NAVIGATING THE LOCAL COSTS AND BENEFITS OF MODERN MINERAL MINES: THE ROLE OF NON-REGULATORY AGREEMENTS

by

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A thesis submitted in partial fulfillment
of the requirements for the degree

of

Master of Science

in

Earth Sciences

MONTANA STATE UNIVERSITY
Bozeman, Montana

August 2020

DEDICATION, ACKNOWLEDGEMENTS, VITA, AMERICAN INDIAN HERITAGE

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ABSTRACT

This thesis explores natural resource development at the local level from the perspective of resource peripheries in the United States. Using three case studies—two in Montana and one in the Upper Peninsula of Michigan—this study combines qualitative mixed-methods with on-the-ground experience to explore the dynamics of the costs and benefits of extractive industries in the context of short-duration, high-impact underground mines. Research questions focused on the specific concerns and priorities in each place and the novel tools communities are using to address both short-term impacts and long-term economic development. The methodology relied on in-person, semi-structured interviews with key stakeholders, participant observation, and document and policy analysis. Results reveal that rural places share similar concerns tied to these projects, although multiple stakeholder groups often have divergent ideas and priorities. Non-regulatory agreements show promise as a tool for stakeholder groups to navigate the balancing act of mining projects, but the initiatives found in these agreements are often affected by the regulatory and institutional context. Findings also suggest that communities are granted a limited window of opportunity to maximize their negotiating power in the social license to operate process. Ultimately, non-regulatory agreements should be tailored to fill regulatory gaps and, in the best cases, are able to focus on delivering lasting economic benefits from short-term mining developments.

INTRODUCTION

Project Context

In the summer of 2019, about 200 people gathered at the high school gymnasium in White Sulphur Springs, a small town in central Montana, to discuss the future of their community. A panel of invited experts addressed the assembled community members. Not academic or policy experts, the speakers were residents of peer communities that travelled from as far away as the Upper Peninsula of Michigan to share their thoughts on mining and how it can affect rural places. White Sulphur Springs has been slowly losing population for the last five decades and average earnings per job is just over $35,000, among the lowest in the state (U.S. Department of Commerce (2019, 2020)). Now, the community is facing the prospect of hosting the Black Butte Copper Project—a large-scale underground copper mine that is projected to employ nearly 250 people and bring a much-needed economic boost to the area. The mine developer, Sandfire Resources America, touts a host of variables—including a state-of the-art mine design, unique geological setting, a commitment to hire local, and a significant increase to the local tax base—that all make the project a no brainer for the community. The company also touts their plan to build a short-duration, high-impact (SDHI) underground mine—a novel form of development in the mining industry—as a win for the community.

So what could go wrong? And why do the residents of White Sulphur Springs care enough to show up to a town hall to hear lessons learned from other mining communities? These questions arise from a fundamental, overarching concern: does natural resource development create sustainable rural community development? All

parties—residents, elected officials, and conservationists alike—hope that it will, but if sustainable local development through mining were a sure thing, gatherings like the town hall in White Sulphur would be unnecessary.

Scholarly research on the local impacts of mining is both long-standing and evolving. While there is consensus on some important issues and considerations for communities grappling with development proposals, there are also many unanswered questions, including those presented by the continued evolution of mining technologies and the policy and economic environment in which they are deployed. This master's thesis grew out of a dual desire to engage novel questions in the academic literature while at the same time helping a community address them in real time. Even with the depth and breadth of the academic debate on the subject, the reality is that there is no perfect blueprint a community like White Sulphur Springs can follow. This project was designed to help identify best practices and lessons learned at the local level, while also contributing to the larger academic conversation.

This chapter starts with a discussion of the literature on resource peripheries and rural mining communities. Following this, the chapter includes more details on the development and details of this research project—including an in-depth description of case studies used, the institutional and regulatory environment surrounding these places, and finally, the approach and changes to the project over time.

Literature Review: Resource Peripheries and Mining Communities

Resource peripheries—regions that rely heavily on natural resource extraction to sustain their economies—classically struggle to recognize lasting economic benefits from extractive industries. On its face, this is counterintuitive given the tremendous value that natural resources have as the base for economic activity. However, the tendency for wealth to concentrate in core regions based on extraction of labor and resources from peripheries is a longstanding phenomenon of the economic geography of global capitalism (Wallerstein, 2004). The concept of the resource curse (Auty, 1993) suggests that social and economic performance declines as economic dependence on natural resource exports increases (Sachs and Warner (1995, 1999, 2001)). However, the existence and extent of the resource curse is variable and largely depends on context (see Stevens, 2006; Wick and Bulte, 2009; Ross, 2015; Badeeb, Lean, and Clark, 2017). Debate persists about the scales at which the resource curse concept accurately applies, with econometric studies showing varied results at subnational scales (Papyrakis and Gerlagh, 2007; James and Aadland, 2011).

These debates notwithstanding, the economic challenges facing small mining-dependent communities, even in high income countries, are well-documented. Extractive industrial developments can create short-term economic benefits—high-paying jobs, increases in tax revenue, potential investments in infrastructure—but long-term benefits are not guaranteed. Complicating this task, mining communities are at risk of becoming 'economically addicted' to a single industry or development resulting in over adaptation,

wage pressure, and even social resistance to planning for post-mining futures (Freudenberg, 1992; Smith, 2019; Smith, 2020). Indeed, scholars agree that success in economic development through primary industries depends on institutional quality, avoiding inefficient distribution of public revenues, and investing locally to create opportunities for long-term economic diversification (Mehlum, et al., 2006; Robinson et al., 2006; Gunton, 2003; Markey et al., 2008). In locales where mineral mining dominates the economy, this means communities must prepare for the eventual withdrawal of the industry through durable public investments that outlast the project and through concerted strategies to replace of lost jobs and revenue (Haggerty et al., 2018; Jacquet, 2014).

A small body of scholarship suggests that institutional and regulatory landscapes are at best mixed when it comes to the ability for resource peripheries to leverage mining projects for long-term development—even in high income countries like the United States. In most cases, social and economic impact mitigation is a stipulation of acquiring the necessary permits to build and operate a mine, but, to the extent that they actually function as intended, these strategies only mitigate impacts and do not address long-term economic development (Haggerty and McBride, 2016). Communities encounter uneven regulatory support needed to manage impacts and guide long-term investment strategies (Ryser et al., 2016; Haggerty and Haggerty, 2015). State and federal fiscal policies have increasingly decoupled resource peripheries from the regional economy and natural assets in fundamental ways: taxation and expenditure limits erode revenue and constrain the ability of local governments to manage volatile revenue, often requiring resource revenue

is used to substitute for other taxes (Haggerty, 2018), and tax incentives for extractive industries results in delay and loss of revenue necessary to mitigate impacts and make investments in resource communities. In the last three decades, this decoupling has occurred simultaneously alongside the implementation of neoliberal economic policies resulting in labor force restructuring, downward pressure on commodity prices, and erosion of support for local infrastructure and services from higher levels of government (Hayter, 2003; Szelenyi, 2011; Halseth, 2017; Schick, Davis, and Younes, 2020). Even in the best of cases, when communities may be protected from some of the short-term effects of mining developments, support for longer-term planning and transition is often absent. In Montana, landmark legislation around hard-rock mining requires that developers pre-pay for expected impacts to local government and infrastructure. In addition, a severance tax levied on mineral production is distributed to local jurisdictions with a mandate that a portion be deposited into a long-term savings account that can only be accessed during transition and closure of the mining project (The Hard-Rock Mining Impact Board, 2008). Even given the unique and comprehensive nature of this legislation, communities are left facing difficult long-term decisions around how to invest in the local economy.

Social License to Operate. Given this context, local actors and governments appear to have limited capacity to influence the long-term economic outcomes of mining projects in their communities. However, there is one moment in and feature of the mining development lifecycle when local actors potentially have leverage to maximize economic benefits for local residents. Mining companies increasingly depend on a ‘social license to

operate' (SLO), or broad local approval and acceptance of industrial projects (Thomson and Boutilier, 2011). The SLO mandate creates a window of opportunity for mining communities. From an industry perspective, the lack of a SLO often results in significant delays and pressure on revenue targets and timetables (Lacey et al., 2012; Davis and Franks, 2011). Research suggests that local communities have real power over the permitting and development of a project (Boutilier, 2014), potentially enabling communities to ask for contributions and programs aimed at long-term economic development.

Non-regulatory agreements (NRAs), negotiated directly by the mining company with local communities, provide one mechanism to leverage the social license opportunity to protect local interests in the face of industrial development (O'Faircheallaigh, 2013). While the specifics of individual agreements—often referred to as 'community benefits agreements' (CBAs)—vary by location, their purpose is to explicate and address opportunities to mitigate local impacts and enhance local benefits. In this way, NRAs share the basic framework of the longstanding CBA model for mitigating the impacts of redevelopment in urban areas (Gross, LeRoy, and Janis-Aparicio, 2005). In the context of energy projects, NRAs often include commitments to provide high wages, hire local, and support local infrastructure through development and/or investment (Salkin and Lavine, 2008; Ryser, 2016). If implemented properly, NRAs offer an avenue for stakeholders to address their concerns and to take ownership in their collective future while also providing a tool to hold industry accountable (Gross, LeRoy, and Janis-Aparicio, 2005). For host communities, the risks of NRAs include

conflict between disparate stakeholder groups and a potential inability to manage the governance and development responsibilities necessary to leverage benefits from the agreements (Bristow, Cowell, Munday, 2012). NRAs tied to mining developments have gained traction in the last 30 years—primarily in lower-income countries and frequently around indigenous communities and lands (O'Faircheallaigh, 2013). While there are examples from Canada and Australia (Centre for Social Responsibility in Mining, 2011; World Bank, 2010), a literature review in both academic and trade publications conducted for this study revealed that NRAs associated with mining developments in the United States are scarce.

Correspondingly, very little is known about whether and how communities facing new mining developments utilize NRAs to address the challenges of translating mining activity into long-term economic benefits as described above. This study offers an exploratory analysis focused on three cases of mining company-community interactions in resource peripheries in the United States. The cases involve remote communities hosting short-duration, high-impact (SDHI) underground mining projects developed by international corporations. For reasons described in more detail in the next section, SDHI mines in remote communities present striking cases of the challenges of achieving long-term economic development through mining, making these cases instructive to the broader questions surrounding the role of NRAs in securing local benefits from mining. Furthermore, scholarship on these specific types of mining projects is limited or non-existent, thus this study fills an important gap in academic knowledge about an increasingly prevalent form of industrial development.

As a contribution to understanding the role of NRAs in helping communities in resource peripheries navigate impact mitigation and secure economic development as well as the particular dynamics present in hosting SDHI mines, this study pursues the following questions: What concerns and priorities are reflected in NRAs between host communities and SDHI mines? To what extent have local stakeholders sought to capitalize on SDHI mines by negotiating for long-term economic benefits—why or why not?

Project Development

The dilemma posed by the development of the Black Butte Copper Project (BBCP) is partially representative of challenges typically faced by resource peripheries, but it is also highly contingent on the *type* of development. This project is characterized by the relatively short lifespan and a high-impact on the local area. In addition, the developer of this project is an international mining company operating under a unique set of incentives and constraints. While underground mines with these specific physical characteristics are rare in high-income countries, they may constitute an emerging development pattern. Trends in the mining industry suggest that technological advancements, combined with a surge in mineral prices, are resulting in the development of harder to reach resources in remote areas of high-income countries (Randolph, 2011; Söderholm and Svahn, 2015). In order for rural places to navigate these situations, they must rely on novel tools tailored to their specific context. New strategies, such as NRAs, are emerging in this space, but the academic literature in this area is sparse. To explore

these issues, this study set out to identify comparable case studies that share characteristics of the BBCP and White Sulphur Springs, Montana. A description of three such places follows.

Case Study Background

Three case studies were selected for this research based on the following criteria: all have previously hosted, currently host, or anticipate underground, high-grade precious metal mines in rural, remote areas in the United States. Additionally, in each location the mine has an outsized influence on the local economy, typical of many resource peripheries historically dependent on extractive industries (See Table 1). Each mine was designed for a relatively short 'life of operation', with a range of seven years to twenty-five years. Despite the original lifespan projections, SDHI mines often exceed this timeline due to continued mineral exploration near the initial site. Lastly, the contrasting regulatory environment and institutions related to these developments offers a unique opportunity for comparison. In Montana—where two of the three sites are located—comprehensive legislation around hard-rock mines provides for both short-term impact mitigation and long-term savings for local communities. In Michigan—which hosts the third site—regulation around hard-rock mining is mostly focused on environmental protections. Differences in state regulations result in different concerns and priorities related to planning at the local level. The following description of each case study area focuses on geographic setting, socioeconomic variables, the associated mining operations, and the institutional and regulatory space. Taken together, these variables establish the contexts

for considering how local leaders and residents negotiated to address community concerns, including economic development questions.

	Marquette County	**Sweet Grass County and Stillwater County**	**Meagher County**
Current Mine(s) Operator	Eagle Mine	Sibanye-Stillwater	Sandfire Resources America
Mine(s) type/Commodity	Underground longhole open stoping, nickel-copper	Underground stoping, platinum-palladium	Copper
County type – ERS Categories and OMB Designations	Non-metro, dependent on recreation	SG: non-metro, dependent on mining and recreation SW: non-metro, dependent on mining	Non-metro, dependent on recreation
County Population	67,000	SG: 3,700 SW: 9,600	1,800
Yrs. of Operation	7	SW: 35 EB: 19	14 (projected)
Total County Employment	26,651	SG: 2,757 SW: 5,383	1,144
Mining Company Employee Count	Over 400	1759 (including associated facility)	235 (projected)
Value of Extraction (gross)	<$1.3 billion (to date)	~$1.4 billion in FY2019	~$3 billion (projected)

Table 1. Relevant county and mine-related data. Data sources: (1) U.S. Department of Commerce. Census Bureau. 2020. (2) U.S. Department of Commerce. Bureau of Economic Analysis 2019. (3) Lundin Management's Discussion and Analysis (2015, 2016, 2017, 2018, 2019). (4) Sibanye-Stillwater Integrated Report, 2019.

County profiles

Marquette County. Marquette County is located in the Upper Peninsula of the state of Michigan (see Figure 1). The United States Census Bureau (USCB) classifies Marquette County as non-metropolitan (USCB OMB, 2010) and the United States Department of Agriculture's Economic Research Service (ERS) categorizes the county as economically dependent on recreation (USDA ERS, 2019). The county population in 2019 was approximately 67,000, or 37.1 people per square mile (USCB, 2019). As of 2018, total employment in the county was 35,304 (Regional Economic Accounts, 2019) with an unemployment rate of 4.9% (Local Area Unemployment Statistics, 2019). Employment trends in the county reflect a 2.8% growth in employment for the period 2000-2018, which is higher than the state of Michigan's 1.9% increase in the same period (Regional Economic Accounts, 2019). County financial statements for fiscal year 2019 show that the total county budget is $58,881,71, or $879 per capita, and intergovernmental revenue is $2,775,875 (County of Marquette, Michigan, 2019).

Figure 1. Map of Marquette County, MI, including the Eagle Mine, nearby communities, and rivers potentially affected by mining operations. Data sources: (1) State of Michigan GIS Clearinghouse (2) ESRI.

Marquette County currently hosts an underground copper-nickel mine owned by a subsidiary of Lundin Mining called Eagle Mine, LLC. Lundin Mining is a publicly traded international mining company headquartered in Canada with operations in Brazil, Chile, Portugal, Sweden, and the United States (Lundin Mining, 2020). Eagle Mine is the only primary nickel mine in the United States and utilizes a 'longhole open stoping' mining method to extract the ore. Eagle has been in operation since 2014, with an expected end of mine life in 2025 (Eagle Mine, 2018). In the early stages of mining operations, there

were approximately 200 employees. That number grew to 400 as of late 2019. To date, Eagle Mine has generated over 1.3 billion dollars in revenue and over 541 million dollars in profit (Lundin Annual Reports, 2014, 2015, 2016, 2017, 2018).

Stillwater and Sweet Grass County. Sweet Grass County and Stillwater County are located in southwestern Montana (see Figure 2). These two counties were combined to represent one case study due to the geographical proximity—about 13.5 miles—of two large-scale underground mines. While these two mines lie in different jurisdictions, they are owned and operated by a single company. The USCB categorizes both counties as non-metro (USCB OMB, 2010) and the ERS reports that both are economically dependent on mining, meaning that at least 13 percent of their average annual labor earnings or at least 8 percent of their total employment derives from the mining industry. The ERS also classifies Sweet Grass County as economically dependent on recreation (USDA ERS, 2019). Approximately 3,700 people live in Sweet Grass County, or 2.0 people per square mile, and over 9,600 people live in Stillwater County, which equates to 5.1 people per square mile. (USCB, 2019). As of 2018, total employment was 5,383 in Stillwater County and 2,757 in Sweet Grass County. Employment trends from 2000-2018 show a 10.4% and 28.3% increase in total employment for Stillwater and Sweet Grass counties, respectively. That compares with a 24% increase for the State of Montana over the same timeframe (Regional Economic Accounts, 2019). In 2018, Stillwater County had an unemployment rate of 3.3%, while Sweet Grass County reported an unemployment rate of 3.0% (Local Area Unemployment Statistics, 2019). County

financial statements for fiscal year 2019 state that the total county budget in Stillwater County is $12,888,116, or $3,483 per capita, and intergovernmental revenue is $6,609,970. In Sweet Grass County, the total budget is $6,245,217 and intergovernmental revenues equal $2,154,579. Each county also has a trust account as established by the Montana Hard-Rock Mining Impact Act. The trust account for Stillwater County has $12,797,236; in Sweet Grass County the trust account holds $2,806,017 (Stillwater County, 2019; Sweet Grass County, 2019).

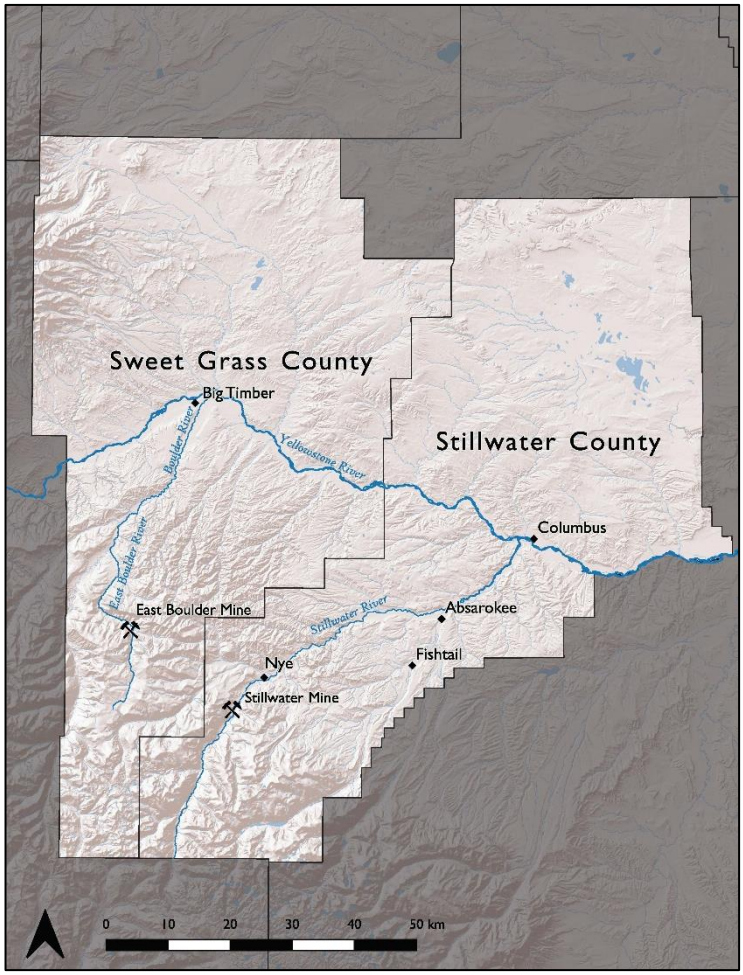

Figure 2. Map of Stillwater County and Sweet Grass County, MT, including the Stillwater Mine, East Boulder Mine, nearby rural communities, and rivers potentially affected by mining operations. Data sources: (1) Montana State Library (2) ESRI.

These two counties host two separate platinum-palladium underground mines—the Stillwater Mine is located in Stillwater County and the East Boulder Mine is located in Sweet Grass County—as well as an associated metallurgical facility nearby. The Stillwater and East Boulder mines have undergone numerous ownership changes since they started operating in 1986 and 2002, respectively. Currently, these operations are fully owned by Sibanye-Stillwater, a publicly traded international mining company based in South Africa. Sibanye acquired the project from Stillwater Mining Company in 2017 for a cost of 2.2 billion dollars (Olson, 2020). Both mines extract platinum group metals (PGMs) from what the company states are the only significant sources of PGMs in the United States as well as the richest PGMs deposit in the world. Both mining operations utilize different stoping methods to extract the ore, and a paste-backfill system is used to replace the excavated areas (Sibanye-Stillwater, 2019). The Stillwater Mine has an expected end of life in 2046 and the East Boulder has an expected end of life in 2054. Employment for both mines and the metallurgical facility has increased over the last few years and currently the company reports 1,759 employees for all three operations. Due to the long history and frequent ownership changes, calculations of gross and net value are difficult, but the company reported 1.4 billion dollars in revenue in 2019 and just under 400 million dollars in profit (Sibanye-Stillwater, 2019).

Meagher County. Meagher County is a non-metro county (USCB OMB, 2010) located in central Montana and surrounded by multiple mountain ranges. The ERS classifies Meagher County as a recreation county and categorizes the county as a

retirement destination (USDA ERS, 2019). As of 2019, approximately 1,800 people live in Meagher County, equating to a population density of less than one person per square mile. Population in the county from 2000-2010 actually decreased (USCB DoC, 2020), which suggests an increase in median age as the reason behind the retirement destination designation. Total employment in Meagher County for 2018 was 1,144 (Regional Economic Accounts, 2019) and the unemployment rate was 3.8% (Local Area Unemployment Statistics, 2019). County financial statements for fiscal year 2019 show a total county budget of $3,009,702, or $1,672 per person, and intergovernmental revenue of $912,013 (Meagher County, 2019).

Figure 3. Map of Meager County, MT, including the site of the Black Butte Copper Project, White Sulphur Springs, and rivers potentially affected by mining operations. Data sources: (1) Montana State Library (2) ESRI

As discussed above, Meagher County is slated to host the Black Butte Copper Project (BBCP), a recently permitted underground copper mine located about fifteen miles northwest of the county seat, the city of White Sulphur Springs, population 939 (American Community Survey Demographic and Housing Estimates, 2018). The project is being developed by Sandfire Resources America, a subsidiary whose majority owner, Sandfire Resources, is based in Australia. Sandfire expects to extract approximately one billion pounds of copper over a projected mine life of fourteen years.

Institutional and regulatory environment. In order to make a rigorous comparison of the processes and considerations rural places face when hosting hard-rock mining, it is important to understand the institutional and regulatory space surrounding these projects. This section will give a brief history and discuss the current status of legislation around hard-rock mining at the state level, with an emphasis on how each state regulates around social impacts and economic development in the course of mining. Mining activities on federal land do involve another set of regulatory requirements, but these are not covered in this research.

Montana

Mine permits. Regulation governing the development of hard-rock mines in Montana passed in 1971 to apply to any operations that disturb over five acres of land. Today, the Montana Hard Rock Mining Program covers three main areas: exploration, small mines (under five acres), and larger operations. This description of regulation excludes the small mines category as it does not apply to the research topic. In order to perform mining exploration on public lands to assess the potential viability of an ore body, the state requires an exploration license that includes a limit of 10,000 short tons of material evaluated, as well as an agreement to reclaim disturbed surface area. A performance bond is mandatory for reclamation and revegetation of the disturbed area (Kolman, 2017).

If a mining operator intends to move forward and develop an ore body, whether on public or private land, the company must apply for an operating permit. The application includes mandatory information regarding mineral rights, reclamation, hydrologic data, plans for tailings impoundments, monitoring and mitigating discharges, and an assessment of potential land use after mining operations have concluded. Additional permits that may be required include air quality and surface and groundwater discharge permits, wetland or stream permits from the federal government and the local conservation district, and a water discharge permit or change of use authorization from the Montana Department of Natural Resources and Conservation. Final issuance of the

operating permit is also subject to the developer posting a performance bond calculated by the state (Ibid).

Development Impact Mitigation. In 1981, Montana passed the Hard-Rock Mining Impact Act (HRMIA), landmark legislation designed to mitigate impacts of large-scale hard-rock mines on units of local government. The HRMIA requires the developer to work with local government to develop a Hard-Rock Mining Impact Plan (HRMIP) as part of the permitting process. The HRMIP identifies units of local government that will be impacted by the development, projects costs and increased demand on local services, and commits the developer to mitigate these impacts through various payment mechanisms. Typically, payment is made by pre-paying property taxes, which are then credited throughout the life of the project. Prior to this legislation, the primary instrument for impact mitigation was the Resource Indemnity Trust Tax. The Indemnity Tax was levied on all mining activity at a rate pf $25.00 plus .5% of the gross value of production in excess of $5,000. Revenues were collected and administered at the state-level and were used by the State Board of Investments to offset and remediate environmental damage caused by mining operations (Montana Department of State Lands, 1978).

Revenue Stabilization & Equalization. The passage of the Hard-Rock Mining Impact Act in 1981 and the Hard-Rock Mining Property Tax Base Sharing Act in 1983 were both intended to help units of local government mitigate impacts associated with hard-rock mining. Among those impacts, the Tax Base Sharing Act was specifically geared to

compensate for ‘jurisdictional revenue disparities’ identified in a HRMIP. A revenue disparity is created when impact costs exceed revenues in a jurisdiction that does not host the mine. When such a discrepancy is identified, annual allocations of the taxable valuation of the project are split amongst affected jurisdictions based on the number and location of employees and their dependents. This Act was designed to provide affected units of local government with recurring revenue to meet ongoing costs associated with a mining development. (The Hard-Rock Mining Impact Board, 2008).

Transition Impacts. In addition to revenue equalization, distributions of the Metal Mines License Tax (MMLT) also help communities and local government prepare for transition when mining activity ends. The MMLT is a gross proceeds tax levied on the value of the product. For hard-rock mining, the rate (on concentrate or crude ore) is 1.81% applied annually to gross values over $250,000. From 1986 through 1988, the Montana Legislature allocated 33% of the revenue from the MMLT to a hard-rock mining impact trust account. This trust account was used to pay for administration and operations of the Hard-Rock Mining Impact Board, with the remaining funds distributed to sub-accounts established for each county that hosted a large-scale hard-rock mine. Distributions from these accounts were administered by the Board as grants and loans to units of local government affected by the closure or slowdown—defined as a reduction of 50% or more of a mine’s workforce—and were required to be used for economic development, stabilization of mill levies, and the retirement of local government debt. In 1989, the Montana State Legislature made significant alterations to the regulations

around the MMLT. These changes included exempting metal mines from the Resource Indemnity Trust Tax and transferring the administration and funds in the existing hard-rock trust accounts to the counties themselves. In addition, the legislature authorized the creation of metal mines reserve accounts for affected counties and school districts. Annual allocations to reserve accounts, up to 62.5% of the annual distribution from the Montana Department of Revenue, occur at the discretion of the board of county commissioners in the affected county. The county can use these funds for economic development purposes and schools are allowed to apply the funds to any purpose authorized by law (The Hard-Rock Mining Impact Board, 2008).

Long-Term Development Strategy. Along with the variable distributions of MMLT revenues to the county and affected school districts, at least 37.5% of the annual proceeds is required to be deposited into a county-level Hard-Rock Mine Trust Reserve Account. The funds in this account can only be accessed under one of two conditions: (1) mine closure or (2) a 50% reduction in mine workforce. At that point, the county commissioners must allocate at least one third of the funds among the affected school districts in the county, which are again allowed to use the funds for any purpose authorized by law. The remaining funds, up to two thirds of the original amount, can be expended for general economic development purposes, including retiring capital debt, stabilizing mill levies, and economic diversification efforts. In addition, commissioners have the option to make grants or loans to other units of government with the purpose of mitigating impacts of mine closure (Ibid).

Michigan

Mine Permits. Mining operations in Michigan are governed under the Natural Resources and Environmental Protection Act (NREPA) passed in 1994. Under current legislation, nonferrous metal mining, meaning mining of metals that do not contain iron, are covered separately from ferrous metal mining. Similar to Montana, Michigan requires various permits and an exploration plan to seek minerals on public lands. Additional metal mining regulations are focused on environmental impact mitigation and an operating permit can only be granted if "the applicant demonstrates that the mining operation will not pollute, impair, or destroy the air, water, or other natural resources of the public trust in those resources (Michigan ICC, 2013, pg. 6). Sections of NREPA that apply to nonferrous metal mining include protections around water, air, soil erosion and sedimentation, hazardous waste, solid waste, remediation, and reclamation, among others. Developers must provide 'financial assurance', another term for a bond, to allow the state to reclaim and remediate the mining site if necessary (Ibid).

Development Impact Mitigation. Although mineral developers in Michigan are encouraged to work with local governmental units and tribal communities to "build a wider understanding of the environmental, economic, and social impacts of proposed investments" (Ibid, pg. 5), no formal regulations around non-environmental impacts (e.g. social or economic) to local communities are in place.

Economic Impacts/Public Revenue. Historically, mining operations in Michigan were taxed similar to other commercial developments in the state. This changed in 2012 when the state passed legislation relating to the taxation of nonferrous metallic minerals. This legislation exempted mineral producers from the traditional *ad valorem* property tax and established a severance tax of 2.75% of the 'taxable mineral value.' Distributions of the mineral severance tax are split, with 65% of the revenue going to school districts, the state of Michigan, and local governmental units in the same proportion as general *ad valorem* property taxes. The other 35% goes to the Michigan Department of Treasury, which deposits the money into a rural development fund (Nonferrous Metallic Minerals Extraction Severance Tax Act, 2012). The Rural Development Fund is administered by the Michigan Department of Agriculture and Rural Development, which makes grants to "promote the sustainability of land-based industries and support infrastructure that benefits rural communities." 'Land-based' industries include food and agriculture, forestry, mining, oil and gas production, and tourism. (Michigan DoA, 2020).

Summary.

With the institutional regulatory context for Montana and Michigan in mind, it is important to consider how this landscape positions local governments and communities to mitigate economic impacts and plan for transition from large-scale mining developments.

First, it is apparent that the two states have similar levels of oversight in regard to environmental permitting. While the specific stipulations required by individual permits have not been described here, it is clear that both states enact comparable regulatory structures designed to prevent environmental degradation to air, land, and water affected by mining. These parallel structures require various permits at each step of the mine development process, and the similarities extend to the environmental impact assessment and bonding requirements. This context creates numerous opportunities for interests to challenge mining permits based on their environmental performance.

Where these two states diverge is on oversight of the socioeconomic impacts of new mines. As described above, Montana requires substantial investment and effort on behalf of the developer to mitigate short-term fiscal impacts of mining developments. Furthermore, the state has enacted legislation that mandates long-term savings at the county level designed to mitigate impacts of closure. In Michigan, the extent to which social and economic impacts are addressed by legislation is limited to the severance tax, a portion of which is directed to school districts and other affected units of local government that fall in the same tax collecting jurisdiction as the mineral property. The rest of the severance tax revenues are directed to a state rural development fund with no guarantee of return to communities or counties affected by hard-rock mining. While the severance tax revenues certainly provide a short-term tax boost, the long-term benefits are uncertain.

We know that rural communities hosting mining projects face risks from developmental impacts and opportunities for long-term economic gains—and that

legislation plays a key role in altering this equation. From the literature, we also know that the permitting process serves as a key time frame where communities can potentially apply leverage to maximize their negotiating position with mining companies. So, what should rural communities be looking for in NRAs to supplement or substitute for regulatory protections? If legislation fails to address short-term socioeconomic impacts, as is the case in Michigan, local communities should focus on mitigating those impacts to ensure the mining development does not leave them *worse* off in the long run. In situations where communities are generally protected from immediate impacts, they are able to use forward thinking to consider longer-term implications and eventual transition. However, even when higher levels of government protect communities from impacts and arm them with tools to smooth transition, risks remain. For example, Montana covers both of these vulnerable time periods with the Hard-Rock Mining Impact Act. Even so, communities that are historically dependent on natural resource development face tough decisions on how to leverage those tools to diversify their economy. In these cases, communities considering NRAs should be focused on securing resources to further community development goals during and after mining operations, as well as promoting planning and capacity building needed to take advantage of long-term savings mechanisms. Table 2 provides an overview of the range of initiatives found in these agreements and a longer examination of these findings is found in Chapter 2.

	Marquette County	**Stillwater/Sweet Grass**	**Meagher County*** *proposed
Environmental Impacts	1. Independent environmental monitoring of surface water, groundwater, and flora and fauna	1. Independent environmental audits 2. Independent, recurring evaluation of reclamation plans and bonding requirements 3. Evaluation of tailings impoundments and waste rock disposal 4. Surface and groundwater monitoring	1. Independent Water Monitoring Program 2. Funding to combat invasive species
Social impacts (worker housing, school, etc.)	Not covered	1. Prohibition on industry-sponsored housing with city limits	1. Employee housing program
Health & safety (traffic, dust, emergency services, etc.)	Not covered	1. Traffic Reduction and Busing program	1. Funding to support local emergency services
Community investments (non-mitigation initiatives, funds, etc.)	1. Endowments and annual investments to promote economic diversification	Not covered	1. Endowment and annual investment into a community benefits fund

Table 2. Mechanisms for impact mitigation and long-term community development as found in NRAs

Project Evolution

In early 2018, a non-profit organization located in Bozeman, Montana approached my advisor, Dr. Julia Haggerty, based on her experience working with rural communities that have hosted oil and gas development and the broader focus of the Resources and Communities Research Group she oversees. As part of its mission, OneMT facilitates collaboration around controversial projects (that often span rural-urban divides) in Montana. In keeping with this mission, OneMT saw the BBCP as an opportunity to

develop relationships with key stakeholders in the area that shared concern about the project. OneMT invited Dr. Haggerty to provide expertise and advice to the Meagher County Stewardship Council—a community group that formed in response to the BBCP. As the engagement evolved, Dr. Haggerty suggested I undertake a formal role as a research and organizing assistant to OneMT and the Meagher County Stewardship Council and that this work inform the direction of my Master's thesis research. Using funds provided by Sandfire, OneMT supported my work through a sales and service agreement with the Resources and Communities Research Group. OneMT supervised my engagement in Meagher County, however, neither Sandfire nor OneMT has directly influenced or overseen the findings or direction of this thesis.

For a master's student, serving as a consultant to the Meagher County Stewardship Council was an ideal opportunity to gain first-hand knowledge and experience working in a community grappling with many of the choices that initially inspired this project. Work with the Stewardship Council raised additional questions about rural places and the effort to negotiate for long-term benefits with an international company. And research in comparable places helped me provide the Council examples of best practices and lessons learned in these negotiations. The town hall event mentioned in the introduction is a concrete example of the unique synergies presented by this project. Current work with the Stewardship Council is ongoing and, at the suggestion of RCRG, the Council is pursuing a NRA with Sandfire as part of their mission to protect the long-term interests of the local residents and environment. Chapter 3 provides an overview of

the products developed during my consultancy with the Meagher County Stewardship Group to date.

Project Approach

To explore how leaders and residents in communities like White Sulphur Springs navigate impacts and long-term planning related to mining projects, this project took a qualitative approach to documenting and analyzing examples of this and comparable processes. After selection of the case studies, the research used mixed-methods, including semi-structured interviews of key stakeholders, and document and policy analysis. Together, these techniques allowed for an in-depth examination of the considerations, opportunities, and risks rural communities face when hosting large-scale mining developments.

For this research, two of the three case study sites—Stillwater County and Sweet Grass County, Montana, and Marquette County, Michigan—were investigated through a three-step data collection process. First, a desk-based exploration was conducted to provide background information and build a profile of each area. Afterwards, a key contact—often a reporter or community leader—was contacted to provide an introduction and suggestions on building a purposive sample of stakeholders in the area. This group of stakeholders consisted of community leaders, local government officials, and industry employees. Stakeholders were asked to participate in semi-structured interviews that were conducted in person during field trips in fall 2018, winter 2019, and spring 2020.

Due to the emergence of COVID-19, the later stages of fieldwork were completed remotely, and stakeholders were asked to instead participate in a phone interview. Interview guides covered the background, professional roles and responsibilities, and the non-profit and voluntary work of each participant. Further questions we centered around past, current, and future involvement with the mining project in each area (see example interview guide in Appendix C). These interviews (n=19) were then transcribed and coded with Nvivo software.

My approach to the third case study, Meagher County, Montana, took advantage of my first-hand experiences and direct involvement with the Meagher County Stewardship Council. Data collection in this case consisted of participant observation during group meetings and activities, including events open to community residents. Over a two-year period, this involved approximately twenty-five group meetings, four focus groups, and a community town hall event. During these engagements, interactions and insights were captured by recording meetings and/or thorough notetaking.

Coding was done with a mix of inductive and deductive codes with the goal of identifying evidence that shed light on the variables and considerations facing local communities in their effort to maximize benefits tied to mining developments. Deductive codes were based on lessons learned from the literature, focusing on the risks and opportunities for long-term community development. Inductive coding was based on a ‘grounded theory’ approach (see Corbin and Holt, 2005) that allows theory to arise from the data, rather than working off an existing theory. This enabled data analysis to look for place and context specific elements of the cost-benefit equation in each place. Additional

desk-based research was done to analyze relevant policy documents, newspaper articles, and meeting minutes related to natural resource development in these areas.

Thesis Format

This thesis follows the requirements for a manuscript submission, as required by the Montana State University Graduate School. Following this introduction, this thesis is organized into three additional chapters. The first is titled: *NAVIGATING THE LOCAL COSTS AND BENEFITS OF MODERN MINERAL MINES: THE ROLE OF NON-REGULATORY AGREEMENTS* and consists of a journal article that will be submitted to the international journal Society and Natural Resources. The next chapter, titled *SUPPORTING THE MEAGHER COUNTY STEWARDSHIP COUNCIL*, documents work with the Meagher County Stewardship Council over the last two and a half years. Finally, this document concludes with a *CONCLUSION* chapter followed by references cited and relevant appendices.

NAVIGATING THE LOCAL COSTS AND BENEFITS OF MODERN MINERAL MINES: THE ROLE OF NON-REGULATORY AGREEMENTS

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NAVIGATING THE LOCAL COSTS AND BENEFITS OF MODERN MINERAL MINES: THE ROLE OF NON-REGULATORY AGREEMENTS

This research explores natural resource development at the local level from the perspective of rural mining communities in the United States. This work uses a case study approach and qualitative mixed-methods to explore the dynamics of the costs and benefits of hard-rock mining and the role of non-regulatory agreements in the context of short-duration, high-impact underground mines. The methodology relied on in-person, semi-structured interviews with key stakeholders in two rural communities, as well as participant observation and on-the-ground experience in a third community. Interview data and notes, along with relevant policy and other documents, were analyzed to reveal the questions and considerations facing rural communities as they attempt to maximize the cost/benefit equation of these developments. Results reveal that rural places share similar concerns tied to these projects, although multiple stakeholder groups often have divergent ideas and priorities. Additionally, communities appear to have a limited window of negotiating power during the 'social license to operate' process where they can best leverage their position for long-term gain. Non-regulatory agreements offer a novel mechanism for local communities to negotiate for impact mitigation and enduring economic benefits, but ensuring that agreements effectively address both areas brings challenges. Ultimately, non-regulatory agreements are most effective as a complement to hard-rock mining legislation. In the best cases, agreements use place-specific initiatives to enable communities to successfully turn short-term projects into long-term economic development.

Keywords: benefit sharing; community development; mining; rural;

Subject classification codes:

Introduction

Turning natural resource development into long-term economic gain presents a difficult challenge for residents and community leaders in places that host extractive industries. Many of these challenges—including economic dependence and over-adaptation, industry capture, and environmental degradation—and are well documented at the national (Sachs and Warner (1995, 1999, 2001)), regional (Freudenberg, 1992), and community levels (Smith and Haggerty, 2020). Exacerbating these difficulties, resource-dependent communities face an advance of neoliberal economic policies that have led to erosion of regulatory support from state and federal governments (Halseth and Ryser, 2017; Otto, 1997; Bridge, 2004). In response to this pressure, many resource dependent communities have turned to novel tools and processes designed to mitigate impacts and maximize socio-economic benefits tied to industrial projects.

In the mining sector, Corporate Social Responsibility (CSR) programs aimed at helping local communities find alternative ways to protect themselves from development impacts are both an outgrowth of and response to the shortcomings of existing regulations and institutions. One alternative that has gained significant traction in the last two decades, particularly with mining developments on Indigenous lands, is the use non-regulatory agreements (NRAs) (O'Faircheallaigh, 2013; Caine and Krogman, 2010) negotiated directly between communities and mining companies. Scholarly research on the use of NRAs in mining is in its infancy and a literature gap exists concerning the potential for these agreements to help mitigate immediate impacts and maximize long-term benefits stemming from mining projects. This research examines NRAs around mining projects in

the United States in an effort to fill that gap and explore how NRAs arise, what initiatives are included, and if these initiatives have the potential to secure positive long-term economic development outcomes for host communities.

Rural locations that host high-grade, underground mining projects are important places to examine the benefits and risks of an extractive industry cycle in the aforementioned context. Underground hard-rock mines in the States are relatively rare—totaling only fourteen nationwide according to a USGS (2015) report—but are likely to increase in number as the demand for metals needed to fuel the energy transition ramps up (Ranjith, et al., 2017; Sovacool, 2020). Given the controversial nature of many new natural resource developments, mining companies are highly committed to securing community support and a 'social license to operate' (SLO) to ensure projects proceed as planned. The need to acquire and maintain a SLO gives communities leverage, which is most apparent during the permitting stages. NRAs are emerging as potential solutions for both parties as they look to maximize their respective benefits and minimize risks. In an examination of NRAs developed in the context of short-duration, high-impact mining projects in three resource peripheries in the United States, this research explores how communities are using novel tools to navigate the costs and benefits of mining development.

Literature Review: Resource Peripheries and Mining Communities

Resource peripheries—regions that rely heavily on natural resource extraction to sustain their economies—classically struggle to recognize lasting economic benefits from extractive industries. While the existence and extent of the "resource curse" at local scales is variable and largely depends on context (see Stevens, 2006; Wick and Bulte,

2009; Ross, 2015; Badeeb, Lean, and Clark, 2017;Papyrakis and Gerlagh, 2007; James and Aadland, 2011), the economic challenges facing small mining-dependent communities, even in high income countries, are well-documented. Extractive industrial developments can create short-term economic benefits—high-paying jobs, increases in tax revenue, potential investments in infrastructure—but long-term benefits are not guaranteed. Mining communities are at risk of becoming 'economically addicted' to a single industry or development resulting in over adaptation, wage pressure, and even social resistance to planning for post-mining futures (Freudenberg, 1992; Smith, 2019; Smith, 2020). Indeed, scholars agree that success in economic development through primary industries depends on institutional quality, avoiding inefficient distribution of public revenues, and investing locally to create opportunities for long-term economic diversification (Mehlum, et al., 2006; Robinson et al., 2006; Gunton, 2003; Markey et al., 2008). In locales where mineral mining dominates the economy, this means communities must prepare for the eventual withdrawal of the industry through durable public investments that outlast the project and strategies to replace of lost jobs and revenue (Haggerty et al., 2018; Jacquet, 2014).

A small body of scholarship suggests that institutional and regulatory landscapes are at best mixed when it comes to the ability for resource peripheries to leverage mining projects for long-term development—even in high income countries like the United States. In most cases, social and economic impact mitigation is a stipulation of acquiring the necessary permits to build and operate a mine, but, to the extent that they actually function as intended, these strategies only mitigate impacts, and do not address long-term

economic development (Haggerty and McBride, 2016). Communities encounter uneven regulatory support needed to manage impacts and guide long-term investment strategies (Ryser et al., 2016; Haggerty and Haggerty, 2015). State and federal fiscal policies have increasingly decoupled resource peripheries from the regional economy and natural assets in fundamental ways: taxation and expenditure limits erode revenue and constrain the ability of local governments to manage volatile revenue, often requiring resource revenue is used to substitute for other taxes (Haggerty, 2018), and tax incentives for extractive industries results in delay and loss of revenue necessary to mitigate impacts and make investments in resource communities. In the last three decades, this decoupling has occurred simultaneously alongside the implementation of neoliberal economic policies resulting in labor force restructuring, downward pressure on commodity prices, and erosion of support for local infrastructure and services from higher levels of government (Hayter, 2003; Szelenyi, 2011; Halseth, 2017; Schick, Davis, and Younes, 2020). Even in the best of cases, when communities may be protected from some of the short-term effects of mining developments, support for longer-term planning and transition is often absent.

Given this context, local leaders and governments appear to have limited capacity to influence the long-term economic outcomes of mining projects in their communities. However, there is one moment in/feature of the mining development lifecycle when local actors potentially have leverage to maximize economic benefits for local residents. Mining companies are increasingly aware of the importance of receiving a SLO, or the approval and acceptance of industrial projects by local actors (Thomson and Boutilier,

2011). During the permitting phase, this creates a window of opportunity for communities. From an industry perspective, the lack of a social license often results in significant delays and pressure on revenue targets and timetables (Lacey et al., 2012; Davis and Franks, 2011). Research suggests that local communities have real power over the permitting and development of a project (Boutilier, 2014), potentially enabling communities to ask for contributions and programs aimed at long-term economic development.

Non-regulatory agreements (NRAs), negotiated directly by the mining company with local communities, provide one mechanism to leverage the social license opportunity to protect local interests in the face of industrial development (O'Faircheallaigh, 2013). While the specifics of individual agreements—often referred to as 'community benefits agreements' (CBAs)—vary by location, their purpose is to explicate and address opportunities to mitigate local impacts and enhance local benefits. In this way, NRAs share the basic framework of the longstanding CBA model for mitigating the impacts of redevelopment in urban areas (Gross, LeRoy, and Janis-Aparicio, 2005). In the context of energy projects, NRAs often include promises to provide high wages, hire local, and support local infrastructure through development and/or investment (Salkin and Lavine, 2008; Ryser, 2016). If implemented properly, NRAs offer an avenue for stakeholders to address their concerns and to take ownership in their collective future while also providing a tool to hold industry accountable (Gross, LeRoy, and Janis-Aparicio, 2005). For host communities, the risks of NRAs include conflict between disparate stakeholder groups and a potential inability to manage the

governance and development responsibilities necessary to leverage benefits from the agreements (Bristow, Cowell, Munday, 2012). NRAs tied to mining developments have gained traction in the last 30 years—primarily in lower-income countries and frequently around indigenous communities and lands (O'Faircheallaigh, 2013). While there are examples from Canada and Australia (Centre for Social Responsibility in Mining, 2011; World Bank, 2010), a literature review in both academic and trade publications conducted for this study revealed that NRAs associated with mining developments in the United States are scarce.

Correspondingly, very little is known about whether and how communities facing new mining developments utilize NRAs to address the challenges of translating mining activity into long-term economic benefits that were described above. This study offers an exploratory analysis focused on three cases of mining company-community interactions in resource peripheries in the United States. The cases involve remote communities hosting short-duration, high-intensity (SDHI) underground mining projects developed by international corporations. SDHI mines in remote communities present attenuated cases of the challenges of achieving long-term economic development through mining, making these cases instructive to the broader questions surrounding the role of NRAs in securing local benefits from mining. Furthermore, scholarship on these specific types of mining projects is limited or non-existent, thus this study fills an important gap in academic knowledge about an increasingly prevalent form of industrial development.

As a contribution to understanding the role of NRAs in helping communities in resource peripheries navigate impact mitigation and secure economic development as

well as the particular dynamics present in hosting STHI mines, this study pursues the following questions: What concerns and priorities are reflected in NRAs between host communities and STHI mines? To what extent have local stakeholders sought to capitalize on STHI mines by negotiating for long-term economic benefits—why or why not?

Materials and Methods

Case Study Background

Three case studies were selected for this research based on the following criteria: all currently host or anticipate underground, high-grade precious metal mines in rural, remote areas in the United States. Additionally, in each location the mine has an outsized influence on the local economy, typical of many resource peripheries historically dependent on extractive industries (See Table 1). Each mine was designed for a relatively short 'life of operation'—although this expected lifespan is often extended due to mine expansions or the discovery of new deposits in the area. Lastly, the contrasting regulatory environment and institutions related to these developments offers a unique opportunity for comparison. In Montana—where two of the three sites are located—comprehensive legislation around hard-rock mines provides for both short-term impact mitigation and long-term savings for local communities. In Michigan—which hosts the third site—legislation around hard-rock mining is mostly focused on environmental protections. The discrepancy in the regulatory space results in different concerns and priorities related to

planning at the local level. What follows is a description of each case study area with context on geographic setting, socioeconomic variables, the associated mining operations, and the institutional and regulatory space. Taken together, these variables establish the contexts for considering how local leaders and residents negotiated to address community concerns, including economic development questions.

	Marquette County	**Sweet Grass County and Stillwater County**	**Meagher County**
Current Mine(s) Operator	Eagle Mine	Sibanye-Stillwater	Sandfire Resources America
Mine(s) type/Commodity	Underground longhole open stoping, nickel-copper	Underground stoping, platinum-palladium	Copper
County type – ERS Categories and OMB Designations	Non-metro, dependent on recreation	Both are non-metro and dependent on mining, SG is dependent on recreation	Non-metro, dependent on recreation
County Population	67,000	SG: 3,700 SW: 9,600	1,800
Yrs. Of Operation	7	SW: 35 EB: 19	14 (projected)
Total County Employment	26,651	SG: 2,757 SW: 5,383	1,144
Mining Company Employee Count	Over 400	1759 (including associated facility)	235 (projected)
Value of Extraction (gross)	<$1.3 billion (to date)	~$1.4 billion in FY2019	~$3 billion (projected)

Table 1. Relevant county and mine-related data. Data sources: (1) U.S. Department of Commerce. Census Bureau. 2020. (2) U.S. Department of Commerce. Bureau of Economic Analysis 2019. (3) Lundin Management's Discussion and Analysis (2015, 2016, 2017, 2018, 2019). (4) Sibanye-Stillwater Integrated Report, 2019.

County profiles

Marquette County

Marquette County is located in the Upper Peninsula of the state of Michigan. The United States Census Bureau (USCB) classifies Marquette County as non-metropolitan

(USCB OMB, 2010) and the United States Department of Agriculture's Economic Research Service (ERS) categorizes the county as economically dependent on recreation (USDA ERS, 2019). County population in 2019 was approximately 67,000, or 37.1 people per square mile (USCB, 2019). As of 2018, total employment in the county was 35,304 (Regional Economic Accounts, 2019) with an unemployment rate of 4.9% (Local Area Unemployment Statistics, 2019). Employment trends in the county reflect a 2.8% growth in employment for the period 2000-2018, which is higher than the state of Michigan's 1.9% increase in the same period (Regional Economic Accounts, 2019).

Marquette County currently hosts an underground copper-nickel mine owned by a subsidiary of Lundin Mining called Eagle Mine, LLC. Eagle Mine is the only primary nickel mine in the United States and utilizes a 'longhole open stoping' mining method to extract the ore. Eagle has been in operation since 2014, with an expected end of mine life in 2025 (Eagle Mine, 2018). In the early stages of mining operations, there were approximately 200 employees. That number grew to 400 as of late 2019. To date, Eagle Mine's operations have grossed over 1.3 billion dollars in revenue resulting in over 541 million dollars in profit from their operations (Lundin Annual Reports, 2014, 2015, 2016, 2017, 2018).

Stillwater and Sweet Grass counties

Sweet Grass County and Stillwater County are located in southwestern Montana. These two counties were combined to represent one case study due to the geographical proximity—about 13.5 miles—of two large-scale underground mines. While these two

mines lie in different jurisdictions, they are owned and operated by a single company. The USCB categorizes both counties as non-metro (USCB OMB, 2010) and the ERS reports that are also both economically dependent on mining, meaning that at least 13 percent of their average annual labor earnings or at least 8 percent of their total employment derives from the mining industry. The ERS also classifies Sweet Grass County as economically dependent on recreation (USDA ERS, 2019). Approximately 3,700 people live in Sweet Grass County, or 2.0 people per square mile, and over 9,600 people live in Stillwater County, which equates to 5.1 people per square mile. (USCB, 2019). As of 2018, total employment was 5,383 in Stillwater County and 2,757 in Sweet Grass County. Employment trends from 2000-2018 show a 10.4% and 28.3% increase in total employment for Stillwater and Sweet Grass counties, respectively. That compares with a 24% increase for the State of Montana over the same timeframe (Regional Economic Accounts, 2019). In 2018, Stillwater County had an unemployment rate of 3.3%, while Sweet Grass County reported an unemployment rate of 3.0% (Local Area Unemployment Statistics, 2019).

These two counties host two separate platinum-palladium underground mines—the Stillwater Mine is located in Stillwater County and the East Boulder Mine is located in Sweet Grass County—as well as an associated metallurgical facility nearby. The Stillwater and East Boulder mines have undergone numerous ownership changes since they started operating in 1986 and 2002, respectively. Currently, these operations are fully owned by Sibanye-Stillwater, a mining company based in South Africa that acquired the project in 2017 for a cost of 2.2 billion dollars (Olson, 2020). Both mines are

platinum group metals (PGMs) which the company states are the only significant sources of PGMs in the United States and the richest deposit in the world. Both mining operations utilize different stoping methods to extract the ore, and a paste-backfill system is used to replace the excavated areas (Sibanye-Stillwater, 2019). The Stillwater Mine has an expected end of life in 2046 and the East Boulder has an expected end of life in 2054. Employment for both mines and the metallurgical facility has increased over the last few years and currently the company reports 1759 employees for all three operations. Due to the long history and frequent ownership changes, calculations of gross and net value are difficult, but the company reported 1.4 billion dollars in revenue in 2019 which resulted in just under 400 million dollars in profit (Sibanye-Stillwater, 2019).

Meagher County

Meagher County is a non-metro county (USCB OMB, 2010) located in central Montana and surrounded by multiple mountain ranges. The ERS classifies Meagher County as a recreation county and categorizes the county as a retirement destination (USDA ERS, 2019). As of 2019, approximately 1,800 people live in Meagher County, equating to a population density of less than one person per square mile. Total employment in Meagher County for 2018 was 1,144 (Regional Economic Accounts, 2019) and the unemployment rate was 3.8% (Local Area Unemployment Statistics, 2019).

Meagher County is slated to host the Black Butte Copper Project (BBCP), a recently permitted underground copper mine located about 15 miles northwest of the county seat, the city of White Sulphur Springs. The project is being developed by Sandfire Resources America, a subsidiary whose majority owner, Sandfire Resources, is based in Australia. Sandfire expects to extract approximately one billion pounds of copper over a projected mine life of fourteen years.

3.2.b. Institutional and regulatory environment

Hard rock mines in both states require permits to operate and are subject to federal, state and local regulations regarding taxation and distribution. The specific regulations governing permits and revenue are described in detail elsewhere (citation withheld pending review). While the specific stipulations required by individual permits have not been described here, both states enact comparable regulatory structures designed to prevent environmental degradation to air, land, and water affected by mining. These parallel structures require various permits at each step of the mine development process, and the similarities extend to the environmental impact assessment and bonding requirements. The presence of these regulations creates opportunities for environmental interests to contest and challenge mine permits, and a corresponding opportunity for "social license" negotiations.

Where these two states diverge is on oversight of the socioeconomic impacts of new mines. Montana requires substantial investment and effort on behalf of the developer

to mitigate short-term fiscal impacts of mining developments. Furthermore, the state has enacted legislation that necessitates long-term savings at the county level designed to mitigate impacts of closure. In Michigan, the extent to which social and economic impacts are addressed by legislation is limited to a state severance tax, a portion of which is directed to school districts and other affected units of local government. The rest of the severance tax revenues are directed to a state rural development fund, with no promise that communities or counties affected by hard-rock mines will see those funds return. While the severance tax revenues provide a short-term tax boost, the long-term benefits are uncertain.

In sum, the permitting process serves as a key time frame during which US communities can potentially apply leverage in negotiating with mining companies. Given the importance of mitigating short-term economic impacts, preparing for transition, and creating opportunities for long-term investment described in the literature, it stands to reason that community representatives may benefit from including these priorities in NRAs signed with mining companies. Where regulations fail to address short-term socioeconomic impacts, as is the case in Michigan, local communities might use NRAs to address the need to mitigate those impacts to ensure the mining development does not leave them *worse* off in the long run. When communities are generally protected from immediate impacts by legislation, they might use NRAs to consider longer-term implications and eventual transition. However, even when higher levels of government protect communities from impacts and arm them with tools to smooth transition, risks remain. For example, even under Montana's very comprehensive approach to mitigating

the local impacts of mining and setting money aside for transition, communities that are historically dependent on natural resource development face tough decisions on how to leverage those tools to diversify their economy.

Methodology

To explore how NRAs assist communities with the 'balancing act' of mitigating short-term impacts of industrial development while securing long-term benefits (Haggerty, 2018; Walsh and Haggerty, 2020; Sincovich et al., 2018), this research assesses three case studies through a qualitative, mixed-methods research design. Case studies were chosen to provide insight and inform analysis about the relationships between rural communities and mining companies. These relationships are difficult to capture with other social science methods and are best described through the reflections of the stakeholders directly involved.

For this research, two of the three case study sites—Stillwater County and Sweet Grass County, Montana, and Marquette County, Michigan—were investigated through a three-step data collection process. First, a desk-based exploration was conducted to provide background information and build a profile of each area. Afterwards, a key contact—often a reporter or community leader—was contacted to provide an introduction and suggestions on building a purposive sample of stakeholders in the area. This group of stakeholders consisted of community leaders, local government officials, and industry employees. Stakeholders were asked to participate in semi-structured interviews that

were conducted in person during field trips in fall 2018, winter 2019, and spring 2020. Due to the emergence of COVID-19, the later stages of fieldwork were done remotely, and stakeholders were asked to instead participate in a phone interview. Interview guides covered the background, professional roles and responsibilities, and the non-profit and voluntary work of each participant. Further questions inquired about past, current, and future involvement with the mining project in each area. These interviews (n=19) were then transcribed and coded with Nvivo software.

The third case study, Meagher County, Montana, took advantage of the lead author's first-hand experiences and direct involvement with a community group in the area. This group organized in response to the impending development of an underground copper mine with the stated goal of ensuring the project led to long-term, positive outcomes for the local economy and environment. The data collection in this case consisted of participant observation during group meetings and activities, including events open to community residents. Over a two-year period, this involved approximately twenty-five group meetings, four focus groups, and a community town hall event. During these engagements, interactions and insights were captured by recording meetings and/or thorough notetaking.

Interviews and field notes were analyzed using a mix of inductive and deductive codes with the goal of identifying evidence that shed light on the variables and considerations facing local communities in their effort to maximize benefits tied to mining developments. Deductive codes generated from scholarly literature focused on the risks and opportunities for long-term community development as reported by local stakeholders.

Inductive coding was based on a 'grounded theory' approach (see Corbin and Holt, 2005) that allows theory to arise from the data, rather than working off an existing theory. This allowed for the data to be analyzed to look for place and context specific elements of the cost-benefit equation in the selected cases. Additional desk-based research was done to analyze relevant policy documents, newspaper articles, and meeting minutes related to natural resource development in these areas.

Results

Results are organized by case study and focus on four key questions: (1) What were the general concerns and priorities of the community regarding the mine? (2) What were the social license to operate dynamics, particularly during the negotiation phase? (3) What concerns and priorities are reflected in NRAs? (4) Does long-term economic development surface as a priority in stakeholder opinion or NRAs? Table 2 provides a point of reference about the content of NRAs in each location.

	Marquette County	**Stillwater/Sweet Grass**	**Meagher County*** *proposed
Environmental Impacts	2. Independent environmental monitoring of surface water, groundwater, and flora and fauna	5. Independent environmental audits 6. Independent, recurring evaluation of reclamation plans and bonding requirements 7. Evaluation of tailings impoundments and waste rock disposal 8. Surface and groundwater monitoring	3. Independent Water Monitoring Program 4. Funding to combat invasive species
Social impacts (worker housing, school, etc.)	Not covered	2. Prohibition on industry-sponsored housing with city limits	2. Employee housing program
Health & safety (traffic, dust, emergency services, etc.)	Not covered	2. Traffic Reduction and Busing program	2. Funding to support local emergency services
Community investments (non-mitigation initiatives, funds, etc.)	2. Endowments and annual investments to promote economic diversification	Not covered	2. Endowment and annual investment into a community benefits fund

Table 2. Mechanisms for impact mitigation and long-term community development as found in NRAs

Marquette County

Concerns and Priorities

In the Marquette area, most of the concerns about short-term impacts of the proposed Eagle Mine focused on environmental degradation, specifically of ground and surface water. Water quality concerns were cited as critical by a consensus of interviewees. As one industry representative noted,

> The biggest concern that people had was around environmental impact and impact to water quality. The mine itself, the ore body itself, is directly underneath a river, so, there was concern about the health of the river and then we're not too far from Lake Superior either. So, definitely environmental concerns were [at] the top of the list (Interviewee I8).

The concerns around environmental impacts were often rooted in a distrust of both industry and regulatory agencies. A member of an organization tasked with oversight of Eagle Mine's impact on water quality summed it up by reflecting, "they [the mining company] understood that the community didn't trust them but they also understood that the community didn't trust the state of Michigan to regulate it either. So, that was a bid deal, that lack of trust with the state as well (Interviewee I24).

While environmental concerns were frequently cited, they were often characterized as representative of only a few organized stakeholder groups. A local resident heavily involved with community development initiatives put it this way,

> …of course, there's a certain tree hugger group that's very concerned about not having something in their backyard. Maybe it's some very wealthy people north of here, […] and other people just feel that way, they don't want a mine in their neighborhood. So, there was a lot more negative at the beginning than there was positive (Interviewee I9).

Additional interview data reinforces this ‘insider vs. outsider’ dynamic where the concerns of a select few groups clashed with the concerns of other groups in the community. Another community development-oriented interviewee stated that “Yeah the thing you have to keep in mind is we have a very green population too. So, they weren't as concerned about employment as many in the younger population would’ve been (Interviewee I18).” This reflection suggests that age and economic status may play a role in the clash between stakeholder groups. In this case, the ‘green population’ is framed as an outsider group consisting of either wealthier, like those members of a nearby exclusive club, or older residents.

Even with the majority of respondents citing environmental concerns as the most prevalent, interview data reveal additional concerns, many of which are frequently cited in the resource periphery literature. For example, an industry representative noted a fear that locals would not have access to employment at the mine:

> There’s this misconception that we were going to bring in all of these, well it was Rio Tinto at the time, so, all these people from Australia and people from out of the area to come in and work at the mine. So, very early on, when we're still in construction, we told the community that we’d have a goal of 75% local hire (Interviewee I8).

Other examples included unease about impacts to local infrastructure. One respondent summed it up by saying,

> when they were building mine and there were a lot of issues around the road that they use to transport because the mill and the mine are in two different locations and there was a lot of concern about the roads. 'You're are going to wreck up our roads, tear up our roads and then you're going to leave, right?' (Interviewee I21).

Outside of concerns around impacts, residents in the area also communicated specific priorities they wished to accomplish. For example, the community expressed a desire to focus on education. Interviewees revealed that this idea came out of community forums held prior to mine operations. A member of a local non-profit described those discussions by saying, "They wanted to keep our kids. It comes right back down to that […] But the true answer to any community development [and] economic development is the youth. Education is the answer to almost every problem, every issue in the whole community" (Interviewee I21). This desire to retain the younger generation acknowledges the challenges faced by resource peripheries and rural places, including outmigration and urbanization that have eroded the labor force and led to an aging population.

Social License to Operate

Given the concerns of the local residents affected by Eagle Mine—namely around the environment and water quality but also reflecting uneasiness about incoming population and effects on infrastructure—it is worth highlighting data on the dynamics prior to mine operations. Namely, what moments stood out from the crucial period during the permitting phase when the community holds leverage and the mining company is looking for a SLO?

The data from Marquette suggests that that local and regional environmental groups used their concerns to put pressure on the mining company. A local resident who was part of early industry-led efforts to gauge community opinion noted that, “There was a lot of problems. I mean people, the environmental groups were doing sit-ins.” Another reflected on the permitting process and said, "I attended all of their public hearings and quite frankly we would take a verbal beating from the people that were opposed. If you stood up and said you were for this mine, and all of the things that it could bring to your community [you were dismissed].”

This effort to hinder the development of the mine contrasts with other stakeholder groups who were much more receptive during the early stages. A local government official in the area summed up his constituent’s feelings by saying,

> Well, Michigamme [a local township] was very receptive of Rio Tinto coming in because of their promise of local hire […]. They were excited. And I think the

> Township Board was supportive of Rio Tinto and of the mine being developed (Interviewee I22).

These findings reflect the desire of many constituents and local governments to secure high-paying jobs and a boost to the tax base. The township mentioned in the above quote, despite seeing few negative impacts from the project, reportedly received over one million dollars from the severance tax under Michigan law.

Initiatives found in NRAs

In Marquette, multiple stakeholder groups including local residents, local and regional environmental groups, and Native communities coalesced around the importance of water quality in the region. This resulted in the creation of a widespread, comprehensive monitoring program that focused mainly on water (but also included air quality and other flora and fauna monitoring) quality and that one interviewee described as, “unprecedented in the global mining community.” This program was negotiated between the mining company and two local groups: a non-profit conservation-oriented organization and the community foundation. The final NRA is bound by a legal contract between the three parties subject to renegotiation on a three-year basis. Interview data also suggests that, beyond avoiding a potential lawsuit and appeasing concerned local stakeholders, robust environmental monitoring is a priority of another stakeholder group—investors. Another member of a group involved in the water quality program noted that, “I think that was very attractive to a lot [of companies]. They had five

different buyers coming here very seriously looking at it and that was one of the, from what [the mining company] told us, that was one of the big selling points was that program." Given that two well-organized and high-capacity stakeholder groups were supportive of environmental, specifically water, monitoring, it should be no surprise that Eagle Mine agreed to such a comprehensive program on which the company spends $300,000 per year (Lundin Mining Corporation, 2017).

Another significant NRA between Eagle Mine and the local community includes a partnership between local high schools and Northern Michigan University, located in the city of Marquette. Notably, this 'Middle College' program was inspired by two local community members who saw the Eagle Mine as the perfect source of needed capital. In the words of one of those behind the idea, "Well, when Eagle came to town they said, 'hey, we are going to establish this $6 million community foundation' and I was like, 'boom, there's our money.' So, [he] basically got me in the front door and said, 'I think you should listen this guy' and together we kind of closed the deal" (Interviewee I18).

Other NRAs in the Marquette area (see Table 2) include a small business development initiative, AccelerateUP, and a program providing micro-loans to high risk clients. Interestingly, a report by Lundin Mining, the parent company of Eagle Mine, states that the objective of AccelerateUP is to "create jobs outside of the mining industry in an effort to alleviate the 'boom and bust' cycle typically associated with mining" (Lundin Mining, 2017, pg. 20-12). This example may provide evidence that international mining companies bring the experience and foresight to establish initiatives that set-up

communities for long-term success, even when mining communities are unable or unwilling to push for those benefits.

Long-term economic considerations

Existing NRAs tied to Eagle Mine reflect an effort to secure long-term economic benefits from the project. For example, the educational program shows that, in a region traditionally dominated by extractive industries, local residents were cognizant of the benefits of an educated workforce. Respondents also were careful to credit Eagle Mine's desire to leave positive lasting impacts as another driver of the Middle College and AccelerateUP. One interview familiar with the programs stated that,

> Again, the big idea was they wanted to leave a legacy. Between AccelerateUP and building that entrepreneurial base and providing this opportunity to young people [by] filling the jobs that were needed to sustain our economy and eventually grow our economy, that's what they wanted to leave. That's what they felt could be their best long-term impact locally (Interviewee I18).

While these programs address long-term priorities and investment in the community, further examination shows that these efforts are not designed to outlive the life of the mine. In the case of both AccelerateUP and the Middle College, interviewees noted that the endowment from Eagle Mine was not enough to sustain the program beyond the mine and future funding was uncertain. This reflects a classic risk identified in the 'addictive

economies' literature—over dependence on a single industry. Interview data supports this assertion with statements on the long-term future of the mining operation and the ability of the local communities to transition. For example, one participant suggested that,

> I think people are just hopeful that there will be another ore body found and it will extend the life […] even if this mine were to close, there are other mining projects that are opening in the Upper Peninsula. People wouldn't have to move that far. They could remain in the Upper Peninsula [but] they might have to move to a different community and in some cases they could probably commute. There's an almost unlimited, right now, opportunity for additional mining and additional jobs in the UP. So, I think everyone is hopeful of that (Interviewee I18).

Stillwater and Sweet Grass County

Concerns and Priorities

Similar to the Marquette area, many residents affected by the Stillwater and East Boulder mines were concerned about the risks to the local environment and were distrustful of industry operators. A member of a local environmental organization recalled that,

> Certainly, water was the issue that we focused our attention around because […] we were concerned about the tourism and fishing economy that this county has […] but also watching how the eastern mining companies moved out here with

> gold mining and how they weren't very reputable and they weren't really honest with how they dealt with landowners in terms of negotiations (Interviewee I19).

The environmental concerns did not stop at water, with interview data reflecting the desire to protect other aspects of the landscape. Another member of an environmental group noted, "it was representing the community through issues about water, about large scale development, the impacts of the development on the community, the scenery, the features of what we have here: the mountains, the fishing, hiking, and all those things that we moved out here for" (Interviewee I23).

It is important to note here that interview data suggests that these concerns were shared by residents as well as members of environmental organizations. A member of one of these organizations emphasized this by stating, "It was widespread. I remember getting a call into that process from a very conservative, 80-year-old rancher up there who I didn't really think would support us. I got a call one Sunday morning from him saying, 'what the hell is going on out here? You mean they are going to pollute this river?" (Interviewee I19).

In contrast to the primarily environmental concerns in Marquette, much of the data from the Stillwater-Sweet Grass area suggests widespread worry around a host of development impacts. One respondent noted concerns from both residents and local government saying,

> the rural residents were really pretty concerned about how the mine was going to affect traffic, water quality, dust, subdivisions and also the units of local government, the city and county, were concerned about the influences on the jails, the schools, the water system [in the city and] the pressures for residential construction (Interviewee I10).

Concerns about the negative impacts of development, while voiced by multiple stakeholder groups, were not necessarily homogenous throughout the community. A segment of the population saw the Stillwater Mine as a positive for the area. One member of an environmental group reflects that, "a lot of local citizens saw the mine as an economic boost, increasing the tax base and jobs and housing and benefits galore for the community. They just thought, 'this is going to be the Golden Goose forever and ever'" (Interviewee I10). Another interviewee characterized the differing opinions on mine-related impacts by stating, "Well, I think there is a part of the community that says, 'Business wants to move in here, let's clear everything away and let them come'" (Interviewee I1). Much like Marquette, these reflections reinforce that the impacts of incoming mines are often perceived very differently by different stakeholder networks in the local area.

Social License to Operate

Much like Marquette, data from interviews in the Stillwater-Sweet Grass area suggests that environmental groups were able to use leverage during the permitting process to put pressure on the developer. In fact, the origins of the Good Neighbor Agreement, an NRA between the mining company and three conservation groups, stem from an attempt to halt the Stillwater Mine from going forward. One interviewee who was involved in that dispute characterizes that period by noting, "The company knew that we were serious, they knew that we had money, and they knew that we would sue them. We had an enormous amount of leverage" (Interviewee I10). Note that this particular stakeholder group was well aware of their advantages—the organizational capacity and resources to truly challenge and perhaps stop the impending development. Another early negotiator with the mining company said,

> You will never again […] have a leverage moment where they're looking at a permit to operate. They have people out there in their management team telling them they have revenue goals to meet. And they're not going to be able to operate in about two months. And so, the whole plan for the year is really in jeopardy. So, that seemed to us to be the moment that we were going to essentially oppose the permit and we had a perfectly good case to do that (Interviewee I7).

Initiatives found in NRAs

As noted, community concerns and priorities around the Stillwater and East Boulder mines resulted in three area environmental groups successfully negotiating the GNA with

the Stillwater Mining Company. This agreement includes initiatives on both environmental protections—including water monitoring and involvement in bonding calculations and tailings impoundment planning—as well as social impacts like traffic limits and employee housing stipulations (see Table 2). Or, as one interviewee notes, "One of the community things identified was, nah, you don't want a bunch of man camps" (I7).

The Good Neighbor Agreement broadly addressed the concerns of multiple stakeholder groups in the area as reported in interviews. It includes a traffic program that limits the number of vehicles allowed in the parking lot of each facility and stipulates that mine employees must carpool as much as possible. The agreement also restricts employee housing outside of local municipalities in order to avoid the aforementioned 'man camps.'

Even when NRAs do appear to address a majority of local concerns, conflict between different stakeholder groups can still occur. In the case of the GNA, one respondent noted that, "We do get occasional feedback of some sorts from people who think that the GNA has reduced business. […] So, it was at one time they might have called it the 'No Neighbor Agreement" (Interviewee I1). This data point suggests that NRAs themselves may cause unforeseen impacts that alienate local groups.

Long-term economic considerations

The GNA does not contain direct initiatives focused on long-term priorities related to community development. To the extent that a longer-term view was taken, the data suggests that respondents the focus on impact mitigation was considered to be in the best interest of the broader community. For example, one interviewee framed the early concerns around the Stillwater Mine from an economic perspective, saying that, "We were concerned about the tourism and fishing economy that this county has. It has some of the most renowned trout fisheries in the country, so people come here for that" (Interviewee I19).

Today, community development initiatives are addressed by Sibanye-Stillwater's 'Community Giving Team' which was created in 2018 and focuses on "rural emergency and health care services, education (especially science, technology, engineering and mathematics), local community improvement activities and environmental stewardship" (Sibanye-Stillwater, 2019, pg. 200). A community representative describes the Giving Team as their "charitable support-arm" and states that, "besides the Good Neighbor Agreement, that's probably our second concerted stakeholder effort" (Interviewee I20). The success of this effort is up for debate. One respondent, a member of group involved with the GNA said that,

> I would like to see more, and I think there's an opportunity there, is to do a lot more philanthropic activities […] these communities are really pretty small and hurting, if you go drive through Absarokee [a local settlement], half the buildings are shuttered. I would think that it should be incumbent

> on the mine to get more involved with these local communities and make sure that they are more vibrant than they are (Interviewee I3).

The lack of early attention to actual developmental goals, as well as the informal nature of community development initiatives led by the mine, casts doubt on the question of whether communities are prepared to leverage mining projects to achieve economic progress.

Meagher County

Concerns and Priorities

In Meagher County, an NRA with Sandfire is in development at the time of writing. As part of this process, community concerns and priorities around the Black Butte Copper Project have been solicitated by the Meagher County Stewardship Council. To capture this feedback, the Council conducted multiple outreach efforts including community focus groups and a community-wide meeting in which residents from other mining communities (including Marquette) shared insights about their experiences hosting similar mines during. The focus groups focused on six areas: culture, economic development, education, environment, health and safety, and transportation and infrastructure. A review of the main findings from these events, as well as ideas discussed at Council meetings, is below.

Culture

At the focus group meeting, locals expressed some worry about incoming population and effects on local culture and lifestyle. To combat this, focus group participants suggested developing a ‘newcomer education course’ designed to educate those moving to the area on the local history and way of life. The newcomer education has been identified as a priority during multiple Stewardship Council meetings as well, with Council members reflecting their desire to maintain the ‘feel’ of the community. Council members and other locals have also shown a distinct pride in the history and economic activities in the area.

Economic Development

Many residents of White Sulphur Springs are highly optimistic about the economic development opportunities associated with the BBCP. This was evident at the focus group, as well as Council events. Participants of the economic development focus group mentioned a desire to diversify the local economy and support small businesses. When asked about potential negative impacts, respondents mentioned rising housing prices and competition for labor (from Sandfire) as primary concerns. At a town hall event held by the Council, the worry around labor and wage competition was raised again, with a reflection from a local businessowner that employees were already in short supply.

Education

Regarding education, focus group attendees raised concerns regarding an ongoing issue in the community—teacher retention. Priorities in this area included keeping housing costs down, as well as exploring opportunities to support teachers through incentive or bonus-based compensation programs. Throughout additional interactions between the community and the Stewardship Council, many residents have expressed the desire to find avenues to encourage the younger generation to stay, or return after college, to the area. The mine is seen as a possible opportunity to bring some former residents back to the area.

Environment

Environmental concerns, and specifically water quality concerns, have been attached to the Black Butte Copper Project throughout the permitting process. Similar to the other case studies discussed here, regional environmental groups have voiced their opposition to the project from the beginning. Meagher County is home to a wilderness stretch of a freshwater river that has a devoted following among anglers and recreationists from around the state and nation, so the mine has attracted particularly vocal and well-organized environmental resistance. A coalition of these groups has subsequently filed a lawsuit against project. Council members and the local community have, to an extent, shared these concerns but not at the expense of support for the project: they have sought to balance costs and benefits through agreements with the mining company that go above state regulations. For example, the Council negotiated a Memorandum of Agreement

with Sandfire that bans open pit mining in six area townships, including the location of the proposed mine. In the environmental focus group meeting, suggestions to mitigate water quality concerns included a water monitoring program and an invasive species prevention program to prevent a population increase from exacerbating the problem. Participants also expressed a desire to develop a riparian restoration/stream health program in the area.

Health and Safety

Health and safety concerns related to the development of the BBCP have keyed on the impacts to local services. Specifically, residents at the focus group were worried about higher demand on the local food bank, emergency medical services, and law enforcement services. Reflecting the depressed nature of local infrastructure, respondents keyed in on the deficiencies of the local jail and the need to replace the facility.

Infrastructure and Transportation

Contrary to the concerns seen in other mining communities, the data from Meagher County does not express significant emphasis around traffic impacts. At the focus group meeting, infrastructure was cited as a much more urgent priority—especially housing. While the Hard-Rock Mining Impact Act in Montana covers fiscal impacts to local governmental units, it does not address secondary impacts. The discussions of the Council have frequently returned to the dismal condition of the local housing stock and the fear that an increased population would exacerbate that problem. Priorities raised

include improving dilapidated and vacant houses and lots. Residents have also expressed concern regarding an incoming workforce and negative effects associated with temporary employee housing.

Social License to Operate

Observations from experiences with the Stewardship Council and interactions with residents of White Sulphur reflect general local acceptance of the BBCP. The Council has developed a collaborative, not adversarial, relationship with Sandfire. This relationship is based primarily on trust. On multiple occasions, Council members have expressed their faith in the leadership of the company, which includes two prominent and longstanding local residents. Public comments throughout the permitting process, including those made at the Council-sponsored town hall and public hearings hosted by state agencies, have shown a receptiveness to the project. At the same time, the Stewardship Council has also made it a priority to leverage their acceptance in return for financial support from the company. In addition, the Council has decided to develop and negotiate a NRA directly with Sandfire.

Initiatives found in NRAs

While not formally signed and agreed upon, the MCSC is in the process of developing a NRA with Sandfire. Early proposals for initiatives and programs are focused on the concerns and priorities identified earlier. Specifically, the agreement is aiming to include

water monitoring, support for local services, and agreements to mitigate issues associated with employee housing (see Table 2).

Long-term economic considerations

In addition to the impact mitigations found in the draft NRA, the Stewardship Council is also concerned with securing enduring economic benefits from the BBCP. To that end, the Council is considering a request to endow a community benefits fund. The endowment would be provided by Sandfire, with the hope that additional revenue sources could be identified in the future. The goal of this fund would be to establish a permanent community savings mechanism aimed at promoting community development long beyond the life of the BBCP.

Discussion

The results from this research build on the literature on the experience of rural communities that host large-scale mining projects. Additionally, our findings shed light on the role of NRAs in the cost/benefit equation facing resource peripheries, as well as the ability for these agreements to advance long-term economic development.

Firstly, we show that community concerns and priorities are contested spaces with multiple stakeholder groups involved. Outside of environmental groups, many stakeholders in rural communities are mainly focused on the short-term benefits provided by a project. The need for a boost to the local tax base and high-paying jobs often

comprises the ‘wish-list’ of these groups. This focus on securing the ‘Golden Goose’ may complicate the need to negotiate for fiscal and social impact mitigation. Ideally, communities would assess the regulatory gaps in the regulatory and institutional frameworks around hard-rock mining and incorporate formal initiatives into NRAs to cover those gaps. However, the data presented here suggests that communities may be unwilling or unable to assess and address regulatory limitations—as shown by the lack of discussion of socioeconomic impacts tied to the Eagle Mine in Marquette County and the absence of long-term community development programs in the GNA in Stillwater and Sweet Grass counties.

Secondly, negotiations with mining companies are further complicated by capacity issues, as well as the reality that the most influential stakeholder groups are often environmental organizations with significant legal, policy, and economic expertise. These groups often hold leverage during the crucial stages of the permitting process, when the social license to operate has not been granted. They exercise this leverage via the threat of litigation, which results in their priorities (and a large share of a limited resource pool) ending up in formal agreements. While these groups often include locals, their ability to represent the broader community is in question.

Taken together, these findings help explain why certain priorities, specifically long-term community development concerns, are not always formalized in NRAs. When they are present, evidence suggests that this results from community priorities pushed by key actors or developed from community outreach efforts—like the emphasis on education and the resulting Middle College program in Marquette. In the absence of these ground-

up efforts, communities risk long-term initiatives being either left out of formal agreements or designed by international mining companies. In addition, some evidence suggests that development initiatives are often limited and heavily front-loaded, leaving their long-term sustainability in doubt. As resource peripheries, rural communities are often historically reliant on the extractive industries. This reliance may lead to expectations of future mining developments and potentially lessens the urgency to negotiate for lasting benefits. Importantly, our evidence does *not* suggest that the institutional and regulatory environment might limit rural communities' ability to secure enduring benefits. In Montana, impact mitigation legislation is robust, but the GNA goes above and beyond these requirements. Furthermore, in Meagher County, a Stewardship Council is negotiating for a permanent savings fund despite legislation requiring long-term savings at the county level. These findings suggest that pressure to secure a social license to operate exists even in strong regulatory environments. This pressure creates unique opportunities that communities can and should exploit to capitalize on natural resource developments.

Conclusion

This work contributes to the literature on rural places and natural resource development, while also building on the scarce literature around NRAs and their role in the context of rural mining communities in high-income countries. These contributions have important

implications for academics, rural communities hosting large-scale industrial projects, and policy makers whose decisions affect those communities. Future research with regard to NRAs and mining communities is needed to explore multiple areas that this study could not, including the role of and impact to tribal communities on which many of these mines are developed, the characteristics of the relationship between communities and mining companies and how that shapes NRAs, and the successes and failures of NRAs in achieving stated long-term development goals.

The insights from stakeholders in these three case studies also reflects the need for policy makers to support rural communities in the process of negotiating for and securing long-term benefits from natural resource development. Rural communities often hold a distrust of incoming international mining companies. This can actually serve to their advantage, helping them leverage the social license to operate moment when they can negotiate NRAs and secure real commitments from developers. When regulatory support is inadequate or absent, this moment may be lost or spent focused on impact mitigation at the expense of long-term planning and development. Especially in the context of short-term industrial projects, the lack of attention to lasting economic goals heightens the risk that natural resource development does not result in positive long-term outcomes for local communities. While the exact policy prescriptions vary by context, this study indicates that the regulatory framework should include protection from short and long-term socioeconomic impacts and vehicles and instruments to promote the capture of lasting economic benefits, including support for planning and transition after projects have completed.

Acknowledgements

The authors gratefully acknowledge support and guidance from OneMT and Bill Bryan. This project would not have been possible without the opportunity provided by the Meagher County Stewardship Council, as well as the collaborative efforts of Nancy Schlepp and Jerry Zeig.

References

Alexeev, Michael, and Robert Conrad. 2011. "The natural resource curse and economic transition." Economic Systems 35 (4): 445-461. https://doi.org/10.1016/j.ecosys.2010.10.003.

Ali, Saleem H., Damien Giurco, Nicholas Arndt, Edmund Nickless, Graham Brown, Alecos Demetriades, Ray Durrheim, Maria Amélia Enriquez, Judith Kinnaird, Anna Littleboy, Lawrence D. Meinert, Roland Oberhänsli, Janet Salem, Richard Schodde, Gabi Schneider, Olivier Vidal, and Natalia Yakovleva. 2017. "Mineral supply for sustainable development requires resource governance." Nature 543 (7645): 367-372. https://doi.org/10.1038/nature21359.

Argent, Neil. 2017. "Rural geography I: Resource peripheries and the creation of new global commodity chains." Progress in Human Geography 41 (6): 803-812. https://doi.org/10.1177/0309132516660656.

Auty, R. M. 1993. Sustaining development in mineral economies : the resource curse thesis. London ; New York: London ; New York : Routledge.

Badeeb, Ramez Abubakr, Hooi Hooi Lean, and Jeremy Clark. 2017. "The evolution of the natural resource curse thesis: A critical literature survey." Resources Policy 51: 123-134. https://doi.org/10.1016/j.resourpol.2016.10.015.

Bank, World. 2010. Mining Foundations, Trusts and Funds: A Sourcebook. World Bank (Washington D.C.). https://openknowledge.worldbank.org/bitstream/handle/10986/16965/828560WP0Sourc00Box379875B00PUBLIC0.pdf?sequence=1&isAllowed=y.

Been, Vicki. 2010. "Community Benefits Agreements: A New Local Government Tool or Another Variation on the Exactions Theme?" The University of Chicago Law Review 77: 5-35. https://doi.org/10.2307/40663024.

Boutilier, Robert G. 2014. "Frequently asked questions about the social licence to operate." Impact Assessment and Project Appraisal 32 (4): 263-272. https://doi.org/10.1080/14615517.2014.941141.
https://doi.org/10.1080/14615517.2014.941141.

Boutilier, Robert G., Leeora Black, and Ian Thomson. 2012. "From metaphor to management tool: how the social license to operate can stabilise the socio-political environment for business." International Mine Management 2012 Proceedings.: 227-237.

Boutilier, Robert G., and Ian. Thomson. 2011. Modelling and Measuring the Social License to Operate: Fruits of a Dialogue Between Theory and Practice.

Bridge, Gavin. 2004. "Mapping the Bonanza: Geographies of Mining Investment in an Era of Neoliberal Reform." The Professional Geographer 56 (3): 406-421. https://doi.org/10.1111/j.0033-0124.2004.05603009.x.

---. 2008. "Global production networks and the extractive sector: governing resource-based development." Journal of Economic Geography 8 (3): 389-419. http://www.jstor.org/stable/26161255.

Campbell, Gary, and Mark Roberts. 2010. "Permitting a new mine: Insights from the community debate." Resources Policy 35 (3): 210 - 217. https://doi.org/https://doi.org/10.1016/j.resourpol.2010.04.001. http://www.sciencedirect.com/science/article/pii/S0301420710000103.

Davis, Rachel., and Daniel M. Franks. 2011. "The Costs of Conflict with Local Communities in the Extractive Industry."

Deloitte. 2018. Mining Capital Projects: Are You Ready for the Next Investment Cycle? (Deloitte Touche Tohmatsu Limited).

ERS, USDA (Economic Research Service, United States Department of Agriculture). 2019. ERS County Typology Codes.

Esteves, A. M. 2008. "Mining and social development: Refocusing community investment using multi-criteria decision analysis." Resources Policy 33 (1): 39 - 47. https://doi.org/https://doi.org/10.1016/j.resourpol.2008.01.002. http://www.sciencedirect.com/science/article/pii/S0301420708000056.

Franks, Daniel M. 2011. "Management of the Social Impacts of Mining." In SME Mining Engineering Handbook, edited by Peter Darling. Englewood, Colorado: Society for Mining, Metallurgy, and Exploration.

Franks, Daniel. 2012. Social Impact Assessment of Resource Projects. International Mining for Development Centre.

Frederick van der, Ploeg. 2011. "Natural Resources: Curse or Blessing?" Journal of Economic Literature 49 (2): 366-420. https://doi.org/10.1257/jel.49.2.366.

Freudenburg, William R. "Addictive Economies: Extractive Industries and Vulnerable Localities in a Changing World Economy1." Rural Sociology 57 (3): 305-332. https://doi.org/10.1111/j.1549-0831.1992.tb00467.x. https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1549-0831.1992.tb00467.x.

G. Heisler, Karen and Markey, Sean. 2014. "Navigating jurisdiction: Local and regional strategies to access economic benefits from mineral development." 58.

Gross, Julian., Greg. LeRoy, and Madeline. Janis-Aparicio. 2005. Community Benefits Agreements: Making Development Projects Accountable. Good Jobs First (Good Jobs First and the California Partnership for Working Families). https://www.goodjobsfirst.org/sites/default/files/docs/pdf/cba2005final.pdf.

Haggerty, Julia H., Adrianne C. Kroepsch, Kathryn Bills Walsh, Kristin K. Smith, and David W. Bowen. 2018. "Geographies of Impact and the Impacts of Geography: Unconventional Oil and Gas in the American West." The Extractive Industries and Society 5 (4): 619-633. https://doi.org/10.1016/j.exis.2018.07.002.

Haggerty, Julia H., Kristin K. Smith, Jason Weigle, Timothy W. Kelsey, Kathryn Bills Walsh, Roger Coupal, David Kay, and Paul Lachapelle. 2019. "Tradeoffs, balancing, and adaptation in the agriculture-oil and gas nexus: Insights from farmers and ranchers in the United States." Energy Research & Social Science 47: 84-92. https://doi.org/https://doi.org/10.1016/j.erss.2018.08.012. http://www.sciencedirect.com/science/article/pii/S2214629618309071.

Haggerty, Mark N., and Julia H. Haggerty. 2015. "Energy Development Opportunities and Challenges in the Rural West." In Bridging the Distance: Common Issues of the Rural West, edited by David B. Danbom. Salt Lake City, U.S.: The University of Utah Press.

Halseth, Greg. 2017a. Towards a political economy of resource-dependent regions. edited by Laura Ryser: Abingdon, Oxon; New York, NY: Routledge, an imprint of the Taylor & Francis Group.

---. 2017b. Transformation of Resource Towns and Peripheries: Political Economy Perspectives. London, UNITED KINGDOM: Taylor & Francis Group.

Halvor, Mehlum, Moene Karl, and Torvik Ragnar. 2006. "Institutions and the Resource Curse." The Economic Journal 116 (508): 1-20. https://doi.org/10.1111/j.1468-0297.2006.01045.x.

Haslam McKenzie, Fiona. 2013. "Delivering Enduring Benefits from a Gas Development: Governance and planning challenges in remote Western Australia." 44.

Hayter, Roger. 2003. "“The War in the Woods”: Post-Fordist Restructuring, Globalization, and the Contested Remapping of British Columbia's Forest Economy." Annals of the Association of American Geographers 93 (3): 706-729. https://doi.org/10.1111/1467-8306.9303010. https://doi.org/10.1111/1467-8306.9303010.

Heisler, Karen, and Sean Markey. 2013. "Scales of Benefit: Political Leverage in the Negotiation of Corporate Social Responsibility in Mineral Exploration and Mining in Rural British Columbia, Canada." Society & Natural Resources 26 (4): 386-401. https://doi.org/10.1080/08941920.2012.695858. https://doi.org/10.1080/08941920.2012.695858.

Hibbard, Michael, and Susan Lurie. 2015. "The New Natural Resource Economy: A Framework for Rural Community Reslience." In Bridging the Distance: Common Issues of the Rural West, edited by David B. Danbom. Salt Lake City, U.S.: The University of Utah Press.

James, Alex, and David Aadland. 2011. "The curse of natural resources: An empirical investigation of U.S. counties." Resource and Energy Economics 33 (2): 440-453. https://doi.org/10.1016/j.reseneeco.2010.05.006.

Katharina, Wick, and Bulte Erwin. 2009. "The Curse of Natural Resources." Annual Review of Resource Economics 1 (1): 139-155. https://doi.org/10.1146/annurev.resource.050708.144219.

Kemp, Deanna. 2009. "Mining and community development: problems and possibilities of local-level practice." Community Development Journal 45 (2): 198-218. https://ecologyaction.ca/files/images-documents/miningandcommunitydevelopment.pdf.

Ken, J. Caine and Naomi Krogman. 2010. "Powerful or Just Plain Power-Full? A Power Analysis of Impact and Benefit Agreements in Canada's North." Organization \& Environment 23 (1): 76-98. https://doi.org/10.1177/1086026609358969.

Kenney, Douglas S., Miriam. Stohs, Jessica. Chavez, Anne. Fitzgerald, and Teresa. Erickson. 2004. Evaluating the Use of Good Neighbor Agreements

for Environmental and Community Protection:Final Report. Getches-Wilkinson Center for Natural Resources, Energy, and the Environment

University of Colorado School of Law.

Mine, Eagle. 2018. 2017 Annual Mining and Reclamation Report: Mine Permit MP 01 2007. (Eagle Mine LLC).

Mining, Centre for Social Responsibility in. 2011. World Bank Extractive Industries Sourcebook, Good Practice Notes: Community Development Agreements. University of Queensland.

Moffat, Kieren, Richard Parsons, and Justine Lacey. 2012. Exploring the concept of a Social Licence to operate in the Australian minerals industry: Results from interviews with industry representatives. CSIRO.

Munday, Max, Gill Bristow, and Richard Cowell. 2011. "Wind farms in rural areas: How far do community benefits from wind farms represent a local economic development opportunity?" Journal of Rural Studies 27 (1): 1 - 12. https://doi.org/https://doi.org/10.1016/j.jrurstud.2010.08.003. http://www.sciencedirect.com/science/article/pii/S0743016710000549.

Nelson, Michael G. 2011. "Evaluation of Mining Methods and Systems." In SME Mining Engineering Handbook, edited by Peter Darling. Englewood, Colorado: Society for Mining, Metallurgy, and Exploration.

Nonferrous Metallic Minerals Extraction Severance Tax Act. 2012.

O'Faircheallaigh, Ciaran. 2013. "Community development agreements in the mining industry: an emerging global phenomenon." Community Development 44 (2): 222-238. https://doi.org/10.1080/15575330.2012.705872.

Otto, James M. 1997. "A national mineral policy as a regulatory tool." Resources Policy 23 (1): 1-7. https://doi.org/10.1016/S0301-4207(97)00007-X.

Papyrakis, E., and R. Gerlagh. 2007. "Resource-Abundance and Economic growth in the U.S." European economic review 51: 1011-1039.

Pathegama, G. Ranjith Jian Zhao Minghe Ju Radhika V. S. De Silva Tharaka D. Rathnaweera Adheesha K. M. S. Bandara. 2017. "Opportunities and Challenges in Deep Mining： A Brief Review." Engineering 3 (4): 546-551. https://doi.org/10.1016/J.ENG.2017.04.024.

Prno, Jason, and D. Scott Slocombe. 2012. "Exploring the origins of ‘social license to operate’ in the mining sector: Perspectives from governance and sustainability theories." Resources Policy 37 (3): 346-357. https://doi.org/https://doi.org/10.1016/j.resourpol.2012.04.002. http://www.sciencedirect.com/science/article/pii/S0301420712000311.

Ross, Michael L. 1999. "The Political Economy of the Resource Curse." World Politics 51 (2): 297-322. https://doi.org/10.1017/S0043887100008200. https://www.cambridge.org/core/article/political-economy-of-the-resource-curse/EBEA5E178E7534C4BA38EE23D25322E0.

---. 2015. "What Have We Learned about the Resource Curse?" Annual Review of Political Science 18 (1): 239-259. https://doi.org/10.1146/annurev-polisci-052213-040359. https://www.annualreviews.org/doi/abs/10.1146/annurev-polisci-052213-040359.

Ryser, Laura, and Greg Halseth. 2010. "Rural Economic Development: A Review of the Literature from Industrialized Economies." Geography Compass 4 (6): 510-531.

https://doi.org/10.1111/j.1749-8198.2010.00321.x. https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1749-8198.2010.00321.x.

Ryser, Laura, Greg Halseth, Sean Markey, and Marleen Morris. 2016. "The structural underpinnings impacting rapid growth in resource regions." The Extractive Industries and Society 3 (3): 616-626. https://doi.org/https://doi.org/10.1016/j.exis.2016.06.001. http://www.sciencedirect.com/science/article/pii/S2214790X1630082X.

Sachs, J. D., and A. M. Warner. 1995. Natural Resource Abundance and Economic Growth.

Sachs, Jeffrey D., and Andrew M. Warner. 1999. "The big push, natural resource booms and growth." Journal of Development Economics 59 (1): 43-76. https://doi.org/10.1016/S0304-3878(99)00005-X.

---. 2001. "The curse of natural resources." European Economic Review 45 (4): 827-838. https://doi.org/10.1016/S0014-2921(01)00125-8.

Salkin, Patricia., and Amy. Lavin. 2008. Understanding Community Benefit Agreements: Opportunities and Traps for Developers, Municipalities and Community Organizations. https://doi.org/http://dx.doi.org/10.2139/ssrn.1025724.

Sincovich, Alanna, Tess Gregory, Ashleigh Wilson, and Sally Brinkman. 2018. "The social impacts of mining on local communities in Australia." Rural Society 27 (1): 18-34. https://doi.org/10.1080/10371656.2018.1443725.

Smith, Kristin K., and Julia H. Haggerty. 2020. "Exploitable ambiguities & the unruliness of natural resource dependence: Public infrastructure in North Dakota's Bakken shale formation." Journal of Rural Studies. https://doi.org/https://doi.org/10.1016/j.jrurstud.2020.05.006. http://www.sciencedirect.com/science/article/pii/S0743016719307569.

Stevens, Paul J. 2005. ""RESOURCE CURSE" AND HOW TO AVOID IT." The Journal of Energy and Development 31 (1): 1-20. http://www.jstor.org/stable/24812676.

Sibanye-Stillwater. 2019. 2019 Mineral Resources and Mineral Reserves Report.

Szelenyi, Balázs A., Peter Hanns Reill, and Iván Berend. 2011. Cores, Peripheries, and Globalization. New York : Central European University Press.

Söderholm, Patrik., and Nanna. Svahn. 2015. "Mining, regional development and benefit-sharing in developed countries." Resources Policy 45: 78 - 91. https://doi.org/https://doi.org/10.1016/j.resourpol.2015.03.003. http://www.sciencedirect.com/science/article/pii/S0301420715000288.

Thomson, Ian., and Robert G. Boutilier. 2011. "Social License to

Operate." In SME Mining Engineering Handbook, edited by Peter Darling, 1784. Englewood, Colorado: Society for Mining, Metallurgy, and Exploration.

United States Census Bureau, Office of Management and Budget. 2010. Metropolitan and Micropolitan Statistical Datasets.

USCB (United States Census Bureau). 2019. "Quick Facts: Marquette County, Michigan." Accessed June 30th. https://www.census.gov/quickfacts/fact/table/marquettecountymichigan/PST045219.

USGS (United States Geological Survey). 2015. DIRECTORY OF ACTIVE METAL AND INDUSTRIAL MINERAL UNDERGROUND MINES IN THE UNITED STATES IN 2015.

van der Plank, Sien, Bríd Walsh, and Paul Behrens. 2016. "The expected impacts of mining: Stakeholder perceptions of a proposed mineral sands mine in rural Australia." Resources Policy 48: 129-136. https://doi.org/10.1016/j.resourpol.2016.03.005.

Wallerstein, Immanuel Maurice. 2004. World-systems analysis: an introduction. Durham: Durham: Duke University Press.

Walsh, Kathryn Bills, and Julia H. Haggerty. 2020. "Social license to operate during Wyoming's coalbed methane boom: Implications of private participation." Energy Policy 138: 111217. https://doi.org/10.1016/j.enpol.2019.111217.

Weber, Jeremy G. 2012. "The effects of a natural gas boom on employment and income in Colorado, Texas, and Wyoming." Energy Economics 34 (5): 1580-1588. https://doi.org/10.1016/j.eneco.2011.11.013.

SUPPORTING THE MEAGHER COUNTY STEWARDSHIP COUNCIL

Introduction

This chapter provides history and context on the support provided by the Resources and Communities Research Group (RCRG) to the Meagher County Stewardship Council (MCSC).

Origins and Purpose of the MCSC

The Meagher County Stewardship Council was developed as an initiative of OneMT, a non-profit in Bozeman, Montana, and Sandfire Resources America, a mining company based out of White Sulphur Springs, Montana. The goal of this initiative was to establish an independent, third-party group that would be tasked with providing oversight on behalf of the residents of White Sulphur Springs and Meagher County related to the development of the Black Butte Copper Project. The MCSC's mission statement reflects a desire to champion the long-term economic, social, and environmental interests of city and county residents. To do so, they planned to work directly with the mine on programs designed to benefit these interests.

Role of RCRG

In early 2018, RCRG was approached by OneMT and presented an opportunity to collaborate and support the newly formed Council. It was agreed at that time that RCRG

would provide an assortment of technical services, reports, and general consultation specifically related to the prospect of capitalizing on the upcoming copper mine.

Process and Workplan

To facilitate the collaboration between OneMT, RCRG, and the MCSC, an early framework regarding a process and workplan was established. First, RCRG director Dr. Julia Haggerty and graduate student Jackson Rose would attend early MCSC meetings to become acquainted with the stakeholders involved. Dr. Haggerty and Jackson Rose would then provide periodic presentations and deliverables designed to help the Council consider the potential costs and benefits of hosting the BBCP. Early on in this process, the RCRG team suggested creating a 'community benefits agreement', or a legal contract between the Council and Sandfire, that would serve as an instrument to achieve many of the goals of the Council related to the BBCP. From this point forward, RCRG was mainly focused on the development of this agreement in collaboration with the Council.

Overview of Materials

This chapter includes a description of key documents and deliverables prepared by RCRG at the request of the Council, as well as a section discussing insights and lessons learned throughout this process.

Products

Over the last two years, RCRG has delivered a number of reports and presentations to the MCSC. The key deliverables are documented below.

(1) In August 2018, RCRG completed a report titled: Community Benefit Agreements and Funds: A Summary of Key Literature and Case Studies (see Appendix A). This report was completed with the intention of informing the Council on the literature and noted examples of the use of non-regulatory agreements tied to industrial developments worldwide. The report included: the history and use, goals and benefits, risks and challenges, and outcomes of non-regulatory agreements.

(2) In March 2020, RCRG completed a report titled: Focus Group Report (see Appendix B). This report documented the process and findings of a community outreach effort during the development of a community benefits agreement. The goal of the Council was to use the focus group data collection process to ensure that the final community benefits agreement represented widespread community concerns and priorities.

(3) In January 2020, Jackson Rose delivered a presentation on the fiscal impacts and associated revenue streams tied to the BBCP. This presentation was designed to inform Council members about direct revenue sources that flow from the project, including payments required by the Hard-Rock Mining Impact Act, and taxes paid under the Montana Metal Mines License Tax and Gross Proceeds Tax.

Lessons Learned

Two years of working closely with the MCSC has imparted several important lessons and takeaways regarding rural mining communities. All of these lessons can be summed up in one word—trust. For example, there exists a disconnect between the two primary stakeholder groups affected by this development: conservationists and the 'locals' or the Council members representing the residents of White Sulphur Springs and Meagher County. This disconnect is fuelled by a distrust of the other group, which makes collaboration around potential issues difficult, if not impossible. This lack of collaboration would seem counterintuitive: both groups share similar concerns. The conservation groups are focused on protecting the local environment, in this case the Smith River. Protecting these natural assets, as research (Haggerty et al., 2018) has shown, enables the community to successfully transition to a post-mining future. Environmental degradation on the other hand, hurts the outcomes for both parties. Furthermore, the inability to form a coalition with specific concerns and requests (of the developer), limits the leverage of both groups. This is never more true than during the permitting phase, when, as this research has shown, leverage for stakeholder groups is at a maximum.

Another example of the importance of trust in these communities is reflected in the leadership of the mine. Currently, Sandfire has two long-time locals in key management positions. This has enabled the development of a healthy working relationship between the Stewardship Council and the company. On many occasions, Council members have remarked that their trust in the company is founded on their

comfort level with these two executives. When concerns about the mining operations have arisen, they are often focused on the possibility that the local leadership presence will someday be replaced by outsiders. Lastly, the value of trust was apparent in my work and interactions with the Council. Growing up in the state, only two hours away from White Sulphur Springs, almost immediately granted me a level of access that was unlikely to be given to a newcomer from a less familiar background. That rural credibility helped me further my desire to help the group play a watchdog role and hold the mine accountable for the impacts of the mining project.

CONCLUSION

Summary

Using three rural peripheries in the United States, this thesis offers novel insights and data that contribute to the literature on rural communities, natural resource development, and the role of NRAs in the context of short-duration, high-impact underground mines. From the literature, we know that new mines bring an immediate economic boost—jobs, taxes, and secondary economic benefits—to local communities. Long-term benefits from mining are far less certain. To explore this dilemma, the research asked two main questions: 1) What concerns and priorities are reflected in NRAs between host communities and SDHI mines? 2) To what extent have local stakeholders sought to capitalize on SDHI mines by negotiating for long-term economic benefits—why or why not? Data collection was conducted in three case studies: Marquette County, Michigan, Meagher County, Montana, and Stillwater County and Sweet Grass County, Montana. All three of these locations share the distinction of hosting, or facing the possibility of hosting, underground mining operations characterized by a relatively short planned life of operations and an outsized impact on the local economies. The research approach in Marquette County as well as Stillwater County and Sweet Grass County relied on semi-structured interviews with key stakeholders and

policy analysis. These were complemented by participant observation facilitated by hands-on experience with the Meagher County Stewardship Council in Meagher County.

Findings from this effort reveal a great deal about the cost/benefit equation facing rural communities that host mining projects. First, concerns and priorities are not homogeneous across communities. Different stakeholder groups bring different sets of ideas around impact mitigation and long-term development. The conflict between these agendas is most costly during the permitting phase, when mining companies are highly cognizant of the need to obtain a social license to operate. Secondly, non-regulatory agreements offer an emerging tool for communities to negotiate directly with mining companies to address short and long-term impacts of mining projects. Evidence suggests that agreements are most effective if they take the regulatory and institutional context into consideration—but this is not always the case. Ideally, the regulations around hard-rock mines will free communities from the need to deal with short-term environmental and socioeconomic impacts of mining. This can open the possibility for communities to focus on long-term economic priorities that successfully capitalize on short-term mining developments.

Limitations

This research was designed and executed to study the role of NRAs in the context of rural communities hosting large-scale underground mining projects. Originally, a fourth case study site was selected: Lincoln County, Montana. Lincoln County has a long history as a resource periphery and met the selection criteria having previously hosted an

underground copper-silver mine. An initial field visit was completed in March 2020. Efforts to continue data collection in the Lincoln area were complicated by COVID-19, with all research related travel suspended in April 2020. Due to the limited number of interviews conducted, Dr. Julia Haggerty and I decided to remove Lincoln County from this project.

Discussion

Back to the question posed by that town hall in White Sulphur Springs: can natural resource development create sustainable rural community development? The answer, as geographers often find, is that a lot depends on place-specific context. The findings demonstrated here provide evidence for both sides of this scholarly debate.

On the positive side, the existing literature and findings from this research suggests that, in high-income countries, short-duration, high-impact mining projects provide a variety of short-term benefits. Among them: high-wage jobs, a boost to the local tax base, and positive economic spill over effects. For many rural places, the incoming capital and capacity serves as an opportunity to improve their community by diversifying and supporting the local economy. However, we also know that with the positive comes negative short-term impacts. Those include environmental degradation, stress on local services and infrastructure, and potential conflict with incoming populations. It is these impacts, and how they are governed under legislation, that influence the ultimate impact to local communities.

The immediate impacts of mining developments are a balancing act, but what does that mean for the longer-term outcomes? And what tools do communities have at their disposal to secure those outcomes? Again, we know that the existing regulatory framework plays a key role. Depending on the context, as in Montana for example, mining communities are set up to weather the short-term impacts and are given tools to mitigate the impacts of closure. In other cases, as in Michigan, communities are left relatively exposed to both immediate and lasting impacts, with support from higher levels of government limited to severance taxes that are likely short-lived. In either case, communities are turning to NRAs as a novel way to complement or substitute for regulatory gaps. We know that negotiating these agreements comes with risks: over-dependence, conflict around concerns and priorities, and a limited window of negotiating power. If these risks can be avoided, this research suggests NRAs offer a vehicle for communities to avoid or mitigate immediate impacts, but also to secure lasting socioeconomic benefits. Insights from stakeholders in three resource peripheries reflects the need for policy makers to support rural communities in the process of negotiating for and securing long-term benefits from natural resource development. Multiple interviewees expressed distrust of both the mining companies and higher levels of government. Where this distrust exists, it hampers the ability of communities to use their leverage, most prominent during permitting, to position themselves for long-term gain from these projects. While the exact policy prescriptions vary by context, this study indicates that the regulatory framework should include protection from short and long-term socioeconomic impacts and vehicles and instruments to promote the capture of

lasting economic benefits, including support for planning and transition after projects have completed.

Future research with regard to NRAs and mining communities is needed to explore multiple areas that this study could not, including the role of and impact to tribal communities on which many of these mines are developed, the characteristics of the relationship between communities and mining companies and how that shapes NRAs, and the successes and failures of NRAs after mining operations have completed.

REFERENCES CITED

Alexeev, M., & Conrad, R. (2011). The natural resource curse and economic transition. *Economic Systems*, *35*(4), 445-461. https://doi.org/10.1016/j.ecosys.2010.10.003

Ali, S. H., Giurco, D., Arndt, N., Nickless, E., Brown, G., Demetriades, A., Durrheim, R., Enriquez, M. A., Kinnaird, J., Littleboy, A., Meinert, L. D., Oberhänsli, R., Salem, J., Schodde, R., Schneider, G., Vidal, O., & Yakovleva, N. (2017). Mineral supply for sustainable development requires resource governance. *Nature*, *543*(7645), 367-372. https://doi.org/10.1038/nature21359

Argent, N. (2017). Rural geography I: Resource peripheries and the creation of new global commodity chains. *Progress in Human Geography*, *41*(6), 803-812. https://doi.org/10.1177/0309132516660656

Auty, R. M. (1993). *Sustaining development in mineral economies : the resource curse thesis*. London ; New York : Routledge.

Badeeb, R. A., Lean, H. H., & Clark, J. (2017). The evolution of the natural resource curse thesis: A critical literature survey. *Resources Policy*, *51*, 123-134. https://doi.org/10.1016/j.resourpol.2016.10.015

Bank, W. (2010). *Mining Foundations, Trusts and Funds: A Sourcebook*. https://openknowledge.worldbank.org/bitstream/handle/10986/16965/828560WP0Sourc00Box379875B00PUBLIC0.pdf?sequence=1&isAllowed=y

Been, V. (2010). Community Benefits Agreements: A New Local Government Tool or Another Variation on the Exactions Theme? *The University of Chicago Law Review*, *77*, 5-35. https://doi.org/10.2307/40663024

Board, T. H.-R. M. I. (2008). *Guide of the Implementation of The Hard-Rock Mining Impact Act and The Property Tax-Base Sharing Act*.

Boutilier, R. G. (2014). Frequently asked questions about the social licence to operate. *Impact Assessment and Project Appraisal*, *32*(4), 263-272. https://doi.org/10.1080/14615517.2014.941141

Boutilier, R. G., Black, L., & Thomson, I. (2012). From metaphor to management tool: how the social license to operate can stabilise the socio-political environment for business. *International Mine Management 2012 Proceedings.*, 227-237.

[Record #148 is using a reference type undefined in this output style.]

Bridge, G. (2004). Mapping the Bonanza: Geographies of Mining Investment in an Era of Neoliberal Reform. *The Professional Geographer*, *56*(3), 406-421. https://doi.org/10.1111/j.0033-0124.2004.05603009.x

Bridge, G. (2008). Global production networks and the extractive sector: governing resource-based development. *Journal of Economic Geography*, *8*(3), 389-419.

Bristow, G., Cowell, R., & Munday, M. (2012). Windfalls for whom? The evolving notion of 'community' in community benefit provisions from wind farms. *Geoforum*, *43*(6), 1108-1120. https://doi.org/10.1016/j.geoforum.2012.06.015

Campbell, G., & Roberts, M. (2010). Permitting a new mine: Insights from the community debate. *Resources Policy*, *35*(3), 210 - 217. https://doi.org/https://doi.org/10.1016/j.resourpol.2010.04.001

Committee, E. Q. C. R. O. (1982). *Report to the 48th Montana Legislature on the Socio-*

Economic impacts of Large-Scale Hard-Rock Mining.
Corbin, J., & Holt, N. L. (2005). *Research methods in the social sciences*. London ; Thousand Oaks, Calif. : SAGE.
Davis, R., & Franks, D. M. (2011). *The Costs of Conflict with Local Communities in the Extractive Industry*
Deloitte. (2018). *Mining Capital Projects: Are You Ready for the Next Investment Cycle?* D. T. T. Limited.
DoC, U. (2020).
ERS, U. (2019). *ERS County Typology Codes*
Esteves, A. M. (2008). Mining and social development: Refocusing community investment using multi-criteria decision analysis. *Resources Policy*, *33*(1), 39 - 47. https://doi.org/https://doi.org/10.1016/j.resourpol.2008.01.002
Families, P. f. W. (2015). *Community Benefits 101*. http://www.forworkingfamilies.org/page/community-benefits-101

Franks, D. (2012). Social Impact Assessment of Resource Projects. *International Mining for Development Centre*. http://im4dc.org/wp-content/uploads/2012/01/UWA_1698_Paper-02_Social-impact-assessment-of-resource-projects1.pdf
Franks, D. M. (2011). Management of the Social Impacts of Mining. In P. Darling (Ed.), *SME Mining Engineering Handbook* (3rd ed. ed.). Society for Mining, Metallurgy, and Exploration.
Frederick van der, P. (2011). Natural Resources: Curse or Blessing? *Journal of Economic Literature*, *49*(2), 366-420. https://doi.org/10.1257/jel.49.2.366
Freudenburg, W. R. Addictive Economies: Extractive Industries and Vulnerable Localities in a Changing World Economy1. *Rural Sociology*, *57*(3), 305-332. https://doi.org/10.1111/j.1549-0831.1992.tb00467.x
G. Heisler, K. a. M., Sean. (2014). Navigating jurisdiction: Local and regional strategies to access economic benefits from mineral development. *58*.
[Record #208 is using a reference type undefined in this output style.]
Graddy, E., & Lili, W. (2009). Community Foundation Development and Social Capital. *Nonprofit and Voluntary Sector Quarterly*, *38*(3), 392-412. https://doi.org/10.1177/0899764008318609
Gross, J., LeRoy, G., & Janis-Aparicio, M. (2005). *Community Benefits Agreements: Making Development Projects Accountable*. G. J. F. a. t. C. P. f. W. Families. https://www.goodjobsfirst.org/sites/default/files/docs/pdf/cba2005final.pdf
Haggerty, J. H., Haggerty, M. N., Roemer, K., & Rose, J. (2018). Planning for the local impacts of coal facility closure: Emerging strategies in the U.S. West. *Resources policy*, *57*, 69-80. https://doi.org/10.1016/j.resourpol.2018.01.010
Haggerty, J. H., Kroepsch, A. C., Walsh, K. B., Smith, K. K., & Bowen, D. W. (2018). Geographies of Impact and the Impacts of Geography: Unconventional Oil and Gas in the American West. *The Extractive Industries and Society*, *5*(4), 619-633. https://doi.org/10.1016/j.exis.2018.07.002
Haggerty, J. H., Smith, K. K., Weigle, J., Kelsey, T. W., Walsh, K. B., Coupal, R., Kay,

D., & Lachapelle, P. (2019). Tradeoffs, balancing, and adaptation in the agriculture-oil and gas nexus: Insights from farmers and ranchers in the United States. *Energy research & social science*, *47*, 84-92. https://doi.org/10.1016/j.erss.2018.08.012

Haggerty, M. N., & Haggerty, J. H. (2015). Energy Development Opportunities and Challenges in the Rural West. In D. B. Danbom (Ed.), *Bridging the Distance: Common Issues of the Rural West*. The University of Utah Press.

[Record #141 is using a reference type undefined in this output style.]

Halseth, G. (2017b). *Transformation of Resource Towns and Peripheries : Political Economy Perspectives*. Taylor & Francis Group.

Halvor, M., Karl, M., & Ragnar, T. (2006a). Institutions and the Resource Curse. *The Economic Journal, 116*(508), 1-20. https://doi.org/10.1111/j.1468-0297.2006.01045.x

Halvor, M., Karl, M., & Ragnar, T. (2006b). Institutions and the Resource Curse. *The Economic Journal, 116*(508), 1-20. https://doi.org/10.1111/j.1468-0297.2006.01045.x

Haslam McKenzie, F. (2013). Delivering Enduring Benefits from a Gas Development: Governance and planning challenges in remote Western Australia. *44*.

Hayter, R. (2003). "The War in the Woods": Post-Fordist Restructuring, Globalization, and the Contested Remapping of British Columbia's Forest Economy. *Annals of the Association of American Geographers*, *93*(3), 706-729. https://doi.org/10.1111/1467-8306.9303010

Heisler, K., & Markey, S. (2013). Scales of Benefit: Political Leverage in the Negotiation of Corporate Social Responsibility in Mineral Exploration and Mining in Rural British Columbia, Canada. *Society & Natural Resources*, *26*(4), 386-401. https://doi.org/10.1080/08941920.2012.695858

Hibbard, M., & Lurie, S. (2015). The New Natural Resource Economy: A Framework for Rural Community Reslience. In D. B. Danbom (Ed.), *Bridging the Distance: Common Issues of the Rural West*. The University of Utah Press.

Jacquet, J. B. (2014). Review of Risks to Communities from Shale Energy Development. *Environ. Sci. Technol, 48*(15), 8321-8333. https://doi.org/10.1021/es404647x

James, A., & Aadland, D. (2011). The curse of natural resources: An empirical investigation of U.S. counties. *Resource and Energy Economics*, *33*(2), 440-453. https://doi.org/10.1016/j.reseneeco.2010.05.006

Katharina, W., & Erwin, B. (2009). The Curse of Natural Resources. *Annual Review of Resource Economics*, *1*(1), 139-155. https://doi.org/10.1146/annurev.resource.050708.144219

Kemp, D. (2009). Mining and community development: problems and possibilities of local-level practice. *Community Development Journal*, *45*(2), 198-218.

Ken, J. C. a. N. K. (2010). Powerful or Just Plain Power-Full? A Power Analysis of Impact and Benefit Agreements in Canada's North. *Organization \& Environment, 23*(1), 76-98. https://doi.org/10.1177/1086026609358969

Kenney, D. S., Stohs, M., Chavez, J., Fitzgerald, A., & Erickson, T. (2004). *Evaluating the Use of Good Neighbor Agreements*

for Environmental and Community Protection:Final Report.
[Record #217 is using a reference type undefined in this output style.]
Mine, E. (2018). *2017 Annual Mining and Reclamation Report: Mine Permit MP 01 2007*. E. M. LLC.
Mining, C. f. S. R. i. (2011). *World Bank Extractive Industries Sourcebook, Good Practice Notes: Community Development Agreements*.
[Record #211 is using a reference type undefined in this output style.]
[Record #147 is using a reference type undefined in this output style.]
[Record #207 is using a reference type undefined in this output style.]
Munday, M., Bristow, G., & Cowell, R. (2011). Wind farms in rural areas: How far do community benefits from wind farms represent a local economic development opportunity? *Journal of Rural Studies*, *27*(1), 1 - 12. https://doi.org/https://doi.org/10.1016/j.jrurstud.2010.08.003
Nelson, M. G. (2011). Evaluation of Mining Methods and Systems. In P. Darling (Ed.), *SME Mining Engineering Handbook* (3rd ed. ed.). Society for Mining, Metallurgy, and Exploration.
Nonferrous Metallic Minerals Extraction Severance Tax Act, https://www.michigan.gov/taxes/0,4676,7-238-43519_43545-375454--,00.html (2012).
O'Faircheallaigh, C. (2013). Community development agreements in the mining industry: an emerging global phenomenon. *Community Development*, *44*(2), 222-238. https://doi.org/10.1080/15575330.2012.705872
Olson, E. (2016). *South African company to acquire Stillwater Mining Company for $2.2B*. Retrieved July 1st from https://billingsgazette.com/news/state-and-regional/montana/south-african-company-to-acquire-stillwater-mining-company-for-2-2b/article_005e58ff-021b-59ff-bb1b-255947063e46.html

OMB, U. (2010). *Metropolitan and Micropolitan Statistical Datasets*
Otto, J. M. (1997). A national mineral policy as a regulatory tool. *Resources Policy*, *23*(1), 1-7. https://doi.org/10.1016/S0301-4207(97)00007-X
Papyrakis, E., & Gerlagh, R. (2007). Resource-Abundance and Economic growth in the U.S. *European economic review*, *51*, 1011-1039.
Pathegama, G. R. J. Z. M. J. R. V. S. D. S. T. D. R. A. K. M. S. B. (2017). Opportunities and Challenges in Deep Mining： A Brief Review. *Engineering*, *3*(4), 546-551. https://doi.org/10.1016/J.ENG.2017.04.024
Prno, J., & Scott Slocombe, D. (2012). Exploring the origins of 'social license to operate' in the mining sector: Perspectives from governance and sustainability theories. *Resources Policy*, *37*(3), 346-357. https://doi.org/https://doi.org/10.1016/j.resourpol.2012.04.002
Randolph, M. (2011). *SME mining engineering handbook* (3rd ed.. ed.). Englewood, Colo. : Society for Mining, Metallurgy, and Exploration.
Ross, M. L. (1999). The Political Economy of the Resource Curse. *World Politics*, *51*(2), 297-322. https://doi.org/10.1017/S0043887100008200
Ross, M. L. (2015). What Have We Learned about the Resource Curse? *Annual Review*

of Political Science, *18*(1), 239-259. https://doi.org/10.1146/annurev-polisci-052213-040359

Ryser, L., & Halseth, G. (2010). Rural Economic Development: A Review of the Literature from Industrialized Economies. *Geography Compass*, *4*(6), 510-531. https://doi.org/10.1111/j.1749-8198.2010.00321.x

Ryser, L., Halseth, G., Markey, S., & Morris, M. (2016). The structural underpinnings impacting rapid growth in resource regions. *The Extractive Industries and Society*, *3*(3), 616-626. https://doi.org/https://doi.org/10.1016/j.exis.2016.06.001

Sachs, J. D., & Warner, A. M. (1995). *Natural Resource Abundance and Economic Growth*.

Sachs, J. D., & Warner, A. M. (1999). The big push, natural resource booms and growth. *Journal of Development Economics*, *59*(1), 43-76. https://doi.org/10.1016/S0304-3878(99)00005-X

Sachs, J. D., & Warner, A. M. (2001). The curse of natural resources. *European Economic Review*, *45*(4), 827-838. https://doi.org/10.1016/S0014-2921(01)00125-8

Salkin, P., & Lavin, A. (2008). Understanding Community Benefit Agreements: Opportunities and Traps for Developers, Municipalities and Community Organizations.

Schick, T., Davis, R., & Younes, L. (2020). Big money bought Oregon's forests. Small timber communities are paying the price. https://www.opb.org/news/article/oregon-investigation-timber-logging-forests-policy-taxes-spotted-owl/

Sincovich, A., Gregory, T., Wilson, A., & Brinkman, S. (2018). The social impacts of mining on local communities in Australia. *Rural Society*, *27*(1), 18-34. https://doi.org/10.1080/10371656.2018.1443725

Smith, K. K., & Haggerty, J. H. (2020). Exploitable ambiguities & the unruliness of natural resource dependence: Public infrastructure in North Dakota's Bakken shale formation. *Journal of Rural Studies*. https://doi.org/https://doi.org/10.1016/j.jrurstud.2020.05.006

Smith, K. K., Haggerty, J. H., Kay, D. L., & Coupal, R. (2019). Using Shared Services to Mitigate Boomtown Impacts in the Bakken Shale Play: Resourcefulness or Over-adaptation? *The Journal of Rural and Community Development*, *14*(2), 66-86.

Sovacool, B. K., Ali, S. H., Bazilian, M., Radley, B., Nemery, B., Okatz, J., & Mulvaney, D. (2020). Sustainable minerals and metals for a low-carbon future. *Science*, *367*(6473), 30-33. https://doi.org/10.1126/science.aaz6003

Stevens, P. J. (2005). "RESOURCE CURSE" AND HOW TO AVOID IT. *The Journal of Energy and Development*, *31*(1), 1-20.

Sibanye-Stillwater. (2019). *2019 Mineral Resources and Mineral Reserves Report*.

[Record #161 is using a reference type undefined in this output style.]

Söderholm, P., & Svahn, N. (2015). Mining, regional development and benefit-sharing in developed countries. *Resources Policy*, *45*, 78 - 91. https://doi.org/https://doi.org/10.1016/j.resourpol.2015.03.003

Thomson, I., & Boutilier, R. G. (2011). Social License to

Operate. In P. Darling (Ed.), *SME Mining Engineering Handbook* (3rd ed. ed., pp. 1784). Society for Mining, Metallurgy, and Exploration.

USCB. (2019). *Quick Facts: Marquette County, Michigan*. Retrieved June 30th from https://www.census.gov/quickfacts/fact/table/marquettecountymichigan/PST045219

USGS. (2015). *DIRECTORY OF ACTIVE METAL AND INDUSTRIAL MINERAL UNDERGROUND MINESIN THE UNITED STATES IN 2015*.

van der Plank, S., Walsh, B., & Behrens, P. (2016). The expected impacts of mining: Stakeholder perceptions of a proposed mineral sands mine in rural Australia. *Resources Policy*, *48*, 129-136. https://doi.org/10.1016/j.resourpol.2016.03.005

Wallerstein, I. M. (2004). *World-systems analysis : an introduction*. Durham : Duke University Press.

Walsh, K. B., & Haggerty, J. H. (2020). Social license to operate during Wyoming's coalbed methane boom: Implications of private participation. *Energy Policy*, *138*, 111217. https://doi.org/10.1016/j.enpol.2019.111217

Weber, J. G. (2012). The effects of a natural gas boom on employment and income in Colorado, Texas, and Wyoming. *Energy Economics*, *34*(5), 1580-1588. https://doi.org/10.1016/j.eneco.2011.11.013

APPENDICES

APPENDIX A

COMMMUNITY BENEFIT AGREEMENTS AND FUNDS: A SUMMARY OF KEY LITERATURE AND CASE STUDIES

This report explores the mechanics and outcomes of community benefits agreements (CBAs) and community benefit funds (CBFs) in the context of major industrial projects (such as mines) located in rural communities. The purpose of this report is to inform community decision makers and other stakeholders responding to proposals for major industrial projects about some of the challenges they face and options for negotiating those challenges. The Resources and Communities Research Group received support from OneMontana to prepare this report as part of OneMontana's efforts to support residents of Meagher County, Montana in engaging with the proposed Black Butte Copper Project (BBCP).

Outcomes of negotiations between host communities and project developers, CBAs and CBFs often function outside of the existing regulatory framework and money and investments in CBAs and CBFs are separate from the government revenue associated with state and local taxes. Widely used in developing country contexts and in urban settings, CBAs and CBFs also have potential benefits for remote communities that host extractive industries. The purpose of this report is to distill knowledge from practice and research generated in the international and urban contexts into a useful summary for communities anticipating new extractive industry projects.

Why consider a community benefit agreement and fund?

Community benefit agreements and funds are important because many communities that host mines and other extractive industrial development struggle to capitalize on these projects in the long-term.

Industrial developments usually create both positive and negative short-term impacts. In the best cases, affected communities and individuals secure a balance between these impacts (Haggerty, et al. 2019). Impact mitigation is typically the focus of the local distribution of taxes from extractive projects—e.g., using tax revenue to provide local government services and maintain basic infrastructure necessary to the community and project development such as schools, roads, and bridges. Local governments often struggle to mitigate impacts due to the timing and amount of tax revenue; this is especially the case with complex industries such as oil and gas development. Major facility siting legislation can help identify and provide mitigation for the impact of large industrial projects. Montana legislation passed in 1981 directly addresses the issue of impact mitigation in mining host communities. The Hard Rock Mining Act provides a process to identify the short-term increased burden on local infrastructure and services and requires developers to set aside funding up front to cover those impacts.

Securing long-term local benefits of extractive industries is a far riskier proposition, as local communities often bear a far greater share of post-development costs than does industry. Such costs include out-migration, environmental contamination and an 'over-adaptation' of labor force and infrastructure that constrain future economic development opportunities. For these reasons, communities anticipating industrial projects need to think about mitigating impacts (managing the short-term cost-benefit equation) *and* about long-term economic and social development and wealth retention.

This is where CBAs and CBFs come in. CBA/CBFs may address impact mitigation but can (and should) focus on a holistic view of the project development cycle and the long-term legacy of industrial projects. CBAs and CBFs have the specific purpose of providing a direct mechanism to ensure the flow of benefits from capital-intensive projects to host communities. Many of these host communities are remote, rural locations, where local actors typically have far fewer resources than do pro-development actors (Heisler and Markey, 2014; Kemp, 2010; Mackenzie, 2013). In response to this power discrepancy, CBAs and CBFs—if implemented properly—offer an avenue for communities to have their voice heard and to take ownership in their collective future while also providing a tool to hold industry accountable (Gross, LeRoy, and Janis-Aparicio, 2005).

The history and current uses of Community Benefit Agreements & Funds

The term community benefits originated in healthcare policy. Since the 1950s, U.S. non-profit hospitals in the U.S. have had to document the provision of community benefits to qualify for tax-exempt status (National Health Care for the Homeless Council, 2016.) In the 1990s, land use conflicts sparked by extensive urban redevelopment led to the growth of a Community Benefits Agreement movement in the United States. This growth was

driven by a desire from communities to see real benefits from development projects beyond just job creation. CBAs are now a common land use planning tool in urban development, with dozens in use in cities across the country to address impacts from mega-projects (typically stadiums) to redevelopments of urban military bases (Gross, LeRoy, and Janis-Aparicio, 2005).

A Community Benefits Agreement (CBAs) is a: “project-specific agreement between a developer and a broad community coalition that details the project’s contributions to the community and ensures community support for the project. Addressing a range of community issues, properly structured CBAs are legally binding and directly enforceable by the signatories.” CBAs are typically private contracts between a prospective developer and community representatives (Salkin and Lavine, 2008) but have also led to agreements between local governments and developers and broader policy change at the local or state level (Partnership for Working Families, 2015).

CBAs focus on securing various benefits for local communities from new land or industrial development projects. While the specifics of CBAs vary by location, their purpose is to explicate and address opportunities to mitigate local impacts and enhance local benefits. For example, CBAs often include "living-wage provisions, 'first-source' (local) hiring plans, guarantees that developments will include low-income housing, and assurances of minority hiring minimums" (Salkin and Lavine, 2008 pg. 19). Other stipulations of CBAs may include investment by project developers in assets that facilitate development and developing critical infrastructure such as transportation, recreational facilities, tourism and visitor centers, educational facilities, daycare, health services, housing, and emergency services (Ryser, 2016).

A Community Benefits Fund (CBF) is a standard component of a benefits agreement. A CBF holds and distributes funds contributed by the project developer. Third-party entities often act as the fund’s fiscal agent. In the case of urban CBAs, CBFs expenditures may be limited to specific programs and services stipulated in the CBA. However, it is possible to negotiate a CBF that can be adapted to emerging community development priorities through discretionary distribution programs (e.g., grants or low-interest loans). There are examples of developer-funded CBFs with a broad philanthropic and community development mission in both the more developed and lesser developed countries. In the United States, one such example is the New Yankees Stadium Community Benefits Fund which provides grants to various non-profits that work in Bronx County. The fund focuses on projects that promote economic equality, including housing assistance and training and services for unemployed citizens of the county (Cardinal McCloskey Community Services, 2016).

In the case of extractive industry developments in rural and remote areas, CBAs go by several common names including community development agreements (CDAs), "Impact Benefit Agreements" (IBAs), and "Indigenous Land Use Agreements" (ILUA), among others. CBAs in this space have only really gained traction in the last 30 years—

primarily in developing nations around the world. Examples include agreements about projects near or on indigenous lands in Australia and Canada, as well as examples around industrial projects in Africa, South America, and Central Asia (O'Faircheallaigh, 2012). The World Bank has also done extensive research around CBAs in mining communities worldwide. This research is mostly focused on CBAs in developing countries, with the primary examples from Papua New Guinea, Peru, Mongolia, Nigeria, and South Africa (among others), but they also cite examples from Canada and Western Australia (Centre for Social Responsibility in Mining, 2011; World Bank, 2010).

The appeal of CBAs for mining and other extractive projects has multiple dimensions. First is the increase in the number of multinational corporations pursuing projects in remote locales. These places are often unfit to bear stress on what local services are available, and typically lack the capacity to turn capital into economic development. Mining companies are therefore being increasingly pressured to use CBAs to mitigate impacts and facilitate local capacity building so that local communities see long term benefits. Additionally, CBAs can alleviate some of the social tension created by the fact that benefits from large-scale extractive operations typically accrue at national or regional scales, while the costs and risks are more often felt at the local level (O'Faircheallaigh, 2012; Campbell and Roberts, 2010).

Beyond the mining industry, there are useful examples of CBAs and CBFs that have emerged around other industrial projects in remote areas of developed nations. Of these, the majority are found tied to renewable energy projects located in or near rural communities. The UK has seen a growing trend in the use of CBFs specifically in the case of onshore wind development (Kerr, Johnson, and Weir, 2017). For example, in Wales, one developer is offering a community fund in an area that hosts multiple wind farms, and another nearby proposal for a larger farm includes “sizable annual contributions to habitat management and community benefit funds” (Munday, Bristow, and Cowell , 2011 pg. 5). In addition to renewable energy, a variety of other energy projects have also begun to incorporate CBFs. Western Australia is another example of a remote area that has seen CBAs and/or CBFs emerge in connection with energy projects. A specific example here is the development of a Liquified Natural Gas (LNG) project near a small, remote town named Onslow. This project includes a "social impact package" for which Chevron has committed $187 million dollars to various community and public infrastructure projects, including a dedicated Community Development Fund (McKenzie, 2013). See Figure 1. for a few examples of CBAs and CBFs currently or recently in use around the world.

Project	Company	Industry	Location	CBA in place	CBF in place
Ahafo Gold Project	Newmont Mining	Mining	Ghana	Newmont Ahafo Development Foundation Agreement among others	Newmont Ahafo Development Fund
Lihir Gold Mine	Lihir Gold	Mining	Papua New Guinea	Lihir Sustainable Development Plan	Yes, direct payments to landowners
Argyle Diamond Mine	Rio Tinto	Mining	Australia	Participation Agreement	Sustainability Fund
Sakhalin II	Sakhalinenergy Investment Co.	Oil and Gas	Sakhalin Island	Sakhalin Indigenous Development Plan	Sakhalin Indigenous Minorities Mini-Grant Fund
Weipa bauxite mine	Rio tinto	Mining	Australia	Western Cape Communities Co-Existence Agreement	Western Cape Communities Trust

Figure 1. Examples of CBAs and CBFs tied to energy projects

In the case of mining projects, it is important to distinguish the use of corporate donations to secure SLO from what is considered best practice in the CBA/CBF literature. Cash donations from extractive industries to local communities do not qualify as CBFs if they do not include appropriate governance. For example, in British Colombia disputes are ongoing over mineral development on Aboriginal (also known as First Nation) lands. To ease some of these disputes, many mining companies—as part of their 'corporate social responsibility' (CSR) programs—are donating cash to Aboriginal communities to help obtain a SLO. While it can be argued that these cash donations are a form of benefit sharing, the lack of transparency, accountability, and investment guidelines can exacerbate local political conflicts and mean that the investment does little to secure long-term benefits for a community.

Goals & Potential Benefits of CBAs

With the establishment of any CBA and/or CBF it is important to understand the goals of all parties involved. These parties typically but not always include: government, industry, and affected communities but this report will be limited to industry and community perspectives in this process. From a company perspective, the main goal behind a CBA is to facilitate benefit sharing with local communities in order to obtain an SLO. If met, this goal enables industry to realize many benefits associated with a successful CBA. These benefits include: the creation of an environment that encourages outside investment for potential future projects, the establishment of positive relationships with host communities that are built on clarity and transparency, understanding by a community of a project timeline and roles of both the company and the community in the project, and the ability to set up a project to succeed long-term.

Community goals in this process are typically focused on short and long-term improvements to their economic outlook and quality of life, as well as mitigation and compensation of impacts related to the project. Successful CBAs enable communities to build local capacity (often through an initial needs assessment), identify the specific economic benefits that a project will result in (number of jobs, increased funding for certain projects, etc.), and hold a developer accountable for their promises and actions related to an extractive development or project (IFC 2010; World Bank, 2012).

Additionally, benefits from CBAs can include the ability for a community to take ownership and have a voice in determining their collective future (Aitken, 2010).

Risks and Challenges of CBAs

While the goals of communities and industry certainly overlap, there remains potential for conflict in the development of a CBA. To avoid this conflict and ensure the CBA development process is beneficial for all parties, it is important to identify the risks and challenges associated with the establishment of a successful CBA or CBF? One of the main challenges indicated in the literature is the capacity of some rural communities. If this local capacity is limited or nonexistent, the community will struggle to gain real benefits—like local employment, infrastructure improvements, etc.—from an industrial project regardless of the specifics of a CBA. Furthermore, creating a successful CBA also faces the risk of upsetting the balance between the pursuit of socio-economic development and the protection of cultural and bio-physical environments (O'Faircheallaigh, 2013). This is especially given that many of these remote areas may be struggling economically and therefore face heightened pressure to secure jobs associated with industrial projects. Another challenge often facing CBAs and CBFs is the identification of legitimate projects to fund. Even where local capacity is not the limiting factor, it can still be difficult to identify projects that an entire community views as positive and leaving lasting benefits (Aitken, 2010). Communities trying to develop a CBA also face challenges over creating and maintain control over the direction of projects and initiatives of such agreements—especially when the funding for said projects comes from a single source. This is further complicated by capacity issues mentioned previously, as well as competing interest groups around extractive projects (Munday, Bristow, and Cowell, 2012).

Key elements community benefit agreements & funds

Given the goals, benefits, challenges, and risks that this report has identified as accompanying the establishment of a CBA/CBF, it is important to recognize key elements—as suggested in the literature—that are vital for a success. The World Bank (2012) summarizes the key elements of a successful CBA into some main takeaways:

- CBA agreements should clearly describe the **roles, responsibilities, and expected behaviors** of signatories
- …community development activities should be clearly distinguished from any activities which are specifically intended to avoid/mitigate the adverse impacts of a project.
- **Early planning** (preferably before mine operation) and engagement is critical to a successful agreement

- **Closure planning** should be built into discussions from the beginning, as should schedules for ongoing monitoring and evaluation, and reporting
- Focus on the process of establishing trust between the parties
- **Stakeholder mapping** can help identify "qualified communities" and potentially marginalized groups affected by the project
- **Involvement and participation** of stakeholders in needs assessment
- **Engagement of all stakeholder groups**
- **Meaningful, two-way engagement** to build trust
- **Efforts to enhance local capacity**
- **The criteria for the management and allocation of funds** should be clearly established
- **Inclusion of an effective grievance mechanism** that involve local leadership/institutions
- A format that **encourages transparency** and **ensures funding goes to priority areas**
- **Monitoring programs** that involve stakeholders whenever possible
- Regular **auditing and reporting** (pg. 11-13)

These elements, among others, all need to be combined in a legal document that holds both parties accountable for a CBA to succeed long term. Additionally, communities need to spend considerable effort deciding how to manage and allocate (as identified in the key elements) any associated funds (whether formally incorporated into a CBF or not) that may be included in a CBA. This includes considering establishment of a foundation, trust, or some other financial vehicle to manage the funds. The international development community—in the context of mining—has identified a model called the Foundations, Trusts, and Funds Model (FTFs) which can bring "particular value where local capacities are limited, public services are absent or weak, and there is a need to demonstrate continued benefit from mining after operations have closed" (Wall and Pelon, pg. 1). The FTFs model calls for large endowments to establish funding in perpetuity for community development and long-term benefits.

Outcomes of CBAs & CBFs: Lessons for Rural and Remote Communities

Fortunately, practical advice is also available from both the CBA and CBF literatures to inform a useful model, beyond just thinking theoretically about key elements. This model can be utilized by and for rural U.S. communities that host industrial projects. A review of the literature reveals many lessons for these rural communities

Many of these lessons come from CBAs and CBFs around renewable projects in Europe—the UK in particular. These projects reveal the importance for the community to have a clear vision, or "wish list". The creation of this vision enables the community to take ownership of the projects implemented within a formal or informal benefits

agreement. The literature provides numerous examples of instances where community groups made specific requests of developers in service of a greater goal for their community. These types of requests vary by location, but many are centered around economic development. A specific success story comes from the Altahullion wind project in Northern Ireland. This wind development opened in 2003 near a small town of about three thousand people. During the siting and application stage of the project, a local community group asked for tourist related development as a community benefit. In response, the developer designated one turbine as a "tourist turbine" and built a car park, foot path, and informational boards for tourists. The local city council now touts the site as a tourist attraction and annual school trips as well as tours are conducted at the turbine. Another example of community vision comes from the Burton Wold wind Farm, located in Burton Latimer, England. Another small community, the residents of the area expressed a desire for cheaply available local power that was previously unavailable. The result of this request was a community fund that was given a £40,000 endowment (with another £10,000 contributed annually) and was earmarked for local energy efficiency and education projects. The fund has seen the successful installation of local solar panels that supply hot water to communal areas (Centre for Sustainable Energy, 2009). The key takeaway for a rural community is this: have a clear vision of projects and ideas that are manageable for the developer and have potential to benefit the community.

Another clear lesson from the CBA literature is to avoid drawing arbitrary boundaries between communities surrounding a project. This is taken from experience in Nigeria, where this tactic has created conflict in areas where it was not present before (World Bank, 2012). The takeaway for rural communities in the U.S. would be to think carefully about the project's area of influence and to include any marginalized groups (as suggested in the key elements), such as Indigenous populations or nearby small communities, that may be affected by the development. Many extractive companies strive to employ members of such marginalized groups, and their inclusion in the CBA process will increase the likelihood of a successful agreement.

The literature also advocates for the inclusion of third parties such as community non-governmental organizations (NGOs) and other groups in the process of developing and implementing a CBA. These parties can often help hold both negotiating factions accountable, can provide local insight and knowledge, and can also play a vital role in participatory monitoring programs which have proven to be successful in resource extractive communities (World Bank, 2012). To facilitate the inclusion of these outside groups, the literature suggests that CBAs contain specific provisions to enable local communities to reach out to independent organizations. Examples include the Participation Agreement between Indigenous tribes in Western Australia and Rio Tinto concerning the Argyle diamond mine. This agreement included funding for the tribes to seek legal counsel during negotiations (Centre for Social Responsibility in Mining, 2011).

One final lesson that both industry and community can draw on is commitment to communication. Lessons from case studies in the literature suggest that the most effective CBAs include an arrangement where the community feels free to communicate any demands, questions, or suggestions to the developer at any time, and where the developer responds 100 percent of the time—regardless of whether the answer is what the community hoped for or not (World bank, 2012). This kind of communication will help build and solidify the trust necessary for both sides to achieve the benefits of a successful CBA.

In sum, communities need to heed four key lessons when developing a model for negotiating and implementing a CBA and/or CBF. First, communities should have a clear vision—realized through participatory engagement with residents—for initiatives and projects to be included in a CBA. Secondly, host communities should be conscious of including outside groups into the CBA process. Thirdly, communities should collaborate with outside organizations that can help overcome local capacity issues. This lesson also advocates for industry to help facilitate this collaboration with funding and other resources. The fourth and final lesson for rural communities it to commit to clear and effective communication with a project developer when negotiating and implementing a CBA. All of these lessons, along with the key elements of successful CBAs, can assist rural communities in the U.S. as they try to secure both short and long-term benefits from extractive projects.

References

A Promising Accord in Montana. (2000, May 17). *New York Times*. Retrieved from: https://www.nytimes.com/2000/05/17/opinion/a-promising-accord-in-montana.html

Aitken, M. (2010). Wind power and community benefits: Challenges and opportunities. *Energy Policy*, *38*(10), 6066 - 6075. doi: https://doi.org/10.1016/j.enpol.2010.05.062

Cardinal McCloskey Community Services. (2016). NY Yankees step up to the plate for CMCS. Retrieved from: https://www.cmcs.org/news-events/news/ny-yankees-step-up-to-the-plate-for-cmcs/

Centre for Sustainable Energy, (2009). Delivering community benefits from wind energy development: A Toolkit. Retrieved from: https://www.cse.org.uk/downloads/toolkits/community-energy/planning/renewables/delivering-community-benefits-from-wind-energy-tookit.pdf

Centre for Social Responsibility in Mining. (2011). *World Bank Extractive Industries Sourcebook, Good Practice Notes: Community Development Agreements*. Retrieved from: http://documents.worldbank.org/curated/en/388421468151145000/pdf/712990v20WP0P100Good0Practice0Notes.pdf

City of White Sulphur Springs, Montana. (2017). White Sulphur Springs Growth Policy. Retrieved from: https://www.whitesulphurspringsmontana.com/documents/77/WSS_GP_Adopted_by_City.compressed.pdf

Esteves, A. M. (2008). Mining and social development: Refocusing community investment using multi-criteria decision analysis. *Resources Policy*, *33*(1), 39-47. doi: 10.1016/j.resourpol.2008.01.002

G. Heisler, K. a. M., Sean. (2014). Navigating jurisdiction: Local and regional strategies to access economic benefits from mineral development. *58*: 457-468. doi:10.1111/cag.12121

Gross, J., LeRoy, G., & Janis-Aparicio, M. (2005). Community Benefits Agreements: Making Development Projects Accountable. Retrieved from: https://www.goodjobsfirst.org/sites/default/files/docs/pdf/cba2005final.pdf

Haggerty, J. H., Smith, K. K., Weigle, J., Kelsey, T. W., Walsh, K. B., Coupal, R., . . . Lachapelle, P. (2019). Tradeoffs, balancing, and adaptation in the agriculture-oil and gas nexus: Insights from farmers and ranchers in the United States. *Energy Research & Social Science*, 47, 84-92. Retrieved from: http://www.sciencedirect.com/science/article/pii/S2214629618309071. doi: https://doi.org/10.1016/j.erss.2018.08.012

Halstead-Acharya, L. (2010, March 26). From conflict to cooperation: Stillwater accord endures. *Billings Gazette*. Retrieved from: https://billingsgazette.com/news/state-and-regional/montana/from-conflict-to-cooperation-stillwater-accord-endures/article_1c761e60-687d-11df-920e-001cc4c002e0.html

McKenzie, F. H, (2013). Delivering Enduring Benefits from a Gas Development: Governance and planning challenges in remote Western Australia. *44*(3), 341-358, doi: 10.1080/00049182.2013.817032

International Finance Corporation. (2010). *Strategic Community Investment*. Retrieved from: https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_handbook_communityinvestment__wci__1319576907570

Kemp, D. (2009). Mining and community development: problems and possibilities of local-level practice. *Community Development Journal, 45*(2), 198-218.

Montana Mining Association. Hard Rock Mining Impact Act. Retrieved from: http://www.montanamining.org/hrmia/

Munday, M., Bristow, G., & Cowell, R. (2012). Windfalls for whom? The evolving notion of 'community' in community benefit provisions from wind farms. *Geoforum, 43*(6), 1108 - 1120. doi: https://doi.org/10.1016/j.geoforum.2012.06.015

Munday, M., Bristow, G., & Cowell, R. (2011). Wind farms in rural areas: How far do community benefits from wind farms represent a local economic development opportunity? *Journal of Rural Studies, 27*(1), 1-12. doi:10.1016/j.jrurstud.2010.08.003

National Health Care for the Homeless Council, (2016). Hospital Community Benefit: Resources for the HCH Community. Retrieved from: https://www.nhchc.org/wp-content/uploads/2016/06/policy-brief-hospital-community-benefit.pdf

O'Faircheallaigh, C. (2013). Community development agreements in the mining industry: an emerging global phenomenon. *Community Development, 44*(2), 222-238. doi:10.1080/15575330.2012.705872

Partnership for Working Families. (2015). Community Benefits 101. Retrieved from: http://www.forworkingfamilies.org/page/community-benefits-101

Ryser, L., Halseth, G., Markey, S., & Morris, M. (2016). The structural underpinnings impacting rapid growth in resource regions. *The Extractive Industries and Society, 3*(3), 616-626. doi:10.1016/j.exis.2016.06.001

Salkin, P., & Lavin, A. (2008). Understanding Community Benefit Agreements: Opportunities and Traps for Developers, Municipalities and Community Organizations. doi:10.2139/ssrn.1025724

Strachan, P. A., & Jones, D. R. (2012). Navigating a Minefield? Wind Power and Local Community Benefit Funds. In *Learning from Wind Power* (pp. 174-193).

Tintina Resources. (2018). Hard Rock Mining Impact Plan.

World Bank. (2010). *Mining foundations, trust and funds: a sourcebook*. Retrieved from: https://openknowledge.worldbank.org/bitstream/handle/10986/16965/828560WP0Sourc00Box379875B00PUBLIC0.pdf?sequence=1&isAllowed=y

World Bank. (2012). *Mining Community Development Agreements Source Book*. Retrieved from: http://siteresources.worldbank.org/INTOGMC/Resources/mining_community.pdf

APPENDIX B

FOCUS GROUP REPORT

Background and Introduction

This document serves to inform a first draft of a proposed Community Benefit Agreement (CBA) between Sandfire Resources America (SRA) and the Meagher County Stewardship Council (MCSC). As part of their mission to serve the long-term interests of Meagher County residents, the MCSC has engaged in a participatory community outreach process to develop this agreement. The goal of a CBA is to leverage the development of the Black Butte Copper Project (BBCP) into lasting benefits for Meagher County and White Sulphur Springs, MT. This draft will outline the methods used to identify local priorities, the findings from that effort, and will conclude with a summary and next steps in the drafting process.

Methods

In order to develop the ideas and content of a CBA, the MCSC has engaged in a year-long process consisting of engagement with outside experts and resources, internal discussions, and participatory data collection.

To begin this process, the Council convened a town hall in May 2019 where Council members and residents heard from their peers in rural communities that have experience hosting mining projects. Residents from Meagher County and White Sulphur Springs were then invited to ask questions and share comments or concerns related to the development of the BBCP.

Using the feedback received at the town hall, the MCSC held an internal workshop designed to brainstorm initial ideas on CBA content areas. From this workshop, the Council identified priorities that they organized into six categories: 1) Health and Safety, 2) Housing, Transportation, and Infrastructure 3) Education, 4) Economic development, 5) Culture, and 6) Environment.

Following the establishment of the categories, the Council began a participatory data collection phase with the intent of basing this agreement on locally identified community development priorities. To facilitate receiving this feedback, the Council organized focus group sessions for each category. Council sub-committees then recruited local and regional participants who were considered knowledgeable on the current state of the community and county related to the identified areas. Priority was placed on recruiting

community leaders and representatives from local, county, and state agencies. The total number of participants for all focus groups was 36. During these focus group meetings, participants were asked to both give feedback on the Council's ideas and offer suggestions of their own. Discussion on potential program cost, viability, and timeline followed. Participants' ideas and feedback were captured by a note-taker at each focus group.

After all focus groups were completed, the notes were compiled and summarized by category to identify the top priorities heard from participants. Considerations given to potential programs or initiatives included: alignment with the mission of the MCSC and CBA objectives, viability, current local, regional or state programs with overlap, and cost.

Findings

1. *Health and Safety*— Main priorities: 1) Increasing number and availability of health and safety services, 2) securing additional funding and other resources for existing services 3) establishing educational courses to improve health and safety outcomes
2. *Housing, Infrastructure, and Transportation*— Main priorities: 1) establishing recommendations around temporary housing 2) improving overall housing market in the community—specifically targeting affordable housing, number of available houses, and improving dilapidated housing

3. *Education*—Main priorities: 1) establishing Community Partnership programs 2) securing resources to support teachers and local educational programs 3) securing resources to support additional school programs and infrastructure

4. *Economic Development*—Main priorities: 1) developing programs to incentivize new small business development and population growth 2) securing resources to support current local business 3) developing programs to improve capacity of the local workforce

5. *Culture*—Main priorities: 1) developing educational programs for newcomers

6. *Environment*—Main priorities: 1) establishing programs designed to protect stream-health 2) securing resources to support noxious weed management 3) establishing water monitoring programs to supplement regulatory requirements

Summary and Next Steps

The goal of a CBA is to deliver long-term benefits to WSS and Meagher County beyond the life of the BBCP. To that end, the MCSC has conducted a year-long effort to develop the community development priorities identified in this document. This process has engaged local residents through participatory data collection in order to ensure the final CBA reflects community and county values and objectives.

From here, the MCSC will work to develop specific initiatives and programs (see Appendix 1) that address these priorities. These initiatives will include considerations on timeline, cost, viability, and potential partner organizations. After a final draft has been developed, the Council will then circulate that draft to the focus group participants and local governmental units to gather final feedback. Following final revisions, this document will then be negotiated with SRA in anticipation of signing a final agreement.

Appendix 1: Potential CBA programs

Category	**Program**	**Description**	**ImplementationTimeline**	**Partner Orgs**
Health and Safety	Emergency Services Support	IFR, Ambulance in Martinsdale, resources for volunteer EMTs	1-2 years	Local Ambulance Dept., EMTs
	Local Services Fund	Funding to support local youth center, senior center, food bank	1-2 years	Local groups
Housing/Infrastructure /Transportation	Housing Improvement Program	Housing stock assessment, refurbish dilapidated housing, vacant lot improvement	5-10 years	HRDC, WSS schools, local construction companies
	Land Trust Program	community land trust to support affordable housing and teacher housing	3-5 years	HRDC, WSS schools

Education	Community Partnership Program	Apprenticeship and Internship partnerships with local businesses	2-4 years	Regional Colleges, WSS schools, Sandfire & other local businesses
	Youth Education Program	Funding and resources to support local youth center and pre-school	1-2 years	Local youth orgs
	Teacher Support Program	Establish a foundation with funding to support educational supplies/equipment	2-4 years	WSS Community Foundation
Economic Development	Meagher County Marketing Program	Funding to support marketing/branding for the county and WSS.	1-3 years	Regional consultants
	Small Business	Funding and resources to promote	1-2 years	Local businesses,

	Development Program	small business development and support existing small businesses		Chamber of Commerce
	Local Workforce Development Program	Resources to establish training for local graduates	2-4 years—indefinitely	Local businesses, Chamber of Commerce, Sandfire, WSS schools
Culture	Newcomer Educational Course	Course designed to educate newcomers on local culture and traditions	1-2 years—indefinitely	Sandfire, local government
Environment	Riparian Restoration Program	Funding and resources to prioritize stream restoration in the basin	3-5 years—14 years	FWP, regional consultants, watershed groups
	Noxious Weed	Funding to expand and support existing	2-4 years—indefinitely	FWP, NRCS, Conservation District

	Management Program	noxious weed management		
	Water Monitoring Program	Funding and resources to supplement water monitoring required by DEQ	1-3 years—14 years	DEQ, Regional consultants, Watershed groups

APPENDIX C

EXAMPLE INTERVIEW GUIDE

Rural Communities, Mining Developments, CBAs Interview Guide |

Introduction & Overview of Project

Introduction:

Hi, thank you for your time and willingness to meet with me.

Project Overview. I am a Master's student at Montana State University. I study resource geography and rural community development. I'm researching rural communities that host large-scale, underground mining developments. As part of this project, I am interested in understanding formal and informal agreements formed between communities, NGOs, or other 3rd party groups and mining companies. My goal is to learn more about these agreements including: the original motivation and intent behind the agreement, the key moments and milestones throughout the life of the agreement, and impacts of the agreement on community development during and after mining operations.

My hope is that findings from this study will increase understanding of the opportunities and challenges facing rural communities that host mining developments, and better enable them to think about securing long-term benefits from these projects.

Before we begin, I just want to point to the LOI—this document says that this proposed research protocol has been reviewed and approved by the Montana State University Institutional Review Board (IRB). Your participation is voluntary and can be withdrawn at any time. These interviews are strictly confidential, and all records will be deidentified and password protected. Before we begin, do you have any further questions about participating?

Ask to turn on recorder.

Questions:

> *Tell me about yourself.* Could you describe your personal history, current position, how long you've worked in it, and the role you play in community?
>
> *Tell me about the relationship between the community and mining.* What was your initial reaction to the early mining developments? How would you characterize the mining company's relationship with the overall community? How do you think that relationship changed over time? How does mining help define the character of this place?
>
> *Tell me about agreements negotiated with the mining company.* Are you directly involved with any programs that include or are sponsored by the mining company? What were your original motivations for getting involved with those programs? Where did the ideas and priorities for those programs originate? What

value does the mining company receive from those agreements? What value does the community receive from those agreements? How does the broader community perceive the agreement(s)? What have been the biggest successes and failures of those agreements/programs? Do you receive community feedback on the agreements? How does your org. or the community see these agreements continuing?

Tell me about the role of legislation around the mining project? Do the current agreements complement or substitute for legislation? In your opinion, is the model of community benefit agreements best practice?

Who should I be talking to? If I'm trying to understand the relationship between the rural communities and the mining company, as well as the role negotiated agreements are playing who should I be talking to?