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Perspectives on community health issues and the mining boom–bust cycle

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ABSTRACT

The health of mining communities is becoming a priority for the mining industry, governments, and researchers. This paper describes an exploratory qualitative study into community health issues and mining activities (associated with the mining boom–bust cycle) from the perspective of health and social service providers in the northern Canadian coal mining community of Tumbler Ridge, British Columbia. Health and social service providers report on increases in pregnancies, sexually transmitted infections, and mine related injuries during booming mine activities. During bust times, mental health issues such as depression and anxiety were reported. Overarching community health issues prominent during both boom and bust periods include burdens to health and social services, family stress, violence towards women, and addiction issues. This paper concludes by providing recommendations as to how the industry can enhance community health made by this important stakeholder group.

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Introduction

Today, governments, non-governmental organizations, communities, and mining organizations expect mining companies to plan for and mitigate health impacts associated with development projects. The mining sector has recognized the importance of health, and has made specific commitments to enhancing the health of associated communities. For instance, the International Council on Mining and Metals (ICMM) identifies in their sustainable development framework that corporate members are committed to implement and measure their performance against ten principals. Under

Principal 5: *Seek continued improvement of our health and safety*, the ICMM includes implementing “a management system focused on continual improvement of all aspects of operations that could have a significant impact on the health and safety of our own employees, those of contractors and the communities where we operate” (International Council on Mining and Metals, 2008, p.10). These commitments recognize that “beyond work related diseases, few endeavours attempt to prevent diseases that affect the wider community or to consider the community’s broader well-being” (Mining, 2002); and that “Ensuring that improved health and education or economic activity will endure after mines close requires a level of planning that has too often not been achieved” (Mining, 2002, p. xvii). The following section highlights literature related to community health and the mining sector as developed by international organizations over the past decade.

The most comprehensive report available to date related to mining community health is the literature review of worker and community health and mining by Stephens and Ahern (2001) as part of the Mining, Minerals and Sustainable Development (MMSD) project. This review identified that mining community health research has historically focused on community exposure to environmental toxins (Stephens and Ahern, 2001). The final report of the MMSD project *Breaking New Ground* reports community health as an important parameter in their chapter on Local Communities and Mines (Mining, Minerals and Sustainable Development Project, 2002, Chapter 9, p.203). However, the description of community

Abbreviations: BC, British Columbia; CAF, Community Adjustment Fund; EIA, Environmental Impact Assessment; HIA, Health Impact Assessment; ICMM, International Council on Mining and Metals; IFC, International Finance Corporation; MABC, Mining Association of British Columbia; MAC, Mining Association of Canada; MEMPR, Ministry of Energy, Mines, and Petroleum Resources; MMSD, Mining, Minerals and Sustainable Development project; WCC, Western Canadian Coal; WD, Western Economic Diversification Canada; WHO, World Health Organization

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health issues is limited to four paragraphs and lacks a detailed description of issues a mining company can/should address in sustainable development/community relations planning (Mining, Minerals and Sustainable Development Project, 2002). In 2003, the International Finance Corporation (IFC) identified potential health impacts associated with private sector projects in emerging economies to include: changes in nutritional status, mortality and morbidity, HIV and other communicable diseases, endemic diseases, impacts of in-migration on health services and associated infrastructure, and environmental (exposure) health impacts (International Finance Corporation, 2003, p. 12). More recently, the IFC released a guidebook to introduce the health impact assessment (HIA) procedure with main objectives of: providing guidance to associated corporations in relation to the HIA process, and assisting in assessing potential impacts to community health as a result of project development. However, the HIA process as outlined by the IFC is limited to environmental health areas, and does not mention health issues associated with other determinants of health (International Finance Corporation, 2009).

Although nutritional status, communicable diseases such as HIV, and illness stemming from exposure to environmental toxins have been highlighted as important issues for the mining industry to consider, plan for, and mitigate, today the mining sector is engaged in directives that commit to sustainable development and corporate social responsibility. These commitments require the industry to update the concept of community health, and to incorporate this consideration into mine planning. The World Health Organization (WHO) defines health as “a state of complete physical and mental and social well being and not purely the presence or absence of disease” (World Health Organization, 1948, p. 100) and “the extent to which an individual or a group is able, on the one hand, to realize aspirations and to satisfy needs, and on the other, to change or cope with the environment” (World Health Organization, 1986, p. 1). Recently, the mining sector published an important document regarding the health of communities: the International Council on Mining and Metals (ICMM) Good Practice Guidance on Health Impact Assessment (International Council on Mining and Metals, 2010). This guidebook represents the first reference material produced by the mining sector that describes health beyond the presence and absence of disease or environmental exposures, and includes other factors that impact health (International Council on Mining and Metals, 2010). Commonly referred to as determinants of health, these factors can include: income and social status, social support networks, education, employment and working conditions, social environments, physical environments, personal health practices and coping skills, healthy child development, biology and genetic endowment, health services, gender, and culture (Health Canada, 2004).

To pursue this momentum within the mining sector, to contribute to industries' efforts to enhance the health of associated communities, and to investigate if communities are benefiting from mining sector community health-specific commitments and guidance frameworks, this paper presents an exploratory qualitative investigation into community health issues and mining activities from the perspective of health and social service providers in a remote Canadian coal mining community. Health and social service providers were chosen to participate in this study for two reasons: (1) health care providers have been recognized as important contributors to health status, and play an important role in shaping the health of a community (Health Canada, 2004), and (2) in order to gain a holistic view of how mining has affected community health, it is important to include perspectives from community residents who have experience with certain social determinants of health (gender, age, income, and education).

This paper is organized as follows. First, the Canadian/British Columbia (BC) mining context is briefly described with a focus on

the commitment made to communities. The next section provides a socio-economic description of the study community; Tumbler Ridge, BC. This is followed by a detailed explanation of the study's method including data collection and analysis, and then presentation of main findings. The final section discusses the results and highlights policy implications for the mining sector, governments, and researchers.

Study setting

Health commitments to mining communities in Canada and British Columbia

In Canada, the health of rural/remote mining communities has garnered little attention, although rural communities in general have become a priority for governments, researchers, and industry. This is especially the case since the global economic recession has left few rural communities unscathed, as many are dependent on natural resource development. As such, the Canadian Government recently recognized the need to strengthen economic prosperity and social cohesiveness in rural communities. As such, \$1 billion (CAD) over two years has been allocated, through the Community Adjustment Fund (CAF), to assist rural communities that are heavily reliant on resource-based industries, including mining (Department of Finance Canada, 2009). Western Economic Diversification Canada (WD) is the responsible governmental institution for delivering CAF funds in British Columbia, and to date, a total of 1092 CAF applications have been submitted to CAF, exceeding \$2 billion (CAD) in funding requests (Western Economic Diversification Canada, 2010). In Northern BC, 477 CAF applications were submitted for a total of \$685 million in program funding. The Northern Development Initiative Trust is an additional example of a current funding strategy targeting the sustainability of northern and rural communities in British Columbia. BC mining municipalities such as Logan Lake, Granisle, Stewart, and Tumbler Ridge have all applied for, and received funds from this initiative (Northern Development Initiative Trust, 2008).

Within the mining sector, additional commitments have been made to communities. For example, in 2004, The *Towards Sustainable Mining* framework developed by the Mining Association of Canada (MAC), representing many Canadian companies, indicated that MAC members will “provide lasting benefits to local communities through self-sustaining programs to enhance the economic, environmental, social, educational and health care standards they enjoy” (Mining Association of Canada, 2004, p. 1). In the western Canadian Province of British Columbia, the Government committed to supporting “strong, enduring relationships between the mining industry, communities and First Nations; the development and implementation of a made-in-British Columbia approach to sustainable exploration, mining and communities” in their 2005 Mining Plan (Ministry of Energy, Mines, and Petroleum Resources, 2005, p. 11). To recognize achievements in the field and sustainable development, the Mining Association of British Columbia (MABC) and MEMPR identified “enhancing the potential for creating economic, social, and cultural benefits for local communities or regions” as a key criterion (Mining Association of British Columbia, 2009). While the commitments made by MAC, MABC, and the BC Ministry of Energy, Mines, and Petroleum Resources (MEMPR) are strong, mining communities in Canada and BC are at present applying for and requiring financial assistance from federal and provincial sources as a result of the global economic recession. In addition, many mining communities in British Columbia have demonstrated historic economic vulnerability, demographic instability (Shandro et al., 2010), and negative health impacts (Shandro et al., 2010), stemming from declining and/or boom-bust economic and employment conditions.

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