

SCREENING GUIDE

COLD AMAZON

THE MACKENZIE RIVER BASIN

Documentary film

Running time: 22 minutes

Everything you need to plan a successful screening of *Cold Amazon*

DISCUSSION QUESTIONS | EDUCATIONAL MATERIALS | Q&A



Cold Amazon is a production of the Walter and Duncan Gordon Foundation, a private, philanthropic foundation based in Toronto, Canada. The Foundation undertakes research, leadership development and public dialogue so that public policies in Canada reflect a commitment to collaborative stewardship of our freshwater resources and to a people-driven, equitable and evolving North.



ABOUT THE FILM

IMAGINE A GIANT RIVER, WHICH CONNECTS ALL CANADIANS AND HELPS CONTROL OUR CLIMATE, HAD SOMETHING TO SAY. HERE'S YOUR CHANCE TO LISTEN.

Narrated by celebrated northern journalist Paul Andrew, *Cold Amazon* tells the story of Canada's massive Mackenzie River Basin. At 1.8 million sq. kilometres, covering three provinces and all three territories, the Mackenzie plays a significant environmental, economic and spiritual role that stretches far beyond its borders. This short documentary highlights the importance and vulnerability of the mighty watershed through the impassioned voices of those who rely on its health and work for its protection.

Directed by Yellowknife-based filmmakers Pablo Saravanja and Jay Bulckaert of aRTLeSS Collective, and written by journalist Tim Querengesser, this film will bring the Mackenzie closer to home for the many Canadians who may be unaware of its importance, or even its existence.



SUB-BASINS: ● PEEL, ● MACKENZIE MAIN STEM AND GREAT BEAR LAKE, ● GREAT SLAVE, ● ATHABASCA, ● PEACE, ● LIARD



ABOUT THE MACKENZIE

SIZE

- The Mackenzie River Basin is the largest drainage area in Canada at **1.8 million sq. kilometres** (or one-fifth the size of Canada).ⁱ
- The Mackenzie River is Canada's longest at **4,241 kilometres**.ⁱ
- Great Bear Lake is the largest lake located entirely within Canada, with a surface area of **31,328 sq. kilometres**.ⁱ
- Great Slave Lake is the deepest lake in Canada at **614 metres**. It is also the fourth largest.ⁱ
- Great Bear Lake and Great Slave Lake are two of the **cleanest lakes of their size** in the world.ⁱ
- The Mackenzie Delta is Canada's largest freshwater delta, and the 12th largest in the world, covering a surface area of **13,500 sq. kilometres**.ⁱ

ⁱ Source: *Northern Voices, Northern Waters: NWT Water Stewardship Strategy*

ⁱⁱ Source: *The Mackenzie River Basin Board*

FEATURES

- The Basin is made up of nine lakes and three large deltas: the Peace-Athabasca (designated by the Ramsar Convention as a wetland of international importance), the Slave River, and the Mackenzie.ⁱⁱ
- Vegetation changes from boreal forest in the south to alpine in the mountains and arctic tundra in the north and east.ⁱⁱ
- This range of conditions results in eight of the 15 major terrestrial ecozones of Canada being represented within the Basin.ⁱⁱ
- There are 44 community water systems in the Basin. More than 700 other small water systems serve small communities and rural populations. People use water and discharge wastes for a variety of industrial activities in the Mackenzie River Basin. The most important industries are agriculture, fossil energy, forest products, hydroelectricity and mineral extraction.ⁱⁱ
- There are 11 aboriginal languages spoken within the Basin. The traditional economy, which depends on healthy ecosystems, remains an important part of Aboriginal Peoples' lives and livelihoods.ⁱⁱ



USEFUL DEFINITIONS

AQUATIC ECOSYSTEMS

The interacting components and interdependencies of air, land, water, and living organisms that depend on water resources. The two main types of aquatic ecosystems are marine and freshwater.ⁱ

DELTA

Wetlands that form as rivers empty their water and sediment into another body of water, such as an ocean, lake, or another river. Deltas can also empty into land, although this is less common.ⁱⁱⁱ

ECOSYSTEMS

All living and non-living things in a given area, and the ways they interact with each other.ⁱ

KARST TOPOGRAPHY

A landscape created when groundwater dissolves sedimentary rock, such as limestone.ⁱ

PERMAFROST

Permanently frozen subsoil which is found in many parts of northern Canada, including the NWT.ⁱ Permafrost underlies 75 per cent of the Mackenzie River Basin.ⁱⁱ

ⁱ Source: *Northern Voices, Northern Waters: NWT Water Stewardship Strategy*

TRADITIONAL KNOWLEDGE

Traditional knowledge (TK) encompasses the physical, emotional, intellectual, and spiritual dimensions of life, and is based on the understanding that the land is a powerful teacher. TK complements and enhances Western scientific information, and scientists and TK holders can work in partnership to gain a more thorough understanding of the natural environment.ⁱⁱ

WATER PARTNERS

Anyone that has a role in water stewardship. They may also be referred to as water stewards.ⁱ

WATER RESOURCES

Lakes, rivers, deltas, wetlands and the surface and groundwater that supplies them – whether in a liquid or frozen state. In addition to ecological benefits, these resources can provide economic and socio-cultural benefits.ⁱ

WATER STEWARDSHIP

Recognizing that people are a part of the environment and that all water users have a duty to ensure their actions safeguard it.ⁱ

ⁱⁱ Source: The Mackenzie River Basin Board

ⁱⁱⁱ Source: National Geographic Education

SCREENING PREP

MACKENZIE RIVER BASIN Q&A BY WATER EXPERT RALPH PENTLAND

Ralph Pentland is the acting chair of the Canadian Water Issues Council at the University of Toronto, and a member of the Forum for Leadership on Water (FLOW).

THE NORTH

What is the fundamental purpose of the Government of the Northwest Territory's Water Strategy?

In its *Northern Voices, Northern Waters* strategy, the Government of the Northwest Territories recognized the fundamental importance of water to natural security and the prosperity it enables. "Clean and abundant freshwaters," the preamble notes, "ensure healthy productive ecosystems. These are essential to the social, cultural and economic well-being of people."

Why was a Strategy needed in 2011?

There were two critical reasons. First, the Crown was in the process of negotiating historic agreements to "devolve" province-like jurisdiction and authority over water to the territorial legislature. Second, the Government of the Northwest Territories was entering into transboundary negotiations with its powerful upstream neighbours regarding water management in the Mackenzie River Basin.

What is unique about the *Northern Voices, Northern Waters* strategy?

Rather than debate how much ecological integrity to sacrifice in pursuit of economic gain, which is the typical discourse in the South, the territorial goal is the preservation of water "substantially unaltered in quality, quantity and rates of flow" and of all the "spiritual, cultural, public health, recreational, economic and ecological values" that water secures.

Does the strategy respect traditional ways of life?

It is recognized that economic vibrancy is necessary for the livelihoods and well-being of NWT residents. However, this vibrancy is only possible in the long run if ecological integrity is safeguarded. Aboriginal Peoples make up about half of the total NWT population. They expect their traditional ways of life and cultures will be sustained, and many places and features associated with water have important cultural, spiritual and historical meaning. For those reasons, the water strategy supports decisions that "respect values held and various lifestyles chosen by NWT residents."

How can citizens play a role in implementing the strategy?

In developing the strategy, meetings were held with every community in the NWT. Consultations are continuing both on implementations of the strategy and on the negotiation of transboundary agreements. These take place through community visits as well as through an Aboriginal Steering Committee. There are also opportunities for citizens to participate directly, for example via community-based monitoring programs.

PROVINCES INSIDE THE BASIN

What is the purpose of transboundary negotiations?

Experience throughout Canada and elsewhere suggests that all parties sharing transboundary waters can benefit from working together towards co-operative management of the waters of the entire river basin that they share. The Mackenzie River Basin comprises portions of five jurisdictions, namely Alberta, British Columbia, Saskatchewan, the Northwest Territories and Yukon.

What common objectives do the five jurisdictions have for the Mackenzie River Basin?

In July of 1997, the Governments of Canada, the Northwest Territories, Yukon, Alberta, British Columbia and Saskatchewan signed "The Mackenzie River Basin Transboundary Waters Master Agreement." The Master Agreement established common principles for the co-operative management of the aquatic ecosystem of the basin. These guiding principles consist of maintenance of ecological integrity, sustainable development, equitable utilization and prior consultation.

What is the current status of the transboundary negotiations?

The Master Agreement encouraged the parties "to develop Bilateral Water Management Agreements to be attached as schedules to the Master Agreement." At this time (spring 2014), Alberta is in bilateral negotiations with Saskatchewan, British Columbia and the Northwest Territories for the Mackenzie Basin. British Columbia is in bilateral negotiations with Alberta for the Mackenzie and the two northern territories for the Liard (a major tributary to the Mackenzie).

As upstream jurisdictions, are there precedents for the provinces to be involved in intergovernmental water agreements with downstream jurisdictions?

Yes, Alberta, Saskatchewan and Manitoba have a longstanding agreement which established the Prairie Provinces Water Board in the Saskatchewan-Nelson River Basin. Waters in the St. Mary-Milk system between Alberta and Montana are managed under provisions in the *International Boundary Waters Treaty*, and waters between British Columbia and its southern neighbours are managed under the provisions of the *Columbia River Treaty*. In all of these cases, co-operation has flourished over a sustained period.

What type of commitments would upstream jurisdictions typically make in these kinds of arrangement?

Typically, all management decisions would continue to be made within individual jurisdictions. The upstream jurisdictions typically restrict their decisions only so far as not to "unreasonably harm" the downstream jurisdiction. For example, in the case of the Prairie Provinces Water Board, that is achieved by establishing and meeting agreed-upon objectives at the borders.

OUTSIDE THE BASIN

Why is the Mackenzie River significant to Canada as a whole?

The Mackenzie River is the terminating artery for the water that flows from a fifth of the country. Its outflow is the most significant physical input to the Beaufort Sea, a major but poorly understood influence on the wider Arctic Ocean. It is a river, in other words, on a scale that clearly meets the test of national interest. It is also fish-bearing, navigable and interjurisdictional, all characteristics that meet national interest criteria.

Why is the Mackenzie River Basin significant globally?

According to a June 2013 report by the Rosenberg International Forum on Water Policy, the Mackenzie River Basin is a globally important resource. Its biological, hydrological and climatological properties affect the welfare of people throughout the Western Hemisphere and to some extent globally. The Forum also concluded that the ecological, hydrologic and climatologic regimes of the Basin are at risk from planetary warming, and that the area is ecologically fragile and could become more so.

Will decisions in the Basin affect decisions elsewhere in Canada?

The Basin highlights the interplay of two distinct cultures – a largely aboriginal culture with strong links to the land supporting traditional ways of life, and a largely non-aboriginal culture which is highly dependent on the extractive industries. The partnerships and understanding that evolve between these two cultures in the Mackenzie River Basin may very well play a significant role in the future of resource development right across the country.

What can the rest of us learn from northern attitudes towards water and the environment?

Northwest Territories Minister of Environment and Natural Resources J. Michael Miltenberger was once quoted as warning “If we don’t protect the land, the water, and the animals, they won’t look after us. We’re going to pay a price, and it will eventually be incredibly brutal and painful.” Northerners seek to restore a candour about humanity’s dependence on our natural ecosystems and habitat that must be grasped by all of us if we are to understand the foundation of wealth in the coming century.

Conversely, what can northerners learn about experience outside the Basin?

Despite a few major developments and climate change, the Mackenzie River Basin is still only modestly impacted by human activities. The time to get things right and to set a healthy course for the future is now, before further development narrows the choices. Northerners can learn from both positive and negative southern experiences as they set that course.

URBAN CENTRES

Do urban Canadians care about remote waters like those in the Mackenzie River Basin?

Absolutely. City folk routinely tell opinion researchers that water is the nation's most important natural resource, an irreplaceable treasure more valuable than all the oil, gas, gold, and geography also yields. As Canadians, we like to see ourselves as outdoorsy people by nature, proud to "stand on guard" for our landscape of iconic lakes and rivers – if only by demanding that Parliament pre-emptively declare our refusal to ever, ever, share our water with anyone else.

What practical things do remote waters do for city-dwellers?

Cities are almost by definition non-sustainable. That is because city-dwellers live and thrive almost exclusively on resources from the outside – energy, food and fibre, water, minerals, building materials and so on. The production of all of those goods is highly dependent on adequate quantities of good quality water. Unless remote waters are managed sustainably, those goods will eventually cease to be available to support urban lifestyles.

How can southern city-dwellers contribute to sound water management in the North?

City-dwellers elect national governments. Those city-dwelling voters have a responsibility not only to their northern indigenous brethren, but also to themselves to protect the living web of northern species and biological productivity in its present robust state. In doing so, they are standing up not only for the interests of indigenous peoples, but also for the wider Canadian public, which is no less dependent on the natural security those ecosystems provide.

Why is protection of remote areas like the Mackenzie River Basin important to our national economy and the economic well-being of cities?

Sustainable development implies, first and foremost avoiding the destruction of environmental resources. Completely unbridled development would lead to accelerated destruction of the air, land and water on which the health of all of our economic and social systems depend. Empirical evidence clearly demonstrates that well-designed regulatory and management regimes do lead to superior economic outcomes.

As climate change reduces water supplies in the South, will it become advisable to move water southward from the better-watered Mackenzie River Basin to meet urban, industrial and agricultural demands?

Absolutely not. Canada as a whole and all of the individual jurisdictions will be far better off in the long run if economic activity moves to water, rather than water moving over long distances to economic activity. That would be consistent with conclusions reached all over the world in recent decades, and with sound existing policies at the federal, provincial and territorial levels.



WHO MONITORS WATER IN CANADA?

FEDERAL GOVERNMENT

Environment Canada's Water Quality Monitoring and Surveillance Division is comprised of scientists and related experts located in several areas of the country to support watershed-based monitoring and assessment.

<http://www.ec.gc.ca/eaudouce-freshwater/>

Environment Canada also runs the Canadian Aquatic Biomonitoring Network (CABIN), an aquatic biological monitoring program for assessing the health of freshwater ecosystems in Canada. CABIN is based on the network of networks approach that promotes inter-agency collaboration and data-sharing to achieve consistent and comparable reporting on freshwater quality and aquatic ecosystem conditions in Canada.

<http://ec.gc.ca/rcba-cabin/>

PROVINCIAL/TERRITORIAL GOVERNMENTS

All provincial and territorial governments in Canada have a water monitoring program of some kind, many of which are run in partnership with the Government of Canada. The Mackenzie River Basin is monitored in the Northwest Territories as part of the NWT Water Stewardship program, a partnership between the Government of the NWT and Aboriginal Affairs and Northern Development Canada.

<http://nwtwaterstewardship.ca/>

OTHER ORGANIZATIONS

Independent organizations such as community groups, conservation authorities, educational and research institutions, NGOs, land and water boards, and industry will also undertake monitoring activities outside of those carried out by government. Some of these groups publish their findings to add to the larger data pool.

DISCUSSION QUESTIONS

INSIDE THE BASIN: GENERAL AUDIENCE

1. For many people, the waters of the Mackenzie are sacred. What does the Mackenzie River Basin mean to you? Has anyone here ever experienced the Mackenzie for themselves (i.e. paddled on it)?
2. The term 'sustainability' is often used by environmentalists. How do you define sustainability? How do you think the definition of sustainability changes depending on how the Basin is used (for industry, for recreation, for personal and spiritual wellbeing, etc.)?
3. Do you think the Basin is being managed sustainably? If not, what do you think sustainable management of the Mackenzie River Basin should entail?
4. What do you think are the most pressing challenges to the health of the Mackenzie River Basin? How can they be addressed, and who needs to be involved to do so?
5. The film shows people monitoring water in their own watershed. Does water monitoring happen in your community? If not, is this something that you would like to see?
6. This film shows that people in the Basin have different relationships to water and often, competing interests. Do you think it's possible to reconcile these differences?
7. Interviewees talk about how healthy waters are connected to healthy communities. Does water play a significant role in your physical and spiritual wellbeing? If so, tell us how.
8. What are some recent examples where poor water quality had an impact on human and/or animal health? What can we learn from these examples that can be applied in the Mackenzie River Basin?
9. Some have described water as 'blue gold' or the oil of the future. Do you think this is true?
10. Name two things you learned in this film that you did not know before watching it.

INSIDE THE BASIN: INFORMED AUDIENCE

1. The Mackenzie River Basin spans three provinces and all three territories. What do you think are the challenges facing jurisdictions when managing a resource like water, one that does not respect jurisdictional boundaries?
2. The film describes community-based monitoring. What are the benefits of this level of monitoring? What are the drawbacks?
3. What are some recent examples where poor water quality had an impact on human and/or animal health? What did we learn from these examples that can be applied in the Mackenzie River Basin?
4. Devolution of control over land and water resources is set to take place in April 2013. What opportunities and challenges does devolution present for water management in the Basin?
5. Did *Cold Amazon* teach you anything new?

DISCUSSION QUESTIONS

OUTSIDE THE BASIN: GENERAL AUDIENCE

1. Show of hands: how many people knew about the Mackenzie River Basin before watching this film? What do you think [the response] says about Canadians' awareness of the waters in their own country?
2. Did you see any similarities between the Mackenzie River Basin and your watershed (how it's used, the challenges it faces, the different interests at play)? How so?
3. The term 'sustainability' is often used by environmentalists. How do you define sustainability? How do you think the definition of sustainability changes depending on how a watershed is used (for industry, for recreation, for personal and spiritual wellbeing, etc.)?
4. Do you think the Basin is being managed sustainably? If not, what do you think sustainable management of the Mackenzie River Basin should entail?
5. What do you think are the most pressing challenges to the health of the Mackenzie River Basin? How can they be addressed and who needs to be involved to do so? What about your own watershed?
6. For many people, the waters of the Mackenzie are sacred. Do you or others in your watershed view water as sacred? What does your watershed mean to you?
7. Interviewees talk about how healthy waters are connected to healthy communities. Does water play a significant role in your physical and spiritual wellbeing? If so, tell us how.
8. What are some recent examples where poor water quality had an impact on human and/or animal health? What can we learn from these examples that can be applied in the Mackenzie River Basin, and in your own watershed?
9. Some have described water as 'blue gold' or the oil of the future. Do you think this is true?
10. Name two things you learned in this film that you did not know before watching it.

OUTSIDE THE BASIN: INFORMED AUDIENCE

1. The Mackenzie River Basin spans three provinces and all three territories. What do you think are the challenges facing jurisdictions when managing a resource like water, one that does not respect jurisdictional boundaries?
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3. What are some recent examples where poor water quality had an impact on human and/or animal health? What did we learn from these examples that can be applied in the Mackenzie River Basin? What about your watershed?
4. Did *Cold Amazon* teach you anything new?



ONLINE RESOURCES

MACKENZIE RIVER BASIN INFOGRAPHIC

<http://gordonfoundation.ca/water/mackenzie-river-basin-initiative>

THE WALRUS: COLD AMAZON

<http://thewalrus.ca/cold-amazon>

NWT WATER STEWARDSHIP: A PLAN FOR ACTION 2011–2015

http://www.enr.gov.nt.ca/_live/pages/wpPages/water_resources_management_strategy.aspx

ROSENBERG INTERNATIONAL FORUM: THE MACKENZIE BASIN

<http://gordonfoundation.ca/publication/662>

THE MACKENZIE BASIN: WHY IT MATTERS TO CANADA AND THE WORLD FROM DR. LANCE LESACK

<http://act-adapt.org/the-mackenzie-basin-why-it-matters-to-canada-and-the-world-from-dr-lance-lesack/>

WWF-CANADA FRESHWATER HEALTH ASSESSMENTS

<http://www.wwf.ca/conservation/freshwater/freshwaterhealth/>

CANADIAN GEOGRAPHIC: PROTECT YOUR WATERSHED

<http://www.canadiangeographic.ca/watersheds/map/>

THE MACKENZIE RIVER GUIDE

<http://www.mackenzieriverguide.ca/>

For more information on *Cold Amazon*, or to order additional copies of the DVD for educational purposes, contact the Walter and Duncan Gordon Foundation:

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