

When the Weather is Uggianaqtuq: Inuit Observations of Environmental Change

Summary

Uggianaqtuq (pronounced OOG-gi-a-nak-took) is a North Baffin Inuktitut word that means to behave unexpectedly, or in an unfamiliar way. From the perspective of many hunters and elders in the Arctic, the weather has been uggianaqtuq in recent years. In this interactive, multi-media CD-ROM, Inuit from two communities in Nunavut, Canada (Baker Lake and Clyde River), share their observations and perspectives on recent environmental changes. The CD-ROM is a pilot project that uses media technology, as opposed to written reports, as an alternative way to document and communicate Inuit observations and knowledge. It is a research product/report for the communities involved, as well as others interested in how Inuit are experiencing environmental change. Maps, text, photos, video and music are integrated to help illustrate the changes Inuit have observed in their environment and the impacts on their livelihoods. The integrated components allow the user to

- search by topic or the person being interviewed
- view interview clips in Inuktitut with English interpretations
- view and print maps about environmental changes drawn by participants
- view short videos with scenes from the communities
- view summaries and photos of environmental changes and their impacts to the landscape and community life.

The research project was funded by the National Science Foundation (NSF), grant number OPP-9906740, a doctoral fellowship from the Social Sciences and Humanities Research Council of Canada (SSHRC), and an award from the Innovative Research Program at the Cooperative Institute for Research in Environmental Sciences (CIRES), University of Colorado at Boulder (CU).

Citing These Data:

When citing specific information from the CD-ROM, please use the name of the person being interviewed, as demonstrated below.

Iyago, L. 2003. From *When the Weather is Uggianaqtuq: Inuit Observations of Environmental Change*. Copyright, Fox, S. Boulder, CO: University of Colorado Geography Department Cartography Lab. Distributed by National Snow and Ice Data Center. CD-ROM.

When citing the entire CD-ROM, please use the reference below.

Fox, S. 2003. *When the Weather is Uggianaqtuq: Inuit Observations of Environmental Change*. Boulder, CO: University of Colorado Geography Department Cartography Lab. Distributed by National Snow and Ice Data Center. CD-ROM.

Table of Contents

- [1. Contacts and Acknowledgments](#)
- [2. Detailed Data Description](#)
- [3. Data Access and Tools](#)
- [4. Data Acquisition and Processing](#)
- [5. References and Related Publications](#)
- [6. Document Information](#)

1. Contacts and Acknowledgments:

Investigator(s) Name and Title

Dr. Roger G. Barry
National Snow and Ice Data Center
University of Colorado at Boulder
Boulder, CO 80309-0449
USA

Dr. Shari Fox Gearheard
MCZL, Room 504
Harvard University
26 Oxford Street
Cambridge, MA 02138
USA

Acknowledgements:

The researchers are extremely grateful to the communities of Baker Lake (Qamani'tuaq) and Clyde River (Kangiktugaapik) in Nunavut, Canada, for their creative input on this project, their support, and their willingness to share and document their observations. In particular, we would like to thank those Inuit who agreed to appear on the CD and make their knowledge available for the education of their communities and the public. All of these individuals are acknowledged by name on the CD. Thanks also to Jim Robb, Evaldas Vidugiris, and the interns of the Cartography Lab in the Department of Geography, CU, where the CD-ROM was produced. Thank you to the NSF, CIRES, SSHRC, and CU for generous funding, and to the National Snow and Ice Data Center (NSIDC) and Arctic System Science Data Coordination Center (ARCSS ADCC) for supporting the publication of the CD-ROM.

1. Overview:

Project Summary

The Inuit and their ancestors have been living off the land in the Arctic for thousands of years and have accumulated a great wealth of understanding of environmental and ecological processes. This knowledge has the potential to reinforce, challenge and extend scientific records of the arctic climate. Despite a great amount of scientific research into arctic climate and environmental changes, few studies have included input from the Inuit. This project addressed the following questions:

- What do the Inuit know about climate and environmental change and how do they construct this knowledge?
- How have the Inuit responded to climate and environmental changes?
- How can Inuit environmental knowledge and scientific research be integrated to further understanding of arctic environmental processes and changes, and potential impacts on the arctic environment and human settlements there?

A multi-method approach, utilizing content analysis, charting with map overlays, semi-structured interviewing, and participant observation, built on previous research conducted by Shari Fox to document Inuit climate and environmental knowledge. Using specific information on climate and ice conditions in the eastern Canadian Arctic, Inuit and scientific observations were linked to identify similarities and distinctions.

This project was an opportunity not only to advance knowledge of arctic climate and environmental processes and changes, but to bring to light the underrepresented and underestimated knowledge of the Inuit. The timing of this project was crucial. Inuit elders and experienced hunters who hold this knowledge are few and passing away. Inuit culture has changed profoundly in recent decades and as it continues to change, some knowledge is in danger of being lost. Through sharing and disseminating knowledge throughout this project, and involving Inuit in all stages of the research design, it is hoped that interest in preserving and transferring Inuit climate and environmental knowledge will be created among scientific researchers and also rekindled at the community level.

Audiences

The communities and Fox identified a number of audiences that could be targeted by the CD-ROM. The audiences are the Inuit communities themselves, as well as the public outside Nunavut. The CD-ROM is structured to accommodate these audiences. The user can navigate the CD-ROM through individuals (more meaningful and of interest to community members) or through topics (of more interest to those not familiar with the community).

The Participating Communities

The CD-ROM is a report for the communities involved in this project. It was designed to be a research product more interesting, accessible, and useful than a written summary. While the information on the CD is most pertinent for use and decision making in the participating communities, the information may be useful to other Nunavut communities as well.

Students

Another audience the CD-ROM targets is elementary, middle, and high-school students both inside and outside Nunavut. Elders were especially interested in applying this CD-ROM as an educational tool so that younger people and students can learn about Inuit knowledge and observations of the environment. It is hoped that the CD-ROM will add an element to courses that address the arctic environment, climate and climate change, as well as Inuit culture and the Inuktitut language.

Researchers and the General Public

A third audience is researchers and the public interested in arctic environmental and climate change. Inuit are interested in having their voice and their information heard on these topics. The CD-ROM provides examples of Inuit observations of recent changes that may add to existing knowledge or prompt further scientific investigation. For the public, the CD-ROM helps to put a "human face" on the issue of arctic environmental change and illustrates how these changes have an impact on real lives, both now and in the future, something often obscured in scientific investigation and reporting on arctic environmental change.

Decision Makers

The fourth audience is decision makers, at a number of levels from the hamlet to territorial, to federal. For many of the reasons already cited, the CD-ROM provides a place where local observations and opinions can be expressed and then used to inform strategies and plans to deal (both immediately and in the long term) with impacts of environmental change.

Additional Information

This CD-ROM is a pilot project in using multi-media technology to document and communicate Inuit observations and knowledge and provide a more creative research report to participating communities. It provides examples of Inuit observations from two communities. It is not an

analyzed set of data that provides the final word on Inuit knowledge of environmental changes. The observations presented here cannot represent what is happening all over Nunavut, and certainly observations and opinions can differ within the same community. The CD-ROM provides observations and information documented in 2001 and, as some Inuit note in their interviews, the environment is always changing; in other words, the observations presented here may not be the same today or in the future. There are other issues that need consideration, such as the erosion of traditional knowledge, taking knowledge out of context, accuracy of memory, and difficulties in language interpretation. This CD-ROM should be used and understood as an ongoing effort to work with Inuit to understand their knowledge and collaborate with them on research about the arctic environment and how it changes. It should also be used and understood as one way to develop new and more innovative ways to document and present Inuit knowledge. Finally, there is much more to Inuit knowledge of the environment and environmental change than is presented on the CD-ROM. The researchers used the time and space available to provide examples in this pilot project format. It is hoped that the information will be useful in future endeavors to work with Inuit communities to find new and meaningful ways to document and apply their knowledge.

This CD-ROM is copyrighted by Shari Fox, 2003 (author). All rights reserved. This CD-ROM may not be copied or reproduced in part or in whole in any way without written permission from the author. Please note that the author's contact name is Shari Gearheard.

All of the Inuit involved in the making of this CD-ROM reviewed their personal contributions, and the CD-ROM content overall, prior to distribution. In 2003, each of them approved it for educational use only. The CD-ROM is to be used for educational purposes only unless the author provides written permission. It is not to be used for commercial applications.

2. Detailed Data Description:

Format:

These data are available on CD-ROM. They launch and run in an Internet browser (Microsoft Internet Explorer is recommended); users must install Flash 5 and Quicktime 3 plug-ins. The plug-ins are not provided on the CD-ROM, but are available for download from the Internet.

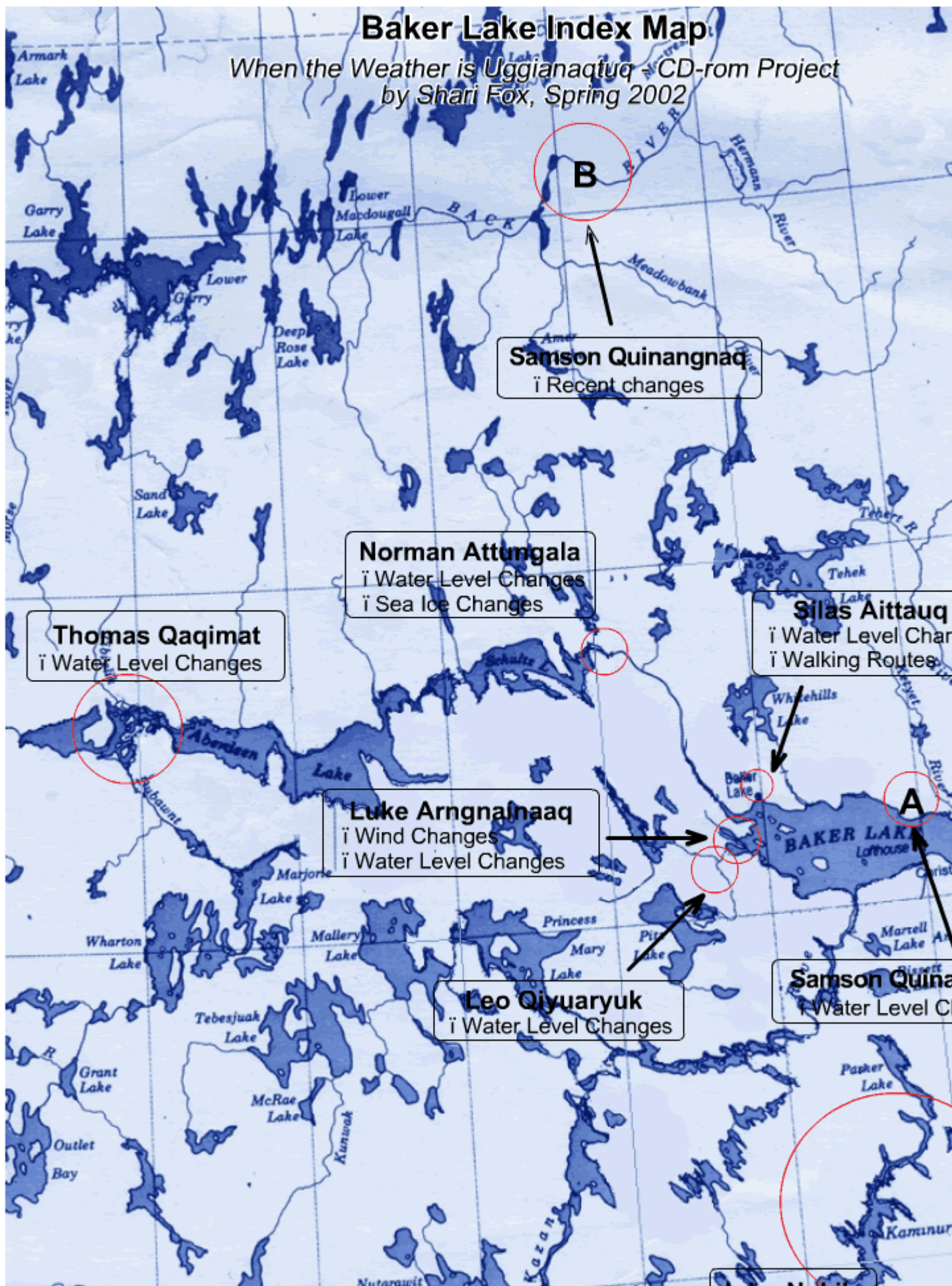
Spatial Coverage:

The interviews were conducted at Baker Lake (64° 18'N, 96° 4'W) and Clyde River (70° 29'N, 68° 31'W), Nunavut.

Spatial Coverage Maps:

Baker Lake Index Map.

*When the Weather is Uggianaqtuq - CD-rom Project
by Shari Fox, Spring 2002*



Clyde River Study Area

Temporal Coverage:

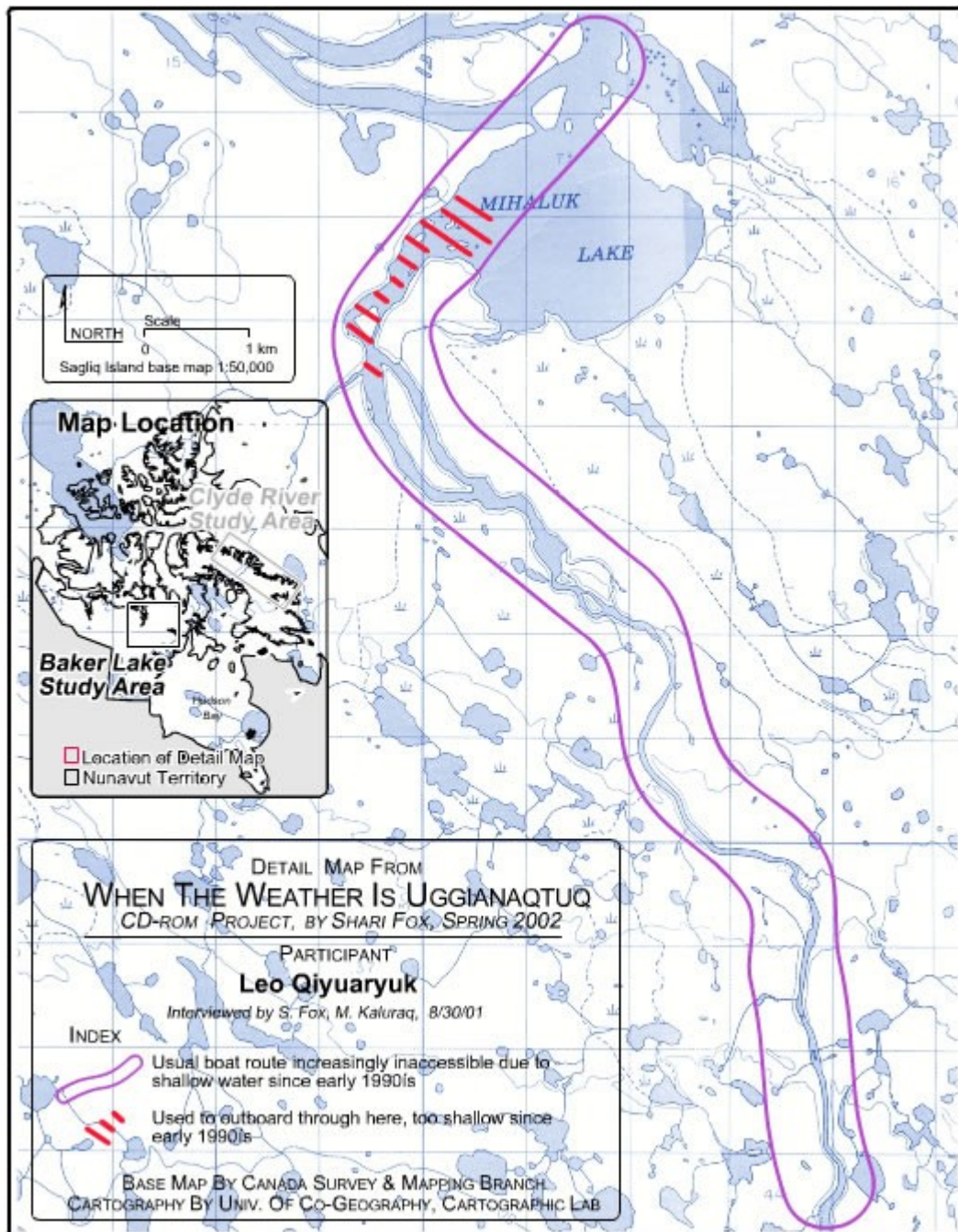
The range of time covered by the maps and interviews on the CD is 1920-2001. There is some reference to the knowledge of parents and grandparents, but it is minimal. The interviews were conducted, maps created, and all of the fieldwork completed between April 2000 and October 2003.

Parameter or Variable:

Parameter Description:

The topics addressed were defined by the participants through interviews and focus groups and include, for Baker Lake: weather unpredictability; rain; snow; lake ice; lakes and rivers; wind; fish; animals; insects; changes in activities; and changes in seasons. In Clyde River, the topics include: weather unpredictability; snow; sea ice; glaciers; wind; permanent snow; animals; icebergs; changes in activities; and changes in seasons.

Sample Data Record:



Sample map showing Leo Qiyuaryuk's boat route in the Baker Lake study area

3. Data Access and Tools:

Data Access:

To request a copy of the CD-ROM, complete the [Data Order Form](#). The data are for educational use only and are not intended for commercial use. No part of the CD-ROM may be copied or reproduced in any way without permission from the author.

Software and Tools:

The CD-ROM operates in an HTML browser. The investigator recommends the use of Microsoft

Internet Explorer 5.x. [Macromedia Flash Player](#) and [Apple QuickTime Player](#) plug-ins are also required and are not provided on the CD-ROM.

A sound card is necessary to access some of the multi-media presentations, but not necessary to access all of the content on the CD.

Directions for using the CD can be found in the readme file on the CD-ROM.

4. Data Acquisition and Processing:

Data Acquisition Methods:

Semi-structured interviews with Inuit were captured using a digital video camera and clips were extracted using iMovie and Quicktime. The community helped identify the key informants for this study and 10 participants from each community agreed to be videotaped for the CD-ROM. The interviews were translated into English at the time of the interview and then reviewed after the clips for the CD-ROM were edited. Each Inuit participant reviewed their interview clips and had an opportunity to review the CD-ROM for content and design before distribution. Mapping was completed by providing a wide variety of topographic maps of different scales during interviews that Inuit could use if they wished. Inuit mapped observations using mylar overlays and colored pencil and later these maps were digitized and standard legends applied.

5. References and Related Publications:

This CD-ROM is a supplement to a dissertation by Shari Fox entitled, "When the Weather is Uggianaqtuq: Linking Inuit and Scientific Observations of Recent Environmental Change in Nunavut, Canada." 2004. Ph.D. dissertation, Department of Geography, University of Colorado at Boulder, Boulder, Colorado. USA

6. Document Information:

Glossary and Acronyms:

Uggianaqtuq: a North Baffin Inuktitut word that means to behave unexpectedly, or in an unfamiliar way.

Document Creation Date:

20 February 2004

Document URL:

<http://nsidc.org/data/docs/arcss/arcss122/>