



Canadian mining and ill health in Latin America: a call to action

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Abstract

This commentary argues that Canada's public and global health communities have a special ethical and political responsibility to act to reverse the harms associated with Canadian mining activities in Latin America and beyond through advocacy, research, and using their public voice. We begin with an overview of the direct and indirect health effects of mining, drawing especially on Latin America where 50–70% of mining activity involves Canadian companies. Then we examine the judicial, legislative, financial, and diplomatic contexts that make Canada such a welcome host and champion of the mining sector. Finally, we turn to the responsibility of the public and global health communities, offering concrete recommendations for using research, practical expertise public health solidarity networks, and political clout to speak out and advocate for policies that redress the harms caused by mining.

Résumé

Ce commentaire présente le point de vue que les communautés de santé publiques et globales du Canada ont une responsabilité morale et politique en vue d'agir au travers de leur plaidoyer, de leur recherche, et de leur voix publique – pour défaire les dommages générés par les activités de l'industrie minière canadienne en Amérique latine et ailleurs. Nous commençons en offrant une vue d'ensemble des effets directs et indirects sur la santé causés par l'extraction minière, soulignant spécialement le contexte latino-américain, là où de 50 % à 70 % des activités minières impliquent des compagnies canadiennes. Nous examinons aussi les contextes judiciaires, législatifs, financiers, et diplomatiques qui font que le Canada est un hôte bienvenu et un champion du secteur minier. Finalement, nous nous retournons vers la responsabilité des communautés de santé publique et globale, en offrant des recommandations concrètes afin d'utiliser la recherche, l'expertise pratique, les réseaux de solidarité de santé publique, et le poids politique afin de redresser les torts causés par l'industrie minière.

Keywords Mining · Public health · Latin America · Business · Social determinants of health · Extraction and processing industry

Mots-clés Industrie minière · Santé publique · Amérique latine · Canada · Secteur privé · Déterminants sociaux de la santé · Industrie extraction et transformation

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Introduction

The business practices of transnational corporations (TNCs) have come under increasing scrutiny as determinants of ill health and health inequity. While the occupational and environmental health hazards of mining are long-recognized, the transnational dimensions of mining industry harms have received inadequate attention. Nowhere is this global health issue more pressing than in the Canada-Latin America mining nexus: 50–70% of Latin American mining activity involves Canadian companies, with significant health injustice consequences (Working Group on Mining and Human Rights in Latin America 2014). Recent research, summarized in Table 1, enumerates mining's principal adverse health effects, both direct

and indirect (e.g., as mediated by loss of livelihoods and destruction of community cohesion) (Schrecker et al. 2018). For example, the Canadian-owned Marlin Mine in Guatemala has been linked to various environmental damages, water scarcity (the mine uses 45,000 L of water per hour), forced dispossession, heavy metal poisoning, and increased poverty and food insecurity in nearby Mayan communities (Caxaj et al. 2014; Sandt 2009; Granovsky-Larsen 2017). Between 2006 and 2009, local communities received just 1.4% of the mine's total

earnings (less than US\$4.5 million, while Goldcorp pocketed \$269.3 million in net earnings) (Zarsky and Stanley 2013). In Colombia, the activities of Canada's Pacific Coal Resources Ltd. contributed to water scarcity and respiratory disease, dizziness, and abdominal pain in community members (Rodríguez Albor et al. 2014). Additionally, many people have been forcibly displaced by environmental destruction and water and soil contamination (Working Group on Mining and Human Rights in Latin America 2014).

Table 1 Adverse health effects of mining in Latin America and beyond

Direct	
Toxic environmental exposures	Miners and community members are exposed to water, soil, and air contaminated with heavy metals and can be exposed to vaporized mercury and airborne dust. Mine tailings that leach into waterways and soil generate heavy metal accumulation in fish and crops, whose consumption can result in elevated heavy metal levels in hair, urine, and blood. Exposure to heavy metals and air pollution—directly or through diet/use of water—is linked to cancer and adverse neurological, respiratory, dermatological, and gastrointestinal symptoms and illnesses.
Hazardous working conditions	Miners are exposed to occupational hazards (e.g., explosives, mine collapses, dust, toxic gases, and substances) that contribute to injury and death through workplace accidents, lung diseases, and cancer.
Death, assault, and injury	Community resistance to mining activities often meets with suppression of protests, targeted assassinations, and injury/assaults by security personnel hired by the mine or even by governments.
Vector-borne diseases	Open mining pits create breeding grounds for mosquitoes, which contribute to spread of malaria and other vector-borne diseases among miners or mining communities.
Mental illness and stress	Violence, poverty, community disruption, and other stress-related issues linked to mining activities contribute to increased mental distress among community members.
Indirect	
Loss of traditional and ancestral territories	Community members may lose access to their land and natural resources, including through forced displacement or coercive land sales, resulting in disconnection from land and natural resources (e.g., water) that are integral for sustenance, livelihoods, and cultural and spiritual well-being.
Reduced agricultural yields and health of livestock	Heavy-metal contamination of water and soil from mines, or water scarcity due to water depletion by mining processes, can impede crop growth and damage the health of livestock. Agricultural intensification, leading to farmer stress and soil erosion, can occur when community members lose access to larger plots of land. Worse agricultural yields and livestock illnesses compromise food sovereignty and livelihoods of community members.
Poverty and income inequality	Community members who work in mines have increased income relative to those who do not work at or resist mines. Most communities do not receive a significant share of mine revenue. Community members who lose access to their land and natural resources also lose their livelihood, forcing many to migrate outside their community or country.
Strains to community cohesion	Mines can divide community members into pro- and anti-mining groups, creating tensions and power differentials within the community.

A bibliography of evidence presented in Table 1 is provided in Supplementary Appendix 1, and a much longer bibliography on extractive industries and global health is available from the Independent Panel on Global Governance for Health at: <https://www.uio.no/english/research/interfaculty-research-areas/globalgov/globalgov-for-health/publications/2017/bibliography%3A-global-health-and-extractive-industr.html>

Local protests against mines frequently centre around health and environmental impacts. People near the Pascua-Lama project spanning the Chile-Argentina border, owned by Toronto-based Barrick Gold, long resisted the mine on environmental grounds (Working Group on Mining and Human Rights in Latin America 2014; Urkidi and Walter 2011). In 2018, the Chilean government definitively closed the open-pit Pascua-Lama gold mine (and copper and silver projects) due to Barrick Gold's environmental violations and manipulation of data on contamination and depletion of fresh water (Jamasmie 2018). Violence against environmental activists, and Canadian diplomatic indifference to it (Gordon and Webber 2016), poses a growing problem. From 2000 to 2015, incidents involving 28 Canadian mining companies in 13 Latin American countries resulted in 44 deaths, 403 injuries (mostly during protests and confrontations), and 709 cases of "criminalization," involving legal complaints, arrests, detentions, and charges (Imai et al. 2017).

Why is Canada so welcoming to the mining sector?

In 2017, approximately half of the world's publicly listed exploration and mining companies were headquartered in Canada, and 59% of global mining financing passed through Toronto's stock exchanges that year (Natural Resources Canada 2018; TSX Inc 2018). Canada's role as a global mining hub escalated in 1987 when, in response to falling mineral prices and rising Indigenous activism, the Canadian government and mining industry hatched a support plan (Heidrich 2016). By 1994, this included provincial tax cuts for Canadian mining companies and in 1996 a federal commitment (Minister of Public Works and Government Services Canada 1996) to use diplomatic and aid agencies to facilitate international expansion of Canadian mining, particularly in "developing" countries (Heidrich 2016). Latin America emerged as a desirable destination because mining codes were overhauled in the 1980s and 1990s—many with input from Canadian mining companies—under structural adjustment pressures to incentivize foreign investment (Gordon and Webber 2016; Grinspun and Mills 2015). Since then, three policies have supported Canadian mining interests in Latin America and beyond.

Distorted financial incentives

Mining companies enjoy a tax credit (currently 15%) for both domestic and foreign exploratory activities, helping to explain the proliferation of junior exploration firms (Heidrich 2016; Deneault and Sacher 2012). Raising capital is facilitated by Canada's federal and provincial securities and stock market regulations, which are less stringent than those in the US and other countries, and are particularly conducive to unlimited

speculation (Imai et al. 2017; Deneault and Sacher 2012). For example, companies listed on Canadian stock exchanges are not required to disclose as much information as in the US about how business activities affect market value (e.g., deaths or injuries associated with mining projects) (Imai et al. 2017). The federal government also channels financial support to the mining sector through the Canada Pension Plan (CPP) and Export Development Canada (Sagebien et al. 2008; Veltmeyer 2013). As of March 2017, the CPP Investment Board held approximately \$748 million in publicly traded equity in Canadian mining companies that operate in Latin America (CPP Investment Board 2017), and in 2017 alone, Export Development Canada facilitated \$14 billion of investment in mining firms (Export Development Canada 2017).

Legislative and judicial gaps

In 1998, the first lawsuit against a Canadian mining company was filed in Canada (North and Young 2013). Since then, Canadian courts have consistently dismissed lawsuits on grounds that events cited occurred outside their jurisdiction. This position was challenged in 2013 when an Ontario court ruled that lawsuits brought forward by Guatemalan Indigenous community members against Toronto-Based HudBay Minerals Inc. could proceed; discovery hearings were underway at the end of 2017 (Kassam 2017). Extraterritorial criminal prosecution could be an alternative route to justice, but this approach normally relies on the Crown to prosecute, which is unlikely (Nwapi 2017).

Advocacy efforts have meanwhile focused on legislative reforms to control harms associated with Canadian mining abroad (Imai et al. 2017). Bill C-300, narrowly defeated in 2010, would have required Canadian mining companies to abide by international human rights and environmental standards; this is the closest that Canada has come to comprehensive legislative reform to regulate the mining industry abroad (McKay 2009). Indeed, the Canadian government has, since 2005, consistently resisted legislative reform, opting instead to promote voluntary "corporate social responsibility" measures (Kamphuis 2012). In January 2018, Global Affairs Canada announced a Canadian Ombudsperson for Responsible Enterprise with the power to publicly investigate mining-related conflicts and recommend penalties for Canadian mining companies (Global Affairs Canada 2018). While this marks a small step forward, it does not reverse Canada's long-standing defence of Canadian mining interests in Latin America and beyond.

Unhealthy diplomacy

Diplomatic support for the Canadian mining industry involves various formal and informal channels (Veltmeyer 2013). At the 2010 G-20 Toronto summit, Canada's Prime Minister Stephen Harper met with President Cristina Fernández de

Kirchner of Argentina and Barrick Gold's CEO Peter Munk to discuss the contentious Pascua-Lama project (Grinspun 2014). Political and financial support for the Canadian mining industry has also included “updating” mining codes in Latin American countries under the guise of international development assistance (Sagebien et al. 2008; Veltmeyer 2013). In 1997, the Canadian International Development Agency (CIDA) helped rewrite Colombia's mining code to favour Canadian mining interests (Sagebien et al. 2008), and in Peru, CIDA funded and participated in mining reforms from 2002 to 2012, then subsidized a development project near a Barrick mine (Gordon and Webber 2016). The revolving door among industry, government, and academia has involved, for instance, the naming of Rio Tinto Alcan's CEO and the director of the University of Toronto's Munk School of Global Affairs (partially funded by and named for Barrick Gold's late founder) to an advisory panel on restructuring CIDA, which brought it directly under the control of the Ministry of Foreign (now Global) Affairs (Blanchfield 2013).

On another front, foreign governments' efforts to control TNC activities are subject to investor-state dispute settlement (ISDS) mechanisms in trade and investment agreements shepherded by the Canadian government (Grinspun and Mills 2015). For example, in 2009, Canadian/Australian mining conglomerate Pacific Rim/Oceana Gold filed a US\$250 million ISDS suit against El Salvador,¹ after the latter denied digging rights to the company due to environmental and regulatory violations (Provost and Kennard 2016). Similarly, in 2017, Toronto-based Gran Colombia Gold filed a US\$700 million claim under the Colombian-Canadian Free Trade Agreement because the Colombian government refused to approve an open-pit gold mine unless the company consulted local communities (Commodities, Mining 2017). In response to such “plunder extractivism” (Broad and Fischer-Mackey 2016), several Latin American countries are contemplating or—as in Costa Rica and El Salvador—implementing regional or nationwide bans on metal mining.

Shaping a Canadian public and global health response to this issue

The heavy concentration of mining firms in Canada, and its historic reliance on mining as an engine of development and capital accumulation, places a special onus on Canada to set a positive example (as Norway has done in divesting its sovereign wealth fund from some mining and energy extraction firms) by protecting communities from the adverse (health)

¹ In 2016, the World Bank tribunal dismissed the claim, ordering OceanaGold to pay El Salvador US\$8 million of its total \$12 million in legal fees). Although the ruling vindicated El Salvador's efforts to protect health against mining, the very filing of the suit had a chilling effect on other countries seeking to regulate the mining industry.

consequences of mining (Working Group on Mining and Human Rights in Latin America 2014; Imai et al. 2017).

Now more than ever is the time to act: the Canadian public and global health communities have an obligation to leverage their broad interdisciplinary expertise and privileged societal role to “speak truth about power.” We propose three initiatives in our call for research and action to address the (ill) health effects of Canadian mining abroad:

1. *Advance* a multidisciplinary research agenda to expand the evidence base for short- and long-term policy changes to redress the ill (health) effects of Canada's transnational mining industry; back aspirational studies that chart the making of post-extractive, health-enhancing societies; and defend the independence of global health researchers at a time of increasing corporate (including mining TNC) influence over academia (Brisbois et al. 2016).
2. *Advocate* for initiatives that address the negative health consequences of the transnational mining industry through: changes to Canada's tax and securities policies; a fundamental reassessment of ISDS and foreign policy practices; and opening of Canadian courts to communities harmed by Canadian mining abroad.
3. *Support and provide solidarity* to existing civil society advocacy and activism in Latin America, Canada, and beyond to hold the Canadian government and mining companies accountable for health and human rights abuses.

Above and beyond these initiatives, the issue of moral and legal responsibility of companies based in Canada for their worldwide conduct (and that of their subsidiaries) is a transcendent (health) issue in the realm of global governance for health and deserves the concerted attention and activism of global health researchers and practitioners. In order to avoid a “race to the bottom,” redressing Canada's deplorable role in buttressing the mining industry should be accompanied by the Canadian public health community's international advocacy and leadership in establishing precedents and advocating for regulations to ensure that similar nefarious practices are not simply transferred to other “home” countries.

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