Lake St. Martin First Nation Community Members' Experiences of Induced Displacement: "We're like refugees"

SHIRLEY THOMPSON, MYRLE BALLARD, AND DONNA MARTIN

Abstract

In 2011, a massive flood occurred in the Canadian province of Manitoba, and provincial government officials decided to divert water to Lake St. Martin and First Nation land to protect urban, cottage, and agricultural properties. As a result of this artificial flood, all community members were evacuated, with infrastructures and housing at Lake St. Martin First Nation permanently destroyed. Three years later, 1,064 Lake St. Martin First Nation members reside in urban hotels and other temporary residences. Data from participatory videography and community workshops were analyzed using the sustainable livelihoods framework. Environmentally and developmentally induced displacement transformed an entire First Nation community into refuges in their homeland. Jurisdictional issues and racism prevented provisioning of services to meet their basic needs, help rebuild their lives, and relocate their community. Inclusive evacuation, relocation, and water-management policies and procedures are recommended.

Résumé

En 2011 a eu lieu une importante inondation dans la province canadienne du Manitoba. Les fonctionnaires du gouvernement provincial ont décidé de détourner les eaux vers le lac St-Martin et les terres des premières nations afin de protéger les propriétés urbaines, rurales et agricoles. En conséquence de cette inondation artificielle, tous les membres de la communauté ont été évacués, et les infrastructures et les habitations de la communauté autochtone du lac St-Martin ont été détruites de façon permanente. Trois

ans plus tard, 1 064 membres de la communauté autochtone du lac St-Martin habitent dans des hôtels urbains et d'autres habitations temporaires. Nous avons analysé les données de vidéographies participatives et des ateliers communautaires à l'aide d'une grille de moyen de subsistance durable. Les déplacements environnementaux et développementaux ont transformé toute une communauté autochtone en refugiés dans leur propre région. Des questions de juridictions et de racisme empêchent de fournir les services de base, d'aider à la reconstruction de leur vie, et de réinstaller leur communauté. Des évacuations inclusives, des déménagements, et des politiques et des procédures de gestion de l'eau sont recommandées.

Introduction

Unprecedented water levels forced the entire community of Lake St. Martin First Nation (LSMFN) in Manitoba, Canada, to undergo an emergency evacuation in 2011.¹ The flooding was so severe that the LSMFN community, a reserve for 140 years and home to Anishinaabe people, is now uninhabitable. Considered the "largest spring runoff in the province's history," the geographical scope and duration of this flood surpassed previous records.² Provincial government officials lowered water levels in Lake Manitoba by flooding Lake St. Martin, responding to a 2011 consultant's report that stated, "If no action is taken, extremely high water levels on Lake Manitoba and Lake St. Martin are expected to continue for an extended duration, leaving communities and homes damaged from flooding, wind and waves."3 The provincial government's decision saved cottages, agricultural areas, and communities on one lake by

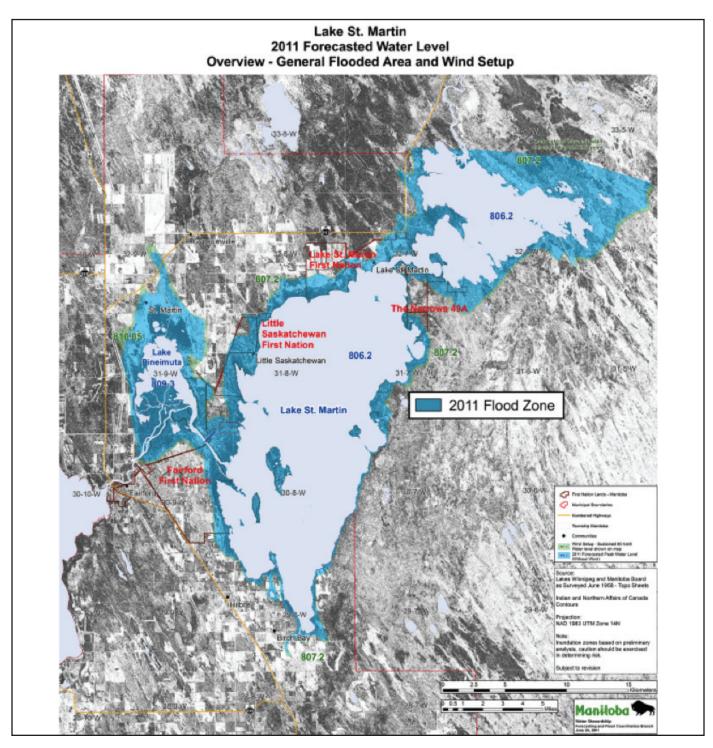


Figure 1. The 2011 forecasted water levels due to flooding of Lake St. Martin FN

flooding three First Nation (FN) communities, including LSMFN, Pinaymootang, and Little Saskatchewan on Lake St. Martin (see figure 1). This diversion of water resulted in lower-than-average levels on Lake Manitoba but sustained flood levels in FN communities. In this context, this study asked the research question, what is the

impact of water management and flooding on the well-being of displaced community members of LSMFN? In this paper, we describe how LSMFN community members struggle for a new, sustainable community. The sustainable livelihoods framework was used to guide data collection and analysis. This framework provided a broad examination of impacts

that included an exploration of the role of institutions and policies on impacts of flooding and displacement.

A literature review was undertaken to embed this case study in a broader understanding of the impact of flooding on health. Utilizing SCOPUS and Ebscohost databases and inputting the keywords *flood* and *health*, researchers located and critically reviewed. Literature reviews⁴ and descriptive research⁵ provided us with the current state of knowledge about short-term and long-term health impacts of flooding. Several studies focused on survivors of Hurricane Katrina,⁶ and other research sites were located in China, Mexico, Poland, Thailand, South Korea, and the United Kingdom.⁷ Few studies examined the health impacts of flooding on indigenous populations.⁸ Most studies examined the health impacts of flooding using an individualistic approach with a biomedical focus. No studies examined the impact of flooding on families or communities.

Lake St. Martin FN was environmentally and developmentally displaced. Community members were displaced within their country of habitual residence as the result of environmental degradation.⁹ The community land is now underwater and not considered suitable for building residences or infrastructures. Floods, like other natural disasters, are forces outside human control. However, although a flood cannot be stopped, it can be diverted from its flow to another course. In the case of the 2011 "superflood," the flood waters were diverted to the water-control structures at the Portage Diversion and the Fairford Dam. Utilizing water-management policies, provincial government officials created a flood at LSMFN, resulting in the communities' permanent displacement. 10 Upstream dams and watercontrol structures are statistically significantly associated with higher risk of death and injuries (b = -1772, p = < 0.1). 11 Thus, dams and water-control structures upstream from LSMFN placed these community members at greater risk to adverse impacts. 12 Thus, the fundamental reason requiring the change of residence is not—in this case—a specific environmental factor (for example, the occurrence of the superflood), but originates in human interference with the environment.

Background: First Nation Communities, Flooding, and Relocation in Manitoba

Many First Nation (FN) communities are affected by flooding in Manitoba, but the health and social and other impacts are largely unknown.¹³ Hydroelectric dams have had an impact on FN communities, as many northern communities have been flooded and displaced.¹⁴ The 2011 flood displaced 4,525 FN people from 17 FN communities in Manitoba. The effect on these community members was extensive. According to a Southern Chiefs' Organization resolution in

May 2012, a year after the 2011 flood, "There are currently 2,427 displaced evacuees from the eight affected communities, which are comprised of two Southern FNs completely evacuated and unable to return to their respective community with six other communities partly evacuated." 15

Development causing flooding of FN communities in Manitoba is a reoccurring story. Hydroelectric dams have displaced many FN communities located in vulnerable locations such as flood plains or near rapids. 16 Chemawawin Cree were displaced and their livelihoods ruined when Manitoba Hydro dammed the Saskatchewan River, making a giant reservoir at Cedar Lake, to fuel the Grand Rapids generating station.¹⁷ Furthermore, a series of dams and hydroelectric plants on the Nelson River in Northern Manitoba reversed the flow of the Churchill River by diverting it into the Nelson River as well as transforming Lake Winnipeg. This water manipulation displaced the South Indian Lake (SIL) FN community and flooded Nelson House FN territory. The ability of FN peoples to live off the land has been compromised at SIL FN and other communities, with SIL fishers reporting catching four tubs of fish with forty nets when before they caught forty tubs with four nets prior to construction of the dam.¹⁸

In flooding FN communities, the Crown had designated FN territory essentially as "sacrifice zones" in the broader development of settler capitalist Canadian society.¹⁹ In 1998, Canada placed first in the Human Development Index (HDI), which measures well-being. Meanwhile, registered FNs living on-reserve ranked at seventy-eight on the HDI list, which is alongside Peru and Brazil. This designation alludes to on-reserve population's poor living conditions.²⁰

Indigenous peoples and other vulnerable communities have a higher risk of severe flood exposure, which results in more negative health and other outcomes.²¹ Cases in Canada and around the world exist where settlements of indigenous peoples have been placed on marginal land and/or in locations that are remote. For example, FNs in Manitoba were often relocated to reserves in swampy areas and flood plains, which make these communities vulnerable to flooding.²² Floods exacerbate the poverty and vulnerability of FN peoples.²³

History and Description of Lake St. Martin First Nation

Anishinaabe people have resided on the shores of Lake St. Martin for many generations, and elders from LSMFN talk about their grandparents telling stories of how beautiful life was there a long time ago.²⁴ Their traditional land was once home to abundant bison and other wildlife, as well as fish, with fertile land for agricultural activities. Their fishing, agriculture, and hunting livelihoods provided an

abundance of resources to feed and clothe their families and live well. These earlier times are described in Anishinaabe as *pimachiwiin*, which is a term that means the good life. From the mid-1850s until the water-control structure in 1961, fishing and agriculture provided some income and sustenance, although they were quickly outcompeted by the expensive technology outside fishermen provided.

The Lake St. Martin basin is situated in the boreal forest and its geomorphology consists of intermittent karst topography and soluble limestone bedrock. Lake St. Martin basin was divided up into reserve property of the Crown into three reserves. LSMFN was part of Treaty 2 for Reserve No. 49, which is officially called the Narrows and also part of Treaty 5 for Reserve No. 49A. These treaties reduced their vast territory to a small land base of approximately 24 square kilometres on the remote northeast shore of Lake St. Martin, as can be seen in figure 2. This Anishinaabe community is located in the Interlake region of Manitoba, a few hours northwest of Winnipeg (225 kilometres), accessible by a gravel road.

In 1961, the Fairford water-control structure was constructed upstream at the Fairford River, which receives its water from Lake Manitoba (see figure 1 for the location of Lake St. Martin FN and its proximity to Little Saskatchewan FN and Pinaymootang FN). In 1970, the Portage Diversion resulted in higher water levels in Lake Manitoba and Lake St. Martin. With this development, Lake St. Martin FN has experienced reoccurring flooding with extensive environmental and human costs.²⁶

Sustainable Livelihoods as the Guiding Framework

The sustainable livelihoods framework was used to guide data collection and analysis. This framework provided a broad examination of impacts (e.g., human, social, physical, environmental, and financial) and included an exploration of the role of institutions and policies on impacts of flooding and dislocation. A "sustainable livelihood" is defined as "the assets (natural, physical, human, financial and social), the activities, and the access to these (mediated by institutions and social relations) that together determine the living gained by an individual or household."²⁷ The sustainable livelihood framework can be used to analyze assets for FN peoples in Canada and the reasons for lower assets in these communities.²⁸

Provincial officials manage risks from floods, and these actions can reduce or worsen impacts. Institutional structures (e.g., rules, customs, and land tenure) and processes (e.g., laws, policies, societal norms, and incentives) operate on multiple scales to change flooding impacts.²⁹ Institutional structures such as the Indian Act, and other colonial policies that continue to this day, take away local

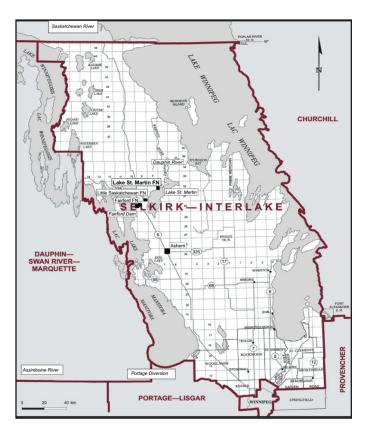


Figure 2. Location of Lake St. Martin First Nation downstream from Lake Manitoba and the Fairford Water-Control Structure

decision-making powers and have resulted in a state in which many FN communities exist.

Lake St. Martin FN is affected by provincial water policy and federal land tenure and funding. Many institutions play a role in post-recovery from flooding, including different levels of government, private sector agencies, and non-government organizations. The way communities themselves are structured is due in large part to their relationship with the state, particularly FN communities, which are constructs of treaties by settlers to establish their governmental authority. Exploring the institutional and policy context offers a way to address the issues of water-level risk and to enhance water governance, management strategies, and services in conjunction with FN communities.

Method of Inquiry: Participatory Workshops and Videography

This participatory research was approved by the University of Manitoba Joint Ethics Board. Research methods included five workshops on strategic analysis and community planning, all of which had a participatory video (PV) component. Workshops were undertaken in both Anishinaabe and English languages. Workshops, focus groups, and PV were considered appropriate for an oral culture. PV interviews

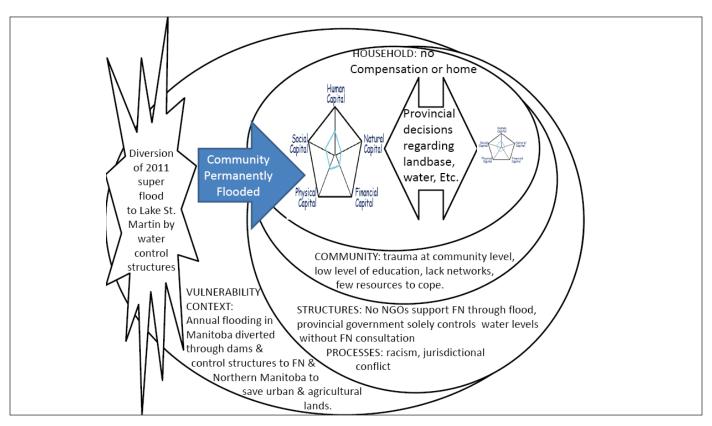


Figure 3. Sustainable Livelihood Analysis applied to Lake St. Martin First Nation

and transcripts from focus groups were analyzed to identify codes, categories, and themes, using the sustainable livelihoods framework as a guide.

All community members were invited to participate, including school-aged children and youth. A convenience sample of 35 adults and several youth was acquired. Adults were asked questions relating to the five sustainable livelihood assets, or in other words, they were asked to describe their health, social relations, financial situation, infrastructure access, and access to nature. Additionally, participants were invited to share their perspectives about how different institutions, rules, customs, and processes played a role in their experiences of displacement. Youth were invited to share drawings of their experiences in LSMFN and their hopes for their new community. Data collection was completed in 2012.

The research process involved producing a video called *Flooding Hope: The Lake St. Martin First Nations Story.* Draft versions of the film were screened at community events to provide community members with the opportunity to provide input into the storyline. After the screenings, more interviews were undertaken based on feedback from participants. The film was selected for a number of film festivals, which served to share this community's story of displacement.³⁰

Project Findings: "We're like refugees"

"We're like refugees" was often expressed by participants and emerged from the data as the major theme. This statement describes the overall predicament of this entire community that lost its homeland and many years later remains displaced. Findings were categorized by the five sustainable livelihood assets and then analyzed for the institutional/ policy and vulnerability context of LSMFN. See figure 3 to show how different levels of government played a role to increase the vulnerability of Lake St. Martin FN to flooding, which decreased their human, physical, natural, economic, and social assets. These institutions and policies shifted the flooding impacts from non-FN to FN for the 2011 superflood. The outer ring of this model represents the vulnerability context ring for Lake St. Martin FNs, which is bulging to show how lack of meaningful consultation and lack of including governance of water and services increased risks and negative impacts for FNs.

Human Assets

Human assets represent the health, education, and skills of individuals that contribute to the productivity of labour and capacity to manage land. Human assets have been greatly affected at LSMFN from flooding. For example, the impact of long-term flooding may explain the much lower median

income for LSMFN. Lake St. Martin FN community members had a median annual income of \$1,636 in 2006.³¹ This figure is drastically below that of Manitobans at \$24,194/ year, of FNs people living off-reserve at \$22,500 per year, or of FNs people across Canada living on-reserve at \$14,000/ year. Since this income level was so unusually low, an inquiry to Statistics Canada was made, to which they responded, "There is no error in the Narrows 49 Indian reserve numbers for median income—total Aboriginal identity population 15 years and over." Behavioural and psychological conditions associated with poverty include substance abuse, addictions, stress, compromised education, and limited capacity to identify and respond to risks. 33

Educational attainment is low at Lake St. Martin FN. In 2006, approximately 11 per cent of LSMFN youth graduated from a secondary school, which is half the rate for Manitoba (approximately 21 per cent), according to Statistics Canada.³⁴ Prior to the evacuation, a school was sited by the federal government at an unsuitable location prone to snakes and moisture issues against the advice of the community, and soon after it was opened, public health authorities closed the school because it posed hazards. This closure resulted in children going to school in portables, prone to dampness and mould, for more than ten years, which was a poor learning environment. Also, schools at LSMFN went up to only Grade 9, which meant that youth could not acquire secondary school in their home community, and so was a major deterrent to attaining a high school education.

Evacuation resulted in large gaps in time where no suitable physical location was identified for schooling children. A school building was not made available to the children in Winnipeg until October 2011, despite many closed public schools identified by band staff as possibilities. As a result, the children missed almost four months of school in 2011 because there was no school building; the children faced mandatory evacuation from their school in early May to the end of school in June and were not provided with an alternative school. When relocated, children continued to be without a school in September to mid-October in 2011. From mid-October to June 2012, the school was temporarily located in the downtown core area of Winnipeg, which suffers from a high crime and poverty rate. The school was moved again to another temporary location in another part of the city in September 2012, which the City of Winnipeg's Planning, Property, and Development Department shut down for several weeks because the landlord violated a number of by-laws.

A resolution for Southern Chiefs Organization (SCO) in 2012 listed the health problems experienced by FN flood evacuees, which included "miscarriages, depression, other mental health symptoms, difficulties addressing those who have a chronic disease, etc., and have resulted in premature deaths."³⁵ A number of elders from LSMFN have died prematurely, since displacement. In *Flooding Hope*, one female elder sobs as though the flood's impacts are a visceral, physical pain: "How it hurts. It hurts. I want to cry all the time."³⁶ Long-term health hazards included worsening of chronic illnesses and mental health disorders.³⁷

The children, when asked to draw pictures of impacts as part of a school exercise, showed their homes under water and conveyed a sense of loss: "I miss LSM. I am sad."³⁸ Since pets were not allowed in hotels and temporary housing, family pets often had to be taken to the humane society for adoption out of necessity, which created further distress among children.³⁹

Lake St. Martin FN, similar to other FNs, experiences high rates of diabetes and other chronic diseases, which have been exacerbated by the flooding and induced displacement. Chronic diseases often worsen as a result of floods. Inability to maintain a stable medication uptake was the main barrier to continuity of care for chronic conditions during the disaster. Inadequate information and financial constraints were contributing factors. Also, with the youthful demographics at LSMFN, many pregnant women and young children were exposed to the negative and stressful impacts of the floods and displacement.⁴⁰

High stress and anxiety were reported by participants. Mental health issues result from flooding and displacement, which take a heavy toll on people's overall health. The main evidence is in common mental disorders (anxiety, depression), post-traumatic stress syndrome, and suicide. Post-traumatic stress disorder is defined by the American Psychiatric Association as a severe and complex disorder precipitated by exposure to psychologically distressing events; it is characterized by persistent intrusive memories about "the traumatic event, persistent avoidance of stimuli associated with the trauma and persistent symptoms of increased arousal." Impacts of the stress of displacement and flooding include attempted suicides and deaths from suicides. Long-term mental and physical health impacts are expected to be profound.

The most severe and enduring effects of relocation have been identified to occur where the entire community is affected and where the disaster is human-made rather than a natural occurrence. The nature and magnitude of the created flood at LSMFN required the entire community to relocate permanently. Relocation, whether voluntary or compulsory, functions as a significant stressor and disrupts social support networks, with compulsory relocation being significantly more negative in the subsequent social support disruption and psychological adjustment. After

involuntary relocation, rural indigenous communities have experienced a cultural identity crisis, resistance to innovation, and increased dependency upon the national government responsible for the relocation, as well as increased morbidity and mortality.⁴⁴ Even the threat of such relocations has been associated with severe levels of psychological distress and dysfunction.⁴⁵

Social Assets

Social assets are the close social bonds that facilitate cooperative action, social bridging, and linking to share ideas and resources. 46 Once strong, social assets in FNs has been weakened by settler political systems, residential school, and poverty. In the case of LSMFN, the long-term flooding and then permanent displacement without satisfactory relocation to a new community has profoundly disrupted social assets. 47 The social impact included many reports of family breakups, increased family violence, drug use, alcoholism, and recruitment of community members by gangs in urban centres and host communities. 48 Compulsory relocation occurred with people dispersed across the province, which resulted in the disruption of social support systems and social networks. 49

Support for LSMFN is strong amongst FN organizations and FN people but minimal among other Canadian organizations and the general public. First Nations organizations were supportive with resolutions and media from Assembly of First Nations, Assembly of Manitoba Chiefs, and SCO. However, these organizations have limited human, social, and financial capacity. The people from LSMFN live in two worlds—one that recognizes and values their rich traditional culture and indigenous knowledge, and the larger Canadian society where FN culture is stigmatized.⁵⁰ Following evacuation, community members reported experiencing overt racism on a daily basis in their hotels and throughout Winnipeg. These flood evacuees were shaken by how negatively the media and government portrayed them as living high off the public purse. By describing flood evacuees as dependent, helpless, and manipulative, flood evacuees were re-victimized. Chief Adrian Sinclair described how community members were called "freeloaders" and how elders were physically and verbally assaulted.⁵¹

Support by Canadians never materialized for this community that had lost everything. Church groups, charities, and development agencies were absent from playing any role. The only exceptions were the Liberal party, which in Manitoba has only one seat, providing generous media and political support, and some individual researchers from University of Manitoba.

Natural Assets

Natural assets comprise resources and land management, typically fisheries, forests, wildlife, agriculture, minerals, and non-timber products.⁷² However, FN peoples, like other indigenous peoples, define nature more broadly than Western society.⁷³ First Nation people include stories, rules, norms, and beliefs as all part of their relationship to the land, air, and water. Although FN peoples' connection to land has changed over time and is complex, there is a marked difference in indigenous peoples' spiritual connection to place, compared to European settlers. Indigenous knowledge systems (IKS) are established from an ancient, ongoing relationship with the land. Nature and culture are not regarded as separate but are entangled together. McKnight acknowledged that land "constitutes identity, and loss of land is tantamount to loss of one's self ... To have one's own country is to have a place where one can withdraw in times of trouble and where one can easily find sustenance ... it bestows a degree of independence that cannot otherwise be obtained."52

Traditional land-use studies and plans enable a community to manage and govern their communities on the basis of indigenous values. Most FN communities in Canada have traditional land-use studies in place or funding for the community to do so, but LSMFN have not been afforded the opportunity to undertake a land-use study and are only starting to develop a community plan.⁵³ First Nation traditional land-use and occupancy studies consider land used for trapping, hunting, fishing, berry picking, medicinal plant gathering, timber harvesting, community/recreational areas, and youth training areas, as well as sites (cabins, campsites, old community/gathering sites, burial sites, spiritual/special sites) and travel corridors to be important historical, livelihood, and cultural sites.⁵⁴ The landscape, as well as elders and harvesters, tell the communities' history and stories. Sumner, an elder from Lake St. Martin FN, described the prosperity that existed on Lake St. Martin prior to the Fairford control structure: "The Anishinabek lived in abundance ... There were lots of rabbits. There was lots of food. We picked duck eggs and seagull eggs. We caught a lot of fish in the little streams from the fish migration. There was a lot of fish. All winter they caught fish and now that doesn't happen. They filled the racks with hay ... The fishers had small camps in Dauphin River where they stayed to fish commercially."55

The people lost their subsistence and economic livelihoods from fishing, farming, hunting, gathering, and gardening after the flood. The community misses their traditional foods, including wild game from hunting and trapping, fish, wild berries, and gardening.

Flooding has spoiled the community's natural assets. Elders and middle-aged participants shared how the community was so beautiful before the water-control structure, lined with sandy beaches. Traverse, an elder, described how she and her mother would go to the lake by rowboat and cast a net into the water to catch enough fish for a few meals. Following the superflood, community members call this land a "wasteland," after the wastewater lagoons and wastesite leachate contaminated groundwater and the lake. Most of the land is water-saturated and is described as a swamp that does not support forests or agriculture. An elder related how when a tree is chopped down on the reserve, it is rotten on the inside.

Physical Assets

Equipment and infrastructure were limited prior to the superflood. Before the flood, this community lacked basic infrastructures. Gypsumville, with a population of 100, neighbours LSMFN and has paved roads, a grocery store, a fire hall, post office, community hall, and a medical clinic.⁵⁷ Lake St. Martin FN lacked a hospital, water-treatment plant, piped water and piped sewage, licensed waste-disposal site, community or recreational centre, library, school building, fire station, food store, and laundromat.⁵⁸ The available housing was overcrowded and lacked weeping tiles, which is a necessity for homes built on lands that are flood-prone or swampy. With increasing water levels, the community members described how the water and sewage cisterns popped up like "corks out of the soil."

During the flood, the main gravel road was used as a dike. Houses and the church were underwater and/or accumulated so much mould and chronic dampness that they are unsalvageable. Photos 1 and 2 show the extensive flooding that engulfed houses, despite sand bagging. This left community members without sheltered structures in which to gather as a community.

The evacuation required people to leave most possessions behind and disperse into different hotels in the Interlake, Winnipeg, and other locations. Without a home, many people resided in hotels, without a kitchen to prepare nutritious food. Without a way to make meals, healthy diets were difficult to maintain.⁵⁹ The daily evacuee allowance of twenty-four dollars per adult per diem did not cover the costs of having to eat in restaurants. Families had to make tough choices, deciding each day who would eat and who would not, as the money would not cover three meals a day for all family members. This initial stipend was drastically reduced to four dollars per adult per day, and many people spiralled into debt, taking loans from friends and family. Families were forced to access food banks to supplement their basic needs and often went hungry.



Photo 1. Housing at Lake St. Martin First Nation affected by 2011 flood (photo credit: Myrle Ballard)



Photo 2. Aerial view of impact of 2011 flood on Lake St. Martin FN (photo credit: Ryan Klatt)

Financial Assets

Financial assets are generally low for people living on FN reserves. Few LSMFN community members have bank accounts and fewer still have access to credit, which is important to deal with emergencies and needed for credit checks to move from a hotel to be eligible for temporary housing. 60 As community members were told they would be away for only a few days, they left with no more than an overnight bag or several suitcases. Lacking access to their property, their provisional needs were costly and could not be addressed adequately for lack of credit, low cash reserves, or no money at all.

Each family lost their individual homes and personal property through water damage or mould. These homes had been in the family sometimes for generations. The communal land and home ownership model of Aboriginal and Northern Development Canada prevented band members

from acquiring home ownership, which would normally allow people to accumulate home equity over their lifetimes. Without home ownership, compensation for the houses was not provided, even where significant upgrades and investments in the property were made. For example, a 78-year-old grandmother and lifetime resident on the reserve received a letter from the province's Emergency Measures Organization stating she was ineligible for compensation for the porch and garage she had paid for herself. Other evacuees received similar letters and no compensation.

Participants said that financial compensation should replace their losses. Compensation was not provided to replace homes, nor was there adequate compensation to replace lost income when flooding destroyed livelihood. For example, after destruction of the fisheries, commercial licences belonging to LSMFN fishers were given away in 2011—and the fishers received only 5,000 dollars in compensation. These fishers and their families cannot survive on this meagre compensation.⁶¹

Financial assets at the community level remain low after the flood. Lake St. Martin FN is dependent on the federal government for all revenues, lacking any band-owned business. Thus, any funding for health, education, and social programming as well as for physical infrastructure must come from the federal government. Like many FNs on marginal and remote lands, LSMFN fell into debt, with the result that many years ago it was placed under third-party management, under which accounting firms control all band funding and management. A large share of the funding to FNs goes to third-party accounting firms. This lack of control over financial resources meant that community leaders had no funding to conduct a health-needs assessment of community members. A health-needs assessment remains urgently needed to determine how to resolve health issues.

Institutional and Policy Impacts on the Experiences of Flooding and Relocation

Institutions and policies play a large role in determining the degree of risk that communities are subjected to by floods. Canadian provinces govern and manage water and all other natural resources; however, it is the federal government that is responsible for FN communities. Thus, a jurisdictional divide occurs regarding First Nations and access and management of resources. This jurisdictional division has curtailed any involvement of FNs in provincial water management decision-making processes. Even intergovernmental forums, which are established to discuss national and international environmental concerns—for example, the Canadian Council of Ministers of the Environment—failed to invite First Nations to the table.

The provincial government has the authority and mandate to manage water resources. The Province of Manitoba and their utilities have taken the approach that waterways are a common property resource, without recognizing that FN peoples have special rights to waterways or a right to accommodation.⁶³ Thus, the province controlled the water and developed dams and water-control structures for hydroelectricity in the "common good," with the "bads" inequitably falling on FN communities.⁶⁴ Provincial guidelines for operating dams privilege residential property and agricultural land over FNs communities.⁶⁵ Manitoba's government officials protected provincial land, following provincial guidelines, by channelling the water to FNs, through the Fairford Dam.⁶⁶

First Nation lands are absent from any consideration in provincial water policy documents. Manitoba's operating guidelines of the Portage Diversion, which affects many FNs, do not mention FNs: "The Portage Diversion operating guidelines allow it to be used for three objectives: minimizing the volume of water diverted to Lake Manitoba, protecting the city of Winnipeg or preventing ice from jamming on the Assiniboine River east of Portage la Prairie." Now 85 per cent of the LSMFN reserve has been ruled unsuitable for construction or rebuilding, as a result of the operation of the Portage Diversion and the control structure that place this area at high risk from flooding.

As well as riparian rights, Aboriginal peoples have a right to consultation on development that affects their treaty rights. ⁶⁸ Despite having these rights and the duty of government to consult, LSMFN community members said that they have never been consulted about water levels at any time before or after the Fairford control structure was established. Lake St. Martin FN and other reserves nearby opposed drawing down Lake Manitoba water by way of Lake St. Martin flooding. To be able to channel more water to Lake St. Martin, the province applied the Emergency Measures Act, to override the requirement for an environmental assessment and the duty to consult on the 2011 \$100 million water channel from Lake St. Martin to Buffalo Marsh, Big Buffalo Lake and into Buffalo Creek, although it borders the LSMFN reserve.

These provincial water decisions were not the only areas where the province did not provide meaningful consultation about their residences. The province chose both a temporary and permanent site, against the wishes of LSMFN. The LSMFN community voted to achieve a permanent settlement immediately at site 9 and bypass any temporary settlements to meet its economic, social, and cultural goals. The FN community had negotiated with the landowners of site 9 for a fair price of less than \$2 million, and their sustainable community plan was endorsed by the Regional

Municipality of Grahamdale. However, the FN had no funds of their own to buy their chosen land and, according to the federal and provincial governments, the FN had no ability to choose their own land.

The province unilaterally decided the place for a temporary and final home for members of LSMFN. The provincial government invested \$14 million of the federal government's money for temporary housing in 2011 at an abandoned military base, which was an unacceptable location, according to community members. Many families refused to move to the Manitoba Housing project on the military base, as it lacked piped water, piped sewage, a school, community centre, church, store, etc. In March 2013, only thirteen of the approximate sixty homes at this site were occupied by LSMFN evacuees. These actions by provincial government officials are reminders of the days of the Indian agent, when the federal government selected skoonigansan Anishinaabe word that means "leftover land"-for FN reserves. History has repeated itself with the provincial choices of land for LSMFN.

The province purchased land adjacent to the flooded FN land in 2011 without consulting the FNs, with the intention of resettling the community at that site.⁶⁹ Participants said that the community needs a land base to regroup and rebuild its culture and social bonds. Under the stress of having no land base over such an extended period of time, many community members said that they feel increasingly pressured to accept this flood-prone and remote land with few economic development opportunities. At a workshop in 2013, the community created their LSMFN vision statement: "This Anishinaabe community is strong, sustainable and healing from the trauma of flooding and displacement on land free from flooding through empowering lifelong education, health and recreational services, abundant economic opportunities, rich cultural programming, healthy housing, state-of-the-art infrastructure and reconnecting to their ancestral lands."

To reach this vision, this community needs support to build its assets to overcome the trauma of displacement.

Conclusion

Lake St. Martin FN and other FNs have limited capacity to deal with flood impacts. A sustainable livelihood analysis indicated that community members of LSMFN were negatively affected by long-term flooding, as well as the 2011 superflood, which permanently displaced the entire community. Having low education levels, minimal financial resources, poor infrastructure, and lack of non-FN social networks, the community members had few resources, and these resources were diminished further. Presently, many evacuees are not having their basic needs met. Participants

said that they are suffering. Prior to the flood, LSMFN community members' assets were greatly reduced, compared to those of other Canadians and even other FN people, either on-reserve or off-reserve. Lake St. Martin FN has been impoverished for some time, with annual income less than one-tenth that of other FNs, and the flooding has required that many go to food banks to have enough to eat.

The impacts from flooding and dislocation on LSMFN are profound and extensive. Environmental and developmental displacement has resulted in community members describing themselves as refugees in their homeland. Participants reported that health impacts in their community include premature deaths, increased rates of suicides, miscarriages, mental health issues, and worsening of chronic diseases such as cancer, diabetes, and cardiovascular disease. The impact on community members is also expected to be more profoundly negative and long lasting than those subjected to other community relocations because of their deep attachment to their land and loss of subsistence and resource livelihoods.

Government and societal action is needed to uphold the rights of FNs and provide financial and human resources. In the low-resource settings of FN reserves, promotion of equitable and sustainable economic growth and culturally appropriate high-quality education is considered a necessary first step toward building their adaptive capacity for severe weather events, including floods.

By framing LSMFN and community members' experiences within the context of sustainable livelihoods, the negative role of the state in retaining and rebuilding assets of LSMFN becomes clear. Institutional and policy barriers, stemming from jurisdictional issues, as well as racism, has interfered with needed services and joint decision-making on water management and land for their new community. Policies regarding water management, post-evacuation services, and community redevelopment have not provided a voice for FNs to ensure their needs are met in a respectful and culturally appropriate way. In partnership with FNs, inclusive policies and procedures must be developed to prevent and mitigate future impacts of natural disasters and displacement.

Water institutions offer a way to move towards enhancing water governance and management strategies. However, FNs have to be at the table. Currently, FNs are not involved in decision-making on water management, nor are their interests are being considered when water-level decisions are being developed and implemented. The jurisdictional division of provincial water management has to be remedied so that FNs have a strong voice in the water-management decision-making process. Water management requires new

governance structures with increased participation of FN and other vulnerable peoples in decision-making.

Acknowledgements

The authors thank the community members of Lake St. Martin First Nation for generously sharing their experiences of induced displacement. This research was done through Dr. Thompson's SSHRC grant called Participatory Research on Harvesting Community Economic Development in Northern Manitoba. The authors were also assisted by a Canadian Institute of Health Research Planning Grant, reference no. 117751.

Notes

- 1. KGS Group and AECOM, Analysis of Options for Emergency Reduction of Lake Manitoba and Lake St. Martin Levels Report from KGS Group and AECOM (Winnipeg, MB: Province of Manitoba, 2011).
- Gloria Galloway, "Flooded Out to Save Winnipeg, Lake St. Martin Residents Now Feel Forgotten," Globe and Mail, 24
 November 2012, http://www.theglobeandmail.com/news/
 national/flooded-out-to-save-winnipeg-lake-st-martinresidents-now-feel-forgotten/article5621936/?page=all;
 Province of Manitoba, "Lake St. Martin Observed Water
 Levels in Feet, 2010–2012," http://www.gov.mb.ca/mit/
 floodinfo/floodoutlook/forecast_centre/lakes/lake_
 levels/2010/lake_st_martin_levels_2011–12.pdf.
- 3. KGS Group and AECOM, Analysis of Options.
- Katarzyna Alderman, Lyle Turner, and Shilu Tong, "Floods and Human Health: A Systemic Review," *Environmental International* 47 (2012): 37–47; Mike Ahern, R. Sari Kovats, Paul Wilkinson, Roger Few, and Franziska Matthies, "Global Health Impacts of Floods: Epidemiologic Evidence," *Epidemiologic Reviews* 27 (2005): 36–46.
- 5. John Newton, "An Assessment of Coping with Environmental Hazards in Northern Aboriginal Communities," Canadian Geographer 39 (1995): 112-20; Yoshinori Kamo, Tammy L. Henderson, and Karen A. Roberto, "Displaced Older Adults' Reactions to and Coping with the Aftermath of Hurricane Katrina," Journal of Family Issues 32 (2011): 1346-70; Christina Paxson, Elizabeth Fussell, Jean Thodes, and Mary Waters, "Five Years Later: Recovery from Post-Traumatic Stress and Psychological Distress among Low-Income Mothers Affected by Hurricane Katrina," Social Science & Medicine 74 (2012): 150-7; Sammy Zahran, Samuel D. Brody, Water Gillis Peacock, Arnold Vedlitz, and Himanshu Grover, "Social Vulnerability and the Natural and Built Environment: A Model of Flood Casualties in Texas," Disasters 32 (2008): 537-60; M. Katherine Shear, Katie A. McLaughlin, Angela Ghesquiere, Michael J. Gruber, Nancy A. Simpson, and Ronald C. Kessler, "Complicated Grief Associated with Hurricane Katrina," Depression and Anxiety 28 (2011): 648-57; Shantini Paranjothy,

- John Gallacher, Richard Amlot, G. James Rubin, Lisa Page, Tony Baxter, Jeremy Wight, David Kirrage, Rosemary McNaught, and S. R. Palmer, "Psychosocial Impact of the Summer 2007 Floods in England," *BMC Public Health* 11 (2011): 145; Bob Carroll, Hazel Morbey, Ruth Balogh, and Gonzalo Araoz, "Flooded Homes, Broken Bones, the Meaning of Home, Psychological Processes and Their Impact on Psychological Health in a Disaster," *Health & Place* 15 (2009): 540–7.
- 6. Kamo et al., "Displaced Older Adults' Reactions": Paxson et al., "Five Years Later."
- 7. Sawitri Assanangkornchai, Sa-nguansri Tangboonngam, and J. Guy Edwards, "The Flooding of Hat Yai: Predictors of Adverse Emotional Responses to a Natural Disaster," Stress and Health 20 (2004): 81-9; Anna Bokszcaanin, "PTSD Symptoms in Children and Adolescents 28 Months after a Flood: Age and Gender Differences," Journal of Traumatic Stress 20 (2007): 347-51; Carroll et al., "Flooded Homes, Broken Bones"; Jin-Hoon Heo, Min-Hyuk Kim, Sang-Back Kohn, Samuel Noh, Joon-Ho Park, Joung-Sook Ahn, Ki-Chang Park, Jongho Shin, and Seongho Min, "A Prospective Study on Changes in Health Status Following Flood Disaster," Psychiatry Investigation 5 (2008), 186-92; Peng Huang, Hongzhuan Tan, Aizhong Lui, Shuidong Feng, and Mengshi Chen, "Prediction of Posttraumatic Stress Disorder among Adults in Flood District," BMC Public Health 10 (2010): 207; Fran H. Norris, Arthur D. Murphy, Charlene K. Baker, and Julia L. Perilla, "Postdisaster PTSD over Four Waves of a Panel Study of Mexico's 1999 Flood," Journal of Traumatic Stress 17 (2004): 283-92.
- 8. James D. Ford, Lea Berrang-Ford, Malcolm King, and Chris Furgal, "Vulnerability of Aboriginal Health Systems in Canada to Climate Change," *Global Environmental Change* 20 (2010); 668–80; Katia Lienafa and Thibault Martin, "Beyond the Conflict: The Reconstruction of the O-Pipon-Na-Piwin First Nation Community in Manitoba," *Geography Research Forum* 30 (2010): 50–65.
- 9. Myrle Ballard, Ryan Klatt, and Shirley Thompson, Flooding Hope: The Lake St. Martin First Nations Story, documentary directed and performed by Ryan Klatt (Winnipeg, MB: University of Manitoba: 2012), http://www.youtube.com/watch?v=SQStePF5jeg; Myrle Ballard, "Flooding Sustainable Livelihoods of the Lake St Martin First Nation: The Need to Enhance the Role of Gender and Language in Anishinaabe Knowledge Systems" (PhD diss., University of Manitoba, 2012).
- Province of Manitoba, Manitoba 2011 Flood Review Task Force Report (Winnipeg: Province of Manitoba, 2013), http://www.gov.mb.ca/asset_library/en/2011flood/flood_ review_task_force_report.pdf.
- 11. Zahran et al., "Social Vulnerability," 553.
- 12. Ibid.
- 13. James Waldram, *As Long as the Rivers Run: Hydroelectric Development and Native Communities in Western Canada* (Winnipeg, MB: University of Manitoba Press, 1988).

- 14. Ibid.; Lienafa and Martin, "Beyond the Conflict."
- 15. Southern Chiefs Organization, "Resolution #5: SCO Flood Affected First Nations—Partnerships with Natural Resources Institute, University of Manitoba, to Conduct a Needs Assessment of Flood Affected Communities," passed May 2012, Brokenhead, MB.
- 16. Waldram, As Long as the Rivers Run.
- 17. Ibid.
- 18. Shirley Thompson, A. Gulrukh Kamal, Myrle Ballard, D. Islam, V. Lozeznik, and K. Wong, "Is Community Economic Development Putting Healthy Food on the Table?: Food Sovereignty in Northern Manitoba's Aboriginal Communities," *Journal for Aboriginal Economic Development* 7 (2011): 14–39.
- 19. Ford et al., "Vulnerability of Aboriginal Health Systems"; Galloway, "Flooded Out to Save Winnipeg," 2.
- 20. Martin Cooke, Daniel Beavon, and Mindy McHardy, "Measuring the Well-Being of Aboriginal People: An Application of the United Nations' Human Development Index to Registered Indians in Canada, 1981–2001" (Ottawa: Indian Affairs and Northern Development, 2004).
- 21. Ahern et al., "Global Health Impacts of Floods"; Huang et al., "Prediction of Posttraumatic Stress Disorder"; Waldram, *As Long as the Rivers Run*, 14.
- 22. Waldram, As Long as the Rivers Run.
- 23. Ibid.
- 24. Ballard, Flooding Sustainable Livelihoods, 7.
- 25. Ibid.
- 26. Ibid.
- 27. Ibid.
- 28. Ibid.
- 29. Province of Manitoba, *Manitoba 2011 Flood Review Task Force Report.*
- 30. Ballard et al., Flooding Hope.
- 31. Ballard, Flooding Sustainable Livelihoods.
- 32. Riva Sabbak, Statistical Information Service, email communication, 13 March 2013.
- 33. Statistics Canada, "2006 Community Profiles from the 2006 Census" (Ottawa: Government of Canada, 2006).
- 34. Ibid.
- 35. Southern Chiefs Organization, "Resolution #5," 16.
- 36. Ballard et al., Flooding Hope.
- 37. Ibid.
- 38. Ibid.
- 39. Ibid.
- 40. Ibid.
- 41. Huang et al., "Prediction of Posttraumatic Stress Disorder," 24.
- 42. Michael J. O'Sullivan and Paul J. Handal, "Medical and Psychological Effects of the Threat of Compulsory Relocation for an American Indian Tribe," The entity from which ERIC acquires the content, including journal, organization, and conference names, or by means of online submission from the author. American Indian and Alaska Native Mental Health Research 2 (1988): 3–19.

- 43. Ibid.
- 44. Ibid.
- 45. Ballard, Flooding Sustainable Livelihoods.
- 46. Ibid.
- 47. Ballard et al., Flooding Hope.
- 48. Ibid.
- 49. Ibid.
- 50. Galloway, "Flooded Out to Save Winnipeg."
- 51. Ibid.
- 52. David McKnight, quoted by Jonathan Kingsley, Mardie Townsend, Claire Henderson-Wilson, and Bruce Bolam, "Developing an Exploratory Framework Linking Australian Aboriginal Peoples' Connection to Country and Concepts of Wellbeing," *International Journal for Environmental Research and Public Health* 10 (2013): 678–98.
- 53. Ballard, Flooding Sustainable Livelihoods.
- 54. Ibid.
- 55. Ibid., 7.
- 56. Ibid.
- 57. Ibid.
- 58. Ibid.
- 59. Ballard et al., Flooding Hope.
- 60. Ballard, Flooding Sustainable Livelihoods.
- 61. Ibid.
- 62. Ibid.
- 63. Katherine Cave, Exploring the Influences of Institutions on Water Governance and Management: A First Nation Case Study (PhD diss., University of Waterloo, 2012, http://uwspace.uwaterloo.ca/handle/10012/6492.
- 64. Waldram, As Long as the Rivers Run.
- 65. Ibid.
- 66. Province of Manitoba, *Manitoba 2011 Flood Review Task Force Report*.
- 67. Ibid., 7.
- 68. Ken Coates, *The Indian Act and the Future of Aboriginal Governance in Canada* (Ottawa: National Centre for First Nation Governance, 2008), fngovernance.org/ncfng_research/coates.pdf.
- 69. Canadian Press, "New Reserve Site for 2011 Flood No Better Than Old One: Academics," *Globe and Mail*, 3 July 2013, http://www.theglobeandmail.com/news/national/new-reserve-site-for-2011-flood-evacuees-no-better-than-old-one-academics/article12949719/.

Shirley Thompson is an associate professor at the Natural Resources Institute, University of Manitoba. The author may be contacted at S.Thompson@umanitoba.ca.

Myrle Ballard is a research associate and PhD graduate from the Natural Resources Institute, University of Manitoba.

Donna Martin is an assistant professor at the Faculty of Nursing, University of Manitoba.