

Profile

‘Changing Climate, Changing Health, Changing Stories’ Profile: Using an EcoHealth Approach to Explore Impacts of Climate Change on Inuit Health

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Abstract: Global climate change and its impact on public health exemplify the challenge of managing complexity and uncertainty in health research. The Canadian North is currently experiencing dramatic shifts in climate, resulting in environmental changes which impact Inuit livelihoods, cultural practices, and health. For researchers investigating potential climate change impacts on Inuit health, it has become clear that comprehensive and meaningful research outcomes depend on taking a systemic and transdisciplinary approach that engages local citizens in project design, data collection, and analysis. While it is increasingly recognised that using approaches that embrace complexity is a necessity in public health, mobilizing such approaches from theory into practice can be challenging. In 2009, the Rigolet Inuit Community Government in Rigolet, Nunatsiavut, Canada partnered with a transdisciplinary team of researchers, health practitioners, and community storytelling facilitators to create the *Changing Climate, Changing Health, Changing Stories* project, aimed at developing a multi-media participatory, community-run methodological strategy to gather locally appropriate and meaningful data to explore climate–health relationships. The goal of this profile paper is to describe how an EcoHealth approach guided by principles of transdisciplinarity, community participation, and social equity was used to plan and implement this climate–health research project. An overview of the project, including project development, research methods, project outcomes to date, and challenges encountered, is presented. Though introduced in this one case study, the processes, methods, and lessons learned are broadly applicable to researchers and communities interested in implementing EcoHealth approaches in community-based research.

Keywords: EcoHealth, Indigenous, climate change, health, community-based research, digital storytelling

INTRODUCTION

Global climate change and its subsequent impacts on public health exemplify the challenge of managing complexity and

uncertainty in health research. Identified as the biggest health threat of the twenty-first century (Costello et al. 2009), impacts of climate change on human health include direct impacts on morbidity and mortality due to increased temperature and extreme events, indirect effects via waterborne, foodborne, and vectorborne diseases, and impacts on mental health and wellbeing due to the

displacement of people and loss of livelihood (McMichael et al. 2008; Costello et al. 2009). In particular, it is expected that these health-related climate change impacts will be experienced by Indigenous populations and peoples who remain directly reliant upon local ecosystems for livelihoods, culture, and well-being. For example, the Canadian North is currently experiencing rapid changes in climate (Nickels et al. 2005; Christensen et al. 2007), and even subtle resultant environmental changes can dramatically impact the livelihoods, cultural practices, and health of Inuit who live there (Furgal and Seguin 2006).

Researchers investigating climate change impacts on health recognise that comprehensive and meaningful research outcomes depend on taking a more systemic and transdisciplinary approach (Wilcox and Kueffer 2008). Furthermore, engaging local citizens in project design, data collection, and analysis (ITK 2006) is required to more broadly comprehend the complexities and interrelationships between climate change and health, and to inform adaptation policy (McMichael and Wilcox 2009).

While the necessity of using approaches that embrace the complexity of public health issues is becoming increasingly recognised, so also is the need to move beyond descriptions and justifications of the theories and provide actual examples in practice (Parkes et al. 2005; Waltner-Toews 2009; Charron 2012). EcoHealth approaches are 'systemic, participatory approaches to understanding and promoting human health and wellbeing in the context of complex social and ecological interactions' (Table 1) (Waltner-Toews 2009). There are many definitions of EcoHealth that have been embraced and successfully implemented in research and practice. Our working definition of EcoHealth stems from one philosophical understanding of EcoHealth, which was originally promoted by the International Development Research Centre, Canada (IDRC) and is widely cited in research and practice (Charron 2012). Within this working definition, there are several different approaches to EcoHealth research because the field is interconnected to and developing alongside many others, including conservation medicine, ecosystem health, OneHealth, global health, systems approaches, and international development research (Schwabe 1964; Rapport et al. 1979; Sieswerda et al. 2001; Aguirre et al. 2002; Zinsstag et al. 2005, 2011; Soskolne et al. 2007; Stephen and Daibes 2010; Charron 2012). The flexible and adaptive research framework offered by EcoHealth approaches contribute to understanding and managing the complexities and uncertainties that can exist in public

health. Therefore, this paper illustrates and highlights the effectiveness of using EcoHealth approaches guided by the principles of transdisciplinarity, community participation, and social equity to plan and implement a research project exploring broad-ranging and complex relationships between climate change and health. Outlined here is the *Changing Climate, Changing Health, Changing Stories* project in Rigolet, Nunatsiavut, Canada, which was the first Northern community-directed project to utilise digital storytelling as a participatory method for gathering data describing local impacts of climate change on health. The goal of this profile paper is to outline the project's development, research methods, outcomes to date, and challenges encountered. Though presented as a single case study, the processes, methods, and lessons learned are broadly applicable to researchers and communities interested in implementing EcoHealth approaches in community-based research globally.

CHANGING CLIMATE, CHANGING HEALTH, CHANGING STORIES PROJECT

Community Profile: Rigolet, Nunatsiavut, Canada

Located on the North east coast of Labrador, Nunatsiavut is one of Canada's four Inuit regions. Nunatsiavut ('Our Beautiful Land') was ratified in 2005 as an Inuit Land Claim Settlement area and is self-governed by the Nunatsiavut Government, working closely with the province of Newfoundland and Labrador. The coastal community of Rigolet (54°N, 58°W) is the southern-most Inuit community in the world (Fig. 1) with a population of approximately 269 people, with 95% of individuals identifying as Aboriginal, and children comprising 19% of the total inhabitants (Statistics Canada 2006). Compared to the Canadian average, there are several disparities in Inuit health outcomes (Table 2). The Rigolet dialect of Inuttitit is only maintained by 4 people and is listed as a UNESCO (2010) endangered language. Rigolet is remote; there are no roads going into or out of the community. Residents access the land surrounding the community through seasonal modes of transportation, such as snowmobiling over snow and ice in the winter, and boating in the summer. Rigolet is reached by a seasonal ferry service or a year-round commercial airline services and since all modes of transportation are highly weather dependent, there are regular disruptions to travel. Rigolet Inuit rely on traditional

Table 1. A List of Working Definitions Used by the *Changing Climate, Changing Health, Changing Stories* Team in Rigolet, Nunatsiavut, Canada

Term	Working definition	References
EcoHealth approaches	<p>Research and development approaches guided by six principles: (1) systems thinking, (2) transdisciplinary research, (3) participation, (4) sustainability, (5) gender and social equity, and (6) knowledge to action</p>	<p>Forget and Lebel (2001), Lebel (2003), Waltner-Toews and Kay (2005), Waltner-Toews (2009), Webb et al. (2010), and Charron (2012)</p>
Complexity	<p>Concepts, ideas, events, or processes that:</p> <ul style="list-style-type: none"> • Are comprised of a large number of interacting elements • Are comprised of elements that individually do not address the problem/issue • Emerge from a number of controlling processes or systems, not from a random association between a large number of interrelated elements • Are comprised of systems that are self-organised <p>Studying complex issues require:</p> <ul style="list-style-type: none"> • Sets of individual research questions, which together address a problem/issue • Embracing uncertainty • Understanding the issue/problem from a variety of operational and philosophical perspectives • Considering several elements to understand the topic, but not too many to enhance understanding and communication. According to Einstein, it should be “as simple as possible, but no simpler” 	<p>Albrecht et al. (1998), Holling (2001), Northridge et al. (2003), Wilcox and Colwell (2005), and Charron (2012)</p>
Transdisciplinary research	<p>Research that transcends disciplinary boundaries, combines multiple perspectives and disciplines working together as a cohesive unit, and integrates many tools and methods to generate new frameworks, concepts, ideas, and information.</p>	<p>Albrecht et al. (1998), Parkes et al. (2005), Kessel and Rosenfield (2008), Klein (2008), Mabry et al. (2008), Pohl and Hirsch Hadorn (2008), and Charron (2012)</p>
Participation in research	<p>Stakeholders—including, but not limited to government, bi-laterals, multilaterals, non-governmental organizations, community-based organizations, and community members—actively participating in all phases of research design, implementation, interpretation, evaluation, and action, which enhances the research process, resulting action, and the sustainability of the project. Participation includes Participatory Action Research</p>	<p>Cornwall, (2003), Lebel (2003), and Charron (2012)</p>
Social equity in research	<p>Research that considers and addresses unfair or unequal differences between groups (e.g. social, economic, class, age, or gender groups) in terms of gender (e.g. roles and responsibilities), power (decision making, access to resources), and trade-offs (who benefits)</p>	<p>Cornwall, (2003), Northridge et al. (2003), Starfield (2006), WHO (2007), CSDH (2008), and Charron (2012)</p>
Health literacy	<p>The cognitive and social skills that allow individuals to access, understand, and use information to maintain good health. Health literacy encompasses basic/functional, communicative/interactive, and critical health literacy</p>	<p>Nutbeam (1998a, b, 2000)</p>

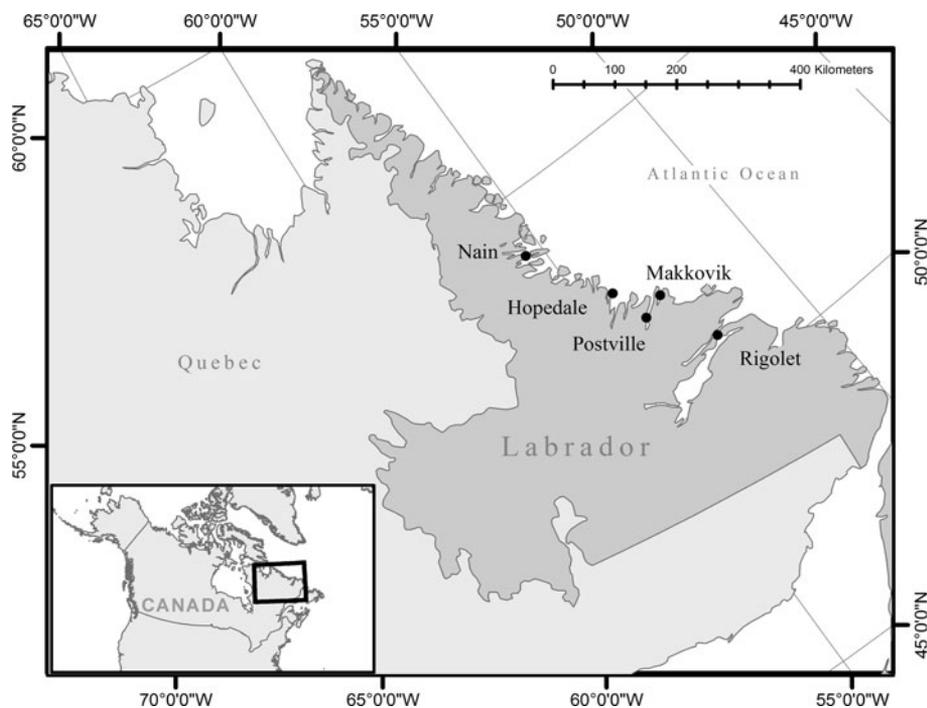


Figure 1. A map of Nunatsiavut Inuit communities in Labrador, Canada.

Table 2. Health Statistics for Those Living in the Four Canadian Inuit Regions Compared to the National Average from 1999 to 2003 (ITK 2010)

Health statistic	Canadian average	Inuit regions
Proportion of low birth weight* (%)	5.6	7.0
Life expectancy at birth [†] (years)	79.5	67.3
Infant mortality per 1,000 births [‡]	5.3	14.8
Perinatal mortality per 1,000 births**	6.3	10.8
Age-standardised mortality per 100,000 ^{††}	197.0	537.1
Respiratory disease age-standardised mortality per 100,000 ^{‡‡}	11.1	54.1
Suicide and self-inflicted injury age-standardised mortality per 100,000 ^{***}	9.7	107.3

* Proportion of live births (birth weight known) less than 2.5 kg.

** Annual number of stillbirths and early neonatal deaths (deaths in the first week of life) per 1,000 total births (includes stillbirths). Stillbirths are defined as gestational age of 28 or more weeks.

*** Age-standardised mortality due to suicide and self-inflicted injury per 100,000 population.

[†] The number of years a person is expected to live from the day he/she is born based on mortality statistics at the time.

^{††} Age-standardised mortality from all causes per 100,000 population.

[‡] Number of infants who die in the first year of life, expressed as deaths per 1,000 live births.

^{‡‡} Age-standardised mortality due to respiratory disease per 100,000 population.

hunting and gathering practices to maintain a subsistence lifestyle, with community members accessing the land to hunt, trap, and commonly harvest caribou, ducks, geese, partridge, rabbit, fish, seal, and berries (Fig. 2).

Climate change and its effects are a growing concern in Nunatsiavut, with reports from residents and scientists alike indicating that recent years have been characterised by

higher atmospheric temperatures, increased intensity and frequency of storms, delayed ice formation and earlier break-up, and changes in rainfall patterns (Furgal and Seguin 2006; Alley et al. 2007; Cunsolo Willox et al. 2011; Harper et al. 2011; Stroeve et al. 2011). In an exploratory survey in 2009, Rigolet residents reported changes in temperature, precipitation, ice, wildlife and vegetation,

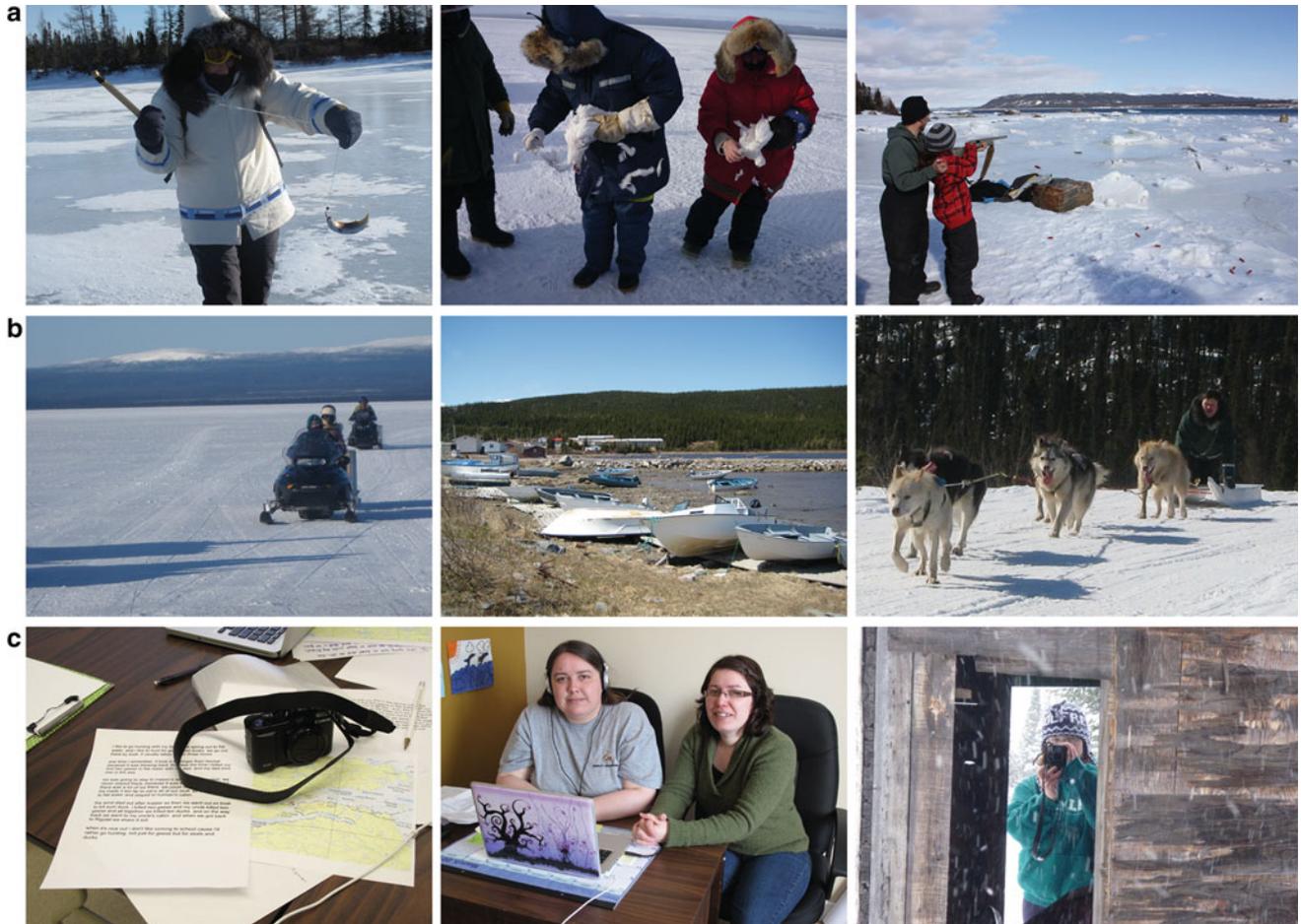


Figure 2. Photographs of **a** traditional land activities, **b** seasonal modes of transportation, and **c** digital storytelling workshops in Rigolet, Nunatsiavut, Canada (photographs provided by the My Word team).

water systems, and overall weather predictability. The majority of community members reported that these climatic and environmental changes were of concern (66 of 75 [88%] respondents), and resulted in changes to lifestyle (46 of 75 [61%] respondents) and health (57 of 75 [76%] respondents).

Project Overview

In January 2009, the Rigolet Inuit Community Government partnered with a team of researchers, public health practitioners, and community storytelling facilitators to examine if any climate change impacts on local health had been observed. Specifically, the *Changing Climate, Changing Health, Changing Stories* project aimed to develop and use participatory, community-run methodological strategies to explore climate–health relationships. Funding was provided directly to the community by Health Canada’s First

Nations and Inuit Health Branch, with complementary funding from the Nasivvik Centre for Inuit Health and Changing Environments, and the Nunatsiavut Government.

Research Approach

While EcoHealth approaches are not suitable for all research projects, the project team identified an EcoHealth framework as the most appropriate approach for this research project for several reasons: an understanding that climate change impacts on Inuit health are complex, uncertain, and long-term, with action required to prepare for and adapt to future impacts of climate change; a requirement that the data collection techniques and the type of data gathered be meaningful, useful, and beneficial to both researchers and community members; and a dedication to using a research framework that incorporated the

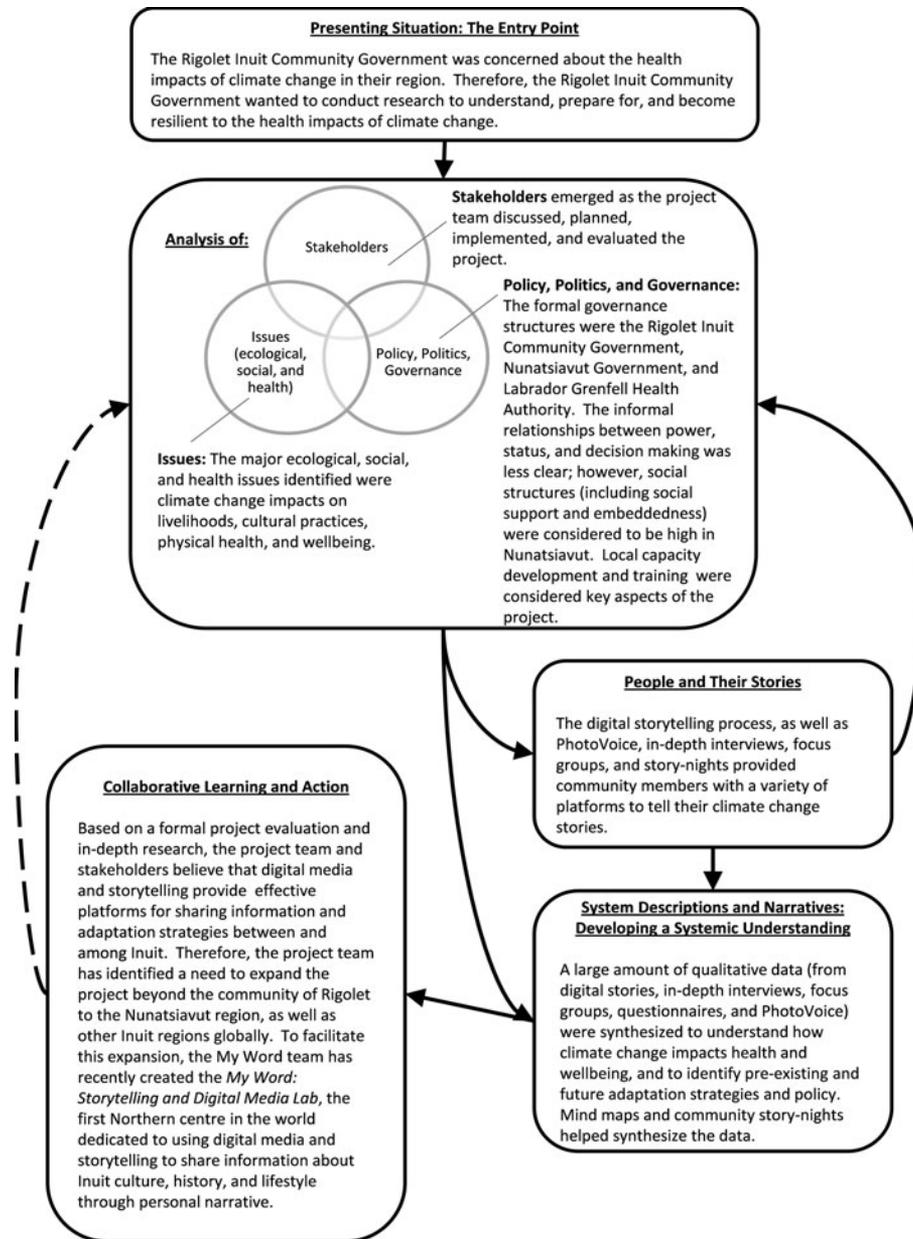


Figure 3. An overview of the Ecosystem Sustainability and Health (AMESH) framework that guided the research process (adapted from Waltner-Toews and Kay 2005).

understanding that the Inuit view of health is holistic and inextricably tied to the land (Furgal et al. 2002). These considerations fit well with the underlying principles of transdisciplinarity, community participation, and social equity of the broader EcoHealth approach, and as such this was considered an ideal conceptual framework to guide the research process (Fig. 3) (Forget and Lebel 2001; Waltner-Toews 2001; Waltner-Toews and Kay 2005; Webb et al. 2010). It is important to note that EcoHealth approaches did not provide prescriptive actions for the team to follow;

rather, it provided a research paradigm within which to explore the issue. Collaboration between researchers, community members, and decision makers (Table 3) allowed the integration of knowledge and synthesised new theories, concepts, and methods that would not have otherwise emerged. Community participation in the project ensured that the research results could inform and create comprehensive, culturally appropriate climate-related health policies and programs that reflect Indigenous perspectives and values. A research approach that addressed

Table 3. A List of Stakeholders and Their Role in the *Changing Climate, Changing Health, Changing Stories Project*, in Rigolet, Nunatsiavut, Labrador, Canada

Stakeholders	Inform project proposal development		Inform research design	Project management	Research management	Data collection	Data analysis	Provide training	Community results sharing	Conference presentations	Peer reviewed publications	Research and project management	
	development	design										advice	decisions
Project Management Team*	●	●	●	●	●	●	●	▼	▼	●	●	●	●
Rigolet Inuit Community Government	●	●	●	▼	▼	▼	▼	▼	●	●	●	●	▼
My Word Storytelling Team**	▼	▼	▼	▼	●	▼	▼	▼	●	●	●	●	●
Digital Storytelling Participants	▼	▼	▼	▼	●	▼	▼	▼	●	▼	▼	●	▼
Community Members†	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Researchers††	▼	●	▼	▼	●	●	●	▼	▼	●	●	▼	▼
Nunatsiavut Government‡	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Labrador Grenfell Health Authority‡‡	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Federal Stakeholders‡‡‡	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	●

▼ Indicates that the stakeholder provided important support in this role
 ● Indicates that the stakeholder provided substantial support in this role
 * Rigolet AngajukKâk, Rigolet Town Manager, and graduate student and faculty researchers
 ** Community researchers and storytelling facilitators † e.g. students, youth, Elders, adults, hunters, trappers, teachers
 † Community researchers, graduate students, and undergraduate students, representing epidemiology, social sciences, public health, environmental sciences, development studies, biology
 ‡ Regional Government: Department of Lands and Natural Resources; Department of Health and Social Development; Department of Culture, Recreation and Tourism
 ‡‡ Provincial Government: Environmental Health Director, Medical Officer of Health, Aboriginal Health Research Director
 ‡‡‡ Public Health Agency of Canada and First Nations Inuit Health Branch, Health Canada

social equity and included capacity development was a project priority, particularly considering historical instances of power imbalances, marginalisation, and unethical practices that have characterised some past research in Inuit communities. As a result, ongoing community member involvement—acting as both researchers and participants—was essential in all phases of this research including project development, grant writing, data collection, analysis, and interpretation, and results sharing. As the project has continued to evolve over several years, there has been a strengthening within the community as they developed their own approach to the research process, which not only recognises and builds upon the complementary nature of this project's chosen EcoHealth approach and the Inuit holistic approach to health and wellbeing, but also is reflective of and sensitive to the often-challenging and adverse history of the Canadian Inuit.

Project Activities and Data Collection

Digital Storytelling

Oral traditions and cultural stories are vital to research exploring past changes and experiences, as well as how these changes were perceived (Smith 1999; Chamberlin 2003; Denzin and Lincoln 2008). Inuit culture, language, and stories are based on an oral tradition. These stories are place-based and contain local knowledge and history—information that cannot be gathered through purely quantitative measurement. Therefore, the project team identified the use of digital storytelling as an innovative approach to data collection, particularly within an Indigenous context (Cunsolo Willox et al. 2012, forthcoming).

Digital storytelling is the process of illustrating personal narratives and experiences through various multimedia techniques (Lambert 2006; Gubrium 2009). The Rigolet community storytelling facilitators tailored a digital storytelling process to meet the local needs and culture of the community. Participants created their own digital stories in week-long workshops facilitated by three locally trained community members. Workshops provided participants with the opportunity to discuss observed climatic changes, as well as perceived impacts of these changes on physical, mental, and emotional health. Participants were also trained in photography skills, digital photo editing, and video-editing. Personal stories were written and/or recited, and then recorded, before being illustrated with

video clips, photographs, art work, text, audio, and music, to create a 3–5 min first-person narrative video.

To date, 37 stories have been created in nine workshops, with five of those workshops taking place in the community, one in the school for grades 7–9, and two in cabins on the land. Six additional stories were created by Elder and youth pairs who participated in the project's Elder and Youth UKausiga ('My Word') Camp, which brought together Elders and youth from all Nunatsiavut communities. The digital format allowed these stories to be shared via the internet (YouTubeTM, community websites, and listservs), social media (Facebook[©] and blogs), community DVDs, academic conferences, and community story nights.

When using digital storytelling as a data collection method, the digital stories *are* the data. Thus, the data emerge directly from the participants, with minimal interference from the researchers. In other qualitative methods, the researcher commonly identifies which questions to ask and frames the direction of the interview. Where digital storytelling is the data collection method, however, it is the participants, not the researchers, who have the power to decide what information is important, relevant, and appropriate for the research topic. Thus, this process provided unique and culturally valid data that were meaningful to participants and representative of their lived experiences (Cunsolo Willox et al. 2012, forthcoming). Analysis of digital storytelling data is similar to other forms of qualitative data analysis: the media are analysed and coded for pre-determined and emergent themes and trends, as well as for place-based and cultural symbols and meanings. The suite of digital stories helped explain complex climate–health relationships from multiple perspectives, showing how various people view and make meaning of different events. The digital storytelling process exemplified the value of the participatory aspect of EcoHealth methodology in collecting complex data, as well as a reversal of the traditional power structure between researcher and participant.

Other Research Methods

While digital storytelling was the central data collection method, other complementary qualitative research methods were also used. In-depth interviews were conducted from November 2009 to October 2010 ($n = 87$) in a conversational format (Kvale 1996) to promote an open dialogue and encourage participants to explore attitudes,

feelings, and behaviours associated with climate change impacts on land, wildlife, vegetation, and human health. In conjunction with the digital storytelling workshops, a series of seven focus groups were facilitated by Rigolet community members using concept mapping, photos, and digital stories to stimulate and enhance discussions. In November 2009, a population survey was conducted to gain a broader understanding of community perceptions and observations of climate change ($n = 75$). A second survey was conducted in August and October 2010, which gathered data on the bio-psycho-social costs of ecosystem disturbance caused by climate change ($n = 112$). Three PhotoVoice workshops were held, where participants received training in photographic skills and took pictures to document health-related climate change impacts. Participants shared these photos, stories, themes, and experiences in a group setting, and then created narratives to accompany their photographs, representing their experiences, perceptions, and observations of the relationship between climate change and health.

The wide spectrum of activities provided community members with multiple opportunities to engage and provide direction in the research project and resulted in high participation and response rates. For instance, there have been 10 story-nights with high attendance, two community surveys and 87 in-depth interviews with high response rates (75, 96, and 100% response rates, respectively), and active social media sites. This participation allowed a more thorough examination of complex climate–health relationships from a variety of perspectives, which fit well within our EcoHealth approach.

Project Outcomes

Research Outcomes

The digital storytelling data collected and the stories created were unique and emergent from local norms and culture, and contained information and ideas that could not have been captured through interviews alone. Research results include exploration of climatic and environmental change observations, the impacts of climate change on mental, emotional, and place-based health, youth and elder observations and perceptions of climate change, the socio-economic impacts of climate change, and the potentials and opportunities of using digital storytelling as a research method. Research results were continually shared, discussed, and validated with community members to ensure

accuracy and authenticity of results via regular community story nights, presentations at large community events, DVDs delivered to each household, a Facebook® group, posters, and household flyers. To share research results with the academic community, researchers and community members are working collaboratively on articles and have a number of scholarly manuscripts at various stages in the peer-review process. As well, to-date, research results have been shared through 34 presentations at academic conferences by community leaders, university students, and health professionals. This active collaboration was fundamental in our EcoHealth approach; rather than being passive sources of data, community members helped generate new knowledge (Forget and Lebel 2001) and have become leaders in climate–health work in the Nunatsiavut region.

Training

Six community team members took part in training sessions provided by the University of Guelph, the Nunatsiavut Government, and a storytelling organisation (Table 4). Seven university students (graduate and undergraduate) gained a broad experience in research methodologies, analytic approaches, and project management. Community members and student researchers gained experience presenting research results at academic conferences and preparing manuscripts for peer-review publication. This type of training, along with capacity development, is often recognised as essential in climate change research (Furgal and Seguin 2006; McMichael et al. 2008; Ford et al. 2010) and enhances meaningful community participation in EcoHealth research.

Health Promotion

The digital stories were also viewed as culturally relevant public health campaigns. The stories and discussion that these media generated promoted health and health literacy in two ways. First, some organisations, such as the Nunatsiavut Government, have expressed interest in utilizing stories with specific health messages in public health campaigns. Through this approach, the digital storytelling process and resulting media could improve people's access to health information and their capacity to use it effectively, thereby improving health literacy (Nutbeam 1998a, b, 2000). Therefore, digital storytelling could be used as a tool for promoting social change and awareness, and modifying

Table 4. Training Provided to Develop and Enhance Skills for Community Storytelling Facilitators in Rigolet, Nunatsiavut, Canada

Trainers	Skills developed
Professional novelist and journalist	Professional writing skills: grant writing; letter and email writing; writing for the media; and media relations
University learning specialist	Presentation skills: oral presentations; poster presentation; and PowerPoint©
Professional media arts technician	Digital video and photo editing skills
Professional photographer	Digital photography skills: composition; lighting; and digital camera options
Professional documentary film director	Mentorship in documentary film
University researchers	Research skills: research design; data collection; and writing
Not-for-profit storytelling organization	Facilitation and digital storytelling techniques were introduced
Nunatsiavut Government mental health specialists	Listening and responding to difficult stories; client referral; self-care; and ethics and responsibilities related to facilitating the storytelling process

behaviour through information dissemination (Lambert 2006). Second, digital storytelling is an effective strategy for enhancing community health through culture preservation and promotion. The digital stories created, the discussions the stories generated, and the gathering of individuals to speak about important issues, were reported by participants as a way of preserving and promoting their language, cultures, and ways of life (Cunsolo Willox et al. 2012, forthcoming). Therefore, the research process itself helped promote community health; the research methods and results within our EcoHealth approach became interventions themselves.

LOOKING FORWARD AND ‘SCALING-UP’

In general, the scaling-up of EcoHealth projects tends to be challenging because of the extent of community involvement and locally specific context of EcoHealth projects (Charron 2012). To meet this challenge, the project advisory team was comprised of local, regional, provincial, and federal members to ensure that all research results and successful programs could be incorporated into wider policies and programs. This partnership has enabled the community of Rigolet to recently launch the ‘*My Word: Storytelling and Digital Media Lab*’ (www.rigolet.ca), the first Northern centre in the world dedicated to using digital media and storytelling to share information about Inuit culture, history, and lifestyle through personal narrative. Rigolet now hosts a fully equipped media lab and can welcome individuals from other Northern communities to use digital media to create stories and archive knowledge and experiences. The ‘My Word’ team also has a travelling

media lab, which will allow trained community facilitators to travel to other communities with all needed equipment to facilitate workshops and provide training and research services. This media lab will encourage the sharing of oral stories within and between communities across the North, thereby facilitating the strengthening of networks across this vast and remote area.

LESSONS LEARNED: ECOHEALTH THEORY AND PRACTICE

Many of the challenges encountered were similar to those faced by other EcoHealth researchers, including how to effectively move EcoHealth theory into action, how to access funding and efficiently utilise limited resources to investigate broad and complex problems, and how to maintain clarity of vision and purpose with diverse project partners. We believe that four elements contributed to the success of this project, which was measured by a sense of pride in the community, an extensive qualitative climate–health database, the emergence of local project champions, far-reaching support, exciting momentum, and long-term commitments. First, a common fundamental belief in the project’s purpose, approach, and future potential was shared between researchers, practitioners, and community members. Second, instead of focusing on overcoming challenges and barriers, the project team focused on and built the project around strengths and opportunities (Brown 2007). This focus allowed the project team to avoid an interventionist approach and escape the pitfall of enumerating problems and trying to ‘fix’ people and communities and contributed to the success of the project

(Sullivan et al. 2001). Third, listening was integral to project success. Considering the varied backgrounds of the project team, active listening allowed the team to relate to and gain an understanding of one another's thoughts, priorities, beliefs, and vision. Finally, while resources and funds from outside the community were required for this project, the unique funding structure allowed community members to control the project finances, including administrative oversight and accountability. This research funding model is exemplary for EcoHealth research. Funding agencies are encouraged to enable and promote research that genuinely engages communities by providing financial support directly to communities, thereby showing respect and recognition of their abilities in addressing their local priorities and research gaps.

CONCLUSIONS

Approaches to research that embrace complexity, such as EcoHealth, are gaining momentum in the research community; however, mobilizing these approaches can be challenging. The *Changing Climate, Changing Health, Changing Stories* project can be used as an example of Indigenous community-based research that mobilised EcoHealth principles of transdisciplinarity, community participation, and social equity to examine the impacts of climate change on Inuit health. The community worked as part of a transdisciplinary team to develop data collection techniques to gather data that were mutually meaningful, useful, and beneficial to researchers and community members. These methods resulted in media that also served as educational pieces and learning opportunities for other Inuit communities, government representatives, and policy makers. The EcoHealth approach built trust and meaningful relationships between stakeholders, promoted positive community perspectives of research, respected community expertise, ensured cultural appropriateness, provided tangible community benefits (Sullivan et al. 2001), and strengthened partnerships, networks, and institutions (Forget and Lebel 2001). We believe that this project has left lasting individual and collective capacity development, resources, knowledge, skills, and infrastructure in the community of Rigolet, and will change the way that future research will be conducted in the community and in the region. This project stands as a successful example of meaningful engagement with an Indigenous community. The lessons learned, experiences shared, and approaches used can extend globally to inform other EcoHealth projects.

ACKNOWLEDGEMENTS

We would like to thank the community of Rigolet for their ongoing strong support for the project and for sharing their knowledge and stories. We would also like to thank Michelle Kinney, John Lampe, Gail Turner, Gwen Watts, and Michele Wood from the Nunatsiavut Government for their continued support. Thanks also to Carol Brice-Bennett and Gwen Elliott from Labrador Grenfell Health for their support in this project. Particular thanks to the Rigolet *My Word* team members: Marilyn Baikie, Sarah Blake, Libby Dean, Candice Elson, Liane Langstaff, Kathryn Marsilio, Joanna McDonald, Dan Michelin, Carlene Palliser, Joeline Pardy, Tanya Pottle, Ashley Shiwak, Inez Shiwak, Charlotte Wolfrey, Dina Wolfrey, and Andra Zommers. Thanks to Marilyn Baikie and Charlotte Wolfrey for editing the manuscript and to Joanna McDonald and Adam Bonnycastle for assistance in creating Fig. 1. Financial support was provided by the Climate Change and Health Adaptation in Northern First Nations and Inuit Communities program through Health Canada's First Nations and Inuit Health Branch, the Nasivvik Centre for Inuit Health and Changing Environments, and the Nunatsiavut Department of Health and Social Development as well as the Canadian Institutes for Health Research (Vanier Canada Graduate Scholarship to Sherilee Harper) and the Social Sciences and Humanities Research Council (J-Armond Bombardier Canada Graduate Scholarship to Ashlee Cunsolo Willox).

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