



# THE SHADOW OF GOLD

EDUCATOR'S GUIDE



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# INTRODUCTION

The Shadow of Gold explores the dark side of the world's most precious metal.

## WHO THIS GUIDE IS FOR

THIS GUIDE IS TO HELP educators of high school and post secondary students have critical and solution-focused conversations about the social, economic, and environmental impacts of gold mining and resource extraction.

Gold continues to be one of the most economically important metals mined in Canada and around the world. It is a huge part of the global economy yet operates in the shadows. Canadian mining companies are at the forefront with an appalling legacy. Meanwhile, tens of millions of miners are digging for gold right now often with few, if any, protections.



***"The Shadow of Gold is a very important film that should be seen broadly to help spur urgent debate about how consumers, legislators and communities can hold the gold industry to account."***

- David Suzuki

## **ABOUT THIS GUIDE**

This guide is divided into topics with Educational Activities for each. They include short clips from the film that could be played to start a group discussion, or a key quote from the film to read. There are also assignments and research essay questions for students to go deeper, either working alone or in groups. Finally, there are resources and suggestions to go further, with campaigns and ways to take action.

## ISSUES & COURSES

The Shadow of Gold covers many subject areas and can be used as an educational tool for a wide range of courses and curriculum levels.

### ISSUES

- Human rights
- Climate, environment & pollution
- Resource extraction
- Worker health & safety
- Indigenous Peoples & community consent
- International development
- Law & legal rights
- Corporate accountability & power
- Conflict & war
- Ethical investing & consumption
- Canada's role & perspective
- Cultural values
- Gender

### SUGGESTED COURSES

<i>Grade 8</i>	Earth Sciences
<i>Secondary</i>	Social Studies Earth Science
<i>Secondary &amp; Post-Secondary</i>	Canadian and World Studies Business and Economy Engineering and Mining Geography Geology History Indigenous and First Nations Studies International Development Studies Jewellery and Metalsmithing Programs Law and Legal Programs Social Sciences and Humanities Women/Gender Studies



# ABOUT THE FILM

*Do you know where the gold in your ring comes from?*

## THE FILM

*The Shadow of Gold* takes an unflinching look at how the world's favourite heavy metal is extracted from the earth. The film explores both sides of the industry: the big-time mining companies that dig deep and lop off mountaintops to extract gold often from low-grade ore, and the small-time miners – an estimated 20 million people in the world's poorest nations – who extract gold by hand, often producing just enough to survive.

We meet back-country guides and entrepreneurs in Montana with deep suspicions about a proposed gold mine that could destroy their pristine wilderness, Indigenous People in British Columbia struggling to recover from a spill of toxic mine waste, a woman miner in the Congo who is determined to keep her gold from feeding the flames of war, a brotherhood of Chinese miners, sick with black lung disease, fighting a state-owned gold mine for compensation, and an artisanal miner in Peru who knows that the mercury he uses to process gold is toxic and polluting, but feels he has no other option.

And at the top the supply chain – in London, Dubai and Toronto – we show how conflict gold reaches unaware consumers and how gold mining corporations are allowed to destroy ecosystems with impunity.



The film reveals that glittering gold has a dark shadow. But it doesn't leave it there. We engage with engineers, scientists, and Fair Trade advocates who work with miners to tackle gold's worst environmental and social problems. In an industrial-scale mine, we see new technology that replaces cyanide-based processing with a biological process that drastically reduces toxic waste. We watch small-scale miners benefit from technology that replaces mercury with an environmentally friendly process that actually produces more gold. We meet Fair Trade jewelers who have created their own self-managed, transparent supply chain that ensures consumers know exactly where their gold comes from.

In the end, *The Shadow of Gold* isn't all about gold, or even its shadow. The film enters the lives and tells the moving stories of hard-working people who face danger just to go to work every day, in the hope of securing a better life for their families.

Year: 2019

Time: 79 minutes

## THE FILMMAKERS

The Shadow of Gold is a film by Denis Delestrac, Robert Lang and Sally Blake, written by Allen Booth and Denis Delestrac. An international Canada-France co-production, the film is produced by Robert Lang (Kensington Communications, Canada) and Sally Blake (Films à Cinq and CAPA Presse, France).

## TERMS AND DEFINITIONS

The following terminology is used in the film and referred to in this guide.

### **Acid Mine Drainage (AMD)**

The outflow of acidic water from a mining site. Gold and other metals are often found in ores with a lot of sulphide minerals that react with air and water to form sulphuric acid. The acid leaches heavy metals from the ore and can leak downstream, poisoning water and life.

### **Artisanal or Small Scale Mining**

Miners who work independently or for small enterprises mining minerals using their own resources, with hand tools or small machinery.

### **Cyanide Leaching**

Cyanide is a highly toxic, potentially deadly chemical. During industrial mining processes, tons of cyanide solution is used to leach or extract gold from the mined ore, often in massive open heaps of ore. Cyanide spills have caused many environmental disasters and public health risks, and cyanide heap leaching has been banned in some countries and some U.S. states.

### **Fair Trade**

Trade partnerships designed to treat producers in developing countries equitably and give them a fair price, with standards that protect workers and the environment.

### **Ore**

Naturally occurring rock or solid material that contains valuable minerals like gold in sufficient quantities to make it profitable to mine. Ore is mined from the earth and then processed to extract the gold.

### **Tailings**

Tailings are finely ground muddy or sandy mine wastes left behind after the valuable metals and minerals have been extracted from the ore. Mine tailings can create a lot of damage when the dams that hold them in place fail and release a powerful wave of waste and contaminated water that destroys communities and ecosystems.



## EDUCATIONAL ACTIVITIES

### BEFORE WATCHING THE FILM

IN ANTICIPATION OF VIEWING THE FILM, you can guide your students through an activity to start them thinking about gold, its origins and uses. Take a show of hands to find out who has gold on them. Explore how gold has many uses beyond jewellery and money, and is found in personal and household electronics like cell phones, televisions and laptops. Now take a show of hands again and find out if more students have gold than first thought. Then ask if anyone knows where the gold comes from or how it was made. Do all hands come down?

### AFTER WATCHING

IMMEDIATELY AFTER VIEWING THE FILM, the following discussion points can start a conversation about the film and first reactions.

- What do you think about gold now that you've seen the film? How has your opinion about gold changed?
- What questions come up after watching the film? What surprised you or stood out?
- What do you think the filmmakers' perspective is? How do you think the film treats the gold mining industry?
- What did you find relatable about the film?
- Some mining companies, including Imperial Metals who run the Mount Polley mine, declined to be interviewed for the film. Why do you think they would not participate? And what do you think about this?



# THE VALUE OF GOLD

## HISTORY, PSYCHOLOGY & ECONOMICS

FROM ANCIENT TIMES to ‘wild west’ pioneers to today’s financial markets, gold has been valued highly for thousands of years. Gold is part of our history and our culture, a lasting symbol of beauty, wealth and marital love. It has driven the rise and prosperity of many countries, including Canada and the United States.

To many, gold truly is a precious metal worth more than what it can be bought and sold for. Gold maintains its value and is called a “safe haven asset.” The value of money and other assets can go up or down but many believe gold is a reliable way to keep wealth, one you can hold and even admire.

*Since 1970, the price of gold has risen 1000%.*

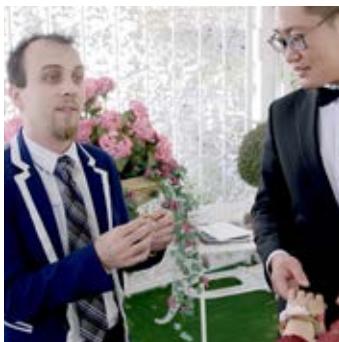
Gold’s allure is shared by people around the world. Emerging middle classes are increasing the demand for gold, driving the price to new heights. Gold is economically powerful because it is scarce and because of how humans culturally value it. Gold cannot be created, it must be found and taken out of the earth. It must be mined.

*More gold is being mined each year. Enough to fill 70 freight cars to capacity. But new sources are hard to find.*

## EDUCATIONAL ACTIVITIES



### CLIPS & QUOTES TO DISCUSS



FILM TIME: 00:01:32 - 00:01:50

During a wedding ceremony, a priest comments about gold:

*"The purity of the gold is a symbolization of the purity of the love that you guys have for one another in your hearts. Gold doesn't tarnish over time. Gold will be always pure."*



FILM TIME: 00:05:01 - 00:07:05

During a segment on how gold maintains its value, **Ross Norman**, CEO Sharps Pixley, a British bullion house, notes that its power goes beyond that:

*"Gold is not an asset class, it's a religion. And people have a view about gold which goes beyond what is realistic about any normal asset class."*



FILM TIME: 00:09:05 - 00:09:52

**James Ledbetter**, Author, *One Nation Under Gold*, discusses how gold has shaped the history of the United States:

*"We sort of think we should be at the centre of the world at some level and in part I think it has a lot to do with the discovery of gold here, and, and the feeling that but of course, it's our birthright. God put the gold there because he wanted the United States to be prosperous, that's the way that people thought."*

## EDUCATIONAL ACTIVITIES



### FURTHER DISCUSSION

- What role has gold played in your family and culture? Do you have traditions or stories that involve gold?
- What are some of the reasons people buy gold?

### ASSIGNMENTS

- Break into small groups and brainstorm: How many expressions using or referencing gold can you think of? What about songs and poems that mention gold or gold mining? What symbolism and themes emerge?
- Besides jewellery and money, what is gold used for? List three items from around you that likely have gold in them.
- Track the price of gold over a period of consecutive years. How did it behave? What factors affected it?

### RESOURCES & SUGGESTIONS TO GO FURTHER

*Behind the Glitter: The Gold Facts*

[miningwatch.ca/blog/2019/2/5/behind-glitter-gold-facts](https://miningwatch.ca/blog/2019/2/5/behind-glitter-gold-facts)

**Only 10% of gold mined is used for technology and industry. 90% goes to luxury markets like jewellery, financial investments, and central banks' currency reserves.**

## EDUCATIONAL ACTIVITIES



### SONGS ABOUT GOLD

Gold and mining have long been used in music to express different ideas and feelings. Here are some examples.

Death Cab for Cutie - “Gold Rush”

[youtu.be/XTPZWG5eLf8](https://youtu.be/XTPZWG5eLf8)

Metric - “Gold Guns Girls”

[youtu.be/FRtd8ArvH\\_s](https://youtu.be/FRtd8ArvH_s)

Kanye - “Gold Digger” (the clean version)

[youtu.be/LEXJjkH9vao](https://youtu.be/LEXJjkH9vao)

From the singing of Bill and Audrey Lore, Tahsis, 1972 -

“Taku Miners” (folk song)

[youtu.be/dpYOPVVulhw](https://youtu.be/dpYOPVVulhw)

Lyrics at: [mudcat.org/@displaysong.cfm?SongID=5661](http://mudcat.org/@displaysong.cfm?SongID=5661)

Overtone - “Shosholoza” (lyrics + translation)

[youtu.be/2aFlQS4k3wo](https://youtu.be/2aFlQS4k3wo)

The Men of the Deeps - “Working Man”

[youtu.be/v56DCcyGnec](https://youtu.be/v56DCcyGnec)

The Dubliners - “Springhill Mine Disaster”

[youtu.be/2wQYdmqK6Tk](https://youtu.be/2wQYdmqK6Tk)



## INDUSTRIAL GOLD MINING

GOLD MINING is a dirty industry. It causes pollution and deforestation, and can destroy traditional livelihoods and displace Indigenous communities.

As gold goes up in value and richer deposits are mined out, mining companies are going after deposits in more and more remote areas, and with less and less gold per tonne of ore. Around the world, gold mines are getting bigger and deeper. Whole mountain tops, sometimes including glaciers, can be removed for the gold they conceal.

*One gold ring generates 20 tons of mining waste. And all that waste has to go somewhere.*



Once the ore is mined, cyanide is the industry's preferred method to separate the gold from the ore. The mined ore often contains other harmful materials like arsenic and heavy metals. The toxic byproducts are stored in tailings ponds that can hold billions of tons of contaminated waste. As mines increase in size, so do the tailings pond dams holding back the waste.

*The exact number of tailings pond failures is unknown but we do know they've caused catastrophes worldwide - and they're increasing in size and frequency.*

## PERPETUAL POLLUTION

Mine waste can last hundreds or thousands of years. Acid mine drainage can cause long-term damage to water sources and aquatic life. Many gold mines will require costly water treatment to fix this. Long after mining companies have abandoned gold mines, the public may have to take responsibility for the mines and mine waste left behind. In some cases, the cost to clean up the sites and maintain them – sometimes forever – may be more than the value of the gold extracted.

*Industrial-scale mining generates billions of tons of tailings waste every year.*

**364**

known tailings failures  
since 1915, including  
71 since 2010



**2,995**

known deaths,  
including 482  
since 2010



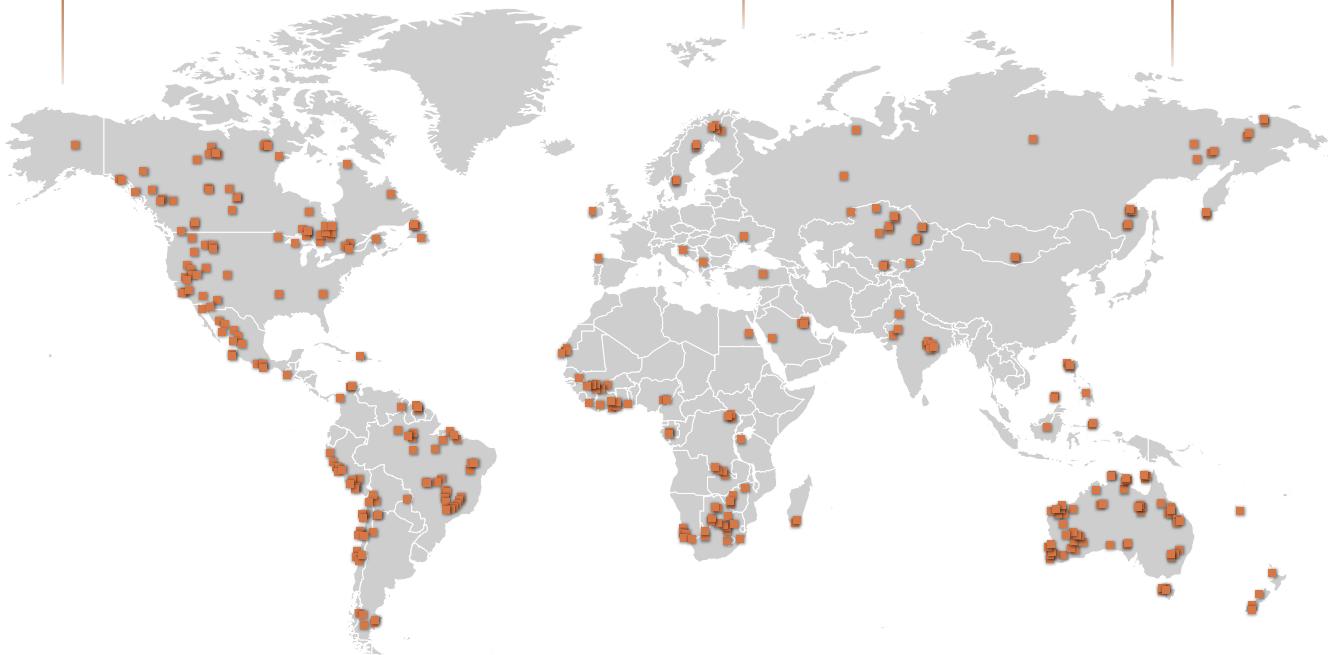
**4,000 km**

Over 4,000 km of  
waterways damaged,  
including over 2,100 km  
since 2010



**275 billion**

Over 275 billion litres  
of tailings waste spilled,  
including over 100 billion  
litres since 2010



*Infographic from "Safety First: Guidelines for Responsible Mine Tailings Management".*

## TAILINGS FAILURES: DEADLY CONSEQUENCES

Dealing with mine waste safely is a problem across the industry. From the 2019 iron mine tailings dam collapse in Brumadinho, Brazil that killed over 250 people, to the 2014 Mount Polley copper-gold mine disaster in British Columbia, Canada, there are hundreds of known failures.

## EDUCATIONAL ACTIVITIES



### CLIPS & QUOTES TO DISCUSS



FILM TIME: 00:11:21 to 00:12:51

In a segment on how industrial gold mining can destroy landscapes, geologist **Shaun Dykes** talks about why mines are getting deeper or larger at surface with lower grade ores:

*"The top 500 to 1,000 feet has been explored, just about everywhere. Before you had to have 30 gram gold per ton. Today that's super high grade for us. We're down to mining half a gram per ton."*



FILM TIME: 00:12:56 to 00:13:33

**Bryan Wells**, a resident of Emigrant Creek, near Yellowstone National Park, says the profits from industrial mines don't benefit the community the way other industries do:

*"Yellowstone tourism has been increasing without a hiccup hardly since 1946. 71 years of growth, that's pretty dependable. Industrial sized gold mines...the money leaves here, it doesn't stay here. Our pioneering spirited entrepreneurs, that money stays here."*



FILM TIME: 00:16:30 to 00:18:20

In a clip about using cyanide and the dismal track record of operating gold mines with tailings failures, **Bonnie Gestring**, Northwest Program Director of Earthworks, notes the legacy of companies not paying for them:

*"The most common method of mining gold is cyanide leaching. They're using a cyanide solution to extract the gold. Inevitably we see at so many sites around the country where the company leaves, the company files for bankruptcy, and we're left with these very toxic sites, forever."*

## EDUCATIONAL ACTIVITIES



CONSIDER the following quote from the film by **Nuskmata (Jacinda Mack)** of the Canadian organization, First Nations Women Advocating Responsible Mining (at 01:26:35):

*"The first thing that comes to mind when I hear the word "gold" is like "dirty gold". It's death, it's violence, it's colonization. I think of all of the Indigenous Peoples of North and South America, and around the world, people from all over who have suffered. For them to be so rich there so many who have to be so poor. That is what I think of when I see gold."*

- Why does she call it “colonization?” How is gold linked to inequality?

### FURTHER DISCUSSION

- What are the benefits and risks of mining on a large scale? Are there better alternatives?
- Is it ethical to create waste that future generations will have to manage? What other resources cause similar dilemmas?
- What role does mining play in climate change?
- Why is gold mining called a “boom and bust” industry? How does this impact the communities where mines are located?

### ASSIGNMENTS

- Analyze gold mining in local and international media coverage. What issues come up and who’s reporting on it? How is it portrayed in Canadian media versus the rest of the world?
- Using a real or hypothetical gold mine opening, put students into groups of community, industry and government stakeholders. Give each stakeholder group time to research and establish their positions. Allow each a short presentation and debate the results. Who won? Were positions changed?
- Often it is Indigenous Peoples’ territories that are subject to mining claims, and in many places, mining is legally considered as the “highest and best” use of land. Research how mining is regulated in your province or territory and the requirements for Indigenous lands. Who ‘owns’ the resources? What role does racism play?

## EDUCATIONAL ACTIVITIES

### RESEARCH ESSAY: CONTINUE THE YELLOWSTONE STORY

In the film, a citizens group in Montana fought to prevent gold exploration in the pristine wilderness surrounding Yellowstone Park. Their research convinced them that a gold mine tailings pond disaster could destroy thousands of local tourist industry jobs.

- Research and summarize what they achieved. Are there lessons to be learned?
- What role did a Canadian mining company play in Yellowstone?

### RESOURCES & SUGGESTIONS TO GO FURTHER

#### Tailings Disasters

Safety First – The Peoples’ Tailings Standard To End Mine Waste Disasters

[miningwatch.ca/safety-first](http://miningwatch.ca/safety-first)

Two Million Tonnes a Day - A Mine Waste Primer

[miningwatch.ca/publications/2010/2/23/two-million-tonnes-day-mine-waste-primer](http://miningwatch.ca/publications/2010/2/23/two-million-tonnes-day-mine-waste-primer)

Preventing Mine Tailing Disasters

[earthworks.org/campaigns/preventing-mine-waste-disasters](http://earthworks.org/campaigns/preventing-mine-waste-disasters)

Acid Mine Drainage

[earthworks.org/issues/acid\\_mine\\_drainage](http://earthworks.org/issues/acid_mine_drainage)

Cyanide

[earthworks.org/issues/cyanide](http://earthworks.org/issues/cyanide)

#### Yellowstone

Greater Yellowstone Coalition

[greateryellowstone.org](http://greateryellowstone.org)

An Unlikely Environmentalist Fights a Gold Mine Near Yellowstone

[sierraclub.org/sierra/unlikely-environmentalist-fights-gold-mine-near-yellowstone](http://sierraclub.org/sierra/unlikely-environmentalist-fights-gold-mine-near-yellowstone)



## MINING IN CANADA

GOLD CONTINUES TO BE one of the main metals mined in Canada, which is headquarters to 50% of the world's mining companies. Canada is also a key source of financing for the global industry, helping to raise money for its projects.

While the mining sector accounts for about 20% of all Canadian exports, it represents only 3% of Canada's GDP – and gold mining is a fraction of this. Despite this, the industry holds a lot of influence over all levels of government. Mining laws are often outdated and more about protecting mining rights and industry interests than the land and people.

### MINING IS “ESSENTIAL” DURING A PANDEMIC

At the beginning of the COVID-19 pandemic in 2020, mining was deemed an essential service in Canada and other countries. Mining companies continued to operate as serious outbreaks hit mine sites in Canada and at Canadian-owned mines around the world, putting workers, communities and Indigenous Peoples at risk.



## MOUNT POLLEY: AN ONGOING DISASTER

The largest mining disaster in Canada took place on August 14, 2014 when the tailings pond dam collapsed at Imperial Metals' Mount Polley gold and copper mine in British Columbia. Millions of cubic metres of wastewater containing dangerous chemicals poured into local waterways. Years later, questions remain about the safety of the drinking water and the effects on vital salmon habitat.

Reports by the province's chief inspector of mines found the collapse was caused by a poorly designed and operated dam that didn't properly account for drainage and erosion. A critical 2016 report by the B.C. auditor general noted that the Mount Polley mine faced the same regulatory issues common to the sector: "too few resources, infrequent inspections, and lack of enforcement."

### A DANGEROUS PRECEDENT

As of 2020, there have been no fines, charges or sanctions against Imperial Metals as a result of the Mount Polley catastrophe. Deadlines for filing charges by provincial and federal authorities have come and gone. Instead, Crown prosecutors have blocked private prosecutions of Imperial Metals by community stakeholders.

British Columbia is supposed to operate under 'polluter-pay' rules, yet won't ensure companies fully pay for any clean up. With the threat of more spills growing, the public may once again be hit with disaster, along with the bill.



## A NOTORIOUS GLOBAL REPUTATION

*Canadian mining companies are in every continent except Antarctica.*

The Canadian mining industry has a reputation for being among the worst offenders of environmental and human rights abuses worldwide. Mining companies will operate in countries with a weak rule of law and little scrutiny, where corruption is widespread. They have faced allegations of negligence, bribery, theft, forced labour, violence and murder. People around the world are frequently criminalized, threatened, attacked, and even killed for defending their land, forest and water.

## ACCOUNTABILITY AT LAST?

In 2019, the Canadian government finally responded to a decade of public pressure to control human rights and environmental abuses by Canadian companies operating internationally, and appointed an Ombudsperson for Responsible Enterprise. However, she does not have full powers to investigate so civil society organizations are continuing their campaign.

In February 2020, the Supreme Court ruled that a Canadian mining company could be held to account for human rights abuses committed abroad. The ruling resulted after three Eritrean refugees sued Vancouver-based Nevsun Resources for being forced to work at a mine jointly owned by the company and state. It remains to be seen whether this ruling will open up a legal channel to hold Canadian companies accountable for what they do overseas.

## GOLD MINES IN CANADA

Communities across Canada are affected by gold mining. Here are some facing issues with past, existing or proposed activities.

### NORTHWEST TERRITORIES

The **Giant gold mine** in Yellowknife started production in 1948. The ore was “roasted” to drive off the arsenic and sulphur it contained. The arsenic was dispersed through the air including rain and snow, on the nearby Yellowknives Dene communities of Dettah and Ndilo, causing the death of at least one child. Some pollution control devices were finally added in late 1951 to begin to capture the arsenic. Once captured, 237,000 tonnes of arsenic trioxide were stored in underground chambers. The arsenic stored underground is leaching into water running through the mine workings but that water is currently treated before it is discharged. The arsenic is highly toxic and a proven human carcinogen. The federal government is spending well over one billion dollars to freeze and stabilize the arsenic in place, but it will remain a threat – forever. It has been estimated that about 7 million ounces of gold were produced by Giant Mine, worth about \$16 billion dollars in today’s money. Most of that money went to the mine owners and shareholders.

### BRITISH COLUMBIA

Imperial Metals' **Mount Polley copper-gold mine** near Williams Lake was built in 1997. In 2014, its mine waste containment (“tailings pond”) collapsed, sending 24 million cubic metres of sludge into Hazelton Creek and then into Quesnel Lake, which drains into the mighty Fraser River. Fortunately no-one was killed, but the disaster – Canada's largest – exposed the dangers of huge mine waste sites and an inadequate regulatory system for all to see.

The proposed **Ajax copper-gold mine project** on the outskirts of Kamloops was subject to a detailed Indigenous environmental assessment led by the Stk'emplupsemc te Secwepemc Nation (SSN), which announced in March 2017 that it would not give its free, prior, and informed consent to the project based on its expected impacts. It also demanded that Jacko Lake and the Pípsell Cultural and Heritage Area be protected for the benefit of all Canadians and future generations. In August, 2017, the B.C. Environmental Assessment Office and the Canadian Environmental Assessment Agency also concluded that the project would have irreversible and significant adverse effects on SSN's heritage and

current use of the lands and resources. In an almost unheard-of decision, the provincial government rejected the project in December, 2017, and the federal government eventually followed in June, 2018.

The **Red Chris copper-gold mine**, near the Tahltan community of Iskut in northwest B.C., has a tailings dam 105 metres high (about the height of a 35-storey building), with a capacity of 305 million cubic metres in the headwaters of the Stikine watershed. MiningWatch had challenged the mine's environmental assessment in court after the project proposal was split into smaller pieces that would avoid a comprehensive study and exclude the public from the assessment process. In 2010 the Supreme Court of Canada decided in MiningWatch's favour, but allowed the mine to proceed regardless. Within months, the federal government amended the Canadian Environmental Assessment Act to bypass the judgment.

## ONTARIO

Goldcorp's **Campbell gold mine** in Balmerton, near Red Lake, has left arsenic-laden tailings in the backyards of Balmerton, an arsenic plume steadily making its way to Red Lake, and 20,000 tons of arsenic trioxide stashed deep in the mine, which has mostly been removed. From 1949 through to 1960, tailings were discharged into Detta Lake and what is now a residential part of Balmerton, leaving it contaminated with arsenic.

## QUEBEC

The **Malartic gold mine** in north-central Quebec is Canada's largest open-pit gold mine, and it is actually in the town of Malartic. Over two hundred households had to be relocated to make way for the mine, and residents adjacent to the mine ended up suing the company over damages to their property and health from blasting and dust. They settled out of court in late 2019.

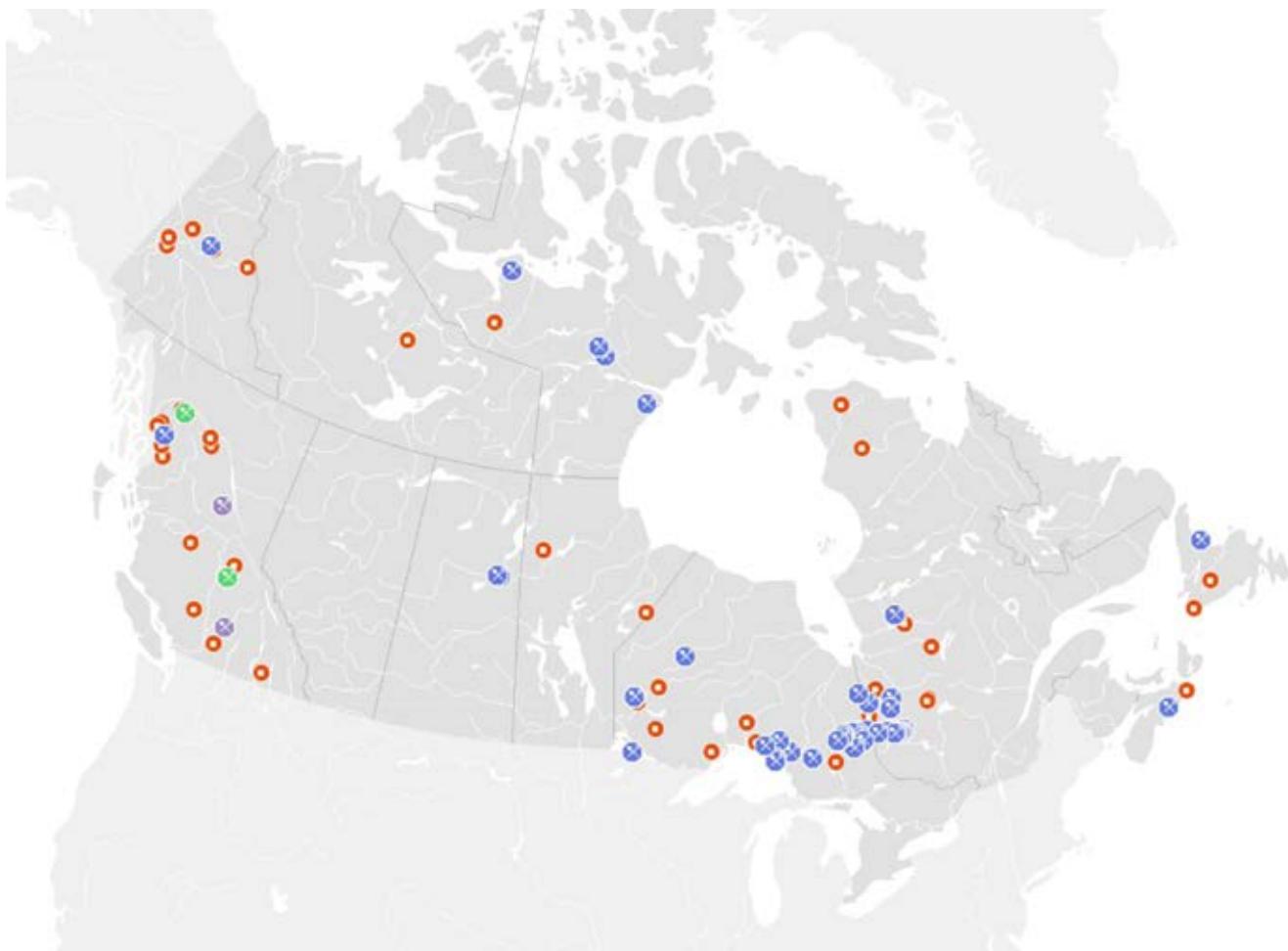
## NOVA SCOTIA

Atlantic Gold, which operates the Moose River or Touquoy gold mine near Halifax, is proposing small new mines near Touquoy (the Beaver Dam and Fifteen Mile Stream projects) as well as the large **Cochrane Hill gold project** in Guysborough County on the St. Mary's River. This would be a large open pit gold mine less than a kilometre from the St. Mary's River. The development footprint would also swallow up the headwaters of McKeen Brook, critical spawning habitat for endangered wild Atlantic salmon. The mine is opposed by many residents who want to protect the river's ecological, historical, recreational, educational, and economic value.

## NATURAL RESOURCES CANADA - MINERALS AND MINING INTERACTIVE MAP

This map depicts the location of Canada's principal producing mines for the given reference year. You can search for mines and filter results by commodity like "gold" and "precious metals," as well as by province/territory, owners and more.

Visit the map at: [atlas.gc.ca/mins/en/index.html](http://atlas.gc.ca/mins/en/index.html)



Map showing producing gold metal mines and top 100 exploration projects for precious metals.

## EDUCATIONAL ACTIVITIES



### CLIPS & QUOTES TO DISCUSS



FILM TIME: 00:18:50 to 00:20:55

In a segment on the Mount Polley disaster, **Nuskmata (Jacinda Mack)** of First Nations Women Advocating Responsible Mining describes the devastating effect:

*"When the disaster happened, communities all around responded like it was a death. People were crying and people were grieving because they knew that... having all of what was in that mine, all that pollution, rush down into the water, and to pollute the entire Fraser watershed."*



FILM TIME: 01:09:27 to 01:11:57

When the film re-visits the site of Mount Polley several years after the disaster, Canadian class action lawyer **Dimitri Lascaris** notes a recurring theme of companies avoiding consequences:

*"It's shaping up to be another example of how the general public is made to bear the costs of these activities whilst the executives appropriate the profits."*

## EDUCATIONAL ACTIVITIES

### FURTHER DISCUSSION

- How do mining companies hold influence over Canadian politics and policy choices?
- Why was gold mining and exploration declared an essential service in most of Canada during the Covid-19 pandemic? Do you agree?
- Should people in other countries be able to sue Canadian mining companies for their actions there? What other ways can companies be held accountable both in Canada and abroad?
- What had you heard about the Mount Polley disaster before the film? How important is it? Was it preventable?

### ASSIGNMENTS

- Find the nearest gold mine to your community. How many are in the province or territory? Can you find any information about the mine or company's safety record?
- Identify an example of a Canadian mining company operating in another country where there are allegations of abuse. Who is the company and what are they accused of?
- “Externality” is an economic term for a cost or benefit imposed on a third party. Working in a group, make a list of the positive and negative externalities communities face from mining. What are the results? Are they different in Canada versus some of the other countries the film visited? Gather with other groups and compare.

## EDUCATIONAL ACTIVITIES



### RESEARCH ESSAY: CONTINUE THE MOUNT POLLEY STORY

At the site of the Mount Polley mine disaster, *The Shadow of Gold* interviewed Indigenous people who continue to pressure the British Columbia government and Imperial Metals for complete restoration of their lands and watershed. The fight and the fallout continues.

- Have there been any legal developments? What is the state of the mine and the lake?
- What action has the government taken to ensure another disaster like this can't occur? Who is responsible for ensuring mine safety in British Columbia and Canada?
- At one point, Imperial Metals was on the brink of bankruptcy. How many mines do they own? What would happen to the mines if the company went under?

## EDUCATIONAL ACTIVITIES

### RESOURCES & SUGGESTIONS TO GO FURTHER

#### **Mount Polley**

The Narwhal - News & Information on Mount Polley Mine Disaster  
[thenarwhal.ca/topics/mount-polley-mine-disaster](http://thenarwhal.ca/topics/mount-polley-mine-disaster)

Mount Polley Independent Expert Investigation and Review Report  
[mountpolleyreviewpanel.ca](http://mountpolleyreviewpanel.ca)

#### **Canadian Mining Companies Abroad**

CBC Fifth Estate - Nevsun in Eritrea : Dealing With a Dictator  
[youtube.com/watch?v=h61Zfm5uyb0](https://youtube.com/watch?v=h61Zfm5uyb0)

Inter Pares - Open for Justice Campaign: Increasing corporate accountability in Canada  
[interpares.ca/content/open-justice-campaign-increasing-corporate-accountability-canada](http://interpares.ca/content/open-justice-campaign-increasing-corporate-accountability-canada)

El Faro - Canada: The Other Imperial Power in Latin America  
[elfaro.net/en/202002/internacionales/24017/Canada-The-Other-Imperial-Power-in-Latin-America.htm](http://elfaro.net/en/202002/internacionales/24017/Canada-The-Other-Imperial-Power-in-Latin-America.htm)

The “Canada Brand”: Violence and Canadian Mining Companies in Latin America  
[justice-project.org/the-canada-brand-violence-and-canadian-mining-companies-in-latin-america](http://justice-project.org/the-canada-brand-violence-and-canadian-mining-companies-in-latin-america)

#### **Responsible Mining**

First Nations Women Advocating Responsible Mining  
[fnwarm.com](http://fnwarm.com)

Initiative for Responsible Mining Assurance  
[responsiblemining.net](http://responsiblemining.net)

#### **Covid-19 Pandemic**

Voices from the Ground: How the Global Mining Industry is Profiting from the COVID-19 Pandemic  
[miningwatch.ca/publications/2020/6/2/voices-ground-how-global-mining-industry-profiting-covid-19-pandemic](http://miningwatch.ca/publications/2020/6/2/voices-ground-how-global-mining-industry-profiting-covid-19-pandemic)

Gold priced at \$1,700 per ounce brings new gold rush to Brazilian Amazon  
[news.mongabay.com/2020/07/gold-priced-at-1700-per-ounce-brings-new-gold-rush-to-brazilian-amazon](http://news.mongabay.com/2020/07/gold-priced-at-1700-per-ounce-brings-new-gold-rush-to-brazilian-amazon)



## ARTISANAL AND SMALL SCALE MINING

*Around the world, at least 20 million miners work alone or in small teams.*

WITH THE PRICE OF GOLD increasing, gold mining has become profitable even in the most hard to reach areas of the world. While most gold comes from mining on a large or even massive scale, the remaining gold is produced entirely by people - without big investments or new technology.

*90% of the gold is produced in the big mines. 90% of the labour is involved in the small scale miners.*

Artisanal and small scale miners often work under dangerous conditions without safety equipment and legal protections. Those who live near gold mining operations suffer from toxic spills. Operating in some of the world's poorest nations, there may be few other jobs or options except to mine or pan for gold, including children.

## MERCURY POLLUTION

*Artisanal gold mining is the biggest source of mercury pollution in the world.*

While large-scale industrial mines generally use cyanide to “leach” or extract the gold out of ore, artisanal miners use mercury.

Mercury binds small particles of gold together so they can easily be separated by hand. It is also the most powerful neurotoxin on the planet and a huge global health threat. Mercury is released from the ore into the water and air, travelling through the world contaminating food sources.

Poisoning from airborne and waterborne mercury is called Minimata disease. Minimata is a coastal city in Japan where in the mid-20th century, a factory released mercury into the sea. Thousands of people became sick and died after eating contaminated seafood.

In 2013, 91 nations signed the Minimata Convention to eliminate mercury pollution. When fully enforced, nearly all artisanal gold mining will become illegal. Yet driven by the increasing demand for gold, it’s unlikely to stop. Miners will need to find mercury-free methods that are cost-effective and easy to adopt.

## MURKY & BROKEN SUPPLY CHAIN

Most people don’t know where their gold comes from. Even jewellers, for the most part, can’t tell you. Gold’s unique physical properties mean once it is melted down and blended together, there is no way to know the source - unless records are kept from mine to retailer.

The anonymity of gold is attractive to criminal gangs and warlords who use it to pay for weapons. As a result, people often purchase conflict gold but don’t know it. That’s starting to change with responsibly produced gold.

*Currently only 1/10th of 1% of the world’s artisanal gold is Fair Trade.*

Fair Trade jewellers know where their gold was mined, and the health and safety conditions of the workers. They never deal in gold that’s linked to exploitation or war. It is part of a broader push by today’s consumers to know what they’re buying is ethical.

## EDUCATIONAL ACTIVITIES

### CLIPS & QUOTES TO DISCUSS



FILM TIME: 00:38:02 to 00:41:55

When the film visits artisanal miners in the Peruvian Amazon, a fragile ecosystem, local Indigenous miner **Manuel Arique** describes how their lives are now worse:

*"Settlers have come in, they have invaded our territory. We have been expelled from everything that was ours. We will work but just for the minimum. To educate our children, to feed ourselves but nothing more."*



FILM TIME: 00:48:09 to 00:50:45

When the film looks at artisanal mining's role in the Congo's long civil war, **Michael Gibb** of Global Witness points out that gold's legality makes it easy to exploit:

*"All you need to do is find a weak link in the international supply chain, where you can slip your quantity of gold into the trade flows without anyone asking too many questions or looking too hard at where it came from."*



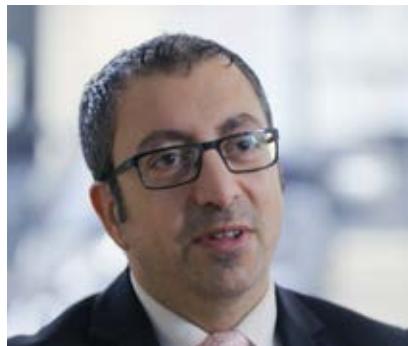
FILM TIME: 00:59:44 to 1:03:18

In the inspiring story of **Kahambu Vaharenie**, a Congolese mother and farmer whose village was terrorized by rebel forces, she and her small team of women miners have become among the first in Congo to have their conflict-free and traceable gold sold to international jewellers:

*"Gold mining has allowed me to keep farming. I will harvest 120 metres of cacao. So the money I earn allows me to continue farming. As long as it rains, we will be able to eat. We no longer live like before. We are blessed."*

## EDUCATIONAL ACTIVITIES

- What barriers do Kahambu and her fellow miners face because they are women?
- If they could still make a living from farming, without their crops being destroyed by violence or being unable to sell their products, do you think they would mine gold? Why or why not?
- What can other artisanal and small scale miners learn from their success?



FILM TIME: 01:15:41 to 01:17:22

In the film's final segment, auditor and whistleblower **Amjad Rihan** believes clean gold is our right:

*"We have a responsibility to know – and the right to demand – that the gold we use is clean."*

### FURTHER DISCUSSION

- How does artisanal and small scale gold mining drive conflict and war? How can gold mining effect positive change in developing countries?
- Has the film changed how you would buy gold? How important is it to be conflict-free and traceable?
- What do you know about fair trade? What other products can you buy that are certified fair trade?
- Around the world, national gold repositories already store more gold than humanity will every need. Yet banning gold mining would be devastating to artisanal and small scale gold miners. Beyond fair trade, how else can we support miners in other countries?

## EDUCATIONAL ACTIVITIES



### ASSIGNMENTS

- If you wanted to buy responsibly mined gold, could you? Can any jewellers or retailers tell you where they get their gold or have a policy on conflict gold? What about diamonds or other materials?
- Do a presentation on fair trade. What does it take to be certified in Canada? What are the advantages and disadvantages to both companies and producers?

### RESEARCH ESSAY: CONTINUE THE MERCURY STORY

The film identified a solution to help miners recover gold without mercury.

- Learn more about the methods to concentrate gold. Can all artisanal miners use them?
- Why is mercury pollution so worrisome? What are its long-term consequences?
- What is the Minamata Convention and how will it affect miners?

## EDUCATIONAL ACTIVITIES

### RESOURCES & SUGGESTIONS TO GO FURTHER

#### Campaigns

The Shadow of Gold - Film Website with Take Action page  
[theshadowofgold.com](http://theshadowofgold.com)

Earthworks - No Dirty Gold  
[earthworks.org/campaigns/no-dirty-gold](http://earthworks.org/campaigns/no-dirty-gold)

IMPACT - Just Gold  
[impacttransform.org/en/work/project/just-gold](http://impacttransform.org/en/work/project/just-gold)

#### Responsibly Produced Gold

Fair Trade Gold  
[fairgold.org](http://fairgold.org)

Fairmined  
[fairmined.org](http://fairmined.org)

OECD Booklet - Responsible Supply Chains in Artisanal and Small-Scale Gold Mining  
[oecd.org/daf/inv/investment-policy/FAQ\\_Sourcing-Gold-from-ASM-Miners.pdf](http://oecd.org/daf/inv/investment-policy/FAQ_Sourcing-Gold-from-ASM-Miners.pdf)

#### Conflict Gold

The VICE - Guide to the Congo  
[vice.com/en\\_ca/article/nnemm8/the-vice-guide-to-congo-1](http://vice.com/en_ca/article/nnemm8/the-vice-guide-to-congo-1)

Global Witness  
[globalwitness.org](http://globalwitness.org)

Reuters Investigates - New Gold Rush  
[reuters.com/investigates/special-report/gold-africa-smuggling](http://reuters.com/investigates/special-report/gold-africa-smuggling)

The Fair Congo Initiatives  
[faircongo.com](http://faircongo.com)

#### Mercury

Podcast - Mercury, California Gold Rush  
[podshipearth.com/gold](http://podshipearth.com/gold)

Minimata Convention on Mercury  
[mercuryconvention.org](http://mercuryconvention.org)

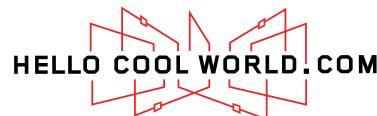
Artisanal Gold Council  
[artisanalgold.org](http://artisanalgold.org)

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**KENSINGTON**



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## FILM WEBSITE AND SOCIAL MEDIA

[theshadowofgold.com](http://theshadowofgold.com)

[twitter.com/kensingtontv](https://twitter.com/kensingtontv)

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