African Nova Scotian and Mi'kmaw communities and between these communities and "mainstream" environmental justice organizations;

- Ensuring that race and other social determinants of health are central in the environmental assessment and approval process;
- Opening up a much-needed discussion in Nova Scotia about other environment-related issues that impact African Nova Scotian and Mi'kmaw communities, such as the disproportionate impacts of climate change in these communities.

Legislation

A Provincial Environmental Bill of Rights

In 2015, the author of this report was invited to join the Environmental Rights Working Group, which has brought together different individuals and organizations in Halifax to share their work on environmental rights and environmental justice. The Group, which includes representatives from the East Coast Environmental Law Association, Ecology Action Center, and Ecojustice, is also collaborating on a new provincial *Environmental Bill of Rights*. A provincial *Environmental Bill of Rights* has several objectives: imposing a legal duty upon the provincial government to protect Nova Scotians' right to a healthy environment; improving public access to environmental information; giving members of the public the ability to challenge government decisions regarding the environment not only in court, but (ideally) in front of an independent tribunal; providing whistleblower protection for Nova Scotians who report environmental crimes; and improving government accountability by giving Nova Scotians the right to bring the Province to court when it fails to implement its environmental laws.

It is important to state that while the proposed provincial *Environmental Bill of Rights* does not have a specific focus on environmental racism, the Working Group is committed to ensuring that a race analysis is incorporated into the bill, and that the specific issues facing African Nova Scotian and Mi'kmaw communities are made explicit. With any environmental legislation concerned with the needs, priorities, and rights of African Nova Scotian and Mi'kmaw communities, it is important to determine if there is potential enshrining something into law that can hold Nova Scotia Environment's feet to the fire, and if preventative steps can be taken to address the environmental concerns of communities most impacted by industry and other environmental hazards. It is also important to assess whether or not the proposed legislation will have teeth, and to put in place built-in mechanisms to ensure that there are community-defined best practices around the siting of facilities---and more holistically, the conditions and types of facilities invested in and supported by governments and private industry generally in the province. The legislation should also define what should happen if such processes are violated by developers and governments.

Environmental legislation that speaks to the priorities of African Nova Scotian and Mi'kmaw communities must also achieve the following: bring increased awareness about and attention to environmental racism in Canada; recognize Aboriginal treaty rights; review the environmental assessment process in collaboration with affected communities; and identify existing gaps and where the process is broken in existing policies related to citizen engagement, community consultations, and other decision-making processes related to the location, monitoring, regulation, assessment, and remediation of polluting industries and other environmental hazards.

Participatory Democracy

Participatory democracy is central to community engagement in environmental issues, and another important step in addressing environmental racism in Nova Scotia. It involves enabling people to participate in and make meaningful contributions to decision making and other processes in equitable ways. Participatory democracy also provides people with the education and competence to understand and communicate in the often technical jargon used by professionals in various fields. With respect to environmental racism in Nova Scotia specifically, participatory democracy would involve Nova Scotia Environment providing African Nova Scotian and Mi'kmaq communities with more opportunities and avenues for public participation and public consultation in decision making processes related to environmental assessments and other environmental issues affecting their communities. In other words, the people most affected by these decisions must be in the room early on and throughout the decision making process. A **community member in North Preston** discussed how government can facilitate that process:

“I’d like two things when it comes to government. I’d like for government to involve or invite every community to be a part of the major infrastructure. Let me give an example. If there’s a committee that speaks directly to the Premier and is the representation from around the province, well, then they need to send an invite to North Preston. So, they have a committee structure in terms of how to get people to sit on committees and so on. And they send them to people who have already been involved, people that they have a rapport with, and these people may not necessarily represent us. Okay? Send information to people that have been politically involved. Someone who has been highly involved with the NDP, well, when something comes down the pipe, they will let you know. The other thing is that I’d like for government to provide information upon which the community can have input. Like focus groups are good. But it’s not the government that is doing the focus groups. It’s more community-based organizations. But the government needs to have focus groups in the community in regards to whatever policies they’re making. They need to have input from the community in terms of what they intend to do that affects them. And, that would only come by recruiting people to sit on committees and boards. Now, the way they do that is in the paper. There will be an invite. But then those people that are suggested, their names will be for a committee. If the committee doesn’t like you, for example, you won’t get approved.”

Community Education & Capacity Building

Addressing environmental racism through community education and capacity building builds community knowledge, skills, and confidence and, consequently, empowers communities to take action on their own terms. The Lincolnville Water Monitoring Project is one example of how the ENRICH Project has sought to educate and build community capacity.

Lincolnton Water Monitoring Project

In 2016, work that had begun in fall 2015 by ENRICH's Water Monitoring Working Group forged ahead in collaboration with African Nova Scotian members of the Lincolnton Reserve Land Voice Council. The Lincolnton Water Monitoring Project had three objectives: to determine if there is contaminated water flowing in the direction of the community from the landfill site; to build the community's capacity to test their own water; and to provide community members with basic knowledge about contaminants and groundwater sampling. ENRICH's Water Monitoring Working Group carried out a number of activities to build community capacity, including meeting with members of the Lincolnton Reserve Land Voice Council to identify their needs and priorities related to water testing, identifying labs willing to conduct low or no-cost water testing in Lincolnton, and reviewing reports and other literature on policies and legislation related to environmental impact assessments, water quality monitoring, hydrogeology, bedrock geology, facility siting regulations from the Municipality of Guysborough County, maps generated by government, and historical information on Lincolnton.

The sampling program conducted by members of the Working Group involved sampling wells for bacteria and for *major ions and elements* (or parameters) that are normally included in a typical water analysis. Generally speaking, the two main routes for possible contamination by these parameters would be through groundwater contamination or less likely, liquids leaking out of trucks as they drive through the community on their way to the landfill. One of the sites tested positive for both coliforms and E. coli, while another site tested positive for coliforms. The analytical results show that the wells at two of the sites contain slightly elevated levels of chlorine and sodium, which together produce sodium chloride or common salt. Surface water is most likely entering these wells, which is consistent with coliform contamination. The Water Monitoring Program was completed at the end of August 2016, when members of the Working Group returned to the community to share findings from the project. The ENRICH Project is currently identifying opportunities to conduct a similar project in Shelburne.

Forging Alliances

More alliances need to be forged between white "mainstream" environmental organizations and African Nova Scotian and Mi'kmaw. These organizations must begin to address in more serious ways the lack of diverse and representative voices within their organizations by engaging in more strategic outreach initiatives that support environmental initiatives already underway in African Nova Scotian and Mi'kmaw communities. Building bridges between Mi'kmaw and African Nova communities is another important, although often not discussed, component to addressing environmental racism in Nova Scotia. Therefore, it is important to identify how these solidarities can center on the shared and contradictory experiences Mi'kmaw and African Nova Scotian communities have around settler colonialism, racism, white supremacy, heteropatriarchy, capitalist exploitation, possession and dispossession, poverty, and class. The ENRICH Project continues to be involved in a number of projects and activities to forge alliances between both communities and between these communities and "mainstream" environmental organizations. One such project is discussed below.

Project Inspired by Seattle's Equity & Environment Agenda

Environmental organizations in Nova Scotia must begin to provide more support to African Nova Scotian leaders, activists, and organizations that are at the forefront of environmental movements in their communities. According to a **community member in North Preston**, white-led environmental groups must be more proactive in collaborating with communities often perceived as out of the way or “off the map”:

“I would like to see some of the groups that do work on this stuff like all the time, like the Ecology Action Centre, for example, or there’s probably so many other environmental groups... Like I’d like if they’re government or funded by government, that they actually stretch to here. Because I don’t think that they... It’s almost as if when it gets to Dartmouth or whatever, they stop. Like that’s their geographic area. They don’t always include Preston. But they may get money from the government to serve all of Halifax or HRM. But North Preston is often left out of that demographic. So thinking about how they can actually expand who they’re serving.”

The ENRICH Project hopes to address this issue by enhancing partnerships with environmental organizations, government, and other organizations on a new project inspired by Seattle's Equity and Environment Agenda (Aldern 2016). The project’s program manager led the development of the Agenda in Seattle by convening a group comprised of sixteen community leaders charged with engaging racialized communities and other groups disproportionately affected by environmental concerns. The project’s mission is to ensure that environmental solutions connect to and create economic and educational opportunities so that all communities can thrive. To do this necessitates addressing past systemic injustices while creating proactive, transformational solutions for the future. The project is, therefore, a call to action for government, non-profits, philanthropy, business, and community to work together in recognition that no single organization can reverse environmental injustice. The focus is on integrating equity into the city’s environmental programs, and ensuring that racialized communities, immigrants, refugees, low-income communities, youth, and low-proficiency English speakers have their voices heard. Seattle's Equity and Environment Agenda advocates for a four-pronged approach to environmental justice:

- Design environmental policies and programs that acknowledge the cumulative impacts of environmental, racial, and socioeconomic burdens in order to ensure clean, healthy, resilient, and safe environments for marginalized communities;
- Ensure that these communities have equitable access, accountability, and decision-making power when environmental policies and programs are crafted;
- Center community stories and narratives, and lift up existing culturally appropriate environmental practices during the decision-making process; and
- Create opportunities for pathways out of poverty through green careers. This can be partly achieved by advocating for support structures for marginalized communities to lead in environmental policy/program work through positions in government, as well as

through partnerships with community organizations, businesses, and other environmental entities.

Since the people most impacted by a problem often have the most fitting solutions, the goal of Seattle's Equity and Environment Agenda is to address inequities in municipal-level decision-making and in the environmental health of the places where people live by providing opportunities for communities to participate in efforts to make their communities safer, “greener,” and more just. Also important is engaging community members and individuals from diverse sectors in preliminary discussions to determine if there is a disconnect between the ways in which marginalized communities experience their environmental issues and how mainstream environmentalists tend to think and talk about environmental issues. Therefore, one of the Agenda’s goals is to engage with representatives from “historically white-led” mainstream environmental organizations in order to help them broaden their understanding of environmental issues, particularly from the perspectives of marginalized communities.

While the ENRICH Project has already been engaging in much of the work being carried out in Seattle, what has been largely missing is strong collaborations with government, non-profits, and other organizations willing to take a stronger stance against environmental racism in the province. Therefore, the ENRICH Project’s goal is to use Seattle's Equity and Environment Agenda as a framework to identify strategies that will break down silos and bring together African Nova Scotian and Mi’kmaq community members, non-profits, government, environmental organizations, and other organizations to work collaboratively together on solutions.

In addition, as a new member of the Climate Jobs Roundtable, the ENRICH Project will be identifying strategies for facilitating access to “green jobs” for African Nova Scotian and Mi’kmaq communities. The Roundtable intends to create momentum for a dramatic increase in “green jobs” in three sectors in Nova Scotia: energy efficiency, renewables, and transportation.

Final Words

The ENRICH Project continues to exemplify the multiple, creative, and timely ways in which research data and knowledge can be shared with community members, policymakers, environmental organizations, health professionals, students, faculty/researchers, members of the general public, and media. Since its inception, the project has engaged with a creative mix of approaches to share and mobilize knowledge, including a documentary film, Twitter, Facebook, a project website, an email newsletter, project maps, traditional media (television, newspapers, radio, magazines), public engagement events, community meetings, a community workshop, government consultations, community and government reports, peer-reviewed journal publications, and an arts-based youth education project.

The ENRICH Project stands at the crossroads of the traditionalist principles and values upon which community-based research *must* be premised, on the one hand, and the innovative, inventive, creative, original, and new ways of conceptualizing how community-based research and research in general, can be conducted through an academic institution, on the other hand. Consequently, the ENRICH Project is illustrative of a research model in which critical academic inquiry can co-exist with new technologies, new media, whilst maintaining the core principles of community-based research, such as community engagement, community collaboration, and community capacity-building – all of which never go out of style.

In closing, I would like to say “thank you” to the community members who shared their experiences with me, and with whom I have been privileged to develop relationships over the past several years. These relationships have impressed upon me how crucial it is to conduct research that is grounded in and evolves out of the priorities, concerns, and needs of community members first and foremost. Moreover, I have come to a greater appreciation for how important it is to create spaces and opportunities for divergent voices to resonate throughout the project. In moving forward, I hope to remain open, flexible, and accommodating to new ways of thinking about how the ENRICH Project can not only stay true to the core principles of community-based research, but how it can also continue to “keep its ears to the ground” by engaging with non-traditional approaches to academic inquiry and knowledge sharing and mobilizing.

Appendices

Appendix A

17 Principles of Environmental Justice Developed by Delegates at the First National People of Color Environmental Leadership Summit

- **Environmental Justice** affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction.
- **Environmental Justice** demands that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias.
- **Environmental Justice** mandates the right to ethical, balanced, and responsible uses of land and renewable resources in the interest of a sustainable planet for humans and other living things.
- **Environmental Justice** calls for universal protection from nuclear testing, extraction, production and disposal of toxic/hazardous wastes and poisons and nuclear testing that threaten the fundamental right to clean air, land, water, and food.
- **Environmental Justice** affirms the fundamental right to political, economic, cultural and environmental self-determination of all peoples.
- **Environmental Justice** demands the cessation of the production of all toxins, hazardous wastes, and radioactive materials, and that all past and current producers be held strictly accountable to the people for detoxification and the containment at the point of production.
- **Environmental Justice** demands the right to participate as equal partners at every level of decision-making, including needs assessment, planning, implementation, enforcement and evaluation.
- **Environmental Justice** affirms the right of all workers to a safe and healthy work environment without being forced to choose between an unsafe livelihood and unemployment. It also affirms the right of those who work at home to be free from environmental hazards.
- **Environmental Justice** protects the right of victims of environmental injustice to receive full compensation and reparations for damages as well as quality health care.
- **Environmental Justice** considers governmental acts of environmental injustice a violation of international law, the Universal Declaration On Human Rights, and the United Nations Convention on Genocide.

- **Environmental Justice** must recognize a special legal and natural relationship of Native Peoples to the U.S. government through treaties, agreements, compacts, and covenants affirming sovereignty and self-determination.
- **Environmental Justice** affirms the need for urban and rural ecological policies to clean up and rebuild our cities and rural areas in balance with nature, honoring the cultural integrity of all our communities, and provided fair access for all to the full range of resources.
- **Environmental Justice** calls for the strict enforcement of principles of informed consent, and a halt to the testing of experimental reproductive and medical procedures and vaccinations on people of color.
- **Environmental Justice** opposes the destructive operations of multi-national corporations.
- **Environmental Justice** opposes military occupation, repression and exploitation of lands, peoples and cultures, and other life forms.
- **Environmental Justice** calls for the education of present and future generations which emphasizes social and environmental issues, based on our experience and an appreciation of our diverse cultural perspectives.
- **Environmental Justice** requires that we, as individuals, make personal and consumer choices to consume as little of Mother Earth's resources and to produce as little waste as possible; and make the conscious decision to challenge and reprioritize our lifestyles to ensure the health of the natural world for present and future generations.

Appendix B: Focus Group Questionnaire

Introduction: Hello everyone. Thank you for taking the time to participate in this focus group to discuss your experiences living close to environmentally hazardous facilities, such as landfills and industrial plants. I am also interested in hearing your opinions about how you think living near to these facilities have affected your health and well-being and how you think these issues should be addressed by government. I will be using a questionnaire to facilitate this focus group. This focus group will be audio recorded and will last a maximum of one hour.

- What are your perspectives on health in your community?
- What do you think makes and keeps people healthy in your community?
- Are there aspects of your community that you think create poor health? What are they?
- What are your perspectives on the location of various facilities and industries operating near to your community?

- Do you think these facilities and industries have an impact on health in your community?
- For those of you who believe that they do, in what ways do you think they affect health?
- Have you tried to address this issue with government or other agencies and individuals?
- For those of you who have, what were the outcomes?
- Is it important to you to be more involved in decisions made by government about where these facilities and industries are located and how they are monitored, regulated and evaluated?
- For those of you who do, how would you like government to involve you in decision-making processes?

Appendix C: Media

Print

- 2016 “The dirt is for the poor”, *Tages-Anzeiger* (Swiss Newspaper), July 23.
- 2016 “Trendsetters: The activist Ingrid Waldron”, *Halifax Magazine*, May 6.
- 2016 “Fighting environmental racism in Nova Scotia: Q&A with Advocate of the Year, Dr. Ingrid Waldron”, *Springtide Collective Blog*, March 22.
- 2016 “Mapping environmental racism in Nova Scotia”, *Canadian Geographic*, March 17.
- 2016 “Nova Scotia group maps environmental racism: The ENRICH Project looks at the cause and effects of toxic industries near marginalized communities”, *CBC News Nova Scotia*, March 16.
- 2016 “Interactive Map Documents Environmental Racism in Nova Scotia”, *Nova Scotia Advocate*, March 14.
- 2016 “Campaign to address environmental racism pushes ahead”, *Touch Base*, February 22.
- 2016 “Minister is colour-blind to environmental racism”, *The Coast*, January 28.
- 2015 “What we’re doing right in Halifax”, *The Coast*, November 26.
- 2015 “Activists lobby for passage of Bill 111 to address environmental racism”, *The Signal*, November 25.
- 2015 “Environmental racism bill hopes to get to second reading: First Canadian bill of its kind asks NS Ministry of Environment to consult communities near hazardous sites”, *Dalhousie Gazette*, October 30.

- 2015 “Facing environmental racism and white privilege: Group wants Bill 111 proclaimed without further delays”, *Halifax Media Co-op*, October 26.
- 2015 “New bill addresses environmental racism around Mi’kmaw, African Nova Scotian communities, *Touch Base*, October 23.
- 2015 “Black residents say Nova Scotia is racist about where it dumps its trash”, *Vice News*, October 1st.
- 2015 “Race, place and poison in Nova Scotia”, *Ethnic Aisle Blog*, September 25.
- 2015 “Facing Nova Scotia’s environmental racism: Dalhousie professor speaks about environmental challenges faced by marginalized communities”, *Dalhousie Gazette*, September 18.
- 2015 “Will Nova Scotia take environmental racism seriously?”, *Halifax Examiner*, July 29.
- 2015 “Nova Scotia’s sad state of environmental racism: Out of sight, shouldn’t mean out of mind”, *The Coast Blog*, July 28.
- 2015 “Playing partisan politics with environmental racism”, *Halifax Media Co-op*, May 15.
- 2015 “NS Liberals = racist garbage - banner drop”, *Halifax Media Co-op*, May 12.
- 2015 “We need to address environmental racism in Nova Scotia”, *Impact Ethics Blog*, May 8.
- 2015 “Environmental racism remains a reality in Canada”, *Huffington Post Canada*, May 7.
- 2015 “We’re on the backs of others that have paved the way for us: Bill 111 - An Act to Address Environmental Racism, is introduced into Nova Scotia House of Assembly”, *Halifax Media Co-op*, April 29.
- 2015 “Nova Scotia bill aims to address legacy of 'environmental racism': Act to address environmental racism, to propose committee to hold public meetings on issue”, *CBC Information Morning*, April 29.
- 2015 “MLA’s proposed bill targets environmental racism”, *Chronicle Herald*, April 29.
- 2015 “Weekend focus: The toxic sites of Nova Scotia racism”, *Chronicle Herald*, April 25.
- 2014 “Boat Harbour photographer hopes to shine light on environmental racism”, *Chronicle Herald*, October 8.

- 2014 “Consider health effects before policy decisions, study urges”, *Chronicle Herald*, May 27.
- 2014 “In whose backyard? Video documents environmental racism in Nova Scotia”, *Halifax Media Co-op*, March 20.
- 2014 “Environmental racism report highlights Mi’kmaq, African Nova Scotian concerns”, *Chronicle Herald*, March 11.
- 2014 “Environmental racism a pressing issue”, *Halifax Commoner*, January 16.
- 2014 “Environmental racism still prevalent in Nova Scotia, communities say”, *Halifax Media Co-op*, January 13.
- 2014 “Environmental racism links N.S. Blacks, Natives to minorities around the world”, *Chronicle Herald*, January 11.
- 2014 “Health top issue in Dal researcher’s environmental racism study”, *Chronicle Herald*, January 1st.
- 2013 “Joint academic, grassroots project examines effects of ‘locally unwanted land uses’ on Nova Scotia’s Indigenous black and Mi’kmaq communities”, *Halifax Media Co-op*, November 1.
- 2013 “Environmental racism focus of project”, *Chronicle Herald*, October 3.
- 2013 “In whose backyard?”, *Between the Issues*, Summer.

Television

- 2016 Interview on *Global Morning News Halifax* about environmental racism, ENRICH and the new ENRICH interactive map, March 15, 2016.
- 2015 Interview on *Global Morning News Halifax* about environmental racism, July 28.
- 2015 Interview on *Global Morning News Halifax* about environmental racism bill, April 30.
- 2015 Interview on *Global Evening News* about environmental racism bill, April 29.
- 2015 Interview on *Global Morning News Halifax* about environmental racism, January 13.
- 2014 Interview on *Global Halifax* about environmental racism, October 29.
- 2014 Interview on *Global Morning News Halifax* about environmental racism, January 10.

2013 Interview on *Doc Talks* about environmental racism and gentrification and health in the Black community in the North End of Halifax, December 9.

2013 Interview on *CTV 6 PM Sunday News* about environmental racism, October 6.

Radio & Podcast

2016 Interview on *Shades of Green* (CKDU, 88.1.FM) about environmental racism, May 9.

2016 Interview on *The Sheldon Macleod Show* (Rogers News 95.7 Halifax) about environmental racism, January 29.

2015 Interview on *Accessible Media* about environmental racism for program “Insights”, November 11.

2015 Interview on *National and International Roundtable* on Blog Talk Radio about environmental racism, September 9.

2015 Interview on *The Sheldon Macleod Show* (Rogers News 95.7 Halifax) about environmental racism, July 28.

2015 Interview on *Examineradio* (Halifax Examiner) about environmental racism, July 24.

2015 Interview on *CBC Information Morning* about environmental racism, April 29.

2014 Interview on *Talking Radical Radio* about environmental racism, October 15.

2014 Interview on *The Tide Podcast* about environmental racism (Episode 6), May 14.

2014 Interview on *CBC Information Morning* about environmental racism, January 10.

2014 Interview on “Insights” about environmental racism, *Accessible Media*, January 10.

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