

Watching, listening and learning from the land

A CBM workshop
Thunder Bay, ON

April 24 and 25, 2018

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First Nations tracking and responding to changes on their traditional territories through Community-Based Monitoring (CBM)

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Land Use Change

- For generations, First Nations have watched over their land and responded to changes by developing traditional knowledge of animals, habitats, weather and environmental conditions.
- Based on their traditional knowledge, they have been responding to impacts using their traditional institutions



Climate Change

- Similarly, this knowledge has supported their response to impacts from climate change which has also been accelerating over the last decades



Kashechewan First Nation spring flooding spurs talk of moving — for good

A scattered few of the 2,000 residents will wait out the flood risk in the James Bay community.

CBC News | Posted: May 04, 2016 6:15 AM ET | Last Updated: May 04, 2016 6:22 AM ET



People are commonly seen out of Kashechewan to hotel rooms in the south when spring flooding threatens the community. (Canadian Press)

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Northwestern Ontario fires force thousands to flee

Assembly of First Nations calls for more support for threatened communities

CBC News | Posted: Jul 20, 2011 10:11 AM ET | Last Updated: Jul 20, 2011 8:37 PM ET



A forest fire burns July 15 about 270 kilometres north-northeast of Sioux Lookout, Ont. (Mick Mihel/Ontario Ministry of Natural Resources/Canadian Press)

REGIONS

British Columbia	Kitchener-Waterloo
Kamloops	Hamilton
Calgary	Toronto
Edmonton	Ottawa
Saskatchewan	Montreal
Saskatoon	New Brunswick
Manitoba	Prince Edward Island
Thunder Bay	Nova Scotia
Sudbury	Newfoundland & Labrador
Windsor	North

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Other examples of monitoring change

- Governments – Far North Biodiversity Program and Monitoring of contaminants in freshwater fish.
- Industry - Project monitoring or effects monitoring, assists industry managers in understanding how their project is affecting the local environment.
- Management Plan monitoring can indicate whether management plans are working. In some cases, monitoring is tied into a flexible kind of management strategy called Adaptive Management.
- NGO (i.e., WCS Canada) conducting aerial surveys for large mammals in the Far North.

What is Community-based Monitoring (CBM)?

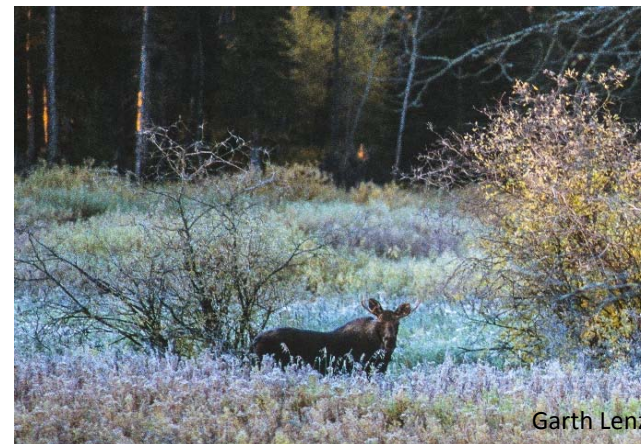
- CBM initiatives are community-directed (needs, design); data collection is initiated from the community and conducted by the community; information is accessible to the community.
- CBM can be informed by multiple knowledge systems, all of which have inherent value (e.g., local knowledge, Traditional and Indigenous Knowledge, western science) – all have a role to play.
- CBM helps advance community-led decision making and support engagement in other processes with government, industry, and stakeholders



Coastal Guardian Network

Designed BY the community

- Local communities decide what to monitor (species, areas, etc.) and how (group interviews satellite images, etc.).
- Communities develop a framework that addresses what information will be collected and used (e.g., oral stories, historical records, interviews), how it should be collected, interpreted, and stored, and how decisions are made based on this information.



Designed FOR the community

CBM is built from the ground up:

- Focus on issues (e.g., subsistence harvest, development) and species (e.g., sturgeon) that are important to the community.
- Focus on information that is easy to collect, but that can inform decision making.
- Focus on areas that make sense for the community in terms of scale, use and ability to detect changes.



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Social and cultural benefits of CBM

- Local people spend more time on the land.
- Traditions, language and knowledge are passed on to younger generations.
- Local traditions of decision-making, governance and resource management are supported and restored.



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Four Rivers Environmental Services Group /
David Pearson

Challenges of CBM

- Funding and support beyond a year and depending on one or two individuals.
- Data management within different knowledge systems requires planning, capacity and attention to detail, and some consistency given traditional and/or Indigenous knowledge.
- Developing a shared or co-created approach that respects and recognize rights-holders and their knowledge.

Where is CBM being used?

Lots of places in Canada and around the world!

- **The Coastal Guardian Watchmen Network** on the central B.C. coast
- **łutsël K'é Dene First Nation Ni hat'ni Dene Program** — *Watching the Land*
- **Mikisew Cree First Nation** TEK-based CBM project in the Athabasca River Watershed
- The **Gwich'in Harvest Study (GHS)** in the Northwest Territories



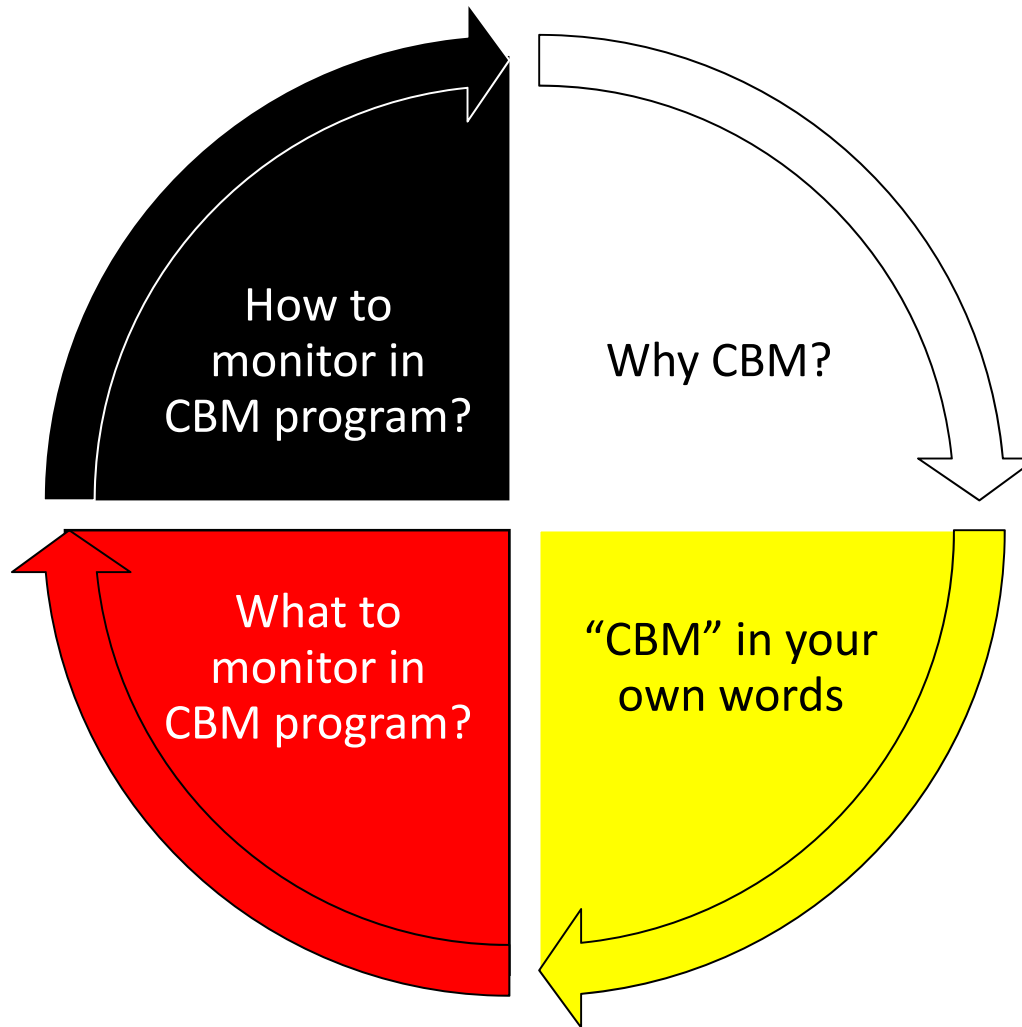
Coastal guardian training

See Raygorodetsky and Chetkiewicz 2017 for examples and descriptions

Goals and objectives of the workshop

- Create the basis for CBM in Ontario's Far North, with interested communities
 - Discuss the fundamentals of CBM monitoring (why, what, and how).
 - Hear from you and learn from CBM practitioners to share experiences with First Nations in northern Ontario.
 - Consider how a pilot program may emerge drawing on lessons learned with other initiatives, together with community experiences and interests.

Approach to the workshop:



Why?

- Are people interested in CBM?
- Why is CBM important to you?
- Guests and community members' experiences and perspectives



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Why CBM?

CBM helps build a culturally-relevant picture of what is happening on the land over time including:

- Baseline conditions **before** changes takes place (either development or climate change)
- Changes that occur **during** development or as a result of climate change
- Changes that unfold **after** development or as a result of climate change



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This information can signal a need to “change course”



Examples:

- Monitoring the impacts of development, including land use change and hydroelectric development (e.g., Mikisew Cree and oilsands; Moose Cree and hydroelectric development)
- Contaminants in the fish, wildlife, and water (e.g., Łutsël K'é Dene and chronic wasting disease, Freshwater Fish Contaminant Monitoring*)
- Species population monitoring, biodiversity, and food security (e.g., Community Moose Monitoring Project, CARMA, Broadscale Inland Lakes Monitoring Program*, Far North Biodiversity Monitoring Program*)

* government-led; limited First Nation involvement

What?

- What is CBM from your perspective?
- “CBM” in your own language
- Guests and community members’ perspectives



WCS Canada / Gleb Raygorodetsky



Coastal guardian training



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Examples:

Chipewyan Terminology for Monitoring:

- *Net'î horédhâ honeltÿn benerédí dhi bek'orejâ t'así Æedø núdhier já ?îâá háyorñla náts'edé sí*

(Watching, listening, learning and understanding about changes in the community)

- *Yunedhe t'asi selæi*

(Looking into and improving the future)

- *Dÿne ch'a nie unizî chu dô chu eåeåte æile*

(The Dene way of life in the past compared to today)



How?

- What are the issues?
- What kind of information would and could you collect to address these issues?
- Guests and community members' experiences and perspectives

How?

- What are some of the ways for developing indicators?
- How do you decide which indicators are meaningful?
- Guests and community members' experiences and perspectives



Gleb Raygorodetsky



Gleb Raygorodetsky



How?

Consider:

- Is it relevant to your community?
- Where does the indicator come from?
 - Traditional knowledge indicators
 - Science indicators
- How easy is it to gather information on this indicator?
- How much does it cost?
- What does the community think is most appropriate for measuring change?



How?

- What are some of the ways for ensuring information is collected consistently?
- Guests and community members' experiences and perspectives

Collecting the information

- Information collection “rules” or protocols.
- Confidentiality.
- Timing? Seasonal indicators e.g., fish, wildlife
- How do you include the community in collecting the information?
- How do include different perspectives due to age and gender?
- Who is attending your workshop? Gathering? Interviews?
- Storage and access, confidentiality, ownership and security?

Tools for collecting the information

- Paper and pen
- Recorders (video, audio)
- Computers
- Consider training
- Try to keep it simple and consistent



Examples:

- Recording of observations by local observers using various approaches (e.g., journal, mapping)
 - Systematic and organized
 - Free style records collected on a regular basis
- Meetings
 - Organized by theme and scheduled regularly and reported
- Population survey



Examples:

- Patrol – local people record their observations of specific environmental conditions important to the community.
- Human Sensor – interviews during one-on-one, group or community meetings.
- Journal – keeping a journal, to regularly record personal observations of environmental conditions.
- Community maps – collecting and sharing traditional knowledge-based spatial information about past and current land use.
- Seasonal calendars – documenting changes in fish & wildlife, and other important sources of local subsistence.
- Participatory media – community radio and/or video to document and share information about environmental changes.



How?

- What are some of the ways for summarizing information so it is meaningful and useful?
- Guests and community members' experiences and perspectives



How?

- What are some of the ways for evaluating the information?
 - Traditional knowledge indicators
 - Science indicators
- Guests and community members' experiences and perspectives



How?

- Goal of reporting is to make the information you have gathered meaningful and useful to those who might use the information.
- Who is your audience?
 - Community
 - Researchers
 - Others?
- What are some of the ways of reporting and presenting the information to these audiences?
- Guests and community members' experiences and perspectives

Beginning the journey?

- We have gone through most of the steps to community-based monitoring project
- Other models and programs that use CBM (e.g., Guardians, Tracking Change) – pros/cons
- Consider potential partners (e.g., government, NGO, academia, others) – pros/cons
- Consider potential funding sources (e.g., government, NGO, academia, others) – pros/cons
- Guests and community members' experiences and perspectives

Beginning the journey?

Step 1: Community learns more about CBM through presentations and workshops.

Step 2: Co-create a simple toolkit or guide to help development of CBM project.

Step 3: Community forms a working group to help secure funding and develop CBM project implementation framework.

- Researcher(s) with community
- Advisory committee
- Community members

Step 4: Community and its partners decide what is to be monitored and how.

Step 5: Locally useful indicators and monitoring methods are agreed upon.

Step 6: Training and pilot project undertaken to test methods and the project focus.



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www.trackingchange.ca/

www.ilinationhood.ca/