

**U4L3A2** | Barriers to sustainable resource management

**overview**

In this activity, you will read about four barriers to sustainable development and put the barriers into your own words. Then, select an article from four choices and conduct a jigsaw to understand the four barriers in a real-world context.

**learning goal**

- To understand that there are barriers, nationally and globally, to sustainable resource management.

**success criteria**

- Describe one barrier to a peer group.
- Accurately complete a summary organizer to explain the main barriers to sustainable resource management.

**Inquiry Question**

- What are the barriers to sustainable resource management?

**Barriers to sustainable development**

In a working paper from the International Institute for the Environment and Development, Halina Ward describes the following four obstacles to sustainable development (2009).

- Dominant economic growth models—too often it is these models which are considered inviolable, not people’s rights and welfare, or environmental processes and limits.
- Environmental costs and benefits of human activity are externalised (i.e. the environmental impacts of transactions of various kinds are not reflected in market prices, so they tend not to be taken account of in decision-making).
- Poor people are marginalized, and inequities entrenched.
- Governance regimes are inadequately designed in terms of internalising environmental factors, ironing out social inequities, and developing better economic models (2009).”

1. Put the four barriers described above into your own words.

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2. Select one article from the choices provided and read it, highlighting main ideas and key points.

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3. In your article groups, complete the article analysis organizer on the next page.

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**article analysis organizer**

Important terms:

Main ideas:

The issues:

Explain how this article describes one of the following barriers:

1. Economy over environment
2. Externalizing the costs
3. Marginalizing poor people and increasing inequality
4. Governance that prevents sustainable decision-making

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**The Great Economy Versus Environment Myth**

Ian Carey

Huffington Post

Posted: 04/05/2012 1:03 pm EDT Updated: 06/05/2012 5:12 am EDT

To many people the most prominent debate of the day is seemingly between the economy and the environment, and in today's economic climate the health of the economy is often deemed more important. Environmentalism, in some circles, is still thought to be only about protecting trees and cuddly animals instead of trying to protect the environmental conditions necessary to ensure the health of people all over the world. While environmentalists and environmental NGOs actually spend a great deal of time studying and reporting on how climate change will impact human and economic health, many people consider environmentalists to be critical and dismissive of any type of resource extraction or energy production and as never giving a thought to job creation or the impact environmental regulations would have on the profitability of certain industries.

In similar fashion, any action taken to protect the environment is seen by many as detrimental to the health of the economy. In the short term this perception is often correct: stricter pollution regulations hurt the profitability of companies and decrease the speed at which they are able to expand their operations while renewable energy is, at the moment, more costly to produce and will need continued government support to become as viable as its more polluting alternatives.

The problem with this perception is that the economy and environment are not in opposition with one another. In fact, environmental issues are not separate from any issue we face but actually a component of them all. You cannot combat poverty, disease, or suffering without a stable climate and a healthy environment for which people to live in and you cannot improve a struggling economy either.

A healthy environment is a prerequisite for a healthy economy. The economy relies on the planet's ability to provide resources and the necessities of life, if the pollution we produce is reducing its ability to do that it becomes catastrophic for the economy. In fact, climate change has the potential to (and most likely will) send us into one of the biggest global recessions ever.

"Climate change presents a growing, long-term economic burden for Canada," said the National Round Table of the Environment and Economy (NRTEE) in September of last year. The NRTEE is an independent agency created by the federal government in 1988 with the mandate to show "leadership in the new way we must think of the relationship between the environment and the economy and the new way we must act." According to their report last fall, climate change will start costing Canada in the billions by 2020 but that number could balloon up to as much as \$43 billion a year by 2050. The economic burdens climate change creates come from a disruption to Canada's timber industry arising from changing environmental conditions, a drain on our health care system from warmer weathers and increased premature deaths, flooding in coastal areas and many other factors.

The report did not go into the impacts felt from global affects such as a rise in the cost of food, and an increase in the need for humanitarian funds to help those affected by the drastic increase projected for extreme weather patterns. Take that into consideration as well and the future looks grim for Canada's economy if runaway climate change is allowed to continue.

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Last year a report showed that climate change is to blame for the rise in the cost of food. Food prices, as with energy, have a trickle-down effect on the rest of the economy, when people have to pay more for food it causes inflation and means everyone spends less on everything else. The more climate change creates harsher conditions that are detrimental to global food production the more the global economy suffers.

The increase in extreme weather patterns that we have seen in the last few years are projected to increase in quantity and size as climate change progresses, and in addition to causing massive amounts of human suffering they are also quite costly. In 2011 the United States experienced 14 extreme weather events, all of them costing more than a billion dollars each.

The impacts of climate change have far greater consequences than sheer economics, however. While it may be possible to put a dollar figure on the costs involved in relocating people, providing humanitarian aid to countries experiencing drought, and the cleanup of areas that have experienced extreme weather or flooding, calculating the cost of human suffering involved in those occurrences and putting a dollar figure on it is of course impossible.

There is nothing more threatening to the health of our economy than climate change, yet frequently there are those defending environmentally destructive activities by claiming they are doing so for the sake of the economy. The truth is actually that the action they are defending would most likely be good for the economy in the short term but in the long term would also contribute to future economic hardship and the risk of massive global recession, not to mention the incalculable costs of human suffering. Perhaps it's time for Canada, and much of the rest of the world, to start looking at the long term implications of a damaged environment when mapping out their current economic strategies.

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**The Story of Stuff: Externalized Costs and the \$4.99 Radio**

**Annie Leonard**

Executive Director, Greenpeace USA

Posted: 05/09/2010 5:12 am EDT Updated: 05/25/2011 3:45 pm EDT

Walking to work one day I wanted to listen to the news, so I popped into Radio Shack. I found a cute little green radio for \$4.99. Pleased with my bargain, I stood in line to pay, but then started wondering: how could \$4.99 cover the cost of extracting the raw materials, manufacturing the parts, assembling the radio, and getting it into my hands?

Whenever I go to buy something I get sidetracked, thinking of how it got here. It's an occupational hazard. I spent a decade traveling around the world, visiting the factories where our stuff is made and the dumps where it goes when we don't want it any more. What I learned makes it impossible for me to look at anything and not see the journey it made through the global take-make-waste system.

The metal in that \$4.99 radio was probably mined in Africa. The petroleum that went into the plastic probably was pumped from Iraq, and the plastic itself produced in China. The packaging came from forests in Brazil or Canada. Maybe the parts were then shipped across the ocean to Mexico, where some 15-year-old in a maquiladora assembled the radio. There it was put on a truck or a train and shipped to a distribution center in Southern California, then 500 miles north to my local store.

Four-ninety-nine? That wouldn't pay for the shelf space it took up until I came along, let alone the salary for the guy who helped me pick it out.

That's when I realized: I didn't pay for the radio. So who did?

A study currently underway for the United Nations is calculating the cost of pollution and other environmental damage caused by the 3,000 largest publicly held corporations in the world. The study, which will be published this summer, has found that the cost of environmental damage by these companies is \$2.2 trillion, or more than one-third of their profits if they were held financially accountable. This includes greenhouse gas emissions, other pollution, and water degradation. The final amount is likely to increase once additional costs – like toxic waste – are incorporated.

The Guardian newspaper wrote: "The report comes amid growing concern that no one is made to pay for most of the use, loss and damage of the environment, which is reaching crisis proportions in the form of pollution and the rapid loss of freshwater, fisheries and fertile soils." Economists call that externalizing costs, and it's how corporations hide the true cost of making and selling cheap stuff – costs that are never recorded on the balance sheets and consumers never see. As David Korten writes in *When Corporations Rule the World*, "Externalized costs don't go away – they are simply ignored by those who benefit from making the decisions that result in others incurring them."

What the UN report means is that a big chunk of the profits these big companies are making is due not paying the full cost of extraction, production, distribution and disposal. They are shoving a whole range of costs – from pollution to climate change to water depletion – onto us. Communities around the world are bearing the costs with degraded health, soil, water and climate change. That's just not fair.

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Which takes us back to the original question: Who paid for that \$4.99 radio? Some people paid with the loss of their natural resources. Some paid with the loss of clean air, with increased asthma and cancer rates. Some workers paid by having to cover their own health insurance. Kids in Africa paid with their future: a third of the school-age children in parts of the Congo now drop out to mine metals for electronics. All along the way, people pitched in, or were forced to, so I could buy a radio for \$4.99 – so cheap that if it broke I could just throw it away.

The UN report is a good first step at showing the global scale of externalized costs. If we're going to get our economy and environment back in order, a top priority must be forcing companies to pay the full costs of production. In economist-speak, this means internalizing externalities. That would be a strong motivator to get companies to invest in the cleaner, less polluting approaches and encourage all of us to avoid superfluous consumption.

If the true cost of that cotton t-shirt or iPod was included in the price tag, we might think twice before throwing it out and replacing it before we really need to. Think about that next time you look at those insanely low prices on so much consumer stuff – who is really paying the full cost of producing all this? Not the companies that sell it.

Annie Leonard is author of *The Story of Stuff: How Our Obsession With Stuff is Trashing the Planet, Our Communities and Our Health - and a Vision for Change*, just published by Free Press, please see [www.storyofstuff.org](http://www.storyofstuff.org) for more information.

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**Excerpts from “Cambodia's sugar rush leaves farmers feeling bitter at 'land grab'”**

**Kate Hodal in Koh Kong**

Tuesday 9 July 2013 21.10 BST Last modified on Thursday 22 May 2014 01.20 BST

The plantation extends as far as the eye can see, row after row of green leaves swaying against the dusky blue light until, finally, it merges with the horizon. There are no houses, no animals, no people. Just sugar. Standing by a rickety wooden fence that separates her clapboard home from the field in front of us, Yoen Sarin, 29, waves her hand in an arc. "My land extended from there to just over there." She narrows her eyes. "The company tried to bulldoze their way closer but I built this fence, and even though they've already knocked it down twice, I'm not moving. I keep rebuilding it."

Yoen Sarin is just one of thousands of Cambodian farmers who claim they are losing their land and livelihoods to big sugar plantations, some of which are directly supplying the EU through companies such as Tate & Lyle Sugars.

Nearly 100,000 hectares (250,000 acres) have been cleared in three provinces to make way for sugar plantations since 2006, activists allege – and most of that land, they argue, has been stolen from subsistence farmers.

Sugar is big business in Cambodia, thanks to a preferential EU trade scheme called Everything But Arms (EBA), which allows Cambodian sugar to be sold duty-free on the European market at a minimum price per tonne. Official figures show that 97% of Cambodia's €10m (£8.5m) sugar exports went to the EU last year, and Tate & Lyle bought 99% of them.

Although the initiative is intended to bolster the world's least-developed countries, the villagers say they have not profited from the deal at all.

"When the company came in May 2006, they bulldozed without consultation or any environmental impact assessment," said Teng Kao, 52, a village representative from Koh Kong province who lost nearly 10 hectares to the plantations. "They bulldozed the fields and streams. They shot our animals. After about 100 families' land was taken away, we started taking pictures."

The "company" Teng Kao refers to is one of two Cambodian entities owned by the Thai group KSL. For the past two years, these companies have sold all of their sugar cane to Tate & Lyle. Now, Teng Kao and some 200 other villagers are taking their fight to the high court in London.

**Criminal violence**

Backed by British law firm Jones Day, the villagers have filed a lawsuit against Tate & Lyle, claiming that KSL were complicit in government moves to evict them to make way for the plantations. They also say they were insufficiently compensated for the land they lost, and faced "multiple instances of battery and criminal violence" during which villagers were shot at and wounded, with one activist murdered.

The villagers are claiming compensation for some of the 48,000 tonnes – or roughly €24m worth – of sugar that Tate & Lyle's London refinery has allegedly received since 2010. Tate & Lyle denies that its supplier, KSL, was involved in land clearances and claims that the land was owned by the government when it was sold to KSL.

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Land rights are a highly contentious issue in Cambodia. Private deeds were abolished under the communist Khmer Rouge, leaving subsistence farmers vulnerable to recent surges in land-grabs and mining and property developments. Campaigners estimate that nearly three-quarters of the country's arable farmland has been granted to private companies as economic land concessions, resulting in the displacement of more than 400,000 people since 2003.

Under Cambodian law, land possession can be established using various legal documents, not just land deeds. As many of the villagers in Koh Kong claim to have such papers, they say their land was stolen from beneath their feet. "I've been living here since I was born – this is my ancestral land," said Teng Kao. Tate & Lyle contends that it engaged a third-party organisation to ensure that KSL complied with legal, ethical and sustainability standards. The auditors concluded that land concessions were legitimate and that villagers who occupied the land "were given compensation and resettled by the Cambodian government prior to the concessions being granted".

Tate & Lyle says KSL provided documentation to prove that compensation had been paid and alternative land parcels provided to the villagers affected, and says it is confident that the sugar it has purchased from Cambodia "is free of breaches of human rights". But it also says it is ready to break its contract with KSL if "evidence is forthcoming of any wrongdoing by our supplier".

Since they lost their farmland to the plantations, many villagers say they have been forced to seek work from the very company they are now suing. "I had to pull my kids out of school and send them to work on the plantation after they took our land away because we couldn't afford to eat," said Chea Sok, 38, a claimant in the lawsuit.

"We work together in the plantation now cutting 1,000 stems of sugar cane a day [for 79p]. It's exhausting and hot and the bundles are so heavy for [my children], they get fever working in the field. They've hardly grown at all – sometimes we don't even have enough rice to eat."

While visiting one of the KSL plantations in January the Guardian saw at least a dozen underage children cutting sugar cane, including some as young as nine years old. The Guardian also filmed children receiving payment for their work on the plantation, and interviewed parents who confirmed that their children worked in the fields and received payment for their labour. While it is difficult to establish just how many children may be working in the fields at any given time, campaigners say that hundreds may cut sugar cane on the KSL plantations during harvest, based on their interviews with families affected by the concessions.

Tate & Lyle Sugars says it does not condone or authorise child labour and would investigate any evidence that its supplier was using it. It says it would take steps to remedy the situation if it found KSL had been using children on its plantations, and would terminate its contract with KSL if the situation could not be resolved. KSL did not respond to multiple requests for comment.

The villagers suing Tate & Lyle are only a small number of those affected by the EU's demand for Cambodian sugar. Activists from the Clean Sugar Campaign, a coalition of NGOs and villagers affected by the concessions, report widespread allegations of human rights abuses, including forced evictions across three provinces – Koh Kong, Kampong Speu and Oddar Meanchey – state-sanctioned violence, destruction of farmland and cattle, relocations to non-arable land, child labour, destruction of protected forest and little-to-no compensation paid to villagers. Those who have resisted being moved off their land have been beaten, shot at and imprisoned, activists claim.

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"We see really only one benefit to the country, and that's for the sugar companies," said Eang Vuthy, of Equitable Cambodia, an NGO supporting the estimated 3,000 families who have lost land or community forest due to sugar concessions. "There are very few jobs at the plantations, the conditions are bad and the work is cyclical. This [deal] is actually making the people poorer."

Tracing the sugar is difficult, but official figures show that in 2012 Tate & Lyle imported 15,385 tonnes of Cambodian sugar – 99% of the total Cambodian sugar imported by the EU.

The company would not confirm how it sells that sugar on to its customers. But as Tate & Lyle is the EU's leading cane sugar producer, and cane sugar is a key component in retail and industrial goods, campaigners argue that Cambodian sugar probably ends up in many of the soft drinks, yoghurts, cakes and confectionery that we consume daily.

Most importantly, say campaigners, a victory would strengthen a sector of Cambodian society that has felt voiceless and powerless for far too long.

"I'm poor and not knowledgeable, and have been threatened by district and other provincial officials to not talk out, to not protect others and to remember I'm at risk of being evicted at any time because this land now 'belongs' to the company," said Yoen Sarin, as she looked out at the sugar plantation that replaced her crops.

"As long as the company gives us our land back, we won't protest anymore."

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**Nunavut premier wants more power over resource development**

**Mining a hot-button issue for Nunavut's Eva Aariak**

CBC News Posted: Sep 01, 2013 2:10 PM ET Last Updated: Sep 01, 2013 2:12 PM ET

Mining activity in Canada's north is set to boom, with 140,000 new jobs forecast in the next few years. In anticipation of the forecast growth, Nunavut Premier Eva Aariak is pushing the federal government for a "devolution" of powers which would allow the territory more control over resource development.

Nunavut, created in 1999, is the last jurisdiction in Canada in which major decisions about its land and resources are made in Ottawa.

"It makes economic sense," says Aariak, speaking to Sunday Edition guest host Karin Wells. "Right now, none of the royalties goes to Nunavut. Under devolution, we would be able to share in that."

Currently, Nunavut has one mine operating. The Agnico-Eagles Meadowbank gold mine contributes to about 30 per cent of the territory's GDP last year. Another four mines are being developed in the region.

While environmental assessments are conducted under the aegis of the Nunavut land claims agreement, it's Ottawa that gets final say on whether a mine is given the green light.

"Soon we will see an ice-free Northwest Passage," Aariak said. "Before long, the world will be at our doorsteps."

Aariak said negotiations for devolution need to start immediately. More than half of the territory's population is under 25 years old, and Aariak said she would like to have a say in what kind of opportunities residents will have in the future.

"Devolution will provide us the power for controlling the pace of development and allow us to have environmental stewardship," she said.

Aariak said in the end, it's about "self-reliance" and making sure the territory can "stand on its own two feet."

**Diversification better than mining**

However, Catherine Coumans of MiningWatch Canada cautions Aariak about moving so quickly towards having Nunavut govern its own resources. The non-profit watchdog tracks environmental and sustainability issues around mining.

Coumans, in an interview on Sunday Edition, said the premier would do better to concentrate on diversifying instead of relying on mining exploration.

"There's no promise those mining jobs would go to people in the territory," Coumans said. "In fact, a mining company says it's bringing back Chinese foreign temporary workers to a mine in B.C."

Coumans said if you examine how mining has affected developing countries — such as Ghana and Zambia — you'll find none of them have benefitted from that type of resource development.

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"The Oxford Policy Management group [which works with the World Bank, NGOs and UNICEF] examined that issue and found that in 10 years, countries that only developed its natural resources were worse off," Coumans said.

Coumans said that the level of governance needed to make sure the territory doesn't end up worse off than when it began developing its resources is "quite costly."

'Mining companies will siphon money off through transfer pricing...profits are made by the subsidiary so no taxes are paid.'—Catherine Coumans, MiningWatch Canada

Regulating mining companies and making sure their profits remain within the country's borders involve creating institutions for governance prior to any development.

"Mining companies will siphon money off through transfer pricing," explained Coumans. "They set up subsidiaries in tax havens around the world and they enter into transactions in which profits are made by the subsidiary so no taxes are paid [where the mine exists]."

Coumans said Nunavut would be better off spending what money it has on education and infrastructure rather than having to regulate mining concerns.

She also points out that mines have a short life and in the end, it's left up to taxpayers to pay for the resulting legacy costs — dealing with the toxic waste left behind.

"There needs to be more critical awareness around the costs associated with mining and not just the benefit," Coumans said.