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Social sustainability in northern mining communities: A study of the European North and Northwest Russia

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ABSTRACT

Social sustainability, one of the three pillars of the sustainable development framework, presents a challenging theoretical and empirical concept to investigate. Many of the prominent debates on sustainable development focus on the challenge of managing economic and environmental issues, leaving the social side of the equation less well-defined. The article expands on the concept of social sustainability through a qualitative study of mining projects in the European North and Northwest Russia, utilizing over 80 thematic interviews in local communities.

In our approach social sustainability is understood two dimensional: procedural and contextual. *Procedural social sustainability* refers to the planning and decision-making of the mining process during mining operations. *Contextual social sustainability* covers the specific features of the locality including historical experiences of extractive industries and future visions of the community. From the procedural perspective there were two general themes important for the local communities: knowledge and understanding of environmental changes caused by mining and second, the ability to be heard and have an impact on decisions about mining operation. From contextual dimension of social sustainability the main dilemma in Northern communities is between the fear and even anxiety of negative environmental impacts and viability of Northern localities generated by mining providing e.g. employment opportunities, prosperity and better service-structure.

1. Introduction

The social sustainability of mining is a key factor for the development of the industry. Approaches like corporate social responsibility and social licensing, along with industry developed self-regulation policies such as the Sustainable Development Framework (ICMM, 2012a) and the Community Development Toolkit (ICMM, 2012b) all underscore "a growing pressure on companies to address the concerns of communities before and during a project and after operations have ceased, to obtain a social license to operate and to avoid the costs associated with delays due to blockades and protests" (Blackmore and Levesque, 2013). Ignoring the social implications of mining development no longer remains an option.

Discussions on social sustainability are quite rare in mining research – the majority of 'social' research focuses on social impacts of mining (e.g. Lockie et al., 2009; Petkova et al., 2014; Rolfe et al., 2007; Tiainen et al., 2014) or social license to operate (e.g. Prno and Slocombe, 2012; Prno, 2013). The social sustainability perspective complements these approaches in two ways: first, it brings to the fore a more broad and comprehensive set of needs identified by local people, rather than reporting the experienced social impacts. Second, social sustainability stresses the importance of a temporal perspective, both past and future while a social license and social impact focus more on the present.

While sustainable development's basic premise, securing the needs of the future, remains one of the central objectives in

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decision making on natural resources, the broad goal engenders normative debate and lacks clear prescriptive definitions (Dryzek, 1997). Dividing the concept into three pillars – ecologic, economic, and social – and ensuring each receive consideration continues to drive both the practice and research fronts. Nevertheless, in much of the previous research, and also in political decision making, social sustainability often sits behind the debate between the economic and ecological aspects. One reason for this state of relative neglect rests in the difficulty in reaching clear definitions of the concept of 'social' in relation to sustainable development (e.g. Boström and Klintman, 2014).

The reason, perhaps, is the broad definition of social sustainability applied to cover a broad set of societal issues. According to Littig and Griessler (2005), social dimension of sustainability deals with satisfaction of basic needs and the quality of life, social justice and social coherence. Vallance et al. (2011) compared different kinds of definitions and suggest a threefold schema for understanding different approaches to social sustainability: 'development sustainability' addresses basic need, creation of social capital, justice, equity and so on; 'bridge sustainability' refers to needed changes in behavior to achieve environmental goals; and 'maintenance sustainability' refers to preservation of socio-cultural characteristics. And McKenzie (2004) discusses several definitions and comes to conclude that social sustainability is a positive condition within communities, and a process within communities that can achieve that condition. He names several indicators for reaching this goal: e.g. equity, widespread political participation, valued and protected local cultures and a sense of community ownership. Partridge (2005) identified common themes in different definitions of social sustainability, such as quality of life, equity, inclusion (physically and socially), access, a 'futures focus' and participatory processes as the key components to checklist for social sustainability. Partridge (2005) and also Koning (2001), McKenzie (2004), and Stren and Polèse (2000) all stress the importance of considering these issues both in the present context and for the future within the context of social sustainability.

Based on these theoretical discussions our attention focused on two dimensions of social sustainability: procedural and contextual. First, procedural social sustainability refers to political participation, participatory processes, equity, justice, inclusion, access and sense of community ownership (Partridge, 2005). Second, contextual social sustainability refers to the positive condition within communities (McKenzie, 2004), defined as social coherence (Littig and Griessler, 2005), creation of social capital, preservation of socio-cultural characteristics (Vallance et al., 2011) or valued and protected local cultures (McKenzie, 2004) and quality of life (e.g. Littig and Griessler, 2005; Partridge 2005) in the present situation and also thought over with the future perspective.

The dichotomy between procedure and context not only fits the existing research on social sustainability, but provides a definition that lends well to analyzing resource development. Procedural dimension not only addresses the actual development of the mine and the related activities (e.g. environmental impact assessment) but also takes into consideration the on-going nature of mine operations and the ability of residents to possess knowledge on these operations and hold influence over outcomes. Context allows for consideration of history, specific features of localities and future perspectives. With this definition, we aim to answer these two research questions: How is social sustainability perceived in northern mining communities? How does this compare with existing theoretical work on social sustainability?

To address these questions we look at local people's perceptions, experiences, needs and future hopes while living in the vicinity of a mining project. A strong opportunity exists to contribute empirically to the concept of social sustainability and we look at identifying issues of social sustainability perceived by individuals living close to mining operations through a qualitative study on northern mining communities in Europe and Northwest Russia. To draw out a complete range of social issues, we take both a short- and long-term perspective and, upon finding the commonalities that exist across the various cases, offer some insight on social sustainability of mining in the North.

The rest of the article is laid out as follows. We first describe the selected cases and elaborate on the data and methods used. Then, we focus on the findings and results of the study-local perception and understanding of conditions of social sustainability. Finally, we offer some conclusions regarding social sustainability with respect to mining communities in the north.

2. Cases

Due to the relative mineral wealth and the good infrastructure and a stable regulatory regime in Northern Europe, interest grew in the 2000s for developing mines in these rural and remote areas. Further, the Swedish, Norwegian, and Finnish governments promoted foreign investment in mining through legislation change, viewing the mineral sector as a vital foundation for growth in both the national and regional economies (see Finland's Minerals Strategy (2010) and also Fraser Institute (2013)). This interest extends to the European Union. The European Commission launched The Raw Materials Initiative in 2008 in order to secure access and increase domestic production of critical raw materials. The EU produces only three per cent of world production of metallic minerals, remaining highly import dependent on high-tech metals (COM, 2008, 2013). On the other hand, Russia is already a major exporter of metallic and other minerals. Understandably, because the mining industry serves as one of the main actors in sustainable socio-economic development in the Russian North, continuing and increasing production hold importance.

Given this new phase for the mining industry in the North – less state-led development in combination with a recent mining-boom – business is increasingly in the hands of multinational companies, making the industry more global and complex. Because of these changes, northern communities are dealing with a much different industry than the state-owned companies of the past. Much of the current research literature on multinational mining companies and social sustainability analyzes developing countries in the south; we propose it is also an issue worth examining in northern countries. This is to shed light on the peculiarities of northern mining communities as remote, partly sparsely populated, and with traditional land use and harvest.

Our research cases are host municipalities for mining projects, briefly described in the next Tables 1 and 2 with some statistical information. Some of the cases share a common history as traditional mine towns (Apatity/Kirovsk, Kiruna, Sør-Varanger) while mining is a more recent activity in others (Kittilä, Pajala) and in some, there are only plans for future mines (Kvalsund, Kolari). Therefore, we intend also to ascertain whether people's opinions and expectations are informed by their current living conditions along with their past experiences with mining.

Table 1 outlines some basic population and employment figures for the municipality. As may be seen the population is the largest in traditional mine towns whereas new mines are opened or planned to the rural communities with only a few thousand inhabitants. Apatity/Kirovsk area in Russia is highly dependent on mining sector, where as in other areas local employment is dependent on public sector, mainly municipal employment.

We also incorporated mining projects at different phases of planning and production. Most of the operating or planned mines are extracting iron ore – this is the case e.g. in all studied operating