Barbara Strozzilaan 336

1083 HN Amsterdam
The Netherlands
gssbsecretariat@globalreporting.org

GRI Sector Standards Project for Coal – Exposure draft

Comments to be received by 30 July 2021

Background

Sustainability reporting using the GRI Standards enables an organization to publicly disclose its most significant impacts and how it manages these impacts. However, reporting by individual organizations has been inconsistent in addressing a sector's key challenges and impacts.

The GRI Sector Program is developing Standards that are specific to certain sectors. The GRI Sector Standards will identify and describe one or more sectors' most significant impacts from a sustainable development perspective. They are intended to focus sustainability reporting on the impacts that matter most, as well as reflect stakeholder expectations for a sector's sustainability reporting. Developing a Sector Standard for coal is one of the pilot projects in the Sector Program. More information can be found on the program webpage.

Public comment for Coal

This GRI Coal Sector Standard exposure draft is published for public comment by the Global Sustainability Standards Board (GSSB), the independent standard-setting body of GRI.

Any interested party can submit comments on this draft **by 30 July 2021** via this online questionnaire. As required by the GSSB Due Process Protocol, only comments submitted in writing and in English will be considered. Comments will be published on the GRI website and considered a matter of public record. Instructions to submit comments are outlined on the first page of the online questionnaire.

An explanatory memorandum preceding the exposure draft summarizes the objectives of the project and the significant proposals contained within this exposure draft.

This draft is published for comment only and may change before official publication.

GRI Universal Standards

The GRI Sector Standards have been developed in conjunction with the review of the GRI Universal Standards. All references to the Universal Standards in this exposure draft refer to the revised Universal Standards submitted to the GSSB, considered for approval on 10 June 2021. The draft Universal Standards are subject to the approval of the GSSB and may change before official publication.

For questions regarding the exposure draft or the public comment period, please send an email to sector@globalreporting.org.

Explanatory memorandum

This explanatory memorandum sets out the objectives of GRI Sector Standards Project for Oil, Gas, and Coal. It also includes the significant proposals resulting from this project and summarizes the Global Sustainability Standards Board (GSSB)'s involvement and views on development of the draft.

Objectives for the project

The exposure draft for coal is the second Standard being developed under the GRI Sector Standards Project for Oil, Gas, and Coal. This is a pilot project for the GRI Sector Program.

The project aims to identify and describe the sectors' significant impacts and stakeholder expectations from a sustainable development perspective, and provide evidence and authoritative references for these. This will serve as a foundation for increased transparency and more consistent reporting from organizations in the sectors.

The project was initiated in 2019 to develop a Sector Standard for oil, gas and coal. As outlined in the GSSB's Due Process Protocol, a multi-stakeholder working group was established to contribute in the development of the Sector Standard.

During the course of the project, the GSSB received stakeholder submissions from the oil and gas sector raising concerns about addressing oil, gas, and coal in a combined Sector Standard, indicating a potential impediment to its uptake. These concerns were echoed by the Oil, Gas, and Coal Working Group, and the GSSB decided in April 2020 to separate coal from the oil and gas contents. As a consequence, this exposure draft focuses on the coal sector only.

For more information on the project, consult the project proposal and terms of reference.

The GRI Universal Standards have simultaneously been under revision. The implementation model of the Sector Standards will be incorporated into these revised Universal Standards. The final Universal Standards are expected to be approved in Q2 2021. For the purposes of this exposure draft, draft versions of the Universal Standards are used.

Significant proposals

An exposure draft for coal has been developed in line with the project objectives set out above. Notable inclusions in this exposure draft are summarized below:

- **22 topics were identified to be likely material** for organizations in the coal sector (see Table 1). For each likely material topic, the sector's most significant impacts are described and disclosures to report information about the organization's impacts and approach in relation to the topic are listed. All topics list one or more disclosures from the GRI Topic Standards; six topics list additional sector disclosures in addition to Topic Standards disclosures; and 15 topics list additional sector recommendations to supplement Topic Standards disclosures.

- **The Standard emphasizes topics related to climate change**, notably *GHG emissions* and *Climate adaptation and resilience*. Robust disclosure on these topics, specifically related to governance, target setting, and organizations' strategic decision-making related to the low-carbon transition, have been identified as essential for the coal sector. Additional reporting recommendations and disclosures draw from relevant climate reporting frameworks, such as the TCFD R*ecommendations of the Task Force on Climate-related Financial Disclosures*.

- **New tailings disclosures are listed** in the topic *Asset integrity and critical incident management* for reporting on integrity of tailings facilities. These disclosures have been developed in line with the *Global Industry Standard for Tailings Management*, launched in 2020 by the International Council on Mining & Metals, United Nations Environment Programme and Principles for Responsible Investment.

- Additional disclosures are also listed related to topics that deal with **payment transparency and prevention of corruption**, with additional sector disclosures based on the Extractive Industries Transparency Initiative *EITI Standard 2019*.

- **Sector Profile** section further outlines the sector's activities, business relationships, and its interactions with the global sustainable development agenda, including linkages to the UN Sustainable Development Goals. A mapping between the likely material topics and the relevant SDGs is included as part of the larger context in the section *1.2 The sectors and sustainable development*, providing a starting point for organizations that seek to integrate the SDGs into their reporting.

Table 1: Likely material topics included in the draft Sector Standard: Coal

Likely material topic	Disclosures from GRI Topic Standards included for reporting on the topic	Whether additional sector recommendations or disclosures are listed for the topic
1. GHG emissions	*GRI 302: Energy 2016* *GRI 305: Emissions 2016*	Additional sector recommendations included for: • Disclosure MT-3 Management of material topics • Disclosure 305-1 Direct (Scope 1) GHG emissions
2. Climate adaptation and resilience	*GRI 201: Economic Performance 2016*	Additional sector recommendations included for: • Disclosure MT-3 Management of material topics • Disclosure 201-2 Financial implications and other risks and opportunities due to climate change + Additional sector disclosures
3. Closure and rehabilitation	*GRI 402: Labor/Management Relations 2016* *GRI 404: Training and Education 2016*	Additional sector recommendations included for: • Disclosure 402-1 Minimum notice periods regarding operational changes • Disclosure 404-2 Programs for upgrading employee skills and transition assistance programs + Additional sector disclosures
4. Air emissions	*GRI 305: Emissions 2016* *GRI 416: Customer Health and Safety 2016*	Additional sector recommendations included for: • Disclosure 305-7 Nitrogen oxides (NO_X), sulfur oxides (SO_X), and other significant air emissions • Disclosure 416-1 Assessment of the health and safety impacts of product and service categories
5. Biodiversity	*GRI 304: Biodiversity 2016*	Additional sector recommendations included for: • Disclosure MT-3 Management of material topics • Disclosure 304-3 Habitats protected or restored

6. Waste	*GRI 306: Waste 2020*	Additional sector recommendations included for: • Disclosure 306-3 Waste generated • Disclosure 306-4 Waste diverted from disposal • Disclosure 306-5 Waste directed to disposal
7. Water and effluents	*GRI 303: Water and Effluents 2018*	Additional sector recommendations included for Disclosure 303-2 Management of water discharge-related impacts
8. Economic impacts	*GRI 201: Economic Performance 2016* *GRI 202: Market Presence 2016* *GRI 203: Indirect Economic Impacts 2016* *GRI 204: Procurement Practices 2016*	Additional sector recommendations included for: • Disclosure MT-3 Management of material topics • Disclosure 201-1 Direct economic value generated and distributed
9. Local communities	*GRI 413: Local Communities 2016*	Additional sector recommendations included for: • Disclosure MT-3 Management of material topics • Disclosure 413-2 Operations with significant actual and potential negative impacts on local communities + Additional sector disclosures
10. Land and resource rights	*GRI 413: Local Communities 2016*	Additional sector recommendations included for: • Disclosure MT-3 Management of material topics • Disclosure 413-2 Operations with significant actual and potential negative impacts on local communities
11. Rights of indigenous peoples	*GRI 411: Rights of Indigenous People 2016* *GRI 413: Local Communities 2016*	Additional sector recommendations included for: • Disclosure MT-3 Management of material topics • Disclosure 413-1 Operations with local community engagement, impact assessments, and development programs • Disclosure 413-2 Operations with significant actual and potential negative impacts on local communities
12. Conflict and security	*GRI 410: Security Practices 2016*	Additional sector recommendations included for Disclosure MT-3 Management of material topics

13. Asset integrity and critical incident management	*GRI 306: Effluents and waste 2016*	Additional sector recommendations included for Disclosure MT-3 Management of material topics + Additional sector disclosures
14. Occupational health and safety	*GRI 403: Occupational Health and Safety 2018*	-
15. Employment practices	*GRI 401: Employment 2016* *GRI 402: Labor/Management Relations 2016* *GRI 402: Labor/Management Relations 2016* *GRI 414: Supplier Social Assessment 2016*	-
16. Child labor	*GRI 408: Child Labor 2016*	-
17. Forced labor and modern slavery	*GRI 409: Forced or Compulsory Labor 2016*	-
18. Non-discrimination and equal opportunity	*GRI 202: Market Presence 2016* *GRI 401: Employment 2016* *GRI 404: Training and Education 2016* *GRI 405: Diversity and Equal Opportunity 2016* *GRI 406: Non-discrimination 2016*	-
19. Freedom of association and collective bargaining	*GRI 407: Freedom of Association and Collective Bargaining 2016*	-
20. Anti-corruption	*GRI 205: Anti-corruption 2016*	+ Additional sector disclosures
23. Payments to governments	*GRI 201: Economic Performance 2016* *GRI 207: Tax 2019*	Additional sector recommendations included for Disclosure 201-4 Financial assistance received from government + Additional sector disclosures
22. Public policy and lobbying	*GRI 415: Public Policy 2016*	Additional sector recommendations included for Disclosure MT-3 Management of material topics

Relationship to draft Sector Standard: Oil and Gas

Draft Sector Standards for oil and gas, and coal were developed in conjunction until April 2020, with the intention of forming a single Standard. Following a recommendation from the working group, these contents were separated.

There are two notable changes in the likely material topics for the coal sector compared to oil and gas - the inclusion of child labor as a likely material topic, and the exclusion of anti-competitive behavior. The exposure draft for coal also has an additional focus on tailings management, which is not relevant for oil and gas organizations outside of oil sands mining.

GSSB involvement and views on the development of this draft

The GSSB appointed a subcommittee of three GSSB members for the Sector Program. The subcommittee was consulted on key conceptual issues on a regular basis.

The first (rough) draft of the Sector Standard for oil, gas, and coal – prior to the separation of the contents – was discussed by the GSSB during a virtual meeting on 26 March 2020, and the scope of the project was discussed on 23 April 2020.

The GSSB confirmed its support for content of the exposure draft for coal when it voted to approve the draft for public exposure at its meeting on 29 April 2021. The recording of the meetings can be accessed on the GSSB website.

Superseded publications

The GRI Sector Standard: Coal will be relevant for coal organizations previously using the G4 Mining and Metals Sector Disclosures. The content of these Sector Disclosures was not updated as part of the transition from the G4 Guidelines to the GRI Standards.

GRI Coal Sector Standard exposure draft

Contents

Introduction

GRI Sector Standard: Coal provides information for organizations in the coal sector about their most likely material topics. These topics have been identified as likely material for organizations in the coal sector on the basis of the sector's most significant impacts on the economy, environment, and people, including on human rights.

Sector Standard: Coal also contains a list of disclosures from the GRI Topic Standards and other sources for organizations in the coal sector to report information about their impacts and approach in relation to each likely material topic.

Sector Standards are developed using multi-stakeholder expertise, authoritative intergovernmental instruments, and other relevant evidence.

This Standard is structured as follows:

- Section 1 provides a high-level overview of the sector, including its activities, business relationships, sustainability context, and the connections between the Sustainable Development Goals (SDGs) and the likely material topics for the sector.
- Section 2 outlines the topics that have been identified as likely material for organizations in the coal sector and therefore potentially merit reporting. For each likely material topic, the coal sector's most significant impacts are described and disclosures to report information about the organization's impacts and approach in relation to the topic are listed.
- Glossary contains defined terms with specific meaning when used in the GRI Standards.
- Bibliography lists the authoritative intergovernmental instruments and other sources used to develop each topic, as well as further resources that may be helpful for reporting on the topic.

The rest of this Introduction section offers an overview of the sectors this Standard applies to, an overview of the system of GRI Standards, and further information on using this Standard.

Sectors this Standard applies to

GRI Sector Standard: Coal applies to organizations undertaking the following:

- Exploration, mining, and processing of thermal and metallurgical coal from underground or open-pit mines.
- Supply of equipment and services to coal mines, such as drilling, exploration, seismic information services, and mine construction.
- Storage or transportation of coal, such as slurry pipelines.

This Standard can be used by coal organizations of any size or type in any geographic location.

Not all topics listed in this Standard may be material for all organizations in the sector. The organization will determine its material topics based on its specific circumstances.

When identifying the applicable Sector Standards, an organization should consider its main sector. If the organization has substantial activities across more than one sector, it must use all applicable Sector Standards.

Sector classifications

Table1 lists industry groupings relevant to the coal sector in the Global Industry Classification Standard (GICS®), Industry Classification Benchmark (ICB), International Standard Industrial Classification of All Economic Activities (ISIC), and Sustainable Industry Classification System (SICS®). The table is intended to assist an organization in identifying whether the Sector Standard: Coal applies to it and is for reference only.

Table 1. Industry groupings relevant to the coal sector in other classification systems

Classification system	Classification number	Classification name
GICS	10102050	Coal & consumable fuels
ICB	60101040	Coal
ISIC	B05	Mining of coal and lignite
SICS®	EM-CO	Coal operations

System of GRI Standards

This Standard is part of the GRI Sustainability Reporting Standards (GRI Standards). The GRI Standards enable an organization to report information on its most significant impacts on the economy, environment, and people, including impacts on their human rights, and how it manages these impacts.

The GRI Standards are structured as a system of interrelated standards that are organized into three series: Universal Standards, Sector Standards, and Topic Standards.

Universal Standards: GRI 101, 102, and 103

Note: All references to the GRI Universal Standards in this Standard refer to the drafts that have been made available as part of the review of the Universal Standards. The GRI Sector Standards will work in conjunction with the revised Universal Standards. The draft Universal Standards are subject to the approval of the Global Sustainability Standards Board and may change.

GRI 101: Using the GRI Standards sets out the requirements that the organization must comply with to report in accordance with the GRI Standards. The organization begins using the GRI Standards by consulting *GRI 101*.

GRI 102: About the Organization contains disclosures that the organization uses to provide information about its reporting practices and other organizational details, such as activities, governance, and policies.

GRI 103: Material Topics provides guidance on how to determine material topics. It also contains disclosures that the organization uses to report information about its process to determine material topics, its list of material topics, and how it manages each topic.

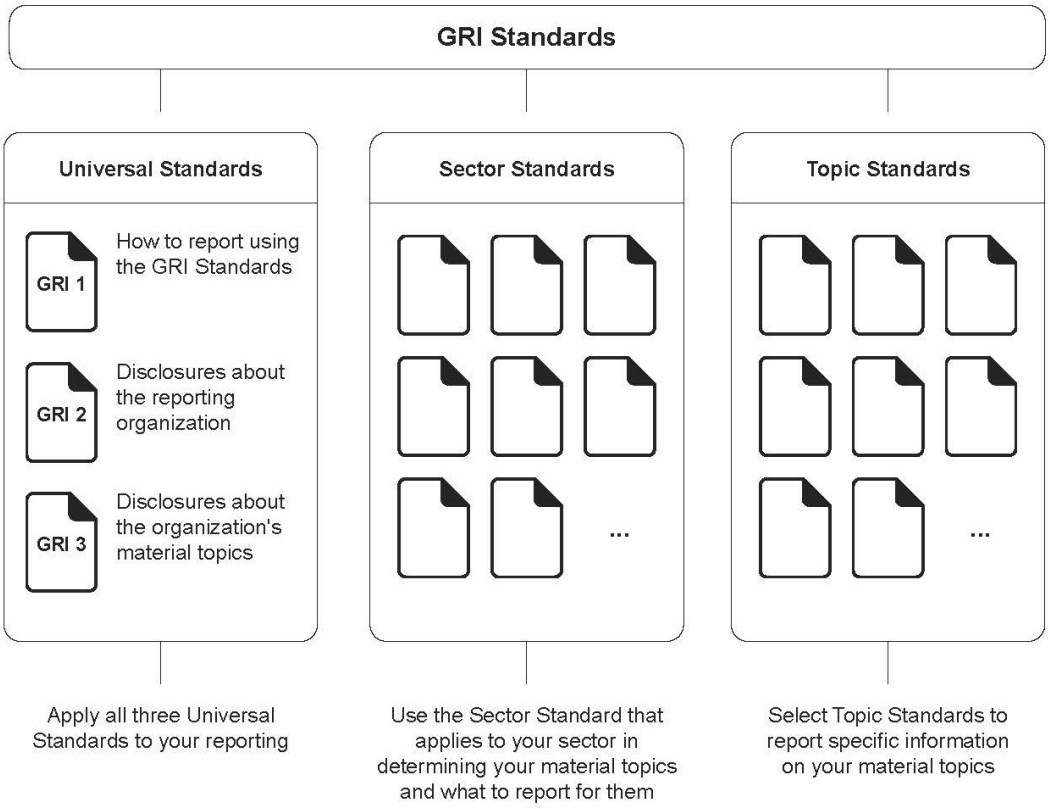
Sector Standards

The Sector Standards provide information for organizations in a given sector about their most likely material topics. The organization uses the Sector Standards that apply to its sectors when determining its material topics and when determining what to report for each material topic.

Topic Standards

The Topic Standards contain disclosures that the organization uses to report information about its impacts in relation to particular topics. The organization uses the Topic Standards according to the list of material topics it has determined using *GRI 103*.

Figure 1. GRI Standards: Universal, Sector, and Topic Standards



Using this Standard

An organization in the coal sector reporting in accordance with the GRI Standards is required to use this Standard when determining its material topics and when determining what information to report for the material topics.

Determining material topics

Material topics are topics that represent the organization's most significant impacts on the economy, environment, and people, including impacts on their human rights.

An organization in the coal sector is required to use this Standard when determining its material topics. The organization needs to review each topic described in Section 2 of this Standard and determine whether it is a material topic for the organization.

This Standard helps the organization determine its material topics, but the organization still needs to consider its own specific circumstances when determining its material topics. The topics an organization identifies as material may vary according to its circumstances, such as its business model; sector; geographic, cultural, and legal operating contexts; ownership structure; and the nature of its impacts. *GRI 3: Material Topics 2021* provides step-by-step guidance on how to determine material topics.

Not all topics listed in this Standard may be material for all organizations in the sectors. If any of the topics that are included in this Standard have been determined by the organization as not material, the organization is required to list them in the GRI content index and explain why they are not material (see Requirement 7 in Section 3 of *GRI 1: Foundation 2021*).

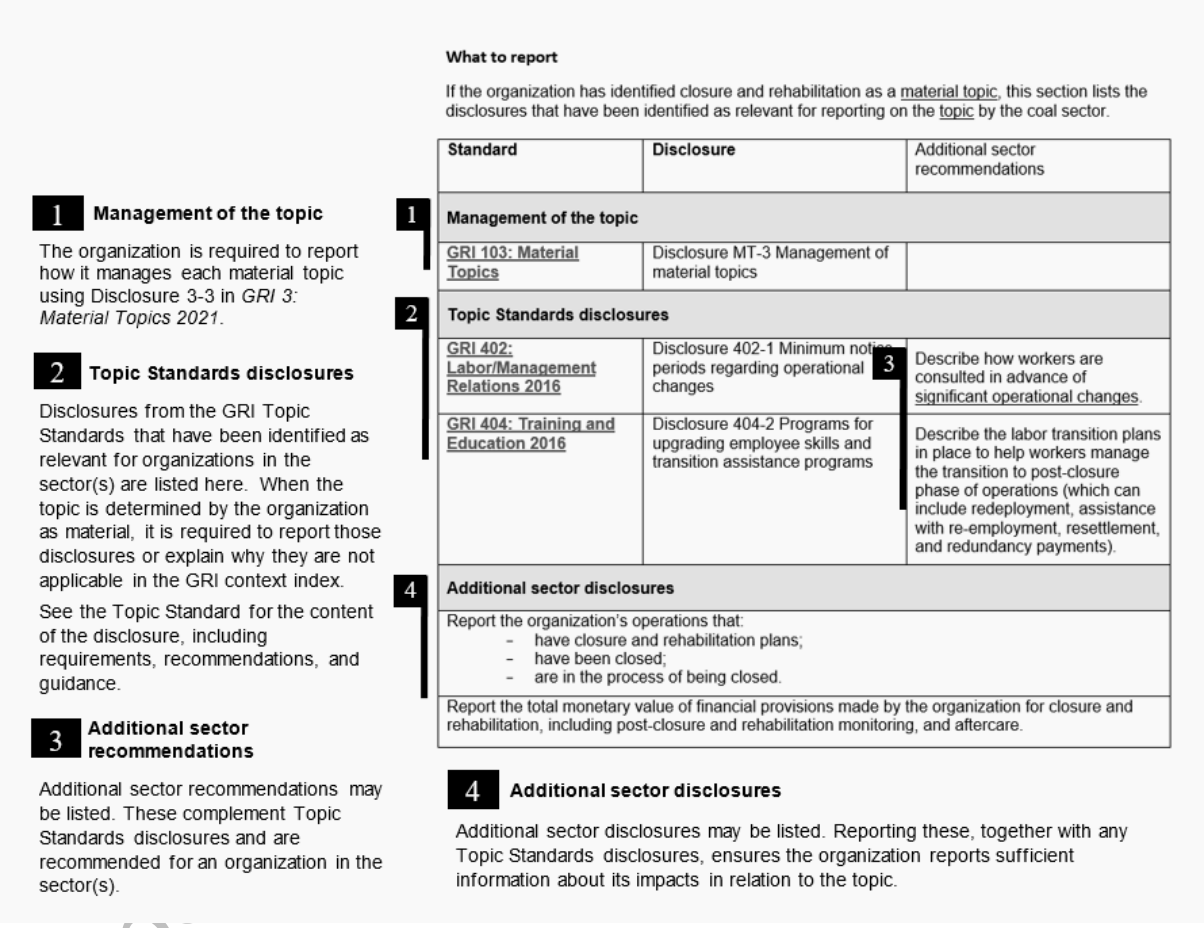
See Requirement 3 in Section 3 of *GRI 1: Foundation 2021* and Figure 1 in *GRI 103: Material Topics* for more information on using Sector Standards when determining material topics.

Determining what to report

When a topic included in this Standard is determined by the organization as material, the Standard helps the organization identify disclosures to report information about its impacts in relation to that topic.

A what to report section is included for each topic in Section 2 of this Standard. What to report sections list disclosures from the GRI Topic Standards. They may also list additional sector recommendations and disclosures for the organization to report on, in cases where the Topic Standards do not provide disclosures, or where the disclosures from the Topic Standards do not provide sufficient information about an organization's impacts and approach in relation to a topic. Additional sector recommendations and disclosures may be based on other sources.

Figure 2. Structure of what to report sections



For topics determined by the organization as material, the organization is required to report the disclosures drawn from Topic Standards listed in the what to report section for that topic. If any disclosures listed are not relevant for reporting on the organization's impacts and approach in relation to the topic, then the organization is not required to report these but is required to list them in the GRI Context Index, provide the 'not applicable' reason for omission and a brief explanation (see Requirement 7 in Section 3 of *GRI 1: Foundation 2021*).

The additional sector recommendations and disclosures outline additional information that the organization should report on the topic. An organization should provide sufficient information about its impacts in relation to each material topic, so that information users can make informed assessments and decisions about the organization. The additional sector disclosures and recommendations have been identified as relevant for organizations in the coal sector in relation to the topic. Reporting on these is encouraged, however, it is not a requirement.

When the organization reports the additional sector disclosures, it is required to list them in the GRI content index.

See Requirement 5 in Section 3 of *GRI 1: Foundation 2021* for more information on using Sector Standards when identifying disclosures to report on.

Defined terms

Defined terms are underlined in the text of the GRI Standards and hyperlinked to their definitions in the Glossary. The organization is required to apply the definitions in the Glossary.

References and resources

Each GRI Topic Standard includes a list of authoritative intergovernmental instruments and other sources used in developing the Standard, as well as additional resources that can be consulted by organizations on the topic. Additional authoritative instruments and sources used to develop the topics in this Standard, as well as further resources that may be helpful for understanding and reporting on the topic by organizations in the coal sector are listed at the end of the Standard.

1. Sector profile

Coal is an abundant and widespread natural resource. Its use dates from ancient history, and coal extraction now represents a large global sector supplying key raw materials for energy generation and metallurgical processes. It is currently a fundamental input in some major industries, notably steel, which accounts for 15% of the use of world coal production.[1] Coal is also used in production of synthetic compounds, such as cement, dye, oil, waxes, pharmaceuticals, and pesticides.

Coal organizations are diverse in nature. While some focus on this sole commodity – combining extraction, distribution, and consumption channels under a single ownership – others are large diversified organizations, extracting different commodities or operating across different sectors. Some of the largest organizations in the sector are state-owned enterprises.

Coal is still widely used to generate electricity in many countries, though its consumption for this purpose has declined globally since 2013.[2]

1.1 Sector activities and business relationships

When determining its material topics, the organization should consider the impacts of both its activities and its business relationships.

Activities

The impacts of an organization vary according to the types of activities it undertakes. The following list outlines some of the key activities of the coal sector. The list is not exhaustive.

Prospecting and exploration: Surveying of resources through, for example, feasibility assessments, geologic mapping, aerial photography, geophysical measuring, and drilling.

Development: Design, planning, and constructing a mine, including facilities for coal processing and workers.

Mining: Coal extraction using surface mining, underground mining, or in-situ techniques.

Processing: Crushing, cleaning, and processing coal from unwanted materials; processing it into briquettes, liquids, and gas or into coke for steelmaking.

Closure and rehabilitation: Decommissioning processing facilities, land reclamation and rehabilitation, and closing and sealing waste facilities.

Transportation: Moving coal to the point of consumption by barge, conveyor belt, train, truck, or ship; or when mixed with oil or water, transported as coal slurry by pipeline.

Storage: Storing coal at mining sites or import and export terminals.

Sales and marketing: Trading and customer sales of products for the purpose of, for example, iron and steel production, cement production, electricity production, and manufacturing.

Business relationships

An organization's business relationships include those with business partners, entities in its value chain, including those beyond the first tier, and any other entities directly linked to its operations,

[1] International Energy Agency (IEA), Coal Information: Overview, accessed on 5 April 2021.
[2] World Economic Forum (WEF), Chart of the day: Is 2019 the beginning of the end for coal in Europe?, accessed on 5 April 2021; International Energy Agency (IEA), Coal 2019: Analysis and Forecasts to 2024, accessed on 5 April 2021.

products, or services. The following types of business relationships are of particular relevance when identifying the impacts of organizations in the coal sector.

Joint ventures are common arrangements, particularly in upstream coal operations, in which organizations share costs, benefits, and liabilities of assets or a project. Even as a non-operating partner, an organization can be involved with negative impacts as a result of a joint venture.

Suppliers and contractors are used often in the coal sector during certain phases of the project, such as construction, or to provide services. Some of the most significant impacts related to the topics in this Sector Standard involve the supply chain.

Customer organizations use coal to produce heat, energy, or materials. When these organizations burn coal, they generate large amounts of greenhouse gas (GHG) and other air emissions. While customer organizations play a key role in reducing and managing their emissions, organizations that extract coal are increasingly expected to take responsibility for emissions from the combustion of their products and to disclose the related emissions. This Sector Standard therefore includes disclosures on all Scopes of GHG emissions (1, 2, 3) as well as on other environmental and health impacts that occur through product use.

1.2 The sector and sustainable development

Energy is a key driver of economic growth and sustainable development. Coal has been a fundamental source of the world's energy, contributing to economic growth and poverty reduction. Coal represents the largest resource for electricity production, providing over a third of the total supply.[3]

The role of coal remains important in regions or countries where coal is a key source of revenue or a strategic asset that guarantees energy independence. Although the number of people worldwide working in coal mining is not very large,[4] coal can be the main economic resource of a community. In addition to employment, coal activities can also bring about local economic development, along with infrastructure and services. Most of the world's coal is not traded internationally, but consumed in the same country where it is produced, though some major producing countries export the majority of the coal produced.

Meanwhile, coal consumption is declining globally, though in many countries, particularly in Asia, its use is still growing. Burning coal for energy generation is responsible for 40% of all greenhouse gas (GHG) emissions from fossil fuels, representing the main contributor to climate change. In addition, coal has the highest emissions intensity when combusted. Coal typically releases more than twice the amount of GHGs than natural gas per unit of energy produced.[5]

The majority of the world's countries has committed to combating climate change, as outlined in the Paris Agreement. Climate change threatens the lives, livelihoods, health, and homes of millions of people. The International Panel on Climate Change (IPCC) warns that continuing to consume fossil fuels at the current rate could result in dangerous global temperature increases leading to magnified risks of extreme weather and climate events.[6] Other reports show that with current policy commitments, the world is indeed heading toward a dangerous 3.2-degree Celsius rise in temperature by 2100.[7] These projections underline the need to transition to a low-carbon economy based on affordable, reliable, and sustainable energy. Achieving net zero GHG emissions by 2050 is required to

[3] International Energy Agency (IEA), World Energy Outlook 2020, 2020, accessed on 5 April 2021.
[4] Eight million people are estimated to work in coal mining in the world; see M. Jakob et al., 'The Future of Coal in a Carbon-Constrained Climate', *Nature Climate Change*, vol. 10, no. 8, August 2020.
[5] Energy Information Administration (EIA), How much carbon dioxide is produced per kilowatthour of U.S. electricity generation?, accessed on 5 April 2021.
[6] International Panel on Climate Change (IPCC), *Global Warming of 1.5°C*, 2018.
[7] United Nations Environment Programme (UNEP), *Emissions Gap Report 2019*, 2019.

limit global warming to 1.5 degrees Celsius above pre-industrial levels, which is predicted to pose significantly lower risks to natural and human systems than a warming of 2 degrees Celsius.[8] Actions taken by high-emitting sectors, such as the coal sector, are essential for this transition. These actions can include business model changes, investing in renewable energy sources, prioritizing energy-efficient practices, and developing and adopting new technologies and nature-based solutions to remove carbon from the atmosphere.

The coal sector faces additional pressure to embark on the transition path as governments and the financial sector implement climate-resilient policies and portfolios, resulting in financial restrictions or divestments from coal. While these policies incentivize decarbonizing the economy, they will also result in decreased employment opportunities for workers in the sector and its supply chains. Many mining communities have few alternative sources of employment, and decline in coal mining can lead to high local unemployment rates. To ensure a just transition, it is essential for governments and organizations to work together. A just transition refers to a fair and equitable pathway through industrial transformation to a sustainable future, that integrates worker-centric public and employer policies and programs to provide a secure and decent future for all workers, their families, and the communities that rely on them. The roadmap to a low-carbon transition will differ between countries according to their context and differing capabilities to respond to and mitigate impacts of climate change.

In addition to contributing to climate change, the coal sector generates various negative impacts on the environment and people, including impacts on human rights. These include, for example, water, air, and soil pollution as well as impacts on biodiversity, which can also result in serious health impacts on people. Accidents and working conditions can pose further health and safety risks for workers and local communities. The use of land for sector activities may also lead to disputes, often triggered by issues related to tenure rights, resettlement of local communities, or restricted access to land and natural resources. These impacts are especially relevant for indigenous peoples, who often have a special relationship with land and the natural environment.

Sustainable Development Goals

The United Nations (UN) Sustainable Development Goals (SDGs), part of the 2030 Agenda for Sustainable Development adopted by the 193 United Nations member states, comprise the world's comprehensive plan to achieving sustainable development.

Since the SDGs and targets associated with them are integrated and indivisible, coal organizations have the potential to impact all SDGs by either enhancing their positive contributions or avoiding and mitigating negative impacts.

While the coal sector contributes to meeting the world's energy demand and thus plays a role in achieving **Goal 7: Affordable and Clean Energy**, extracting and burning coal is the primary contributor to climate change. Climate change can also exacerbate other challenges, such as achieving access to clean water, food security, and poverty reduction. Ensuring access to affordable, reliable, and sustainable energy while mitigating GHG emissions as per **Goal 13: Climate Action** and the necessary transition to a low-carbon economy is one of the sector's greatest challenges.

Because the coal sector is in many regions still a central source of employment and income, it makes positive contributions to **Goal 8: Decent Work and Economic Growth** and **Goal 1: No Poverty**. Coal operations can also stimulate other economic activity and bring along infrastructure and services to local communities around mining sites. With proper management of environmental impacts caused by coal operations, the sector can thus contribute to **Goal 11: Sustainable cities and communities** and **Goal 12: Responsible Consumption and Production**.

[8] International Panel on Climate Change (IPCC), *Global Warming of 1.5°C*, 2018.

Table 2 highlights connections between the likely material topics for the coal sector and the SDGs. These linkages were identified based on an assessment of the impacts described in each likely material topic, the targets associated with each SDG, and existing mapping undertaken for the sector. It is a starting point for organizations that seek to integrate the SDGs into their reporting.

Table 2: Linkages between the likely material topics for the coal sector and the SDGs

Likely material topics	Corresponding Sustainable Development Goals
2.1 Climate adaptation and resilience	Goal 1: No Poverty
	Goal 7: Affordable and Clean Energy
	Goal 8: Decent Work and Economic Growth
	Goal 9: Industry, Innovation and Infrastructure
	Goal 13: Climate Action
2.2 GHG emissions	Goal 13: Climate Action
	Goal 14: Life Below Water
2.3 Closure and rehabilitation	Goal 8: Decent Work and Economic Growth
	Goal 11: Sustainable Cities and Communities
	Goal 15: Life on Land
2.4 Air emissions	Goal 3: Good Health and Well-being
	Goal 11: Sustainable Cities and Communities
	Goal 15: Life on Land
2.5 Biodiversity	Goal 6: Clean Water and Sanitation
	Goal 12: Responsible Consumption and Production
	Goal 14: Life Below Water
	Goal 15: Life on Land
2.6 Waste	Goal 3: Good Health and Well-being
	Goal 6: Clean Water and Sanitation
	Goal 12: Responsible Consumption and Production
	Goal 15: Life on Land
2.7 Water and effluents	Goal 6: Clean Water and Sanitation
	Goal 12: Responsible Consumption and Production
	Goal 14: Life Below Water
	Goal 15: Life on Land
2.8 Economic impacts	Goal 1: No Poverty
	Goal 5: Gender Equality
	Goal 8: Decent Work and Economic Growth
	Goal 9: Industry, Innovation and Infrastructure
	Goal 10: Reduced Inequalities
2.9 Local communities	Goal 1: No Poverty
	Goal 3: Good Health and Well-being
	Goal 5: Gender Equality
	Goal 6: Clean Water and Sanitation
	Goal 16: Peace, Justice and Strong Institutions

2.10 Land and resource rights	Goal 1: No Poverty
	Goal 11: Sustainable Cities and Communities
	Goal 16: Peace, Justice and Strong Institutions
2.11 Rights of indigenous peoples	Goal 1: No Poverty
	Goal 3: Good Health and Well-being
	Goal 5: Gender Equality
	Goal 11: Sustainable Cities and Communities
	Goal 16: Peace, Justice and Strong Institutions
2.12 Conflict and security	Goal 16: Peace, Justice and Strong Institutions
2.13 Asset integrity and critical incident management	Goal 3: Good Health and Well-being
	Goal 11: Sustainable Cities and Communities
2.14 Occupational Health and Safety	Goal 3: Good Health and Well-being
	Goal 8: Decent Work and Economic Growth
2.15 Employment practices	Goal 1: No Poverty
	Goal 5: Gender Equality
	Goal 8: Decent Work and Economic Growth
	Goal 10: Reduced Inequalities
2.16 Child labor	Goal 1: No Poverty
	Goal 8: Decent Work and Economic Growth
	Goal 16: Peace, Justice and Strong Institutions
2.17 Forced labor and modern slavery	Goal 8: Decent Work and Economic Growth
	Goal 16: Peace, Justice and Strong Institutions
2.18 Non-discrimination and equal opportunity	Goal 5: Gender Equality
	Goal 8: Decent Work and Economic Growth
	Goal 10: Reduced Inequalities
	Goal 16: Peace, Justice and Strong Institutions
2.19 Freedom of association and collective bargaining	Goal 8: Decent Work and Economic Growth
	Goal 16: Peace, Justice and Strong Institutions
2.20 Anti-corruption	Goal 12: Responsible Consumption and Production
	Goal 16: Peace, Justice and Strong Institutions
2.21 Payments to governments	Goal 1: No Poverty
	Goal 16: Peace, Justice and Strong Institutions
	Goal 17: Partnerships for the Goals
2.22 Public policy and lobbying	Goal 16: Peace, Justice and Strong Institutions

2. Likely material topics

The following section outlines the likely material topics for the coal sector. Each topic describes the most significant impacts related to the topic and lists disclosures that have been identified as relevant for reporting on the topic by the sector. The organization needs to review each topic in this section and determine whether it is material for it to report on.

2.1 Climate adaptation and resilience

Climate adaptation and resilience refer to how an organization adjusts to current and anticipated climate-related risks, as well as how it contributes to the ability of societies and economies to withstand impacts from climate change. This topic covers an organization's strategy in relation to the transition to a low-carbon economy and the impacts of that transition on workers and local communities.

Signatories of the Paris Agreement have committed to keeping global warming 'well below 2 degrees'. Yet the maximum amount of fossil fuels that can be burned while remaining within that limit – the global carbon budget – is far lower than the proven reserves that organizations could be extracted. This puts pressure on producers to modify their business models, establish carbon emissions targets, create carbon sinks, and diversify away from fossil fuels.

Since coal emits the largest amount of carbon dioxide (CO_2) and has the highest intensity of emissions per unit of energy among fossil fuels (see topic 2.2 GHG emissions), burning coal is likely to be the first activity governments seek to suppress in fulfilling their commitments under the Paris Agreement. Since its peak consumption in 2013, the energy transition has commenced and total consumption of coal has been declining.[9]

This transition presents high risks for organizations, workers, and local communities reliant on coal operations. As the market for coal shrinks, some organizations will be forced to close operations, impacting their financial viability. Workers are faced with challenges related to their employability and finding desirable re-employment. Coal mining regions may end up with environmental legacy costs related to asset closure as well as significant reductions of economic activity that lead to lower tax revenues and depopulation.

In 2040, coal use as a share of total global energy use could vary between an estimated 20% and 10% depending on the policy scenario.[10] The transition will also be unequal across countries, as some countries are much more dependent on coal for electricity generation than others. Similarly, while alternatives are available for energy generation, steelmakers still lack a feasible alternative for coal, so their transition might take longer. Technological solutions for burning coal without emitting CO_2 (e.g., through carbon capture and storage or utilization) are being tested, but the technology has not progressed at the rate necessary to meet the required emissions reductions to limit global warming to levels committed to in the Paris Agreement, and new investment is scarce.[11]

Many coal operations will face closure, but others are expected to remain operational for decades. Which remain operational longer will depend on technological, geographic, and political factors. Organizations are at risk of owning stranded assets or pieces of physical capital that become drastically reduced in value by the transition, leading to write-offs. Organizations may mitigate these

[9] International Energy Agency (IEA), Coal Information: Overview, accessed on 5 April 2021.
[10] The share of coal in the energy mix was 27% in 2018. International Energy Agency (IEA) uses two policy scenarios for forecasting the use of coal: under the Current Policy Scenario (assuming no change in policies), this share will be reduced to 20% in 2040; under the Sustainable Development Scenario (assuming policies compatible with the Paris Agreement), the share will be reduced to 10% in 2040. World Energy Outlook 2019, accessed 5 April 2021.
[11] International Energy Agency (IEA), World Energy outlook 2018, accessed 5 April 2021.

risks by diversifying away from coal, investing in technological solutions, and focusing on market segments expected to remain operational longer.

A just transition to a low-carbon economy requires recognizing the different levels of dependence on coal by regions and countries and the need to create quality jobs for persons affected. Examples of potential actions from coal organizations to ensure a just transition include providing plenty of notice of closures, collaborating with governments and unions, retraining and redeploying workers, and providing alternate investments in affected communities. Meaningful, early consultations with stakeholders and communities have proven crucial (see topic 2.3 Closure and rehabilitation).

The transition can also bring along opportunities to reinvigorate economic activity and provide new employment opportunities and skills development.

What to report

If the organization has identified climate adaptation and resilience as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	– Report the level and function within the organization that has been assigned responsibility for managing climate change-related impacts. – Describe the board's oversight to manage climate-change related impacts. – Report whether responsibility to manage climate change-related impacts is linked to performance assessments or incentive mechanisms, including in the remuneration policies for highest governance body members and senior executives. – Describe any commitments, policies, and actions taken to mitigate the impacts of the transition to a low-carbon economy on workers and communities.
Topic Standards disclosures		
GRI 201: Economic Performance 2016	Disclosure 201-2 Financial implications and other risks and opportunities due to climate change	– Describe the climate change-related scenarios used to assess the resilience of the organization's strategy, including a 2-degree or lower scenario. – Describe how the climate-change related scenarios affect or could affect the organization's operations or revenue, including potential write-offs and early closure of existing assets. – Report the coal production volumes for the reporting year and projected volumes for the next five years.

		– Report the estimated reserves and potential emissions from these reserves.
		– Report the percentage of capital expenditure (CapEx) allocated to investments in:
		  ○ prospecting and exploration of new reserves;
		  ○ low-carbon technology;
		  ○ energy from renewable sources.
		– Report investments in nature-based solutions for climate change mitigation and technologies to remove CO_2; and net captured value of CO_2 removed.
		– Report diversification of operations away from a reliance on sales and transport of coal.

Additional sector disclosures		
Describe the organization's approach to public policy advocacy on climate change, including: – the organization's stance on issues related to climate change; – any differences between the organization's lobbying positions and any stated policies, goals, or other public positions; and – a list of industry and other membership associations and national or international organizations participating in public policy advocacy on climate change in which the organization has a significant role. *Note: The final disclosure is related to Disclosure 2-28 Membership associations. If the information reported by the organization in 2-28 covers the membership associations requested by this disclosure, the organization can provide a reference to this information.*		

References and resources

GRI 201: Economic Performance 2016 lists authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 72.

2.2 GHG emissions

Greenhouse gas (GHG) emissions comprise air emissions that contribute to climate change, such as carbon dioxide and methane. This topic covers direct and energy indirect GHG emissions (Scope 1 and Scope 2) related to an organization's activities, as well as other indirect GHG emissions (Scope 3) related to the end use of an organization's products.

Greenhouse gas (GHG) emissions are the single biggest contributor to climate change, the impacts of which are occurring at an accelerating rate. Studies show that approximately half of the total anthropogenic carbon dioxide (CO_2) emissions from 1750 onwards have occurred in the last 40 years, mostly due to increased use of fossil fuels, including coal.[12] Although the energy efficiency of production has improved, increased energy demand has caused a rise in global GHG emissions, the majority of which originates from combustion of fossil fuels.[13]

Besides CO_2, coal operations also cause the emission of another powerful GHG: methane (CH_4). This GHG has a significantly higher global warming potential than CO_2; when considering its impact over 100 years, one ton of CH_4 is equivalent to 28 to 36 tons of CO_2.[14] The energy sector has been identified as the second-largest source of anthropogenic CH_4 emissions. Recent measurements indicate that available figures on CH_4 emissions from energy could be underestimates. Other GHG emissions related to coal extraction and use include nitrous oxide (N_2O) and ozone (O_3).

Activities related to coal mining and processing consume significant amounts of energy. Unless they are powered by renewable energy sources, these operations generate CO_2 emissions. These are classified as direct (Scope 1) GHG emissions for activities owned or controlled by the organization or energy indirect (Scope 2) GHG emissions for activities that result from purchased or acquired electricity consumed by the organization.

The amount of energy used in coal mining depends on several factors, such as the method of mining, mine depth, geology, mine productivity, and degree of refining required. Activities among the most energy-consuming include transportation, exploration activities, drilling, excavation, extraction, grinding, crushing, milling, pumping, and ventilation processes. Extraction and transportation in underground mines might require more energy than surface mining due to, for example, greater requirements for hauling, ventilation, and water pumping. Closure and rehabilitation activities are also a source of GHG emissions.

Coal mines are also a source of CH_4 emissions, which are produced during the process of coal formation and released to the atmosphere during and after the mining process. Coal mine methane (CMM) can be released via degasification systems and ventilation air from underground coal mines, seepage from abandoned or closed mines through vent holes or cracks in the ground, coal seams of surface mines, and fugitive emissions from storage and transportation. Underground mines are responsible for the majority of Scope 1 coal CH_4 emissions due to the higher gas content of deeper seams.

For coal, end-use activities are responsible for the most significant GHG emissions, which are classified as part of other indirect (Scope 3) GHG emissions. Coal is a carbon-intensive fuel, and its combustion generates the single largest source of global CO_2 emissions. These emissions mostly originate from electricity and heat generation, steel production, and cement manufacturing.

[12] Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2014: Synthesis Report*, 2014.
[13] International Energy Agency (IEA), *Market Report Series: Energy Efficiency 2018*, accessed 5 April 2021; *CO2 Emissions from Fuel Combustion: Highlights*, 2018.
[14] Greenhouse Gas Protocol, Global Warming Potential Values; International Energy Agency (IEA), Methane tracker 2020, accessed 5 April 2021.

354 ## What to report

355 If the organization has identified GHG emissions as a material topic, this section lists the disclosures
356 that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	When reporting on goals and targets, report: – Report the scopes of GHG emissions (1, 2, 3) and the activities and business relationships to which the goals and targets apply. – Report how the goals and targets are set and which instruments and mandatory legislation the goals and targets are based on or aligned with. – Report the baseline for setting goals and targets and the timeline for achieving them.
Topic Standards disclosures		
GRI 302: Energy 2016	Disclosure 302-1 Energy consumption within the organization	
	Disclosure 302-2 Energy consumption outside of the organization	
	Disclosure 302-3 Energy intensity	

Standard	Disclosure	Additional sector recommendations
Topic Standards disclosures		
GRI 305: Emissions 2016	Disclosure 305-1 Direct (Scope 1) GHG emissions	– Report the percentage of direct (Scope 1) methane emissions. – Report the breakdown of gross direct (Scope 1) GHG emissions by type of source (stationary combustion, process, fugitive). *Note: This recommendation is based on the guidance to clause 2.2.5.3 in GRI 305: Emissions 2016.*
	Disclosure 305-2 Energy indirect (Scope 2) GHG emissions	
	Disclosure 305-3 Other indirect (Scope 3) GHG emissions	
	Disclosure 305-4 GHG emissions intensity	
	Disclosure 305-5 Reduction of GHG emissions	

References and resources

GRI 302: Energy 2016 and *GRI 305: Emissions 2016* list authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 72.

2.3 Closure and rehabilitation

At the end of commercial use, organizations are expected to close assets and facilities and rehabilitate operational sites. The planning and execution of this phase should take environmental as well as socioeconomic impacts into consideration. This topic covers an organization's approach to closure and rehabilitation, including impacts on the environment, local communities, and workers.

Potential impacts of coal mining following closure include soil and water contamination, changes to landforms, and disturbance of biodiversity and wildlife. Closure can also lead to lasting socioeconomic consequences for local communities (see topic 2.9 Local communities). Closure often requires planning that begins in the early phases of a project's lifecycle in order to anticipate potential impacts. Failure to close assets and rehabilitate sites effectively can render land unusable for other productive uses due to the presence of toxic materials or contamination. It can also result in health and safety hazards.

Environmental impacts from the closure of surface and underground mining can differ. For example, surface mining requires more land use and more substantial rehabilitation, whereas abandoned underground mines may emit coal mine methane even after active mining has ceased, contributing to GHG emissions.

Over the course of a coal mining project, communities may come to depend on the sector's activities for jobs, income, royalties, tax payments, charitable donations, and other benefits (see also topic 2.21 Payments to governments). This can lead to negative impacts on the economy and people once the project ends. For example, insufficient notice of closure or lack of adequate planning for economic revitalization, social protection, and labor transition can hinder the transition of workers and local communities to a post-closure phase and cause retrenchment, economic downturn, and social unrest. Without clearly assigned responsible parties or allocated funds, closed coal mines can also leave behind legacy environmental issues and financial burden for local communities and governments.

Closure and rehabilitation of coal operations can also create employment and business opportunities. This can involve an influx of additional workers for an extended period of time. The arrival of workers from the surrounding areas or through a fly-in-fly-out approach during this phase can, in turn, exacerbate other pressures on the environment.

Closure and rehabilitation of coal mining operations should result in a stable and sustainable ecosystem, compatible with planned post-closure land use. Activities can include stabilization of open-pit or underground workings and removal or conversion of infrastructure to ensure safety of people; rehabilitation of waste rock stockpiles and tailings facilities to control erosion and land degradation; management of waste, surface water, and groundwater quality issues resulting from abandoned rock drainage, waste rock, and leaching from tailings (see also topic 2.6 Waste and 2.7 Water and effluents); and post-closure monitoring.

The need to reduce GHG emissions and to transition to a low-carbon economy (see topic 2.1 Climate adaptation and resilience) is leading to more frequent closures. These are less likely to be counterbalanced by openings, as has been the case in the past. In areas where employment largely derives from coal activities, mitigating significant socioeconomic impacts requires collaboration between local and national governments, coal organizations, workers, and unions to ensure a just transition.

What to report

If the organization has identified closure and rehabilitation as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	
Topic Standards disclosures		
GRI 402: Labor/Management Relations 2016	Disclosure 402-1 Minimum notice periods regarding operational changes	Describe how workers are consulted in advance of significant operational changes.
GRI 404: Training and Education 2016	Disclosure 404-2 Programs for upgrading employee skills and transition assistance programs	Describe the labor transition plans in place to help workers manage the transition to post-closure phase of operations (which can include redeployment, assistance with re-employment, resettlement, and redundancy payments).
Additional sector disclosures		
Report the organization's operations that: – have closure and rehabilitation plans; – have been closed; – are in the process of being closed.		
Report the total monetary value of financial provisions made by the organization for closure and rehabilitation, including post-closure and rehabilitation monitoring, and aftercare.		

References and resources

GRI 402: Labor/Management Relations 2016 and *GRI 404: Training and Education 2016* list authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 73.

2.4 Air emissions

Air emissions include pollutants that can have negative impacts on air quality, ecosystems, and human and animal health. This topic covers impacts from emissions of sulfur oxides (SOx), nitrogen oxides (NOx), particulate matter (PM), volatile organic compounds(VOC), carbon monoxide(CO), and heavy metals, such as lead, mercury, and cadmium.

In addition to greenhouse gas (GHG) emissions, coal is a significant source of anthropogenic air emissions classified as pollutants. Globally, air pollution causes acute health problems and millions of deaths annually[15] by contributing to heart and lung diseases, strokes, respiratory infections, and neurological damage. Children, the elderly, and the poor are disproportionately affected, as are communities adjacent to operations.

The emission of pollutants also has impacts on ecosystems. For example, nitrogen emissions and mercury that enter the oceans or waterways can impact marine life. They are also a major cause of ground-level ozone – commonly known as smog – which can lead to or worsen respiratory illnesses. Sulfur oxides can lead to acid rain and increase ocean acidification. Further adverse effects from acid rain and ground-level ozone include degradation of water, soil, flora, and fauna, and impairment of their ability to function and grow.

Air emissions from coal operations include CO, NO_x, PM from coal dust, and SO_2. These emissions can occur from evaporation from tailings ponds or waste areas; fugitive dust emissions from drilling, blasting, storage, transportation, loading, and unloading; refining and processing activities; and transportation of supplies and products. Emissions related to product use include NO_x, PM, SO_2, arsenic, cadmium, lead, mercury, selenium, and other heavy metals.

In addition to their impacts on climate change (see topic 2.2 GHG emissions), air emissions from burning coal in power plants or industrial processes can also have negative impacts on people. Outdoor air pollution causes millions of deaths every year, and burning coal is a major source of this pollution. These emissions are caused by organizations in other sectors, such as utilities and steel, but their impacts can often be directly linked to the coal sector.

What to report

If the organization has identified air emissions as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	

[15] World Health Organization (WHO), *Ambient Air Pollution: A Global Assessment of Exposure and Burden of Disease*, 2016.

Standard	Disclosure	Additional sector recommendations
Topic Standards disclosures		
GRI 305: Emissions 2016	Disclosure 305-7 Nitrogen oxides (NO_X), sulfur oxides (SO_X), and other significant air emissions	– Report particulate matter (PM) emissions from coal dust separately from total PM. – Report carbon monoxide (CO) emissions.
GRI 416: Customer Health and Safety 2016	Disclosure 416-1 Assessment of the health and safety impacts of product and service categories	Describe actions taken to improve product quality to reduce air emissions.

References and resources

GRI 305: Emissions 2016 and *GRI 416: Customer Health and Safety 2016* list authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 74.

2.5 Biodiversity

Biodiversity not only has intrinsic value, but is also vital to climate, human health and well-being, food security, and economic prosperity. This topic covers impacts on biodiversity, including on plant and animal species and genetic diversity.

Coal operations typically require large-scale infrastructure development, which have direct, indirect, and cumulative impacts on biodiversity in the short and long term. Due to the scale and long lifespans of coal projects, impacts can occur well beyond a project's temporal and geographical parameters, including after closure. Direct impacts include air, soil, and water contamination, deforestation, soil erosion, and sedimentation of waterways. Other impacts include habitat fragmentation and conversion, the introduction of invasive species and pathogens, and species mortality.

Impacts on biodiversity can result from land clearance for pits, access routes, and progressive expansion into new areas; habitat fragmentation from access roads and other linear infrastructure; disruption of surface water, wetland, and groundwater ecosystems; and effluent discharges, groundwater, or surface stream contamination from acidic water, coal tailings ponds, or overburden piles (see also topic 2.6 Waste and 2.7 Water and effluents).

Different mining methods present distinct risks for biodiversity. Open-pit mines generate more severe impacts than underground mines due to progressive deepening and widening of the mining site, increasing affected areas over time. Coal resources can also be located in sensitive ecosystems or areas with high biodiversity value, which can exacerbate impacts on biodiversity. In addition, increased human settlement around operational sites can have impacts through opening of routes to previously inaccessible areas, adding stress and contributing to cumulative impacts within the landscape.

Coal activities can contribute to cumulative impacts on biodiversity. For example, habitat fragmentation caused by the presence of a mining site can be compounded by land use change from agricultural operations. Extensive land use requirements for open-pit mining can also contribute to GHG emissions and climate change, namely through land use change resulting in removal of carbon sinks. Climate change, in turn, is expected to affect all aspects of biodiversity – including individual organisms, populations, species distribution, and ecosystem composition and function – and the impacts are anticipated to become more severe as temperatures increase (see also topic 2.1 Climate adaptation and resilience and 2.2. GHG emissions).

The coal sector has participated in developing a mitigation hierarchy tool, which can be used to limit and manage negative impacts on biodiversity and ecosystems. The tool presents a prioritized sequence of measures for the sustainable management of natural resources, with preventive actions taking precedence over remediation. Priority is given to avoidance and, where avoidance is not possible, to minimization of impacts. Only at the point that all preventative steps are adopted should remediation measures be used, including rehabilitation or restoration of degradation or damage, and offsetting residual impacts remain after all other measures have been applied.[16]

What to report

If the organization has identified biodiversity as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

[16] Cross Sector Biodiversity Initiative (CSBI), *A cross sector guide for implementing the Mitigation Hierarchy*, 2015.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	– Describe any commitments to achieving no net loss or net gain to biodiversity on operational sites, and report whether these commitments apply to existing or future operations, and whether they also apply to operations beyond areas of high biodiversity value. – Report whether application of the mitigation hierarchy has informed actions to manage the topic and related impacts.
Topic Standards disclosures		
GRI 304: Biodiversity 2016	Disclosure 304-1 Operational sites owned, leased, managed in, or adjacent to protected areas and areas of high biodiversity value outside protected areas	
	Disclosure 304-2 Significant impacts of activities, products, and services on biodiversity	
	Disclosure 304-3 Habitats protected or restored	Describe how the application of the mitigation hierarchy has resulted in: – areas protected through avoidance measures or through offset measures; – areas restored through on-site restoration measures or through offset measures.
	Disclosure 304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	

References and resources

GRI 304: Biodiversity 2016 lists authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 74.

2.6 Waste

Waste refers to anything that a holder discards, intends to discard, or is required to discard. When inadequately managed, waste can have significant negative impacts on the environment and human health, often extending beyond locations where waste is generated and discarded. This topic covers impacts from waste, including as a result of construction and remediation activities from active and inactive sites.

Waste impacts from coal activities can include contamination of surface water, groundwater, and food sources with chemicals and heavy metals. Further effects can be loss of land productivity and erosion. Certain wastes require particularly robust management due to their type or volume. In remote areas with limited waste disposal methods, waste impacts can be more severe or harder to monitor.

The largest waste stream from coal operations comprises overburden, rock waste, and tailings. Often produced in large quantities, these wastes can also contain toxic or noxious substances, including heavy metals. Effective waste management and minimization are therefore critical for protecting local communities and preventing damage to the environment.

Overburden from surface mining is usually stored on adjacent undisturbed land until it can backfill the pit once mining is complete. Disposal options are limited for some surface mining techniques, such as mountain-top removal, since the overburden cannot be returned to the pit. In these cases, the disposal method consists of adjacent valley filling, which can lead to various environmental and biodiversity impacts (see topic 2.5), such as burial of waterways and concentration of noxious substances harmful to ecosystems and humans (see also topic 2.7 Water and effluents).

Rock waste and coarse tailings are usually managed on heaps or disposed in constructed waste rock dumps or former open-pit operations. Associated environmental impacts concern air pollution from dust from these dumps, which wind or rainwater can carry to affect air quality, watercourses, or lands.

Coal slurry waste from mining and processing is generally discarded into ponds, filtered, stored in heaps, or disposed of in underground voids. Surface tailing storage facilities can cover vast areas and be contained by tailings dams. Tailings without harmful substances can be drained and stored until being reshaped and covered with soil and vegetated. However, tailings pose a health risk for local communities when they contain heavy metals, cyanide, chemical-processing agents, sulfides, or suspended solids that can pollute the environment, including groundwater and surface water (incidents related to tailings facilities are discussed in topic 2.13 Asset integrity and critical incident management).

Other typical wastes from coal operations include waste oils and chemicals, spent catalysts, solvents and other industrial wastes, as well as packaging and construction wastes.

The nature and quantity of generated waste often requires management beyond the productive phase of a mining operation. At the end of a coal exploration or extraction project, closure can also yield significant waste, which can have lasting environmental and socioeconomic consequences (see topic 2.3 Closure and rehabilitation).

What to report

If the organization has identified waste as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	
Topic Standards disclosures		
GRI 306: Waste 2020	Disclosure 306-1 Waste generation and significant waste-related impacts	
	Disclosure 306-2 Management of significant waste-related impacts	
	Disclosure 306-3 Waste generated	Report a breakdown of the composition of waste by the following waste streams: – overburden; – rock waste; – tailings.
	Disclosure 306-4 Waste diverted from disposal	Report a breakdown of the composition of waste by the following waste streams: – overburden; – rock waste; – tailings.
	Disclosure 306-5 Waste directed to disposal	Report a breakdown of the composition of waste by the following waste streams: – overburden; – rock waste; – tailings.

References and resources

GRI 306: Waste 2020 lists authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 74.

2.7 Water and effluents

Recognized by the United Nations as a human right, access to fresh water is essential for human life and wellbeing. The amount of water withdrawn and consumed by an organization and the quality of its discharges can have impacts on ecosystems and people.

Coal activities can have impacts on the availability and quality of water resources, which can in turn have impacts on ecosystems and water users. The coal sector's water consumption in operations can reduce water availability for local communities and other sectors that also rely on the resource. Certain mining methods can involve substantive vegetation clearance and land use changes, which can also lead to erosion and sediments flows. Alterations in water flows and increased sedimentation affect water quality and aquatic and terrestrial habitats.

Water in coal mining is used for cooling and cutting in mines; dust suppression in mining and hauling; washing to improve coal quality; re-vegetation of surface mines; and long-distance transportation of coal slurry. The amount of water needed for operations depends on whether mining occurs on the surface or underground as well as on operational efficiency. The amount of water withdrawn also varies according to the ability to substitute water, water quality, reservoir characteristics, and recycling infrastructure.

The coal sector's impacts on water additionally depends on the quantity of water resources in the local context; where water is scarce, the sector has a greater impact. A large proportion of the world's coal resources are found in areas that are arid or experience water stress. In such areas, the sector's activities are likely to increase competition for water with other demands – such as for household use and fishing, aquaculture, or agriculture activities – and exacerbate tensions between as well as within sectors or local communities. Droughts, floods, and other extreme weather events related to climate change will likely pose more challenges related to water availability and quality.

Coal activities can have significant impacts on the quality of surface water and groundwater, which can translate into long-term implications for ecosystems and biodiversity, spread waterborne diseases, cause health and development problems for humans, and impair food chain productivity. These impacts can occur from leaching from tailings, failure of tailings facilities, and acid mine drainage, which involves acidic water containing heavy metals. Underground operations might also disrupt or contaminate aquifers. Transportation accidents and related coal spills can result in waterways and wetlands being contaminated with harmful materials, such as arsenic, lead, mercury, and sulfur compounds (see also topic 2.13 Asset integrity and critical incident management).

What to report

If the organization has identified water and effluents as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	
Topic Standards disclosures		
GRI 303: Water and Effluents 2018	Disclosure 303-1 Interactions with water as a shared resource	
	Disclosure 303-2 Management of water discharge-related impacts	Describe actions taken to prevent or mitigate impacts from acid mine drainage.
	Disclosure 303-3 Water withdrawal	
	Disclosure 303-4 Water discharge	
	Disclosure 303-5 Water consumption	

References and resources

GRI 303: Water and Effluents 2018 lists authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 75.

2.8 Economic impacts

An organization's activities can have impacts on the economic conditions of its stakeholders and on economic systems through, for example, revenues and other payments, hiring, and procurement. Infrastructure investments and services supported by an organization can also have impacts on a community's well-being and long-term development. This topic covers economic impacts at local, national, and global levels.

Coal activities can be an important source of investment and income for local communities, countries, and regions. Actual impacts vary according to the scale of operations, stimulation of other economic activity, and effectiveness of management of coal-related revenues by local governments. In some resource-rich countries, a significant amount of the gross domestic product is derived from investments in the development of coal resources and revenues from mining. However, mismanagement of these revenues can harm economic performance and lead to macroeconomic instability and distortions (see also topic 2.21 Payments to governments and 2.20 Anti-corruption). Economies dependent on finite resources can also be vulnerable to commodity price and production fluctuations.

The coal sector can have positive impacts on communities, countries, and regions through royalty payments, taxes, and wealth creation. Investments by coal organizations in the development of enabling infrastructure, such as public power utilities to improve access to energy, can benefit local communities. Coal activities can also stimulate economies and create local employment, with well-paid jobs in the coal sector potentially resulting in increased purchasing power. Skills development of local communities through education and training can also help increase access to jobs in the sector. Positive impacts on local businesses can result from local procurement of products and services as well as from supplier development.

The extent to which local communities benefit from the coal sector's presence depends on existing development and industrialization levels and the community's capacity to offer qualified workers for the new employment opportunities. In addition, the net employment impacts depend on how employment by the sector affects existing jobs in other sectors. These impacts can also be affected by an organization's employment practices. For example, a fly-in-fly-out work approach can offset pressures associated with influxes of people in small communities while still supplying workers to fill positions (see also topic 2.15). However, this approach reduces employment opportunities available to local communities, thus detracting from potential economic benefits.

Introduction of new coal activities can also generate negative impacts on local communities, including competition over jobs and economic disparity; vulnerable groups, including women, are often disproportionately affected (see also topic 2.9 Local communities). An influx of external workers can increase pressure on housing, infrastructure, and public services. Other potential negative impacts include environmental legacy costs related to, for example, contamination, incidents, or lack of proper rehabilitation after closure (see also topic 2.3 Closure and rehabilitation).

Governments and regions with coal resources currently face the risk of stranded assets due to stricter climate policies and technological developments driving the transition to a low-carbon economy (see topic 2.1 Climate adaptation and resilience). The transition is expected to result in significant reductions in coal mining, making communities and countries that depend on the sector's revenues or employment vulnerable to resulting economic downturn. In these cases, collaboration between local and national governments and organizations in the coal sector is essential to ensure a just transition.

What to report

If the organization has identified economic impacts as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	Describe the organization's approach to providing local procurement and employment opportunities, including training programs.
Topic Standards disclosures		
GRI 201: Economic Performance 2016	Disclosure 201-1 Direct economic value generated and distributed	Report direct economic value generated and distributed by project.
GRI 202: Market Presence 2016	Disclosure 202-1 Ratios of standard entry level wage by gender compared to local minimum wage	
	Disclosure 202-2 Proportion of senior management hired from the local community	
GRI 203: Indirect Economic Impacts 2016	Disclosure 203-1 Infrastructure investments and services supported	
	Disclosure 203-2 Significant indirect economic impacts	
GRI 204: Procurement Practices 2016	Disclosure 204-1 Proportion of spending on local suppliers	

References and resources

GRI 201: Economic Performance 2016 and *GRI 202: Market Presence 2016* list authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 75.

2.9 Local communities

Local communities can comprise individuals or groups of individuals living and/or working in areas that are affected or that could be affected by an organization's activities. An organization is expected to conduct community engagement to understand the vulnerabilities of local communities and how they might be affected by the organization's activities. This topic covers socioeconomic, cultural, health, and human rights impacts on local communities.

Coal organizations can have positive impacts on local communities through employment, local procurement, and local taxes (see also topic 2.8 Economic impacts, 2.15 Employment practices and 2.21 Payments to governments). Organizations in the sector can also benefit local communities through community development programs and providing access to infrastructure and services, including access to energy, if the services and infrastructure are designed with community needs in mind.

The coal sector's activities can also lead to negative impacts on communities. For example, land use requirements for activities or transportation and distribution of products, influxes of people seeking employment and economic opportunities, environmental degradation, and use of natural resources for sector activities can all cause negative impacts. Types and significance of impacts commonly associated with the sector vary according to the characteristics and context of the local community.

Land use requirements can cause displacement and loss of access to land, water and other natural resources (see 2.10 Land and resource rights). Land use for coal mining can compete with other land uses, such as farming, fishing, or recreation. Displacement can additionally impact human rights of individuals in local communities. The sector's land use may also result in damage to cultural heritage sites, which can lead to loss of culture, tradition, or cultural identity. Such damage especially affects indigenous peoples. Decreased availability of resources can have more severe impacts on women, who are often responsible for obtaining water, food, and fuel.

The arrival of workers from the surrounding areas or through a fly-in-fly-out work approach during construction or expansion of a coal mine might lead to greater economic inequality within the local community. There may be an increase in activities that compromise social order, such as substance abuse, gambling, and prostitution, specifically affecting vulnerable groups. The influx of predominantly male migrant workers can also change the social dynamics of the local community. This impacts women in particular, as it can lead to a rise in sexual violence and trafficking as well as sexually transmitted diseases (see also topic 2.11 Rights of indigenous peoples). The sector has also been linked to domestic and gender-based violence, both on mining sites and in local communities. In-migration of workers can also introduce new communicable diseases and increase pressure on local services and resources.

Organizations can have further impacts on community health, safety, and well-being due to air, soil, and water pollution; increased levels of noise and light; waste streams and leaks; and dust. Incidents, such as explosions, fires, mine collapses, spills, and tailings dams failures, can threaten the safety of local communities (see also topic 2.13 Asset integrity and critical incident management). Increased traffic to operational sites can pose additional road accident hazards.

When operating in areas of pre-existing conflict or where negative impacts from coal activities are left unattended, conflicts can arise or become exacerbated (see also topic 2.12 Conflict and security).

Effective local community engagement can contribute to better management of the social impacts of coal projects. If organizations in the coal sector overlook or poorly execute such engagement, community concerns might not be understood or addressed, which can exacerbate existing impacts or create new ones.

What to report

If the organization has identified local communities as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	– Describe the means for identifying and engaging with local communities. – List the vulnerable groups that the organization has identified. – List any collective or individual rights that the organization has identified to be of particular concern to the local communities. *Note: These recommendations are based on the guidance to clause 1.1 in* GRI 413: Local Communities 2016.
Topic Standards disclosures		
GRI 413: Local Communities 2016	Disclosure 413-1 Operations with local community engagement, impact assessments, and development programs	
	Disclosure 413-2 Operations with significant actual and potential negative impacts on local communities	Describe significant impacts on the health of local communities as a result of exposure to pollution caused by the organization's operations or use of hazardous substances.
Additional sector disclosures		
Report the number and description of disputes from local communities, including actions taken and outcomes of the actions.		

References and resources

GRI 413: Local Communities 2016 lists authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 76.

2.10 Land and resource rights

Land and resource rights encompass the rights to use, manage and control land, fisheries, forests, and other natural resources. Organizations can have impacts on the availability and accessibility of these to local communities and other users. This topic covers impacts from an organization's use of land and natural resources on human rights and tenure rights, including from resettlement of local communities.

Coal operations require access to land for prospecting, exploration, mining, coal and waste storage, processing, transportation, and distribution of products. This can sometimes lead to displacement of other land users, restricted access to resources and services, and resettlement. Impacts from land use vary according to methods of extraction, resource location, processing required, and transportation methods. For example, displacement is more often associated with open-pit mining than underground coal mining.

Unclear rules regarding tenure rights to access, use, and control land often cause disputes, economic and social tensions, and conflict. Insufficient consultation with, and inadequate compensation to, affected communities can also exacerbate tensions and conflict. For example, the relationship between subsurface (i.e., mineral) rights and surface (i.e., land) rights might be unclear; formal statutory tenure rules might overlap or conflict with traditional customary rules; legitimate rights may not be recognized or enforced; or people may lack formal documentation of their rights to land. Community consultations may also fail to include all affected members. Women, for example, are often excluded from decision-making processes related to the development a new project.

Organizations may provide local communities with monetary compensation or land that is equivalent to lost assets. However, determining the value of local communities' lost access to the natural environment is complex. It requires considerations of income-generating activities, human health, and non-material aspects of quality of life. The amount of compensation provided may therefore not be equivalent to the loss suffered. In some cases, customary titleholders to the land may not be compensated at all or may only be compensated for crops they were cultivating on the land rather than also for the land itself.

Involuntary resettlement of local communities can have impacts on people's livelihoods and human rights. These impacts can be exacerbated for vulnerable groups. Involuntary resettlement can involve physical displacement (e.g., relocation or shelter loss) and economic displacement (e.g., loss or access to assets). Involuntary resettlement typically requires more extensive engagement between organizations and local communities. Impacts of resettling communities can be exacerbated by a flawed process or lack of transparency, for example, in the absence of free, prior, and informed consent (FPIC), specifically for indigenous peoples (see also topic 2.11 Rights of indigenous peoples).

Community members resisting resettlement can also face threats and intimidation, as well as violent, repressive, or life-threatening removal from lands by security forces or government agents (see also topic 2.12 Conflict and security).

What to report

If the organization has identified land and resource rights as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	Describe how the organization seeks to ensure meaningful engagement with vulnerable groups, including how it ensures safe and equal gender participation. *Note: This recommendation is related to Disclosure 2-29 Approach to stakeholder engagement. If the information reported by the organization in 2-29 describes how it seeks to ensure meaningful engagement with vulnerable groups, the organization can provide a reference to this information.*
Topic Standards disclosures		
GRI 413: Local Communities 2016	Disclosure 413-1 Operations with local community engagement, impact assessments, and development programs	
	Disclosure 413-2 Operations with significant actual and potential negative impacts on local communities	– Report the locations of operations or facilities which necessitated involuntary resettlement or where such resettlement is ongoing. For each location, describe how peoples' livelihoods and human rights were affected as a result of the resettlement, and any remedy provided. (For example, describe the impacts on people's customary rights, cultural rights, and access to economic resources and services as a result of the resettlement, and any remedy provided.) – Describe the process for providing remediation to local communities subject to involuntary resettlement, such as the process for establishing compensation for loss of assets or other assistance to improve or restore standards of living or livelihoods.

References and resources

GRI 413: Local Communities 2016 lists authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 76.

2.11 Rights of indigenous peoples

Indigenous peoples are considered a vulnerable group that could experience negative impacts as a result of an organization's activities more severely than the general population. Indigenous peoples have both collective and individual rights, as set out in United Nations Declaration on the Rights of Indigenous Peoples and other international human rights instruments. This topic covers impacts on the rights of indigenous peoples.

The coal sector can have impacts on indigenous peoples that are often connected with sociocultural factors, such as their cultural heritage and special relationship with land. Development of coal activities can present positive economic impacts through, for example, employment opportunities and community development programs (see also topic 2.8) but the sector's activities can also disrupt indigenous peoples' cultural, spiritual, and economic ties to their lands or natural environments, compromise their rights and well-being, and cause displacement (see also topic 2.10 Land and resource rights). Availability of and access to water, as a key concern for indigenous communities, can also be impacted. Considering many indigenous peoples' distinct relationship with and dependence on nature, the sector's role as a major contributor to climate change exacerbates impacts on the environment.

The collective and individual rights of indigenous peoples are recognized in international instruments. Indigenous peoples also often have a special legal status in national legislation, and/or can be customary or legal owners of lands to which organizations in the coal sector are granted use rights by governments. As such, before initiating development projects that require resettlement or have potential impacts on lands or resources used or owned by indigenous peoples, organizations are expected to seek free, prior, and informed consent (FPIC) from indigenous peoples. This right is recognized in the United Nations Declaration on the Rights of Indigenous Peoples and allows indigenous peoples to give or withhold consent to a project that may affect them or their territories as well as to negotiate project conditions. However, some national governments might not recognize or enforce indigenous land rights or indigenous peoples' rights to consent. Documented cases show absence of good faith consultations as well as undue pressure and harassment toward indigenous peoples to accept projects; opposition to such projects has in some cases led to violence and death (see also topic 2.12 Conflict and security). Organizations in the coal sector and indigenous peoples regularly have disputes and conflicts over land ownership and rights.

The sector can further undermine social cohesion, welfare, and safety of indigenous communities through tension created by the influx of foreign workers, risks of prostitution and forced labor, violence against women, and increased exposure to communicable diseases (see also topic 2.9 Local communities). Negative socioeconomic impacts from coal mining projects often affect indigenous women more than men.

What to report

If the organization has identified rights of indigenous peoples as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	– Describe the mutually accepted process to incorporate the right to free, prior, and informed consent (FPIC) and other rights as set out in the United Nations Declaration on the Rights of Indigenous Peoples and the International Labour Organization Convention 169 'Indigenous and Tribal Peoples'.

Standard	Disclosure	Additional sector recommendations
GRI 3: Material Topics 2021 (cont.)	Disclosure 3-3 Management of material topics	– Describe how the organization seeks to ensure meaningful engagement with indigenous peoples, including how it ensures safe and equal gender participation. *Note: this recommendation is related to Disclosure 2-29 Approach to stakeholder engagement. If the information reported by the organization in SE-1 describes the means for ensuring equal and safe gender participation, the organization can provide a reference to this information.*
Topic Standards disclosures		
GRI 411: Rights of Indigenous Peoples 2016	Disclosure 411-1 Incidents of violations involving rights of indigenous peoples	
GRI 413: Local Communities 2016	Disclosure 413-1 Operations with local community engagement, impact assessments, and development programs	Describe the process for identifying and implementing community development programs for indigenous peoples, such as providing training and access to jobs, providing supply opportunities and benefit-sharing contracts, or implementing an indigenous employment strategy.
	Disclosure 413-2 Operations with significant actual and potential negative impacts on local communities	List the locations of operations where indigenous peoples are present or affected by ongoing coal activities.

References and resources

GRI 411: Rights of Indigenous Peoples 2016 and *GRI 413: Local Communities 2016* list authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 77.

2.12 Conflict and security

An organization's activities may trigger conflict, or they may be located in areas facing conflict situations. An organization's use of security personnel or reliance on national security forces in conflict situations can have negative impacts and needs to be carefully managed to ensure that the human rights of local communities and other third parties are respected. This topic covers the organization's security practices and its approach to operating in areas of conflict.

Many organizations in the coal sector operate in regions and situations of conflict. Pre-existing conflicts are common when, for example, organizations operate in countries characterized by political and social instability. The risk of human rights abuses is heightened in areas of conflict.

Conflict can also be caused by the presence of coal activities. These conflicts can be triggered by poor engagement with or exclusion of local communities and indigenous peoples from decision-making processes; uneven distribution of economic benefits; negative impacts, such as environmental pollution or reduced access to resources seen as disproportionate to the benefits received; or disputes over use of scarce resources. Conflict can also be triggered by mismanagement of coal-related revenues by public officials for individual gains at the expense of local interests (see also topic 2.20 Anti-corruption).

Organizations in the coal sector may use security personnel to protect their assets or ensure their workers' safety. Security personnel may take action against community members, including when they are protesting projects or protecting their lands. These actions can violate human rights, such as rights to freedom of association and freedom of speech (see also topic 2.19), as well as lead to violence, injuries, or deaths. Security contractors may also be connected to military or paramilitary groups.

Security may be provided by host government police or military forces. In such cases, organizations in the coal sector might be involved with negative human rights impacts as a result of their business relationships with these military and security forces, over whose actions they have limited control. When coal projects are endorsed by local governments but remain disagreeable to local communities, the use of private military or security forces may increase tensions and exacerbate the power imbalance between companies and local communities.

Effectively addressing such negative impacts involves assessing security risks, which includes engaging with stakeholders, and working with security providers to ensure human rights are respected. This may also help organizations improve safety and security in local communities through, for example, facilitating communication between government security forces and local communities and supporting efforts to address other sources of conflict.

What to report

If the organization has identified conflict and security as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	List the organization's significant operations in areas of conflict.
Topic Standards disclosures		
GRI 410: Security Practices 2016	Disclosure 410-1 Security personnel trained in human rights policies or procedures	

References and resources

GRI 410: Security Practices 2016 lists authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 78.

2.13 Asset integrity and critical incident management

Asset integrity and critical incident management deal with prevention and control of incidents that can lead to fatalities, injuries or ill health, environmental impacts, and damage to communities and infrastructure. This topic covers impacts from such incidents and an organization's approach to critical incident management.

Critical incidents in the coal sector can have catastrophic consequences on workers, local communities, and the environment, as well as cause damage to the organization's assets. In addition to fatalities and injuries, these incidents can cause economic loss, conflict, threats to livelihoods, compromised food safety and security, social disruption, cultural erosion, litigation stress, environmental degradation, and direct species mortality. Incidents that cause methane and other GHG emissions, such as gas and coal dust explosions, also contribute to climate change.

Critical incidents related to coal mining include mine collapses, poisonous gas leaks, dust explosions, stope collapses, fires, mining-induced seismicity, floods, vehicle collisions, and mechanical errors due to improperly operated or malfunctioning equipment (see also topic 2.14 Occupational health and safety). Coal fires can release fly ash and smoke containing GHG emissions and toxic chemicals that can enter food chains.

Other critical incidents involve failures related to tailings management. Poor management or design of tailing facilities can lead to leaks or collapses, with severe impacts on local communities, livelihoods, infrastructure, and the environment. Failures can be due to poor water management, overtopping, foundation or drainage failure, erosion, and earthquakes. Impacts become more severe when tailings also contain high levels of bioavailable metals or hazardous chemicals. Incidents related to spills and leaks of coal slurry ponds and tailings pipelines can also cause significant damage.

Critical incident risks can be identified and anticipated through implementation of a critical control management approach, which addresses the sources or factors likeliest to lead to potential incidents. Organizations can mitigate their impacts through measures that ensure emergency preparedness and response. This includes effective communication with local communities to mitigate exposure to pollution and other impacts during emergencies (see also topic 2.9 Local communities). Effective critical control management can also limit impacts associated with natural calamities and extreme weather events, which are likely to increase in frequency and intensity due to climate change.

What to report

If the organization has identified asset integrity and critical incident management as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	– Report whether the organization complies with the Global Industry Standard on Tailings Management (GISTM) and, if so, provide a link to the latest information disclosed in line with GISTM Principle 15.[17] – Describe the actions taken to: ○ manage impacts from tailings facilities throughout the lifecycle, including closure and post-closure; ○ prevent catastrophic failures of tailings facilities.[18]
Topic Standards disclosures		
GRI 306: Effluents and waste 2016	Disclosure 306-3 Significant spills	
Additional sector disclosures		
– List the organization's tailings facilities. – For each tailings facility, report the following information: • description of the tailings facility; • operational status (active, inactive, closed, etc.); • Dam Failure Consequence Classification, in line with the GISTM; • date and main findings from the latest risk assessment. *Note: If the organization has already reported this information as specified in the additional sector recommendation to MT-3 listed above, the organization can provide a reference to this information.*		
Describe the organization's emergency preparedness and response programs and plans.		

References and resources

GRI 306: Effluents and Waste 2016 lists authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 79.

[17] International Council on Mining and Metals (ICMM), United Nations Environment Programme (UNEP), Principles for Responsible Investment (PRI), *The Global Industry Standard on Tailings Management*, 2020.
[18] The terms 'tailings facility' and 'catastrophic failure' are so defined in ICMM, UNEP, PRI, *The Global Industry Standard on Tailings Management*, 2020.

2.14 Occupational health and safety

Healthy and safe working conditions are recognized as a human right. Occupational health and safety involves prevention of physical and mental harm to workers and promotion of workers' health. This topic covers impacts related to workers' health and safety.

Many of the work-related hazards in the coal sector are associated with key processes in exploration and mining phases, such as working with heavy machinery and exposure to or handling of explosive, flammable, poisonous, or harmful substances. Despite the sector's efforts to eliminate work-related hazards and improve safety, exposure to these hazards has resulted in higher fatality rates than in many other sectors.

Other hazards with a potential to result in work-related injury or ill health can result from working in confined spaces or isolated locations, long working hours, and the type of physical, often repetitive, labor involved. Hazards vary according to the extraction method. For example, risks may be higher for workers in underground mines due to challenging working conditions and confined environments.

The coal sector extensively uses suppliers to perform what can amount to major parts of projects. Suppliers are often subject to lower occupational health and safety standards than employees. Suppliers might also have higher accident and fatality rates, which can be due to them undertaking the most dangerous jobs. In addition, suppliers might not be covered by the coal organization's occupational health and safety management system, be less familiar with the workplace and the organization's safety practices, or be less committed to those practices.

Hazards associated with the coal sector with a potential to result in injury include transportation incidents, which are a common source of fatalities and injuries. These can occur when workers and equipment are transported to and from mining sites, sometimes over long distances along dangerous routes. Fires and explosions are another major hazard (see also topic 2.13 Asset integrity and critical incident management), which can originate from coal dust and flammable gases during coal extraction, transportation, and processing. Electrical hazards can be associated with high-voltage systems or equipment used in mining sites.

Work-related incidents categorized as 'struck-by', 'caught-in', or 'caught-between' can involve falling equipment or structures, faulty operation of heavy machinery, or malfunctioning of electrical, hydraulic, or mechanical installations. Workers can also be at risk of falls, slips, and trips, such as when workers access working areas or equipment located high above the ground or via underground walkways, which can be obstructed, wet, or sloped.

Hazards associated with the sector with a potential to result in ill health include exposure to airborne respirable dust, which can lead to obstructive or debilitating lung illnesses such as asthma, cancer, and pneumoconiosis. Free crystalline silica released during processes that use or produce sand, can cause lung cancer and silicosis. Coal dusts are also associated with coal workers' pneumoconiosis. In addition, exposure to hydrogen sulfide released by coal seams can lead to incapacitation or death. Concentration of gases such as carbon monoxide, methane, and nitrogen in confined spaces can create poisonous environments, which can lead to asphyxiation.

Physical hazards include extreme temperatures, which can cause fatigue and body stress reactions, as well as harmful levels of carcinogenic radiation from industrial processing and harmful levels of machinery noise. Workers can also suffer impaired hearing and musculoskeletal disorders due to ergonomic-related hazards, such as vibration.

Biological hazards include exposure to viruses present in the local community that cause communicable diseases or bacteria as a result of poor hygiene and quality of water or food.

Hazards related to work organization and psychosocial well-being due to common employment practices in the sector, such as the use of fly-in-fly-out work organization, can increase risks of fatigue, strain, or stress, and affect physical, psychological, and social health. These hazards include expatriation, rotational work, long shifts, irregular or odd working hours, and work that is solitary or monotonous. Workers can also suffer psychological reactions, such as post-traumatic stress disorder due to, for example, being involved in a critical incident. Gender imbalance can contribute to stress, discrimination, or sexual harassment (see also topic 2.18 Non-discrimination and equal opportunity).

What to report

If the organization has identified occupational health and safety as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	
Topic Standards disclosures		
GRI 403: Occupational Health and Safety 2018	Disclosure 403-1 Occupational health and safety management system	
	Disclosure 403-2 Hazard identification, risk assessment, and incident investigation	
	Disclosure 403-3 Occupational health services	
	Disclosure 403-4 Worker participation, consultation, and communication on occupational health and safety	
	Disclosure 403-5 Worker training on occupational health and safety	
	Disclosure 403-6 Promotion of worker health	
	Disclosure 403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	
	Disclosure 403-8 Workers covered by an occupational health and safety management system	
	Disclosure 403-9 Work-related injuries	
	Disclosure 403-10 Work-related ill health	

References and resources

GRI 403: Occupational Health and Safety 2018 lists authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 79.

2.15 Employment practices

Employment practices refer to an organization's approach to job creation, terms of employment and working conditions for its workers. This topic also covers the employment and working conditions in an organization's supply chain.

Employment opportunities generated by the coal sector, either directly or through suppliers, can have positive socioeconomic impacts on communities, countries, and regions. The sector can offer well-paid opportunities for skilled workers. However, employment practices in the sector are also associated with a number of negative impacts related to working conditions, use of contract labor and disparities in working conditions, inadequate labor-management consultations, and job security.

Many jobs in the sector have rigorous shift patterns to ensure continuity of operations around the clock, sometimes requiring overtime employment and night shifts, which can cause high fatigue levels and augment risks related to critical incidents and occupational health and safety and (see also topics 2.13 and 2.14). An organization can also use fly-in-fly-out work arrangements, in which workers are flown to the site of operations for a number of weeks at a time and often required to work extended shifts. Irregular work shifts and schedules and time spent away from families can have further psychosocial impacts on workers.

Various activities are commonly outsourced to suppliers. This is prevalent during peak periods, such as construction or maintenance works, or for specific activities, such as drilling, catering, transportation, and security. By outsourcing activities and using workers employed through suppliers, organizations in the coal sector may seek to reduce their labor costs and circumvent collective agreements that would otherwise benefit workers in direct employment (see also topic 2.19 Freedom of association and collective bargaining).

Compared to employees workers who have an employment relationship with the organization, agency workers commonly receive less favorable employment conditions, lower compensation, and less training. They also have higher accident rates and less job security than directly employed workers. They might lack social protection and access to grievance mechanisms. Workers beyond the first tiers in the organization's supply chain may be subject to low standards for working conditions, exposing organizations in the coal sector human rights violations through their business relationships (see also topics 2.16 Child labor and 2.17 Forced labor and modern slavery).

Employment terms can also vary significantly for local workers, expatriates (e.g., temporary coal workers who are brought in by employers), migrant workers, and contractors. Remuneration might be unequal, and benefits, such as bonuses, housing allowances, and private insurance plans, might only be offered to expatriates. Lack of relevant skills, knowledge, or accessible training programs can restrict local communities from accessing employment opportunities created by the sector in the first place (see also topic 2.8 Economic impacts).

Job security is another concern the coal sector faces. For example, mine closures or coal price drops can be sudden, leading to job losses. Low job security is compounded by automation and changing business models, such as changes triggered by the transition to a low-carbon economy. If organizations fail to offer workers timely skills development measures, improving their employability in other sectors, they can face underemployment or unemployment.

What to report

If the organization has identified employment practices as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	
Topic Standards disclosures		
GRI 401: Employment 2016	Disclosure 401-1 New employee hires and employee turnover	
	Disclosure 401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	
	Disclosure 401-3 Parental leave	
GRI 402: Labor/Management Relations 2016	Disclosure 402-1 Minimum notice periods regarding operational changes	
GRI 404: Training and Education 2016	Disclosure 404-1 Average hours of training per year per employee	
	Disclosure 404-2 Programs for upgrading employee skills and transition assistance programs	
GRI 414: Supplier Social Assessment 2016	Disclosure 414-1 New suppliers that were screened using social criteria	
	Disclosure 414-2 Negative social impacts in the supply chain and actions taken	

References and resources

GRI 401: Employment 2016, *GRI 402: Labor/Management Relations 2016*, *GRI 404: Training and Education 2016*, and *GRI 414: Supplier Social Assessment 2016* list authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 80.

2.16 Child labor

Child labor is defined as work that 'deprives children of their childhood, their potential and their dignity, and that is harmful to their physical or mental development including by interfering with their education'. Freedom from child labor is a fundamental human right.

Around one million children between ages five and 17 are estimated to be engaged in artisanal and small-scale mining and quarrying activities.[19] Coal is identified as produced with the use of child labor in several countries, including Afghanistan, Colombia, Mongolia, Pakistan and Ukraine.[20]

Coal mining activities are dangerous to children in various ways. Children face multiple hazards in coal mines, such as severe accidents and injuries, falling rocks, explosions, fires, and collapse of mine walls (see also topic 2.14 Occupational health and safety). Other impacts can result from working in remote areas with limited access to schools and social services. If there is no family or community support, the conditions may also foster alcohol abuse, drugs, and prostitution.

Coal organizations interact with a high number of suppliers and customers, including in countries with low enforcement of human rights. Organizations can be linked to child labor by business relationships in their supply chains, such as during facilities construction. Risks of child labor in the coal sector are often found in artisanal and small-scale mining, with more prevalence in the informal sector and remote areas. Child labor is also more frequent in areas affected by armed conflict (see also topic 2.12 Conflict and security).

Other impacts on children's rights and well-being can result from the coal sector's impacts on the local communities as well as from organization's employment practices. These can include parents' working conditions, long hours, shift work, and fly-in-fly-out practices (see also topic 2.15 Employment practices).

What to report

If the organization has identified child labor as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	
Topic Standards disclosures		
GRI 408: Child labor 2016	Disclosure 408-1 Operations and suppliers at significant risk for incidents of child labor	

[19] UNICEF, *Children's rights and the mining sector*, 2015; International Labour Organisation (ILO), *Global Estimates of Child Labour – Results and Trends 2012-2016*, 2017.
[20] U.S. Department of Labor, *2020 List of Goods Produced by Child Labor or Forced Labor*, 2020.

Standard	Disclosure	Additional sector recommendations
GRI 414: Supplier Social Assessment 2016	Disclosure 414-1 New suppliers that were screened using social criteria *Note: This disclosure is also listed in 2.15 Employment practices. If the organization has identified employment practices as a material topic and has already reported this disclosure, the organization can provide a reference to this information.*	

References and resources

GRI 408: Child labor 2016 and *GRI 414: Supplier Social Assessment 2016* list authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 80.

2.17 Forced labor and modern slavery

Forced labor is work or service which is exacted under the menace of penalty and for which a person has not offered themselves voluntarily. Freedom from forced labor is a fundamental right at work. This topic covers impacts and expectations of organizations in relation to forced labor and modern slavery.

Coal has been identified as a product at risk of being produced by forced labor or modern slavery in several countries, including North Korea, Pakistan, and China.[21] Organizations in the coal sector interact with a large number of suppliers, including in countries characterized by low rates of enforcement of human rights. This can increase the likelihood of using suppliers that do not adhere to rights at work or relevant codes of conduct, leaving supply chains vulnerable to human rights violations, including incidences of modern slavery.

Coal organizations can contribute to occurrences of modern slavery through joint ventures and other business relationships, including state-owned enterprises in countries where regular human rights standards violations occur.

Documented cases of human rights violations throughout the supply chain concern activities such as coal shipping and construction. Low-skilled migrant workers can also face higher risks of modern slavery when dealing with third-party employment agencies, such as those who have been found to overcharge workers for visas and flights or to demand recruitment costs be paid by employees rather than employers.

What to report

If the organization has identified forced labor and modern slavery as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	
Topic Standards disclosures		
GRI 409: Forced or Compulsory Labor 2016	Disclosure 409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	

[21] United States Department of Labor, *2020 List of Goods Produced by Child Labor or Forced Labor*, 2020; Walk Free Foundation, *The Global Slavery Index 2018*, 2018.

Standard	Disclosure	Additional sector recommendations
GRI 414: Supplier Social Assessment 2016	Disclosure 414-1 New suppliers that were screened using social criteria *Note: This disclosure is also listed in 2.15 Employment practices. If the organization has identified employment practices as a material topic and has already reported this disclosure, the organization can provide a reference to this information.*	

References and resources

GRI 409: Forced or Compulsory labor 2016 and GRI 414: Supplier Social Assessment 2016 list authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 81.

2.18 Non-discrimination and equal opportunity

Freedom from discrimination is a human right and a fundamental right at work. Discrimination can impose unequal burdens on individuals or deny them opportunities instead of treating them fairly and on the basis of individual merit. This topic covers impacts from discrimination and practices related to diversity, inclusion, and equal opportunity.

The conditions, locations, and types of work associated with the coal sector can set a barrier for entry to the sector, hinder employee diversity, and result in discrimination. Discriminatory practices can impede access to jobs and career development, as well as lead to unequal treatment, remuneration, and benefits.

Discrimination has been documented in the coal sector concerning race, color, sex, gender, religion, national extraction, and worker status. For example, jobseekers from local communities are sometimes excluded from the hiring process because of a recruitment system bias that favors a dominant ethnic group or utilizes expatriate workers. Compared to expatriates, local workers might receive significantly lower pay for equal work. The sector's widespread use of contract workers, often with differing terms of employment, can also be a source of discrimination.

The coal sector is characterized by a significant gender imbalance. In many countries, the percentage of women working in this sector is significantly lower than the proportion of women working in other sectors. Women are also significantly underrepresented in senior management positions. One of the causes of this imbalance is that fewer women graduate with degrees pertinent to the sector, such as in science, technology, engineering, and mathematics. Other barriers for women and primary caregivers include lack of parental leave arrangements and childcare facilities at mining sites, long work hours, and fly-in-fly-out work arrangements (see also topic 2.15 Employment practices). Social or cultural customs and beliefs and biases can also limit women's access to jobs in this sector or prevent them from taking on specific roles. In addition, some resource-rich countries have laws that prevent women from working in hazardous or arduous occupations.

The coal sector has also been linked to domestic and gender-based violence, both at sites of operation and within local communities near operations. Male-dominated cultures, imbalanced gender distribution, and gendered organizational norms have been identified as factors that contribute to the likelihood of sexual harassment in such contexts.

Understanding how specific groups may be subject to discrimination in the different locations where an organization operates can help the organization in effectively addressing discriminatory practices, for example, by providing specific training to workers on how to prevent discrimination and create a respectful workplace.

What to report

If the organization has identified non-discrimination and equal opportunity as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	

Topic Standards disclosures		
GRI 202: Market Presence 2016	Disclosure 202-1 Ratios of standard entry level wage by gender compared to local minimum wage *Note: This disclosure is also listed in 2.8 Economic impacts. If the organization has identified economic impacts as a material topic and has already reported this disclosure, the organization can provide a reference to this information.*	
	Disclosure 202-2 Proportion of senior management hired from the local community *Same note as above applies.*	
GRI 401: Employment 2016	Disclosure 401-3 Parental leave *Note: This disclosure is also listed in 2.15 Employment practices. If the organization has identified employment practices as a material topic and has already reported this disclosure, the organization can provide a reference to this information.*	
GRI 404: Training and Education 2016	Disclosure 404-1 Average hours of training per year per employee *Same note as above applies.*	
GRI 405: Diversity and equal opportunity 2016	Disclosure 405-1 Diversity of governance bodies and employees	
	Disclosure 405-2 Ratio of basic salary and remuneration of women to men	
GRI 406: Non-discrimination 2016	Disclosure 406-1 Incidents of discrimination and corrective actions taken	

References and resources

GRI 401: Employment 2016, *GRI 404: Training and Education 2016*, *GRI 405: Diversity and equal opportunity 2016*, and *GRI 406: Non-discrimination 2016* list authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 81.

2.19 Freedom of association and collective bargaining

Freedom of association and collective bargaining are fundamental rights at work. They include the rights of employers and workers to form, join, and run their own organizations without prior authorization or interference, and to collectively negotiate working conditions and terms of employment. This topic covers impacts resulting from violations of freedom of association and collective bargaining.

Workers' rights to organize and to take collective action are essential for improving working conditions in the coal sector, including conditions relating to occupational health and safety, wages, and job security. These rights can also enable public scrutiny about the sector's governance and practices, and help reduce social inequality.

Many jobs associated with the sector have traditionally been represented by trade unions and covered by collective bargaining agreements, which are negotiated by national, regional, or global sectoral federations and associations. However, some coal resources are located in countries where these rights are restricted. Workers in such locations face risks when seeking to join trade unions and engage in collective bargaining. Even in countries where unions are legal, restrictions might exist that prevent effective worker representation, and workers who join unions may face intimidation or unfair treatment.

Documented cases of interference with freedom of association and collective bargaining include detention of managers and employees; invasion of privacy; not adhering to collective agreements; prevention of union access to workplaces in order to assist workers; refusal to bargain in good faith with workers' chosen unions; threats, harassment, forced disappearance, violence, and deaths; unfair dismissal of trade union members and leaders; and unilateral cancellation of collective bargaining agreements.

Contract workers, who are widely used in these sectors, are often excluded from the scope of collective bargaining agreements, which can leave them with reduced benefits and worse working conditions (see also topic 2.15 Employment practices).

Freedom of association and civic space

Freedom of association and peaceful assembly are fundamental human rights. These rights entail that both workers, through their trade unions, as well as citizens, through independent civil society, have the freedom to speak about the sector's policies and organizations' practices without interference. Restrictions imposed on civic space – the environment that enables civil society to contribute to decisions that affect individual lives – can limit citizens' ability to engage in public debate about the sector's policies and organizations' practices.

What to report

If the organization has identified freedom of association and collective bargaining as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	
Topic Standards disclosures		
GRI 407: Freedom of Association and Collective Bargaining 2016	Disclosure 407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	

References and resources

GRI 407: Freedom of Association and Collective Bargaining 2016 lists authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 81.

2.20 Anti-corruption

Anti-corruption refers to how an organization manages the potential of being involved in corruption. Corruption refers to practices such as bribery, facilitation payments, fraud, extortion, collusion, money laundering, and the offer or receipt of an inducement to do something that is dishonest or illegal. This topic covers impacts related to corruption and expectations of organizations in relation to contract and ownership transparency.

Corruption in the coal sector has been linked to various negative impacts, such as misallocation of resource revenues, damage to the environment, abuse of democracy and human rights, and political instability. Corruption can lead to diversion of resource revenues from public needs, such as infrastructure or basic services, which can have severe impacts, especially in countries with high levels of poverty. This can lead to increased inequalities and conflicts over coal resources.

Factors increasing the likelihood of involvement with corruption include frequent interaction between coal organizations and politically exposed persons, such as government officials appointed to govern a country's natural resources for licenses and other regulations. The sector's international reach along with complex transactions and flows of money can further enable corruption.

Corruption in the coal sector can occur throughout the value chain, with practices that aim to:

- influencing decision-making processes in order to extract resources;
- shaping policies and rules; or influencing protection of land rights and land access restrictions affecting livelihoods of local communities and indigenous peoples;
- gaining preferential terms or license approvals;
- gaining favorable treatment or confidential information in the bidding process for exploration and production rights; or for avoiding specific requirements, potentially resulting in awarding licenses or contracts to less qualified organizations or securing contracts at inflated prices;
- influencing or avoiding environmental, social, and other regulations and enforcement of these, as they relate to impact assessment processes or consultation with local communities;
- incentivizing suppliers of equipment, products, and services to secure contracts by using bribes and kickbacks to, for example, cover up fraud or to get a waiver of regulations or quality requirements for products and services;
- gaining favorable treatment in relation to taxes and other government levies, such as royalties and import duties, to deny the state revenue, or to divert payments to private beneficiaries;
- blocking unfavorable legislation, including environmental policies or pollution taxes (see also topic 2.22 Public policy and lobbying).

To combat corruption and prevent the negative impacts that stem from it, organizations are expected by the marketplace, international norms, and stakeholders to demonstrate their adherence to integrity, governance, and responsible business practices.

Transparency of contracts and ownership structures

Publication of government contracts is a growing practice that is now an international norm in the extractive industries. The practice is endorsed by organizations such as the United Nations, International Monetary Fund, International Finance Corporation, International Bar Association, and the Organisation for Economic Co-operation and Development (OECD).

Contracts governing the extraction of oil and gas resources are commonly devised by governments and organizations on behalf of citizens or local communities without public oversight. Due to the long-term horizons and widespread impacts of projects, fair terms for sharing risk and rewarding benefits, including those related to a just transition, are particularly important. Contract transparency helps local communities hold governments and organizations accountable for their negotiated terms and obligations. It also helps create a level playing field that enables governments to negotiate for better deals.

Lack of transparency about ownership structures can make it difficult to determine who benefits from financial transactions in the sector. Beneficial ownership transparency has been identified as a significant opportunity to deter conflicts of interest, corruption, tax avoidance and evasion.

What to report

If the organization has identified anti-corruption as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	
Topic Standards disclosures		
GRI 205: Anti-corruption 2016	Disclosure 205-1 Operations assessed for risks related to corruption	
	Disclosure 205-2 Communication and training about anti-corruption policies and procedures	
	Disclosure 205-3 Confirmed incidents of corruption and actions taken	
Additional sector disclosures		
Describe the organization's policy on contract transparency and provide a link to publicly available contracts and licenses. If a contract or a license is not publicly available, explain the reasons why and report any actions taken by the organization to overcome any barriers to publication. *Note: This disclosure in based on EITI Standard 2019, Requirement 2.4.Contracts.*		
List the beneficial owners within the organization's structure and explain how the organization identifies the beneficial owners of business partners, including joint ventures and suppliers. *Note: This disclosure in based on EITI Standard 2019, Requirement 2.5. Beneficial ownership c. and f.*		

References and resources

GRI 205: Anti-corruption 2016 lists authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 82.

2.21 Payments to governments

Lack of transparency about payments to governments can contribute to inefficient management of public funds, illicit financial flows, and corruption. This topic covers impacts from an organization's practices related to payments to governments, and expectations of organizations in relation to transparency regarding such payments.

Organizations in the coal sector deal with a large number of complex financial transactions subject to a variety of payments to governments. These include taxes; commodity trading revenues; production rights; royalties; signature, discovery, and production bonuses; and other payments.

Transparency about payments to governments can demonstrate the economic importance of the coal sector to the host countries, and enable informed decision-making and public debate. Insufficient transparency of these payments can impede detection of misallocation of revenues and corruption (see also topic 2.20 Anti-corruption). In the absence of contract transparency, transparency about taxes and other payments can offer valuable insights into the terms of contracts and can help governments increase their accountability and strengthen revenue collection and management.

Taxes, royalties, and other payments from organizations in the coal sector can amount to an important source of investment and income for local communities, countries, and regions (see also topic 2.15 Economic impacts). Coal organizations are often subject to paying royalties, along with widely applicable taxes and payments to governments, for using natural resources. Royalties are obligations to governments that are not based on corporate profits, but rather on amounts of the commodity extracted. They are designed to guarantee governments an income from the non-renewable resource that is protected from transfer pricing and other mechanisms used by organizations to minimize taxes. At the same time, the sector receives substantial subsidies from governments in many countries, even despite government commitments to phase out financial support by 2018.[22] Transparency about the subsidies received can be of great value interest to some stakeholders, such as investors or civil society.

When disclosing information on payments to governments, organizations in the coal sector may report aggregate payments at a global level. However, aggregated figures provide limited insight into payments made in each country or per project. Reporting country-level or project-level payments enables governments to compare the actual payments made to those stipulated in fiscal, legal, and contractual terms and to assess the financial contribution of coal projects to communities. It can also enable tax authorities to address tax avoidance and evasion by revealing information on transfer pricing arrangements and transactions. This can remove information asymmetry and provide a level playing field for governments when negotiating contracts.

State-owned enterprises

In some countries – China and India being notable examples – the largest producers of coal are state-owned enterprises (SOEs). As direct customers, SOEs are also highly relevant for the sector. Of all power plants burning coal, 40% belong to SOEs; the figure rises to 56% if joint ventures are included.

SOEs often have special status, which can involve financial advantages and preferential treatment. By disclosing their transactions with SOEs, organizations in this sector can increase transparency about payments to governments and help reduce risks of corruption.

[22] In the European Union, subsidies to coal producers added up to €9.7 billion in 2012 (M. Blom et al., 'Subsidies and Costs of EU Energy', 2014), and remained at similar levels in the following years (see S. Whitley et al.; Overseas Development Institute (ODI), 'Cutting Europe's Lifelines to Coal: Tracking Subsidies in 10 Countries', 2017).

What to report

If the organization has identified payments to governments as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	
Topic Standards disclosures		
GRI 201: Economic Performance 2016	Disclosure 201-1 Direct economic value generated and distributed *Note: This disclosure is also listed in 2.8 Economic impacts. If the organization has identified economic impacts as a material topic and has already reported this disclosure, the organization can provide a reference to this information.*	
	Disclosure 201-4 Financial assistance received from government	For state-owned organizations, report the financial relationship between the government and the SOE. *Note: This disclosure is based on EITI Standard 2019 Requirement 2.6 State participation.*
GRI 207: Tax 2019	Disclosure 207-1 Approach to tax	
	Disclosure 207-2 Tax governance, control, and risk management	
	Disclosure 207-3 Stakeholder engagement and management of concerns related to tax	
	Disclosure 207-4 Country-by-country reporting	

Additional sector disclosures
Report a breakdown of taxes and other payments to governments by revenue stream and project. *Note: This disclosure is based on EITI Standard 2019 Requirement 4.1 Comprehensive disclosure of taxes and revenues and requirement 4.7. Level of disaggregation.*
For coal purchased from the state, or from third parties appointed by the state to sell on their behalf, report: – the volumes and types of coal purchased; – the full names of the buying entity and of the recipient of the payment; – the value of payments made for the purchase. *Note: This disclosure is based on EITI Standard 2019 Requirement 4.2 Sale of the state's share of production or other revenues collected in kind and EITI Reporting Guidelines for companies buying oil, gas and minerals from governments.*

References and resources

GRI 201: Economic Performance 2016 and GRI 207: Tax 2019 list authoritative intergovernmental instruments and other sources relevant to reporting on this topic.

The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 82.

2.22 Public policy and lobbying

An organization can participate in public policy development, directly or through an intermediary organization, by means of lobbying and making financial or in-kind contributions to political parties, politicians, or causes. This topic covers an organization's approach to public policy participation, and the impacts that can result from the influence an organization exerts in such participation.

Lobbying by the coal sector can result in long-lasting impacts on the economy, environment, and people, including local communities. In regions where coal generates significant revenue for governments, organizations in the sector can have undue influence over public policy discussions. Documented cases show how the sector has habitually donated to political parties whose policies favor corporate agendas, or to gain special access to politicians.

The coal sector has actively lobbied against ambitious climate policies. These lobbying activities may aim to safeguard existing jobs and the livelihoods of coal-mining areas, but also to prevent meaningful carbon pricing, carbon budgets, or other actions to reduce GHG emissions that could leave coal assets or resources stranded. These activities sometimes contradict with publicly stated positions that support policies addressing climate change (see also topic 2.1 Climate adaptation and resilience). Other lobbying activities by the sector include hindering environmental policies; blocking or amending legislation on environmental and social assessments of projects or fair participation of all stakeholders; overturning restrictions on resource development; and supporting the lowering of corporate taxes and resource royalties.

Lobbying can also be used to gain or retain government subsidies, which can result in commodity prices that do not reflect the full environmental or social costs of products, and impede the low-carbon transition. This can consequently hinder sustainable development in numerous ways, including by reducing or inefficiently allocating available national resources, increasing dependence on fossil fuels, and discouraging investment in renewable energy sources and energy efficiency.

What to report

If the organization has identified public policy and lobbying as a material topic, this section lists the disclosures that have been identified as relevant for reporting on the topic by the coal sector.

Standard	Disclosure	Additional sector recommendations
Management of the topic		
GRI 3: Material Topics 2021	Disclosure 3-3 Management of material topics	– Report any significant issues that the organization focuses on when participating in public policy development and lobbying. – Report the organization's stance on these issues as well as differences between lobbying positions and the stated policies, goals, or other public positions.
Topic Standards disclosures		
GRI 415: Public Policy 2016	Disclosure 415-1 Political contributions	

References and resources

GRI 415: Public Policy 2016 lists authoritative intergovernmental instruments and other sources relevant to reporting on this topic. The additional intergovernmental instruments and references used to develop this topic description as well as further resources that may be helpful for understanding and reporting on the topic by the coal sector are listed in the Bibliography on page 83.

Glossary

Please note: The glossary terms listed below are not part of the public comment review and are included to aid the review of this Standard.

This glossary provides definitions for terms used in this draft Standard. The organization is required to apply these definitions when using the GRI Standards.

The definitions included in this glossary may contain terms that are further defined in the complete *GRI Standards Glossary*. All defined terms are underlined. If a term is not defined in this glossary or in the complete *GRI Standards Glossary*, definitions that are commonly used and understood apply.

anti-competitive behavior

action of the organization or employees that can result in collusion with potential competitors, with the purpose of limiting the effects of market competition

Note: Examples of anti-competitive behavior actions can include fixing prices, coordinating bids, creating market or output restrictions, imposing geographic quotas, or allocating customers, suppliers, geographic areas, and product lines.

area of high biodiversity value

area not subject to legal protection, but recognized for important biodiversity features by a number of governmental and non-governmental organizations

Note 1: Areas of high biodiversity value include habitats that are a priority for conservation, which are often defined in National Biodiversity Strategies and Action Plans prepared under the United Nations (UN) Convention, 'Convention on Biological Diversity', 1992.

Note 2: Several international conservation organizations have identified particular areas of high biodiversity value.

area protected

area that is protected from any harm during operational activities, and where the environment remains in its original state with a healthy and functioning ecosystem

area restored

area that was used during or affected by operational activities, and where remediation measures have either restored the environment to its original state, or to a state where it has a healthy and functioning ecosystem

baseline

starting point used for comparisons

Note: In the context of energy and emissions reporting, the baseline is the projected energy consumption or emissions in the absence of any reduction activity.

basic salary

fixed, minimum amount paid to an employee for performing his or her duties, excluding any additional remuneration, such as payments for overtime working or bonuses

benefit

direct benefit provided in the form of financial contributions, care paid for by the organization, or the reimbursement of expenses borne by the employee

Note: Redundancy payments over and above legal minimums, lay-off pay, extra employment injury benefit, survivors' benefits, and extra paid holiday entitlements can also be included as a benefit.

business partner

entity with which the organization has some form of direct and formal engagement for the purpose of meeting its business objectives

Source: Shift and Mazars LLP, *UN Guiding Principles Reporting Framework*, 2015; modified

Examples: affiliates, business-to-business customers, clients, first-tier suppliers, franchisees, joint venture partners, investee companies in which the organization has a shareholding position

Note: Business partners do not include subsidiaries and affiliates that the organization controls.

business relationships

relationships that the organization has with business partners, with entities in its value chain including those beyond the first tier, and with any other entities directly linked to its operations, products, or services

Source: United Nations (UN), *Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework*, 2011; modified

Note: Examples of other entities directly linked to the organization's operations, products, or services are a non-governmental organization with which the organization delivers support to a local community, or state security forces that protect the organization's facilities.

carbon dioxide (CO_2) equivalent

measure used to compare the emissions from various types of greenhouse gas (GHG) based on their global warming potential (GWP)

Note: The CO_2 equivalent for a gas is determined by multiplying the metric tons of the gas by the associated GWP.

child

person under the age of 15 years, or under the age of completion of compulsory schooling, whichever is higher

Note 1: Exceptions can occur in certain countries where economies and educational facilities are insufficiently developed and a minimum age of 14 years applies. These countries of exception are specified by the International Labour Organization (ILO) in response to a special application by the country concerned and in consultation with representative organizations of employers and workers.

Note 2: The ILO Convention 138, 'Minimum Age Convention', 1973, refers to both child labor and young workers.

collective bargaining

all negotiations which take place between one or more employers or employers' organizations, on the one hand, and one or more workers' organizations (trade unions), on the other, for determining working conditions and terms of employment or for regulating relations between employers and workers

Note 1: Collective agreements can be at the level of the organization; at the industry level, in countries where that is the practice; or at both.

Note 2: Collective agreements can cover specific groups of workers; for example, those performing a specific activity or working at a specific location.

Note 3: This definition is based on the International Labour Organization (ILO) Convention 154, 'Collective Bargaining Convention', 1981.

community development program

plan that details actions to minimize, mitigate, or compensate for adverse social and/or economic impacts, and/or to identify opportunities or actions to enhance positive impacts of a project on the community

corruption

'abuse of entrusted power for private gain',[23] which can be instigated by individuals or organizations

Note: In the GRI Standards, corruption includes practices such as bribery, facilitation payments, fraud, extortion, collusion, and money laundering. It also includes an offer or receipt of any gift, loan, fee, reward, or other advantage to or from any person as an inducement to do something that is dishonest, illegal, or a breach of trust in the conduct of the enterprise's business.[24] This can include

cash or in-kind benefits, such as free goods, gifts, and holidays, or special personal services provided for the purpose of an improper advantage, or that can result in moral pressure to receive such an advantage.

direct (Scope 1) GHG emissions

GHG emissions from sources that are owned or controlled by an organization

Note 1: A GHG source is any physical unit or process that releases GHG into the atmosphere.

Note 2: Direct (Scope 1) GHG emissions can include the CO2 emissions from fuel consumption.

discrimination

act and result of treating persons unequally by imposing unequal burdens or denying benefits instead of treating each person fairly on the basis of individual merit

Note: Discrimination can also include harassment, defined as a course of comments or actions that are unwelcome, or should reasonably be known to be unwelcome, to the person towards whom they are addressed.

disposal

any operation which is not recovery, even where the operation has as a secondary consequence the recovery of energy

Note 1: Disposal is the end-of-life management of discarded products, materials, and resources in a sink or through a chemical or thermal transformation that makes these products, materials, and resources unavailable for further use.

Note 2: This definition comes from the European Union (EU), Waste Framework Directive, 2008 (Directive 2008/98/EC).

effluent

treated or untreated wastewater that is discharged

Note: This definition is based on the Alliance for Water Stewardship (AWS), AWS International Water Stewardship Standard, Version 1.0, 2014.

employee

individual who is in an employment relationship with the organization according to national law or practice

Note: This information is derived from the organization's own human resources system.

energy indirect (Scope 2) GHG emissions

GHG emissions that result from the generation of purchased or acquired electricity, heating, cooling, and steam consumed by an organization

exposure

[23] Transparency International
[24] These definitions are based on Transparency International, 'Business Principles for Countering Bribery', 2011.

quantity of time spent at or the nature of contact with certain environments that possess various degrees and kinds of hazard, or proximity to a condition that might cause injury or ill health (e.g., chemicals, radiation, high pressure, noise, fire, explosives)

forced or compulsory labor

all work and service that is exacted from any person under the menace of any penalty and for which the said person has not offered herself or himself voluntarily

Note 1: The most extreme examples of forced or compulsory labor are slave labor and bonded labor, but debts can also be used as a means of maintaining workers in a state of forced labor.

Note 2: Indicators of forced labor include withholding identity papers, requiring compulsory deposits, and compelling workers, under threat of firing, to work extra hours to which they have not previously agreed.

Note 3: This definition is based on International Labour Organization (ILO) Convention 29, 'Forced Labour Convention', 1930.

freedom of association

right of employers and workers to form, to join and to run their own organizations without prior authorization or interference by the state or any other entity

freshwater

water with concentration of total dissolved solids equal to or below 1,000 mg/L

Note: This definition is based on ISO 14046:2014; the United States Geological Survey (USGS), Water Science Glossary of Terms, water.usgs.gov/edu/dictionary.html, accessed on 1 June 2018; and the World Health Organization (WHO), Guidelines for Drinking-water Quality, 2017.

global warming potential (GWP)

value describing the radiative forcing impact of one unit of a given GHG relative to one unit of CO_2 over a given period of time

Note: GWP values convert GHG emissions data for non-CO2 gases into units of CO_2 equivalent.

governance body

committee or board responsible for the strategic guidance of the organization, the effective monitoring of management, and the accountability of management to the broader organization and its stakeholders

greenhouse gas (GHG)

gas that contributes to the greenhouse effect by absorbing infrared radiation

grievance mechanism

routinized process through which grievances can be raised and remedy can be sought

Source: United Nations (UN), *Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework*, 2011; modified

Note: See Guidance to Disclosure 2-25 in *GRI 2: General Disclosures 2021* for more information on 'grievance mechanism'.

groundwater

water that is being held in, and that can be recovered from, an underground formation

Note: This definition comes from ISO 14046:2014.

highest governance body

governance body with the highest authority in the organization

Note: In some jurisdictions, governance systems consist of two tiers, where supervision and management are separated or where local law provides for a supervisory board drawn from non-executives to oversee an executive management board. In such cases, both tiers are included under the definition of highest governance body.

human rights

rights inherent to all human beings, which include, at a minimum, the rights set out in the *United Nations (UN) International Bill of Human Rights* and the principles concerning fundamental rights set out in the *International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work*

Source: United Nations (UN), *Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework*, 2011; modified

Note: See Guidance to 2-23-b-i in *GRI 2: General Disclosures 2021* for more information on 'human rights'.

impact

effect the organization has or could have on the economy, environment, and people, including on their human rights, which in turn can indicate its contribution (negative or positive) to sustainable development

Note 1: Impacts can be actual or potential, negative or positive, short-term or long-term, intended or unintended, and reversible or irreversible.

Note 2: See section 2.1 in *GRI 1: Foundation 2021* for more information on 'impact'.

indigenous peoples

indigenous peoples are generally identified as:

- tribal peoples in independent countries whose social, cultural and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations;
- peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonization or the establishment of present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions.

Note: This definition comes from the International Labour Organization (ILO) Convention 169, 'Indigenous and Tribal Peoples Convention', 1989.

infrastructure

facilities built primarily to provide a public service or good rather than a commercial purpose, and from which an organization does not seek to gain direct economic benefit

Note: Examples of facilities can include water supply facilities, roads, schools, and hospitals, among others.

local community

individuals or groups of individuals living or working in areas that are affected or that could be affected by the organization's activities

Note: The local community can range from those living adjacent to the organization's operations to those living at a distance.

material topics

topics that represent the organization's most significant impacts on the economy, environment, and people, including impacts on their human rights

Note: See section 2.2 in *GRI 1: Foundation 2021* and section 1 in *GRI 3: Material Topics 2021* for more information on 'material topics'.

mitigation

action(s) taken to reduce the extent of a negative impact

Note: The mitigation of an actual negative impact refers to actions taken to reduce the severity of the negative impact that has occurred, with any residual impact needing remediation. The mitigation of a potential negative impact refers to actions taken to reduce the likelihood of the negative impact occurring.

Source: United Nations (UN), *The Corporate Responsibility to Respect Human Rights: An Interpretive Guide*, 2012; modified

occupational health and safety management system

set of interrelated or interacting elements to establish an occupational health and safety policy and objectives, and to achieve those objectives

Note: This definition comes from the International Labour Organization (ILO), Guidelines on Occupational Safety and Health Management Systems, ILO-OSH 2001, 2001.

operation with significant actual or potential negative impacts on local communities

an operation, considered alone or in combination with the characteristics of local communities, that has a higher than average potential of negative impacts, or actual negative impacts, on the social, economic or environmental well-being of local communities

Note: Examples of negative impacts on local communities can include impacts to local community health and safety.

other indirect (Scope 3) GHG emissions

indirect GHG emissions not included in energy indirect (Scope 2) GHG emissions that occur outside of the organization, including both upstream and downstream emissions

parental leave

leave granted to men and women employees on the grounds of the birth of a child

preparation for reuse

checking, cleaning, or repairing operations, by which products or components of products that have become waste are prepared to be put to use for the same purpose for which they were conceived

Note: This definition is based on the European Union (EU), Waste Framework Directive, 2008 (Directive 2008/98/EC).

remedy / remediation

means to counteract or make good a negative impact / provision of remedy

Examples: apologies, restitution, restoration, rehabilitation, financial or non-financial compensation, and punitive sanctions (whether criminal or administrative, such as fines), prevention of harm through injunctions or guarantees of non-repetition

Source: United Nations (UN), *The Corporate Responsibility to Respect Human Rights: An Interpretive Guide*, 2012; modified

recycling

reprocessing of products or components of products that have become waste, to make new materials

Note: This definition is based on the United Nations Environment Programme (UNEP), Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, 1989.

remuneration

basic salary plus additional amounts paid to a worker

Note: Examples of additional amounts paid to a worker can include those based on years of service, bonuses including cash and equity such as stocks and shares, benefit payments, overtime, time owed, and any additional allowances, such as transportation, living and childcare allowances.

renewable energy source

energy source that is capable of being replenished in a short time through ecological cycles or agricultural processes

Note: Renewable energy sources can include geothermal, wind, solar, hydro, and biomass.

reporting period

specific time period covered by the reported information

Examples: fiscal year, calendar year

Scope of GHG emissions

classification of the operational boundaries where GHG emissions occur

Note I: Scope classifies whether GHG emissions are created by an organization itself, or are created by other related organizations, for example electricity suppliers or logistics companies.

Note 2: There are three classifications of Scope: Scope 1, Scope 2 and Scope 3.

Note 3: The classification of Scope derives from the World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD), 'GHG Protocol Corporate Accounting and Reporting Standard', Revised Edition, 2004.

security personnel

individuals employed for the purposes of guarding property of the organization; crowd control; loss prevention; and escorting persons, goods, and valuables

senior executive

high-ranking member of the management of the organization, such as the Chief Executive Officer (CEO) or an individual reporting directly to the CEO or the highest governance body

services supported

services that provide a public benefit either through direct payment of operating costs or through staffing the facility or service with an organization's own employees

Note: Public benefit can also include public services.

severity (of an impact)

The severity of an actual or potential negative impact is determined by its scale (i.e., how grave the impact is), scope (i.e., how widespread the impact is), and irremediable character (how hard it is to counteract or make good the resulting harm).

Source: United Nations (UN), *The Corporate Responsibility to Respect Human Rights: An Interpretive Guide*, 2012; and the Organisation for Economic Co-operation and Development (OECD), *OECD Due Diligence Guidance for Responsible Business Conduct*, 2018; modified

Note: See section 1 in *GRI 3: Material Topics 2021* for more information on 'severity'

significant air emission

air emission regulated under international conventions and/or national laws or regulations

Note: Significant air emissions include those listed on environmental permits for an organization's operations.

significant operational change

alteration to the organization's pattern of operations that can potentially have significant positive or negative impacts on workers performing the organization's activities

Note: Significant operational change can include restructuring, outsourcing of operations, closures, expansions, new openings, takeovers, sale of all or part of the organization, or mergers.

spill

accidental release of a hazardous substance that can affect human health, land, vegetation, water bodies, and ground water

stakeholder

individual or group that has an interest that is affected or could be affected by the organization's activities

Source: Organisation for Economic Co-operation and Development (OECD), *OECD Due Diligence Guidance for Responsible Business Conduct*, 2018; modified

Examples: business partners, civil society organizations, consumers, customers, employees and other workers, governments, local communities, non-governmental organizations, shareholders and other investors, suppliers, trade unions, vulnerable groups

Note: See section 2.4 in *GRI 1: Foundation 2021* for more information on 'stakeholder'.

supplier

entity upstream from the organization (i.e., in the organization's supply chain), which provides a product or service that is used in the development of the organization's own products or services

Examples: brokers, consultants, contractors, distributors, franchisees, home workers, independent contractors, licensees, manufacturers, primary producers, sub-contractors, wholesalers

Note: A supplier can have a direct business relationship with the organization (often referred to as first-tier supplier) or an indirect business relationship.

supply chain

range of activities carried out by entities upstream from the organization, which provide products or services that are used in the development of the organization's own products or services

surface water

water that occurs naturally on the Earth's surface in ice sheets, ice caps, glaciers, icebergs, bogs, ponds, lakes, rivers, and streams

Note: This definition is based on CDP, CDP Water Security Reporting Guidance, 2018.

sustainable development/sustainability

development that meets the needs of the present without compromising the ability of future generations to meet their own needs

Source: World Commission on Environment and Development, *Our Common Future*, 1987

Note: In the GRI Standards, the terms 'sustainability' and 'sustainable development' are used interchangeably.

value chain

range of activities carried out by the organization, and by entities upstream and downstream from the organization, to bring the organization's products or services from their conception to their end use

Note 1: Entities upstream from the organization (e.g., suppliers) provide products or services that are used in the development of the organization's own products or services. Entities downstream from the organization (e.g., distributors, customers) receive products or services from the organization.

Note 2: The value chain includes the supply chain.

vulnerable group

group of individuals with a specific condition or characteristic (e.g., economic, physical, political, social) that could experience negative impacts as a result of the organization's activities more severely than the general population

Examples: children and youth; elderly persons; ex-combatants; HIV/AIDS-affected households; human rights defenders; indigenous peoples; internally displaced persons; migrant workers and their families; national or ethnic, religious and linguistic minorities; persons who might be discriminated against based on their sexual orientation, gender identity, gender expression, or sex characteristics (e.g., lesbian, gay, bisexual, transgender, intersex); persons with disabilities; refugees or returning refugees; women

Note: Vulnerabilities and impacts can differ by gender.

waste

anything that the holder discards, intends to discard, or is required to discard

Note 1: Waste can be defined according to the national legislation at the point of generation.

Note 2: A holder can be the reporting organization, an entity in the organization's value chain upstream or downstream (e.g., supplier or consumer), or a waste management organization, among others.

Note 3: This definition is based on the United Nations Environment Programme (UNEP), Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, 1989.

waste disposal method

method by which waste is treated or disposed of

Note: Waste disposal methods can include composting, reuse, recycling, recovery, incineration, landfill, deep well injection, and on-site storage.

water consumption

sum of all water that has been withdrawn and incorporated into products, used in the production of crops or generated as waste, has evaporated, transpired, or been consumed by humans or livestock, or is polluted to the point of being unusable by other users, and is therefore not released back to surface water, groundwater, seawater, or a third party over the course of the reporting period

Note 1: Water consumption includes water that has been stored during the reporting period for use or discharge in a subsequent reporting period.

Note 2: This definition is based on CDP, CDP Water Security Reporting Guidance, 2018.

water stress

ability, or lack thereof, to meet the human and ecological demand for water

Note 1: Water stress can refer to the availability, quality, or accessibility of water.

Note 2: Water stress is based on subjective elements and is assessed differently depending on societal values, such as the suitability of water for drinking or the requirements to be afforded to ecosystems.

Note 3: Water stress in an area may be measured at catchment level at a minimum.

Note 4: This definition comes from the CEO Water Mandate, Corporate Water Disclosure Guidelines, 2014.

worker

person that performs work for the organization

Examples: employees, apprentices, interns, self-employed persons, and persons working for organizations other than the reporting organization, such as for suppliers

Note: In the GRI Standards, in some cases it is specified whether a particular subset of workers is required to be used.

work-related hazard

source or situation with the potential to cause injury or ill health

Note 1: Hazards can be:

- physical (e.g., radiation, temperature extremes, constant loud noise, spills on floors or tripping hazards, unguarded machinery, faulty electrical equipment);
- ergonomic (e.g., improperly adjusted workstations and chairs, awkward movements, vibration);
- chemical (e.g., exposure to solvents, carbon monoxide, flammable materials, or pesticides);
- biological (e.g., exposure to blood and bodily fluids, fungi, bacteria, viruses, or insect bites);
- psychosocial (e.g., verbal abuse, harassment, bullying);
- related to work-organization (e.g., excessive workload demands, shift work, long hours, night work, workplace violence).

Note 2: This definition is based on International Labour Organization (ILO) Guidelines on Occupational Safety and Health Management Systems from 2001 and ISO 45001:2018.

work-related incident

occurrence arising out of or in the course of work that could or does result in injury or ill health

Note 1: This definition is based on ISO 45001:2018.

Note 2: Incidents might be due to, for example, electrical problems, explosion, fire; overflow, overturning, leakage, flow; breakage, bursting, splitting; loss of control, slipping, stumbling and falling; body movement without stress; body movement under/with stress; shock, fright; workplace violence or harassment (e.g., sexual harassment).

Note 3: An incident that results in injury or ill health is often referred to as an ‘accident’. An incident that has the potential to result in injury or ill health but where none occurs is often referred to as a ‘close call’, ‘near-miss’, or ‘near-hit’.

work-related injury or ill health

negative impacts on health arising from exposure to hazards at work

Note 1: This definition is based on the International Labour Organization (ILO), Guidelines on Occupational Safety and Health Management Systems, ILO-OSH 2001, 2001.

Note 2: ‘Ill health’ indicates damage to health and includes diseases, illnesses, and disorders. The terms ‘disease’, ‘illness’, and ‘disorder’ are often used interchangeably and refer to conditions with specific symptoms and diagnoses.

Note 3: Work-related injuries and ill health are those that arise from exposure to hazards at work. Other types of incident can occur that are not connected with the work itself. For example, the following incidents are not considered to be work related:

- a worker suffers a heart attack while at work that is unconnected with work;
- a worker driving to or from work is injured in a car accident (where driving is not part of the work, and where the transport has not been organized by the employer);
- a worker with epilepsy has a seizure at work that is unconnected with work.

Note 4: Traveling for work: Injuries and ill health that occur while a worker is traveling are work related if, at the time of the injury or ill health, the worker was engaged in work activities ‘in the interest of the employer’. Examples of such activities include traveling to and from customer contacts; conducting job tasks; and entertaining or being entertained to transact, discuss, or promote business (at the direction of the employer).

Working at home: Injuries and ill health that occur when working at home are work related if the injury or ill health occurs while the worker is performing work at home, and the injury or ill health is directly related to the performance of work rather than the general home environment or setting.

Mental illness: A mental illness is considered to be work related if it has been notified voluntarily by the worker and is supported by an opinion from a licensed healthcare professional with appropriate training and experience stating that the illness is work related.

For more guidance on determining 'work-relatedness', see the United States Occupational Safety and Health Administration, Determination of work-relatedness 1904.5, https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9636, accessed on 1 June 2018.

Note 5: The terms 'occupational' and 'work-related' are often used interchangeably.

Bibliography

In addition to the authoritative intergovernmental instruments and other sources listed in GRI Topic Standards, the following have been used in developing the content of this Sector Standard.

Sector Profile

Authoritative instruments

1. Intergovernmental Panel on Climate Change (IPCC), *Global Warming of 1.5°C*, 2018.
2. United Nations Framework Convention on Climate Change (UNFCC), Paris Agreement, 2015.

Other sources

3. Britannica, Coal, Fossil fuel, britannica.com/science/coal-fossil-fuel#ref259096, accessed 6 November 2020
4. Energy Information Administration (EIA), How much carbon dioxide is produced per kilowatthour of U.S. electricity generation?, eia.gov/tools/faqs/faq.php?id=74&t=11, accessed on 5 April 2021.
5. International Energy Agency (IEA), Coal 2019, iea.org/reports/coal-2019, accessed on 5 April 2021.
6. International Energy Agency (IEA), Coal Information: Overview, iea.org/reports/coal-information-overview, accessed on 5 April 2021.
7. International Energy Agency (IEA), World Energy Outlook 2020, https://www.iea.org/reports/world-energy-outlook-2020, accessed 5 April 2021.
8. International Institute for Sustainable Development (IISD), *State-Owned Companies Transitioning Away From Coal, Mining and Coal-Fired Power*, 2018.
9. Organisation for Economic Co-operation and Development (OECD) and International Energy Agency (IEA), *OECD Green Growth Studies: Energy*, 2011.
10. Organisation for Economic Co-operation and Development (OECD), *Arrangement on officially supported export credits*, 2020.
11. O. Sartor, Institut du développement durable et des relations internationals (IDDRI) and Climate Strategies, *Implementing coal transitions: Insights from case studies of major coal-consuming economies*, 2018.
12. M. Jakob et al., The Future of Coal in a Carbon-Constrained Climate *Nature Climate Change,* vol. 10, nr. 8, pp. 704–7, August 2020, doi.org/10.1038/s41558-020-0866-1.
13. P. Friedlingstein et al., 'Global Carbon Budget 2019', Earth System Science Data, vol.11, nr. 4, pp.1783–18384, 4 December 2019, doi.org/10.5194/essd-11-1783-2019.
14. Reuters, Coal India output falls for third straight month on tepid demand, reuters.com/article/coal-india-output/coal-india-output-falls-for-third-straight-month-on-tepid-demand-idINKBN2426N4, accessed on 5 April 2021.
15. United Nations Environment Programme (UNEP), *Emissions Gap Report 2019*, 2019.
16. United Nations Principles for Responsible Investment (UNPRI), Phasing out investments in thermal coal, unpri.org/climate-change/phasing-out-investments-in-thermal-coal/3281.article, accessed on 5 April 2021.
17. World Economic Forum (WEF), Chart of the day: Is 2019 the beginning of the end for coal in Europe?, weforum.org/agenda/2019/07/coal-generation-production-europe-2019-fall-renewable-lignite/, accessed on 5 April 2021.

18. World Economic Forum (WEF), These are the world's biggest coal producers, https://www.weforum.org/agenda/2018/01/these-are-the-worlds-biggest-coal-producers/, accessed on 5 April 2021.

Climate adaptation and resilience

Authoritative instruments

19. Intergovernmental Panel on Climate Change (IPCC), Climate Change 2014: Mitigation of Climate Change, 2014.
20. Intergovernmental Panel on Climate Change (IPCC), 2014: Climate Change 2014: Impacts, Adaptation, and Vulnerability, 2014.
21. Intergovernmental Panel on Climate Change (IPCC), Global Warming of 1.5°C, 2018.

Other sources

22. Carbon Tracker Initiative, Carbon Budgets Explainer, 2018.
23. Carbon Tracker, Unburnable Carbon: Are the World's Financial Markets Carrying a Carbon Bubble?, 2011.
24. A. Dagnachew, A. Hof, et al., *Insight into Energy Scenarios: A comparison of key transition indicators of 2˚C scenarios*, 2019.
25. International Energy Agency (IEA), Coal Information: Overview, iea.org/reports/coal-information-overview, accessed on 5 April 2021.
26. International Energy Agency (IEA), *World Energy Outlook 2018*, 2018.
27. International Energy Agency (IEA), *World Energy Outlook 2019*, 2019.
28. J. G. J. Olivier and J. A. H. W. Peters, *Trends in global CO2 and total greenhouse gas emissions: 2019 Report*, 2020.
29. Organisation for Economic Co-operation and Development (OECD), International Energy Agency (IEA), *OECD Green Growth Studies: Energy*, 2011.
30. Organisation for Economic Co-operation and Development (OECD), *Monitoring the transition to a low-carbon economy: a strategic approach to local development*, 2015.
31. M. F. Rahman, M. Mostofa, and S. Huq, 'Low-Carbon Futures in Least-Developed Countries', wri.org/climate/expert-perspective/low-carbon-futures-least-developed-countries, accessed on 5 April 2021.
32. O. Sartor, Institut du développement durable et des relations internationals (IDDRI) and Climate Strategies, *Implementing coal transitions: Insights from case studies of major coal-consuming economies*, 2018.
33. E. Stuart, 'Leaving No One Behind in Sustainable Development Pathways', wri.org/climate/expert-perspective/leaving-no-one-behind-sustainable-development-pathways, accessed on 5 April 2021.
34. Task Force on Climate-Related Financial Disclosure (TCFD), *Recommendations of the Task Force on Climate-related Financial Disclosure*, 2017.
35. Task Force on Climate-Related Financial Disclosure (TCFD), *The Use of Scenario Analysis in Disclosure of Climate-Related Risks and Opportunities*, 2017.
36. University of Cambridge, *Climate change: Action, trends and implications for business: The IPCC's Fifth Assessment Report, Working Group 1*,2013.

Further resources

The following resources may help organizations in the coal sector report on this topic:

37. International Finance Corporation (IFC), *Good Practice Note: Managing Retrenchment*, 2005.
38. Transition Pathway Initiative (TPI), *Methodology and Indicators Report*, 2019.
39. World Resources Institute (WRI), *A Recommended Methodology for Estimating and Reporting the Potential Greenhouse Gas Emissions from Fossil Fuel Reserves*, 2016.

GHG emissions

Authoritative instruments

1. Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: The Physical Science Basis*, 2007.
2. Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2014: Synthesis Report*, 2014.
3. Intergovernmental Panel on Climate Change (IPCC), *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*, 2001.

Other sources

4. International Energy Agency (IEA), *CO_2 Emissions from Fuel Combustion Highlights*, 2019.
5. International Energy Agency (IEA), *Energy Efficiency 2018: Analysis and Outlooks to 2040*, 2018.
6. International Energy Agency (IEA), Methane Tracker, iea.org/reports/methane-tracker, accessed on 31 May 2020.
7. International Finance Corporation (IFC), *Environmental, Health, and Safety Guidelines for Mining*, 2007.
8. United Nations Framework Convention on Climate Change (UNFCCC), What do adaptation to climate change and climate resilience mean?, 2020, unfccc.int/topics/adaptation-and-resilience/the-big-picture/what-do-adaptation-to-climate-change-and-climate-resilience-mean, accessed on 5 April 2021.
9. United States Energy Information Administration (EIA), *Assumptions to the Annual Energy Outlook 2019: Industrial Demand Module*, 2019.
10. United States Environmental Protection Agency (US EPA), Overview of Greenhouse Gases, epa.gov/ghgemissions/overview-greenhouse-gases#methane, accessed on 31 May 2020.
11. World Resources Institute, *Estimating and Reporting the Comparative Emissions Impacts of Products*, 2019.

Further resources

The following resources may help organizations in the coal sector report on this topic:

12. Carbon Brief, Methane emissions from fossil fuels 'severely underestimated', 2020, carbonbrief.org/methane-emissions-from-fossil-fuels-severely-underestimated, accessed 5 April 2021.
13. P. Forster, V. Ramaswamy, et al., 'Changes in Atmospheric Constituents and in Radiative Forcing', in Climate Change 2007: The Physical Science Basis, 2007.
14. Greenhouse Gas Protocol, *Global Warming Potential Values*, 2015.

Closure and rehabilitation

Other sources

15. P. D. Cameron and M. C. Stanley, Oil, Gas, and Mining: A Sourcebook for Understanding the Extractive Industries, 2017.
16. International Energy Agency (IEA), World Energy Outlook 2020, https://www.iea.org/reports/world-energy-outlook-2020, accessed on 5 April 2021.
17. United Nations (UN) Tax Committee's Subcommittee on Extractive Industries Taxation Issues for Developing Countries, *Guidance Note on the Tax Treatment of Decommissioning for the Extractive Industries*, 2016.
18. J. Watts and J. Ambrose, 'Coal industry will never recover after coronavirus pandemic, say experts', The Guardian, 17 May 2020, theguardian.com/environment/2020/may/17/coal-industry-will-never-recover-after-coronavirus-pandemic-say-experts, accessed on 5 April 2021.
19. World Bank, *Towards Sustainable Decommissioning and Closure of Oil Fields and Mines: A Toolkit to Assist Government Agencies*, 2010.
20. World Bank, *Managing Coal Mine Closure: Achieving a Just Transition for All*, 2018.

Further resources

The following resources may help organizations in the coal sector report on this topic:

21. International Council on Mining & Metals (ICMM), *Integrated Mine Closure – Good Practice Guide*, *2nd Edition*, 2019.

Air emissions

Other sources

22. A. Markandya and P. Wilkinson, 'Electricity Generation and Health', The Lancet, vol 370, no. 9591, pp. 979–90, 15 September 2007, doi.org/10.1016/S0140-6736(07)61253-7.
23. International Energy Agency (IEA), Energy and Air Pollution: World Energy Outlook Special Report, 2016.
24. The United Nations Economic Commission for Europe (UNECE), Air pollution, ecosystems and biodiversity, unece.org/environmental-policy/conventions/envlrtapwelcome/cross-sectoral-linkages/air-pollution-ecosystems-and-biodiversity.html, accessed on 5 April 2021.
25. Union of Concerned Scientists, How Coal Works, ucsusa.org/resources/how-coal-works, accessed 17 October 2020.
26. World Coal Association (WCA), Coal and air quality, worldcoal.org/coal-and-air-quality-0, accessed 17 October 2020.
27. World Health Organization (WHO), Air pollution, who.int/health-topics/air-pollution, accessed 31 May 2020.
28. World Health Organization (WHO), Air pollution and child health: Prescribing clean air, advance copy, 2018.
29. World Health Organization (WHO), *Ambient Air Pollution: A Global Assessment of Exposure and Burden of Disease,* 2016.

Biodiversity

Intergovernmental instruments

30. Intergovernmental Panel on Climate Change (IPCC), *Climate Change and Biodiversity*, 2002.
31. Intergovernmental Panel on Climate Change (IPCC), *Climate Change and Land*, 2019.

Other sources

32. N. Butt, H. L. Beyer, et al., *Biodiversity Risks from Fossil Fuel Extraction*, Science, 2013.
33. Convention on Biological Diversity, *Mainstreaming of Biodiversity into the Energy and Mining Sectors*, 2018.
34. Cross Sector Biodiversity Initiative (CSBI), *A cross sector guide for implementing the Mitigation Hierarchy*, 2015.
35. M. B. J. Harfoot, D. P. Tittensor, et al., *Present and future biodiversity risks from fossil fuel exploitation*, Conservation Letters, 2018.

Further resources

The following resources may help organizations in the coal sector report on this topic:

36. International Finance Corporation (IFC) Performance Standard 6: *Biodiversity Conservation and Sustainable Management of Natural Resources*, 2012.
37. International Council for Mining and Metals (ICMM), International Petroleum Industry Environmental Conservation Association (IPIECA), Equator Principles, *A cross-sector guide for implementing the Mitigation Hierarchy*, 2017.
38. Integrated Biodiversity Assessment Tool (IBAT) Alliance, Integrated Biodiversity Assessment Tool, https://www.ibat-alliance.org/, accessed 5 April 2021.

Waste

Authoritative instruments

39. European Commission, *Best Available Techniques (BAT) Reference Document for the Management of Waste from Extractive Industries*, 2018.

Other sources

40. Alberta Energy Regulator, Tailings, aer.ca/providing-information/by-topic/tailings.html, accessed on 5 April 2021.
41. P. D. Cameron and M. C. Stanley, *Oil, Gas, and Mining: A Sourcebook for Understanding the Extractive Industries*, 2017.
42. International Finance Corporation (IFC), *Environmental, Health, and Safety Guidelines for Mining*, 2007.
43. C. Roche, K. Thygesen, K., E. Baker, E. (Eds.), United Nations Environment Programme (UNEP), *Mine Tailings Storage: Safety Is No Accident. A UNEP Rapid Response Assessment*, 2017.
44. Union of Concerned Scientists, 'The Hidden Cost of Fossil Fuels', 2008, ucsusa.org/resources/hidden-costs-fossil-fuels, accessed 5 April 2021.
45. United Nations Development Programme (UNDP), *Circular Economy Principles for NDCs and Long-term Strategies*, 2019.
46. United Nations Environment Programme (UNEP), *Towards a Pollution-Free Planet*, 2017.
47. United States Environmental Protection Agency (EPA), Basic Information about Surface Coal Mining in Appalachia, epa.gov/sc-mining/basic-information-about-surface-coal-mining-appalachia, accessed 5 April 2021.

Further resources

The following resources may help organizations in the coal sector report on this topic:

48. International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Waste Management, 2007.
49. United Nations Environment (UN environment), International Council for Mining and Metals (ICMM), Principles for Responsible Investment (PRI), *Global Industry Standard on Tailings Management*, 2020.

Water and effluents

Other sources

50. L. Allen, M. Cohen, et al., 'Fossil Fuels and Water Quality', *The World's Water Volume 7: The Biennial Report on Freshwater Resources*, chapter 4, 2011, worldwater.org/wp-content/uploads/2013/07/chapter_4_fossil_fuel_and_water_quality.pdf.
51. P. D. Cameron and M. C. Stanley, *Oil, Gas, and Mining: A Sourcebook for Understanding the Extractive Industries*, 2017.
52. Greenpeace, *The Great Water Grab: How the Coal Industry is Deepening the Global Water Crisis*, 2016.
53. International Energy Agency (IEA), *Water Energy Nexus: Excerpt from the World Energy Outlook 2016*, 2016.
54. International Energy Agency (IEA), 'Water for Energy', *World Energy Outlook 2012*, 2012.
55. United Nations Environment Programme (UNEP), *Towards a Pollution-Free Planet*, 2017.
56. United States Environmental Protection Agency (US EPA), *Profile of the Fossil Fuel Electric Power Generation Industry*, 1997.

Further resources

The following resource may help organizations in the coal sector report on this topic:

57. International Council for Mining and Metals (ICMM): *Water Stewardship Framework*, 2014.

Economic impacts

Authoritative instruments

58. United Nations Office for Disaster Risk Reduction (UNISDR), *Words into Action Guidelines: National Disaster Risk Assessment, Special Topics, D. Direct and Indirect Economic Impact*, 2017.

59. Organisation for Economic Co-operation and Development (OECD), OECD Principles for Private Sector Participation in Infrastructure, 2007.

Other sources

60. Bill & Melinda Gates Foundation, *Paper 7: Leveraging extractive industries for skills development to maximize sustainable growth and employment*, 2015.
61. Extractive Industries Transparency Initiative (EITI), Social and economic spending: The impact of the extractive industries on economic growth and social development, eiti.org/social-economic-spending, accessed on 5 April 2021.
62. International Institute for Environment and Development (IIED), *Breaking New Ground: Mining, Minerals and Sustainable Development*, 2002.
63. J.-F. Mercure, H. Pollitt, et al., 'Macroeconomic impacts of stranded fossil fuels assets', Nature Climate Change, vol. 8, pp. 588-593, 2018, nature.com/articles/s41558-018-0182-1, accessed on 5 April 2021.
64. United Nations Conference on Trade and Development (UNCTAD), *Extractive industries: Optimizing the value retention in host countries*, 2012.
65. K. Storey, 'Fly-in/Fly-out: Implications for Community Sustainability', Sustainability, vol. 2, pp. 1161-1181, 2010.

Further resources

The following resource may help organizations in the coal sector report on this topic:

66. Organisation for Economic Co-operation and Development (OECD), *Collaborative Strategies for In-Country Shared Value Creation*, 2016.

Local communities

Authoritative instruments

67. Organisation for Economic Co-operation and Development (OECD), *Due Diligence Guidance for Meaningful Stakeholder Engagement in the Extractives Sector*, 2015.

Other sources

68. Cordaid, *When Oil, Gas or Mining Arrives in Your Area: Practical Guide for Communities, Civil Society and Local Government on the Social Aspects of Oil, Gas and Mining*, 2016.
69. International Finance Corporation (IFC), *Unlocking Opportunities for Women and Business: A Toolkit of Actions and Strategies for Oil, Gas, and Mining Companies*, 2018.
70. United Nations Environment Programme Financial Initiative (UNEP FI), Human Rights Guidance Tool for the Financial Sector, Mining and Metals, unepfi.org/humanrightstoolkit/mining.php, accessed on 5 April 2021.
71. The Advocates for Human Rights: *Promoting Gender Diversity and Inclusion in the Oil, Gas, and Mining Extractive Industries*, 2019.

Further resources

The following resource may help organizations in the coal sector report on this topic:

72. IFC, Performance Standard 4 Community Health, Safety, and Security, 2012.

Land and resource rights

Authoritative instruments

73. European Union and UN Interagency Framework Team for Preventive Action, *Toolkit and Guidance for Preventing and Managing Land and Natural Resources Conflict: Land and Conflict*, 2012.
74. Organisation for Economic Co-operation and Development (OECD), *Due Diligence Guidance for Meaningful Stakeholder Engagement in the Extractives Sector*, 2015.

Other sources

75. Avocats Sans Frontières, *Human Rights Implications of Extractive Industry Activities in Uganda: A Study of the Mineral Sector in Karamoja and the Oil Refinery in Bunyoro*, 2014, asf.be/wp-content/uploads/2014/09/ASF_UG_ExtractiveSectorHRImplications.pdf.
76. P. D. Cameron and M. C. Stanley, *Oil, Gas, and Mining: A Sourcebook for Understanding the Extractive Industries*, 2017.
77. GRI, *Land Tenure Rights: The need for greater transparency among companies worldwide*, 2016.
78. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), *Report of the Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services on the work of its seventh session*, 2019.
79. International Council on Mining & Metals (ICMM), *Land Acquisition and Resettlement*, 2015.
80. Pensamiento y Acción Social (PAS) and L. Turrriago, 'Caso El Hatillo: El re-asentamiento como la legalización del despojo y el acaparamiento de las tierras por el modelo extractivista', pas.org.co/hatillo-despojo-extractivista, accessed on 5 April 2021.
81. The Advocates for Human Rights: *Promoting Gender Diversity and Inclusion in the Oil, Gas, and Mining Extractive Industries*, 2019.
82. United Nations Environment Programme Financial Initiative (UNEP FI), Human Rights Guidance Tool for the Financial Sector, Mining and Metals, unepfi.org/humanrightstoolkit/mining.php, accessed on 5 April 2021.
83. United Nations Human Rights Office of the High Commissioner website, Land and Human Rights, ohchr.org/EN/Issues/LandAndHR/Pages/LandandHumanRightsIndex.aspx, accessed on 5 April 2021.
84. F. Vanclay, 'Project-induced displacement and resettlement: from impoverishment risks to an opportunity for development?', *Impact Assessment and Project Appraisal Journal*, vol. 35, pp. 3-21, 2017, doi: 10.1080/14615517.2017.1278671.

Further resources

The following resources may help organizations in the coal sector report on this topic:

85. International Finance Corporation (IFC), *Good Practice Handbook: Land Acquisition and Resettlement (draft)*, 2019.
86. International Finance Corporation (IFC), *Performance Standard 5, Land Acquisition and Involuntary Resettlement*, 2012.
87. International Finance Corporation (IFC), *Performance Standard 8: Cultural Heritage*, 2012.

Rights of indigenous peoples

Authoritative instruments

88. International Labour Organization (ILO) Convention 169, 'Indigenous and Tribal Peoples Convention', 1989.
89. United Nations (UN) Declaration, 'United Nations Declaration on the Rights of Indigenous Peoples', 2007.

Other sources

90. Amnesty International, 'Inter-American Court ruling marks key victory for indigenous peoples', 2012, amnesty.org/en/press-releases/2012/07/ecuador-inter-american-court-ruling-marks-key-victory-indigenous-peoples-20, accessed on 5 April 2021.
91. Amnesty International, *Out of sight, out of mind: Gender, indigenous rights, and energy development*, 2016.
92. A. Anongos, D. Berezhkov, et al., *Pitfalls and pipelines: Indigenous peoples and extractive industries*, 2012.
93. J. Burger, *Indigenous Peoples, Extractive Industries and Human Rights*, 2014.
94. European Parliament, Committee on Foreign Affairs, *Report on Violation of the Rights of Indigenous Peoples in the World, Including Land Grabbing*, 2018.

95. G. Gibson, K. Yung, et al. with Lake Babine Nation and Nak'azdii Whut'en, *Indigenous communities and industrial camps: Promoting healthy communities in settings of industrial change*, 2017.
96. Global Witness, *Defenders of the earth: Global killings of land and environmental defenders in 2016*, 2017.
97. K. Herbertson, 'Momentum Builds for Gaining the Consent of Indigenous Peoples', 2010, wri.org/blog/2010/05/momentum-builds-gaining-consent-indigenous-peoples, accessed on 5 April 2021.
98. International Finance Corporation (IFC), *Projects and People: A Handbook for Addressing Project Induced In-Migration*, 2009.
99. International Labour Organization (ILO), Observation (CEACR) – adopted 2018, published 108th ILC session (2019) Indigenous and Tribal Peoples Convention, 1989 (No. 169) – Venezuela, Bolivarian Republic of (Ratification: 2002), 2019, ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:13100:0::NO::P13100_COMMENT_ID,P11110_COUNTRY_ID,P11110_COUNTRY_NAME,P11110_COMMENT_YEAR:3962283,102880,Venezuela,%20Bolivarian%20Republic%20of,2018.
100. B. McIvor, *First Peoples Law: Essays in Canadian Law and Decolonization*, 2018.
101. The Advocates for Human Rights, *Promoting Gender Diversity and Inclusion in the Oil, Gas, and Mining Extractive Industries*, 2019.
102. UN Permanent Forum on Indigenous Issues (UNPFII), Combating violence against indigenous women and girls: article 22 of the United Nations Declaration on the Rights of Indigenous Peoples: Report of the international expert group meeting, 2012.
103. UN Permanent Forum on Indigenous Issues (UNPFII), Report of the international expert group meeting on extractive industries, Indigenous Peoples' rights and corporate social responsibility, 2009.
104. United Nations Department of Economic and Social Affairs (UN DESA), Indigenous Peoples, Climate Change, un.org/development/desa/indigenouspeoples/climate-change.html, accessed on 5 April 2021.
105. United Nations Human Rights Council (HRC), *Report of the Special Rapporteur on the rights of indigenous peoples, James Anaya - Extractive industries and indigenous peoples*, 2013.

Further resources

The following resources may help organizations in the coal sector report on this topic:

106. International Finance Corporation (IFC), *Performance Standard 7: Indigenous Peoples*, 2012.
107. International Council on Mining & Metal (ICMM), *Indigenous peoples and mining good practice guide*, 2015.

Conflict and security

Authoritative instruments

108. European Union (EU) and UN Interagency Framework Team for Preventive Action, *Toolkit and Guidance for Preventing and Managing Land and Natural Resources Conflict: Extractive Industries and Conflict*, 2012.
109. Office of the High Commissioner for Human Rights (OHCR), *Basic Principles on the Use of Force and Firearms by Law Enforcement Officials*, 1990,.
110. Office of the High Commissioner for Human Rights (OHCR), *Code of Conduct for Law Enforcement Officials*, 1979.
111. Voluntary Principles on Security and Human Rights, *The Voluntary Principles on Security and Human Rights*, 2000.

Other sources

112. Institute for Human Rights and Business (IHRB), *From Red to Green Flags: The Corporate Responsibility to Respect Human Rights in High-Risk Countries*, 2011.
113. K. Neu, and D., Avant, *Overview of the relationship between PMSCs and extractive industry companies from the Private Security Events Database*, 2019.

114. Office of the High Commissioner for Human Rights (OHCHR), 'Call for submissions: the relationship between private military and security companies and extractive industry companies from a human rights perspective in law and practice', ohchr.org/EN/Issues/Mercenaries/WGMercenaries/Pages/CallforsubmissionesPrivateMilitarySecurity.aspx, accessed on 5 April 2021.
115. Office of the High Commissioner for Human Rights (OHCR), *Private military and security companies in extractive industries – impact on human rights*, 2017.
116. United Nations Environmental Programme (UNEP), *From Conflict to Peacebuilding: The Role of Natural Resources and the Environment*, 2009.

Further resources

The following resources may help organizations in the coal sector report on this topic:

117. International Alert, *Human Rights Due Diligence in Conflict-Affected Settings: Guidance for Extractive Industries*, 2018.
118. International Council on Mining & Metals (ICMM), International Committee of the Red Cross (ICRC), International Finance Corporation (IFC), and IPIECA, *Voluntary Principles on Security and Human Rights: Implementation Guidance Tools*, 2011.

Asset integrity and critical incident management

Other sources

119. R. Sullivan, D. Russell, et al., *Managing the Unavoidable: investment implications of a changing climate*, 2009.
120. Business for Social Responsibility, *Adapting to Climate Change: A Guide for the Mining Industry,* 2011.
121. C. Roche, K. Thygesen, K., E. Baker, E. (Eds.), United Nations Environment Programme (UNEP), *Mine Tailings Storage: Safety Is No Accident. A UNEP Rapid Response Assessment*, 2017.

Further resources

For additional reporting support, organizations can consult the following resources:

122. International Council on Mining & Metals (ICMM), United Nations Environment Programme (UNEP), Principles for Responsible Investment (PRI), *Global Industry Standard on Tailings Management*, 2020.
123. International Council on Mining & Metals (ICMM), *Health and safety critical control management*, 2015.
124. International Council on Mining & Metals (ICMM), United Nations Environment Programme (UNEP), *Good practice in emergency preparedness and response*, 2005.
125. Organisation for Economic Co-operation and Development (OECD), *Guidance on Developing Safety Performance Indicators Related to Chemical Accident Prevention, Preparedness and Response for Industry*, 2008.
126. UK Health and Safety Executive, *Step-By-Step Guide to Developing Process Safety Performance Indicators*, 2006.

Occupational health and safety

Authoritative instruments

127. International Labour Organization (ILO) Convention 176, 'Safety and Health in Mines Conventio'n, 1995.

Other sources

128. Center for Disease Control and Prevention (CDC), The National Institute for Occupational Health and Safety (NIOSH), Mining Topic: Respiratory Diseases, cdc.gov/niosh/mining/topics/RespiratoryDiseases.html, accessed 30 October 2020
129. Health and Safety Executive (HSE), Heat stress, hse.gov.uk/temperature/heatstress, accessed on 5 April 2021.

130. International Labour Organization (ILO), *Working towards sustainable development: Opportunities for decent work and social inclusion in a green economy*, 2012.
131. Occupational Safety and Health Administration (OSHA) US Department of Labor, Silica, Crystalline: Health Effects, osha.gov/dsg/topics/silicacrystalline/health_effects_silica.html, accessed on 5 April 2021.
132. Occupational Safety and Health Administration (OSHA) US Department of Labor, Hydrogen Sulfide: Hazards, osha.gov/SLTC/hydrogensulfide/hazards.html, accessed on 5 April 2021.
133. The Advocates for Human Rights, *Promoting Gender Diversity and Inclusion in the Oil, Gas and Mining Extractive Industries: A Women's Human Rights Report*, 2019.
134. World Nuclear Association, Naturally-Occurring Radioactive Materials, 2019, world-nuclear.org/information-library/safety-and-security/radiation-and-health/naturally-occurring-radioactive-materials-norm.aspx, accessed on 5 April 2021.

Further resources

The following resources may help organizations in the coal sector report on this topic:

135. International Labour Organization (ILO) Code of Practice: Safety and health in underground coalmines, 2009.
136. International Council on Mining & Metals (ICMM), *Good practice guidance on occupational health risk assessment*, 2016.
137. International Council on Mining & Metals (ICMM), O*verview of leading indicators for occupational health and safety in mining*, 2012.

Employment practices

Authoritative instruments

138. Organisation for Economic Co-operation and Development (OECD), *Due Diligence Guidance for Meaningful Stakeholder Engagement in the Extractives Sector*, 2015.

Other sources

139. International Labour Organization (ILO), Mining (coal; other mining) sector, ilo.org/global/industries-and-sectors/mining/lang--en/index.htm, accessed on 5 April 2021.

Child labor

Authoritative instruments

140. International Labour Organization (ILO) and International Organisation of Employers (IOE), *How to do business with respect for children's right to be free from child labour: ILO-IOE child labour guidance tool for business*, 2015.
141. International Labour Organization (ILO) Convention 138, 'Minimum Age Convention', 1973.
142. International Labour Organization (ILO) Convention 182, 'Worst Forms of Child Labour Convention', 1999.
143. United Nations (UN) Convention, 'Convention on the Rights of the Child', 1989.

Other sources

144. International Labour Organisation, *Global Estimates of Child Labour – Results and Trends 2012-2016*, 2017.
145. International Labor Organization (ILO), Mining and quarrying. https://www.ilo.org/ipec/areas/Miningandquarrying/lang--en/index.htm, accessed on 5 April 2021.
146. Organisation for Economic Co-operation and Development (OECD), *Practical actions for companies to identify and address the worst forms of child labour in mineral supply chains*, 2017.
147. UNICEF, *Children's rights and the mining sector*: UNICEF extractive pilot, 2015;

148. Unite States (U.S.) Department of Labor, *2018 List of Goods Produced by Child Labor or Forced Labor*, 2018.

149. United States Department of Labor, *2020 List of Goods Produced by Child Labor or Forced Labor*, 2020

Forced labor and modern slavery

Authoritative instruments

150. International Labour Organization (ILO) Convention 29, 'Forced Labour Convention', 1930.

Other sources

151. M. Coderre-Proulx, B. Campbell, I Mandé, and International Labour Organization (ILO), *International migrant workers in the mining sector,* 2016.

152. International Transport Workers' Federation (ITF), BHP ignores pleas to help starving crew, itfglobal.org/en/news/bhp-ignores-pleas-help-starving-crew, accessed 5 April 2021.

153. International Transport Workers' Federation (ITF), Bulk carrier detained in Australia, crew owed $64,000, https://www.itfglobal.org/en/news/bulk-carrier-detained-in-australia-crew-owed-64000, accessed on 5 April 2021.

154. Global Slavery Index, 'Global Findings', *Global Slavery Index 2018*, chapter 3, globalslaveryindex.org/resources/downloads.

155. Global Reporting Initiative (GRI), Responsible Labor Initiative, *Advancing modern slavery reporting to meet stakeholder expectations*, 2019.

156. International Council for Mining and Metals (ICMM), Tackling modern slavery in the mining supply chain, icmm.com/en-gb/case-studies/action-against-modern-slavery, accessed on 5 April 2021.

157. International Labour Organization (ILO) and Walk Free Foundation, *Global estimates of modern slavery: forced labour and forced marriage,* 2017.

158. International Transport Workers' Federation (ITF), 'ITF and Malaviya Seven crew dismayed by delay', 2017, itfglobal.org/en/news/itf-and-malaviya-seven-crew-dismayed-delay, accessed on 5 April 2021.

159. National Union of Rail, Maritime and Transport Workers (RMT), 'Modern day slavery charge made by RMT', 2016, rmt.org.uk/news/modern-day-slavery-charge-made-by-rmt, accessed on 5 April 2021.

160. United States Department of Labor, *2020 List of Goods Produced by Child Labor or Forced Labor*, 2020

Non-discrimination and equal opportunity

Other sources

161. J. Soper, 'Ghanaian Workers Fight Pay Discrimination', 2015, pulitzercenter.org/reporting/ghanaian-workers-fight-pay-discrimination, accessed on 31 May 2020.

162. United Nations Environment Programme Financial Initiative (UNEP FI), Human Rights Guidance Tool for the Financial Sector, Mining and Metals, unepfi.org/humanrightstoolkit/mining.php, accessed on 5 April 2021.

163. The Advocates for Human Rights: *Promoting Gender Diversity and Inclusion in the Oil, Gas, and Mining Extractive Industries*, 2019.

Freedom of association and collective bargaining

Authoritative instruments

164. International Labour Organization (ILO), *386th Report of the Committee on Freedom of Association*, 2018.

Other sources

165. International Trade Union Confederation (ITUC), *2016 ITUC Global Rights Index: The World's Worst Countries for Workers*, 2016.
166. International Trade Union Confederation (ITUC), Saudi Arabia bans trade unions and violates all international labour standards, 2012, ituc-csi.org/saudi-arabia-bans-trade-unions-and, accessed on 5 April 2021.

Anti-corruption

Authoritative instruments

167. Organisation for Economic Co-operation and Development (OECD), *Convention on Combating Bribery of Foreign Public Officials in International Business Transactions and Related Documents*, 1997.

Other sources

168. Extractives Industry Transparency Initiative (EITI), Factsheet: Disclosing beneficial ownership, 2017.
169. FATF, *FATF guidance: Politically exposed persons (recommendations 12 and 22)*, 2013.
170. International Monetary Fund, *Fiscal Transparency Initiative: Integration of Natural Resource Management Issues*, 2019.
171. Organisation for Economic Co-operation and Development (OECD), *Corruption in the Extractive Value Chain: Typology of Risks, Mitigation Measures and Incentives*, 2016.
172. A. Sayne, A. Gillies, and A. Watkins, *Twelve Red Flags: Corruption Risks in the Award of Extractive Sector Licenses and Contracts*, 2017.
173. Transparency International, *Corruption Perceptions Index 2018*, 2018.
174. E. Westenberg and A. Sayne, *Beneficial Ownership Screening: Practical Measures to Reduce Corruption Risks in Extractives Licensing*, 2018.
175. A. Williams and K. Dupuy, *Deciding over nature: Corruption and environmental impact assessments*, 2016.

Further resources

The following resource may help organizations in the coal sector report on this topic:

176. Extractives Industry Transparency Initiative (EITI), *The EITI Standard,* 2019.

Payments to governments

Authoritative instruments

177. European Parliament, 'Directive 2013/34/EU of the European Parliament and the Council of 26 June 2013 on the annual financial statements, consolidated financial statements and related reports of certain types of undertakings', 2013.
178. Organisation for Economic Co-operation and Development (OECD), *Transfer Pricing Documentation and Country-by-Country Reporting, Action 13 - 2015 Final Report*, OECD/G20 Base Erosion and Profit Shifting Project, 2015.

Other sources

179. Extractive Industries Transparency Initiative (EITI), Fact sheet: Project-level reporting in the extractive industries, 2018.
180. Extractive Industries Transparency Initiative, *Transparency in the First Trade*, 2019.
181. Extractive Industries Transparency Initiative (EITI), *Nigeria EITI: Making transparency count, uncovering billions*, 2012.
182. S. Whitley et al., and Overseas Development Institute (ODI), 'Cutting Europe's Lifelines to Coal: Tracking Subsidies in 10 Countries', 2017, odi.org/publications/10788-cutting-europes-lifelines-coal-tracking-subsidies-10-countries.
183. A. Sayne, A. Gillies, and A. Watkins, *Twelve Red Flags: Corruption Risks in the Award of Extractive Sector Licenses and Contracts*, 2017.
184. Transparency International, *Under the Surface: Looking into Payments by Oil, Gas and Mining Companies to Governments*, 2018.

185. M. Blom and et al, “Subsidies and Costs of EU Energy,” 2014.

Further resources

The following resources may help organizations in the coal sector report on this topic:

186. Extractives Industry Transparency Initiative (EITI), The EITI Standard, 2019.
187. Organisation for Economic Co-operation and Development (OECD), Upstream Oil, Gas, and Mining State-Owned Enterprises, Governance Challenges and the Role of International Reporting Standards in Improving Performance, 2018.

Public policy and lobbying

Other sources

188. Australasian Centre for Corporate Responsibility (ACCR), Politics – BHP, 2017.
189. Climate investigations, *Coal’s Lonely Lobbyists*, 2016, climateinvestigations.org/coal-lobby/, accessed on 5 April 2021.
190. D. Coady, I. Parry, et al., *Global Fossil Fuel Subsidies Remain Large: An Update Based on Country-Level Estimates*, 2019.
191. N. Graham, S. Daub, and B. Carroll, *Mapping Political Influence: Political donations and lobbying by the fossil fuel industry in BC*, 2017.
192. European Parliament Directorate General for Internal Policies, *Fossil Fuel Subsidies*, 2017.
193. InfluenceMap, Climate Lobbying: How Companies Really Impact Progress on Climate, 2018, influencemap.org/climate-lobbying, accessed on 31 May 2020.
194. InfluenceMap, Trade association and climate: Shareholders make themselves heard, 2018, influencemap.org/report/Trade-associations-and-climate-shareholders-make-themselves-heard-cf9db75c0a4e25555fafb0d84a152c23, accessed on 5 April 2021.
195. D. Koplow, C. Lin, et al., *Mapping the Characteristics of Producer Subsidies: A review of pilot country studies*, 2010.
196. Organisation for Economic Co-operation and Development (OECD) Anti-corruption & Integrity Hub, Lobbying, oecd.org/corruption-integrity/explore/topics/lobbying.html.
197. Competition Commission of India, *Case No. 60 of 2017,* 2017.