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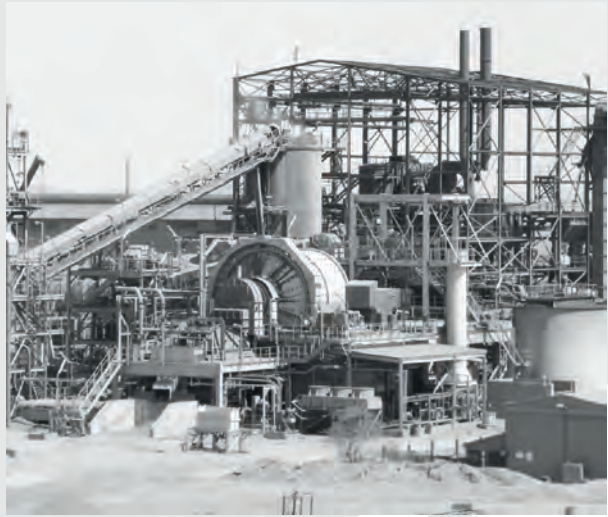
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für Internationale
Zusammenarbeit (GIZ) GmbH



Human Rights Risks in Mining

BGR / GIZ Country Study Mauritania





Abbreviations and Acronyms

ASM	Artisanal and Small Scale Mining	OMRG	L'Office Mauritanien de Recherches Géologique
BGR	Bundesanstalt für Geowissenschaften und Rohstoffe	SAMIA	Société Arabe des Industries Métallurgique
CGTM	Confédération Generale des Travailleurs de Mauritanie	SCA	Sub-Committee on Accreditation of GANHRI
CLTM	Confédération Libre des Travailleurs de Mauritanie	SENI SA	Société d'Extraction du Nord de l'Inchiri S.A.
CSR	Corporate Social Responsibility	SMHPM	Société Mauritanienne des Hydrocarbures et du Patrimoine Minier
DFS	Definitive Feasibility Study	SNIM	Société Nationale Industrielle et Minière de Mauritanie
DMG	Direction des Mines et de la Géologie	SOMISEL	Société Mauritanienne des Industries du Sel
ESIA	Environmental and Social Impact Assessment	TML SA	Tasiast Mauritanie Limited S.A.
FPIC	Free Prior and Informed Consent	UN	United Nations
FQM	First Quantum Minerals	UNDRIP	UN Declaration on the Rights of Indigenous Peoples
GANHRI	Global Alliance on National Human Rights Institutions	UNESCO	United Nations Educational, Scientific and Cultural Organization
GIZ	Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	USGS	United States Geological Survey
ILO	International Labour Organization	UTM	Union des Travailleurs de Mauritanie
MCM	Mauritanian Copper Mines		
MIFERMA	Société Anonyme de Fer de Mauritanie		
NHRI	National Human Rights Institution		

Programme information

This study is a product of the sector programmes *Extractives and Development* and *Realizing Human Rights including Children and Youth Rights in Development Cooperation*.

The Extractives and Development sector programme is implemented jointly by the Federal Institute for Geosciences and Natural Resources (BGR) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ).

For more information please visit: www.bmz.de/rue/en

Contacts: Leopold von Carlowitz (GIZ), Johannes Danz (BGR)

Realizing Human Rights including Children and Youth Rights in Development Cooperation is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ).

For more information, please visit: www.giz.de/human-rights

Contact: Viola Bölscher (GIZ)

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1. Objective and Methodology

The objective of the present study is to contribute to a better understanding and a sustainable development of the Mauritanian mining sector. It therefore analyses current and possible future mining activities in the industrial and artisanal sector with a view to their social and environmental impact. This impact is then systematically reviewed to identify the most important risks for negative effects that could directly or indirectly lead or contribute to human rights violations.¹ To present a holistic assessment of the sub-

ject matter, the authors combine extensive expertise on mining and human rights, which was permanently juxtaposed during the analysis. Data collection was mainly carried out through semi-structured interviews² with mining and human rights experts in Mauritania and in Germany, international mining companies active in Mauritania as well as civil society representatives. The present study presents its results in the form of the most important human rights risks that are based on a detailed description of the industrial and artisanal sector.

¹ See for the methodological basis of the study see “Human Rights Risks in Mining – A Baseline Study”, German Federal Institute for Geosciences and Natural Resources (BGR) and Max Planck Institute for International Peace and the Rule of Law, 2016, at: www.bmz.de/rue/includes/downloads/BGR_MPFPR_2016

[Human Rights Risks in Mining.pdf](#).

² Interview methodology was based on the outcome of the above-mentioned Baseline Study.



2. Mauritania's Economic Background

After more than 30 years of inconsistent growth, Mauritania's GDP increased rapidly during the iron ore and commodity price boom, with annual GDP growth averaging 5.5 % between 2003 and 2015. However a fall in mining and oil production, as well as a negative terms of trade shock in 2015, caused GDP growth to decline to approximately 3 % in that year. Estimates suggest that growth may start to increase in the next few years, to around 4.6 % in 2019.

Mauritania's economy relies heavily on fishing, agriculture and the extractive industries, although the services industry has grown rapidly in recent years and now accounts for 41.1 % of GDP (2016 estimate). The industrial sector contributes 34.8 % of GDP, and is made up of fish processing and oil production as well as mining, which mainly involves iron ore, gold, and copper. This was a decrease from previous years,

from highs of over 25 % of GDP in the years leading up to 2013, which was followed by a downturn in global commodity prices.

Mauritania's exports are dominated by the extractive industries, averaging 54 % of total exports in 2016. Over 70 % of iron ore output is exported to China.

During the boom years, the extractive industries attracted significant amounts of foreign investment, as well as encouraging considerable state-driven public investments. From January 2003 to May 2015 inward investment into Mauritania amounted to US\$ 5.4 billion and created 8,018 jobs (FDI Intelligence from The Financial Times). The majority of this was into oil and gas (US\$ 2.7 bn) and copper and gold (US\$ 2.0 bn).

Future investment into the country is likely to remain focussed on natural resources with Kinross planning to increase production at its Tasiast gold mine in a two-phase expansion. The Phase 1 expansion is expected to reach commercial production in 2018 effectively doubling gold output, followed by further doubling of production in a Phase 2 expansion in 2020. This could result in gold becoming the most significant contributor to the country's economy and exports.

Employment figures are difficult to collate, as many people are not in formal employment; approximately half the population still relies on subsistence farming. However, it appears that unemployment rates have fallen in recent years, from 30% in 2008 to 12.8% in 2016; the biggest rise in employment has been in the services sector, from an estimated 40% in 2001 to 48.1% in 2014, while employment in industry has fallen from 10% to 1.9% in the same period. In 2015, the mining sector employed more than 15,000 people (Ministère du Pétrole, de l'Énergie et

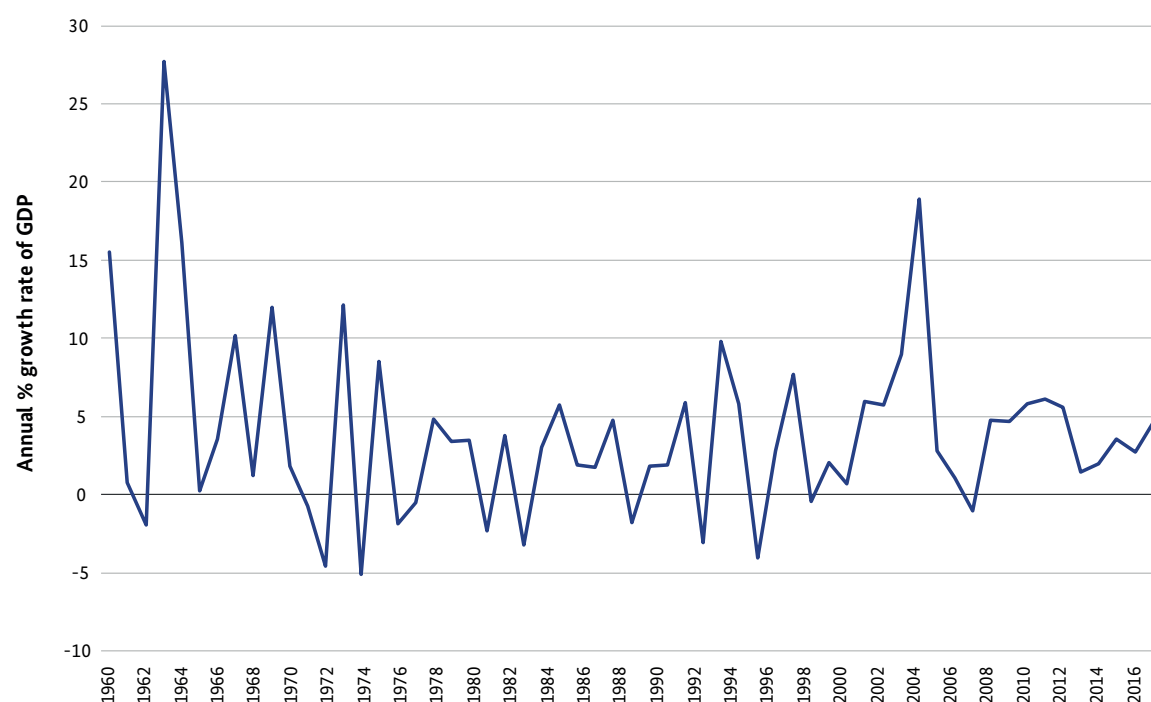
des Mines, 2015), with almost half of these employed by SNIM (SNIM, 2016).

2.1 Mining Sector Legislative Framework and State Institutions

2.1.1 Mining Law in Mauritania

The Mining Code of Mauritania was enacted, and was subsequently amended in 2009, 2012 and 2014. A further law was brought in during 2012 with the aim of encouraging investment into mining projects; this is referred to as the 'Model Mining Convention' (African Law & Business, 2016). There are three types of permits available for large scale mining companies: prospection, exploration and mining. For the dura-

Figure 1 Mauritanian GDP growth (annual %). (World Bank Group. 2017)



tions and renewal periods of each permit please see the table in Add. 2.

The cadastral situation in 2014 as reported by the Ministry of Petroleum, Energy and Mines (EITI report 2014) has 83 mining operators and 13 operating licenses distributed as follows:

- ▶ 6 permits for iron to the benefit of SNIM, EL Aouj Mining Company, Tazadit Underground Mine, Sphere Mauritania SA and Legleitat Iron Mauritanie SA;
- ▶ 3 gold licenses for Tasiast Mauritanie Ltd SA and SENI SA;
- ▶ 2 quartz permits for Quartz Inc Mauritania and Quartz de Mauritanie SA;
- ▶ 1 copper and gold license for MCM (First Quantum); and
- ▶ 1 salt permit for SOMISEL

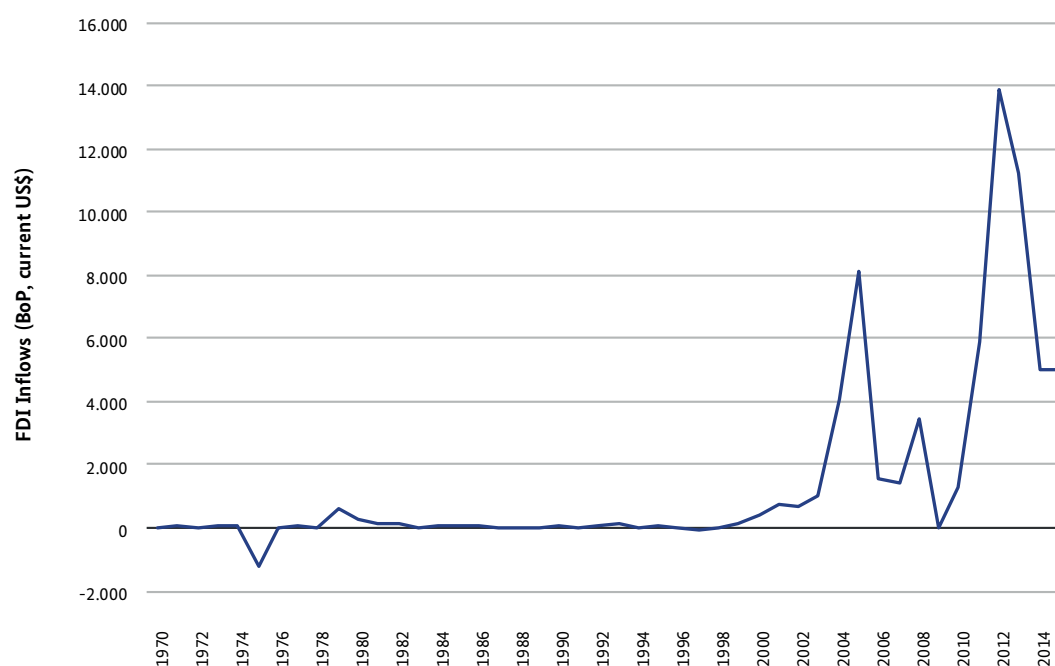
Mining permits can only be awarded to legal entities incorporated under Mauritanian law. The State

may retain a 10% free participation of each company, and is also authorised to purchase an additional 10%. Security of tenure is guaranteed by the 2012 Model Mining Convention, except in situations when expropriation of assets is considered to be justified, in which case the State agrees to first pay the permit-holder a fair price (African Law & Business, 2016). However, in certain circumstances, permits can be cancelled; for example if serious breaches of the Mining Code take place. The key elements that relate to Human Rights of the mining code that is applicable to all mining companies, but potentially excluding small scale artisanal mining, are the submission of health and safety, environmental and operational activity reports, and that land needs to be rehabilitated after mining.

For an overview of the Mauritanian permitting process, please see Add. 3.

Small scale mining permits also exist, for extraction down to depths of less than 150 metres (Afri-

Figure 2 FDI into Mauritania in current US dollars. Foreign direct investment refers to direct investment equity flows in the reporting economy. It is the sum of equity capital, reinvestment of earnings, and other capital. (World Bank Group, 2017).



can Law & Business, 2016³). These are valid for three years and are renewable. In May 2016, a ministerial order has been adopted to grant “authorisations for the prospection and sampling of mineral substances”. However artisanal mining continues to occur illegally⁴ in some areas, for instance at Algold’s Tijirit gold project⁵.

Under the new order introduced in 2016, a license holder must be a Mauritanian citizen, own a metal detector cleared through Mauritanian customs offices and pay a fee of 100,000 Ouguiyas (about US\$ 280)⁶. The license is valid for four months and the beneficiary is required to sell their gold to the state bodies (Central Bank of Mauritania) designated for this purpose. As of early 2016 around 10,000 people had applied for a small scale mining license.

The three main fees that mining companies must pay are dividends (related to shares held by the State), royalties and contributions to the state budget. Royalties are payable to the State at varying rates, depending on the commodity and its market price. For instance, rates for iron vary between 2.5 % and 4 %, while gold royalties start at 4 %, increasing to 6.5 % where gold is priced at more than US\$ 1,800 per ounce (African Law & Business, 2016).

With regard to local obligations, permit holders must gain consent from landowners, and are required to purchase the land if its normal use will become impossible. Compensation must be given to landowners in cases where operations cause any damage. Environmental obligations include conducting an Environmental Impact Study before mining, and returning the site to its original condition after closure (African Law & Business, 2016).

2.1.2 State Institutions

The following institutions have a role in regulation and support of the mining sector in Mauritania.

The Council of Ministers is the supreme authority that has the power to decide on all mining activities on the territory of the country. It decides on a mining project of national interest and is entitled to grant or withdraw mineral titles and other authorisations of mining activities.

Ministry of Petroleum, Energy and Mines – responsible for implementing the Mining Code, and oversees several smaller departments involved with the country’s mining industry. These include the Department of Mines and Geology (DMG), and the Mauritanian Geological Research Office (OMRG).

Department of Mines and Geology (DMG – Direction des Mines et de la Géologie) – compiles geological and mining data from the country to provide to potential investors and the public. It also promotes the development of the mining sector and is involved with developing legislation and enforcing regulations and environmental protection. The DMG is divided into three services: the Department of Mines (Service des Mines), the Mining Cadaster and Geological Service (Département du Cadastre Minier et de la Géologie) and the Environment Department (Service de l’Environnement).

Mauritanian Geological Research Office (OMRG – Office Mauritanien des Recherches Géologiques) is responsible for the evaluation of the mineral potential of Mauritania and the promotion of prospective areas to investors. The OMRG was involved with the identification of the Tasiast gold province, where the mine of the same name is now being operated by Kinross, as well as exploration for peat, ornamental rock and ceramic clays. As well as carrying out its own research, the OMRG also offers mapping, drilling, surveying and analysis services to other mining companies.

The Mauritanian Hydrocarbons and Mining Patrimony Company (SMHPM) manages state investments in mining projects.

³ African Law & Business (2016). Mauritania: Mining Law 2017 <https://www.africanlawbusiness.com/publications/mining-law/mining-law-2017/mauritania/q-and-a#chaptercontent13>

⁴ For the purpose of the present study, ‘illegal’ artisanal mining refers to activities carried out outside of the areas designated to artisanal mining.

⁵ SGS Canada Inc. (2017). Tijirit Property NI 43-101 Technical Report with Resource Estimate Update (for Algold Resources Ltd)

⁶ <http://fr.africatime.com/mauritanie/articles/mauritanie-la-ruée-vers-lor-amenent-les-autorites-reglementer-lorpaillage>





Photo: © BGR

3. Human Rights System in Mauritania

3.1 Legal Framework (International, Regional, National)

On the **international level**, Mauritania has signed and ratified the international core human rights treaties of the United Nations.⁷ In contrast, few of the Optional Protocols to these treaties have been ratified. Particularly those Protocols creating a communications procedure, allowing individuals to bring cases of non-compliance of their government with the treaty before the respective UN committees are still missing.⁸ Mauritania has further ratified 41 ILO

Conventions including the eight ILO fundamental conventions.⁹

On the **regional level** Mauritania has most importantly ratified the African Charter on Human and peoples' Rights, the African Charter on the Rights and Welfare of the Child, the Optional Protocol on the establishment of the African Court on Human and Peoples' Rights and the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa.¹⁰

On the **national level**, Mauritania's constitution incorporates the Universal Declaration on Human

⁷ See for an updated list including all reservations made "10th-14th Periodic Reports of the Islamic Republic of Mauritania on the Implementation of the Provisions of the African Charter on Human and Peoples' Rights", July 2016, p. 15 et seq; see further <https://www.upr-info.org/fr/review/Mauritania/Session-23---November-2015/Compilation-of-UN-information#top>.

⁸ The Optional Protocol to the International Covenant on Civil and Political Rights, Optional Protocol to the International Covenant

on Economic, Social and Cultural Rights, Optional Protocol to the Convention on the Elimination of All Forms of Discrimination against Women and Optional Protocol to the Convention on the Rights of the Child on a communications procedure are still not ratified, see <http://indicators.ohchr.org>.

⁹ Ibid., p. 18 et seq.

¹⁰ Ibid., 22.

Rights in its preamble. Under Mauritania's prevailing monistic system,¹¹ ratified international human rights instruments form an integral part of the body of national legislation in accordance with Article 80 of the constitution. This article grants the above-mentioned UN and ILO conventions "an authority superior to that of the laws" in Mauritania. The provisions of these conventions can thus be directly invoked before the courts of Mauritania for mandatory application by the judge.¹²

Further **Mauritanian legislation** particularly important for the realisation of human rights are the Criminal Code, Code of Criminal Procedure, the Law on Legal Assistance (awards free legal assistance to poor litigants), the Act on the Status of the National Police, and the 2005 Code on the Judicial Protection of Minors (female genital mutilation in Article 12; the Personal Status Code of 2001; Water Code, Mining Code, Livestock Act, Pastoral Act, Agropastoral Policy Act; the 2001 Law on Compulsory Basic Education, which sets the school age at 6 to 14 years; the Ordinance introducing the Organic Law on Access for Women to Elective Office and Electoral Mandates (sets a 20% quota for women); the Ordinance on the Protection and Promotion of the Rights of Persons with Disabilities; the Labour Code; the Collective Bargaining Agreement and Laws No. 2015/032 and 2015/033 criminalising slavery practices.

3.2 Institutions

The Mauritanian government points out the following institutions as the competent authorities of human rights:

Constitutional Council

The Constitutional Council has the competence for reviewing Presidential elections and organic laws as to their conformity with the constitution (Arts 81 et seq).

Office of the Commissioner for Human Rights and Humanitarian Action

The Office of the Commissioner for Human Rights and Humanitarian Action has the rank of a ministry and is in charge of drafting and implementing the national policy for the promotion, defence and protection of human rights.

National Human Rights Commission


The National Human Rights Commission is an independent institution entrusted with the following missions: issuing, at the request of the Government or on its own initiative, a consultative opinion on general or specific questions concerning the promotion and protection of human rights and respect for individual and collective freedoms. It has a complaints mechanism allowing any natural or legal person to file a complaint, if he or she believes that his or her rights have been violated. Accredited as an A Status national human rights institution (NHRI) by the Sub-Committee on Accreditation (SCA) of the Global Alliance on National Human Rights Institutions (GANHRI), it was recognised as a constitutional institution in 2012.

National mechanism for the prevention of torture

The national mechanism for the prevention of torture ensures compliance with existing legislation in this area.

¹¹ See generally on the monistic and dualistic systems V. Arnauld, *Völkerrecht*, 2. Aufl., Rdn. 493, 499 et seq.

¹² See the interpretation of the Mauritanian government in "10th-14th Periodic Reports of the Islamic Republic of Mauritania on the Implementation of the Provisions of the African Charter on Human and Peoples' Rights", July 2016, p. 23.



Furthermore, the most important judicial institutions¹³ of the Mauritanian system of justice, which is based on the second-hearing principle, comprise trial courts at the level of the moughataas and wilayas, appeal courts and a Supreme Court. A High Court of Justice is entrusted with the trial of the highest authorities in the State (President of the Republic and members of the Government). Constitutional justice is guaranteed by the Constitutional Council. Additionally, a High Council deals with fatwas and informal appeals providing legal opinions according to Islamic law. Important specialised courts comprise three criminal courts that focus on the fight against slavery and a labour court in Zouerate.¹⁴

¹³ See the overview in the “10th-14th Periodic Reports of the Islamic Republic of Mauritania on the Implementation of the Provisions of the African Charter on Human and Peoples’ Rights”, July 2016, p. 12.

¹⁴ Ibid.



Photos: © Projekt Consult

4. Human Rights Risks in the Industrial Mining Sector

4.1 The Industrial Mining Sector: Technical Overview

See Add. 1 for a geological map of Mauritania showing locations of main deposits and mines. In 2014, approximately 83 companies were involved in industrial sector mining and exploration in Mauritania, however, since the commodity cycle downturn, many of these companies have abandoned their projects. There are currently only three companies with significant operating mines in Mauritania: Kinross Gold Corp., First Quantum Minerals (FQM), and the majority state-owned Société Nationale Industrielle et Minière (SNIM). Kinross Gold's Tasiast gold mine is undergoing a two-phased production expansion, while First Quantum's Guelb Moghrein copper mine is nearing the end of its mine life. The next po-

tential new mine to be developed in the country is Algold Resource's Tijirit project, in or around 2020.

A number of companies have been active in exploration and development within the country. The collapse in iron ore price post-2013 led a number of large mining companies terminating their plans for iron projects in the north. ArcelorMittal terminated an agreement with SNIM to develop the El Agareb iron ore project¹⁵, while Glencore slowed development of the Guelb El Aouj project in 2014¹⁶ and the

¹⁵ SEC (2013). EX-99 3 Ex992.htm EXHIBIT 99.2 – ITEM 4. INFORMATION ON THE COMPANY Available from <https://www.sec.gov/Archives/edgar/data/1243429/000124342914000004/Ex992.htm>

¹⁶ Glencore (2015). Preliminary results 2014. Available at <http://otp.investis.com/clients/uk/glencore1/rns/regulatory-story>.

following year abandoned the Askaf project¹⁷, seeking a buyer. Exploration is ongoing for iron ore, gold, uranium and base metals as well as industrial materials.

4.1.1 SNIM Iron Ore Mines

SNIM owns several iron ore mines near Zouerate in Tiris Province: Guelb el Rhein, M'Haoudat, and Kedidia d'Idjill (TO14). Identified resources in this area are more than 5 billion metric tonnes of magnetite and several hundred million tonnes of haematite iron ore (USGS 2013 report). The government holds 78.35% equity participation in the company, the remainder being held by historic financing partners including: Industrial Bank of Kuwait K.S.C (7.17%); Arab Mining Co. (5.66%); Iraq Foreign Development Fund (4.59%); Office National des Hydrocarbures et des Mines (2.30%); Islamic Development Bank (1.79%); and private investors (0.14%).

SNIM has a history dating back to the first export of ore in 1963 by MIFERMA (Iron Mines in Mauritania) which was nationalised in 1974 and incorporated into the National Industrial and Mining Company (SNIM). Since then the mine has raised its annual output to 13.3 million tonnes in 2016 (L'Office National de la Statistique, Annuaire Statistique 2016¹⁸) and had plans before the crash in iron ore prices to nearly quadruple output to 40 million tonnes per year by 2025 at a capital cost of US\$ 6 billion. It is uncertain whether SNIM still aims to achieve this expansion against a current iron ore market of oversupply. However, this expansion would require significant additional infrastructure, workforce and water supply.

SNIM is the largest employer in the country after the state, employing 5,030 people of which more than 93% are mine workers and supervisors. 68% of the workforce are employed in Zouerate and 32% in

Nouadhibou. SNIM provides healthcare and medical facilities for workers and their families.

The main water supply to SNIM's mines is the Taoudeni Basin near Zouerate. From a desk study and from interviews conducted it has been difficult to gauge the commitment that SNIM has to improve the quality of life for its employees, contractors and local inhabitants. A US\$ 175 million loan made in 2009 by a syndicate of well-known banks (African Development Bank, BNP-PARIBAS, Société Générale, BHF-Bank) came with conditions to increase and diversify its social programs for the benefit of 4,000 families and several local communities (transport, water and electricity supply, health care, schools, etc.) and to strengthen SNIM's environmental management capabilities. Although SNIM's website cites a number of environmental and social responsibility programmes, most of the information is dated and lacking sufficient detail to be of use.

4.1.2 Tasiast Gold Mine (Kinross Gold Corp.)

The Tasiast mine and the existing exploitation permit are owned by Tasiast Mauritanie Limited S.A. (TMLSA) which in turn is owned by a Canadian mining company, Kinross Gold Corporation. Kinross acquired the mine in 2010 through its purchase of Red Back Mining Inc.¹⁹ Mining operations commenced in 2007. The mine is located in the Inchiri and Dakhlet Nouadhibou Districts, approximately 300 km north of Nouakchott and 250 km southeast of Nouadhibou. The mine produces around 240,000 ounces of gold a year and small amount of by-product silver. Gold ore is mined by conventional open pit methods and processed by crushing, grinding, and cyanide leaching.

The current throughput of the mill is 8,000 tonnes per day of ore. Kinross had initially planned to expand to a 38,000 tonnes per day operation at a capital investment of US\$ 1.6 bn. However due to the post-2012 fall in gold prices, the company instead opted to increase production in a two-phase expansion. The US\$ 300 million Phase One expansion will upgrade

[aspx?cid=275&newsid=489950](https://www.ft.com/content/32bea32c-e6ee-11e5-a09b-1f8b0d268c39)

¹⁷ Financial Times (2016). Mauritania's mining industry hit by commodity price fall. Available at <https://www.ft.com/content/32bea32c-e6ee-11e5-a09b-1f8b0d268c39>

¹⁸ http://www.ons.mr/images/Archive/doc/publication/Annuaire_Statistique_2016.pdf

¹⁹ Kinross Gold Corp. (2017), Annual Information Form for the Year Ended December 31, 2016. Available at sedar.com

the operation to 12,000 tonnes per day in Q2 2018 (100 million tonnes per year mined) (Kinross Gold Corp., 2016; Kinross Gold Corp., 2017). On 18 September 2017 Kinross announced the decision to implement the Phase Two expansion that will increase ore processing rates to a combined 30,000 tonnes per day and over 800,000 ounces of gold per year placing the mine in the top 15 largest gold mines globally. Between 2017 and 2020 Kinross will invest US\$ 1,150 million, extending the mine life to 2029.

In 2016 Tasiast employed approximately 1,140 people, of which 1,010 were Mauritanian nationals (Tasiast 2016 Technical Report) and the remainder expatriates. A total of 2,322 contractors were also employed in 2013, of which 90% were Mauritanian nationals. Staff accommodation is provided at the mine site. The company has plans to gradually decrease the numbers of expatriates over time, as members of the national workforce develop mining skills and expertise. As the various expansion plans are implemented over the next 3 years staffing levels will continue to increase significantly. The majority of the recruitment will be Mauritanian nationals. Based on interpretation of the Tasiast 2016 Technical report, peak employment levels for the Phase 1 expansion are likely to be achieved in 2021, thereafter employee numbers will decline.

The operation's water supply is sourced from a borefield 64 km west of the mine, which consists of 47 wells in a semi-saline aquifer. In total, the existing borefield and pipelines are capable of supplying up to 24,000 m³/day of water. TMLSA have submitted a number of detailed environmental studies, in support of the proposed expansions, including a Phase 3 EIA for "off-site" sea water supply.

According to the 2015 Kinross CSR report²⁰ the company seeks to reduce water consumption at the mine, introducing water saving and management measures. In 2016, 61% of the water consumed at the mine was recycled compared to 72% in 2015. The mine provides drinking water for local communities.

Kinross tracks both hazardous and non-hazardous waste at the mine. Waste from plant and equipment maintenance, construction, offices, kitchens and accommodation is recycled or handled in an on-site landfill. Sewage is disposed of through septic tanks fitted with soak away overflow systems.

4.1.3 Guelb Moghrein Copper-Gold Mine (First Quantum Minerals, FQM)

The Guelb Moghrein mine is located close to the town of Akjoujt, 250 km northeast of Nouakchott. First Quantum Minerals (FQM) acquired an 80% interest in the open pit copper-gold mine in 2004, increasing its share to 100% in 2010 through its subsidiary, Mauritanian Copper Mines (MCM); commercial production commenced in April 2006. Current projections of the mine life extend until 2023, producing approximately 4 million tonnes of ore per year²¹. Open pit mining will continue until early 2021 followed by two years of processing stockpiled ore during which time the mining workforce is likely to be downsized, with perhaps only 100 people being employed in 2022 and 2023. At the end of 2016, Guelb Moghrein employed 1,124 persons directly and a further 332 contractors (First Quantum Annual Information Form 2016).

The mine produces a copper and gold intermediary product, called a concentrate (22.5% copper) which is then sold to smelting and refining companies, mainly in China, to be smelted to copper metal and refined gold. Production forecasts are for 30,000 to 36,000 tonnes of copper annually out to 2019.

Exploration and mining began in the 1960s, but the mine closed in 1977 due to technical difficulties and high fuel prices, finally restarting under FQM in 2006.

FQM has made a commitment to clean up the legacy impacts from previous mining operations where practicable, despite receiving an indemnity from the government from responsibility for any environmental degradation or pollution caused by previous

²⁰ <http://s2.q4cdn.com/496390694/files/cr/2015/files/2015-Kinross-Gold-Corporate-Responsibility-Report.pdf>

²¹ First Quantum Minerals Ltd (2016) Guelb Moghrein Copper Gold Mine, Inchiri, Mauritania: NI 43-101 Technical Report.

operators of the site. Existing environmental liabilities were principally an open pit mine, waste rock dumps, magnetite tailings dump, redundant mill and gold plant, mining equipment, non-operational generators and transformers, various tailings dumps and a buried asbestos dump. Since 2004 FQM claim that legacy environmental liabilities have been significantly reduced.²²

4.1.4 Other Industrial Sector Mining Operations

4.1.4.1 Gypsum

Mauritania hosts one of the world's largest gypsum deposits, Sebkha N'dramcha, located about 50 km northeast of Nouakchott, containing at least 140 million tonnes of proven gypsum reserves (USGS 2013) and estimated total resources of 1.7 billion tonnes at a purity of 70-97%. Despite the large scale of these resources, Mauritania has only two producers. The first is the Société Arabe des Industries Métallurgiques (SAMIA) (50-50 joint venture of SNIM and the Industrial Bank of Kuwait), producing on a small scale (160,000 tonnes/year), ranking it around the 45th largest producer globally (USGS 2015). Based on a presentation by the Managing Director of SAMIA²³, mining is conducted by small hydraulic shovels, loading onto trucks for transportation to the port or plaster plant.

The low production rate reflects the limited demand from the domestic and local markets (Senegal, Mali), with two-thirds of the product used as a cement additive and one-third used in plaster production.

Should future regional demand increase then it is feasible that this operation could be expanded accordingly.

Given the small scale of current production, employee numbers are understood to be less than 100. The main human rights impacts are thought to be related to dust pollution, although this is not thought to be significant issue in scale. Furthermore, based on examination of photos within the SAMIA presentation, safety standards appear to be lax with many workers not wearing protective helmets or other personal safety equipment.

Another gypsum and plaster plant was launched in 2010 by the company MAMCO, with a production target of 120,000 tons per year.

4.1.4.2 Salt Mining

Historically, salt was mined at N'terrert (in the Trarza) and Sebkha d'Idjil (Tiris) brine pits. Currently there is one mining licence for salt extraction by Société Mauritanienne des Industries du Sel (SOMISEL) at a rate of 700 tonnes per year (USGS 2013). Very little information on the salt operations is available in the public domain.

4.1.4.3 Quartz Mining

Two companies hold licences for high-purity quartz projects in Mauritania; Quartz Inc. Mauritania (ARVG Specialty Mines PVT Ltd) and Ferroquartz Mauritania SARL, a subsidiary of Ferroglobe, a US-Spanish speciality metals company which is the largest producer of silicon globally. High-purity quartz is used in the production of silicon metal and silicon ferroalloys.

Ferroglobe is believed to have started production at Vadel 2 in early 2017, with Vadel 1 planned to start in 2018. Both licences are located 250 km east of Nouadhibou and Ferroglobe is targeting a minimum production of quartz of 85,000 tonnes per year over a 20 year mine life at a development cost of € 3.25 million. Quartz will be trucked 250 km to a washing, screening and sorting plant in the Free Area of Nouadhibou Bay before being loaded onto ships. Given the scale

²² These environmental liabilities include: The Morak tailings dam and contaminated sub soil were removed and placed within the lined CIL gold tailings storage facility; The Morak tailings footprint has since been rehabilitated with indigenous vegetation; Waste rock was dumped on the old TORCO tailings with the main objective being reduction of dust pollution; Significant non-hazardous and hazardous waste including scrap metal and hydrocarbons have been removed from site and disposed of in accordance with acceptable standards.

²³ Can Mauritania become a major gypsum exporter: Opportunities and Challenges? http://www.petrole.gov.mr/IMG/pdf/session_8_s5_mohamed_el_moustapha_ould_eleya_samia.pdf

of the operation, employment is expected to be minimal compared to the copper, gold and iron ore mining operations.

In May 2017 ARVG organised a public consultation day on their plans to develop a mine in the Tasiast area. ARVG have undertaken an environmental impact assessment; quartz is relatively easy to mine and process requiring little or no chemical processing.

4.1.5 Exploration Companies

There are a number of publicly-listed foreign companies exploring for minerals in Mauritania. Algold Resources and Aura Energy have the most advanced exploration projects which are nearing a development decision stage. Drake Resources, Mining Resources and OreCorp are other notable companies which are operating within (or have recently quit) the country.

At the end of 2016 Glencore reported²⁴ that it held a number of iron ore exploration properties in Mauritania including a 50% interest in the El Aouj Mining Company through a joint venture arrangement with SNIM and a 100% share in Sphere Minerals. Based on an email (26 May 2017) received from Glencore's investor relations team "these [assets] are very early stage projects, which we acquired as part of our takeover of Xstrata. We are actively looking to exit these assets. Glencore is not currently involved in mining activity in the country."

See for licenses granted or renewed in 2015 Add. 4.

4.1.5.1 Algold Resources Ltd – Gold Exploration / Development

Canadian-listed gold exploration company Algold Resources has three gold projects in the country, the Tijirit project which lies to the south-east of Tasiast, and the early exploration stage Kneivissat and

Legouessi properties located to the north-west of Tasiast. In August 2017, Algold received a formal decree from the Mauritanian Council of Ministers granting a 30-year mining license for Tijirit. Under the terms of the mining license, Algold will deliver a feasibility study by December 2018 and could, subject to economic viability, commence production 12-18 months later.

4.1.5.2 Aura Energy – Uranium Exploration Projects

Currently no uranium mining is being conducted within the country; however, two Australian listed exploration companies, Aura Energy and Forte Energy are currently exploring in the Tiris Zemmer region in the far north of the country. Aura Energy has an early stage development project, Tiris, that could produce up to 1 million pounds of uranium oxide (yellowcake) per year over a 15 year mine life at a capital development cost of US\$ 45 million based on a 2014 scoping study²⁵. Aura is currently progressing a Definitive Feasibility Study (DFS) and Environmental and Social Impact Assessment (ESIA), which is due for completion in early 2018.

Development of the project is subject to a number of critical areas, aside from project and uranium market economic fundamentals, including water supply and security. Aura has identified potential sources of water, the closest being the Oued el Foule ephemeral watercourse and aquifers within this depression, including the aquifer that supplies the SNIM operations 75 km south of Aura's project.

With regard to security, the project is located in a sparsely populated area close to the Algerian border. This region is prone to high levels of terrorist activity. Development of uranium mining in an area that is prone to terrorism is not without precedence – in Niger, Areva operates a number of high profile uranium mines in the north of the country near the town of

²⁴ http://www.glencore.com/assets/investors/doc/reports_and_results/2016/GLEN-2016-Annual-Report.pdf

²⁵ 2014 Tiris (Reguibat) Scoping Study [http://www.auraenergy.com.au/assets/ae_tiris_\(reguibat\)_scoping_study.pdf](http://www.auraenergy.com.au/assets/ae_tiris_(reguibat)_scoping_study.pdf)

Arlit (Cominak and Somaïr) and Goviex Uranium Inc. is in the advanced stages of developing its Madaouela project that could start producing in 2020.

The product of uranium mining is normally uranium oxide concentrate – U₃O₈ or yellowcake, which is shipped from the mines in 200 litre drums. This is barely radioactive, but has chemical toxicity similar to lead, so occupational hygiene precautions are taken similar to those in a lead smelter. Most of the radioactivity from the ore ends up in the tailings (Occupational Safety in Uranium Mining, World Nuclear Association website)²⁶. Mining companies conduct and evaluate a wide range of social and environmental baseline studies before developing a mining project ostensibly to minimise impact on local communities and the environment.

4.1.5.3 Phosphate Development Projects

Mauritania's reserves and resources of phosphate rock are estimated to be at least 100 million tonnes, against a global estimated resource of more than 300 billion tonnes; in other words, there is no imminent shortage of this commodity. There are two key deposits in south west Mauritania; Bofal (70 million tonnes grading 21% P₂O₅) and Loubboira (29 million tonnes grading 19% P₂O₅). Both deposits are exposed at surface lying along the northern bank of the Senegal River, around 300 km east of the Atlantic coast, approximately 20 to 25 km from the Senegal River in a dry sparsely populated by semi-nomadic to sedentary pastoralists and cattle breeders. Due to the remoteness of the location, infrastructure costs will be high.

In 2010 Bofal Indo Mining Co. S.A. established a joint venture, between the Archean Group of India and

the Mauritanian Government to develop a one million tonne per year phosphate rock mine in the Bofal-Loubboira area as of 2013, plus a phosphoric acid plant. However, since 2012 phosphate rock prices have fallen from US\$ 200 to around US\$ 93 per tonne and by mid 2017 there are no indications that the operation has started production.

If the global oversupply of phosphate is absorbed by market demand and prices rise in future, then the Bofal deposits could be developed, which would place considerable focus on an area along the Senegal River that is considered to have a fragile ecosystem. The authors of this report recommend that the government and various NGOs consider the impact of developing these operations with regard to the environment and the local communities. Typically, small scale, unlisted privately run companies lack transparency in terms of financial, environmental and CSR reporting in comparison to companies listed on Canadian, Australian or European stock exchanges.

4.1.5.4 Mineral Sands

Significant beach mineral sand placer deposits (ilmenite, zircon, rutile) occur along the Mauritania coastline. At present most of the known deposits are situated within Banc d'Arguin national park and potentially environmentally sensitive areas along the coast. Based on current sources of information there appears to be little activity in exploiting this resource potential but it could be a risk area for the future, should the economics of the minerals sands industry improve. For example, a mining license for a titanium deposit located 80 km south of Nouakchott was recently granted to a company called Mauritanian Titanium Resources and several black sand exploration licenses were awarded in October 2017.

²⁶ <http://www.world-nuclear.org/information-library/safety-and-security/radiation-and-health/occupational-safety-in-uranium-mining.aspx>.

4.2 Human Rights Risks

4.2.1 Right to Information / Participation / Free, Prior and Informed Consent

Indigenous and tribal peoples belong to the most affected groups in the context of mining activities.²⁷ Such groups not only compete with mining projects over lands they need as the basis for their livelihoods earned by agriculture or pastoralism, but in addition, they often maintain a “special relationships between themselves and their land as basic to their existence as such and to all their beliefs, customs, traditions and culture”.²⁸ Mining activities therefore not only threaten their economic, but also their cultural existence. Other ethnic or cultural minority groups are often similarly affected by mining and need to be considered in this context.²⁹ A clear-cut widely accepted definition of “indigenous” or “tribal” people hasn’t been established yet.³⁰

In Mauritania, a significant risk of negative impacts from current and future mining activities exists for

certain local groups living in the areas affected by mining projects:

Nomadic herders/pastoralists could be affected around all industrial mining operations.³¹ According to the Mauritanian Code Pastoral (Law No. 2000-044), pastoralism is defined as livestock raising based on permanent or seasonal mobility and herders are those livestock keepers who depend on mobility for their use of pastoral resources (Art. 7, para. 3). This group is particularly dependent on the land and the “pastoral resources”, which are listed in Art. 4 of the code pastoral as: water (above and below surface level), grass and tree or brush grazing areas (pâturages herbacés ou aériens), and salt licks (les carriers d’Amersal et les terrains à lécher). Mining activities can negatively affect these resources through contamination or depletion of water resources; contamination of grazing areas by mine-generated dust or through transport of ore; disruption of traditional travelling routes; displacement of traditional camping grounds by mine sites or related infrastructure; accidents through increased traffic close to mines. Cumulatively, these effects can lead to an erosion of the traditional nomadic culture (see reference case 1, Add.1). According to several sources,³² livestock of pastorals is currently lost due to “sudden deaths” particularly in the Tasiast area, which could indicate contaminated water resources. However, contaminations could have multiple reasons, also due to the fact that livestock is moved around constantly. No official investigations have been conducted into these cases.

Elsewhere in Mauritania, the **Imraguen** people living in the Parc National du Bank d’Arguin are a UNESCO protected cultural minority group that could, at some point, be affected by mining activities. Environmental impact, forcing the Imraguen to change or stop their traditional fishing techniques would eradicate their entire culture and way of life. While currently,

²⁷ See BGR/MPFPR, “Human Rights Risks in Mining – A Baseline Study” (BGR/MPFPR - Baseline Study), 2016, p. 23 et seq

²⁸ See UN Special Rapporteur of the Sub-Commission on Prevention of Discrimination and Protection of Minorities, ‘Study on the Problem of Discrimination Against Indigenous Populations’, UN Doc. E/CN.4/Sub.2/1986/7/Add.1, para. 196. See further Art. 13 (1) of the ILO Convention No. 169, which recognises the special importance for the cultures and spiritual values of indigenous peoples regarding the relationship with lands and territories which indigenous peoples occupy or use otherwise.

²⁹ See, e.g., ‘The Rights of Non-Indigenous ‘Forest Peoples’ with a focus on Land and Related Rights - Existing International Legal Mechanisms and Strategic Options’, Forest Peoples Program, November 2013.

³⁰ As a minimum consensus, the following factors are considered relevant to the understanding of the concept of “indigenous” by international organisations and legal experts: Priority in time, with respect to the occupation and use of a specific territory; Cultural Distinctiveness, which may include aspects of language, social organisation, religion and spiritual values, modes of production, laws and institutions; Self-identification as well as recognition by other groups or by state authorities; and Experience of subjugation, marginalisation, exclusion or discrimination, see working paper on the concept of ‘indigenous people’ of the Working Group on Indigenous People, UN Doc. E/CN.4/Sub.2/AC.4/1996/2; see further references on the related academic debate BGR-MPFPR - Baseline Study, p. 12, footnote 30.

³¹ See, e.g., the Tasiast Gold Mine Expansion Project Environmental Impact Assessment, which recognises that “nomadic / semi-nomadic people transit or are temporary residents within the vicinity of the Mine for at least part of the year”, see “Tasiast Gold Mine Expansion - Project Phase 2: On-Site Mine”, Environmental Impact Assessment, 30 March 2012, p. 70.

³² Interviews lead during the study; repeated reporting through news outlets such as www.cridem.org.

there seems to be a somewhat higher risk of negative effects from artisanal mining (see below 5.3.3), this group should also be recognised in the development of legislative and administrative frameworks for the industrial mining sector.

Furthermore, communities living along the Senegal River and in the perimeters near the **phosphate** deposits could be severely affected by future phosphate mining activities, although it should be borne in mind that the phosphate deposits are some 25-30 km away from the river, so the magnitude of this potential impact needs further assessment. As described above (see 1.1.1.5), a reduction in the global oversupply of phosphate and current low prices could lead to renewed investment activity and a development of the Bofal deposits. Negative environmental impacts of these mining activities could have disruptive effects on agriculture, which forms the basis for livelihoods of the local population.

In Mauritania there are few adequate laws, regulations or frameworks in place that would mitigate negative effects of mining on these specific groups. Poor to no administrative capacities on the local and municipal level further exacerbate potentially negative effects. Local administration currently has limited involvement in the planning and implementation of mining projects.³³ Given the fact, that the Afro-Mauritanian communities along the Senegal River could be negatively affected by mining operations, particularly in connection to the lands they use for subsistence agriculture, their needs should be dealt with under the above-mentioned Indigenous rights frameworks, too.

The *Code Pastoral*, however, protects the pastoral resources and declares them common goods (Art. 8-9) and the area in which these goods occur (l'espace pastoral) public domain, exclusively reserved for mobile livestock keeping.³⁴ However, this law doesn't re-

flect the new challenges arising from the broad expansion of the mining sector that poses the specific threats to pastoralists described above. Furthermore, no disaggregated data are available about already existing land use conflicts in connection to pastoralism that could serve as a basis for estimating potential conflict to an expanding mining sector.

No official data has been collected on the effects of mining activities to these cultural or socio-professional groups. Social impact on these groups is assessed to a certain extent by industrial mining companies in the approval procedure through Environmental Impact Assessments according to Mauritanian legislation.³⁵ However, this is always limited to specific mining projects and the local area³⁶ without holistically assessing potential impacts for the entire sector.

In order to mitigate future conflict between mining projects and these particularly vulnerable groups, specialised legal and administrative frameworks should be adopted. The core principle in this context is the right to a **"free, prior and informed consent" (FPIC)**,³⁷ which creates an obligation to consult and cooperate with such groups prior to the implementation of any mining activities. Consultations are thereby to be held as early as possible – even in the

³³ Interviewees reported complaints by local mayors who complained about not being informed about and included in the implementation about mining projects in their region.

³⁴ See H. Wabnitz, "Le Code Pastoral de la République Islamique de la Mauritanie : Un exemple parfait de législation traditionnelle", Colloque international "Les frontières de la question foncière – At the frontier of land issues", Montpellier, 2006, p. 8.

³⁵ See Environment Code No. 2000-045 (26 July 2000); Decree No. 2004-094 relating to Environmental Impact Assessment (24 November 2004), Decree No. 2007-105 modifying and supplementing certain provisions of Decree No. 2004-094 (13 April 2007).

³⁶ See, e.g., "Tasiast Gold Mine Expansion – Project Phase 2: On-Site Mine", Environmental Impact Assessment, 30 March 2012, p. 208 et seq.

³⁷ While 'Free' implies that there is no coercion, intimidation or manipulation, 'Prior' implies that consent is to be sought sufficiently in advance of any authorisation or commencement of activities and respect is shown to time requirements of indigenous consultation/consensus processes. 'Informed' implies that information is provided that covers a range of aspects, including the nature, size, pace, reversibility and scope of any proposed project or activity; the purpose of the project as well as its duration; locality and areas affected; a preliminary assessment of the likely economic, social, cultural and environmental impact, including potential risks; personnel likely to be involved in the execution of the project; and procedures the project may entail, see 'Free, Prior and Informed Consent, OHCHR Facts Sheet', Indigenous Peoples and Minorities Section, OHCHR Rule of Law, Equality and Non-Discrimination Branch, at: <http://www.ohchr.org/Documents/Issues/IPeoples/FreePriorandInformedConsent.pdf>

planning of related legislation or the award of mining licenses.

While these concepts mainly arise from ILO convention 169 and the UN Declaration on the Rights of Indigenous Peoples of 2007 (UNDRIP), which were not signed or ratified by Mauritania,³⁸ they equally arise from the below provisions of the international convention it is a party to. They can also be seen as constituting international customary law.³⁹ The Mauritanian government is therefore legally obligated to refrain from any actions leading to the above-mentioned scenarios and must also prevent third parties therefrom.⁴⁰

- ▶ Rights of Minorities to Culture, Religion and Language (Art. 27 ICCPR)
- ▶ Right to take part in Cultural Life (Art. 15(1)(a) ICESCR; Art. 5 (e)(vi) ICERD; Art. 17 (2) ACHPR)
- ▶ Right to Economic Self-Determination (Art. 1(2) ICESCR)
- ▶ Right to Own Property (Art. 15 Mauritanian Constitution (MC); Art. 5 (d)(v) ICERD)
- ▶ Protection from Expropriation / Compensation / Right to Indemnity (Art. 15 (5), (6) MC)
- ▶ FPIC Rights as International Customary Law (Art. 19 and 32 UNDRIP)
- ▶ Right to Information (Art. 19, 25 ICCPR)

See BGR/MPFPR-Baseline Study, p. 27-30, 31-33 et seq.

4.2.2 Area Clearing / Resettlement

Area clearings and resettlements in the **construction phase** of industrial mining projects often lead to human rights violations, if the impact on local populations is not adequately mitigated⁴¹ (see reference case 2, Add. 1). No reports or indications were found that there are comparable scenarios in the industrial mining sector of Mauritania. This is mainly due to the fact that industrial mining projects that are operational are situated in almost unpopulated desert areas. In the context of potentially negative human rights impacts, this feature of the Mauritania industrial mining sector is a strong asset.

However, further development of particularly the Bopal **phosphate** deposits along the Senegal River in the south could require resettlement and area clearings of local communities. Due to the fact that the area close to the deposits near Kaédi (approx. 20-25 km away from the river) is a populated dry grassland region, semi-nomadic and sedentary pastoralists as well as cattle breeders in the area could be negatively affected. Afro-Mauritanian groups depending on agriculture in the region (see above, 4.2.1) could be similarly affected. The ongoing efforts of the Mauritanian government to improve food security through its land tenure policy, particularly through ordinance Nr. 83.127 on land reform,⁴² and access to water⁴³ need to be further enhanced and tailored to avoid negative impact, if phosphate mining projects are being developed.

The human rights standards potentially affected in this risk area comprise:

³⁸ In fact, the Mauritanian delegation was not present during the vote.

³⁹ See BGR/MPFPR-Baseline Study, p. 29 et seq.

⁴⁰ See on the state human rights obligations (the duty to respect, protect and fulfill) BGR/MPFPR-Baseline Study, p. 13 et seq.

⁴¹ Ibid., p. 34 et seq.

⁴² See “10th–14th Periodic Reports of the Islamic Republic of Mauritania on the Implementation of the Provisions of the African Charter on Human and Peoples’ Rights”, July 2016, p. 41 et seq.

⁴³ Ibid., p. 44.

- ▶ Right to Adequate Housing (Art. 11 ICESCR Art. 14 ACPHR, Art. 14 Protocol to the ACPHR on the Rights of Women in Africa)
- ▶ Right to Privacy (Art. 13 (4) MC, Art. 17 ICCPR)
- ▶ Right to Food (Art. 11 (1) ICESCR)
- ▶ Right to Water (Art. 11 (1) ICESCR, Art. 24 ACPHR, Mauritanian Water Code)
- ▶ Right to Food /Water Security for Women (Art. 15 Protocol to the ACPHR on the Rights of Women in Africa)
- ▶ Right to Health (Art. 12 ICESCR, Art. 14 ACPHR, Art. 14 Protocol to the ACPHR on the Rights of Women in Africa)
- ▶ Right to Work (Art. 6 (1) ICESCR, Art. 15 ACPHR)

See BGR/MPFPR-Baseline Study, p. 27-30, 31-33 et seq.

4.2.3 Settlement Growth Adjacent to Mine Sites

As a side effect of mining activities, settlements, villages or towns close to mining operations often grow rapidly, due to in the influx of mine workers, their families and those seeking employment and those providing goods and services. Apart from considerable environmental impacts, local infrastructure, water and sanitary systems are often quickly overburdened. Thereby, other parts of the population are negatively affected by the mining operations. In arid regions like Mauritania, water depletion probably constitutes the biggest risk in this context (see reference case 1, Add. 1).⁴⁴

Comparable scenarios are currently not being observed in Mauritania yet. This, again, could be connected to the industrial mining projects being situated in sparsely populated desert areas. However, a significant future risk exists, given the history of population growth in the area around **Akjoujt**. Groundwater reserves in the region could at some point be negatively affected, thereby not only affecting the

further development of mining operations but also elementary human rights of the population in the region. While inward migration and potential effects on natural resources is generally taken into account in the mandatory Environmental Impact Assessments in Mauritania this is always limited to a specific project that seeks approval.

Another phenomenon related to newly evolving or rapidly expanding mine settlements is a rapid inward migration of poorer parts of society, particularly women and children that seek work servicing miners. These groups are often exploited due to their vulnerable position.

- ▶ Freedom from Forced and Compulsory Labour (Art. 8 ICCPR)
- ▶ Right to Work (Art. 6 (1) ICESCR, Art. 15 ACPHR)
- ▶ Economic and Social Welfare Rights of Women (Art. 13 Protocol to the ACPHR on the Rights of Women in Africa)
- ▶ Right to Health (Art. 12 ICESCR, Art. 14 ACPHR)
- ▶ Health and Reproductive Rights of Women (Art. 14 Protocol to the ACPHR on the Rights of Women in Africa)
- ▶ Freedom from Economic Exploitation of Children (Art. 32 CRC)
- ▶ Protection of Children (Art. 10 (3), 12 CRC)
- ▶ Right to Education (Art. 13, 28 CRC)

See BGR/MPFPR Baseline Study, p. 109-112, 139-140

4.2.4 Environmental Impact

Environmental impact from industrial mining operations, mainly during the **Operations Phase** often translate into human rights violations. Environmental contamination, water depletion and air pollution belong to the most common effects in this context.⁴⁵ In the Mauritanian industrial mining sector dust generation and water depletion constitute the currently most important environmental impacts that

⁴⁴ See also the identified potential impact of the Tasiast Mine, see “Tasiast Gold Mine Expansion - Project Phase 2: On-Site Mine”, Environmental Impact Assessment, 30 March 2012, p. 212.

⁴⁵ See BGR/MPFPR Baseline Study, p. 49 et seq.

could affect the below listed human rights of affected persons. Water or soil contamination also pose risks.

Dust and particulate matter are the most visible atmospheric effects of mining activities. In arid environments the building of roads and facilities, exploration drilling, open pit mining, ore processing and transport all tend to generate dust and particulate matter that not only affect visibility and respiration, but also pollute local streams and vegetation.⁴⁶ Particulate matter is solid material suspended in the atmosphere, including road dust, soot, smoke particles, and suspended soil.⁴⁷ If not properly controlled, these particulates can threaten human respiratory health by lodging in the lungs, causing problems ranging from minor irritation to deadly exacerbation of symptoms in chronic asthma sufferers⁴⁸ or even silicosis.⁴⁹ Fallout of particulate matter may also contaminate soils, vegetation and water and, if extensive and continuous, can lead to habitat destruction and species mortality.⁵⁰ Finally, potentially harmful gases like carbon monoxide (CO), sulfur dioxide (SO₂) and nitrous oxides (NO_x) are generated during processing by smelters and refineries.⁵¹

In a semi-arid environment such as Mauritania, dust and fine particles are very hard to control. Massive dust emissions naturally occur through dust storms. Emissions are normally controlled by companies through the spraying of water to limit the dispersal, particularly from transport and tailings. However, the mining operations in the Mauritanian desert have to save water as much as possible is rarely

used in this way.⁵² Numerous cases of mining workers suffering from lung cancer, silicosis and eye diseases are being reported⁵³; however, limited information is available in the public domain to corroborate that appropriate monitoring studies have or continue to be carried out to assess the risk to workers and people living near the mining operations.

Increasing dust impact on the adjacent city of Akjoujt is also reported from the Guelb Moghrein copper mine.⁵⁴ Here dust is mainly generated from crushing ore, although the primary ore stockpile is covered by a dome, and traffic within and around the mine. Complaints made by the local administration were recounted by interviewees. Mining companies are required to conduct and submit detailed environmental impact assessment studies, including monitoring and reduction of dust emissions during mining, before developing or expanding a mine; for example the Environmental Impact Assessment (EIA) for Phase 2 of the Tasiast Expansion Project.⁵⁵

At Akjoujt artisanal water is piped from boreholes 112 km away, for use in the mining operations and by the local population of 12,000 people. The mine is scheduled to close around 2023, and First Quantum is putting in place plans to ensure the continuity of this water supply to Akjoujt after closure, partly by reconfiguring pumping stations along the pipeline to use solar power, rather than gasoline, and partly by drilling additional boreholes closer to Akjoujt.

In some countries where the water table is relatively close to surface, dewatering in order to facilitate mining can also lead to depletion of water resources, but so far this has not been the case in Mauritania, given that the water table is below the deepest mining levels of the existing mines. Some operations (TO14 Mine and West Brach in Tasiast) at times en-

⁴⁶ See A. Rosenfeld-Sweeting / A. Clarke, 'Lightening the Lode: A Guide to Responsible Large-Scale Mining', Conservation International, (2000), p. 29.

⁴⁷ Ibid.

⁴⁸ Ibid.

⁴⁹ Silicosis is one of the severest health issues in mining as a consequence of air pollution, mostly within the mine but also outside of it, expert consultation, Sven Renner, BGR.

⁵⁰ C. Down / J. Stocks, 'Environmental Impact of Mining', Applied Science Publishers Ltd., March 1977, 65.

⁵¹ See A. Rosenfeld-Sweeting / A. Clarke, 'Lightening the Lode: A Guide to Responsible Large-Scale Mining', Conservation International, (2000), p. 29. See further <http://www.miningfacts.org/Environment/How-are-waste-materials-managed-at-mine-sites/#sthash.oKm4rAXc.dpuf>.

⁵² Interviews conducted between 4-17 September 2017.

⁵³ Interviews conducted between 4-17 September 2017.

⁵⁴ Interviews conducted between 4-17 September 2017 that report related complaints by local majors.

⁵⁵ <https://www.miga.org/Documents/SPGDisclosures/Addendum%20to%20Phase%202%20Environmental%20Impact%20Assessment%20for%20Expansion%20Proj%20at%20Tasiast%20Mine-Mauritania%20-%20SRK%20-%20Jan%202016.pdf>

counter pockets of water that they use to ensure the progress of the works.

Water and soil contamination is not necessarily obvious in the arid landscape of Mauritania, since very little vegetation is present to serve as an indicator. However, there are many cases of sudden deaths of livestock being reported, particularly from the area around Tasiast and Akjoujt.⁵⁶ The causes of these deaths are very hard to verify, as nomadic herders move their livestock over vast areas, and non-mining related diseases cannot be ruled out without further study. Industrial mining operations can be the source of water and soil contamination, particularly around tailings dams, waste dumps and reagent storage facilities.

Indeed, Kinross Gold reported unauthorised releases of cyanide-contaminated process water at Tasiast in 2014 and 2015, although both of these were reportedly contained within the mine operational area and promptly remediated. Furthermore, Mauritania's arid climate and flat landscape doesn't favour the wide dispersal of such contamination, which tends to be a greater risk in mountainous settings with high rainfall, for instance. It is also possible at Akjoujt that mining-related contamination could arise from legacy wastes left behind by historic mining activity. The current owner, First Quantum has stated that it has a programme underway to clean up these contaminated areas.

The risk of **tailings dam failures** at existing mining operations in Mauritania is considered to be low, for several reasons. The flat topography, low rainfall and missing seismicity reduce the risk substantially; by contrast the risks tend to be much high in mountainous, wet, earthquake-prone locations such as Papua New Guinea or Peru. Furthermore, there are hardly any settlements close to mines and their tailing storage facilities, reducing the risk of human impact of a dam burst to very low levels. Little to no information was available on the nature and suitability of tailings disposal practice at the SNIM iron ore mining operations in Zouerate. However, given the mine's report-

ed compliance with the ISO 14001 environmental standards, suitable provision must be in place.

Overall, these environmental risks will increase with further development of Mauritania's mining sector, particularly through an increase in dust from road traffic through populated areas (see reference case 4 Add. 1). A scenario comparable to Mongolia is possible in this regard (see reference case 1, Add. 1). Very importantly, due to the fact that these environmental effects of mining activities are often very hard to identify the right to remedy of affected individuals at least established a right to a full and effective investigation by the state.⁵⁷

- ▶ Right to Water (Art. 11 (1) ICESCR, Art. 24 ACPHR, Mauritanian Water Code)
- ▶ Right to Food / Water Security for Women (Art. 15 Protocol to the ACPHR on the Rights of Women in Africa)
- ▶ Right to Health (Art. 12 ICESCR, Art. 14 ACPHR, Art. 14 Protocol to the ACPHR on the Rights of Women in Africa)
- ▶ Right to Food (Art. 11 (1) ICESCR)
- ▶ Right to Adequate Housing (Art. 11 ICESCR Art. 14 ACPHR, Art. 14 Protocol to the ACPHR on the Rights of Women in Africa)
- ▶ Right to Remedy (Art. Art. 2 (3) ICCPR; Art. 25 Protocol to the ACPHR on the Rights of Women in Africa)
- ▶ Right to a Clean Environment (Art. 24 ACPHR)

See BGR/MPFPR Baseline Study, p. 54 et seq

4.2.5 Labour / Workers Rights

4.2.5.1 Occupational Health & Safety

Detrimental **working conditions** and occupational health and safety issues today constitute an acute problem connected to artisanal and illegal mining (see below 5.3.4) but also remain an issue at industrial sector mines, although less severe and the subject

⁵⁶ Interviews conducted between 4-17 September 2017 and reports published via www.cridem.org.

⁵⁷ See BGR/MPFPR Baseline Study, p. 57.

of significant ongoing management focus in most cases. Challenges, however, can arise at mining projects in countries with poor legislative or administrative frameworks to implement and monitor compliance with respective standards, or where operational management is not performing well.

In Mauritania there is little indication of poor working conditions in the industrial sector. Sufficient information is available to verify that international standards of occupational health and safety are being applied at the gold and copper operations at Akjoujt and the Tasiast mine. Less information is available about the iron ore mine at Zouérat but working conditions are reportedly compliant with international standards.⁵⁸ Personal protective equipment is provided and used. Furthermore, there is an increasing competition for skilled workers to be observed in the Mauritanian mining sector due to the newly established mining projects.⁵⁹ This potentially creates an incentive to maintain good working conditions and wages at all industrial mining projects.

Little to no information or data exists on working conditions in the **gypsum, quartz** and particularly **salt mining** operations. Given the fact that these operations are much smaller and run by small to medium-sized national companies, it is unlikely that the same high standards of occupational health and safety are applied as in large-scale projects at Guelb Moghrein, Tasiast or Zouérat. Potential hazards particularly comprise health threats from dust inhalation.

Occupational health is a cause for concern, with numerous cases of miners from the iron ore mines of Zouérat suffering from lung cancer, desert lung, sil-

icosis and eye diseases are being reported.⁶⁰ However, this creates two risks and should therefore be addressed by the Mauritanian government: Once a link between mining operations and these diseases is established, affected workers could claim damages; furthermore, general acceptance and support among workers and the larger population for mining projects could decline. Further strikes and protests could negatively affect productivity.

Particular attention should be dedicated in the future to occupational health risks in the context of the **Uranium** deposits in the Tiris Zemmer region, which are currently being developed by Australian companies Aura and Forte Energy (see above 4.1.5.2). Here, compliance with international standards of occupational health and broad safety information and trainings for workers is of particular importance due to the additional threats from low-level radiation in Uranium mining.⁶¹

4.2.5.2 Labour Unions / Freedom of Association

Freedom of association and to form unions is officially guaranteed in Mauritania. There are currently 21 Unions⁶² such as the Free Confederation of Mauritanian Workers (CLTM), the General Confederation of Mauritanian Workers (CGTM) and the Union of Mauritanian Workers (UTM). However, it is to be noted that these Unions only represent employees in the industrial sector, which constitutes only about one fourth of the entire mining workforce in Mauritania.

Massive infringements of union rights, or cases in which persons were put into jail due to their union activities in relation to the mining sector have not been found. The freedom to assembly (Art. 10) and to strike (Art. 14) are expressly guaranteed by the Mau-

⁵⁸ It is recognised that as a result of financing of a US \$175 million loan in 2009 by a syndicate of well-known banks (African Development Bank, BNP-PARIBAS, Société Générale, BHF-Bank) that this came with conditions to increase and diversify its social programs for the benefit of 4,000 families and several local communities (transport, water and electricity supply, health care, schools etc.) and strengthen SNIM's environmental management capabilities, see <https://www.afdb.org/en/news-and-events/signing-of-the-loan-agreement-with-the-societe-nationale-industrielle-et-miniere-snim-5457/>.

⁵⁹ Interviews conducted during 4-17 September 2017.

⁶⁰ Interviews conducted between 4-17 September 2017.

⁶¹ See on the challenges of Uranium mining and the improved working conditions at Rio Tinto's Rössing Uranium Mine in Namibia, see B. Kohrs / P. Kafuka, "Study on low -level radiation of Rio Tinto's Rössing Uranium mine workers, EJOLT & Earthlife Namibia, 2014 Report.

⁶² See "10th-14th Periodic Reports of the Islamic Republic of Mauritania on the Implementation of the Provisions of the African Charter on Human and Peoples' Rights", July 2016, p. 39 et seq.

ritanian constitution, however, the right to strike is considerably restricted particularly through excessive prerequisites for considering a strike legal,⁶³ infringements in the determination of minimum services in case of strike⁶⁴ and excessive sanctions in cases of legitimate strikes.⁶⁵ Such sanctions in cases of legitimate strikes often seem to take the form of withholding of wages and benefits.⁶⁶ In the mining sector, particularly during a major 2015 strike at the Zouerate iron ore mines,⁶⁷ there have been several cases of workers representatives being suspended.⁶⁸ Furthermore, the Mauritanian government deployed the armed forces to end the strike, after it continued among parts of the workforce after an overall agreement had been reached.

However, it seems that despite these problems the major strikes at Zouérat led to a broad negotiation process in which workers were able to express their demands. As the reasons to this strike were particularly connected to demands for pay raises and bonuses, low world market prices for iron ore could continue to reduce the mine's revenues and lead to further conflict over pay.

Another source of dissatisfaction for SNIM workers seems to be the higher wages paid at Guelb Moghrein and Tasiast, and the number of non-Mauritanian mine workers being employed there. Mining operations at Tasiast were suspended in June 2016 for nearly two months due to the Mauritanian Ministry of Labour's decision to prohibit certain expatriate employees from working at the site due to allegations of invalid work permits. Following discussions with the Government of Mauritania a mutually acceptable "Mauritanisation" plan to increase the number of local workers, who have the necessary skills and experience to work at Tasiast, was agreed which complies with new requirements under Mauritanian law. As of 2016, 89% of the workforce at Tasiast were Mauritanian nationals. A new employee collective agreement was signed in October 2016. Kinross and the Government maintain regular meetings to review progress on the "Mauritanisation" plan.

Overall, the freedom of mine workers to strike can be regarded as a positive indicator. This could be connected to an increased demand for Mauritanian mine workers. A better self-organisation and association among mine workers will very likely lead to a more regular voicing of inadequacies, particularly connected to working conditions. An increased number of strikes and protests increases the risk for negative effects as described in this subsection.

4.2.5.3 Subcontract and Temporary Workers

Subcontract and temporary mine workers are reportedly still in a difficult position in the Mauritanian industrial mining sector. Many of these workers have apparently been employed by informal staffing agencies that, in some cases, did not provide employment contracts. The government reportedly undertook some efforts to regulate the staffing industry, which has rapidly evolved in response to increasing demand for mine workers. While today subcontract and temporary workers must operate on a contractual basis, they still are in a disadvantaged position relative to permanent workers. This is mainly due to the fact that subcontractors and temporary workers only form a minority part of the workforce (an estimated 30% at the iron ore mines of Zouérat). However, certain government actions have slightly improved

⁶³ For Mauritania, excessive procedural requirements and cooling-off periods before a strike prolonging the period between a bargaining impasse and a strike to up to 120 days are being criticised, see E. Xhafa, "The Right to Strike Struck Down? An Analysis of Recent Trends", Friedrich-Ebert-Stiftung, Study (Oct. 2016), 8.

⁶⁴ For Mauritania, the unilateral definition of minimum services and particularly the legislative framework is being criticised since it leaves the determination of minimum services to a degree up to the government, see E. Xhafa, "The Right to Strike Struck Down? An Analysis of Recent Trends", Friedrich-Ebert-Stiftung, Study (Oct. 2016), 12.

⁶⁵ Ibid., 14.

⁶⁶ Ibid.

⁶⁷ In 2015 SNIM's workers staged a strike over working conditions and pay based on the implementation of a memorandum of understanding to increase wages and productivity bonuses signed on 03 May 2014, last October. A deal was signed to allow the strikers, estimated at several thousand, to receive immediately two months of salary and another month of salary ten days after the resumption of work. The agreement was obtained through the facilitation of the mayor of the city of Zouerate, considered to have a close relation of President Mohamed Ould Abdel Aziz. See <http://www.panapress.com/Fin-ce-vendredi-de-greve-a-la-SNiM-de-Mauritanie---13-630430903-18-lang4-index.html>.

⁶⁸ The management of the mining company reportedly agreed to reverse the dismissal of penalties that struck 400 employees and union representatives during this long strike, see <http://www.panapress.com/Fin-ce-vendredi-de-greve-a-la-SNiM-de-Mauritanie---13-630430903-18-lang4-index.html>.

their situation. A contractual basis for subcontract and temporary workers is now a legal requirement. Furthermore, the specific situation of contract workers was included in the overall demands made during the strikes at SNIM in 2016. However, given the weak position and the often very limited educational background of subcontract and temporary workers there remains an increased risk of exploitation of this group (see reference case 6, Add. 1).

- ▶ Right to Just and Favorable Conditions of Work – Safe and healthy Working Conditions, (Art. 7 (b) ICESCR)
- ▶ Right to Just and Favorable Conditions of Work – Just and Fair Payment (Art. 7 (a) ICESCR)
- ▶ Right to Work (Art. 6 (1) ICESCR, Art. 15 ACPHR)
- ▶ Economic and Social Welfare Rights of Women (Art. 13 Protocol to the ACPHR on the Rights of Women in Africa)
- ▶ Freedom of Association (Art. 10 MC; 22 ICCPR, Art. 10 ACPHR)
- ▶ Freedom of Association/to form Unions (Art. 10 MC; Art. 8 ICESCR)
- ▶ Right to Strike (Art. 14 MC)
- ▶ Right to Health (Art. 12 ICESCR, Art. 14 ACPHR)
- ▶ ILO Conventions No. 97 (Freedom of Association), 98 (Right to Organise and Collective Bargaining), 100 (Equal Remuneration), 111 (Discrimination), 138 (Minimum Age)
- ▶ Labour Code

4.2.6 Closure (Environmental & Social Impact)

The Mauritanian Government requires mining companies to provide a financial guarantee that will cover the costs to rehabilitate and close mining operations (reclamation bond), and to produce a reclamation and closure plan (RCP) as part of the mine's environmental impact assessment (EIA). Both Kinross and FQM have carried out studies and made financial provision.

The human rights risks associated with the “active” closure and reclamation phase of operations are similar to those encountered during the operating phase, given that the mine will continue to employ workers and impact the local community, although at a lower level of activity.

The biggest risk is that closure plans are not properly designed and implemented, especially where rehabilitation activity is scheduled to take place over an extended period.

It should be borne in mind that FQM's Guelb Moghrein mine is now scheduled to close in 2023, which will leave the town of Akjoujt without its current main source of employment and income. FQM is putting in place measure to ensure that vital services to the town, such as water supply, are sustainable post-closure. Insufficient information is currently available to allow the authors of the present study to assess whether plans to mitigate the social and economic impact on the town are sufficient. This is a risk which requires further assessment and monitoring.

4.2.7 Corruption

The mining sector has a unique combination of characteristics, which make it especially susceptible to corruption.⁶⁹ Capital intensive licensing, construction and operation, pressure from investors, a high level of regulation and intense competition over the few economic mineral deposits are only a few to name.⁷⁰ At the same time, it is widely recognised that corruption inhibits the full enjoyment of human rights,⁷¹ and can also directly translate into human

⁶⁹ See M. Sepulveda, 'Corruption and Human Rights: Making the Connection', International Council on Human Rights Policy, Report 2009, 61, which assesses the extractives sector as a 'high risk' area, particularly prone to corruption. See further on the particular vulnerability to corruption of junior companies during the exploration phase M. Dougherty, 'By the gun or by the bribe: Firm size, environmental governance and corruption among mining companies in Guatemala', Anti Corruption Resource Center, U4 Issue, September 2015.

⁷⁰ See BGR/MPFPR – Baseline Study, p. 140.

⁷¹ See the statements by the CESCR that “states face serious problems of corruption, which have negative effects on the full exercise of rights covered by the Covenant”, UN Doc. E/C.12/1/ADD.91 of 12 December 2003, para. 12; and by the CRC that it

rights violations.⁷² For the purpose of a legal analysis, “corruption” is best defined as a “list of acts criminalised by law under the heading “Corruption”.”⁷³ This approach was also chosen for the UN Convention against Corruption (UNCAC)⁷⁴, which lists acts to be criminalised (bribery, embezzlement, trading in influence, abuse of functions or position, illicit enrichment) without, however, stipulating that such acts amount to corruption.⁷⁵

Despite efforts to eradicate corruption by the Mauritanian government, which has ratified UNCAC in 2006 and currently implements a national strategy and sectoral plans with this goal,⁷⁶ Mauritania still only ranks 142 out of 176 on the Transparency International Corruption Perception Index of 2016.⁷⁷

In the industrial mining sector, particularly Kinross Gold has to deal with allegations of corruption on the context of its Tasiast project, which is subject to ongoing investigations.⁷⁸ It is of the utmost importance that future mining projects are not affected by corruption given its multiple negative effects on tax revenue, public acceptance and foreign direct investment.

► State’s Duty to Take Maximum Steps to Effectuate Provisions of this Covenant (Art. 2(1) ICE-SCR) in connection to the Right to Housing, Water, Food, Health

See BGR/MPFPR – Baseline Study, p. 145

“remains concerned at the negative impact corruption may have on the allocation of already limited resources to effectively improve the promotion and protection of children’s rights, including their right to education and health” UN Doc. CRC/C/COG/CO/1 of 20 October 2006, para 14. See also the statement by the UN Special Rapporteur on independence of judges and lawyers in UN Doc. E/CN.4/2006/52/Add.4. para. 96 as cited in M. Sepulveda, ‘Corruption and Human Rights: Making the Connection’, International Council on Human Rights Policy, Report 2009, p. 23. See further D. Fuhr, ‘Of Thieves and Repressors: The Interplay between Corruption and Human Rights Violations’, *Elon Law Review*, vol. 5, Issue 2, 2013, pp. 271–300 (272); J. Ngugi, ‘Making the Link between Corruption and Human Rights: Promises and Perils’, *American Society of International Law Proceedings*, vol. 104, 2010, pp. 246–250 (246).

⁷² See on the ongoing scholarly debate, BGR/MPFPR – Baseline Study, p. 143 et seq.

⁷³ M. Sepulveda, ‘Corruption and Human Rights: Making the Connection’, International Council on Human Rights Policy, Report 2009, p. 18.

⁷⁴ See UN Doc. A/RES/58/4 on 31 October 2003, entered into force on 14 December 2005; ratified by Mauritania in 2006.

⁷⁵ See UNCAC, Chapter III. See for further convention adopting this approach M. Sepulveda, ‘Corruption and Human Rights: Making the Connection’, International Council on Human Rights Policy, Report 2009, p. 18.

⁷⁶ See for an updated list including all reservations made “10th–14th Periodic Reports of the Islamic Republic of Mauritania on the Implementation of the Provisions of the African Charter on Human and Peoples’ Rights”, July 2016, p. 12.

⁷⁷ See <https://www.transparency.org/news/feature/corruption-perceptions-index-2016>

⁷⁸ Kinross Golds’ 2015 CSR report (p. 64) states: “In March and December 2014, and July 2015, Kinross received subpoenas from the United States Securities and Exchange Commission seeking information and documents on substantially the same subjects as had previously been raised. In December 2014, Kinross received similar requests for information from the United States Department of Justice. The internal investigation is ongoing, and additional issues or facts could become known as the investigation continues. On December 10, 2015, the Non-Governmental Organisations (NGOs) MiningWatch Canada and the French anti-corruption association Sherpa announced that they had filed a report with the Royal Canadian Mounted Police”; see further <https://miningwatch.ca/news/2015/12/10/ngos-urge-rcmp-investigate-kinross-over-reports-corruption-africa>.



Photos: © Projekt Consult

5. Human Rights Risks in the Artisanal Sector

5.1 Artisanal Mining – Overview

Artisanal and small-scale mining (ASM) is characterised by a lack of capital, mechanisation or technology, relying on manual labour and very basic processing techniques. Artisanal mining is often carried out without a mining licence or permit. In contrast, industrial sector mining is carried out by companies or state-owned enterprises, and is characterised by a technical approach to operations management, significant capital investment in exploration, equipment and infrastructure, and adherence to regulatory oversight.

Artisanal mining for gold has only recently become a significant activity in Mauritania, although traditional gold mining has taken place in the country historically. Most recently, a gold rush started in the Inchi-

ri region in 2016, the activity level increasing rapidly over the last 18 months. Total numbers are currently hard to assess but could involve 10,000 persons or more.

Existing legislation made no provision for ASM, so a ministerial decree was issued in 2016, to allow for the licensing of small scale miners using metal detectors in a specific 1,791 km² zone at Inchiri, adjacent to mining and exploration licenses assigned to Kinross and Algold. In addition there are reports that activity has started in the Tiris Zemmour region in the extreme north of the country⁷⁹ along the Algerian bor-

⁷⁹ <http://afrique.le360.ma/mauritanie/economie/2016/12/16/8314-mauritanie-serie-darrestations-et-pluie-damendes-contre-des-orpailleurs-clandestins-8314>

der and around the border with Mali with a number of illegal prospectors being arrested by authorities.⁸⁰

5.2 Small Scale and Artisanal Mining – Areas / Technical Aspects

In the Mauritanian context, artisanal mining is still at an early stage of development. Little or no mechanised equipment is used, explosives are not used, and significant quantities of gold are still being recovered at surface, using metal detectors to find gold nuggets and very basic processing methods to extract gold from ore. Ore is dug from relatively shallow open pits using hand tools, to depths of around 20 m.

Gold nuggets are then melted using a gas burner before sale. Gold ore is crushed to less than 2 mm particle size, then passed through simple sluice boxes, followed by panning to produce a gravity gold concentrate. This is then treated with mercury to produce a gold amalgam, which is then heated to produce “sponge” gold. This sponge gold is then sold to local dealers.

Mauritania has ratified the Minamata Convention on Mercury which entered into force on 18 May 2017. According to Art. 4 of the convention which applies directly in Mauritania via Art. 80 of its Constitution, the manufacture, import or export of mercury and mercury compounds have to be effectively prevented. The Mauritanian Ministry of Environment and Sustainable Development currently analyses the adequacy of the domestic legal and institutional frameworks in order to identify possible reforms required for the implementation of the Minamata Convention.⁸¹ It is likely that Mercury is brought into the country from Ghana and Burkina Faso via Mali or

Senegal, as this is reportedly the source for artisanal mining in neighbouring Mali.⁸² Besides handheld metal detectors, artisanal miners explore for gold using very basic, visual prospecting methods, that is to say looking for visible gold grains in near-surface sediments or rock. Unlike industrial sector miners they are effectively restricted to mining high grade ore, because their exploration, mining and processing methods are labour-intensive and inefficient, and recovery rates of gold from the ore are very low. Based on the author’s personal experience, artisanal miners tend to target mineralisation which grades at least 15g/t Au, and may recover less than 50% of the contained gold from the ore; in contrast a industrial sector miner may mine ore grading less than 1g/t in very large volumes (millions of tonnes per year), recovering in excess of 90% of the contained gold.

In countries with a longer history of ASM, extraction methods have evolved over time, although are still rudimentary by industrial sector engineering standards. Working practices are likely to be developed that allow mining to continue to greater depths, using fire-setting or explosives to break rock. For ore processing, small-scale mechanical crushers are currently used at Chami, and these could be augmented by commercially manufactured gravity concentration equipment, such as shaker tables or centrifugal concentrators. Given that a significant number of the artisanal miners working in Mauritania are foreigners, mostly from Mali, Senegal and Sudan, it is likely that over time these foreigners will introduce slightly more sophisticated methods to Mauritania.

Since the start of the artisanal gold rush metal detector prices in Nouakchott reportedly increased from \$300 to \$1,400 as of April 2016. In order for artisanal miners to finance their activities, they often participate in group financing with five or six people raising a sum of \$2,000. Some have sold their cars, their homes and even their businesses to achieve this.

⁸⁰ <http://zouerateactu.com/2017/02/04/tiris-zemmour-des-orpailleurs-clandestins-tombent-encore-dans-les-filets-de-larmee-mauritanienne/>

⁸¹ See “Mauritania, with UNITAR’s support, reinforces national capacities to develop the mercury inventory” (23 December 2016), at: <http://mercury.unitar.org/site/news-item/1251>.

⁸² See ‘Child Labour, Mercury, and Artisanal Gold Mining in Mali’, HRW Report (2011), p. 34.

5.3 Human Rights Risks

5.3.1 Conflict between Industrial and Artisanal Gold Mining

The exploitation of non-renewable natural resources, including oil, gas, and minerals, is often a key factor in triggering, escalating, or sustaining violent conflicts around the globe.⁸³ Within the extractive industries, the mining sector is somewhat unique, given the significance of small-scale and artisanal miners.⁸⁴ Unlike oil or gas, for instance, which can only be extracted with large inputs of capital and equipment, many minerals, particularly gold and gemstones can be extracted by artisan miners.⁸⁵ Economic recession or the discovery of new deposits can lead to a rapid increase in ASM activities, most notably in “rush type” scenarios (see reference cases 6-7, Add. 1). At the same time, artisanal mining activities are generally very hard to control and often comes into direct conflict formal mining operations when artisanal miners, often in rush type scenarios, enter the concessions. Violence and even casualties mostly result from overwhelmed or ill-trained private security or police forces answering the influx of artisanal miners with excessive violence (see reference cases 8-11, Add. 1).

In Mauritania there is a high risk for similar scenarios to evolve. There is currently a gold rush going on in the country that could expand considerably, comparable to the situation which arose in Mongolia in 2003 (see reference case 6, Add. 1). Cases of conflict of artisanal miners with police and military forces, often in relation to industrial mining projects are being reported. Particularly the gold projects of Kinross are being affected which led to a major incident in 2016 that led to “a number of injuries and other incidents among these artisanal miners, and extensive environmental impacts in the areas with the most activ-

ity”.⁸⁶ Other sources report casualties in the context of this incident. In October 2016, the Government of Mauritania mandated that all artisanal miners demobilise from the area, “which occurred peacefully”.⁸⁷ However, since then artisanal miners are reported to have accessed the concessions clandestinely, usually at night. Apart from conflict with security forces, this work is also very dangerous. Kinross’ Emergency Response Teams have been deployed on several occasions to provide support as requested by local authorities.⁸⁸ Algold is reported to monitor the movement of artisanal miners by using drones after a similar incident occurred on their concessions.⁸⁹ Further independent sources regularly report similar cases, including casualties, too, thereby corroborating these indications of a high human rights risk area.

Casualties among artisanal miners and conflict with police and military forces are also reported from Zouerat and the northern border to Algeria.⁹⁰

Other factors that contribute to this risk potential are very limited capacities in the Mauritanian security forces, general police forces and the mine police, which only fulfils administrative functions in the implementation of the mining code,⁹¹ to deal with this phenomenon. Reports about overwhelmed police forces are published.⁹² Similarly low capacities ex-

⁸³ See A. Grzybowski, ‘Extractive Industries and Conflict’, Guide and Toolkit, UN Interagency Framework Team for Preventive Action, 2012, 6.

⁸⁴ See A. Rosenfeld-Sweeting / A. Clarke, ‘Lightening the Lode: A Guide to Responsible Large-Scale Mining’, Conservation International, (2000), p. 54.

⁸⁵ Ibid.

⁸⁶ 2016 Kinross CSR: http://s2.q4cdn.com/496390694/files/doc_downloads/corp-responsibility/2016/Kinross-2016-Corporate-Responsibility-Supplement.pdf

⁸⁷ Ibid.

⁸⁸ Ibid.

⁸⁹ Interviews conducted between 5-15 September 2017.

⁹⁰ See “Mauritanie: un mort dans une corse poursuite entre militaires et orpailleurs”, Saharamedias.net, (11 December 2016), at <https://kassataya.com/2016/12/11/mauritanie-un-mort-dans-une-corse-poursuite-entre-militaires-et-orpailleurs>; See “Zouerate | la fièvre de l’or fait de nouvelles victimes : deux orpailleurs trouvent la mort dans un accident de voiture”, (1 January 2017), at http://www.boolumbal.org/Zouerate--la-fievre-de-l-or-fait-de-nouvelles-victimes-deux-orpailleurs-trouvent-la-mort-dans-un-accident-de-voiture_a17142.html.

⁹¹ See mandate and functions in Decret No. 2000 - 139 of 21 November 2000 (see at: <http://extwprlegs1.fao.org/docs/pdf/mau69359.pdf>), which is based on the Mining Code, Loi N° 99-013 of 23 June 1999 (see at: <http://extwprlegs1.fao.org/docs/pdf/mau61971.pdf>).

⁹² See, e.g., “Prospection aurifère : accrochage entre orpailleurs et gendarmes”, (4 Mai 2016), at <http://fr.saharamedias.net/Prospection-aurifere-accrochage-entre-orpailleurs-et-gendarmes>.

ist at the local administrative level with local mayors already complaining about lack of information and participation in the implementation of mining projects in their areas.

- ▶ Right to Life (Art. 6 ICCPR; Art. 4 ACPHR; Art. 4 Protocol to the ACPHR on the Rights of Women in Africa)
- ▶ Right to Security of the Person (Art. 9 (1) ICCPR; Art. 4 Protocol to the ACPHR on the Rights of Women in Africa)
- ▶ Freedom from Torture and Cruel, Inhuman or Degrading Treatment (Art. 13 MC; Art. 1 (1), 2 (1) CAT)
- ▶ Fair Trial Rights (Art. 13 (2), (3) MC; Art. 14 IC-CPR; Criminal Code; Criminal Procedure Code)

See BGR/MPFPR – Baseline Study, p. 130 et seq.

5.3.2 Settlement Growth Adjacent to Mining Area

As described above, as a side effect of mining activities, settlements, villages or towns close to the mining operations grow rapidly, due to the influx of mine workers. This is a particular problem connected to artisanal mining where unplanned and uncontrolled settlement growth is often connected to rush type scenarios. The risk of negative environmental and social impact in this context is often much higher with artisanal mining settlements, since influx of artisanal miners is very hard to control (see reference case 6, Add. 1).

In Mauritania, a high risk exists for similar developments at Chami, which seems to rapidly expand in an unplanned way.⁹³ While environmental impacts like the depletion of water resource is not yet reported, it seems very likely that negative social impact will occur. While there are no disaggregated data available, it seems likely that the poorest parts of society will migrate towards these settlements looking for simple

[a6797.html](#).

⁹³ Interviews conducted during 4-17 September 2017.

work. If this is not closely monitored and regulated, particularly women and children will be exposed to exploitation.

- ▶ Freedom from Forced and Compulsory Labour (Art. 8 ICCPR)
- ▶ Right to Work (Art. 6 (1) ICESCR, Art. 15 ACPHR)
- ▶ Economic and Social Welfare Rights of Women (Art. 13 Protocol to the ACPHR on the Rights of Women in Africa)
- ▶ Right to Health (Art. 12 ICESCR, Art. 14 ACPHR)
- ▶ Health and Reproductive Rights of Women (Art. 14 Protocol to the ACPHR on the Rights of Women in Africa)
- ▶ Freedom from Economic Exploitation of Children (Art. 32 CRC)
- ▶ Protection of Children (Art. 10 (3), 12 CRC)
- ▶ Right to Education (Art. 13, 28 CRC)

See BGR/MPFPR – Baseline Study, p. 109-112, 139-140

5.3.3 Environmental Impact

While large scale mining projects have a massive environmental impact, “environmental costs” of artisanal mining activities are in general higher than those of other types of mining.⁹⁴ This means that artisanal mining is significantly more environmentally damaging per unit of output than medium, large, and modern mining operations.⁹⁵ Additionally, many mine sites are in remote regions and areas, which are difficult to access. Thus, controlling and monitoring of artisanal mining activities is very difficult⁹⁶ and environmental regulations are hard to enforce.

In Mauritania, the currently most important human rights risks connected to the environmental impact of artisanal mining arise from the extensive use of

⁹⁴ See T. Hentschel / F. Hruschka / M. Priester, ‘Global Report on Artisanal & Small-Scale Mining’, MMSD/IIED, Working Paper No. 70, 2002, pp. 36 et seq.

⁹⁵ Ibid.

⁹⁶ Ibid.

mercury described above. Freely disposed into the open environment it can lead to an environmental contamination that can affect the water and food resources as well as the health of large parts of the population (see reference cases 12-14, Add. 1).⁹⁷ However, in comparison to places with higher precipitation and more surface waters the risk of negative human rights effects from the environmental impact of the mercury use is somewhat lower. This, however, might change as artisanal mining activities spread to more populated areas, or places where water resources can be contaminated with unregulated sewage from mining camps, rubbish disposal and mercury emissions.

There is a high risk of negative environmental effects in the artisanal mining area around Chami. It is located close to the **National Park (Parc National du Banc d'Arguin)**, which is a UNESCO world heritage site inhabited by the Imraguen cultural minority group practicing traditional sea fishing techniques. Should artisanal mining activities spread to the national park area the related environmental destruction and contamination would not only severely threaten the heritage site, but also the culture of the Imraguen. Environmental contamination from mercury could reach the rich fisheries off the Mauritanian coast, entering the food chain through bioaccumulation in fish.⁹⁸ Similar concerns in connection to mercury contamination from artisanal gold mining exist in Ghana, where the river Pra transports contamination into the Gulf of Guinea.⁹⁹

Additionally, **dust** generation mainly from dry crushing of ore constitutes another environmental risk of artisanal mining with the same implications as described in the industrial sector.

Lastly, haphazard, unregulated artisanal mining activities leave dangerous **open excavations** and a risk of **subsidence**. So far this negative effect does not af-

fect too many people due to the sparse population. However, reports about loss of livestock due to animals falling into holes from artisanal mining are being increasingly published. If this problem is neglected for a long time it can lead to severe legacy issues (see ref. case 15, Add. 1).

- ▶ Right to Water (Art. 11 (1) ICESCR, Art. 24 ACPHR, Mauritanian Water Code)
- ▶ Right to Food / Water Security for Women (Art. 15 Protocol to the ACPHR on the Rights of Women in Africa)
- ▶ Right to Health (Art. 12 ICESCR, Art. 14 ACPHR, Art. 14 Protocol to the ACPHR on the Rights of Women in Africa)
- ▶ Right to Food (Art. 11 (1) ICESCR)
- ▶ Right to Adequate Housing (Art. 11 ICESCR Art. 14 ACPHR, Art. 14 Protocol to the ACPHR on the Rights of Women in Africa)
- ▶ Right to Remedy (Art. 2 (3) ICCPR; Art. 25 Protocol to the ACPHR on the Rights of Women in Africa)
- ▶ Right to a Clean Environment (Art. 24 ACPHR)
- ▶ Minamata Convention on Mercury¹⁰⁰
- ▶ Environmental Code, Water Code

See BGR/MPFPR – Baseline Study, p. 95 et seq.

5.3.4 Occupational Health & Safety

The currently applied artisanal mining techniques described above create two main human rights risks, namely uncontrolled use of mercury and accidents due to the lack of expertise, protection gear and the archaic techniques applied. Here, comparisons can be drawn from neighbouring Mali and other countries (see ref. cases 15-16).

⁹⁷ See further BGR/MPFPR – Baseline Study, p. 89 et seq.

⁹⁸ See on this S. Diringer (et al.), 'River transport of mercury from artisanal and small-scale gold mining and risks for dietary mercury exposure in Madre de Dios, Peru', *Environmental Science: Processes & Impacts*, vol. 2, 2015, p. 479.

⁹⁹ See A. Donkor (et al.), 'Artisanal Mining of Gold with Mercury in Ghana', *West Africa Journal of Applied Ecology* (2006), p. 4.

¹⁰⁰ The Minamata Convention was drafted by the UN Environmental Program and signed on 10 October 2013. Upon ratification of the 50th state party it entered into force on 18 May 2017, see <http://www.mercuryconvention.org/Convention/tabid/3426/language/en-US/Default.aspx>. Mauritania has ratified the convention on 18 August 2015. Its provisions therefore apply directly in Mauritania via Art. 80 of the Mauritanian Constitution.

Mercury is today used by an estimated 13 to 15 million artisanal miners in at least 70 countries around the world.¹⁰¹ Worldwide, an estimated 1,000 tons of mercury are released from artisanal miners each year – around 400 tonnes go into the atmosphere, and around 600 tonnes are discharged into rivers, lakes and soil.¹⁰² The metal can cause severe damage to human health, causing colic, vomiting and gastroenteritis; complaints of the kidneys and urinary tract; acute enteritis; and ulceration of the gums combined with extreme sensitivity to light.¹⁰³ If mercury vapour is inhaled over a long period, chronic mercury poisoning occurs, affecting the brain, causing tremors, speech disturbances, lack of concentration, and mood swings.¹⁰⁴ Mercury is easily absorbed through the skin, respiratory, and gastrointestinal tissues¹⁰⁵ by miners. Mercury vapour, which is released when mercury-gold amalgam is heated in an open cycle, is further ingested through the lungs.¹⁰⁶ This potentially affects everybody near and thereby also persons not directly involved in the artisanal mining.¹⁰⁷ In Mauritania these health threats from mercury are still mostly unknown among artisanal miners whose knowledge artisanal mining is generally very low.

Another risk which is connected to the still very limited expertise on artisanal mining in Mauritania are **accidents**. Many cases of for example hand injuries are being reported. Collapsing trenches and pits can result in major injuries. Eye injuries are also common

from quartz chips while hammering rock due the lack of eye protection.

Furthermore, **dust** inhalation, physical exhaustion and dehydration are only some of the detrimental effects artisanal mining in the desert areas around Chami can have on artisanal miners.

A particularly complex risk appears to be evolving in connection to larger numbers of **migrants** working in the artisanal sector in Mauritania. These artisanal miners, who mainly come from Sudan, Niger and Mali, seem to be currently accepted in Mauritania due to the know-how and expertise in artisanal mining, which is new to Mauritania.¹⁰⁸ However, migrant workers seem to be in a particularly vulnerable position in the country, where they often lack any legal basis for residency and work. While according to Decree No. 2012-031 (2012) a procedure for regularising the status of foreign nationals is in place, the costs of the procedure (30,000 Ouguiyas or US\$ 93), which corresponds to one month's salary at the minimum wage level in Mauritania, is too high for many migrant workers.¹⁰⁹ Furthermore, the Labour Code is applicable to all migrant workers and the conditions for employment of foreign workers (art. 388) include an obligation to grant a work permit in accordance with the requirements set out in Decree No. 2009-224. However, the requirements for obtaining a work permit are so strict that migrant workers find themselves obliged to work without a contract or to agree to work without a permit, which makes them more vulnerable and puts them at risk of exploitation and human trafficking.¹¹⁰ In line with these challenges, reports indicate that migrant workers often fall victim to corruption.¹¹¹

While these challenges to migrant workers are currently still rather reported pertaining to other sectors than mining, such as the domestic sector, the increasing number of migrant workers in artisanal mining

¹⁰¹ See 'Child Labour, Mercury, and Artisanal Gold Mining in Mali', HRW Report (2011), 38.

¹⁰² See 'Child Labour, Mercury, and Artisanal Gold Mining in Mali', HRW Report (2011), p. 38.

¹⁰³ N. Jennings, 'Social and labour issues in small-scale mines', Report for discussion at the Tripartite Meeting on Social and Labour Issues in Small-scale Mines, Geneva, 17-21 May 1999, 24.

¹⁰⁴ Ibid.

¹⁰⁵ M. Hansson, 'Ending child labour in mining - Field experience and analysis of interventions from Mongolia', IPEC, International Labour Office, Geneva, June 2006, p. 9.

¹⁰⁶ The vapor, which is ingested through the lungs (up to 80 per cent of what is inhaled remains) becomes a soluble as methyl mercury and is absorbed into the bloodstream, see N. Jennings, 'Social and labour issues in small-scale mines', Report for discussion at the Tripartite Meeting on Social and Labour Issues in Small-scale Mines, Geneva, 17-21 May 1999, p. 24.

¹⁰⁷ See E. Yard (et al.), 'Mercury Exposure Among Artisanal Gold Miners in Madre de Dios, Peru: A Cross-sectional Study', *Journal of Medical Toxicology*, Vol. 8, 2012, pp. 441-448 (445).

¹⁰⁸ Interviews conducted during 4-17 September 2017.

¹⁰⁹ See the UN Committee on the Rights of Migrant workers "Concluding observations on the initial report of Mauritania", UN Doc. CMW/C/MRT/CO/1 of 31 May 2016, para. 36.

¹¹⁰ Ibid., para. 26.

¹¹¹ Ibid., para. 24.

in Mauritania could be similarly affected. According to current observations, the physically demanding labour in the Mauritanian artisanal sector is mainly performed by either Mauritians or migrant workers from Sudan, Niger and Mali. Given the difficulties to obtain legal status and work permits, it is very likely that these groups are being exploited.

- ▶ Right to Just and Favorable Conditions of Work – Safe and healthy Working Conditions, (Art. 7 (b) ICESCR)
- ▶ Right to Just and Favorable Conditions of Work – Just and Fair Payment (Art. 7 (a) ICESCR)
- ▶ Right to Work (Art. 6 (1) ICESCR, Art. 15 ACPHR)
- ▶ Economic and Social Welfare Rights of Women (Art. 13 Protocol to the ACPHR on the Rights of Women in Africa)
- ▶ Freedom of Association (Art. 10 MC; 22 ICCPR, Art. 10 ACPHR)
- ▶ Freedom of Association / to form Unions (Art. 10 MC; Art. 8 ICESCR)
- ▶ Right to Strike (Art. 14 MC)
- ▶ Right to Health (Art. 12 ICESCR, Art. 14 ACPHR)
- ▶ Non-discrimination and Rights of Migrant workers (Art. 7, 8 Convention on the Rights of Migrant Workers)
- ▶ ILO Conventions No. 97 (Freedom of Association), 98 (Right to Organise and Collective Bargaining), 100 (Equal Remuneration), 138 (Minimum Age)
- ▶ Labour Code

See BGR / MPFPR – Baseline Study, p. 102 et seq.

5.3.5 Child Labour

Child labour in the mining sector almost exclusively arises in ASM operations in Africa, Asia, and Latin America, with an estimated one million children working in this field.¹¹² Most cases of child labour occur in unregulated and artisanal settings.¹¹³ The more remote and more artisanal a small-scale mining activity, the more likely children are to be involved.¹¹⁴ Mining activities, such as carrying heavy loads or repetitively working in awkward positions as, for example, during gold panning, can particularly affect children and lead to life-long skeletal and posture damage.¹¹⁵ Furthermore, mining has a negative impact on children's intellectual development¹¹⁶ and education. Similar to other child labourers, child miners have difficulties balancing work and school and often drop out, only to remain permanently on the mine / quarry sites.¹¹⁷

Child labour in artisanal mining particularly occurs in western African countries such as Ghana, Burkina Faso and Niger but also in Mauritania's neighbouring country Mali (see ref. cases 17 – 20, Add. 1). Therefore, the level of child labour in Mauritania's mining sector requires close observation. In carrying out research for the present study few indications of an increase in child labour in Mauritania's mining sector

¹¹² Ibid. See also M. Priester, 'Action against Child Labour in Small-Scale Mining & Quarrying – A Thematic Evaluation', Joint Thematic evaluation by an independent Evaluator, ILO / IPEC and ILO / SECTOR, Geneva, May 2004.

¹¹³ See, e.g., 'Girls in mining: Research findings from Ghana, Niger, Peru and the United Republic of Tanzania', Working paper, Bureau for Gender Equality, IPEC, ILO 2007, p. 10.

¹¹⁴ N. Jennings, 'Child labour in small-scale mining: Examples from Niger, Peru & Philippines', preliminary working paper for the tripartite meeting on Social and labour issues in small-scale mines, Geneva 17-21 May 1999, International Labour Office, Geneva 1999, p. 2

¹¹⁵ See 'Precious Metal, Cheap Labour – Child Labour and Corporate Responsibility in Ghana's Artisanal Gold Mines', HRW report, 2015, p. 7.

¹¹⁶ This has been observed, e.g., in Mollehuaca, Peru, see N. Jennings, 'Child labour in small-scale mining: Examples from Niger, Peru & Philippines', preliminary working paper for the tripartite meeting on Social and labour issues in small-scale mines, Geneva 17-21 May 1999, International Labour Office, Geneva 1999, p. 55.

¹¹⁷ This can be observed, e.g., in Ghana, see Government of Ghana and ILO, 'Analytical Studies on Child Labour in Mining and Quarrying in Ghana', August 2013, p. 30.

were found. This, however, could also be connected to the fact that artisanal mining in Mauritania, unlike other countries in the region, is still a very recent development. Given that child labour in mining is closely connected to extreme poverty, there seems to be a significant risk that children could increasingly become part of the production of artisanal gold in Mauritania. Children are seemingly being increasingly sent to work in the service sector in mining settlements, so it could be only a matter of time until they are directly recruited into mining activities.

Another risk that should not be neglected is that young people from poorer parts of society could be drawn away from completing their education to work in the artisanal sector. Artisanal miners working for well-off persons who invest in this activity can reportedly earn up to 20.000-25.000 Ouguiya per day (50-60 EUR).¹¹⁸ However, such forms of employment are not very likely to be sustainable. This could exacerbate the problem of low educational attainment in these segments of society, negatively affecting their related rights.

- ▶ Freedom from Economic Exploitation of Children (Art. 32 CRC)
- ▶ Protection of Children (Art. 10 (3), 12 CRC)
- ▶ Right to Education (Art. 13, 28 CRC)
- ▶ State's Duty to Protect Children from Economic Exploitation, Hazardous and Harmful Work (Art. 10 (3) ICESCR)
- ▶ Right to Health (Art. 12 ICESCR)
- ▶ State's Duty to Provide for Effectuating Right to Work (Art. 6(2) ICESCR)

See BGR / MPFPR – Baseline Study, p. 130 et seq.

5.3.6 Corruption / Organised Crime

Almost no data and reports are available as to how far the artisanal mining sector in Mauritania is affected by corruption. The risks from corruption are increased by the overall challenges in the access to justice mentioned above (see 3.2) and the fact that there are no tailored complaint or grievance mechanisms in place that could serve as an early warning system or remedy. Furthermore, migrant workers are particularly vulnerable to corruption in the artisanal mining sector.¹¹⁹ Considering the many ways in which the artisanal mining sector could develop links to corruption and organised crime, this needs to be closely monitored and regulated by the government in the coming years.¹²⁰

¹¹⁸ Interviews conducted between 4-17 September 2017.

¹¹⁹ See the general concern of the UN Committee in Migrant Workers in "Concluding observations on the initial report of Mauritania", UN Doc. CMW/C/MRT/CO/1 of 31 May 2016, para. 24.

¹²⁰ See the related recommendation by the UN Committee on Economic, Social and Cultural Rights of 2012 in "Concluding observations on the initial report of Mauritania", UN Doc. E/C.12/MRT/CO/1 of 10 December 2012, para. 9.



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6. Conclusions

Although Mauritania's economic growth slowed down towards the peak of the commodity super cycle in 2012, commodity prices are now recovering. The country remains highly prospective for large-scale deposits of a wide range of minerals, but especially gold and copper. It is therefore quite possible that a mining boom will occur in the medium to long term. Apart from the industrial mining sector, artisanal mining activity could expand rapidly at the same time.

In contrast, government, public, and particularly local administration seems ill-prepared to deal with the concomitant challenges. The most important risks, in this context and as identified in the present report are: controlling the artisanal sector and its environmental and social impact if, as seems likely, it continues to grow rapidly; fighting corruption (both in industrial and artisanal mining); mitigating environmental impact (dust, water); avoiding conflict with local communities over land-use/ownership especially in connection with the potential development of phosphate deposits along the Senegal Riv-

er; mitigating adverse effects of the closing of mining projects – particularly the Guelb Moghreïn mine at Akjoujt. These risks are thereby largely related to poor governance capacities, while particularly international mining companies seem to generally comply with international environmental and social standards. However, the high susceptibility to corruption of Mauritania's mining sector (industrial and artisanal) and ongoing investigations against industrial sector companies indicate a certain risk for corporate complicity in potential human rights violations in the future.

Human Rights legislation has been widely integrated into the Mauritanian system but often lacks implementation. International human rights standards are rarely invoked before Mauritanian courts despite their direct applicability (Article 80 Mauritanian Constitution). This could be related to a lack of knowledge but also an overall lack of access to justice with the law on legal assistance (which awards free legal assistance to poor litigants) only being slowly implemented. Furthermore, while most of the inter-



national human rights conventions were ratified by Mauritania, this is not the case with a view to the Optional Protocols that allow for individual complaints. Due to this lack of legal remedies and an the overall lack in objective civil society organisations in Mauritania, little structures are in place to function as an early warning system for negative effects of mining activities.

However, if these shortcomings are addressed now, before growth of the sector accelerates, there is a positive outlook for Mauritania's mining sector. Due to the country's low population density (3.9 inhabitants per square kilometre: the fourth-lowest in Africa), particularly in desert areas, the impact on human rights of mining activities is intrinsically reduced to a larger degree. When well-managed, Mauritania's mining sector can tap its full potential of reducing poverty through providing employment, tax revenues, infrastructure, health care and education. While mining is already a major contributor to the country's economy this has to go hand in hand with a greater diversification of the country's economy.

Annex

Add. 1 Reference Cases

Case 1 Mongolia

Regarding the Oyu Tolgoi copper/silver/gold mine project in the Omnogovi Aimag (province) in the Southern Gobi Desert region, it is controversially discussed whether the affected semi-nomadic herders, which had to be resettled (see above...), are to be defined as indigenous people.¹²¹ The Mongolian herders are pastoralists as a consequence of the environment they have lived in for centuries and are tied to their winter campsites and water sources. The license area of the Oyu Tolgoi mining project is 10 km x 10 km, which overlays traditional pasture and water sources of a group of 11 herder families who were involuntarily resettled in 2004.¹²² These resettlements have not been fully successful. According to a fact-finding mission conducted in 2011, only 4-5 of the resettled families still continue their tradition of semi-nomadic pastoralism.¹²³

Furthermore, other mining projects, notably the Tavan Tolgoi coal mine, have reportedly already led to shallow, manual wells used by the traditional herders, drying up.¹²⁴

The growing mining sector increases the population in the region, with local soum centres doubling and

tripling their population in the last couple of years.¹²⁵ This further increases the conflict over the scarce water resources.¹²⁶ Water depletion has also occurred in the Gobi Altai aimag due to iron ore mining. In Tseel soum, the static water level of the community wells has reportedly been reduced by three to four meters depth since the commencement of mining activities.¹²⁷

Case 2 Ghana

Mining activity at the Tarkwa open pit gold mine in southwest Ghana has reportedly led to the forceful displacement of 20,000-30,000 people since mining activities were commissioned in 1997.¹²⁸ As a result, problems regarding inadequate housing, youth unemployment, family disorganisation, school dropout rates, prostitution and drug abuse have risen to such a level that a serious adverse impact on the social organisation and cultural values of the people have become obvious.¹²⁹ New housing arrangements for resettled communities have disrupted long-established family networks and the houses provided by the mining company were reportedly in many instances not large enough.¹³⁰

¹²¹ Investors and Owners do not consider the herders as an 'indigenous people', which is disputed by civil-society organisations, as demonstrated by a related complaint procedure with the European Bank for Reconstruction and Development (EBRD) (see at http://www.ebrd.com/downloads/integrity/OT_addition_to_the_complaint_4.2014.pdf). The discussion revolves around the question, if the herders fall within the definition of 'indigenous people' arising from EBRD Performance Requirements and Guideline No. 7 (see at <http://www.ebrd.com/who-we-are/our-values/environmental-and-social-policy/performance-requirements.html>), which is disputed by EBRD (see the EBRD, Project Complaint Mechanism, Eligibility Report, p. 67, para. 60).

¹²² See L. Johnston, 'Mongolia-Oyu Tolgoi Copper/Gold/Silver Mine Project Trip Report', USAID report, May-June 2011, EGAT/ESP, 16.

¹²³ Ibid., 17.

¹²⁴ See F. McGrath, 'Spirited away – Mongolia's mining boom and the people that development left behind', Fact-Finding Report, CEE Bankwatch Network, December 2011, p. 16.

¹²⁵ See L. Johnston, 'Mongolia – Oyu Tolgoi Copper/Gold/Silver Mine Project Trip Report', USAID report, May-June 2011, EGAT/ESP, p. 9.

¹²⁶ Ibid.

¹²⁷ See S. Dugersuren (et al.), 'When the dust settles – The Tayan Nuur iron ore mine's impacts on nomadic herders', Report of the second fact-finding mission to Tseel soum, Gobi Altai aimag, Mongolia, CEE Bankwatch Network, December 2014, p. 17.

¹²⁸ See a study of the Tarkwa Mining Region (2001) at http://www.saprin.org/ghana/research/gha_mining.pdf, at p. 43.

¹²⁹ Ibid.

¹³⁰ Ibid.

Case 3 Mongolia

Dust produced by, or related to, mining projects constitutes a major environmental concern in Mongolia, particularly in iron ore mining in the Tseel soum in the Gobi Altai aimag (province). Fact-finding missions conducted in 2014 concluded that dust pollution in the region is caused by trucks transporting ore, blasting operations at the mine, and the processing of iron ore using “dry” techniques.¹³¹ Local herders reported that their livestock suffered from diseases and died, due to the dust that polluted their pastures.¹³² Similar concerns were voiced by local herders in the Omnogovi Aimag (province) during assessments of environmental implications of the Tavan Tolgoi coal-mining project.¹³³

Case 4 India

Dust from trucks transporting iron ore in Goa the region was identified as one of the major sources of dust pollution in 2001, resulting in a deterioration of ambient air quality in many villages, as truck routes pass directly through settlements.¹³⁴ Later reports observed negative effects on the crops and health of the local population that are very likely to be connected to the dust produced by the mining projects and their supportive infrastructure.¹³⁵

Case 5 Namibia

In October 2015, workers at the Rössing Uranium mine handed over a petition to the management of the company, alleging unjustified distinctions regarding the employees’ salary. According to the worker’s petition, the salary of one permanent employee is equal to the salary of seven contract workers, even though they do the same work.¹³⁶ The petition was accepted by the mine’s acting managing director.¹³⁷ A reply is still anticipated.

Case 6 Mongolia

Mongolia witnessed a dramatic upsurge in illegal ASM in 2003 that caught the Government, local people, mining industry, media and international donors completely by surprise. Known as the ‘ninjas’, the artisanal gold miners whose livelihoods depend on the illegal mining were estimated to be in excess of 100,000 individuals at the time. Government estimates arrived at less than half of this figure. This ‘gold rush’ was essentially poverty driven, due to urban and rural unemployment, and semi-nomadic herders losing their livestock over repeated natural calamities.¹³⁸

¹³¹ See S. Dugersuren (et al.), ‘When the dust settles – The Tayan Nuur iron ore mine’s impacts on nomadic herders’, Report of the second fact-finding mission to Tseel soum, Gobi Altai aimag, Mongolia, CEE Bankwatch Network, December 2014, p. 7 et seq.

¹³² Ibid.

¹³³ L. Johnston, ‘Mongolia – Oyu Tolgoi Copper / Gold / Silver Mine Project Trip Report’, USAID report, May-June 2011, EGAT/ESP, p. 4.

¹³⁴ L. Noronha, ‘Designing Tools to track health and well-being’, Natural Resources Forum, Vol. 25, Issue 1, February 2001, pp. 53-65 (60).

¹³⁵ See ‘Out of Control - Mining, Regulatory Failure, and Human Rights in India’, HRW report, 2012, p. 23. The report details that the respiratory problems observed by many locals could be related to silica in the iron ore dust.

¹³⁶ See A. Hartman, ‘Rössing contract workers feel exploited and abused’, The Namibian (9 October 2015), see at <http://www.namibian.com.na/index.php?page=archive-read&id=142848>.

¹³⁷ See at http://www.rossing.com/bullet/rossing-media-release-MUN-petition-handover_8Oct2015.pdf.

¹³⁸ See R. Grayson (et al.), ‘The People’s Gold Rush in Mongolia—the Rise of the ‘Ninja’ Phenomenon’, World Placer Journal, vol. 4, 2004, pp. 1-112 (1).

Case 7 Madagascar

Madagascar saw a major upsurge in the number of artisanal gold miners, which grew from approximately 200,000 in 2001 to around 350,000 to 500,000 in 2012.¹³⁹

Case 8 Tanzania

The North Mara Mine, situated in the Mara Region in North West Tanzania has seen significant violence and killings since its commencement in the early 2000s.¹⁴⁰ Between 2009 and 2011, 21 villagers were killed by security personnel of the mine or by police officers.¹⁴¹ On May 16, 2011, 5 villagers were killed and 10 left injured while collecting gold from the waste rock of the North Mara mine site.¹⁴² Traditionally, local communities and tribes had relied on ASM as the basis of livelihood.¹⁴³

Case 9 DRC

Violence against small-scale miners (“creuseurs”), thousands of which illegally entered the mining concession of LSM projects in the diamond fields of Mbuji-Mayi, was reported in the early 2000s.¹⁴⁴ Particularly in 2001 and 2002, several shootings of small-scale miners occurred resulting in death and serious injuries, according to reports from human rights organisations.¹⁴⁵

¹³⁹ R. Cook / T. Healy, ‘Madagascar Case Study: Artisanal Mining Rushes in Protected Areas and a Response Toolkit’, Protected Areas and Critical Ecosystems Project (ASM-Pace), Final Report, 30 June 2012, p. 14.

¹⁴⁰ P. Mlowe / O. Olengurumwa, ‘Fact Finding Mission Report, North Mara Mine, Tanzania’, Legal and Human Rights Centre, (May 2011), pp. 7 et seq.

¹⁴¹ Ibid., 8 et seq.

¹⁴² Ibid., 9 et seq.

¹⁴³ Ibid., 4.

¹⁴⁴ AI, ‘Democratic Republic of Congo, Making a killing - The diamond trade in government-controlled DRC’, report of 22 October 2002, 7.

¹⁴⁵ Ibid., 9 et seq.

Case 10 Bolivia

The extent of small-scale mining in Bolivia is significant. Since the reduction in production by the state mining corporation Corporación Minera de Bolivia (COMIBOL) in 1985, small-scale mining has attracted a large number of miners, creating employment and ensuring their livelihood. In the early 2000s, about 100,000 persons worked as small-scale miners, and about 500,000 people (including families) therefore depended on it for their livelihood, an very high proportion relative to the country’s population of around 7 million. Gold mining projects on the San Simón plateau in eastern side of Bolivia, in particular, led to an increase in ASM activities when industrial sector exploration began in the early 1990s. Initially, small-scale miners were “locals” but subsequently artisanal gold miners from other parts of Bolivia and Brazil came to the area. This culminated with approximately 500 artisanal miners invading the concession; their activities also led to serious environmental impacts.¹⁴⁶

Case 11 Brazil

In the Carajás mining district of Pará, attempts to evict small-scale miners from a concession by Brazilian state mining company CVRD led to violence in the mid-1990s. While developing a \$250 million gold mine at Serra Leste, CVRD tried to remove the artisanal miners who had been working the gold deposits in the area for years. The small-scale miners objected, and took seven CVRD employees hostage until their demands were met.¹⁴⁷

¹⁴⁶ Case described by T. Hentschel (et al.), ‘Small-scale gold mining at San Simón, Bolivia’, in: N. Jennings (ed.), Small-scale gold mining: Examples from Bolivia, Philippines & Zimbabwe, Working Paper, ILO Sectoral Activities Programme / Industrial Activities Branch (2003), pp. 1, 5.

¹⁴⁷ See A. Rosenfeld-Sweeting / A. Clarke, ‘Lightening the Lode: A Guide to Responsible Large-Scale Mining’, Conservation International, (2000), p. 54.

Case 12 Ecuador

ASM mining in Ecuador was formalised during the 1990s: The General Regulation Substituting the General Regulation of the Mining Law (17 April, 2001) established the parameters for defining small-scale mining. Accordingly, small-scale mining is limited to a maximum concession area of 150 hectares, to an extraction of 100 metric tons per day and a total amount of investment of up to one million US dollars. The growth of the sector gave increased pollution from mercury and contamination of rivers by disposal of cyanide and heavy metals. The region of Portovelo-Zarzuma is one of the most well-known mining area in Ecuador.¹⁴⁸ Most processing facilities are built along, or near the banks of the Puyango-Tumbes River.¹⁴⁹ The plants use a combination of mercury amalgamation and/or cyanidation, resulting in an estimated 0.65 tons of mercury and 6,000 tons of cyanide entering the watershed per year.^{150,151} The waste discharges devastated aquatic life for 160 km downstream, resulting in an international dispute between Ecuador and Peru over the ecological damage and health effects, costs of which were estimated to be up to 35 billion US dollars.¹⁵²

Case 13 Bolivia

At the Cerro Rico mine in the city of Potosí of the Bolivian Potosí department, approximately 6–8,000 small-scale and cooperative miners extract around 1,000 tons of lead/silver/zinc ore per day¹⁵³ of which 800 tons is discarded as tailings, 30 to 40% of which is made up of pyrite.¹⁵⁴ The waste material from flo-

tation plants not only contains sulphur minerals, but also chemical reagents (collectors, frothers and cyanide) and appreciable quantities of dissolved heavy metals (zinc, lead, cadmium, copper and iron) that have been contaminating the Pilcomayo river basin for many years.¹⁵⁵ This is also affecting downstream communities and causing serious enduring water contamination problems on a national and international level, long after ASM activity has ceased.¹⁵⁶ In Bolivia, legalised ASM cooperatives have become more predominant than informal, illegal mining activities, since the Bolivian State started issuing mining concessions to both mining enterprises and cooperatives.¹⁵⁷ Once formalised, cooperatives have to comply with rules of environmental protection and safety measures, which limits the negative effects of ASM activities.¹⁵⁸

Case 14 Sudan

In Gugub and the surrounding communities, located in the southern Blue Nile region, tailings that include mercury used in ASM gold extraction activities are usually disposed of near the mining site.¹⁵⁹ Conspicuous tailings heaps are common wherever there are alluvial or primary artisanal gold mining activities.¹⁶⁰ Around Gugub, it is estimated that about 400,000–500,000 m³ of tailings/waste has accumulated along the banks of Khor Gidad, Khor Neiwi and other localised areas.¹⁶¹ Seasonal run-off washes a portion of the tailings into streambeds, leading to sil-

¹⁴⁸ B. Nichols et al. 'Closure of Artisanal Small Scale Gold Mining Processing Plants in Ecuador', *Journal of Management and Sustainability*, vol. 5, 2015, p. 42.

¹⁴⁹ Ibid, 43.

¹⁵⁰ Ibid, 43.

¹⁵¹ Ibid, 41.

¹⁵² Ibid, 41.

¹⁵³ D. Bocangel 'Small-Scale Mining in Bolivia: National Study, Mining Minerals and Sustainable Development', MMSD/IIED, Working Paper No. 71, 2001, p. 7.

¹⁵⁴ Ibid.

¹⁵⁵ Ibid.

¹⁵⁶ See T. Hentschel / F. Hruschka / M. Priester, 'Global Report on Artisanal & Small-Scale Mining', MMSD/IIED, Working Paper No. 70, 2002, p. 61.

¹⁵⁷ T. Salman (et al.), 'Cooperative Organisation and Balsa Mining in Bolivia', in: L. Cremers / J. Kolen / M. de Theije (eds), *Small-Scale Gold Mining in the Amazon-The Cases of Bolivia, Brazil, Colombia, Peru and Suriname*, Centre for Latin American Studies and Documentation, Cuadernos del Cedla, No. 26 (2013), pp. 23 et seq.

¹⁵⁸ Ibid., 28.

¹⁵⁹ J. Hinton / M. Veiga, 'Summary Report – Technical and socio economic profiles of global mercury project sites', 2004, p. 27.

¹⁶⁰ Ibid.

¹⁶¹ Ibid.

tation of rivers that extends as far as the Blue Nile.¹⁶² The ASM sector in Sudan is legally based on the Mining Act No. 36 of 2012 that provides in its Chapter VI (Section 55-61) specific regulations for small-scale mining licenses. In particular, it stipulates that a title-holder shall comply with all requirements for the protection of the environment.

Case 15a India

There are no specific legal codes concerning small-scale mines in India. Instead, all legal codes applicable to mining in general are also generally applicable to small-scale mining, except such legal provisions giving exemptions on the size and nature of activities.¹⁶³ In the Raniganj Coalfields, mining started over two centuries ago and was for the first 100 years mainly haphazard, meaning that there was no legislation in force to ensure orderly mining. Subsidence became such a big problem on this coalfield that a subsidence committee was established in 1922. Underground voids are still numerous today in the area, where extractive activities are still ongoing (both by large and illegal small-scale mining), threatening entire villages. In recent years, the problem of ground stability has been aggravated in some areas due to illegal mining. As is typical for abandoned mines, here responsibilities are unclear, since present operators and owners were not responsible for the inappropriate mine closure that occurred over the centuries.¹⁶⁴

Case 15b Mali

Small-scale mining is arduous, dangerous work, for both children and adults. Mine pits sometimes collapse, the hours are long, the work is physically de-

manding, and use of mercury is unregulated, with no local knowledge of its dangers.¹⁶⁵ According to Order No. 099-032, small-scale mining requires the acquisition of a mining title referred to as “small-scale mining development license”. Regarding the closure of a small-scale mine, the order provides that any license holder shall rehabilitate the site and make sure that it complies with directives related to site rehabilitation after closure and ensures a good ending of the site and its related work.¹⁶⁶

Case 16 Mongolia

Artisanal miners in Mongolia use simple tools and rely on their own strength and endurance in what is labourious work. Mining activities vary, depending on the mineral being mined but the operation often involves digging pits and tunnels, draining, excavating soil and evacuating water, drilling and blasting, and crushing and processing ore. All of these tasks confront the artisanal miners with a range of risks and hazards: the collapse of diggings; dangerous overhangs; limited oxygen; rock dust; and explosives. Other risks arise from burning rubber tires, working long hours in confined spaces, and exposure to metallic mercury. The unorganised nature of the operations, the lack of personal protective equipment, and the extreme climate exacerbate these hazards.¹⁶⁷

Case 17 Mali

In Mali, child labour in artisanal mining is reported to be a widespread problem: With immense poverty and poor quality of schooling in rural areas, many families have no choice but to take their chil-

¹⁶² Ibid.


¹⁶³ S. Chakravorty, ‘Artisanal and Small-Scale Mining in India’, MMSD/IIED, Working Paper No. 78, 2001, pp. 12 et seq., 50; e.g. the Mines Act (1952) does not apply to mines which do not use explosives, do not employ more than 50 person and are not more than 20 ft. deep, see *ibid* 75.

¹⁶⁴ See <http://business-humanrights.org/en/india-coal-india-allegedly-failing-to-address-dangerous-subsidence>.

¹⁶⁵ F. Johannisson, ‘Child Labour mined gold in your gadgets?’, Dan-Watch Report 2013, p. 17.

¹⁶⁶ S. Keita, ‘Study on Artisanal and Small-Scale Mining in Mali’, MMSD/IIED, Working Paper No. 80, 2001, p. 28.

¹⁶⁷ M. Hansson, ‘Ending child labour in mining – Field experience and analysis of interventions from Mongolia’, IPEC, International Labour Office, Geneva, June 2006, p. 2. See further W. Murray, ‘Informal Gold Mining in Mongolia’, in: G. Hilson (ed.), *The Socio-Economic Impacts of Artisanal and Small-Scale Mining in Developing Countries*, 2003, pp. 531-544 (538).



dren along when they seek their livelihood at informal mining sites. An estimated 20,000 to 40,000 children are engaged in gold mining in Mali. Some travel to mining sites alone, though most are taken along by their families. At the sites, children as young as 7 work in the mines, digging tunnels, crushing and washing ore and selling food or water. Younger children will sometimes tend to the babies. Child prostitution is also a growing problem in the artisanal mining communities. Many of the children are taken out of school to work in the mines, while others never went to school in the first place. Small-scale mining in Mali is extremely tough and dangerous work, for both children and adults. The income from working in gold mining is entirely dependent on what is found, and thus the daily wage can vary a lot: children earn from 500 – 2,500 CFA (0.76 € to 3.8 €) per day. The daily income is most likely to be about 1,000 CFA (1.5 €). The children typically work 8 to 10 hour days, with a break at midday. The mines are closed on either Mondays or Fridays.¹⁶⁸

Case 18 Niger

Bearing in mind that about 73% of the population in Niger lives below the poverty line and that approximately 50% of the population in Niger are children under 15, the high poverty rate is the main reason for the development of the small-scale mining sector and the emergence of child labour in this sector.¹⁶⁹ Following studies of 1999, full-time employment in small-scale mining in Niger was about 15,000, 2,500 of whom were under 18 years old. Part-time employment, however, was about 132,000, including about 67,000 children. When small-scale mines are included, the total ASM workforce amounted to about 442,000, of whom 250,000 are estimated to be chil-

dren under 18.¹⁷⁰ There were 40-50 mining sites in Niger, including about 5,100 children.¹⁷¹ An estimated 10,000 children was said to be involved in trona production (sodium carbonate) in Niger. For example, 360 children under 18 were working at the trona site in Birni Ngaouré, Boboye region.¹⁷² The children were forced by their parents to take part in trona production. Since their work is considered family assistance, the children do not receive cash remuneration.¹⁷³ There are pupils working at the weekend as well as children who do not attend or have left school to work every day at the trona site.¹⁷⁴ Moreover, social problems associated with small-scale mining, such as prostitution and drug trafficking, are common at some gold mining sites in Niger.¹⁷⁵

Case 19 Ghana

In 2013, about one-third (34%) of Ghana's gold production (119 tons/1% of Ghana's GDP) comes from artisanal and small-scale gold mining.¹⁷⁶ Estimates put the number of artisanal and small-scale miners in Ghana between 500,000 and 1 million.¹⁷⁷ The Gha-

¹⁶⁸ Case described by F. Johannisson, 'Child mined gold in your gadgets? Child labour in Ghana and Mali and sourcing policies of IT brands', DanWatch Investigative Report, 2013, 17.

¹⁶⁹ N. Jennings, 'Child labour in small-scale mining: Examples from Niger, Peru & Philippines', preliminary working paper for the tripartite meeting on Social and labour issues in small-scale mines, Geneva 17-21 May 1999, International Labour Office, Geneva 1999, p. 6.

¹⁷⁰ N. Jennings, 'Social and Labour issues in small-scale mines', Report for discussion at the Tripartite Meeting on Social and Labour Issues in Small-scale Mines, Geneva, 17-21 May 1999, p. 45.

¹⁷¹ Ibid., p. 47.

¹⁷² N. Jennings, 'Child labour in small-scale mining: Examples from Niger, Peru & Philippines', preliminary working paper for the tripartite meeting on Social and labour issues in small-scale mines, Geneva 17-21 May 1999, International Labour Office, Geneva 1999, p. 10.

¹⁷³ Ibid, p. 14.

¹⁷⁴ Ibid.

¹⁷⁵ See N. Jennings, 'Social and Labour issues in small-scale mines', Report for discussion at the Tripartite Meeting on Social and Labour Issues in Small-scale Mines, Geneva, 17-21 May 1999, p. 47.

¹⁷⁶ See 'Precious Metal, Cheap Labour Child Labour and Corporate Responsibility in Ghana's Artisanal Gold Mines', Human Rights Watch Report, June 2015, p. 16.

¹⁷⁷ See 'Second Global Forum on Artisanal and Small-Scale Gold Mining', UNDP, 3-5 September 2013, Lima, Peru, final report, p. 16, available at http://www.unep.org/chemicalsandwaste/Portals/9/Mercury/GF2/NewFolder/Global_Forum_II_meeting_report.pdf; Government of Ghana and ILO, 'Analytical Studies on Child Labour in Mining and Quarrying in Ghana', August 2013, p. ix; K. Kessey / B. Arko, 'Small Scale Gold Mining and Environmental Degradation in Ghana: Issues of Mining Policy Implementation and Challenges', Journal of Studies in Social Sciences,



naian government requires small-scale miners to obtain a license.¹⁷⁸ In November 2014, Ghana had about 1,300 active licenses for small-scale mining under the mining law, of which at least 90 percent were for gold mining.¹⁷⁹ However, the majority of miners work without a valid license, effectively mining illegally.¹⁸⁰ It is estimated that several thousand children work in Ghana's artisanal and small-scale gold mining sector, though data is scarce.¹⁸¹ There are many more boys than girls working in mining. While the majority of child labourers are between the ages of 15 and 17, younger children work in gold mining too. Of 44 child miners interviewed by Human Rights Watch, 20 had started working at the age of 12 or younger. The youngest child miner Human Rights Watch interviewed was 9 years old. A survey by the International Labour Organisation (ILO) of 400 child miners found that most child miners – 61% – were adolescents between the ages of 15 and 17.¹⁸² One-third of miners were between the ages of 10 and 14, and nearly 6% of children were between 5 and 9 years old. Artisanal and small-scale gold mining takes place in many parts of Ghana – including in Western, Central, Ashanti, Eastern, Brong Ahafo, Northern, and Upper East Regions. Child labour in mining occurs in all of these areas.¹⁸³

Case 20 Burkina Faso

Child labour in the gold mines of Burkina Faso is so obvious and prevalent that the U.S. government prohibits its contractors and agencies from buying gold

directly from Burkina Faso.¹⁸⁴ It has been reported, for example, that in the Kollo mining village near the border between Burkina Faso and Ghana, around 30 children are working in a gold mine¹⁸⁵ crushing ore with primitive hammers. Furthermore, they haul buckets of water up the hillside.¹⁸⁶ Moreover, at a recently discovered mining site in the Bilbalé region, where overnight about 200 people had shown up, it has been observed that little children squatted on the ground to claw dirt and rocks into shallow bowls.¹⁸⁷ The ASM sector was legally formalised through the Mining Code of 1997 in Burkina Faso. The new mining code (26 June, 2015) includes, inter alia, provisions for the creation of a fund to rehabilitate artisanal mining sites and prohibits the use of harmful chemicals.¹⁸⁸ While mineral exploitation must generally be authorised by obtaining a mining title, artisanal miners are exempt from that rule, as they only require a basic administrative authorisation.¹⁸⁹

Vol. 5 (2013), p. 15.

¹⁷⁸ Minerals and Mining Act, No. 703 of 2006, Art. 82.

¹⁷⁹ See 'Precious Metal, Cheap Labour Child Labour and Corporate Responsibility in Ghana's Artisanal Gold Mines', HRW report, 2015, p. 17.

¹⁸⁰ Ibid.

¹⁸¹ Ibid.

¹⁸² Government of Ghana and ILO, 'Analytical Studies on Child Labour in Mining and Quarrying in Ghana', August 2013, p. 26.

¹⁸³ Government of Ghana and ILO, 'Analytical Studies on Child Labour in Mining and Quarrying in Ghana', August 2013, ix; G. Hilson, 'Child Labour in African Artisanal Mining Communities: Experiences from Northern Ghana', Development and Change, Vol. 41 (3), 2010, pp. 445–473.

¹⁸⁴ Larry C. Price, 'Burkina Faso: Childhoods Lost in the Gold Mines' Pulitzer Center on Crisis Reporting (28 April 2013), available at: <http://pulitzercenter.org/reporting/gold-mining-child-labour-burkina-faso-kollo-ILO-labour-rights-commodities>.

¹⁸⁵ Ibid.

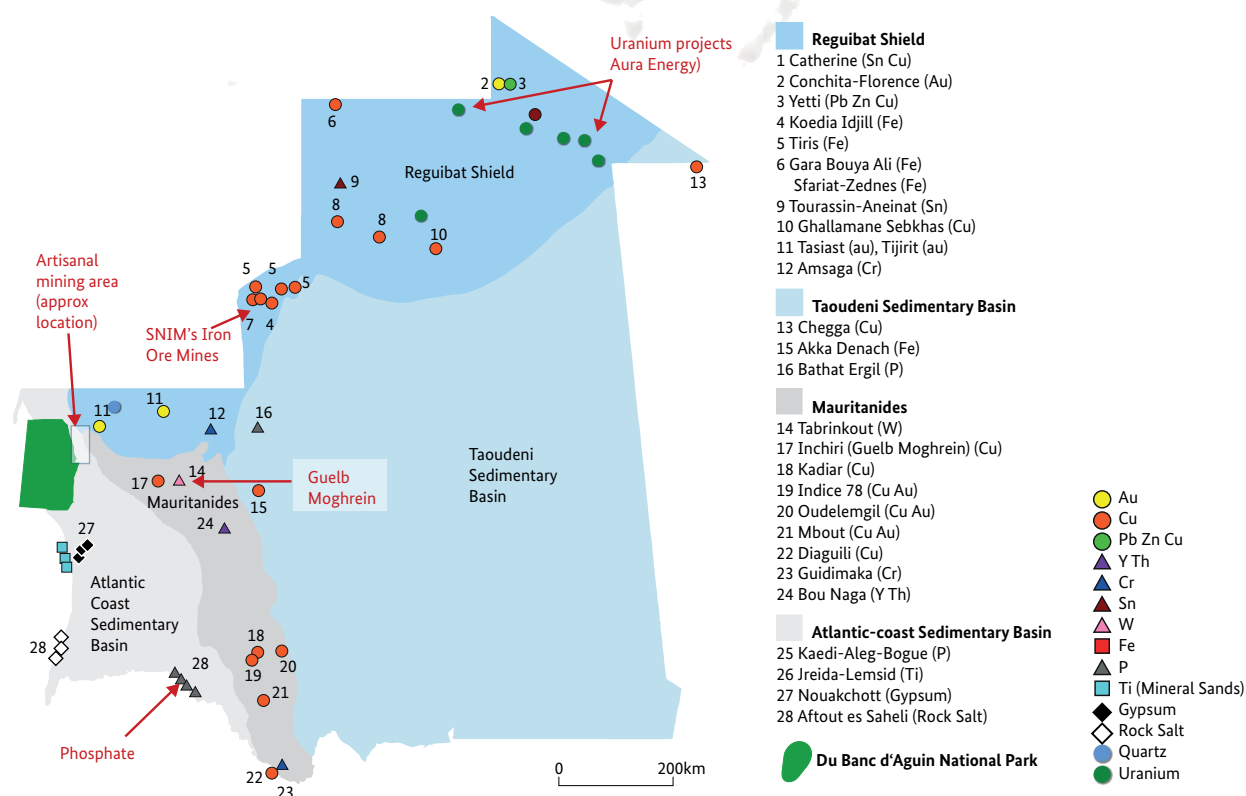
¹⁸⁶ Ibid.

¹⁸⁷ Ibid; see also N. Jennings, 'Social and Labour issues in small-scale mines', Report for discussion at the Tripartite Meeting on Social and Labour Issues in Small-scale Mines, Geneva, 17–21 May 1999, p. 42.

¹⁸⁸ C. Mathieu Bonkougou, 'Burkina Faso parliament adopts new mining code' Reuters (26.6.2015); available at: <http://www.reuters.com/article/2015/06/26/burkina-mining-regulations-idUSL8N0ZC48G20150626>.

¹⁸⁹ D. Gueye, 'Small-Scale Mining in Burkina Faso' (October 2001), 10; available at: <http://pubs.iied.org/pdfs/G00717.pdf>.

Add. 2 Geological map of Mauritania showing locations of main deposits and mine



(Source: Office Mauritanien de Recherches Géologiques, Skarn Associates)

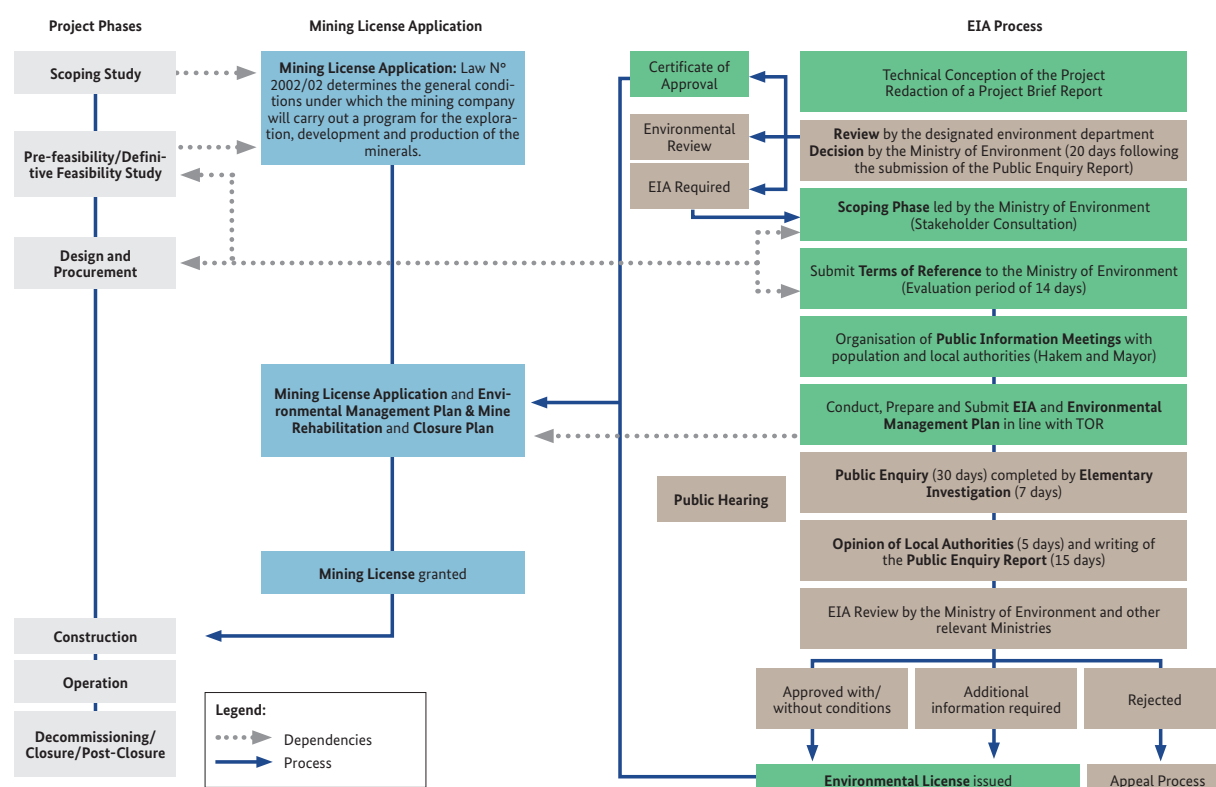
Add. 3 Durations and Renewal Periods of Mining Permits

Table 1: Permit durations. Data from African Law & Business (2016) & Kinross Technical Report 2016

Type of Permit	Duration of permit	Renewals Possible?	Total Duration	Rules and mechanisms
Prospection (non-exclusive)	4 months	No	4 months	
Exploration	3 years	Yes, for a further 2 periods of 3 years	9 years	<ul style="list-style-type: none"> ▶ Surface Area: 1,000 km² blocks ▶ Confers right to explore for resources to any depth within permit area ▶ Number is limited to 20 exploration permits per holder; a holder must have the technical and financial capability to conduct the work ▶ Permits taken under a joint venture are not taken into consideration for the calculation of the above limit, if the holder is not the controlling partner or the operator ▶ Transferable under conditions established by the Decree on Mining Titles
Mining	30 years	Yes, renewals are for additional 10-year periods	>30 years	<ul style="list-style-type: none"> ▶ Necessary for operating a mine ▶ Within an area initially covered by an exploration permit, for the same commodities, and on the basis of a feasibility study ▶ Granted only to a legal entity incorporated under Mauritanian law and created by the holder of the exploration permit ▶ Transferable under conditions established by the Decree on Mining Titles ▶ Personnel health and safety reports to be lodged with the Ministry every six months, and environmental and activity reports every year ▶ Land needs to be rehabilitated after mining

Add. 4 Permitting Process Mauritania

Mine permitting process Tiris Uranium Project (Aura Energy London Roadshow 3 July 2017¹⁹⁰)



Environmental permitting process in Mauritania in relation to project phases and mining license application process

¹⁹⁰ <http://www.auraenergy.com.au/investor/ASX%20Announcements/2017/Aura%20Energy%20London%20Roadshow%20July%202017.pdf>

Add. 5 Licences granted or renewed in 2015

(Some of these projects are known to have been abandoned since then (e.g. Drake Resources' projects) (Ministère du Pétrole, de l'Energie et des Mines, 2015; Drake Resources, 2016)¹⁹¹

from <http://www.drakeresources.com.au/assets/docs/18-Nov-2016/AnnualReporttoshareholders.pdf>

¹⁹¹ Drake Resources (2016), Annual Report 30 June 2016, available

Description of mining research titles granted or renewed in 2015 Fiche descriptive des titres miniers de recherche octroyés ou renouvelés en 2015								
Nom de société	Code permis	Groupe de Substances	Nationale	Date d'Octroi	1 ^{er} Renouvellement	2 ^{eme} Renouvellement	Wilaya	Superficie km ²
BUMI MAURITANIE Sa	270	B1	Indonésienne	14/10/2005	24/05/2009	12/06/2015	Tiris Zemmour	1,193
BSA	280	B4	Nationale	17/03/2006	27/05/2009	23/06/2015	Dakhlet Nouadhibou Inchiri	307
ID - GEOSERVICES	378	B4	Nationale	07/02/2008	09/06/2015		Tiris Zemmour	240
MACOBA TP	407	B4	Nationale	08/04/2008	09/06/2015		Tiris Zemmour	665
AURA ENERGY LIMITED	563	B4	Australienne	30/04/2008	18/08/2011	25/03/2015	Tiris Zemmour	313
AURA ENERGY LIMITED	564	B4	Australienne	30/04/2008	18/08/2011	10/06/2015	Tiris Zemmour	330
BUMI MAURITANIE	849	B5	Indonésienne	22/03/2010	12/06/2015		Brakna - Gorgol	972
BUMI MAURITANIE	850	B5	Indonésienne	22/03/2010	12/06/2015		Brakna	669
ID- Geoservices S.a	1109	B2	Nationale	22/02/2011	03/08/2015		Dakhlet Nouadhibou	602
Drake Ressources Limited	1163	B2	Australienne	17/01/2011	26/03/2015		Inchiri	134
Drake Ressources Limited	1164	B2	Australienne	17/01/2011	01/06/2015		Inchiri	41
Mineralis	1291	B2	Nationale	30/03/2011	22/04/2015		Inchiri	360
OreCorp Mauritania Sarl	1415	B2	Australienne	21/07/2011	30/07/2015		Adrar	308
OreCorp Mauritania Sarl	1416	B2	Australienne	21/07/2011	30/07/2015		Adrar	232
Mining Resources Ltd	1540	B2	Saint-Vincent	12/12/2011	04/08/2015		Trarza	649
Mining Resources Ltd	1541	B2	Saint-Vincent	12/12/2011	04/08/2015		Trarza	648

Source: http://www.petrole.gov.mr/IMG/pdf/fiche_descriptive_des_titres_miniers_de_recherche_renouveles_en_2015.pdf

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Sector programme Extractives and Development
Sector programme Realizing Human Rights
including Children and Youth Rights in
Development Cooperation
Stilleweg 2
30655 Hannover
Phone +49 (0) 511-643 - 0
Fax +49 (0) 511-643 - 2304
rue@bgr.de
www.bmz.de/rue/en

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Ira Olaleye
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Text
Mark Fellows, Dr. Maximilian Spohr

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Sector programme Extractives and Development
Sector programme Realizing Human Rights
including Children and Youth Rights in
Development Cooperation
Friedrich Ebert Allee 36
53113 Bonn
Phone +49 (0) 228 446 035 18
Fax +49 (0) 228 446 080 351 8
info@giz.de
www.giz.de/human-rights

