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Outlining Socio-Economic Challenges in the Non-Fuel Mining Sector

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STRADE is an EU-funded research project focusing on the development of dialogue-based, innovative policy recommendations for a European strategy on future raw materials supplies. In a series of policy briefs and reports, the project will offer critical analysis and recommendations on EU raw materials policy.

This policy brief, the fifth in a series of STRADE briefs, addresses the socio-economic challenges related to the extraction process of mining.

1. Introduction

The European Raw Material Initiative postulates that mining can and should contribute to sustainable development, creating a win-win situation for both developing countries and the European Union (EU). However, sustainable development is a vast field, with no clearly defined routes for achieving progress. This policy brief aims at outlining the multiple facets of the socio-economic dimension of mining. The starting point for this discussion are the opportunities created from mining activities such as economic growth, increase in government revenues, employment and poverty reduction in resource-rich countries and the supply of materials essential for the European economy.

Mining activities and projects in many parts of the world are also associated with various socio-economic challenges, which occupy an increasingly prominent place on the political agenda as well as for industry and civil-society organisations (CSOs). Understanding these complex relationships between various facets is of high relevance for designing a comprehensive and cooperative EU raw material strategy. Only if pressing socio-economic challenges are addressed will mining activities gain public acceptance in the short and long term. This is an important pre-condition for securing a stable and continuous raw material supply. Sustainable development not only supports the EU's supply security, it also complies with the rising awareness of European consumers and down-stream companies and their call for responsible mining practices and mutually beneficial trade.

This policy brief will highlight relevant challenges such as barriers to generating broader economic development from mining in developing countries, impacts on communities and companies' need for a 'social license to operate', specificities of artisanal small-scale mining (ASM) and financing of armed conflict from minerals. In addition, the review provides an overview of the engagements led by the EU, international initiatives, industry and civil society. Environmental challenges of mining were separately addressed in the previous Policy Brief No. 04/2016¹.

2. Mining and economic development

Many developing country experiences reflect poor economic development performance from mining revenues and the latter's inability to meet high expectations [1],[2]. This raises the issue of how mining can contribute to development, particularly as many governments still see mining as an important opportunity to advance the Sustainable Development Goals (SDG). It is assumed that mining can help in achieving SDG 1 "End Poverty", SDG 2 "Decent work and economic growth" and SDG 9 "Infrastructure, Innovation and Industrialization" [3]. Referring to the lessons learnt from the past, the Mining Atlas states that these targets can only be achieved if the mining industry reinforces its engagement, partnership and dialogue with other industry sectors, government, civil societies and local communities. This is similar to the findings in a series

¹ http://stradeproject.eu/fileadmin/user_upload/pdf/PolicyBrief_04-2016_Sep2016_FINAL.pdf

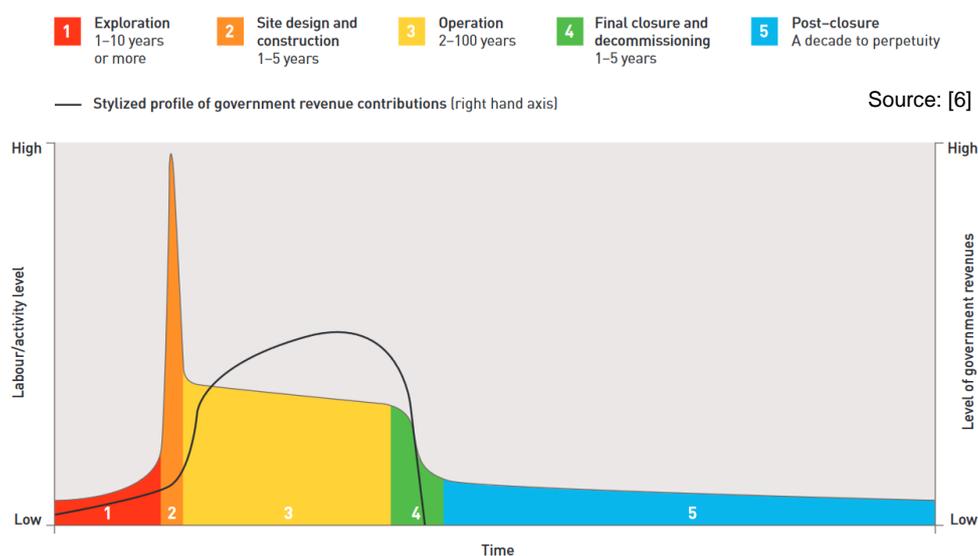
of reports in 2015, prepared by the African Development Bank Group (AfDB) and the Bill and Melinda Gates Foundation (BMGF), stating that extractive industries projects have the potential to contribute to human development and boost the economy, but that this is not guaranteed [4]. The reports point out that the achievement of such development requires carefully considered government policies and practices. These considerations are particularly relevant for developing countries, where mining contributes significantly to the national GDP and national exports².

2.1. Mining contribution to economic development

The main contributions from mining towards potentially boosting economic development – job generation, public revenues, infrastructure development, technology and knowledge transfer – are briefly outlined in the next paragraphs. A more comprehensive analysis is beyond the scope of this policy brief but will be part of future STRADE policy briefs and workshops.

Job generation: Mining offers enhanced employment opportunities by creating direct jobs at mine sites and indirect jobs within the supply chain. A recent study from the Columbia Center on Sustainable Investments reports that induced employment, which results from mine employees spending their wages e.g. for services and food provision, is often much more important for overall employment and poverty reduction [5]. Mining regions profit from this mechanism and reduce local poverty levels whereas broad-based national job development requires efficient transmission mechanisms [6]. Following this, long-term job creation at the local and national scale must be supported by good government policy to help maximize direct, indirect and induced job generation as well as employment resulting from the spending of government mining revenues. In this context, one approach is to attempt to increase the local contribution in the supply chain ('local content'). However, assertive policies aiming to increase local content may be constrained by WTO non-discrimination rules and can be burdensome to investment, raising production costs. In addition, there is limited evidence that countries which included quantitative local content requirements in their legislation succeeded in fully translating this concept in business practice [5]. Nevertheless, the idea is still on the agenda and new approaches for its success are discussed [7].

Figure 1: The mine project life cycle with indicative activity levels [6]



Another challenge for creating jobs is the life cycle of the mine, which has a peak demand for workers in the construction phase and a lower demand during operation, as demonstrated in Figure 1. Also, the required skills vary throughout this life cycle, and demand is filled with a non-local or foreign workforce if local workers are not skilled enough. [5] If unskilled local staff is employed, companies have to undertake significant training efforts, including ensuring that workers fully understand and comply with safety regulations. Considering the end of the life-cycle, governments and mining companies need to ensure sustainable closure plans that are developed for addressing the loss of income after a mine closure. Similar strategies

² States with mining contribution from 10-60% to the national GDP and 15% to >90% to national exports, while mining contributes less than 0.5% of the global mined mineral production value: Mauritania, Mongolia, Guinea, Sierra Leon, Botswana, Liberia, Papua New Guinea, Guyana, Zimbabwe, Mali, DRC, Eritrea, Burkina Faso, Togo, Suriname, Lesotho, Lao, Ghana, Namibia, Solomon Islands. Further states with mining contribution of more than 10% to the national GDP are Zambia, South Africa, Chile, Peru, Kazakhstan, Ukraine, Uzbekistan, and Australia

are necessary for coping with commodity price downturns. Another issue is the often high expectations of local job creation, and mining companies must address the communities' disappointments if realistic numbers have not been communicated at the planning stage.

The study from the Columbia Centre on Investment on employment from mining also states that ASM can play a vital role in reducing poverty and diversifying the local economy, e.g. in Tanzania [5]. The development and operation of a large-scale mine can lead to significant losses of ASM jobs, which are generally not offset by increased employment in large-scale mining. On the other hand, ASM is often associated with negative environmental and social aspects, which are described in Chapter 3.2.

Infrastructure development: In developing countries, mining companies often finance the necessary infrastructure, such as new transport facilities and electrical and sanitation infrastructure. This contributes to SDG 9 "Infrastructure, Innovation and Industrialization" if the construction and maintenance activities support local development by job creation, skill development or local procurement. Another benefit arises from shared infrastructure solutions, which are gaining popularity. Here, companies and governments share funding responsibilities and/or usage rights [3] in order to generate positive effects on local employment and income from third party access to new or better infrastructure. A successful implementation of these approaches requires cooperative company engagement as well as good strategic planning on the part of local and national authorities, which must have sufficient governance capacities. In this context, the African Mining Vision (AMV) developed the concept of integrated multi-state development corridors where different instruments, e.g. training and mentoring of local SMEs, shall build economic linkages [8]. However, there is little evidence of successful implementation up to now.

Technology and knowledge transfer: With reference to the SDG 4 "Education", SDG 9 "Infrastructure, Innovation and Industrialization" and SDG 17 "Partnerships for Goals", mining companies can contribute directly to improved education facilities. This is achieved through training programs for the current and future mining workforce, with employees gaining skills that may be useful outside the mining industry. More significantly, mining revenues can be used for the education sector ranging from primary to academic and technical training programs.

The technology transfer that takes place during the mining life cycle accompanies job creation, and infrastructure development is not limited to mining technologies but includes broader knowledge transfer in fields such as energy technology, electricity supply, ICT, mechanical engineering and environmental protection systems. In addition, management skills, business know-how, administration know-how and legal expertise are transferred when implementing mining activities. The implementation of governance capacity building and the development of mining legislation can also potentially benefit other economic sectors. Further, important from a developing country perspective, geological mapping and exploration data can be improved.

Public revenues: In a large number of resource-rich developing countries, the revenues from royalties, taxes, licences and fees paid by the extractive industry constitute a major source of state revenue. As long as commodity prices are high, these revenues provide valuable opportunities for governments to finance a wide variety of activities, e.g. social protection, health and education services, infrastructure and development programs. The challenge, however, is to channel these revenues toward a long-term broad-based growth path, which can continue when commodity prices are low or the mine closes. The recent study from AfDB and BMGF points out that the right balance of direct spending on social, health and education issues, infrastructure investments and savings, e.g. in sovereign wealth funds, is important and must be carefully considered [9]. In order to maximise the benefit to human development they also stress the need for effective, transparent and accountable use of the revenues.

2.2. Barriers to economic development

History shows that many resource-rich developing countries have not succeeded in exploiting the above-described promising opportunities from mining, resulting in a rather small to non-existent development impact, accompanied by weak growth rates and under-development [1],[2]. There are only a few mineral-producing countries which are described as positive examples, e.g. Botswana, Chile and Malaysia. Past failures have resulted in intense debates on the cause of the mismatch of potentially large opportunities and poor outcomes in the struggle over poverty. Particularly, the idea of a 'resource curse' is contrarily discussed [2],[10],[11]. The term 'resource curse' refers to the paradox that resource-rich countries, particularly those with minerals and fuels, appear to have lower economic growth, less democracy, and worse development

outcomes than countries with fewer natural resources. There is no clear empirical evidence on a general relationship between natural resource exploitation and poor economic development. The question remains as to what the main factors of the past failures have been, and how they can be avoided in the future to succeed in diversifying and boosting the local economy.

One risk for less developed resource-rich states is the so-called “Dutch Disease”. It occurs when a national resource boom leads to a real exchange rate appreciation, which negatively impacts the competitiveness of other sectors (e.g. agriculture, manufacturing or construction) that are exposed to international competition [5]. In the long run de-industrialisation in these sectors may occur, leaving an economy heavily dependent on the resource sector. Another serious risk comes from highly volatile commodity prices leading, in countries with an undiversified economy, to erratic revenue changes, which again make long-term engagements to diversify the economy unavailable.

On the political level the resource curse has been connected to weakened governance institutions by rent-seeking behaviour of political and economic elites, who misuse windfall revenues for their own priorities. Corruption and weakened accountability of political decision-makers may result in reinforcement of authoritarian regimes, ethnical tensions and armed conflicts. The societal level of the resource curse is demonstrated by increasing inequality, poor social infrastructure, under-development and poverty. [2]

The literature on this topic does not agree on one dominant driving force behind the resource curse. Rather, it emphasizes the complexity of factors that keep resource-abundant countries from successful development. The Royal Institute for International Affairs’ (London), paper “The Resource Curse Revisited”, points out that the extractives-led growth agenda followed by diverse actors such as the World Bank, UNDP, the Natural Resource Governance Institute and the African Progress Panel see comprehensive good governance as one key factor for success [10]. This includes many aspects such as optimum contractual terms, revenue transparency, institution building, spending revenues on long-term public infrastructure, use of stabilisation funds, local capacity building, increasing accountability and democratic participation, minimising environmental and negative socio-environmental impacts and strengthening linkages between extractive industries and the local economy. This is a huge task, and the authors postulate that this transformation process needs sufficient time, not only for the public sector but also for the private sector which must develop the capacity and capabilities necessary to utilise development opportunities for the rest of the economy.

3. Selected challenges and hotspots

Four issues in the next sections cover selected hotspots for mineral mining: Local communities and the social license to operate (SLO), artisanal mining, conflict minerals and human rights, and fair trade schemes.

3.1. Local communities and the social license to operate

Local communities are heavily impacted by mining activities. They profit from the jobs created, leading to poverty reduction. However, the extent of job creation may be lower than expectations if the overall and sustained job creation effect is overestimated or bad governance and corruption hinder local economic diversification. The allocation of jobs within the local population and the employment of higher-skilled migrants may further lead to conflicts.

Many communities experience massive negative social and environmental impacts from mining, particularly if weak states provide no adequate regulation and control and companies do not utilise responsible mining practices. Important topics, particularly in LSM, include resettlements, forced evictions and the loss of livelihood, resulting from the absence of local communities’ participation and remediation. These are particularly relevant for indigenous communities when they lead to the denial of their right of self-determination and damage of their cultural heritage. In addition, many indigenous communities are more vulnerable to negative impacts from immigration and diseases that may be introduced subsequently.

Further pressing topics are negative health and safety impacts from both LSM and ASM, if mining sites are not managed properly and regulations fail. The environmental impacts such as water contamination, loss of agricultural land and air pollution are outlined in the previous Policy Brief No. 4/2016. Nevertheless, these cannot be separated from their impacts on human health and livelihoods. Besides continuous impacts, which can be immense by themselves, large accidents such as tailing dam bursts can lead to catastrophic impacts and destroy local livelihoods.

Poor working conditions are also of concern and may contribute to communities’ rejection of mining activities. Relevant issues include low wages, lack of social security, low or non-existent health standards and the refusal to honour basic labour rights. Fatal accidents with heavy machinery, shaft and slope collapses and water invasions are serious safety issues and call for well-functioning regulation.

The foregoing paragraphs briefly mention the most crucial issues but do not cover the whole spectrum of communities' challenges. Instead, a general overview on all socio-economic impacts from mining is given in table 1 at the end of the document. In addition, Chapter 3.2 on ASM-specific issues considers in more detail the impact on local communities from ASM.

The social license to operate (SLO) refers to the level of acceptance and approval by local communities and stakeholders of companies' mining activities. It is based on the idea that mining companies need "social permission" as well as government permission for their mining operations. Figures 2 and 3 show that mining-community conflicts have been reported in all continents and that reported cases increased in the last decade³. There is no clear evidence if the absolute number of conflicts increased; rising awareness of local communities about their rights, together with the rapid growth in access to global communication systems has encouraged communities to fight for a comprehensive consideration of their values, interests and livelihoods. As a consequence, SLO tops mining companies' agendas as an approach for addressing the widespread poor reputation of mining companies, and local communities' rejection of new mining projects.

Figure 2: Incidents of reported community conflict [12]

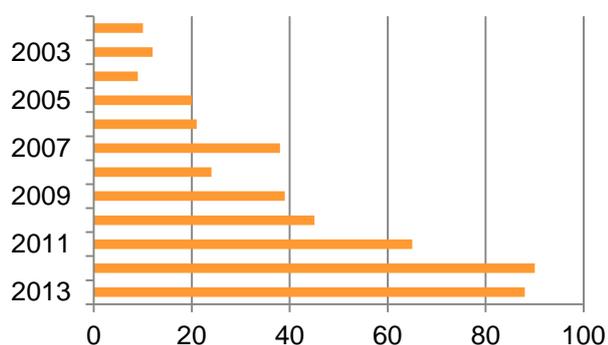
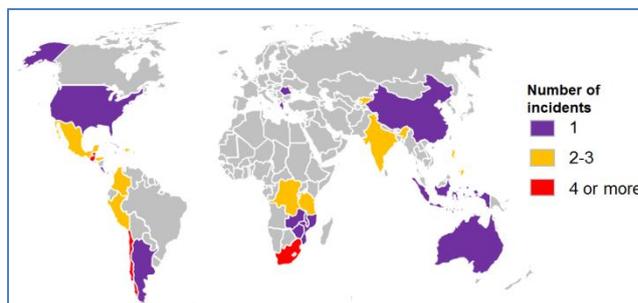


Figure 3: Countries with reported community conflicts [12]



Against this background it is congruent that a recent Ernst & Young study highlighting the top ten business risks ranked the issue of SLO in fifth place [13]. Industry initiatives, such as the International Council on Metals and Mining (ICMM) and the Canadian 'Towards Sustainable Mining' programme (TSM), have developed a set of guidelines, e.g. on land acquisition and resettlement, community development, stakeholder engagement, strengthening community relations, integrating human rights due diligence into corporate risk management processes and crisis management and communications planning. Politicians are also very aware of this topic. For example, during the recent DG Growth Raw Material Diplomacy Event in Brussels in June 2016, this topic was widely considered in presentations and discussions.

3.2. Specific socio-economic challenges in artisanal mining

Artisanal small-scale mining (ASM) is an often informal and sometimes illegal type of mining. Individuals or groups work in a mining zone and mainly extract high value, easily transportable and marketable raw materials that can be extracted with a low level of mechanisation (e.g. tantalum-ores, tin-ores and gold). They may also extract bulk minerals such as iron ore, and non-metallic minerals such as construction stone (e.g. India, China). ASM mainly occurs in emerging and developing countries, where poverty is widespread and an abundant workforce is available. In a large number of cases, ASM operates outside any regulatory regime as state institutions are commonly weak, although several highly-regulated states such as Ethiopia also have considerable ASM sectors. While informal ASM characteristically operates within small-scale organisational structures, ASM can also be highly formalised, including labour unions or providing social services and infrastructure (e.g. cooperatives in Ethiopia [14]). Frequently, ASM activities are also linked to a larger mining area and co-exist with LSM.

The metals gold, tantalum, tin and cobalt are in particular mined by ASM, with estimated shares of global production between 15% and 30% [15]. There are also relevant volumes of gemstones mined by ASM. Currently, up to 30 million workers and their families depend on ASM as a source of income [16]. In areas where traditional livelihoods such as livestock farming or agriculture are diminishing (e.g. due to droughts or land conflicts also ignited by mining activities as in Mongolia [17]), ASM often offers an essential basis of existence. Estimates from 2009 assume that in Mongolia, two South American and six African countries more than 10% of the population depends on ASM [18].

³ The documented incidents encompass conflict in cases where escalation of tension has led to active public protest and/or physical violence, sometimes leading to harm and in the extreme, death.

Some socio-economic challenges particularly apply to ASM [18],[19],[20]:

- **Low income:** The incomes of miners are usually low due to limited market access and monopolistic middleman structures.
- **Child labour:** Less regulated and controlled environments are highly vulnerable to structures inducing the worst forms of child labour as defined by the International Labour Organization (ILO-convention No. 182) [21]. Therefore, child labour in mining is mainly related to ASM. Other risks related to basic rights, such as workplace health and safety or loss of livelihood, affect both child workers and adult workers. However, children in the same situations experience higher risks of severe physical harm. Child labour in mines often implies a lack of basic education and loss of capabilities for personal development.
- **Workplace health and safety:** Working conditions are in most cases concerning and associated with high risks due to low precautionary security measures against shaft collapses, hanging wall collapse and flooded tunnels. In addition, sufficient safety equipment and expertise in handling hazardous and toxic substances are lacking. Severe hotspots are the use of mercury in ASM gold mining and the associated radioactive substances in 3T-ores and cobalt ores.
- **Organised crime and armed conflicts:** The mainly informal and often illegal ASM sector is often conducted in environments without full government control. In addition, many ASM workers are migrants and have no stable social environment in the areas they work in. Thus, the sector is especially vulnerable to high crime rates and other illegal practices, such as money laundering and the financing of illegally armed groups. In addition, illegal mining activities with the lowest wages endanger the profitability of legal mining activities. [20]

3.3. Conflicts and natural resources

A major human rights problem is the inter-link between mineral extraction and violent conflicts. Although most scholars agree that violent conflicts usually result from a combination of various factors, it is widely established that natural resources can be one such factor. Of the most prominent causality between resources and conflict, is when mining revenues are used to finance armed conflicts and perpetuate the fighting. For example, commodities such as diamonds and tantalum ores have been used for financing armed groups, particularly in Angola and Sierra Leone in the 1990s and until 2002, and in the DR Congo after 2000. Other links between resources and conflict also need to be taken into account; especially when conflicts are fuelled by a perception of unfairness, e.g. the perceived unfair distribution of mining revenues, environmental destruction, poor working condition or forced evictions. In many cases, such resource linked conflicts are interlinked with secession-conflicts such as in the Papua region in Indonesian or are closely linked to other issues of identity, e.g. ethnicity, religion or social class. In addition, conflicts over mining profits also motivate armed confrontations.

The term 'conflict minerals' is widely used to describe the nexus between mineral extraction and trade in the eastern Democratic Republic of Congo (DR Congo), and the ongoing conflict and instability in the region. The situation started around the year 2000 when – in the midst of the so-called Second Congo War, with five million deaths – armed groups in the eastern DR Congo began to fund their operations by extracting and trading locally available minerals, most notably gold, tin, tantalum and tungsten-ores.

An NGO study found that armed groups earned an estimated \$185 million from the so-called conflict minerals also known as 3TGs (tin, tungsten, tantalum, gold) in 2008 [22]. This led to different mandatory and voluntary initiatives, with the target to stop the financing of armed conflicts from mining revenues in this area. In 2010, the US Dodd-Frank Act 1502 was passed. It came into force in 2014 and requires US-stock-listed companies to report their use of conflict minerals from the DR Congo or bordering countries. A similar intention is followed by the *OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas* [23] and in 2016 a framework for a future EU regulation on trade in tin, tungsten, tantalum and gold was agreed upon.

The upcoming EU conflict minerals framework will involve (i) a mandatory certification system for importers, smelters and refiners; and (ii) voluntary reporting on sourcing practices by bigger EU manufacturers and sellers. The draft regulation recognises that funding of armed conflicts from mineral extraction revenue is not limited to DR Congo and adjoining countries and must be addressed with a global scope. It defines 'conflict-affected and high-risk areas' as areas in a state of armed conflict, fragile post-conflict as well as areas witnessing weak or non-existent governance and security, such as failed states, and widespread and systematic violations of international law, including human rights abuses.

The impacts of these legal and voluntary initiatives are contrarily discussed [15],[22],[24],[25]. Proponents state that the Dodd Frack Act has led to significant improvements in the transparency of corporate supply chains and to a significant reduction in the number of 3T conflict mines in eastern Congo. In addition, the measures caused pronounced price drops for non-certified minerals in the African Great Lakes region, which is an indication that it became increasingly difficult to use 3TGs as source of rebel funding.

Critics, however, point out that many artisanal and small mines were forced to close, as they could not afford the extra costs of due diligence or could not be certified due to the illegal nature of their operations. In addition, it was observed that gold mining and trading was not as strongly affected by the initiatives as the 3Ts, mostly because of high world market prices and the comparably easy transport and marketability of gold, e.g. by smuggling via neighbouring countries. It is also thought that the decision by some international companies to avoid sourcing any commodity from the Great Lakes Region, to avoid negative publicity, may have also contributed to income losses in the DR Congo.

Critics further argue that the reduction of conflict minerals stems from other political and economic developments than from the Dodd Franck Act, and militias have simply shifted revenue sources from ore to drugs, timber and charcoal. Therefore, no significant improvement in the security situation has occurred.

This debate demonstrates the highly complex local interrelationship between mining and socio-economic and political processes, and points out the limitations of certification and due diligence schemes. Their potentially negative side-effects must be carefully considered, attentively monitored and accompanied by positive contributions to local development and active dialogues. Such an approach is taken by the recently launched European Partnership for Responsible Mines (EPRM)⁴, which claims that 'legislation alone will not enable us to directly improve the situation of miners in conflict areas'. On this foundation, EPRM is designed as a multi-stakeholder European public-private partnership, aiming at complementing responsible sourcing of conflict minerals with support of ASM workers and local communities.

3.4. Mining and human rights

Considering the full codification of human rights⁵ accepted by the international community [26], many of the mining-related negative impacts mentioned in this document are linked to human rights concern, at least the grave cases where the lives and wellbeing of individuals and groups are threatened. A recent comprehensive study on Human Rights Risks in Mining commissioned by the German Geological Survey maps the most relevant human rights risks in LSM and ASM. These risks mainly relate to the infringement of rights under the following categories; 'indigenous peoples', 'land', 'environment', 'labour', 'conflict' and 'corruption' [19].

It concludes that in LSM, the most salient human right risks relate to land (mainly relocation and eviction) and to environmental impacts from area clearing measures and contamination (mainly from mining waste and tailings storage). They can massively affect local, particularly indigenous, communities.

In the ASM sector, labour-related human rights problems are prominent, e.g. child labour, bad working conditions, mercury contamination and environmental destruction from mining operation.

Most large mining companies are highly aware of the importance of corporate responsibility to respect human rights. For example, industry initiatives, such the International Council on Metals and Mining (ICMM) and the Canadian 'Towards Sustainable Mining' programme (TSM), include respect of human rights in their principles. The ICMM has developed comprehensive guidelines to assess, prevent, mitigate and remediate adverse impacts on human rights [27].

3.5. Fair trade schemes

The idea of 'fair trade' aims at a fair distribution of risks, benefits and costs. This topic is highly relevant for the extractive sector, particularly if resource-rich developing countries carry all the environmental, health and safety risks and yet don't succeed in generating greater benefit from mining. Raw-material importing industrialized countries carry none of these risks but strongly benefit from the raw materials use for their consumption and their extensive industrial activities. This unequal distribution of risks and benefits calls for a higher net-benefit for developing countries. This issue is closely related to the question how mining can boost sustainable development. It is also relevant for the SLO, which requires communities' perception of an adequate overall net-benefit and a fair distribution of chances and risks.

The basic question on how mining can contribute to sustainable development means a conceptual shift away from a singular analysis and mitigation of impacts to a more comprehensive analysis and encouragement of contribution. A key issue requiring attention in emerging economies is not only the unequal risk sharing of resource-rich countries and resource-importing countries but also unequal sharing of benefit and risks within mining countries' population where benefits (such as employment, training and health care) may accrue largely to men and the local elite while most risks (such as family and social disruption, increased

⁴ Members are: EC, foreign & Commonwealth Office, Ministry of Foreign Affairs of the Netherlands, Intel, Philips, Solidaridad, Cfsi., IPIS. http://www.resolv.org/site-ppa/files/2016/06/joint-press-statement-EPRM_def-version.pdf

⁵ Convention for the Protection of All Persons from Enforced Disappearance (CPED), Convention on the Rights of Persons with Disabilities (CRPD), International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families (ICRMW), Convention on the Rights of the Child (CRC), Convention Against Torture (CAT), Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), International Covenant on Economic, Social and Cultural Rights (ICESCR), International Covenant on Civil and Political Rights (ICCPR), International Convention on the Elimination of All Forms of Racial Discrimination (CERD), Universal Declaration of Human Rights

prostitution, loss of gardens for subsistence agriculture, pollution, and water losses) fall on the poorer women, the less advantaged, and the families they care for [28].

The 2015 EU trade strategy *Trade for All* promotes fair and ethical trade schemes and reflects European consumers' concerns about social and environmental conditions in global production sites; it increasingly scrutinizes the effects of Free Trade Agreements (FTAs) on other countries, notably developing countries. Thus, *Trade for All* aims to use the existing structure for implementing FTAs to promote fair trade and other sustainability assurance schemes. [29]

4. Engagement from EU, international initiatives, industry and civil society

In 2016, following a long and controversial discussion, the EU responded to the debate on conflict minerals and the US Dodd Franck Act 1502 by agreeing on a framework for future EU regulation addressing trade in tin, tungsten, tantalum (including their ores) and gold (see chapter 3.3). The EU's response to corruption, patronage systems and misuse of public mining revenue, is the European Transparency Directive Amending Directive (Directive 2013/50/EU). It complements the global Extractive Industries Transparency Initiative (EITI), a global standard for open and accountable documentation of payments by the extractive industry to governments, by requiring large European extractive companies to disclose their payments to governments if they exceed 100 000 €. The first reports will be published for the year 2016. In addition to these initiatives, the EU's and Member State's various development projects also address socio-economic challenges in mining.

Addressing additional socio-economic problems of imported raw materials, the European Raw Material Initiative (RMI) sees that mining can and should contribute to sustainable development. The EU's development policy can also play an important role in raw materials diplomacy, building win-win situations for developing countries and the EU in the area of raw materials [30]. This approach is coherent with the new EU Trade strategy promoting fair and ethical trade. During its dialogue process, STRADE will discuss to what extent this target can be achieved and how the impact can be improved.

In the last 15 years, many different initiatives for responsible mining have emerged. The World Bank Group launched the IFC Environmental and Social Performance Standard and the Environment, Health & Safety (EHS) guidelines for mining. These standards are applied to World Bank financed projects as well as to publicly supported projects from OECD member states and to around 80 international private and public banks committed to the Equator Principles. Industry initiatives, such as the International Council on Metals and Mining (ICMM) and the Canadian 'Towards Sustainable Mining' programme (TSM), have developed responsible mining principles and comprehensive guidelines for bringing them into practice. Though there is no independent evaluation on their performance, public reporting on member companies' commitment is intended to provide a strong incentive for good performance. The Responsible Mining Index, currently under development, also follows this approach. It will publish its first ranking of large mining companies' performances in terms of socio-economic and environmental issues in 2017⁶. Many voluntary initiatives from various stakeholders (OECD, authorities, associations, companies, CSOs) have developed additional standards and certification schemes for responsible mining and/or for preventing armed conflict financing from mining revenues. These will be presented and analysed in subsequent STRADE policy briefs.

Complementing these initiatives, which formulate specific principles applicable to mining sites, broader international initiatives emerged, such as the Natural Resource Governance Institute with its 2010 National Resource Charter of 12 best-practice principles and provisions of policy advice for governing resources. The Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF), founded in 2002, is a platform for governments to work collectively to achieve their sustainable mining goals. European members include France, the UK, Germany, the Netherlands and Romania.

The Extractive Industries Transparency Initiative (EITI), a pioneer global standard founded in 2003 and implemented in 52 countries, promotes the open and accountable management of oil, gas and mining industry resources. The standard requires countries and companies to disclose information along the extractive industry value chain, from the point of extraction, following revenues through the government, to how they ultimately benefit the public. EITI reports from individual member countries provide information on the licensing and contracting processes, fiscal and legal arrangements, revenue payments, locations of allocated revenues, and economic contributions. EITI implementation in a country is guided by a national multi-stakeholder group, with contributions from companies, state organisations and CSO's. In Europe, Norway is compliant with the standard, and the UK and Germany have candidate status.

Besides EITI, further precautionary actions against corruption and revenue diversion are important, particularly in countries with weak legal systems. On the national level, they include transparent bidding, negotiation and permits procedures with stronger participation of parliaments. The G20 / OECD's Base

⁶ See <http://responsibleminingindex.org/>

Erosion and Profit Shifting (“BEPS”) project is an important global initiative against tax avoidance and profit shifting and highly relevant for ensuring that developing countries have full access to adequate taxes from mining activities. BEPS was developed in participation with over 80 developing countries and provides tools and instruments aiming to ensure that profits are taxed where economic activities generating the profits are performed and where value is created. In July 2016, the BEPS inclusive framework had 85 member states committing to implementing common standards and launching a monitoring process. [31,32]

In addition to these specific initiatives for the mining sector, a large number of general principles are also relevant for responsible business and respecting humans in the extractive sector, such as the UN ‘Guiding Principles on Business and Human Rights’ that includes the “Ruggie-Principles” addressing the general responsibilities of states and enterprises, and the ILO core labour norms. The European Commission addresses these aspects in its renewed EU Strategy for Corporate Social Responsibility, which should be implemented into member states’ national action plans [33]. The UN Guideline on Free, Prior and Informed Consent (FPIC), highly relevant for the extractive sector, requires bottom-up participation and consultation of an Indigenous population prior to using resources within their territory.

5. Conclusion

The wide range of socio-economic challenges covers work-force related issues such as child labour or high-risk working conditions, issues in local communities such as health problems or resettlements and finally past failures to use the extractive industries as a motor for development (see summary table at the end). Many communities have experienced the negative consequences of mining activities and/or poor governance, corruption and mismanagement of mining revenues. With this legacy, the mining sector currently faces widespread mistrust and rejection from communities in many parts of the world; mining companies must make concerted efforts to gain a ‘social license to operate’.

In contrast, in many world regions, mining is one of the few economic sectors with potential to provide short and mid-term economic development and government revenues. Presupposing sound governance and a well-planned use of revenues, it is hoped that such mining-based developments can increasingly be harnessed for poverty alleviation and more diversified economic development.

Industrialized countries and particularly their consumers and big down-stream companies are increasingly aware of these socio-economic challenges in the extractives sector and demand more responsible mining practices and fair trade schemes. In addition to many voluntary initiatives from states, industry and CSOs addressing responsible mining, an increasing number of more binding approaches are entering into legislation, in particular approaches related to supply-chain transparency and conflict minerals. These approaches should consider carefully the specifics of the ASM sector, which is particularly vulnerable to issues such as inadequate health and safety measures and sub-standard working conditions. At the same time ASM is very labour-intensive and provides income for large poor population groups. Therefore, any initiatives aiming at responsible mining within the supply chain should refrain from general discrimination of ASM practices and develop integrated strategies which actually improve local conditions.

STRADE seeks to learn from past failures to develop new approaches that consider the interests of investors, companies, governments and local communities. A comprehensive EU raw material policy, which includes responsible mining and fair trade schemes in its contribution to the Sustainable Development Goals as a foundation of its raw material sourcing and supply security, must go beyond the current development assistance, transparency legislation or legal response to conflict minerals. It must further consider the whole range of socio-economic challenges. STRADE aims to provide a platform for discussing new strategies and partnership models with resource-rich countries, industry and CSOs through a series of workshops and additional policy briefs.

Summary table on socio-economic challenges in mining

Table 1: Socio-economic challenges in mining

Workforce	Child labour	Freedom from child labour
	Forced labour	Freedom from forced labour
	Working conditions	Adequate working hours & leave
		Fair wages
		Non-discrimination in hiring & employment
		Social insurance against loss of income
	Workplace health & safety	Protection from injuries & occupational diseases
		Freedom from physical and mental harm
		Emergency preparedness
		Hygienic workplace & sanitary facilities
		Access to safe drinking water
	Labour rights	Freedom of association
		Collective bargaining
Local communities	Community health	Emergency preparedness
		General community health & safety
	Social & cultural rights	Free, prior and informed consent
		Displacement & resettlements
		Loss of livelihood
		Preservation of cultural heritage
	Community Safety	Social tensions & increase in crime
		Responsible use of force and firearms
	Local development	Crisis & conflict mitigation
		Infrastructure development
		Procurement of local goods & services
Society at large	Economic development	Income generation
		Job creation
		Attraction of foreign investment
		Procurement of national goods & services
	Governance issues	Corruption
		Money-laundering
		Tax evasion
	Armed conflicts	Fraud
		Finance & support of conflicts

Note: Text highlighted in blue is of specific relevance for ASM

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Project Background

The Strategic Dialogue on Sustainable Raw Materials for Europe (STRADE) addresses the long-term security and sustainability of the European raw material supply from European and non-European countries.

Using a dialogue-based approach in a seven-member consortium, the project brings together governments, industry and civil society to deliver policy recommendations for an innovative European strategy on future EU mineral raw-material supplies.

The project holds environmental and social sustainability as its foundation in its approach to augmenting the security of the European Union mineral raw-material supply and enhancing competitiveness of the EU mining industry.

Over a three year period (2016-2018), STRADE shall bring together research, practical experience, legislation, best practice technologies and know-how in the following areas:

1. A European cooperation strategy with resource-rich countries
2. Internationally sustainable raw-material production & supply
3. Strengthening the European raw-materials sector

Project Identity

Project Name	Strategic Dialogue on Sustainable Raw Materials for Europe (STRADE)
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