

Chapter 1 : Sustaining development in mineral economies : the resource curse in SearchWorks catalog

In Sustaining Development in Mineral Economies, Richard Auty highlights these drawbacks and the devastating effect they can have on developing economies. With reference to six ore-exporters (viz. Peru, Bolivia, Chile, Jamaica, Zambia and Papua New Guinea) he outlines how things can go badly wrong.

November 9, last updated On one hand, mining royalties and taxes provide funds that can be invested in infrastructure and social services. Mining projects can also create local jobs and spur demand for locally produced goods and services, supporting livelihoods and spurring economic growth. On the other hand, mining revenues can be “and there is plenty of evidence that they routinely are” spirited or frittered away, leaving little to show by way of long-term productive investment or better living standards. Moreover, mining booms undermine growth in other industries by skewing labor demand and swelling the exchange rate. Adding injury to dashed hopes, mining operations often leave a legacy of massive and long-lived environmental damage. For communities that live near mining projects, the stakes and trade-offs are particularly acute. A large mine might offer locals well-paying jobs, as well as social investment funds provided either by the government or by mining companies. But in practice, the share of mine revenues received by local communities tends to be very small. Moreover, jobs disappear when the mine closes or reduces production due to a commodity price bust. While economic benefits tend to flow to national capitals, foreign shareholders and corrupt elites, local communities suffer the brunt of the environmental damage, as well as the social upheaval, caused by large-scale mining projects. Unless properly monitored and managed, environmental impacts tend to get worse over the life of the mine and even after it closes. Despite its dismal record, mining investment continues to be championed by governments and development agencies as a route toward sustainable development. But the rubber hits the road at the local level. Given its myriad environmental, economic and social challenges, is it possible for mining to promote the sustainable development of local communities? In environmental terms, mining is inherently unsustainable because metals and minerals are depletable, nonrenewable resources. Another way of saying this is that total benefits outweigh total costs. This principle suggests that diverse benefits are additive or, put another way, that economic and social benefits can substitute for loss of nature. An in-between position is that some of the services provided by ecosystems are substitutable while others are not. Plastics, for example, can substitute for copper in pipe and plumbing fixtures; nanotechnologies can substitute for silver and gold in electronics production. The first condition for sustainable mining, therefore, is that mining projects must maintain essential life support systems over the life of the mine, that is, from exploration to exploitation to closure and post-closure. A second condition is that mining should maximize economic and social benefits to humans. There is little point in undertaking a mining project if it generates little economic benefit or worse, undermines long-term productive capacities. Putting the two conditions together provides a conceptual and decision-making framework: Mining can be considered to promote sustainable development if it generates net benefits—that is, if it maximizes human welfare subject to the constraint that essential life-supporting ecosystem services are maintained. Sustainable mining projects must improve human welfare subject to the constraint that cultural capital—the identity and autonomy of indigenous communities—is maintained. In practice, maintaining life-support eco-functions and cultural identity are often closely linked for indigenous peoples who rely on agricultural and resource-based livelihoods. It is not surprising, therefore, that indigenous peoples have often been at the forefront of opposition to large-scale mining projects. Net Benefits and the Mining Boom Unraveling the relationship between mining and sustainable development—whether and under what circumstances mining offers net benefits—is not an academic exercise. After decades of low-level activity, mining operations boomed in the past decade, spurred by a cyclical rise in global commodity prices. While prices peaked and then slid after the global financial crisis in , they afterward recovered their upward trajectory, even if they have been volatile and generally sliding in recent years. Experts have mixed views as to whether the commodity boom has gone bust or is simply decelerating. Resource-rich developing countries in Africa, Asia, and Central and South America have been flooded by a wave of foreign investment in mining exploration and exploitation projects deemed

marginal when global commodity prices were low. In Mongolia, mining accounted for some 17 percent of GDP by Down on the ground, the mining boom has been highly controversial. Despite flashy promises of economic benefits, high-tech mining projects have triggered widespread pushback by local and indigenous communities. In Latin America alone, conflicts involving projects and communities were raging as of mid-July Such concerns cannot be addressed by national policies alone. For there to be a hope that mining can promote sustainable development, local communities must be at the center of the mine approval, benefit negotiation and impact monitoring process. Only local communities can evaluate the complex environmental, economic and social trade-offs offered by a large-scale mining project and decide whether or not it offers net benefits. Mining companies use explosives to blast large holes or dig out vast tunnels in the ground. The waste rock is dumped nearby in large mounds or hauled off to nearby valleys. The next step involves excavating large amounts of ore and leaching out the metal or mineral using water and chemicals, often cyanide. The metal is then sent to a refining smelter, on- or off-site, and the resulting leftover tailings slurry is stored in an on-site pond known as an impoundment. These processes have significant environmental impacts at each stage. The initial blasting and clearing, as well as the waste rock dumps, destroy productive topsoil and forest cover, stress farm animals and wildlife and create dust that causes respiratory problems for humans. If mines use dirt roads, or if the mine itself is not properly watered and maintained, dust can remain a problem for the entire operational life of the mine. The smelting process can also pollute the air, if pollution control devices are not in place. The most destructive and longest-lasting impacts of mining, however, are on water. Concerns about loss of access to water underpin many conflicts between mining companies and local communities. It is common for national governments to grant mining leases without taking a local hydrological survey of the availability and uses of existing water supplies. Moreover, many mines are sited in dry areas. Mining operations can not only deplete but also pollute surrounding ground and surface waters. Most mining processes use chemicals such as cyanide and sulfuric acid to separate ore from rock. Widely used in gold mining, cyanide is acutely toxic to humans and wildlife. Cyanide-rich tailings ponds are prone to leakage and overflow, especially in areas vulnerable to flooding and earthquakes. Cyanide can also spill out from trucks transporting it to mine sites. Even when it is diluted, cyanide exposure can kill fish, cause skin rashes in humans and sicken farm animals and wildlife. Large numbers of fish died, and 24 municipalities were cut off from water supplies. Since then, cyanide spills have been routinely reported around the world, including in Ghana, Australia and Alaska. Though highly toxic, cyanide is relatively short-lived, posing environmental and health risks primarily in the operating phase of the mine, some years. An even worse risk to water is heavy metals pollution caused by acid mine drainage AMD , which results from the exposure of sulfide-rich crushed rock, both tailings and waste rock, to rainfall. Heavy metals such as mercury, arsenic, cadmium, lead, nickel and zinc that would otherwise remain buried in intact rock leach into surface and ground water. Through AMD, mine sites can continue leaching heavy metals for decades, even centuries. Given its long-lived and perhaps irreversible nature, water contamination caused by AMD is the greatest source of long-term risk from mining operations. According to a study published by Environmental Science and Technology , air and soil pollution can be readily addressed by re-vegetation and landscaping. Heavy metals contamination is especially risky in poor locales where water-supply infrastructure is lacking. Increased levels of arsenic have been found in people living close to the mine. Climate change will exacerbate water risks. Global warming will further stress water supplies, increasing the competition for water between mining and other uses, while increasing the intensity and frequency of storms. Greater rainfall means more risk of overtopping of tailings ponds or changes in interaction of ground and surface water with waste rock, with associated AMD risk. The resource boom has wrought not only intense conflict but also feverish innovation in mining norms. Governments, which typically own subsurface mineral resources, have pressed companies, often successfully, for a higher share of mining revenues. Ghana, for example, increased its royalty rate from 3 percent to 5 percent. South Africa is currently revising mining and tax rates, in part in response to pressures to nationalize mines. National environmental regulation is slowly increasing, usually in the form of increased requirements for companies to undertake and make public an environmental impact assessment EIA as a condition of obtaining a mining lease. However, there is often a gap between legal frameworks and on-the-ground enforcement. In Mongolia,

for example, the failure to enforce strict environmental standards has led to widespread environmental damage of fragile steppes and waters. Moreover, the scope of an EIA tends to be narrow. Cumulative and interrelated impacts on water, biodiversity and health are typically not included, while social and cultural impacts are ignored. Mine protesters often view EIAs as box-checking exercises designed to facilitate mining projects. A major gap in regulation is credible and transparent impact monitoring and amelioration. During the operation phase, it is common for mining companies themselves, rather than independent third parties, to monitor and report environmental impacts to governments. After mine closure, companies are often required to fill in and re-vegetate open pits, but not to monitor and ameliorate impacts such as AMD. While national governments are slowly being dragged into stronger regulation, extractive industry norms are evolving rapidly at the international level. As the private sector arm of the World Bank, the IFC not only provides but also leverages a substantial portion of global finance for mining projects. The IFC considers the eight standards a central part of its approach to risk management; demonstration that governments and companies are adhering to them is a requirement of project funding. Human rights norms for business have also evolved substantially in the past decade. Given their huge social and environmental impacts, extractive industries account for the bulk of cases involving allegations of human rights violations. In , the U. In operational terms, this means that businesses must uphold rights defined in international law. The extension of mining projects to marginal areas during the resources boom means that many are located on or near the traditional lands of indigenous peoples. Defined in two U. While still far from widespread recognition or implementation, even in countries that are signatories to the U. Declaration, the defined right to FPIC has buoyed efforts by indigenous communities to assert self-determination and resist unwanted mining projects. More than 1 million people have expressed their opposition, mostly out of concern over water pollution and its potentially devastating impact on agriculture. Despite having consistently argued that the votes are not legally binding, the government was forced earlier this month to suspend new metal-mining licenses for two years in order to quell massive indigenous protest. Local Communities at the Fulcrum International norms, national regulation and changes in company practice are essential in the pursuit of a more sustainable approach to mining. They are also best able to negotiate for themselves the complex trade-offs between economic, social, cultural and environmental benefits.

Chapter 2 : sustaining development in mineral economies | Download eBook PDF/EPUB

In Sustaining Development in Mineral Economies, Richard Auty highlights these drawbacks and the devastating effect they can have on developing economies. With reference to six ore-exporters (viz. Peru, Bolivia, Chile, Jamaica, Zambia, and Papua New Guinea) he outlines how things can go badly wrong.

It is widely believed that natural mineral resources are desirable. However there is growing evidence that this may not always be the case. Indeed, it seems that natural assets can distort the economy to such a degree that the benefit actually becomes a curse. In *Sustaining Development in Mineral Economies*, Richard Auty highlights these drawbacks and the devastating effect they can have on developing economies. With reference to six ore-exporters viz. Oxford University Press Format Available: The mineral economies comprise approximately one-fifth of developing countries. They face special problems in achieving sustainable development, and have as a group been less successful than resource-deficient neighbours. This book examines the apparent paradox, detailing the current problems facing the mineral economies and the future policies necessary to overcome these problems. Nine countries are studied: The authors argue that the key factor is not the sustainability of the mineral production that initially generates growth, but the maintenance of the economic and social conditions for sustaining that growth. They draw upon recent progress in environmental and natural resource accounting to show how this can be achieved, and also assess the socio-political factors that often constrain sustainable development. Duke University Press Format Available: DIVA compilation of definitions, terms, and critical commentary on aspects of sustainable development and environmental policy, with a strong emphasis on policy tools, policy practices, and systems of international environmental governance. This study will attempt to answer the question of how can the rise in social violence since the s be explained in the oil-rich nation of Venezuela? A review of the relevant literature will reveal that the study of a social phenomenon such as violence, in a nation such as Venezuela, is a complicated task because there are a number of different, but in many cases interlinked, variables that contribute to the formation of this social phenomenon. Therefore, the conceptual framework will consist of a multi-variable analysis so that this study may go about to formulate an appropriate explanation based on the complex causes and effects that surround this issue. Although special attention will be given to this important variable, no hierarchy of variables will be established, as the convoluted nature of social events makes it very difficult to formulate one. Other factors that will also be analyzed as they contribute to the rise of social violence are: Although there have been several studies on oil-rich nations including Venezuela , their economic dynamics, the Latin American urbanization process, and the Venezuelan political crisis, there is an absence of studies that include these intervening factors in a comprehensive manner. This study hopes to fill this gap. This clear and concise text encourages critical engagement by integrating theory alongside practice and related key topics throughout. It demonstrates informatively that ideas concerning development have been many and varied and highly contested - varying from time to time and from place to place. With a new colour layout and in-chapter features such as Key Ideas, Boxed Case Studies and Summaries, students will find this an easy-to-use text which will focus them on the most important information in this area of study.

Chapter 3 : Sustaining Development: Extractive Industries and Local Communities

the resource curse thesis and mineral economies Pages 10 The conventional view concerning the role of natural resources in economic development has been that the resource endowment is most critical in the early low-income stages of the development process.