



GRI Sector Standard: Oil and Gas - Exposure draft

8 July 2020

Comments to be received by 6 October 2020

This exposure draft of the Sector Standard: Oil and Gas has been published for public comment by the Global Sustainability Standards Board (GSSB), the independent standard-setting body of GRI.

This exposure draft is accompanied by the Explanatory memorandum, which sets out the objectives for developing the pilot GRI Sector Standard, GRI Sector Standard: Oil and Gas, the significant proposals contained in the exposure draft, and a summary of the GSSB's involvement and views on the development of the draft.

All references to the GRI Universal Standards in this document are to the exposure drafts made available for public comment as part of the review of GRI's Universal Standards. GRI Sector Standard: Oil and Gas is subject to changes as a result of outcomes from public comments on the Universal Standards as well as on this exposure draft.

Any interested party can submit comments on the draft by 6 October 2020 using this Exposure draft survey.

For more information, visit the GRI Standards website. For questions regarding the project, the exposure draft, or the public comment period, please email oil@globalreporting.org.

Users can navigate to specific sections of the exposure draft by clicking the hyperlinked bookmarks that function in most browsers and in Adobe Acrobat Reader.

GRI Sector Standard: Oil and Gas

EXPOSURE draft for Public comments

Contents

I. Introduction	4
I.I. Purpose of the GRI Sector Standards	4
I.2. GRI Standards	4
I.3. Organizations this Standard applies to	
I.4. Overview of this Standard	5
I.5. Using this Standard	6
Identifying material topics	6
Identifying what to report	6
2. Sector description	8
2.1. Oil and gas sector activities	
2.2. Sector context	9
3. Sector topics	12
3.1. Overview of likely material topics	
Climate change	12
Environment and biodiversity	12
Health and safety	13
Employment	13
Communities	
Transparency and governance	14
3.2. Topic descriptions and what to report	15
CLIMATE CHANGE	15
GHG emissions	15
Climate resilience and transition	18
ENVIRONMENT AND BIODIVERSITY	22
Air emissions	22
Biodiversity	23
Waste	25
Water and effluents	27
Closure and decommissioning	29
HEALTH AND SAFETY	
Asset integrity and process safety	31
Occupational Health and Safety	33



EMPLOYMENT	35
Employment practices	35
Diversity and non-discrimination	37
Forced labor and modern slavery	38
Freedom of association and collective bargaining	40
COMMUNITIES	41
Economic impacts	41
Local community impacts	43
Land use and resettlement	45
Rights of indigenous peoples	47
Conflict and security	50
TRANSPARENCY AND GOVERNANCE	51
Anti-competitive behavior	51
Anti-corruption	52
Payments to governments	54
Public policy and lobbying	56
Glossary	
Ribliography	70



I. Introduction

- 2 GRI Sector Standard: Oil and Gas, which is part of the GRI Sustainability Reporting Standards (GRI
- 3 Standards), applies to any organization that undertakes activities in the oil and gas sector. It helps an
- 4 organization in the sector identify and report on its most significant impacts and assists information
- 5 users in examining and appraising the organization's reporting.

6 1.1. Purpose of the GRI Sector Standards

- 7 The GRI Sector Standards (Sector Standards) are intended to help organizations prepare and report
- 8 information on their material topics, enhancing transparency and accountability as well as supporting
- 9 decision-making.

ı

- 10 Through their activities and <u>business relationships</u>, organizations <u>impact</u> the economy, environment,
- II and people, and in turn make negative and positive contributions to sustainable development. Material
- 12 topics are those that reflect the organization's most significant impacts on the economy, environment,
- 13 and people, including human rights.
- 14 The topics an organization identifies as material may vary according to specific circumstances, such as
- 15 its business model; sector; geographic, cultural, and legal operating contexts; ownership structure; and
- 16 the nature of its impacts.
- 17 Sector Standards provide information on the likely material topics for an organization in a given
- 18 sector. These topics have been identified through a transparent, multi-stakeholder process, and are
- 19 based on available authoritative instruments and other relevant references. They need to be
- 20 considered for reporting by an organization in that sector.
- 21 If an organization identifies a topic in an applicable Sector Standard as material, the Sector Standard
- 22 also helps it determine what to report for that topic.

1.2. GRI Standards

- 24 The GRI Standards enable an organization to publicly disclose its most significant impacts and how it
- 25 manages these impacts. The GRI Standards consist of three sets of Standards: Universal Standards,
- 26 Sector Standards, and Topic Standards (Figure 1).
- 27 Note: All references to the GRI Universal Standards in this document are to the exposure drafts
- 28 made available for public comment as part of the review of GRI's Universal Standards.

¹ The development of Sector Standards is overseen by the Global Sustainability Standards Board and governed by the formally defined Due Process Protocol.



GRI Sector Standard: Oil and Gas

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

29

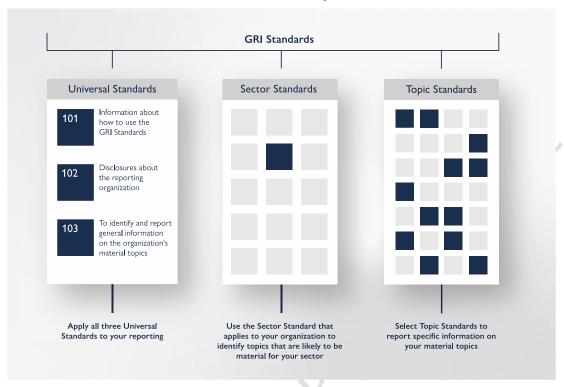
35

36 37 38

39

40

41



For more information on how to use the GRI Standards system, see GRI 101: Using the GRI Standards.

1.3. Organizations this Standard applies to

- 32 GRI Sector Standard: Oil and Gas applies to organizations undertaking the following activities:
- Exploration and production of onshore and offshore oil and gas, including by integrated oil and gas companies.
 - Supply of equipment and <u>services</u> to oil fields and offshore platforms, such as drilling, exploration, seismic information services and platform construction, including by owners and contractors of drilling rigs.
 - Storage and transportation of oil and gas, such as that conducted by midstream natural gas companies, pipeline operators, and oil and gas shipping.
 - Manufacturing and marketing of oil and gas products, such as refined petroleum products and consumable fuels.
- This Standard can be used by oil and gas organizations of any size or type in any geographic location.

1.4. Overview of this Standard

- The next section, Section 1.5, sets out how this Standard is used. The rest of the Standard is structured as follows:
- Section 2 provides an overview of the sector, including its activities, types of business relationships, and context.



- Section 3 describes sector topics, which are topics that have been identified as likely material for an organization in the oil and gas sector and therefore potentially merit inclusion in its reporting.
- Each sector topic description in Section 3 contains a 'What to report' section that lists disclosures identified for reporting on the topic by an organization in the oil and gas sector. This section specifies appropriate disclosures from the GRI Topic Standards and, where relevant, includes additional appropriate disclosures and sector-specific guidance. It also lists resources that can assist an organization with reporting.

1.5. Using this Standard

Identifying material topics

55

56

72

76

78

- 57 An organization reporting in accordance with the GRI Standards is required to identify its material
- 58 topics. Material topics are the topics an organization has prioritized to report on because they reflect
- 59 its most significant impacts on the economy, environment, and people, including impacts on human
- 60 rights. GRI 103: Material Topics includes guidance for identifying material topics.
- 61 Section 3 of this Sector Standard outlines topics that are likely material for an organization in the oil
- and gas <u>sector</u> based on the sector's most significant impacts.
- 63 GRI 101: Using the GRI Standards requires that when identifying its material topics, an organization use
- the Sector Standard(s) that apply to its sector(s) where available. As such, an organization in the oil
- and gas sector needs to review each topic described in this Standard and determine whether it is
- 66 material for it to report on. The organization may need to use more than one Sector Standard,
- 67 depending on its activities.
- Using this Standard is not intended to substitute the organization's own process for identifying material
- 69 topics. Not all topics listed in this Standard may be material for all organizations in the oil and gas sector,
- and other topics may be material that are not listed in this Standard. An organization is therefore still
- 71 required to identify material topics according to its unique circumstances.

Sustainability context

- 73 | Sections 2 and 3 include contextual information for the sector, including highlighting authoritative
- 74 measures of sustainable development, referencing broader sustainable development conditions and
- 75 goals set out in recognized sector-specific or global instruments, and describing expectations of
 - responsible business conduct and transparency. This will assist an organization to report on its
- 77 impacts in the wider context of sustainable development.

Identifying what to report

- 79 GRI 101: Using the GRI Standards requires the organization to report appropriate disclosures from the
- 80 corresponding GRI Topic Standard for each material topic. If a material topic is not covered by a
- 81 Topic Standard or the Topic Standard does not provide appropriate disclosures for the organization's
- 82 impacts for a material topic, the organization should report appropriate disclosures from other
- 83 sources.
- 84 The Sector Standard lists disclosures from the Topic Standards and other sources that have been
- 85 identified as appropriate for reporting on each sector topic.



- 86 If a sector topic is not covered by the Topic Standards or if the disclosures in the Topic Standards do
 87 not sufficiently capture the impacts associated with the sector for that topic, additional disclosures
 88 and/or guidance are also listed.
- If the organization determines that some disclosures listed for a sector topic do not adequately capture the impacts it has identified for a material topic, it does not need to report them. It only needs to report those disclosures that adequately capture its impacts.
- Along with any appropriate disclosures, the organization is required to report how it manages each material topic and related impacts using *GRI 103: Material Topics*.
- 94 Figure 2 illustrates how the 'What to report' sections are structured.

Including the Sector Standard in a GRI Content Index

95 96

97

98

99

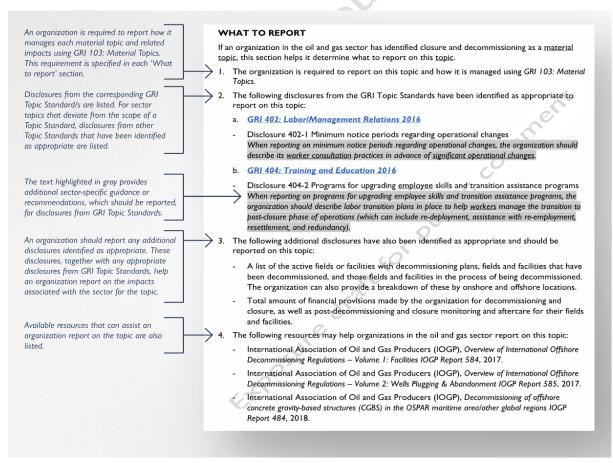
100

101

102 103 An organization reporting in accordance with the GRI Standards is required to publish a GRI Content Index using the template set out in GRI 101: Using the GRI Standards. As part of this content index, the organization is required to list the Sector Standard(s) it has used when identifying its material topics.

For more information on the elements an organization should include in the GRI Content Index, see Appendix I in GRI 101: Using the GRI Standards.

Figure 2. Content overview of 'What to report' section included in each sector topic





104 2. Sector description

- The oil and gas sector is a large, global industry producing energy and raw materials for products, such
- as specialty chemicals, polymers, and petrochemicals. In addition to impacts related to the activities
- described below, significant impacts are associated with the use of oil and gas products, the
- 108 combustion of which generates air emissions, including greenhouse gases (GHG). GHG emissions, in
- turn, are the main contributor to climate change. Along with end users, organizations extracting these
- products are increasingly expected to take responsibility for product use emissions from combustion
- and to disclose GHG emissions that occur from the use of its products (Scope 3 emissions).

2.1. Oil and gas sector activities

- The following describes upstream and downstream oil and gas activities and related project lifecycle
- 114 phases.

112

- 115 **Exploration**: Surveying of resources, which can include aerial surveys, seismic testing, and exploratory
- 116 drilling.
- 117 **Development**: Design, planning, and construction of oil and gas fields, including processing and
- 118 worker facilities.
- 119 **Production**: Production of oil and gas from reservoirs offshore or onshore, and separation of fluids
- 120 through processing.
- 121 Mining oil sands: Extraction of bitumen from oil sands using surface mining or in-situ techniques.
- 122 **Decommissioning and rehabilitation**: Dismantling, removal, disposal, or modification of a physical
- 123 asset and site rehabilitation.
- 124 **Refining**: Refining of oil into petroleum products for use as fuels and as feedstocks for chemicals.
- 125 **Processing**: Processing of gas into pipe-quality natural gas and natural gas liquids, including removing
- 126 hydrocarbons and fluids.
- 127 **Transport**: Marine and land transportation of oil and gas products.
- 128 Storage and pipelines: Distribution and storage of oil and gas in tanks and marine vessels and
- 129 distribution via marine and land-based pipelines.
- 130 Sales and marketing: Trading and customer sales of products, for example, transport fuels, gas for
- retail use, and inputs into lubricants, plastics, and chemicals manufacturing.

133 BUSINESS RELATIONSHIPS

- 134 In the GRI Standards, impact refers to the effect an organization has or could have on the economy,
- 135 environment, or people, including on human rights, as a result of its activities or business relationships.
- When identifying its material topics and related impacts, the organization should consider the impacts
- of additional entities with which it has business relationships. See GRI 103: Material Topics for more
- 138 | information

- 139 The following business relationships are of particular relevance for the oil and gas sector:
- | Joint ventures: these are common arrangements, particularly in upstream oil and gas operations.
- 141 Within a joint venture, companies share the costs, benefits, and liabilities of assets or a project. An



- 142 organization can be involved with negative impacts as a result of a joint venture, even if it is a non-143 operating partner.
- 144 State-owned enterprises (SOEs): these are prevalent in the oil and gas sector. They often represent
- 145 the largest producers of the commodities and hold ownership of the majority of reserves. SOEs often
- 146 have specific governance challenges, which are addressed in the section Transparency and governance.
- 147 Suppliers and contractors: these are used, often in large number, by oil and gas organizations during
- 148 certain phases of the project, such as drilling or construction, or to provide services. Some of the
- 149 most significant impacts related to the topics in this Sector Standard occur mainly through the supply
- 150

2.2. Sector context

- The oil and gas sector currently plays an important role in meeting society's need for energy and raw 151
- 152 materials. The sector's activities are associated with extensive infrastructure development, project
- 153 lifecycles lasting several decades, and immobile production, which can result in various and long-lasting
- 154 impacts on the environment and people. Presently, extraction of oil and gas also generates critical
- 155 revenue streams for governments that can contribute to local and national economic development,
- 156 along with job creation, investments, and local skills and business development. At the same time, the
- 157 large revenues derived from the sector can contribute to corruption and mismanagement of resources.
- 158 Economies dependent on these finite resources can also be vulnerable to commodity price and
- 159 production fluctuations.
- 160 The sector's main business model has historically been based on the production of energy, which is an
- 161 essential driver of sustainable development. The world's energy systems have thus far relied on fossil
- 162 fuels, such as oil and gas, to generate electricity and to fuel global economic development. With world
- 163 population and economies growing, the demand for energy and electricity is burgeoning. At present,
- 164 more than one in ten people globally still lack access to electricity,² highlighting the need for modern
- energy that everyone can afford and depend on. However, extracting and burning oil and gas releases 165
- 166 greenhouse gases, which are the largest single contributor to climate change.
- 167 Almost every country in the world has committed to combating climate change, as outlined in the
- 168 2015 Paris Agreement. Leading scientists warn in the Intergovernmental Panel on Climate Change
- 169 (IPCC) special report Global Warming of 1.5°C that continuing on a 'business-as-usual' basis to
- 170 consume and produce fossil fuels, including existing and future reserves, could result in dangerous
- 171 global temperature increases and magnified risks of extreme weather and climate events. Further
- 172 reports show that with current commitments, the world is heading toward a 3.2°C rise in
- 173 temperature by 2100.3
- 174 Combating climate change and avoiding dangerous temperature increases will require the global
- 175 energy system to transition to low-carbon economies. Actions taken by high-emitting sectors, such as
- 176 oil and gas, are essential to this transition. This can include making business model changes, investing

³ United Nations Environment Programme (UNEP), Emissions Gap Report 2019, 2019, wedocs.unep.org/bitstream/handle/20.500.11822/30797/EGR2019.pdf?sequence=1&isAllowed=y.



² World Bank Group, Access to Electricity, data.worldbank.org/indicator/EG.ELC.ACCS.ZS, accessed on 31 May

in renewable energy resources, prioritizing energy-efficient practices, and developing and adopting new technologies and nature-based solutions to remove carbon from the atmosphere.⁴

As laid out by the Paris Agreement, organizations and governments must work together to ensure a <u>just transition</u>. This entails accommodating countries' differing capabilities to respond to and <u>mitigate</u> impacts and ensuring equitable access to sustainable development, while contributing to poverty eradication and creating quality jobs for people affected by the transition.⁵

183 The oil and gas sector activities can support a number of United Nations Sustainable Development 184 Goals (SDGs), either through their positive contributions or by preventing or mitigating negative 185 impacts. Figure 3 presents linkages between the sector's high-level impacts and the SDGs.

⁴ Organisation for Economic Co-operation and Development (OECD) and International Energy Agency (IEA), *OECD Green Growth Studies: Energy*, 2011, oecd.org/greengrowth/greening-energy/49157219.pdf.
⁵ United Nations Framework Convention on Climate Change (UNFCCC), *Paris Agreement*, 2015, unfccc.int/files/essential background/convention/application/pdf/english paris agreement.pdf.



179

180

181

Figure 3. The oil and gas sector and the Sustainable Development Goals





3. Sector topics

3.1. Overview of likely material topics

- 189 The following topics have been identified as likely material for organizations in the oil and gas sector.
- 190 The topics are grouped by theme and elaborated on in Section 3.2.

191 Climate change

192

193

194

195

196 197

198

199

200

201 202

203

204

205

206

208209

210

218

219

220

221

222

223

224

225

226

Greenhouse gas (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 indirect GHG emissions (Scope I and Scope 2) as well as emissions related to construction activities, transportation, processing and refining, and end use of products (Scope 3).

• Climate resilience and transition

Climate resilience refers to how organizations are adapting to current and anticipated future climate risks and hazards. This topic also covers approaches and actions organizations can take toward a just transition to low-carbon economies.

Environment and biodiversity

Air emissions

Air emissions are pollutants that can have adverse <u>impacts</u> on ecosystems, air quality, agriculture, and human and animal health. This topic covers impacts from such pollutants, including sulfur dioxides, nitrogen oxides, particulate matter, volatile organic compounds, carbon monoxide, and heavy metals, such as lead, mercury, and cadmium.

207 • Biodiversity

Biodiversity has intrinsic value, and is closely connected to climate, human health and well-being, and economic prosperity. This topic covers impacts on biodiversity, including on plant and animal species, genetic diversity, and ecosystems.

211 • 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 <u>remediation</u> activities from active and inactive sites.

• Water and effluents

The amount of water withdrawn and consumed by an organization and the quality of its discharges can impact the functioning of an ecosystem and have economic and social consequences for <u>local communities</u> and <u>indigenous peoples</u>. This topic covers impacts on <u>freshwater</u> – including <u>groundwater</u>, <u>surface water</u>, and <u>seawater</u>.

Closure and decommissioning

At the end of commercial use, organizations are expected to decommission assets and facilities and rehabilitate operational sites. The planning and execution of this phase is expected to take environmental as well as socioeconomic consequences into consideration. This topic covers impacts from closure and decommissioning on the environment, local communities, and workers.



227 Health and safety

• Asset integrity and process safety

Asset integrity and process safety deal with prevention and control of events and incidents that can result in, for example, toxic effects, loss of containment, fires, or explosion. These, in turn, can lead to casualties or major injuries, property damage, production decrease, and environmental impacts. This topic covers impacts from such events and incidents on local communities and workers.

• Occupational health and safety

Occupational health and safety include prevention of physical and mental harm and promotion of workers' health. This topic covers impacts related to workers' health and safety, including workers who are not employees.

238 Employment

235

236

237

239

240

241

242

244245

246

247

248

249

250

25 I

253

254

255

256257

258259

260

261

262

263

264

265

266

267268

Employment practices

Employment practices refer to an organization's approach to job creation, recruitment, retention, training, and development, as well as the working conditions set for its workers and <u>suppliers</u>.

This topic covers impacts on workers as a result of employment practices.

• Diversity and non-discrimination

Freedom from <u>discrimination</u> is a fundamental labor right. Discrimination can impose unequal burdens on or deny <u>benefits</u> to individuals instead of treating them fairly and on the basis of individual merit. This topic covers impacts from discrimination and an organization's practices related to diversity and inclusion.

Forced labor and modern slavery

Freedom from forced labor is a fundamental labor right. This topic covers concepts such as <u>forced</u> <u>or compulsory labor</u>, debt bondage, forced marriage, slavery and slavery-like practices, and human trafficking.

• Freedom of association and collective bargaining

<u>Freedom of association</u> and <u>collective bargaining</u> are fundamental labor rights. They include the rights of employers and workers to form, join, and run their own organizations without prior authorization or interference, as well as to collectively negotiate working conditions and terms of employment. This topic covers impacts resulting from interference with freedom of association and collective bargaining.

Communities

Economic impacts

Organizations' activities can have direct impacts on the economic conditions of its <u>stakeholders</u> and on economic systems through, for example, revenues and other payments, local hiring, and local procurement. Indirect impacts can influence a community's well-being and long-term development through, for example, <u>infrastructure</u> investments and <u>services supported</u>. This topic covers economic impacts at local, national, and global levels.

Local community impacts

Local communities can comprise a range of persons, from those living adjacent to an organization's activities to those at a distance who are still likely to be affected by them. This topic covers socioeconomic, cultural, and environmental impacts on local communities.

269 • Land use and resettlement



The extensive land use required by oil and gas activities can affect a community's rights by restricting its access to that land and lead to involuntary resettlement of communities and individuals using the land. This topic covers impacts on local communities as a result of land use and resettlement.

• Rights of indigenous peoples

Indigenous peoples often have distinct customary cultural, economic, social, and political institutions, or lack economic resources, which renders them vulnerable to impacts caused by large-scale development projects. This topic covers impacts on the rights of indigenous peoples.

Conflict and security

An organization's use of <u>security personnel</u> to safeguard its workers and operations can pose risks to the human rights of local communities. This topic covers impacts related to operating in areas of conflict and the conduct of security personnel toward third parties, such as local communities.

282 Transparency and governance

Anti-competitive behavior

Anti-competitive behavior and anti-trust practices can result in collusion with potential competitors, with the purpose of limiting the effects of market competition. This topic covers impacts as a result of such practices.

• Anti-corruption

<u>Corruption</u> refers to corrupt practices, such as bribery, facilitation payments, fraud, extortion, collusion, and money laundering. It can also include self-dealing, influence peddling, and <u>conflicts of interest</u>. This topic covers impacts as a result of such practices.

Payments to governments

Payments to governments include paid taxes; production rights; royalties; signature, discovery, and production bonuses; commodity trading activities; and other payments. Lack of transparency about such payments can contribute to inefficient management of public funds, illicit financial flows, and corruption. This topic covers impacts related to lack of transparency on these payments.

• Public policy and lobbying

An organization's participation in public policy development can include activities, such as lobbying and, directly or through an intermediary organization, making financial or in-kind contributions to political parties, politicians, or causes. This topic covers impacts related to public policy development and lobbying activities.



3.2. Topic descriptions and what to report

The following section describes the most significant <u>impacts</u> related to the likely <u>material topics</u> for the oil and gas <u>sector</u> across upstream and downstream activities. An organization in the oil and gas sector needs to review each <u>topic</u> described in this section and determine whether it is material for it to report on. This section also assists the organization in determining what to report for each of these topics.

CLIMATE CHANGE

GHG emissions

307

308

- 309 Oil and gas are responsible for a large portion of two of the most significant greenhouse gas (GHG)
- emissions causing climate change: carbon dioxide (CO₂) and methane (CH₄). CO₂ and CH₄ constitute
- 311 over 90% of global GHG emissions. The sector's activities and product use makes up roughly half of
- the global CO₂ emissions and close to a quarter of CH₄ emissions caused by human activities.⁶ Recent
- 313 measurements show a high degree of uncertainty in estimates of global CH₄ emissions from oil and gas
- activities, which has a significantly higher global warming potential than CO₂.
- Other greenhouse gases from oil and gas activities include ethane (C_2H_6) , nitrous oxide (N_2O) ,
- 316 hydrofluorocarbons (HCFs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen
- 317 trifluoride (NF₃).

318 Scope I and 2 emissions

- Oil and gas activities consume significant amounts of energy. Unless powered by renewable energy
- 320 sources, these activities generate GHG emissions, which are classified as direct (Scope I) GHG
- 321 emissions for activities owned or controlled by the organization or indirect (Scope 2) GHG emissions,
- 322 which are a result of purchased or acquired electricity, heating, cooling, and steam consumed by the
- organization. GHG emissions originate from stationary and mobile sources (e.g., transportation of
- materials, products, or waste); extraction; operation of facilities and equipment; transportation;
- 325 liquefaction and regasification of natural gas; and oil refining.
- 326 Direct GHG emissions from oil and gas include emissions from fuel combustion during operations,
- process emissions such as those during loading and tankage, and fugitive emissions such as those from
- 328 piping and equipment leaks.
- In addition, flaring and venting are one of the most significant sources of GHG emissions from oil and
- gas activities. These practices are aimed to dispose of gas that cannot be contained or otherwise
- 331 handled for safety, technical, or economic reasons. They occur during production, storage, refining,
- 332 and electricity generation.

⁶ J. G. J. Olivier and J. A. H. W. Peters, *Trends in global CO*₂ and total greenhouse gas emissions: 2019 Report, 2020, pbl.nl/sites/default/files/downloads/pbl-2020-trends-in-global-co2-and-total-greenhouse-gas-emissions-2019-report 4068.pdf, p. 12.



- 333 Though improvements in production efficiency have reduced direct emissions, increasing depletion of
- 334 traditional oil and gas resources moves production to complex or sensitive environments, such as
- 335 offshore deep water and oil sands. These difficult settings and the unconventional extraction methods
- 336 they necessitate have led to increased energy use and GHG emissions during production activities.

337 Scope 3 emissions

- 338 For oil and gas, end-use activities are responsible for the most significant GHG emissions, which are
- 339 classified as other indirect (Scope 3) GHG emissions. Higher energy demands have led to higher GHG
- 340 emissions, the majority of which originates from combustion processes. Oil and natural gas
- 341 combustion represent over half of global CO₂ emissions.^{7 8} These emissions mostly originate from
- 342 activities, such as electricity and heat generation, transportation, manufacturing, and construction.

Flaring and venting

343

344

345

356

357

358 359

361

362 363

364

365

- Routine venting of associated gases is widely considered poor industry practice. Venting releases CH₄ directly to the atmosphere, whereas flaring converts the gas to CO_{2...} which has a lower global
- 346 warming potential. The International Finance Corporation recommends routing associated gas streams
- 347 to an efficient flare system instead of venting it.
- 348 However, continuous flaring of gas should also be avoided. Although large amounts of associated gases
- 349 from oil and gas activities are utilized or conserved, routine flaring still occurs in many major oil- and
- 350 gas-producing countries. The World Bank defines routine flaring as that which occurs 'during normal
- 35 I oil production operations in the absence of sufficient facilities or amenable geology to re-inject the
- 352 produced gas, utilize it on-site, or dispatch it to a market', and in 2019, estimated that around 4% of
- 353
- all natural gas produced was wasted by flaring. The uptick of shale oil production has also increased
- 354 flaring volumes. Paradoxically, better regulation and detection of flaring could also result in increased
- 355 venting, creating a net increase in global warming.
 - * The World Bank, Zero Routine Flaring by 2030, worldbank.org/en/programs/zero-routine-flaring-by-2030#7, accessed 31 May 2020

WHAT TO REPORT

- If an organization in the oil and gas sector has identified GHG emissions as a material topic, this section helps it determine what to report on this topic.
- 360 1. The organization is required to report on this topic and how it is managed using GRI 103: Material Topics.
 - When reporting on actions taken to manage GHG emissions and related impacts and the effectiveness of these actions, the organization should report the actions taken to manage flaring and venting as well as the effectiveness of these actions.
 - When reporting on goals and targets, the organization should report the following.
- 366 How goals and targets are set;

⁸ International Energy Agency (IEA), CO2 Emissions from Fuel Combustion Highlights, 2019, webstore.iea.org/co2emissions-from-fuel-combustion-2019-highlights.



GRI Sector Standard: Oil and Gas

⁷ International Energy Agency (IEA), Energy Efficiency 2018: Analysis and Outlooks to 2040, 2018, webstore.iea.org/market-report-series-energy-efficiency-2018.

- Whether, and how, goals and targets take into account the context in which the impacts take place and are informed by expectations in internationally recognized instruments and, where relevant, by scientific consensus;
- Whether goals and targets are voluntary or mandatory (if mandatory, the organization can list the mandating legislation);
- Activities or <u>business relationships</u> to which the goals and targets apply;
- 373 <u>Baseline</u> for the goals and targets; and
- Timeline for achieving the goals and targets.
- The following disclosures from the GRI Topic Standards have been identified as appropriate toreport on this topic:
- 377 a. **GRI 302: Energy 2016**
- 378 Disclosure 302-1 Energy consumption within the organization
- 379 Disclosure 302-3 Energy intensity
- 380 b. **GRI 305: Emissions 2016**

383 384

385

- Disclosure 305-1 Direct (Scope I) GHG emissions
 When reporting on direct (Scope I) GHG emissions, the organization should report:
 - Percentage of methane emissions from gross direct (Scope 1) GHG emissions; and
 - Breakdown of direct (Scope 1) GHG emissions by type of source, including from flared gas, vented gas, and fugitive emissions.
- Disclosure 305-2 Energy indirect (Scope 2) GHG emissions
 - Disclosure 305-3 Other indirect (Scope 3) GHG emissions
- 388 Disclosure 305-4 GHG emissions intensity
- Disclosure 305-5 Reduction of GHG emissions
- In addition to the disclosures listed above, when reporting ACT-1 Activities, value chain, and other
 business relationships in GRI 102: About the Organization, the organization should report efforts to
 move toward less GHG-intensive operations and products.
- 393 4. The following resources may help an organization in the oil and gas sector report on this topic:
- International Petroleum Industry Environmental Conservation Association (IPIECA), American
 Petroleum Institute (API), International Association of Oil and Gas Producers (IOGP),
 Sustainability reporting guidance for the oil and gas industry, 2020. The World Bank, Global Gas
 Flaring Reduction Partnership.
- World Resources Institute, Estimating and Reporting the Comparative Emissions Impacts of
 Products, 2019.
- 400 Greenhouse Gas Protocol, Corporate Value Chain (Scope 3) Accounting and Reporting Standard, 401 2011



Climate resilience and transition

402

418

425

426

427

428

429

430

43 I

- Climate change cuts across environmental and socioeconomic systems. To achieve sustainable development while addressing climate change, both mitigation and adaptation strategies are required. Mitigation, in order to avoid extreme climate change effects by, for example, investing in renewable energy, nature-based solutions to climate mitigation, and technologies to remove CO₂ from the atmosphere. Adaption, in order to cope with impacts that cannot be avoided. If climate change is moderate rather than substantial, the resulting risks to sustainable development may also be limited.⁹
- For organizations in the oil and gas sector, climate-related risks include transition risks that can affect the organization's financial performance as well as physical risks driven by acute events and long-term shifts in climate patterns, which can have impacts on the health and safety of workers and local communities. Disruptions in operations can also cause gaps in energy supply and impact energy security.
- Climate resilience and transition to low-carbon economies can limit these impacts and provide opportunities for organizations in the oil and gas sector, including improved resource efficiency, low-emission energy sources and consumption patterns, new <u>products</u> and <u>services</u>, and access to new markets.

Transition to low-carbon economies

- There is wide agreement that to mitigate climate change and stabilize global temperatures, global CO₂ emissions need to be limited. They need to 'eventually approach zero', which requires a 'fundamental transformation of the energy supply system' involving a key role for low-GHG energy supply technologies.¹⁰ For an organization in the oil and gas sector, this poses a 'strategic challenge of balancing short-term returns with its long-term license to operate'¹¹ while also facing increasing pressure to align with the transition to low-carbon energy in portfolios and business models.
 - Currently, proven global reserves of fossil fuels significantly exceed that which can be combusted while still keeping warming 'well below 2 degrees', the global goal established by the Paris Agreement. Aligning with this goal requires organizations to set carbon emission targets that are compatible with carbon budgets, which indicate 'the cumulative amount of CO₂ emissions permitted over a period of time to keep within a certain temperature threshold'. These projections are also referred to as 'scenarios'. By making targets compatible with carbon budgets, organizations can better establish relevant mitigation and adaptation measures to navigate a climate-resilient pathway. The more limited

¹² Carbon Tracker Initiative, *Carbon Budgets Explainer*, 2018, carbontracker.org/wp-content/uploads/2018/02/Carbon-Budgets Eplained 02022018.pdf.



⁹ F. Denton, T. J. Wilbanks, et al., 'Climate-Resilient Pathways: Adaptation, Mitigation, and Sustainable Development', *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, 2014, ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap20_FINAL.pdf, pp. 1101-1131.*

¹⁰ T. Bruckner, I. Alexeyevich Bashmakov, et al., 'Energy Systems', Mitigation of Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, 2014, ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter7.pdf, pp. 511-597.

¹¹ International Energy Agency (IEA), The Oil and Gas Industry in Energy Transitions: World Energy Outlook special report, 2020, iea.org/reports/the-oil-and-gas-industry-in-energy-transitions.

- the budget, the greater the required changes, which can include diversification and portfolio
- 433 reassessment.
- 434 Such changes in business models can have economic impacts, including loss of economic activity
- affecting sector workforces, local communities, and entire nations. Countries particularly those with
- emerging economies whose gross domestic products heavily rely on fossil fuels face greater
- 437 transition-related challenges. Stricter climate policies, environmental regulations, and technological
- developments can increase the risk of stranded assets when demand for oil and gas decreases and
- production costs remain stable or increase. This can increase the need to retire production
- infrastructure, which can be a major economic burden for governments and taxpayers.
- 441 As oil and gas fields have finite lifespans, the coming decades are likely to see increases in closure
- and decommissioning without being counterbalanced by new developments. The social impact can
- be significant when substantial direct employment, broader job creation, and economic development
- in the region depend on the sector. Workers face other potential impacts related to employment,
- specifically surrounding employability, reskilling, and desirable re-employment.
- Transitioning to low-carbon economies can also offer communities opportunities to transform
- economic activity, in turn, creating new jobs and skills development. To create opportunities and
- ensure a just transition for those most affected, it is essential to anticipate and facilitate workforce
- retraining and mobility through active dialogue between governments, employers, and workers.

WHAT TO REPORT

450

455

456

457 458

459

460 461

462

463 464

465

466

467

468

469

470

47 I

472

473

474

475

- If an organization in the oil and gas sector has identified climate resilience and transition as a <u>material</u> topic, this section helps it determine what to report on this <u>topic</u>.
- 1. The organization is required to report on this topic and how it is managed using *GRI 103: Material Topics*.
 - a. When reporting on actions taken to manage climate resilience and transition and related impacts, the organization should report:
 - Level and function within the organization assigned responsibility for managing the impacts (this can also be reported as part of GOV-3 Responsibilities for sustainable development topics and delegation in GRI 102: About the Organization);
 - Internal decision-making, budget allocation, and oversight processes to enable effective actions to manage the impacts (this can also be reported as part of GOV-13 Remuneration policies in GRI 102: About the Organization);
 - How performance criteria in the remuneration policies for highest governance body members and senior executives relate to the topic; and
 - Whether responsibility to manage the topic is linked to performance assessments or incentive mechanisms.
 - b. When describing its policies on or commitments to the topic, the organization should report:
 - Policy commitments to climate change (this can be reported as part of RBC-2 Policy commitments in GRI 102: About the Organization);
 - Approach to public advocacy on climate change, including stance on issues related to climate change, and any differences between its lobbying positions and any stated policies, goals, or other public positions; and
 - Any industry and other membership associations and national and international advocacy
 organizations that participate in public advocacy on climate change in which the organization has a
 significant role (this can also be reported as part of RBC-7 Membership associations in GRI 102:
 About the Organization).



- When reporting on goals and targets, the organization should report targets related to reducing <u>Scope 3</u>
 emissions from use of sold products, including:

 Strategy to achieve targets, including through investments in renewable energy, nature-based solution
 - Strategy to achieve targets, including through investments in renewable energy, nature-based solutions to climate mitigation, and technologies to remove CO₂ from the atmosphere;
 - Baseline for the targets;

480

48 I

482

483 484

485

488

489

490

491

492 493

494

495

496

497

498

499

500

50 I

502

503

504

505

506

507

508

509

510

511

512

513

- Whether and how the goals and targets take into account the context in which the impacts take place and are informed by expectations in internationally recognized instruments and, where relevant, by scientific consensus; and
- Timeline for achieving goals and targets.

(**Note:** Reporting on goals and targets related to <u>Scope I emissions</u> and <u>Scope 2 emissions</u> is included in GHG emissions.)

2. The following disclosure from the GRI Topic Standards has been identified as appropriate to report on this topic:

GRI 201: Economic Performance 2016

 Disclosure 201-2 Financial implications and other risks and opportunities due to climate change

When reporting on financial implications and other risks and opportunities due to climate change, the organization should report:

- Whether climate change is considered in the organization's strategy;
- Scenarios used for outlining risks and opportunities;
- Assumptions and/or projections used to address stranded asset risks; and
- How the concept of just transition is considered to prevent or mitigate systemic negative impacts.

When reporting on methods used to manage risks or opportunities, the organization should report:

- Investments in nature-based solutions to climate mitigation and technologies to remove CO_2 , and net captured value of CO_2 removed;
- Decisions not to invest in new oil and gas developments and project divestments;
- Investments in exploration of new oil and gas reserves and development of new fields (percentage of total CAPEX)¹³.
- 3. The organization should also report its business model and lines of business when reporting ACT-1 Activities, value chain, and other business relationships in GRI 102: About the Organization, including:
 - Oil and gas production volumes for the reporting year and projected volumes for the next five years in percentages by crude oil, natural gas, oil sands, tight oil, and shale gas;
 - Energy production from renewable sources by type of energy source and investment into renewable energy as well as projections for the next five years (percentage of total CAPEX and current total revenue); and
 - Estimated reserves by resource type and emission potential of these reserves.

¹³ The definition of reserves refers to the one applied in the organization's consolidated financial statements or equivalent documents.



- 514 4. The following resources may help organizations in the oil and gas sector report on this topic:
- 515 Task Force on Climate-Related Financial Disclosure (TCFD), Recommendations of the Task Force on Climate-related Financial Disclosure, 2017. 516
- Task Force on Climate-Related Financial Disclosure, The Use of Scenario Analysis in Disclosure of 517 518 Climate-Related Risks and Opportunities, 2017.
- 519 Transition Pathway Initiative, Methodology and Indicators Report, 2019.
- eporting the economic confidence of the economic 520 521



539

546

547 548

549

550

55 I

552

523 Air emissions

- In addition to GHGs, emissions from oil and gas activities and use constitute significant anthropogenic
- sources of air pollutants. Globally, these emissions result in severe negative health impacts and
- millions of deaths annually by contributing to heart and lung diseases, strokes, respiratory infections,
- and neurological damage. Children, the elderly, and the poor are disproportionately affected, as are
- 528 communities adjacent to operations.
- Air pollution also impacts ecosystems. For example, nitrogen emissions that enter the oceans can
- alter ocean chemistry, impacting marine life. Sulfur oxides can lead to acid rain and increase ocean
- acidification. Air pollution can also cause damage to plant life, such as impaired photosynthesis and
- 532 reduced growth.
- Air emissions from oil and gas activities include nitrogen oxides (NO_x), sulfur oxides (SO_x), volatile
- organic compounds (VOC), particulate matter (PM), ozone (O₃), and other hazardous air pollutants,
- such as hydrogen sulfide (H_2S) and benzene (C_6H_6). ¹⁴ These can occur from venting, flaring, and
- blowdowns; equipment leaks, evaporation losses, accidents, and equipment failures (in the form of
- fugitive emissions); waste impoundments and storage; fuel combustion; refining and processing
- activities; and transportation of supplies and products.

WHAT TO REPORT

- If an organization in the oil and gas <u>sector</u> has identified air emissions as a <u>material topic</u>, this section helps it determine what to report on this <u>topic</u>.
- The organization is required to report on this topic and how it is managed using GRI 103: Material
 Topics.
- 544 2. The following disclosure from the GRI Topic Standards has been identified as appropriate to report:

GRI 305: Emissions 2016

- Disclosure 305-7 Nitrogen oxides (NO_X), sulfur oxides (SO_X), and other <u>significant air</u> emissions
- 3. The organization can also report the following disclosure:

GRI 416: Customer Health and Safety 2016

- Disclosure 416-1 Assessment of the health and safety impacts of product and service categories
- When reporting on the assessment of the health and safety impacts of product and service categories, the organization can also describe efforts to improve product quality to reduce air emissions.

¹⁴ This scope does not include carbon dioxide (CO_2) and methane (CH_4), which are to be reported under <u>GHG</u> emissions.



555 Biodiversity

- Oil and gas activities typically require large-scale infrastructure development, which have direct,
- 557 indirect, and cumulative impacts on biodiversity occurring in the short and long term. Direct impacts
- 558 can include air, soil, and water contamination, deforestation, soil erosion, and sedimentation of
- 559 waterways. Other direct impacts involving species include mortality; habitat fragmentation and
- conversion; and the introduction of invasive species and pathogens.
- These impacts can result from land clearance; seismic testing and drilling of exploration wells;
- construction of facilities, infrastructure, and pipelines; transportation; increased levels of noise and
- light; generation, use, and disposal of <u>produced water</u> and other <u>effluents</u>; disposal of drilling waste;
- spills and leaks; gas leakage and methane migration into freshwater; and contamination from tailings
- 565 ponds.
- 566 Oil and gas resources are often located in sensitive ecosystems or areas with high biodiversity value,
- 567 which can exacerbate the impacts on biodiversity. Threats to biodiversity will increase as easily
- accessible oil and gas resources are depleted and exploration moves into more remote areas.
- Unconventionally produced oil and gas, such as shale oil and gas, have a greater environmental
- 570 footprint than conventional production.
- Increased human settlement around operational sites can have indirect impacts, such as opening of
- 572 routes to previously inaccessible areas and adding stress on areas of high biodiversity value.
- 573 Effects on species and ecosystems can also be the result of cumulative impacts. For example, habitat
- fragmentation caused by a pipeline can be compounded by land use change from agricultural
- operations. Impacts can also accumulate over time. Due to the scale and long lifespans of oil and gas
- activities, impacts can occur well beyond a project's direct activities, including after closure and
- 577 decommissioning.
- Impacts on biodiversity can also generate other effects. Activities related to oil and gas can have
- 579 impacts on local communities by limiting resource availability, accessibility, or quality. Due to
- 580 extensive land use required for many projects, the sector's activities can further contribute to GHG
- 581 emissions and climate change through land-use change resulting in removal of carbon sinks. Climate
- 582 change is expected to affect all aspects of biodiversity including individual organisms, populations,
- 583 species distribution, and ecosystem composition and function and the impacts are anticipated to
- worsen with increasing temperatures.
- To limit and manage its negative impacts on biodiversity and ecosystems, the oil and gas sector has
- been active in developing a mitigation hierarchy tool, which can be used to limit and manage its
- negative impacts on biodiversity and ecosystems.



588 WHAT TO REPORT

598

599

600 601

602 603

604

608

609

610

611

612

613

614 615

616

617

- If an organization in the oil and gas sector has identified biodiversity as a <u>material topic</u>, this section helps it determine what to report on this <u>topic</u>.
- The organization is required to report on this topic and how it is managed using *GRI 103: Material Topics*.
- When describing the actions taken to manage the topic and related impacts, the organization should describe whether it has implemented the <u>mitigation hierarchy</u> and how local community engagement is incorporated.
- 596 2. The following disclosures from the GRI Topic Standards have been identified as appropriate to report:

GRI 304: Biodiversity 2016

- Disclosure 304-1 Operational sites owned, leased, managed in, or adjacent to, <u>protected areas</u> and areas of high biodiversity value outside protected areas
- Disclosure 304-2 Significant impacts of activities, <u>products</u>, and <u>services</u> on biodiversity When reporting significant impacts of activities, products, and services on biodiversity, the organization should report significant direct and indirect impacts on biodiversity with reference to habitats or ecosystems.
- Disclosure 304-3 Habitats protected or restored
 When reporting habitats areas, the organization should provide a breakdown of those protected or restored through the application of the mitigation hierarchy and/or additional conservation actions.
 - Disclosure 304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations
 - 3. The following resources may help organizations in the oil and gas sector report on this topic:
 - International Finance Corporation (IFC) Performance Standard 6: Biodiversity Conservation and Sustainable Management of Natural Resources, 2012.
 - 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.
 - Integrated Biodiversity Assessment Tool (IBAT) Alliance, Integrated Biodiversity Assessment Tool.
- International Petroleum Industry Environmental Conservation Association (IPIECA),
 International Association of Oil and Gas Producers (IOGP), Biodiversity and ecosystem services
 fundamentals, 2016.



621 Waste

- Extraction of oil and gas generates various <u>waste</u> streams, often in large quantities, which can contain
- toxic or noxious substances, including heavy metals. Effective waste management and minimization are
- 624 critical for protecting <u>local communities</u> and preventing damage to the environment.
- Waste impacts from oil and gas can include contamination of surface water, groundwater, and food
- sources with chemicals or heavy metals. Further effects can be loss of land productivity and erosion.
- 627 Certain wastes require particularly robust management due to their type or volume. In remote areas
- 628 with limited disposal methods, waste impacts can be more severe or slower to manifest.
- Wastes are generated throughout oil and gas activities. In traditional oil and gas exploration and
- 630 production, the largest waste stream derives from drilling, which can consist of rock cuttings and
- water and drilling muds. These, in turn, can contain salts, metals, hydrocarbons, chemical additives,
- and naturally occurring radioactive material (NORM). Drilling waste can pose risks to the
- environment if released in an uncontrolled manner. When disposed of in underground injection wells,
- drilling waste can cause earthquakes or contamination of groundwater. In the absence of an alternative
- outlet, drilling fluids might also be discharged into waterways or the ocean.
- In oil sands surface mining, the largest waste streams constitute topsoil, overburden, and tailings. The
- process of separating oil from sand and clay produces tailings, a toxic waste. Some tailings ponds have
- been found to leach chemicals into the environment, causing health risks for local communities and
- 639 wildlife, including birds that land on ponds and can drown from oiling.
- At the end of an oil and gas exploration or extraction project, decommissioning and closure also
- yield significant waste, which can have lasting environmental and socioeconomic consequences.
- Other typical wastes from oil and gas facilities include chemicals and waste oils, construction waste,
- office and packaging waste, and medical waste.

Use of materials

644

- The use of materials is increasing globally, requiring better and more efficient management as well as reduction in waste generation. Production of oil and gas largely consists of using water and chemicals
- for extraction and processing. However, much of the sector's impacts from the use of materials
- comes from infrastructure development. Project construction, commissioning, and
- decommissioning and closure involve substantial use of steel and concrete. The oil and gas sector
- has opportunities for implementing more efficient use of materials as well as leveraging its significant
- 651 purchasing power to create demand for more responsibly produced materials.
 - → The use of materials is addressed in GRI 301: Materials 2016.



653 WHAT TO REPORT

- lf an organization in the oil and gas sector has identified waste as a <u>material topic</u>, this section helps it determine what to report on this <u>topic</u>.
- I. The organization is required to report on this topic and how it is managed using *GRI 103: Material Topics*.
- The following disclosures from the GRI Topic Standards have been identified as appropriate to report on this topic:
- 660 **GRI 306: Waste 2020**

662

664

668

- Disclosure 306-1 Waste generation and significant waste-related impacts
 - Disclosure 306-2 Management of significant waste-related impacts
- Disclosure 306-3 Waste generated
 - Disclosure 306-4 Waste diverted from disposal
- Disclosure 306-5 Waste directed to disposal
- When reporting on waste generated, diverted from disposal, and directed to disposal, the organization should report the composition of the waste broken down by:
 - Drilling waste (muds and cuttings);
 - o Total amounts of overburden, rock, and sludges; and
- o Tailings waste.
- The following additional disclosures have also been identified as appropriate and should be reported on this topic by organizations with oil sands mining operations:
- Volume (m³) and area (m²) of tailings ponds
- Types of tailings facilities the organization operates
- 4. The following resources may help organizations in the oil and gas sector report on this topic:
- International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Waste Management, 2007.
- United Nations Environment (UN environment), International Council for Mining and Metals (ICMM), Principles for Responsible Investment (PRI), Global Tailings Standard.
- International Association of Oil and Gas Producers (IOGP) Guidelines for waste management with special focus on areas with limited infrastructure.
- International Petroleum Industry Environmental Conservation Association (IPIECA), Petroleum refinery waste management and minimization, 2014.



684 Water and effluents

- Oil and gas activities can have impacts on the availability of water resources, which can have
- consequences for <u>local communities</u> as well as other <u>sectors</u>. The sector's impacts from water use
- depend on the quantity of water resources in the local context; where water is scarce, the sector has
- a greater impact and can increase conflicts between water users.
- Water is used in the development, extraction, and processing of oil and gas. The quantity of water
- required for production varies depending on fuel type and extraction method, geology, and the degree
- 691 of processing required. Unconventional extraction methods, including hydraulic fracturing and oil
- sands operations, are particularly water-intensive. The amount of water resources is further impacted
- by the ability to substitute water, water quality, reservoir characteristics, and recycling infrastructure.
- In regions where water is scarce or in high demand for other uses, operations can use alternative
- sources, such as saline water or recycled wastewater.
- Oil and gas activities can also have significant impacts on surface water and groundwater quality. In
- turn, long-term impacts on ecosystems and biodiversity can spread waterborne diseases, cause
- 698 problems for human health and development, and impair food-chain productivity. Heavy metals and
- pollutants can accumulate in groundwater, lakes, and reservoirs; contaminate aquifers with methane;
- and pollute streams receiving water discharges and downstream communities.
- 701 Impacts on water quality can derive from inefficient treatment of water discharges, spills, and leaks. By
- volume, produced water is the largest wastewater source from the sector. Produced water that is not
- reinjected into a well or discharged into the ocean might be discarded to land or water or held in
- retention ponds, potentially causing surface water and groundwater contamination.
- 705 Contamination can also occur from spills and injection of drilling fluids into wells and flowback from
- hydraulic fracturing. Hydraulic fracturing and other forms of well stimulation for extracting oil and tar
- sands can cause underground contaminants to seep further and pollute groundwater resources.
- 708 Seepage or failure of an oil sands tailings dam can also have significant impacts on surface and
- 709 groundwater quality. Oil spills from transportation accidents and ruptured pipelines can similarly have
- 710 negative impacts on local water resources.
- 711 Droughts, floods, and other extreme weather events related to climate change will likely pose further
- 712 challenges to water availability and quality and exacerbate the impacts of this sector.

WHAT TO REPORT

713

720

72 I

- If an organization in the oil and gas sector has identified water and <u>effluents</u> as a <u>material topic</u>, this
- section helps it determine what to report on this topic.
- 716 I. The organization is required to report on this topic and how it is managed using *GRI 103: Material Topics*.
- 718 2. The following disclosures from the GRI Topic Standards have been identified as appropriate to report on this topic:

GRI 303: Water and Effluents 2018

- Disclosure 303-1 Interactions with water as a shared resource
- 722 Disclosure 303-2 Management of water discharge-related impacts
- 723 Disclosure 303-3 Water withdrawal
- 724 Disclosure 303-4 Water discharge
- When reporting on water discharge, the organization should report the total volume of hydrocarbon
- 726 discharged within produced water.



- 727 Disclosure 303-5 Water consumption
- 728 3. The following resources may help organizations in the oil and gas sector report on this topic:
- 729 International Council for Mining and Metals (ICMM): Water Stewardship Framework, 2014.
- A): The

 A): The 730 International Petroleum Industry Environmental Conservation Association (IPIECA): The 73 I



732 Closure and decommissioning

- Developing oil and gas fields can impact the surrounding area and cause changes beyond the location
- or lifespan of a project. Impacts following closure may include soil and water contamination, changes
- 735 to landforms, disturbance of biodiversity and wildlife, and lasting socioeconomic consequences for
- 736 <u>local communities</u>.
- 737 Closure and decommissioning often requires planning from the early phases of a project's lifecycle, to
- 738 consider potential <u>impacts</u> on the economy, environment, and people. Failure to decommission assets
- and rehabilitate sites soundly can render land unusable for other productive uses, due to the presence
- of toxic materials or contamination, as well as cause health and safety hazards. Without clearly
- assigned responsible parties or allocated funds, closed and decommissioned oil and gas fields can also
- 742 leave behind legacy environmental issues and financial burden for communities and governments.
- Over the course of an oil and gas project, communities might come to depend on the sector's
- activities for jobs, income, royalties, tax payments, charitable donations, and other benefits. This can
- 745 lead to negative economic and social impacts after the project ends. For example, insufficient notice of
- 746 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
- 748 retrenchment, economic downturn, and social unrest.
- 749 The need to reduce GHG emissions and transition to low-carbon economies increases the
- 750 likelihood of more frequent closures, which will not, as in the past, be counterbalanced by openings. In
- 751 areas where employment largely derives from oil and gas activities, social impacts will be significant,
- 752 requiring collaboration between local and national governments, companies, workers and unions to
- 753 ensure a just transition.
- 754 Closure and decommissioning of oil and gas fields can include removal and final disposal of hazardous
- 755 materials and chemicals; capping or plugging of abandoned wells; dismantling and discarding structures;
- 756 <u>remediation</u> of land or water; and restoration of lands to a condition or economic value approximates
- 757 pre-development state. Closing oil sands operations also involves management of tailings ponds (see
- 758 also **Waste**).
- 759 Decommissioning offshore structures can be more complex and costly than for onshore operations.
- 760 International conventions require decommissioning all offshore platforms at the end of field life.
- Leaving offshore installations intact, after decommissioning, might cause marine pollution from
- corrosion, ecosystem changes, damage to fishing equipment, and navigational hazards to shipping.
- 763 However, leaving them intact might be an appropriate solution in cases where rigs have become
- 764 integral to the benthic community and habitat.¹⁵
- 765 The closure and decommissioning phase can create significant employment opportunities at the end
- of an asset lifecycle and 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 project's
- 768 phase can, in turn, exacerbate other pressures on the environment.

¹⁵ Benthic communities 'are biological communities that live in or on the seabed', as defined by the Australian Environmental Protection Authority (EPA, *Environmental Factor Guideline: Benthic Communities and Habitats*, 2016, epa.wa.gov.au/sites/default/files/Policies_and_Guidance/Guideline-Benthic-Communities-Habitats-131216_2.pdf).



GRI Sector Standard: Oil and Gas

769 WHAT TO REPORT

776

777

778

779

78 I

782

783

784

785

788

789

790

79 I

792

793

795

796

797

798

799

800

- If an organization in the oil and gas sector has identified closure and decommissioning as a <u>material</u> topic, this section helps it determine what to report on this <u>topic</u>.
- The organization is required to report on this topic and how it is managed using GRI 103: Material
 Topics.
- 774 2. The following disclosures from the GRI Topic Standards have been identified as appropriate to report on this topic:
 - a. GRI 402: Labor/Management Relations 2016
 - Disclosure 402-1 Minimum notice periods regarding operational changes

 When reporting on minimum notice periods regarding operational changes, the organization should describe its worker consultation practices in advance of significant operational changes.
- 780 b. GRI 404: Training and Education 2016
 - Disclosure 404-2 Programs for upgrading <u>employee</u> skills and transition assistance programs. When reporting on programs for upgrading employee skills and transition assistance programs, the organization should describe labor transition plans in place to help <u>workers</u> manage the transition to post-closure phase of operations (which can include re-deployment, assistance with re-employment, resettlement, and redundancy).
- 786 3. The following additional disclosures have also been identified as appropriate and should be reported on this topic:
 - A list of the active fields or facilities with decommissioning plans, fields and facilities that have been decommissioned, and those fields and facilities in the process of being decommissioned. The organization can also provide a breakdown of these by onshore and offshore locations.
 - Total amount of financial provisions made by the organization for decommissioning and closure, as well as post-decommissioning and closure monitoring and aftercare for their fields and facilities.
- 794 4. The following resources may help organizations in the oil and gas sector report on this topic:
 - International Association of Oil and Gas Producers (IOGP), Overview of International Offshore Decommissioning Regulations Volume 1: Facilities IOGP Report 584, 2017.
 - International Association of Oil and Gas Producers (IOGP), Overview of International Offshore Decommissioning Regulations Volume 2: Wells Plugging & Abandonment IOGP Report 585, 2017.
 - International Association of Oil and Gas Producers (IOGP), Decommissioning of offshore concrete gravity-based structures (CGBS) in the OSPAR maritime area/other global regions IOGP Report 484, 2018.



803 Asset integrity and process safety

- 804 Major incidents in the oil and gas sector can have catastrophic consequences on workers, local
- 805 communities, and the environment, as well as cause damage to assets and infrastructure. Significant
- 806 <u>impacts</u> include fatalities, injuries, and health impacts, including toxicological and mental health effects
- 807 for communities and workers, economic loss, conflict, threats to livelihoods and food safety and
- 808 security, social disruption, cultural erosion, litigation stress, environmental degradation, and direct
- species mortality. Events or incidents that cause methane and other GHG emissions, such as well
- 810 blowouts, pipeline pigging, and refinery releases, further contribute to climate change.
- 811 Focus areas associated with asset integrity and process safety in the oil and gas sector commonly
- 812 involve unplanned or uncontrolled hydrocarbon releases. Distribution of oil and gas in pipelines and by
- water, road, or rail also come with the risk of spills, which can pollute soil and water as well as harm
- 814 species and livelihoods (see also Water and effluents and Biodiversity). Other events or incidents
- 815 include oil or gas well blowout, explosions, fires, unplanned plant disruption and shutdown, and tailings
- dam failures from oil sands operations. Gas leaks from oil and gas equipment and distribution systems
- are also common, yet often insufficiently monitored and regulated.
- 818 Besides prevention of events and incidents with sound asset integrity and process safety systems, the
- 819 consequences of incidents can be minimized through measures ensuring emergency preparedness and
- 820 response. A highly effective process safety management system can also limit impacts associated with
- 821 extreme weather events, the frequency and intensity of which will likely increase due to the effects of
- 822 climate change.

823

832

840

84 I

WHAT TO REPORT

- lf an organization in the oil and gas sector has identified asset integrity and process safety as a <u>material</u> topic, this section helps it determine what to report on this <u>topic</u>.
- I. The organization is required to report on this topic and how it is managed using *GRI 103: Material Topics*.
- When describing its policies or commitments for this topic, the organization should describe its emergency preparedness and response programs and plans.
- 2. The following disclosure from the GRI Topic Standards has been identified as appropriate to report on this topic:

GRI 306: Effluents and Waste 2016

- 833 Disclosure 306-3 Significant spills
- When reporting on <u>significant spills</u>, the organization should report cause of spill and volume of substance recovered.
- Note: GRI 306: Effluents and Waste 2016 can continue to be used for reports or other materials only if they are published on or before 31 December 2021.
- 3. The following additional disclosures have also been identified as appropriate and should be reported on this topic:
 - Number of Tier I and Tier 2 process safety events per API RP 754 definitions, reported per business activity (e.g., refining, upstream).
- 4. The following resources may help organizations in the oil and gas sector report on this topic:



843 844 845	-	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.
846 847	-	International Association of Oil and Gas Producers (IOGP), Asset Integrity – the Key to Managing Major Incident Risks, 2018.
848 849	-	International Association of Oil and Gas Producers (IOGP), Process safety: recommended practice on key performance indicators, 2018.
850 851	-	UK Health and Safety Executive, Step-By-Step Guide to Developing Process Safety Performance Indicators, 2006.
	\	Aposture drafte.



852 Occupational Health and Safety

- Some occupations in the oil and gas sector can potentially have significant impacts on workers' health
- and safety. Many of the work-related hazards are associated with key processes in exploration and
- production phases, such as working with heavy machinery and exposure to or handling of explosive,
- 856 flammable, poisonous, or harmful substances. Despite the sector's efforts to eliminate work-related
- hazards and achieve improvements, exposure to these hazards has resulted in higher fatality rates than
- 858 in many other sectors.
- Other hazards to workers' health and safety can derive from working in confined spaces or isolated
- locations; long working hours; and the type of physical, often repetitive, labor required by the oil and
- gas sector. Work-related hazards can vary according to the extraction method. For example, offshore
- workers can be exposed to more health and safety risks due to, for example, challenging working
- 863 conditions and remote locations.
- The oil and gas sector extensively uses <u>suppliers</u> to perform sometimes significant parts of projects.
- Suppliers are often subject to lower occupational health and safety standards than employees.
- 866 Suppliers can also have higher accident and fatality rates, which can be the result of suppliers
- undertaking the most dangerous jobs. They might also not be covered by the oil and gas organization's
- 868 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.
- The following hazards present occupational health and safety risks for the oil and gas sector, with the
- potential to result in a high-consequence work-related injury or ill health.

Hazards with a potential to result in injury

- 873 Transportation incidents are the most common source of fatalities and injuries in the oil and gas
- 874 sector. These can occur when workers and equipment are transported to and from wells and offshore
- rigs, sometimes over long distances along dangerous routes.
- 876 Fires and explosions are another major hazard, which can originate from dust and flammable gases,
- such as methane, well gases, and vapors during oil and gas production, transportation, and processing.
- 878 Electrical hazards can be associated with high-voltage systems used in exploration and production
- 879 facilities or equipment.

872

884

- 880 Incidents categorized as 'struck-by', 'caught-in', or 'caught-between' can involve falling equipment or
- 881 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 accessing
- platforms and equipment located high above the ground or water.

Hazards with a potential to result in ill health

- 885 Commonly reported chemical hazards include respirable free crystalline silica, which is released
- during, for example, hydraulic fracturing, and can cause silicosis and lung cancer. Exposure to
- hydrogen sulfide released by oil and gas wells can lead to incapacitation or death. Workers can also be
- 888 exposed to harmful or carcinogenic hydrocarbon gases and vapors. Concentration of gases such as
- methane, carbon monoxide, and nitrogen in confined spaces can create poisonous environments
- which may lead to asphyxiation.
- 891 Physical hazards in the sector include extreme temperatures, causing fatigue and body stress
- 892 reactions; harmful levels of carcinogenic radiation from industrial processing; harmful levels of
- 893 machinery noise or vibration causing impaired hearing or musculoskeletal disorders; and ergonomics-
- related injury risks.



- Biological hazards faced by many oil and gas workers include communicable diseases present in the local community or diseases due to poor hygiene and quality of water or food.
- 897 Hazards related to work organization and psychosocial well-being due to common employment
- 898 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
- 900 expatriation, rotational work, long shifts, irregular or odd working hours, and solitary or monotonous
- 901 work. Psychological reactions, such as post-traumatic stress disorder, can also occur when, for
- 902 example, being involved in a major incident. Finally, gender imbalance can contribute to stress,
- 903 <u>discrimination</u>, or sexual harassment (see also **Diversity and non-discrimination**).

WHAT TO REPORT

- lf an organization in the oil and gas sector has identified occupational health and safety as a <u>material</u> topic, this section helps it determine what to report on this <u>topic</u>.
- 907 I. The organization is required to report on this topic and how it is managed using *GRI 103: Material Topics*.
- 2. The following disclosures from the GRI Topic Standards have been identified as appropriate to report on this topic:
- 911 GRI 403: Occupational Health and Safety 2018
- 912 Disclosure 403-1 Occupational health and safety management system
- 913 Disclosure 403-2 Hazard identification, risk assessment, and incident investigation
- 914 Disclosure 403-3 Occupational health services
- 915 Disclosure 403-4 Worker participation, consultation, and communication on occupational
 916 health and safety
- 917 Disclosure 403-5 Worker training on occupational health and safety
- 918 Disclosure 403-6 Promotion of worker health
- 919 Disclosure 403-7 Prevention and mitigation of occupational health and safety impacts directly
 920 linked by business relationships
- 921 Disclosure 403-8 Workers covered by an occupational health and safety management system
- 922 Disclosure 403-9 Work-related injuries
- 923 Disclosure 403-10 Work-related ill health
- 3. The following resources may help organizations in the oil and gas sector report on this topic:
- International Association of Oil and Gas Producers (IOGP) International Petroleum Industry
 Environmental Conservation Association (IPIECA), Health management in the oil and gas industry,
 2019.
- 928 International Association of Oil and Gas Producers (IOGP) International Petroleum Industry 929 Environmental Conservation Association (IPIECA), Health Performance Indicators: A guide for the 930 oil and gas industry, 2007.



932

Employment practices

- Employment opportunities generated by the oil and gas sector across the value chain can have positive
- 934 socioeconomic impacts on communities, countries, and regions. While usually offering well-paid
- opportunities for skilled workers, employment practices in the sector are associated with a number of
- negative impacts related to, for example, working conditions, use of contract labor and related
- 937 disparities in working conditions, shortfalls of labor-management consultations, and job security.
- 938 Many oil and gas jobs have complex shift patterns to ensure continuity of operations around the clock,
- 939 sometimes requiring overtime employment and night shifts, which can cause high fatigue levels and
- augment risks related to occupational health and safety and process safety. An organization may
- 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 oil and gas activities are commonly outsourced to <u>suppliers</u>. This is prevalent during peak
- periods, such as construction or maintenance works, or for specific activities, such as drilling, catering,
- 946 transportation, and security. Outsourcing operations and using agency workers could allow
- organizations in the oil and gas sector to reduce their labor costs by, for example, avoiding legal
- obligations to employ a worker following a period of employment as a contract worker or by
- 949 bypassing collective agreements that are in place for workers in direct employment (see also
- 950 Freedom of association and collective bargaining).
- 951 Compared to employees, agency workers commonly have less favorable employment conditions,
- lower compensation, less training, higher accident rates, and less job security. They often lack social
- 953 protection and access to grievance mechanisms. Suppliers' standards for working conditions can also
- be lower and, as a consequence, expose organizations in the oil and gas sector to human and labor
- 955 rights violations through their <u>business relationships</u> (see also <u>Forced labor</u> and <u>modern slavery</u>).
- 956 Employment terms can also vary significantly when offered to local workers, expatriates (temporary
- 957 oil and gas workers who are usually brought in by employers), and contract workers. Remuneration
- 958 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
- 960 restrict the <u>local communities</u> from accessing employment opportunities created by the sector in the
- 961 first place (see also **Economic impacts**).
- Job security is another concern in this sector. For example, closure and decommissioning phases
- or oil price drops can occur suddenly, leading to job losses and increasing pressure on remaining
- 964 workers. Low job security is further compounded by automation and changing operating models, such
- as when triggered by the transition to low-carbon economies. Without timely skills development
- measures that aim to improve employability, many workers might end up with an inadequate skill set
- 967 and face unemployment.

968

969

970

97 I

972

WHAT TO REPORT

- If an organization in the oil and gas sector has identified employment practices as a <u>material topic</u>, this section helps it determine what to report on this topic.
- 1. The organization is required to report on this topic and how it is managed using GRI 103: Material Topics.



973 974	2.	The following disclosures from the GRI Topic Standards have been identified as appropriate to report on this topic:			
975		a. GRI 401: Employment 2016			
976		- Disclosure 401-1 New employee hires and employee turnover			
977 978		Disclosure 401-2 <u>Benefits</u> provided to full-time employees that are not provided to temporar or part-time employees			
979		Disclosure 401-3 Parental leave			
980		GRI 402: Labor/Management Relations 2016			
981		Disclosure 402-1 Minimum notice periods regarding operational changes			
982		GRI 404: Training and Education 2016			
983		 Disclosure 404-1 Average hours of training per year per employee 			
984		- Disclosure 404-2 Programs for upgrading employee skills and transition assistance programs			
985		d. GRI 414: Supplier Social Assessment 2016			
986		- Disclosure 414-1 New suppliers that were screened using social criteria			
987		 Disclosure 414-2 Negative social impacts in the supply chain and actions taken 			
		ETPOSURE Arafic for Pur			



988 Diversity and non-discrimination

- 989 The oil and gas sector commonly requires skilled workers, which can set a high barrier for entry and
- hinder employee diversity. The condition, location, and type of work associated with jobs in the
- 991 sector can be a further impediment to having a diverse workforce. This can result in discrimination,
- which has been documented in the oil and gas sector in relation to, for example, race, color, sex,
- 993 gender, religion, national extraction, and worker status. The sector's widespread use of contract
- labor, often with differing terms of employment, can also be a source of discrimination.
- 995 Discriminatory practices can impede access to jobs and career development, as well as lead to unequal
- treatment and remuneration. Jobseekers from <u>local communities</u> are sometimes excluded from the
- 997 hiring process because of a recruitment system bias that favors a dominant ethnic group. Compared
- 998 to expatriates, local workers might receive significantly lower pay for equal work.
- The oil and gas sector is also characterized by a significant gender imbalance. In many countries, the
- 1000 percentage of women working in this sector is significantly lower compared to the overall number of
- 1001 working women. Women are especially underrepresented in senior management. One of the root
- 1002 causes of this imbalance is that fewer women graduate with degrees in disciplines pertinent to the
- sector, such as science, technology, engineering, and mathematics. In addition, some resource-rich
- 1004 countries have laws that prevent women from working in hazardous or arduous occupations. Social or
- 1005 cultural customs and beliefs can also limit women's access to jobs in this sector or prevent them from
- 1006 taking on specific roles.

1007

WHAT TO REPORT

- If an organization in the oil and gas sector has identified diversity and non-discrimination as a <u>material</u> topic, this section helps it determine what to report on this topic.
- 1010 I. The organization is required to report on this topic and how it is managed using GRI 103: Material
 1011 Topics.
- 1012 2. The following disclosures from the GRI Topic Standards have been identified as appropriate to report on this topic:
- 1014 GRI 202: Market Presence 2016
- 1015 Disclosure 202-1 Ratios of standard <u>entry level wage</u> by gender compared to <u>local minimum</u> wage
- 1017 Disclosure 202-2 Proportion of senior management hired from the local community
- 1018 GRI 405: Diversity and Equal Opportunity 2016
- 1019 Disclosure 405-1 Diversity of governance bodies and employees
- 1020 Disclosure 405-2 Ratio of <u>basic salary</u> and <u>remuneration</u> of women to men
- 1021 GRI 406: Non-discrimination 2016
- 1022 Disclosure 406-1 Incidents of discrimination and corrective actions taken
- 1023 GRI 404: Training and Education 2016
- 1024 Disclosure 404-1 Average hours of training per year per employee





1026 Forced labor and modern slavery

- 1027 Organizations in the oil and gas sector interact with a large number of suppliers, including in countries 1028 characterized as having low rates of enforcement of labor rights. This can increase the potential of 1029 using suppliers that do not adhere to labor rights or relevant codes of conduct, leaving supply chains 1030 vulnerable to human rights violations. These include modern slavery, which refers to forced labor and 1031 marriage, debt bondage, other slavery-like practices, and human trafficking. The violations most 1032 frequently reported in the oil and gas sector are forced labor and situations of exploitation where a 1033 person cannot refuse or leave because of coercion, deception, threats, violence, or other abuse of 1034 power. Increased attention to modern slavery has prompted a global response to address the issue, 1035 with a number of governments issuing legislation for businesses to publicly report on progress toward 1036 addressing these impacts.
- 1037 In addition to impacts through their supply chains, oil and gas organizations can be directly linked to 1038 occurrences of modern slavery through joint ventures and other business relationships, including 1039 state-owned enterprises in countries where international human rights standards violations occur. 1040 Documented cases show forced labor and modern slavery in oil and gas activities such as shipping, 1041 construction, cleaning, catering, onshore transportation, supply base activities, waste management, 1042 maintenance, and modifications services. Offshore oil and gas workers can be at higher risk of forced 1043 labor due to the isolation of extraction sites, making it more challenging to reinforce measures. Higher 1044 risk related to shipping is tied to ships being registered in a country other than that of the beneficial 1045 owner, obscuring accountability through layers of management and crewing companies.
- Migrant workers also face higher risks of modern slavery. For example, third-party employment agencies have been found to overcharge workers for visas and flights or to demand recruitment costs be paid by employees rather than employers.

Impacts on children's rights

1049

1058

1065

1066

1067

- Risks of child labor in the oil and gas sector mainly occur through business relationships, including joint ventures and the supply chain, such as during facilities construction or pipeline operations.

 Suppliers can operate in countries with working ages below the ILO's minimum age.
- Other impacts on children's rights and well-being can come from an oil or gas project's proximity to the <u>local community</u> through, for example, environmental impacts or land use and resettlement.
 Parents' labor conditions, including hours, shift work, and fly-in-fly-out practices, can also have indirect impacts on children (see also <u>Employment practices</u>).
- 1057 → Child labor is addressed in *GRI 408: Child Labor 2016*.

WHAT TO REPORT

- If an organization in the oil and gas sector has identified forced labor and modern slavery as a <u>material</u> topic, this section helps it determine what to report on this <u>topic</u>.
- 1061 I. The organization is required to report on this topic and how it is managed using GRI 103: Material
 1062 Topics.
- 1063 2. The following disclosures from the GRI Topic Standards have been identified as appropriate to report on this topic:
 - a. GRI 409: Forced or Compulsory Labor 2016
 - Disclosure 409-1 Operations and suppliers at significant risk for incidents of <u>forced or compulsory labor</u>



b. GRI 414: Supplier Social Assessment 2016

1068

1069 – Disclosure 414-1: New suppliers that were screened using social criteria

EXPosure draft for public comment

1070 Freedom of association and collective bargaining

- The right to organize and take collective action is critical for the oil and gas sector to enable public
- debate about the sector's governance and practices, reduce social inequality, and improve labor
- standards, including occupational health and safety, working conditions, wages, and job security.
- Many professions associated with the sector have traditionally been represented by trade unions and
- 1075 covered by collective bargaining agreements, which are negotiated by national, regional, or global
- 1076 sectoral federations and associations. However, some oil and gas resources are located in countries
- 1077 where these rights are restricted. Workers in such locations face risks when seeking to join trade
- 1078 unions and engage in collective bargaining. Even in countries where unions are legal, restrictions might
- 1079 exist to prevent effective representation, and workers joining unions might face intimidation or unfair
- 1080 treatment.

1089

1095

1099

- 1081 Documented cases of interference with <u>freedom of association</u> and collective bargaining include
- detention of managers and employees; invasion of privacy; not adhering to collective agreements;
- prevention of union access to workplaces so as to assist workers; refusal to bargain in good faith with
- 1084 workers' chosen unions; unfair dismissal of trade union members and leaders; and unilateral
- 1085 cancellation of collective bargaining agreements.
- 1086 Contract workers, who are widely used in these sectors, are often excluded from the scope of
- 1087 collective bargaining agreements, which can cause them to have reduced benefits and worse working
- 1088 conditions (see also **Employment practices**).

Freedom of association and civic space

- Freedom of association is a fundamental human right, which comprises the right to freedom of
- peaceful assembly and association. This entails engaging in free speech about sector policies and
- organizations' practices not only for workers and employees, but also through active participation of
- independent civil society. Restrictions on civic space can limit citizens' ability to engage in public
- debate about sector policies and company practices.

WHAT TO REPORT

Topics.

- If an organization in the oil and gas sector has identified freedom of association and collective bargaining as a material topic, this section helps it determine what to report on this topic.
- 1. The organization is required to report on this topic and how it is managed using GRI 103: Material
- 1100 2. The following disclosure from the GRI Topic Standards has been identified as appropriate to report on this topic:
- I 102 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



Economic impacts

- 1107 Oil and gas activities can be an important source of investment and income for local communities,
- 1108 countries, and regions. Impacts can vary according to the scale of operations and the importance of
- 1109 the activity in the economic context. For example, in some resource-rich countries, oil and gas
- 1110 development-related investments and operational revenues account for a significant amount of
- $\Pi\Pi\Pi$ national gross domestic product. However, if not well managed, this can harm economic performance
- 1112 and lead to macroeconomic instability and distortions. Economies dependent on these finite resources
- 1113 can also be vulnerable to commodity price and production fluctuations.
- 1114 The sector can have positive impacts on communities, countries, and regions through royalty
- 1115 payments, taxes, and wealth creation. Investments by oil and gas organizations in the development of
- 1116 enabling infrastructure, such as public power utilities to improve access to energy or other public
- 1117 services can be beneficial for communities. Oil and gas activities can also stimulate economies and
- 1118 create benefits through local employment. Increased wages for jobs in the oil and gas sector can
- 1119 potentially lead to increased purchasing power and positive impacts on local businesses, local
- 1120 procurement of products and services, and supplier development. Skills development of local
- 1121 communities through education and training can help increase access to jobs in the sector.
- 1122 The extent to which local communities can benefit from the presence of the oil and gas depends on
- 1123 existing development and industrialization levels as well as the community's capacity to offer qualified
- 1124 workers for the new employment opportunities or supporting activities related to the project. In
- 1125 addition, the net employment impacts depend on how employment by the sector affects existing
- 1126 employment in other sectors. These impacts can also be affected by an organization's employment
- 1127 practices. For example, a fly-in fly-out work approach can offset pressures associated with influxes of
- 1128 people in small communities while still supplying the necessary workers (see also Local community
- 1129 impacts). However, this approach reduces the employment opportunities available to local
- 1130 communities, detracting from the potential economic benefits.
- 1131 The introduction of new oil and gas sector activities can also generate negative impacts on local
- 1132 communities, including competition over jobs and economic disparity, with vulnerable groups often
- 1133 disproportionately negatively affected. The resulting influx of external workers can also increase
- 1134 pressure on housing, infrastructure, and public services. Other economic impacts include
- 1135 environmental legacy costs, related to, for example, contamination, incidents, or lack of proper
- 1136 rehabilitation after closure and decommissioning.
- 1137 Governments and regions currently face the risk of stranded assets due to stricter climate policies and
- 1138 technological developments driving the transition to low-carbon economies (see also Climate
- 1139 resilience and transition). The transition is expected to lead to decreased sector activity, making
- 1140 communities and countries that depend on the sector's revenues or employment more vulnerable to
- 1141 resulting economic downturn. In these cases, collaboration between local and national governments
- 1142 and organizations in the oil and gas sector is essential to ensure a just transition.

WHAT TO REPORT

- 1144 If an organization in the oil and gas sector has identified economic impacts as a material topic, this 1145 section helps it determine what to report on this topic.
- 1146 1. The organization is required to report on this topic and how it is managed using GRI 103: Material 1147 Topics.



- When describing policies on or commitments to the topic, the organization should describe its approach to providing local employment opportunities.
- 11502. The following disclosures from the GRI Topic Standards have been identified as appropriate to report on this topic:
- a. GRI 201: Economic Performance 2016
- Disclosure 201-1 Direct economic value generated and distributed
 When reporting on direct economic value generated and distributed, the organization should report by country, regional, and project levels.
- 1156 b. **GRI 202: Market Presence 2016**
- Disclosure 202-1 Ratios of standard <u>entry level wage</u> by gender compared to local minimum
 wage
- 1159 Disclosure 202-2 Proportion of senior management hired from the local community
- 1160 c. GRI 203: Indirect Economic Impacts 2016
- Disclosure 203-1 <u>Infrastructure</u> investments and <u>services supported</u>
 When reporting on indirect economic impacts, the organization should report the extent to which different communities or local economies are impacted by the organization's infrastructure investments and services supported.
- 1165 Disclosure 203-2 Significant indirect economic impacts
- d. GRI 204: Procurement Practices 2016
- 1167 Disclosure 204-1 Proportion of spending on <u>local suppliers</u>
- 1168 3. The following resources may help an organization in the oil and gas sector report on this topic:
- I International Petroleum Industry Environmental Conservation Association (IPIECA), Local content, A guidance document for the oil and gas industry, second edition, 2016.
- Organisation for Economic Co-operation and Development (OECD), Collaborative Strategies
 for In-Country Shared Value Creation, 2016.



1173 Local community impacts

- Oil and gas activities can result in various social and human rights impacts on local communities.
- 1176 and distribution of products; influx of people seeking employment and economic opportunities;
- 1177 environmental degradation; and use of local resources for sector activities. Types and significance of
- 1178 impacts commonly associated with the oil and gas sector vary according to the characteristics and
- 1179 context of the local community.
- 1180 Land use requirements can cause displacement and loss of access to land and water, as well as lead to
- 1181 competition over other land uses, such as farming, fishing, or recreational uses (see also Land use
- 1182 and resettlement). This can disrupt traditional livelihoods, increase risks of impoverishment, and
- 1183 restrict access to essential services, such as education and healthcare. The sectors' activities can also
- 1184 incur damage to cultural heritage sites, potentially leading to loss of culture, tradition, or cultural
- 1185 identity, especially among indigenous peoples.
- 1186 The arrival of workers from the surrounding areas or through a fly-in-fly-out approach during a
- 1187 project's construction or expansion phase can result in a range of impacts. A large-scale influx of
- 1188 expatriate workers can put local services and resources under pressure. Local communities can suffer
- 1189 from inflation of housing and food costs, which might lead to an increase in homelessness, especially
- 1190 among vulnerable groups. Inflows of cash associated with in-migration and new employment
- 1191 opportunities might be unevenly distributed, leading to increased inequalities and social disruption
- through, for example, increased alcohol consumption, gambling, and prostitution.
- 1193 Further impacts on community health and well-being might come from air, soil, and water pollution
- related to chemical use, dust from transportation, emissions, increased levels of noise and light, leaks
- and waste streams, all of which can lead to a reduced standard of living. Expatriate or migrant workers
- 1196 can also introduce new communicable diseases. The influx of predominantly male migrant workers can
- also change the composition of the local community. This can impact women in particular, as it can
- 1198 lead to a rise in sexual violence and trafficking, as well as sexually transmitted diseases (see also
- 1199 Rights of indigenous peoples). The sector has also been linked to domestic and gender-based
- 1200 violence, both on operational sites and in local communities. 16
- 1201 Safety of local communities can be threatened by potential incidents, such as explosions, fires, mine
- 1202 collapses, <u>spills</u>, tailings dams, and pipelines failures (see also **Asset integrity and process safety**).
- 1203 Increased traffic to operational sites can pose additional road accident hazards.
- 1204 Communities can also experience conflicts when faced with impacts that are disproportionately
- 1205 negative in proportion to the benefits gained through oil and gas activities (see also Conflict and
- 1206 security).
- 1207 Effective local community engagement can mitigate the social impacts of oil and gas activities. If
- 1208 community engagement is flawed or overlooked, community concerns might not be understood or
- 1209 addressed, which can exacerbate existing impacts or create new ones.

ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/gender+at+ifc/resources/unlocking-opportunities-for-women-and-business, accessed on 31 May 2020.



GRI Sector Standard: Oil and Gas

¹⁶ International Finance Corporation (IFC), Unlocking Opportunities for Women and Business: A Toolkit of Actions and Strategies for Oil, Gas, and Mining Companies, 2018, ifc.org/wps/wcm/connect/topics ext content/ifc external corporate site/gender+at+ifc/resources/unlocking

1210 WHAT TO REPORT

1217 1218

1219

1220

1221 1222

1223

1224

1225 1226

1227

1234

1235

1236 1237

- If an organization in the oil and gas sector has identified local community impacts as a <u>material topic</u>, this section helps it determine what to report on this <u>topic</u>.
- 1213 I. The organization is required to report on this topic and how it is managed using *GRI 103: Material Topics*.
- 1215 2. The following disclosures from the GRI Topic Standards have been identified as appropriate to report on this topic:

GRI 413: Local Communities 2016

- When reporting clause 1.1 in GRI 413: Local Communities, the organization should report:
 - o the means by which <u>stakeholders</u> are identified and engaged with;
 - o which vulnerable groups have been identified;
 - if any collective or individual rights have been identified that are of particular concern for the community
 - o how it engages with stakeholder groups particular to the community; and
 - o the means by which it addresses risks and impacts or supports independent third parties to engage with stakeholders and address risks and impacts.
- Disclosure 413-1 Operations with local community engagement, impact assessments, and development programs
- 1228 Disclosure 413-2 Operations with significant actual and potential negative impacts on local
 1229 communities

When reporting on operations with significant actual and potential negative impacts on local communities, the organization should report the local community's <u>exposure</u> to its operations resulting from volume and type of pollution released or the use of hazardous substances that impact the environment and human health.

- 3. The following additional disclosures have also been identified as appropriate and should be reported on this topic:
 - Number and description of significant disputes with local communities and indigenous peoples, including actions taken and outcomes.
- 1238 4. The following resources may help organizations in the oil and gas sector report on this topic:
- 1239 International Finance Corporation (IFC), *Performance Standard 4 Community Health*, Safety, and Security, 2012.
- International Petroleum Industry Environmental Conservation Association (IPIECA), American
 Petroleum Institute (API), International Association of Oil and Gas Producers (IOGP),
 Sustainability reporting guidelines for the oil and gas industry, 2020.



1244 Land use and resettlement

- Oil and gas activities require land for a number of purposes, including operations, access routes, and
- 1246 distribution of products. This can sometimes lead to involuntary resettlement of local communities,
- 1247 which can have widespread impacts on people's livelihoods, access to resources and services, and
- 1248 human rights. Involuntary resettlement can involve physical displacement (e.g., relocation or shelter
- loss) and economic displacement (e.g., loss or access to assets).
- 1250 Impacts from land use vary according to methods of extraction, resource location, processing
- required, and transportation methods. For example, oil and gas pipelines can have a large footprint
- due to their geographical reach and large safety buffer zones.
- Unclear tenure rules regarding rights to land access, use, and control or lack of proper compensation
- 1254 to affected communities often cause disputes, economic and social tensions, and conflict. Local
- 1255 communities can receive monetary compensation or equivalent land for lost assets. However,
- determining the value of lost access to the natural environment is complex, as considerations must
- 1257 include income-generating activities, human health, and non-material aspects of quality of life. The
- 1258 amount of compensation might therefore prove unrepresentative of the loss. In some cases,
- 1259 individuals who are customary titleholders to the land might not be compensated at all or might only
- 1260 be compensated for crops but not the land.
- 1261 Resettlement typically requires more extensive engagement between organizations and local
- 1262 communities. Impacts of resettling communities can be exacerbated by a flawed process or lack of
- transparency in cases of, for example, poor community consultation or the absence of free, prior, and
- 1264 <u>informed consent (FPIC)</u>, specifically for <u>indigenous peoples</u>. 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 Conflict and security).

WHAT TO REPORT

1267

1275

1276 1277

1278

1279

1280

1281

1282

1283 1284

1285

- If an organization in the oil and gas <u>sector</u> has identified land use and resettlement as a <u>material topic</u>, this section helps it determine what to report on this <u>topic</u>.
 - 1. The organization is required to report on this topic and how it is managed using GRI 103: Material Topics.
- When reporting actions taken to manage land use and resettlement and related impacts, the organization should report approaches taken to prevent or <u>mitigate</u> systemic negative impacts.
- 1272 2. The following disclosures from the GRI Topic Standards have been identified as appropriate to report on this topic:

1274 GRI 413: Local Communities 2016

- Disclosure 413-1 Operations with local community engagement, impact assessments, and development programs
 - When reporting on operations with local community engagement, impact assessments, and development programs, the organization should report how communities' reliance on natural resources and ecosystem services is measured and valued.
- Disclosure 413-2 Operations with significant actual and potential negative impacts on local communities
 - When reporting on operations with significant actual and potential negative impacts on local communities, the organization should report locations of operations or facilities where involuntary resettlements took place or are ongoing and how resettled peoples' livelihoods were affected and restored (e.g., customary rights, economic impacts, access to services, and cultural impacts).



- 1286 3. The following resources may help organizations in the oil and gas sector report on this topic:
- Global Reporting Initiative (GRI), Land Tenure Rights: The Need for Greater Transparency Among 1287 1288 Companies Worldwide, 2016.
- 1289 International Finance Corporation (IFC), Good Practice Handbook: Land Acquisition and Resettlement (draft), 2019. 1290
- 1291 International Finance Corporation (IFC), Performance Standard 5, Land Acquisition and Involuntary Resettlement, 2012. 1292
- 1293



1294 Rights of indigenous peoples

- Oil and gas activities can have particularly significant <u>impacts</u> on <u>indigenous peoples</u>. These impacts can be connected to various sociocultural factors, for example, <u>indigenous peoples</u>' special relationship with land, traditional lifestyles, cultural heritage, and social vulnerability.
- The <u>sector</u>'s activities can 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 **Land use and resettlement**). Availability of and access to water, which is a key concern for indigenous communities, can also be compromised. Considering indigenous peoples' distinct relationship with and sometimes dependence on nature, the oil and gas sector's role as a major contributor to climate change exacerbates these impacts.
- The sector's presence in indigenous communities can also impact social cohesion and well-being. The in-migration of workers from other areas might create social tensions and result in discrimination.

 Other impacts on indigenous peoples' welfare and safety include risks of prostitution, bonded labor, violence against women, and increased exposure to communicable diseases (see also Local community impacts).¹⁷
- 1309 Indigenous peoples often also have a special legal status in national legislation. Before initiation of 1310 development projects that require resettlement or have potential impacts on lands or resources that 1311 indigenous peoples use or own, organizations are expected to seek free, prior, and informed consent 1312 (FPIC) from indigenous peoples. However, disputes and conflicts between indigenous peoples and 1313 organizations in the oil and gas sector regularly occur over land ownership and rights. Indigenous 1314 peoples can be customary or legal owners of lands to which organizations in the oil and gas sector are 1315 granted use rights by governments. Further, some national governments might not recognize or 1316 enforce indigenous land rights or indigenous peoples' rights to consent. Documented cases show an 1317 absence of good faith consultations as well as undue pressure and harassment toward indigenous 1318 peoples to accept projects, with opposition to such projects sometimes leading to violence and 1319 death.18

¹⁸ See, for example, 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



¹⁷ See, for example, UN Permanent Forum on Indigenous Issues, 11th session, 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, undocs.org/E/C.19/2012/6; G. Gibson, K. Yung, et al. with Lake Babine Nationa and Nak'azdii Whut'en, Indigenous communities and industrial camps: Promoting healthy communities in settings of industrial change, 2017, firelight.ca/wp-content/uploads/2016/03/Firelight-work-camps-Feb-8-2017_FINAL.pdf; Amnesty International, Out of sight, out of mind: Gender, indigenous rights, and energy development, 2016, amnesty.ca/sites/amnesty/files/Out of Sight Out of Mind EN FINAL web.pdf; A. Alook, I. Hussey, and N. Hill, Indigenous gendered experiences of work in an oil-dependent, rural Alberta community, 2019, assets.nationbuilder.com/parklandinstitute/pages/1681/attachments/original/1550688239/indigenousexperiences.pdf?1550688239; Indigenous Environmental Network, 'Native Leaders Bring Attention to Impact of Fossil Fuel Industry on Missing and Murdered Indigenous Women and Girls', 2018, ienearth.org/native-leaders-bring-attention-to-impact-of-fossil-fuel-industry-on-missing-and-murdered-indigenous-women-and-girls, accessed on 31 May 2002.

- 1320 Oil and gas development projects can present significant economic opportunities and benefit sharing
- for indigenous peoples, especially when indigenous peoples are provided the opportunity to control
- 1322 and develop the resources themselves. Indigenous peoples can also benefit from oil and gas activities
- through employment, training, and community development programs (see also Economic impacts).
- 1324 However, conflicts can arise when benefits to indigenous peoples are or appear to be of less
- economic value than profits generated by the organization or are insufficient to compensate the
- 1326 negative impacts of the development (see also Conflict and security).

WHAT TO REPORT

1327

1345

1346

- If an organization in the oil and gas sector has identified rights of indigenous peoples as a <u>material</u> topic, this section helps it determine what to report on this <u>topic</u>.
- The organization is required to report on this topic and how it is managed using GRI 103: Material
 Topics.
- When describing actions taken to manage the topic and related impacts, the organization should explain how commitment to manage the topic incorporates 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'.
- 1336 2. The following disclosures from the GRI Topic Standards have been identified as appropriate to report on this topic:
- 1338 a. GRI 411: Rights of Indigenous Peoples 2016
- 1339 Disclosure 411-1 Incidents of violations involving rights of indigenous peoples
- 1340 b. **GRI 413: Local Communities 2016**
- 1341 Disclosure 413-1 Operations with local community engagement, impact assessments, and
 development programs
- When reporting on operations with local community engagement, impact assessments, and development programs, the organization should report:
 - engagement strategies and processes in place aimed to avoid, minimize, mitigate, or compensate negative impacts on indigenous peoples; and

(Ratification: 2002), 2019,

ilo.org/dyn/normlex/en/f?p=1000:13100:0::NO:13100:P13100_COMMENT_ID,P11110_COUNTRY_ID,P11110_COUNTRY_ID,P11110_COUNTRY_NAME,P11110_COMMENT_YEAR:3962283,102880,Venezuela, Bolivarian Republic of,2018; J. Burger, Indigenous peoples, extractive industries and human rights, 2014,

europarl.europa.eu/RegData/etudes/STUD/2014/534980/EXPO_STU(2014)534980_EN.pdf; A. Anongos, D. Berezhkov, et al., *Pitfalls and pipelines: Indigenous peoples and extractive industries*, 2012,

iwgia.org/images/publications/0596_Pitfalls_and_Pipelines_-_Indigenous_Peoples_and_Extractive_Industries.pdf; Global Witness, Defenders of the earth: Global killings of land and environmental defenders in 2016, 2017, globalwitness.org/en/campaigns/environmental-activists/defenders-earth; United Nations Department of Economic and Social Affairs (UN DESA), Report of the international expert group meeting on extractive industries, Indigenous Peoples' rights and corporate social responsibility, 2009, un.org/development/desa/indigenouspeoples/meetings-and-workshops/7136-2.html; B. McIvor, First Peoples Law: Essays in Canadian Law and Decolonization, 2018, firstpeopleslaw.com/public-education/publications.php.



1348 1349			to jobs, supply opportunities, and benefit-sharing contracts, or an indigenous employment strategy.		
1350 1351 1352 1353 1354	 Disclosure 413-2 Operations with significant actual and potential negative impacts on local communities When reporting on operations with significant actual and potential negative impacts on local communities, the organization should report operations where indigenous peoples are present or affected by its activities. 				
1355	3. The following resources may help organizations in the oil and gas sector report on this topic:				
1356		-	International Finance Corporation (IFC), Performance Standard 7: Indigenous Peoples, 2012.		
1357 1358		-	International Petroleum Industry Environmental Conservation Association (IPIECA), <i>Indigenous Peoples and the oil and gas industry: context, issues and emerging good practice</i> , 2012.		
1359 1360		-	International Petroleum Industry Environmental Conservation Association (IPIECA), Free, prior and informed consent (FPIC) toolbox, 2018.		
1361	•		A Postific araft for Public		

how it identifies and implements development benefits for indigenous peoples, such as access



1362 Conflict and security

- 1363 Many organizations in the oil and gas sector operate in conflict situations. Pre-existing conflicts are
- 1364 common when, for example, organizations operate in countries characterized by political and social
- instability. The risk of human rights abuses is also heightened in areas of conflict.
- 1366 Conflict can be directly linked to the presence of oil and gas activities. These conflicts can be triggered
- by poor engagement with or exclusion of <u>local communities</u> and <u>indigenous peoples</u>; uneven
- 1368 distribution of economic benefits; excessive negative impacts on the economy, environment, or
- 1369 people; and disputes over use of scarce resources. Conflict can also be triggered by mismanagement
- of funds for individual gains at the expense of local interests (see also **Anti-corruption**).
- Organizations in the oil and gas sector might use <u>security personnel</u> to protect their assets or ensure
- 1372 their employees' safety. Security personnel can take action against community members, including
- 1373 when they are protesting projects or protecting their lands. These actions can violate human rights,
- such as rights to <u>freedom of association</u> and free speech, as well as lead to violence, injuries, or
- deaths. Security contractors can also be connected to military or paramilitary groups.
- Security might also be provided by national police or military forces. In such cases, organizations in the
- 1377 oil and gas sector might be contributing to potential negative human rights impacts through their
- 1378 <u>business relationship</u> with these military and security forces though have limited control over their
- 1379 actions. When oil and gas projects are endorsed by local governments but remain disagreeable to
- local populations, the use of private military or security forces might increase tensions between
- 1381 companies and local communities, exacerbating a power imbalance.

1382 WHAT TO REPORT

- If an organization in the oil and gas sector has identified conflict and security as a <u>material topic</u>, this section helps it determine what to report on this topic.
- The organization is required to report on this topic and how it is managed using GRI 103: Material
 Topics.
- When reporting how it has identified and prioritized impacts for reporting, the organization should report whether it has fields or facilities in areas of conflict.
- 1389 2. The following disclosure from the GRI Topic Standards has been identified as appropriate to report on this topic:

1391 GRI 410: Security Practices 2016

1392

1398

- Disclosure 410-1 Security personnel trained in human rights policies or procedures
- 1393 3. The following resources may help organizations in the oil and gas sector report on this topic:
- I International Association of Oil and Gas Producers (IOGP), Conducting security risk assessments (SRA) in dynamic threat environments, 2016.
- International Association of Oil and Gas Producers (IOGP), Security management system Processes and concepts in security management, 2014.
 - International Association of Oil and Gas Producers (IOGP), Integrating security in major projects principles and guidelines, 2014.
- Voluntary Principles on Security and Human Rights, Voluntary Principles on Security and Human
 Rights, 2000.



1403 Anti-competitive behavior

- 1404 The significant investments, reliance on high technology, and high risks associated with the oil and gas
- 1405 sector mean that barriers to entry are high. A limited number of multinational corporations continues
- 1406 to dominate the global market for oil and gas. As such, fair competition is essential to enable adequate
- 1407 access to oil and gas resources and to avoid excessive price variations and low quality of products.
- 1408 Anti-competitive behavior, including violations of anti-trust and monopoly legislation, can affect the
- 1409 commodity prices of oil and gas as well as other market conditions. As producers of an essential
- 1410 commodity, organizations in the oil and gas sector can behave in ways that affect other industries
- 1411 using their products.
- 1412 Anti-competitive behavior can occur throughout the <u>value chain</u>, from license allocations to final sales
- 1413 and marketing. Horizontal agreements between producers, also known as cartels, can affect output
- 1414 volume by restricting supply contracts and imposing penalties that threaten supply security. Bid rigging
- can inflate prices or reduce the quality of goods or <u>services</u> in a public procurement process, which
- 1416 can be costly for taxpayers and can erode public confidence (see also Anti-corruption).
- Organizations in the oil and gas sector can also deliberately limit competitors' access to transportation
- 1418 networks and shipping lines. Anti-competitive mergers in the oil and gas sector can further diminish
- direct competition by, for example, creating monopolies over transmission and supply to consumers.
- 1420 Vertical agreements among organizations and energy distributors can include unfair contractual
- obligations, which might, for example, restrain distributors from switching to an alternative energy
- 1422 <u>supplier</u>. High presence of vertical integration in the oil and gas sector, in which one organization
- owns an entire supply chain, also creates risks of discrimination against other market players.
- National state-owned oil and gas monopolies and international cartels can get exemptions from anti-
- 1425 trust laws or regulatory regimes. State-owned enterprises control two-thirds of the oil market, thus
- 1426 being able to set prices and control outputs and imports. However, the consequences of anti-
- 1427 competitive practices can be as harmful as private organizations' restrictions on competition.

1428 WHAT TO REPORT

- 1429 If an organization in the oil and gas sector has identified anti-competitive behavior as a <u>material topic</u>,
- this section helps it determine what to report on this topic.
- 1431 I. The organization is required to report on this topic and how it is managed using GRI 103: Material
 1432 Topics.
- 1433 1434 2. The fo
 - 2. The following disclosure from the GRI Topic Standards has been identified as appropriate to report on this topic:
- 1436 GRI 206: Anti-competitive Behavior 2016
- Disclosure 206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly
 practices
- 1439



1440 Anti-corruption

- 1441 Organizations in the oil and gas sector often operate in emerging countries characterized by weaker
- 1442 governance and transparency requirements, which exposes the sector to corruption. Corruption in
- 1443 the oil and gas sector has been linked to various negative impacts, such as misallocation of resource
- 1444 revenues and related investments, damage to the environment, abuse of democracy and human rights,
- 1445 and political instability.
- 1446 Corruption can occur throughout the value chain. Documented cases of corruption include bribery of
- 1447 officials, misappropriation and diversion of public funds, abuse of office, influence peddling, favoritism,
- 1448 extortion, and manipulation of policies and practices for personal and political benefit to the detriment
- 1449 of public interest.19

1459

1460

1461

1462

1463 1464

1465

1466

1467

1468

1469

1470 1471

1472

1473

1474

- 1450 Corruption can lead to diversion of resource revenues from public needs, such as infrastructure or
- 1451 basic services, which can have major impacts, especially in countries with high levels of poverty. This
- 1452 can lead to increased inequalities and conflicts over oil and gas resources (see Conflict and
- 1453 security). Other factors exposing the sector to corruption include the frequent interaction between
- 1454 oil and gas companies and government officials; centralized government ownership and control over
- 1455 natural resources leads to companies dealing with politically exposed persons²⁰ for licenses and
- 1456 regulation. The sector's international reach and complex transactions and flows of money can further
- 1457 reduce transparency and enable corruption.
- 1458 Some organizations in the oil and gas sector have been found to use corrupt practices to:
 - influence the decision-making process in order to extract resources; avoid or overlook environmental requirements; shape policies and rules; or influence protection of land rights and land access restrictions affecting livelihoods of local communities and indigenous peoples;
 - gain preferential terms or permit approvals;
 - gain favorable treatment or confidential information in awarding in the bidding process for exploration and production rights through a bidding process; or for avoiding specific requirements, potentially resulting in awarding licenses or contracts being awarded to less qualified organizations and/or securing contracts at inflated prices;
 - influence environmental, social, and other regulations, and the enforcement of these regulations, related to impact assessment processes or consultation with local communities;
 - incentivize 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;
 - gain 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 instead;
 - block unfavorable legislation, including environmental policies or pollution taxes (see also Public policy and lobbying).

²⁰ According to the Financial Action Task Force, a politically exposed person is 'an individual who is or has been entrusted with a prominent public function'; FATF, FATF guidance: Politically exposed persons (recommendations 12 and 22), 2013, fatf-gafi.org/media/fatf/documents/recommendations/Guidance-PEP-Rec12-22.pdf.



¹⁹ Organisation for Economic Co-operation and Development (OECD), Corruption in the Extractive Value Chain, 2016, oecd-ilibrary.org/development/corruption-in-the-extractive-value-chain 9789264256569-en.

Transparency about contracts and ownership structures

Contracts governing the extraction of oil and gas resources are devised by companies and governments on behalf of citizens or <u>local communities</u>, commonly without public oversight. Due to the long-term horizons and various impacts of projects, fair terms for sharing risk and rewards <u>benefits</u> are particularly important. Contract transparency helps local communities hold governments and companies accountable for their negotiated commitments and obligations, as well as helps create a level playing field that enables governments to negotiate for better deals. Contract transparency has been 'established as an international norm', and is endorsed by organizations such as the UN, the International Bar Association, and the OECD.

Lack of transparency about ownership structures can make it difficult to determine who benefits from financial transactions in the sector. Insufficient disclosure about beneficial ownership has been identified as a significant problem, enabling tax evasion and avoidance, money laundering, conflicts of interest, and corruption.

* IMF (2019), Fiscal Transparency Initiative: Integration of Natural Resource Management Issues.

WHAT TO REPORT

1476

1477

1478

1479

1480

1481

1482

1483 1484

1485

1486

1487

1488

1489

1490

1498

1499

1500

1503

1504

1505

1506 1507

1508

1509

1510

1511

1512

- If an organization in the oil and gas sector has identified anti-corruption as a <u>material topic</u>, this section helps it determine what to report on this <u>topic</u>.
- The organization is required to report on this topic and how it is managed using GRI 103: Material
 Topics.
- 1495 2. The following disclosures from the GRI Topic Standards have been identified as appropriate to report on this topic:

1497 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
- 1501 3. The following additional disclosures have also been identified as appropriate and should be reported on this topic:
 - A description of the company's policy on contract transparency and a link to publicly available contracts and licenses, in line with EITI Requirement 2.4. If a contract or license is not publicly available, an explanation of the reasons why along with a description of any actions taken by the company to overcome any barriers to publication.
 - A description of the organization's corporate structure and beneficial owners and a description of how the organization identifies the beneficial owners of business partners, including joint ventures and suppliers, in line with EITI Requirement 2.5. Publicly listed companies should report the stock exchange where they have made filings that include beneficial ownership information and a link to those filings.
 - 4. The following resource may help organizations in the oil and gas sector report on this topic:
- 1513 Extractives Industry Transparency Initiative (EITI), The EITI Standard, 2019.



Payments to governments

1514

1522

1539

1540 1541

1542

1543

1544

1545

1546

1547

1548

1549

1550

1551

1552

1553

1554

- Organizations in the oil and gas <u>sector</u> deal with a large number of complex financial transactions subject to a variety of taxes and other payments to governments. Insufficient transparency about these transactions can impede detection of misuse or misappropriation of funds and <u>corruption</u>; prevent civil society from monitoring the sector's activities, including <u>infrastructure</u> and other community development spending; and decrease economic stability. Payment transparency can help organizations in the oil and gas sector demonstrate their economic contribution to the host country via taxes and other payments to government, allow informed decision-making and public debate, and help
- 1523 Taxes, royalties, and other payments from organizations in the oil and gas sector represent significant 1524 revenues for governments. Tax non-compliance in the form of tax evasion and tax avoidance can 1525 direct significant funds away from governments. This can be particularly damaging for developing 1526 economies incapable of pursuing enforcement of tax legislation. In addition, organizations in this 1527 sector are often liable for taxes in locations distinct from the locations of their operations. When an 1528 organization has oil and gas entities across different locations, it can make inter-company payments, 1529 moving profits to locations with more advantageous taxation. National tax authorities might lack 1530 access to specific information to determine where profits are to be reported.

governments strengthen revenue collection and management.

1531 When disclosing information on payments to governments, organizations in the oil and gas sector 1532 often report aggregate payments at a global level. However, aggregated figures provide limited insight 1533 into payments made in each country or per project. Reporting country-level or project-level payments 1534 enables governments to compare the actual payments made to those stipulated in fiscal, legal, and 1535 contractual terms and to assess the financial contribution of oil and gas projects to communities. It can 1536 also enable tax authorities to address tax avoidance and evasion by revealing information on transfer 1537 pricing arrangements and transactions. This can remove information asymmetry and provide a level 1538 playing field for governments when negotiating contracts.

State-owned enterprises

A state-owned enterprise (SOE) is, according to the Extractives Industry Transparency Initiative (EITI), 'a wholly or majority government-owned company that is engaged in extractive activities on behalf of the government'*. SOEs often have special status, which can involve financial advantages and preferential treatment.

SOEs usually sell shares of the produced resource to commodity trading companies. This first sale represents an important revenue stream for countries and can involve a high volume of financial transactions. However, data on these transactions is often scarce or inaccessible. The first trade can be subject to trade mispricing in the form of under-invoicing exports or over-invoicing imports to obtain financial gain. Other risks include selection of buyers and allocation of sales contracts (which can involve bribery and conflicts of interest) and moving income to a state treasury, potentially causing misallocation of revenues or generating public mistrust of revenue management (see also Anti-corruption).

Transparency in the operations and objectives of SOEs is crucial for monitoring their performance and maximizing their economic and social contributions.

* Extractive Industry Transparency Initiative (EITI), Requirement 2.6 State participation, eiti.org/document/eiti-standard-2019#r2-6, accessed 3 July 2020



1555 WHAT TO REPORT

- 1556 If an organization in the oil and gas sector has identified payments to governments as a material topic,
- 1557 this section helps it determine what to report on this topic.
- 1558 I. The organization is required to report on this topic and how it is managed using GRI 103: Material
 1559 Topics.
- 1560 2. The following disclosures from the GRI Topic Standards have been identified as appropriate to report on this topic:
- a. GRI 201: Economic Performance 2016
- 1563 Disclosure 201-1 Direct economic value generated and distributed
- 1564 Disclosure 201-4 <u>Financial assistance</u> received from government
- 1565 b. <u>GRI 207: Tax 2019</u>
- 1566 Disclosure 207-1 Approach to tax
- 1567 Disclosure 207-2 Tax governance, control, and risk management
- 1568 Disclosure 207-3 Stakeholder engagement and management of concerns related to tax
- 1569 Disclosure 207-4 Country-by-country reporting
- 1570 3. The following additional disclosures have also been identified as appropriate and should be reported on this topic:
- 1572 Payments to governments broken down by revenue stream and project, in line with the EITI Requirement 4.1 and EITI Requirement 4.7.
- Volumes and type of oil and gas purchased from the state or third parties appointed by the
 state to sell on their behalf, the full name of the buying entity, the payments made for the
 purchase, and the recipient of the payment, in line with the EITI Requirement 4.2 and the EITI
 guidelines for buying companies.
- 1578 4. The following additional disclosures have also been identified as appropriate and should be reported on this topic by State-owned enterprises (SOEs):
- The level of state ownership in the organization and the financial relationship between the government and the SOE, in line with the EITI Requirement 2.6.
- 1582 5. The following resources may help organizations in the oil and gas sector report on this topic:
- 1583 Extractives Industry Transparency Initiative (EITI), The EITI Standard, 2019.
- Extractives Industry Transparency Initiative (EITI), Upstream Oil, Gas, and Mining State-Owned
 Enterprises, Governance Challenges and the Role of International Reporting Standards in Improving
 Performance, 2018



1587 Public policy and lobbying

- 1588 The oil and gas sector can exert significant influence on government policies and is among the sectors
- 1589 with the largest lobbying expenditure. Lobbying by the oil and gas sector can result in significant, long-
- lasting impacts on the economy, environment, and local communities.
- 1591 The sector has represented a strong force against ambitious climate policies through lobbying
- 1592 activities by individual organizations and industry bodies. These lobbying activities have often aimed to
- 1593 prevent meaningful carbon pricing, carbon budgets, or other actions to reduce GHG emissions that
- 1594 could leave oil and gas assets or resources stranded. These activities sometimes contradict publicly
- 1595 stated corporate strategies or positions that support policies addressing the climate crisis.
- 1596 Other lobbying activities by the sector include hindering environmental policies; blocking or amending
- 1597 legislation on environmental and social assessments of projects or fair participation of all stakeholders;
- 1598 overturning restrictions on resource development; acquiring permits for pipelines; and supporting the
- 1599 lowering of corporate taxes and resource royalties.
- 1600 Due to the large revenues distributed to their host-country governments, organization in the oil and
- 1601 gas sector might be given better access to and representation in meetings with government
- 1602 representatives, leading to undue influence over public policy discussions. Documented cases show
- 1603 how the sector has habitually donated to political parties whose policies favor corporate agendas or in
- 1604 order to gain special access to politicians.
- 1605 Lobbying can also be used to gain or retain government subsidies, which can result in commodity prices
- 1606 that do not reflect the full environmental costs of products. Subsidies for the oil and gas sector can
- inhibit sustainable development in numerous ways, including reducing or inefficiently allocating available
- 1608 national resources, increasing dependence on fossil fuels, and discouraging investment in renewable
- 1609 energy and energy efficiency, which impedes the transition to low-carbon economies (see also Climate
- 1610 resilience and transition).

1611

1618

1619

1620 1621

1622

1623

1624

WHAT TO REPORT

- 1612 If an organization in the oil and gas sector has identified public policy and lobbying as a material topic,
- 1613 this section helps it determine what to report on this topic.
- 1614 I. The organization is required to report on this topic and how it is managed using GRI 103: Material
 1615 Topics.
- 1616 2. The following disclosure from the GRI Topic Standards has been identified as appropriate to report on this topic:

GRI 415: Public Policy 2016

- When reporting clause 1.1 in GRI 415: Public Policy 2016, the organization should report:
 - significant issues that are the focus of its participation in public policy development and lobbying; and
 - its stance on these issues as well as any differences between lobbying positions and stated policies, goals, or other public positions.
- Disclosure 415-1 Political contributions
- In addition to disclosures listed above, when reporting RBC-7 Membership associations in GRI 102:
 About the Organization, the organization should also report its memberships or contributions to organizations that participate in public advocacy on climate change.



Glossary 1628

1634

1645

- 1629 This glossary includes definitions for terms used in the GRI Sector Standard: Oil and Gas. The
- 1630 organization is required to apply these definitions when using this Sector Standard.
- 1631 Some definitions included in this glossary contain terms that are further defined in the complete GRI
- 1632 Standards Glossary. All defined terms are underlined. If a term is not defined in this glossary or the
- 1633 complete GRI Standards Glossary, definitions that are commonly used and understood apply.

Proposed additions to the GRI Glossary

- 1635 The GRI Standards Division proposes including to the GRI Glossary three new terms that are seen as 1636 applicable beyond the Oil and Gas Sector Standard. Comments on these additions are sought in the
- 1637 current public comment period for the draft Sector Standard: Oil and Gas.
- 1638 free, prior, and informed consent (FPIC) right recognized in the United Nations Declaration on 1639 the Rights of Indigenous Peoples that allows indigenous peoples to give or withhold consent to a
- 1640 project that may affect them or their territories as well as to negotiate project conditions
- Note I: This definition is based on Food and Agriculture Organization of the United Nations (FAO), 1641 1642 Free Prior and Informed Consent Manual, 2016. fao.org/3/a-i6190e.pdf.
- 1643 Note 2: The free, prior and informed consent terminology aligns with the United Nations Human 1644 Rights Office of the High Commissioner for Human Rights (OHCHR), Free, Prior and Informed
- Consent of Indigenous Peoples, 2013. ohchr.org/Documents/Issues/ipeoples/freepriorandinformedconsent.pdf. 1646
- 1647 Note 3: 'Free' implies no coercion, intimidation, or manipulation. 'Prior' implies consent sought 1648 sufficiently ahead of any activity authorization or commencement, with respect for time requirements
- 1649 of indigenous consultation and consensus processes. 'Informed' implies a range of information is
- 1650 provided, including any proposed project's or activity's nature, size, pace, reversibility, scope, purpose,
- 1651 duration, locality, and areas affected as well as a preliminary assessment of likely cultural, economic,
- 1652 environmental, and social impacts and the personnel likely entailed in execution and procedures.

1653 just transition

- 1654 framework that encourages sectors and economies to become more environmentally sustainable
- while ensuring decent work, social inclusion, and poverty eradication. A just transition involves not 1655
- 1656 only phasing out polluting sectors, but also implementing measures to reduce impacts of job and
- 1657 industry loss.
- 1658 Note 1: The Paris Agreement recognizes a just transition as an essential element of climate action.
- 1659 **Note 2**: This definition is based on the following sources:
- 1660 International Labour Organization (ILO), Guidelines for a just transition towards environmentally
- 1661 sustainable economies and societies for all, 2015, ilo.org/wcmsp5/groups/public/---ed emp/---
- emp ent/documents/publication/wcms 432859.pdf. 1662
- 1663 S. Smith, Just Transition Centre, Just Transition: A Report for the OECD, 2017,
- 1664 oecd.org/environment/cc/g20-climate/collapsecontents/lust-Transition-Centre-report-just-
- 1665 transition.pdf.
- 1666 United Nations Framework Convention on Climate Change (UNFCC), Paris Agreement, 2015,
- 1667 unfccc.int/files/meetings/paris nov 2015/application/pdf/paris agreement english .pdf.



- United Nations Framework Convention on Climate Change (UNFCC), Just Transition of the Workforce, and the Creation of Decent Work and Quality Jobs, technical paper, 2016,
- unfccc.int/sites/default/files/resource/Just%20transition.pdf.

| 167| | mitigation hierarchy

1674

1675 1676

1677

1681

sequence of actions providing a best-practice approach for the sustainable management of living natural resources in order to:

- avoid <u>impacts</u> on biodiversity and ecosystem services;
- where avoidance is not possible, minimize;
- when impacts occur, rehabilitate or restore; and
- where significant residual impacts remain, offset.

Note: This definition is based on Cross Sector Biodiversity Initiative (CSBI), A cross sector guide for implementing the Mitigation Hierarchy, 2015.

csbi.org.uk/wp-content/uploads/2017/10/Mitigation-Hierarchy-Executive-summary-and-Overview.pdf.

anti-competitive behavior

- action of the organization or employees that can result in collusion with potential competitors, with
- 1683 the purpose of limiting the effects of market competition
- 1684 Note: Examples of anti-competitive behavior actions can include fixing prices, coordinating bids,
- 1685 creating market or output restrictions, imposing geographic quotas, or allocating customers, suppliers,
- 1686 geographic areas, and product lines.

1687 anti-trust and monopoly practice

- 1688 action of the organization that can result in collusion to erect barriers for entry to the sector, or
- 1689 another collusive action that prevents competition
- 1690 **Note**: Examples of collusive actions can include unfair business practices, abuse of market position,
- 1691 cartels, anti-competitive mergers, and price-fixing.
- 1692 area of high biodiversity value
- area not subject to legal protection, but recognized for important biodiversity features by a number of
- 1694 governmental and non-governmental organizations
- 1695 Note 1: Areas of high biodiversity value include habitats that are a priority for conservation, which
- 1696 are often defined in National Biodiversity Strategies and Action Plans prepared under the United
- 1697 Nations (UN) Convention, 'Convention on Biological Diversity', 1992.
- 1698 Note 2: Several international conservation organizations have identified particular areas of high
- 1699 biodiversity value.
- 1700 baseline
- 1701 starting point used for comparisons
- 1702 **Note**: In the context of energy and emissions reporting, the baseline is the projected energy
- 1703 consumption or emissions in the absence of any reduction activity.
- 1704 basic salary
- 1705 fixed, minimum amount paid to an employee for performing his or her duties, excluding any additional
- 1706 <u>remuneration</u>, such as payments for overtime working or bonuses



- 1707 benefit
- 1708 direct benefit provided in the form of financial contributions, care paid for by the organization, or the
- 1709 reimbursement of expenses borne by the employee
- 1710 Note: Redundancy payments over and above legal minimums, lay-off pay, extra employment injury
- 1711 benefit, survivors' benefits, and extra paid holiday entitlements can also be included as a benefit.
- 1712 business relationships [as proposed in the revised Universal Standards draft]
- 1713 entity with which the organization has some form of direct and formal engagement for the purpose of
- 1714 meeting its business objectives
- 1715 Note 1: Examples of business partners can include affiliates, business-to-business customers, clients,
- 1716 first-tier suppliers (such as a supplier that manufactures the organization's products), franchisees, joint
- 1717 venture partners, and investee companies in which the organization has a shareholding position.
- 1718 Business partners do not include subsidiaries and affiliates that the organization controls.
- 1719 **Note 2:** This definition comes from Shift and Mazars LLP, UN Guiding Principles Reporting Framework,
- 1720 2874 2015.
- 1721 **child**
- 1722 person under the age of 15 years, or under the age of completion of compulsory schooling, whichever
- 1723 is higher
- 1724 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
- 1726 specified by the International Labour Organization (ILO) in response to a special application by the
- 1727 country concerned and in consultation with representative organizations of employers and workers.
- 1728 Note 2: The ILO Minimum Age Convention, 1973 (No. 138), refers to both child labor and young
- 1729 workers.
- 1730 collective bargaining [as proposed in the revised Universal Standards draft]
- 1731 negotiations between one or more employers or employers' organizations and one or more workers'
- 1732 organizations (trade unions), to determine working conditions and terms of employment or to
- 1733 regulate relations between employers and workers
- 1734 Note: This definition is based on the International Labour Organization (ILO), Collective Bargaining
- 1735 Convention, 1981 (No. 154).
- 1736 community development program
- 1737 plan that details actions to minimize, mitigate, or compensate for adverse social and/or economic
- 1738 impacts, and/or to identify opportunities or actions to enhance positive impacts of a project on the
- 1739 community
- 1740 conflict of interest
- 1741 situation where an individual is confronted with choosing between the requirements of his or her
- 1742 function and his or her own private interests
- 1743 corruption



1744	'abuse of entrusted power for private gain',21 which can be instigated by individuals or organizations		
1745 1746 1747 1748 1749 1750	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. ²² 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.		
1752	direct (Scope I) GHG emissions		
1753	GHG emissions from sources that are owned or controlled by an organization		
1754	Note I: A GHG source is any physical unit or process that releases GHG into the atmosphere.		
1755	Note 2: Direct (Scope I) GHG emissions can include the CO2 emissions from fuel consumption.		
1756	discrimination		
1757 1758	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		
1759 1760 1761	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 toward whom they are addressed.		
1762	effluent		
1763	treated or untreated wastewater that is discharged		
1764 1765	Note : This definition is based on the Alliance for Water Stewardship (AWS), AWS International Water Stewardship Standard, Version 1.0, 2014.		
1766	employee		
1767 1768	individual who is in an employment relationship with the organization, according to national law or its application		
1769	employee turnover		

1770 employees who leave the organization voluntarily or due to dismissal, retirement, or death in service

| 177 | entry level wage

1772 full-time wage in the lowest employment category

1773 **Note**: Intern or apprentice wages are not considered entry level wages

1774 exposure

²¹ Transparency International

²² These definitions are based on Transparency International, 'Business Principles for Countering Bribery', 2011.



GRI Sector Standard: Oil and Gas

- 1775 quantity of time spent at or the nature of contact with certain environments that possess various
- 1776 degrees and kinds of hazard, or proximity to a condition that might cause injury or ill health (e.g.,
- 1777 chemicals, radiation, high pressure, noise, fire, explosives)
- 1778 financial assistance
- 1779 direct or indirect financial benefits that do not represent a transaction of goods and services, but
- 1780 which are an incentive or compensation for actions taken, the cost of an asset, or expenses incurred
- 1781 Note: The provider of financial assistance does not expect a direct financial return from the
- 1782 assistance offered.
- 1783 forced or compulsory labor
- 1784 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
- 1786 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.
- 1788 Note 2: Indicators of forced labor include withholding identity papers, requiring compulsory deposits,
- 1789 and compelling workers, under threat of firing, to work extra hours to which they have not previously
- 1790 agreed.
- 1791 Note 3: This definition is based on International Labour Organization (ILO) Convention 29, 'Forced
- 1792 Labour Convention', 1930.
- 1793 freedom of association
- 1794 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
- 1796 freshwater
- 1797 water with concentration of total dissolved solids equal to or below 1,000 mg/L
- 1798 Note: This definition is based on ISO 14046:2014; the United States Geological Survey (USGS),
- 1799 Water Science Glossary of Terms, water.usgs.gov/edu/dictionary.html, accessed on 1 June 2018; and
- 1800 the World Health Organization (WHO), Guidelines for Drinking-water Quality, 2017.
- 1801 global warming potential (GWP)
- 1802 value describing the radiative forcing impact of one unit of a given GHG relative to one unit of CO2
- 1803 over a given period of time
- 1804 Note: GWP values convert GHG emissions data for non-CO2 gases into units of CO₂ equivalent.
- 1805 greenhouse gas (GHG)
- 1806 gas that contributes to the greenhouse effect by absorbing infrared radiation
- 1807 grievance mechanism [as proposed in the revised Universal Standards draft]
- 1808 routinized process through which grievances can be raised and remedy can be sought
- 1809 Note 1: Grievance mechanisms include routinized, State-based or non-State-based, judicial or non-
- 1810 judicial processes. They also include operational-level grievance mechanisms, which are administered
- by the organization either alone or in collaboration with other parties, and which are directly
- 1812 accessible by the organization's stakeholders.
- 1813 Note 2: According to UN Guiding Principle 31, effective grievance mechanisms are legitimate,
- 1814 accessible, predictable, equitable, transparent, rights-compatible, and a source of continuous learning.



- 1815 In addition to these criteria, effective operational-level grievance mechanisms are also based on
- 1816 engagement and dialogue.
- 1817 Note 3: This definition is based on the United Nations (UN), Guiding Principles on Business and
- 1818 Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework, 2011.
- 1819 groundwater

1831

1832

1833

1834

1838

1839

1840

1841 1842

1843

1844

1845

- 1820 water that is being held in, and that can be recovered from, an underground formation
- 1821 Note: This definition comes from ISO 14046:2014.
- 1822 high-consequence work-related injury
- 1823 work-related injury that results in a fatality or in an injury from which the worker cannot, does not, or
- is not expected to recover fully to pre-injury health status within 6 months
- impact [as proposed in the revised Universal Standards draft]
- In the GRI Standards, unless otherwise stated, 'impact' refers to the effect the organization has on the
- 1827 economy, environment, and/or people, including on human rights, which in turn can indicate the
- 1828 organization's contribution (negative or positive) to sustainable development.
- **Note**: In the GRI Standards, the term 'impact' can refer to:
 - actual impacts (those that have already occurred) or potential impacts (those that could occur
 but have not yet occurred);
 - negative impacts or positive impacts;
 - short-term impacts or long-term impacts;
 - intended impacts or unintended impacts;
- reversible impacts or irreversible impacts.
- 1836 See 'impact' in Section 2 of GRI 101: Using the GRI Standards.
- 1837 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), Indigenous and Tribal
 3004 Peoples Convention, 1989 (No. 169).
- 1849 infrastructure
- 1850 facilities built primarily to provide a public service or good rather than a commercial purpose, and
- 1851 from which an organization does not seek to gain direct economic benefit
- 1852 Note: Examples of facilities can include water supply facilities, roads, schools, and hospitals, among
- 1853 others.
- 1854 local community [as proposed in the revised Universal Standards draft]



- 1855 individuals or groups of individuals living and/or working in areas that are, or could be, affected by the
- 1856 organization's activities and decisions
- 1857 **Note**: The local community can range from individuals living adjacent to the organization's operations
- 1858 to those living at a distance who are still likely to be affected by these operations.
- 1859 local minimum wage
- 1860 minimum compensation for employment per hour, or other unit of time, allowed under law
- **Note**: Some countries have numerous minimum wages, such as by state or province or by
- 1862 employment category.
- 1863 local supplier
- organization or person that provides a product or service to the reporting organization, and that is
- based in the same geographic market as the reporting organization (that is, no transnational payments
- 1866 are made to a local supplier)
- 1867 **Note**: The geographic definition of 'local' can include the community surrounding operations, a region
- 1868 within a country or a country.
- material topic [as proposed in the revised Universal Standards draft]
- 1870 topic that reflects the organization's most significant impacts on the economy, environment, and
- 1871 people, including impacts on human rights
- Note: See Section 2 of GRI 101: Using the GRI Standards and Section 2 of GRI 103: Material Topics for
- 1873 more information.
- 1874 mitigation [as proposed in the revised Universal Standards draft]
- 1875 action(s) taken to reduce the extent of a negative impact
- 1876 Note 1: The mitigation of an actual negative impact refers to actions taken to reduce the extent of
- 1877 the negative impact that has occurred, with any residual impact needing remediation. The mitigation of
- 1878 a potential negative impact refers to actions taken to reduce the likelihood of the negative impact
- 1879 occurring.
- 1880 Note 2: This definition is based on the United Nations (UN), The Corporate Responsibility to
- 1881 Respect Human Rights: An Interpretive Guide, 2012.
- 1882 occupational health and safety management system
- 1883 set of interrelated or interacting elements to establish an occupational health and safety policy and
- 1884 objectives, and to achieve those objectives
- 1885 Note: This definition comes from the International Labour Organization (ILO), Guidelines on
- 1886 Occupational Safety and Health Management Systems, ILO-OSH 2001, 2001.
- 1887 occupational health and safety risk
- 1888 combination of the likelihood of occurrence of a work-related hazardous situation or exposure and
- 1889 the severity of injury or ill health that can be caused by the situation or exposure
- 1890 **Note**: This definition is based on ISO 45001:2018.
- 1891 occupational health services
- 1892 services entrusted with essentially preventive functions, and responsible for advising the employer, the
- 1893 workers, and their representatives in the undertaking, on the requirements for establishing and
- 1894 maintaining a safe and healthy work environment, which will facilitate optimal physical and mental



- health in relation to work and the adaptation of work to the capabilities of workers in the light of their state of physical and mental health
- **Note I**: Functions of occupational health services include:
- surveillance of factors in the work environment, including any sanitary installations, canteens,
 and housing provided to workers, or in work practices, which might affect workers' health;
 - surveillance of workers' health in relation to work;
- advice on occupational health, safety, and hygiene;
- advice on ergonomics and on individual and collective protective equipment;
- promotion of the adaptation of work to the worker;
- organization of first aid and emergency treatment.
- 1905 Note 2: This definition comes from the International Labour Organization (ILO) Convention 161,
- 1906 'Occupational Health Services Convention', 1985.
- 1907 operation with significant actual or potential negative impacts on local communities
- 1908 an operation, considered alone or in combination with the characteristics of local communities, that
- 1909 has a higher than average potential of negative impacts, or actual negative impacts, on the social,
- 1910 economic or environmental well-being of local communities
- 1911 Note: Examples of negative impacts on local communities can include impacts to local community
- 1912 health and safety.

- 1913 other indirect (Scope 3) GHG emissions
- 1914 indirect GHG emissions not included in energy indirect (Scope 2) GHG emissions that occur outside
- 1915 of the organization, including both upstream and downstream emissions
- 1916 parental leave
- 1917 leave granted to men and women employees on the grounds of the birth of a child
- 1918 political contribution
- 1919 financial or in-kind support given directly or indirectly to political parties, their elected
- 1920 representatives, or persons seeking political office
- 1921 Note 1: Financial contributions can include donations, loans, sponsorships, retainers, or the purchase
- 1922 of tickets for fundraising events.
- 1923 Note 2: In-kind contributions can include advertising, use of facilities, design and printing, donation of
- 1924 equipment, or the provision of board membership, employment, or consultancy work for elected
- 1925 politicians or candidates for office.
- 1926 produced water
- 1927 water that enters an organization's boundary as a result of extraction (e.g., crude oil), processing (e.g.,
- 1928 sugar cane crushing), or use of any raw material, and has to consequently be managed by the
- 1929 organization
- 1930 **Note**: This definition is based on CDP, CDP Water Security Reporting Guidance, 2018.
- 1931 product
- 1932 article or substance that is offered for sale or is part of a <u>service</u> delivered by the organization
- 1933 protected area
- 1934 geographic area that is designated, regulated, or managed to achieve specific conservation objectives



935	reduction of	greenhouse	gas (GHG) emissions
/33	i cauction or	greeniiouse	gas (Gi iG	<i>,</i> eminasions

- 1936 decrease in GHG emissions or increase in removal or storage of GHG from the atmosphere, relative
- 1937 to baseline emissions
- 1938 Note: Primary effects will result in GHG reductions, as will some secondary effects. An initiative's
- 1939 total GHG reductions are quantified as the sum of its associated primary effect(s) and any significant
- 1940 secondary effects (which may involve decreases or countervailing increases in GHG emissions).
- remediation [as proposed in the revised Universal Standards draft]
- 1942 provision of <u>remedy</u>
- 1943 Note: This definition is based on the United Nations (UN), The Corporate Responsibility to Respect
- 1944 Human Rights: An Interpretive Guide, 2012.
- 1945 remedy [as proposed in the revised Universal Standards draft]
- 1946 means to counteract or make good a negative impact
- 1947 Note 1: Remedy can take a range of forms, such as apologies, restitution, restoration, rehabilitation,
- 1948 financial or non-financial compensation, and punitive sanctions (whether criminal or administrative,
- 1949 such as fines), as well as the prevention of harm through, for example, injunctions or guarantees of
- 1950 non-repetition.
- 1951 Note 2: This definition is based on the United Nations (UN), The Corporate Responsibility to Respect
- 1952 Human Rights: An Interpretive Guide, 2012, ohchr.org/Documents/publications/hr.puB.12.2 en.pdf.
- 1953 remuneration
- 1954 <u>basic salary</u> plus additional amounts paid to a <u>worker</u>
- 1955 Note: Examples of additional amounts paid to a worker can include those based on years of service,
- 1956 bonuses including cash and equity such as stocks and shares, benefit payments, overtime, time owed,
- 1957 and any additional allowances, such as transportation, living and childcare allowances.
- 1958 renewable energy source
- 1959 energy source that is capable of being replenished in a short time through ecological cycles or
- 1960 agricultural processes
- 1961 Note: Renewable energy sources can include geothermal, wind, solar, hydro, and biomass.
- 1962 seawater
- 1963 water in a sea or in an ocean
- 1964 **Note**: This definition comes from ISO 14046:2014.
- 1965 sector [as proposed in the revised Universal Standards draft]
- 1966 subdivision of an economy, society, or sphere of activity, defined on the basis of some common
- 1967 characteristic such as similar or related <u>products</u> or <u>services</u>
- 1968 Note: Sector types can include classifications such as the public or private sector, as well as industry-
- specific categories such as the education, technology, or financial sectors.
- 1970 security personnel
- 1971 individuals employed for the purposes of guarding property of the organization; crowd control; loss
- 1972 prevention; and escorting persons, goods, and valuables



	•
1973	service

- 1974 action of the organization to meet a demand or need
- 1975 services supported
- 1976 services that provide a public benefit either through direct payment of operating costs or through
- 1977 staffing the facility or service with an organization's own employees
- 1978 **Note**: Public benefit can also include public services.
- 1979 significant air emission
- 1980 air emission regulated under international conventions and/or national laws or regulations
- 1981 Note: Significant air emissions include those listed on environmental permits for an organization's
- 1982 operations.
- 1983 significant operational change
- 1984 alteration to the organization's pattern of operations that can potentially have significant positive or
- 1985 negative impacts on workers performing the organization's activities
- 1986 **Note**: Significant operational change can include restructuring, outsourcing of operations, closures,
- 1987 expansions, new openings, takeovers, sale of all or part of the organization, or mergers.
- 1988 significant spill
- 1989 spill that is included in the organization's financial statements, for example due to resulting liabilities,
- 1990 or is recorded as a spill by the organization
- 1991 **spil**
- 1992 accidental release of a hazardous substance that can affect human health, land, vegetation, water
- 1993 bodies, and ground water
- 1994 stakeholder [as proposed in the revised Universal Standards draft]
- 1995 individual or group that has an interest that is, or could be, affected by the organization's activities and
- 1996 decisions
- 1997 Note 1: Common categories of stakeholders for organizations include business partners, civil society
- 1998 organizations, consumers, customers, employees and other workers, governments, local communities,
- 1999 non-governmental organizations, shareholders, suppliers, trade unions, and vulnerable groups. See
- 2000 'stakeholder' in Section 2 of GRI 101: Using the GRI Standards.
- Note 2: This definition is based on the Organisation for Economic Co-operation and Development
- 2002 (OECD), OECD Due Diligence Guidance for Responsible Business Conduct, 2018.
- 2003 supplier [as proposed in the revised Universal Standards draft]
- 2004 entity in the organization's <u>supply chain</u>, which provides a <u>product</u> or <u>service</u> that contributes to the
- 2005 organization's own products or services
- 2006 **Note I**: Examples of <u>suppliers</u> include brokers, consultants, contractors, distributors, franchisees,
- 2007 home workers, independent contractors, licensees, manufacturers, primary producers, sub-
- 2008 contractors, and wholesalers.
- 2009 Note 2: A supplier can have a direct business relationship with the organization (often referred to as
- 2010 first-tier supplier) or an indirect business relationship.
- 2011 supply chain [as proposed in the revised Universal Standards draft]



- range of activities carried out by entities upstream in the organization's value chain, which provide
- 2013 products or services that contribute to the organization's own products or services
- 2014 surface water
- water that occurs naturally on the Earth's surface in ice sheets, ice caps, glaciers, icebergs, bogs,
- 2016 ponds, lakes, rivers, and streams
- 2017 **Note**: This definition is based on CDP, CDP Water Security Reporting Guidance, 2018.
- 2018 sustainable development/sustainability [as proposed in the revised Universal Standards
- 2019 draft]
- development that meets the needs of the present without compromising the ability of future
- 2021 generations to meet their own needs
- Note I: Sustainable development encompasses broader economic, environmental, and societal
- interests, rather than the individual interests of organizations.
- Note 2: In the GRI Standards, the terms 'sustainability' and 'sustainable development' are used
- interchangeably.
- 2026 Note 3: This definition comes from the World Commission on Environment and Development, Our
- 2027 Common Future, 1987.
- value chain [as proposed in the revised Universal Standards draft]
- range of activities carried out by the organization and other entities, which convert input into output
- 2030 by adding value throughout the life cycle of a product or service from conception to end use
- Note: The value chain includes the organization's own activities, as well as activities carried out by
- 2032 entities upstream and downstream from the organization in relation to the organization's products
- 2033 and services. The upstream entities (e.g., suppliers) provide products or services that contribute to
- the organization's own products or services. The downstream entities (e.g., distributors, customers)
- receive products or services from the organization.
- 2036 vulnerable group [as proposed in the revised Universal Standards draft]
- 2037 group of individuals with some specific economic, physical, political, or social condition or
- 2038 characteristic that could experience negative impacts as a result of the organization's activities and
- 2039 decisions more severely than others
- Note 1: Vulnerable groups can include children and youth, elderly persons, ethnic minorities, ex-
- 2041 combatants, HIV/AIDS-affected households, indigenous peoples, internally displaced persons, people
- with disabilities, and refugees or returning refugees.
- Note 2: Vulnerabilities and impacts can differ by gender.
- 2044 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 I: 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.
- 2052 water discharge



- sum of effluents, used water, and unused water released to surface water, groundwater, seawater, or
- a third party, for which the organization has no further use, over the course of the reporting period
- Note I: Water can be released into the receiving waterbody either at a defined discharge point
- 2056 (pointsource discharge) or dispersed over land in an undefined manner (non-point-source discharge).
- Note 2: Water discharge can be authorized (in accordance with discharge consent) or unauthorized
- 2058 (if discharge consent is exceeded).
- 2059 water stress
- ability, or lack thereof, to meet the human and ecological demand for water
- Note I: Water stress can refer to the availability, quality, or accessibility of water.
- 2062 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
- 2064 ecosystems.
- 2065 Note 3: Water stress in an area may be measured at catchment level at a minimum.
- 2066 Note 4: This definition comes from the CEO Water Mandate, Corporate Water Disclosure
- 2067 Guidelines, 2014.
- 2068 water withdrawal
- sum of all water drawn from surface water, groundwater, seawater, or a third party for any use over
- 2070 the course of the reporting period
- 2071 worker [as proposed in the revised Universal Standards draft]
- 2072 person that performs work
- Note 1: Workers include, but are not limited to, employees. Further examples of workers include
- interns, apprentices, self-employed persons, and persons working for organizations other than the
- reporting organization (e.g., for <u>suppliers</u>).
- Note 2: In the context of the GRI Standards, in some cases it is specified whether a particular subset
- of workers is to be used.
- 2078 worker consultation
- 2079 seeking of workers' views before making a decision
- 2080 Note I: Worker consultation might be carried out through workers' representatives.
- Note 2: Consultation is a formal process, whereby management takes the views of workers into
- account when making a decision. Therefore, consultation needs to take place before the decision is
- 2083 made. It is essential to provide timely information to workers or their representatives in order for
- them to provide meaningful and effective input before decisions are made. Genuine consultation
- 2085 involves dialogue.
- 2086 Note 3: Worker participation and consultation are two distinct terms with specific meanings. See
- 2087 definition of 'worker participation'.
- 2088 worker participation
- 2089 workers' involvement in decision-making
- 2090 **Note I**: Worker participation might be carried out through workers' representatives.



- Note 2: Worker participation and consultation are two distinct terms with specific meanings. See definition of 'worker consultation'.
- 2093 work-related hazard
- source or situation with the potential to cause injury or ill health
- 2095 **Note I**: Hazards can be:

2097

2098

2099

2100 2101

2102

2103

- 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.



Bibliography

2 Front matter

- 3 Organisation for Economic Co-operation and Development (OECD) and International Energy Agency (IEA),
- 4 OECD Green Growth Studies: Energy, 2011, oecd.org/greengrowth/greening-energy/49157219.pdf.
- 5 United Nations Environment Programme (UNEP), Emissions Gap Report 2019, 2019,
- 6 wedocs.unep.org/bitstream/handle/20.500.11822/30797/EGR2019.pdf?sequence=1&isAllowed=y.
- 7 United Nations Framework Convention on Climate Change (UNFCCC), Paris Agreement, 2015,
- 8 unfccc.int/files/essential background/convention/application/pdf/english paris agreement.pdf.
- 9 World Bank Group, Access to Electricity, data.worldbank.org/indicator/EG.ELC.ACCS.ZS, accessed on 31 May
- 10 2020.

ı

| | GHG emissions

- 12 Carbon Brief, Methane emissions from fossil fuels 'severely underestimated', 2020, carbonbrief.org/methane-
- 13 emissions-from-fossil-fuels-severely-underestimated.
- 14 Environmental Defense Fund (EDF), Taking Aim: Hitting the mark on oil and gas methane targets, 2018,
- 15 edf.org/sites/default/files/documents/EDF_TakingAim.pdf.
- 16 Ernst & Young (EY), Unconventional oil and gas in a carbon constrained world: A review of the environmental risks
- and future outlook for unconventional oil and gas, 2017,
- 18 klp.no/polopoly fs/1.38621.1509968953!/menu/standard/file/UnconventionalOilAndGasInaCarbonConstrained
- 19 World-September2017.pdf.
- P. Forster, V. Ramaswamy, et al., 'Changes in Atmospheric Constituents and in Radiative Forcing', Climate
- Change 2007: The Physical Science Basis, 2007, ipcc.ch/site/assets/uploads/2018/02/ar4-wg1-chapter2-1.pdf.
- 22 Greenhouse Gas Protocol, Global Warming Potential Values, 2015, ghgprotocol.org/sites/default/files/Global-
- 23 Warming-Potential-Values%20%28Feb%2016%202016%29 1.pdf.
- 24 Intergovernmental Panel on Climate Change (IPCC), Climate Change 2014: Synthesis Report, 2014,
- 25 ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf.
- 26 Intergovernmental Panel on Climate Change (IPCC), Climate Change 2007: The Physical Science Basis, 2007,
- ipcc.ch/site/assets/uploads/2018/02/ar4-wg1-chapter2-1.pdf.
- 28 Intergovernmental Panel on Climate Change (IPCC), Good Practice Guidance and Uncertainty Management in
- National Greenhouse Gas Inventories, 2001, ipcc-nggip.iges.or.jp/public/gp/english/2_Energy.pdf.
- 30 International Energy Agency (IEA), CO2 Emissions from Fuel Combustion Highlights, 2019, webstore.iea.org/co2-
- 31 emissions-from-fuel-combustion-2019-highlights.
- 32 International Energy Agency (IEA), Energy Efficiency 2018: Analysis and Outlooks to 2040, 2018,
- webstore.iea.org/market-report-series-energy-efficiency-2018.
- 34 International Energy Agency (IEA), Methane Tracker, iea.org/reports/methane-tracker, accessed on 31 May
- 35 2020.
- 36 International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Mining, 2017,
- 37 ifc.org/wps/wcm/connect/595149ed-8bef-4241-8d7c-50e91d8e459d/Final%2B-
- 38 %2BMining.pdf?MOD=AJPERES&CVID=jqezAit&id=1323153264157
- 39 IPIECA, Saving energy in the oil and gas industry, 2013, world-
- 40 petroleum.org/docs/docs/socialres/saving_energy_6_feb_2013.pdf.
- 41 IPIECA, American Petroleum Institute (API), and International Association of Oil and Gas Producers (IOGP),
- 42 Oil and gas industry guidance on voluntary sustainability reporting, 3rd ed., 2015,
- 43 ipieca.org/media/2849/og_industry_guidance_on_voluntary_sustainability_reportnig_3rd_ed_2016.pdf.

Users can navigate to specific sections of the exposure draft by clicking the hyperlinked bookmarks that function in most browsers and in Adobe Acrobat Reader.

- The Energy Resources Institute (TERI), Towards an Energy Efficient Oil & Gas Sector,
- 45 sustainabledevelopment.un.org/content/documents/625468-
- 46 Parekh Towards%20an%20Energy%20Efficient%20Oil%20&%20Gas%20Sector.pdf.
- 47 The World Bank, Global Gas Flaring Reduction Partnership (GGFR),
- 48 worldbank.org/en/programs/gasflaringreduction, accessed on 31 May 2020.
- 49 The World Bank, 'Increased Shale Oil Production and Political Conflict Contribute to Increase in Global Gas
- Flaring', 2019, worldbank.org/en/news/press-release/2019/06/12/increased-shale-oil-production-and-political-
- 51 conflict-contribute-to-increase-in-global-gas-flaring, accessed on 31 May 2020.
- The World Bank, Zero Routine Flaring by 2030, worldbank.org/en/programs/zero-routine-flaring-by-2030#7,
- accessed on 31 May 2020.
- 54 UN Climate Change (UNFCC), 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 31 May 2020.
- United States Energy Information Administration (EIA), Assumptions to the Annual Energy Outlook 2019: Industrial
- Demand Module, 2019, eia.gov/outlooks/aeo/assumptions/pdf/industrial.pdf.
- 59 United States Energy Information Administration (EIA), Natural gas explained, eia.gov/energyexplained/natural-
- gas, accessed on 31 May 2020.
- 61 United States Environmental Protection Agency (US EPA), Overview of Greenhouse Gases,
- 62 epa.gov/ghgemissions/overview-greenhouse-gases#methane, accessed on 31 May 2020.

63 Climate resilience and transition

- T. Bruckner, I. Alexeyevich Bashmakov, et al., 'Energy Systems', Mitigation of Climate Change 2014, Mitigation of
- 65 Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on
- 66 Climate Change, 2014, ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter7.pdf, pp. 511-597.
- 67 Carbon Tracker Initiative, Balancing the Budget: Why deflating the carbon bubble requires oil & gas companies
- to shrink, 2019, carbontracker.org/reports/balancing-the-budget, accessed on 31 May 2020.
- 69 Carbon Tracker Initiative, Carbon Budgets Explainer, 2018,
- 70 carbontracker.org/wp-content/uploads/2018/02/Carbon-Budgets Eplained 02022018.pdf.
- 71 Carbon Tracker, Unburnable Carbon: Are the World's Financial Markets Carrying a Carbon Bubble?, 2011,
- $72 \qquad banktrack.org/download/unburnable_carbon/unburnablecarbonfullrev2.pdf.$
- A. Dagnachew, A. Hof, et al., Insight into Energy Scenarios: A comparison of key transition indicators of 2°C scenarios,
- 74 2019, pbl.nl/sites/default/files/downloads/pbl-2019-insight-into-energy-scenarios 3686.pdf.
- 75 F. Denton, T. J. Wilbanks, et al., 'Climate-Resilient Pathways: Adaptation, Mitigation, and Sustainable
- 76 Development', Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects.
- 77 Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change,
- 78 2014
- 79 ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap20_FINAL.pdf, pp. 1101-1131.
- 80 L. Fletcher, T. Crocker, et al., Beyond the cycle: Which oil and gas companies are ready for the low-carbon transition?
- 81 Executive summary, 2018,
- 82 6fefcbb86e61af1b2fc4-
- 83 c70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/003/858/original/CDP
- Oil and Gas Executive Summary 2018.pdf?1541783367.
- R. Hutt, 'Which economies are most reliant on oil?', weforum.org/agenda/2016/05/which-economies-are-most-
- reliant-on-oil, accessed on 31 May 2020.
- 87 Intergovernmental Panel on Climate Change (IPCC), Global Warming of 1.5°C. An IPCC Special Report on the
- 88 impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in



- 89 the context of strengthening the global response to the threat of climate change, sustainable development, and efforts
- 90 to eradicate poverty, 2018, ipcc.ch/sr15/download.
 - International Energy Agency (IEA), The Oil and Gas Industry in Energy Transitions: World Energy Outlook special report, 2020, iea.org/reports/the-oil-and-gas-industry-in-energy-transitions.
- 91 IPIECA, Addressing adaptation in the oil and gas industry, 2013, ipieca.org/news/addressing-adaptation-in-the-oil-
- 92 and-gas-industry.
- 93 [. G.]. Olivier and J. A. H. W. Peters, Trends in global CO₂ and total greenhouse gas emissions: 2019 Report, 2020,
- 94 pbl.nl/sites/default/files/downloads/pbl-2020-trends-in-global-co2-and-total-greenhouse-gas-emissions-2019-
- 95 report 4068.pdf, p. 12.
- 96 Organisation for Economic Co-operation and Development (OECD) and International Energy Agency (IEA),
- 97 OECD Green Growth Studies: Energy, 2011, oecd.org/greengrowth/greening-energy/49157219.pdf.
- 98 Organisation for Economic Co-operation and Development (OECD), Monitoring the transition to a low-carbon
- 99 economy: a strategic approach to local development, 2015, oecd.org/regional/Monitoring-Green-Transition-
- 100 Final2.pdf.
- 101 M. F. Rahman, M. Mostofa, and S. Huq, 'Low-Carbon Futures in Least-Developed Countries',
- 102 wri.org/climate/expert-perspective/low-carbon-futures-least-developed-countries, accessed on 31 May 2020.
- 103 E. Stuart, 'Leaving No One Behind in Sustainable Development Pathways', wri.org/climate/expert-
- 104 perspective/leaving-no-one-behind-sustainable-development-pathways, accessed on 31 May 2020.
- 105 C. Symon, Climate change: Action, trends and implications for business: The IPCC's Fifth Assessment Report, Working
- 106 Group 1, cisl.cam.ac.uk/business-action/low-carbon-transformation/ipcc-climate-science-business-
- briefings/pdfs/briefings/science-report-briefing-print-en.pdf.
- 108 Task Force on Climate-Related Financial Disclosure (TCFD), Recommendations of the Task Force on Climate-
- 109 related Financial Disclosure, 2017, fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-2017-TCFD-Report-
- 110 11052018.pdf.
- Task Force on Climate-Related Financial Disclosure (TCFD), The Use of Scenario Analysis in Disclosure of Climate-
- 112 Related Risks and Opportunities, 2017, fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Technical-
- 113 Supplement-062917.pdf.
- 114 Air emissions
- International Energy Agency (IEA), Energy and Air Pollution: World Energy Outlook Special Report, 2016,
- pure.iiasa.ac.at/id/eprint/13467/1/WorldEnergyOutlookSpecialReport2016EnergyandAirPollution.pdf.
- 117 International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Crude Oil and Petroleum
- Product Terminals, 2007, ifc.org/wps/wcm/connect/83036b30-f957-4e0e-a662-2df991dcdfa0/Final%2B-
- 119 %2BCrude%2BOil%2Band%2BPetroleum%2BProduct%2BTerminals.pdf?MOD=AJPERES&CVID=jqevC2Q&id=1
- 120 323162170625,
- 121 International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Gas Distribution Systems,
- 122 2007, ifc.org/wps/wcm/connect/88f41d8f-bd85-4535-a689-066d41b7ee29/Final%2B-
- 123 %2BGas%2BDistribution%2BSystems.pdf?MOD=AJPERES&CVID=jqezuZM&id=1323162128496.
- 124 International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Liquefied Natural Gas
- 125 Facilities, 2017, ifc.org/wps/wcm/connect/ab72db72-736a-43e7-8c81-f2d749ec3ad1/20170406-
- 126 FINAL+LNG+EHS+Guideline_April+2017.pdf?MOD=AJPERES&CVID=IJuCgVs.
- 127 International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Natural Gas Processing,
- 128 2017, ifc.org/wps/wcm/connect/ab72db72-736a-43e7-8c81-f2d749ec3ad1/20170406-
- 129 FINAL+LNG+EHS+Guideline_April+2017.pdf?MOD=AJPERES&CVID=IJuCgVs.
- 130 International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Offshore Oil and Gas
- Development, 2015, ifc.org/wps/wcm/connect/e2a72e1b-4427-4155-aa8f-



- 132 c660ce3f2cd5/FINAL_Jun+2015_Offshore+Oil+and+Gas_EHS+Guideline.pdf?MOD=AJPERES&CVID=kU7RMJ
- 133 6
- 134 International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Onshore Oil and Gas
- Development, 2017, ifc.org/wps/wcm/connect/8eb48de5-748e-4d62-bcfe-
- 136 40814dee7f0f/Onshore+Oil+and+Gas+Development+EHS+Guideline+-
- +clean+draft+revised+version.pdf?MOD=AJPERES&CVID=IIWn.4z.
- 138 International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Petroleum Refining, 2016,
- 139 ifc.org/wps/wcm/connect/bde2da1d-3a09-400b-be24-3f6a60353ddc/2016-
- 140 EHS+Guidelines+for+Petroleum+Refining+FINAL.pdf?MOD=AJPERES&CVID=IxPS7Bu.
- 141 International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Retail Petroleum
- 142 Networks, 2007, ifc.org/wps/wcm/connect/80003f2b-2c37-45ea-93c5-0bb6032d8f6f/Final%2B-
- 143 %2BRetail%2BPetroleum%2BNetworks.pdf?MOD=AJPERES&CVID=jqevKsA&id=1323152536731.
- 144 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 31 May 2020.
- World Health Organization (WHO), Air pollution, who.int/health-topics/air-pollution, accessed on 31 May
- 148 2020.
- World Health Organization (WHO), Air pollution and child health: Prescribing clean air, advance copy, 2018,
- 150 who.int/ceh/publications/Advance-copy-Oct24 18150 Air-Pollution-and-Child-Health-merged-
- 151 compressed.pdf?ua=1.

152 **Biodiversity**

- N. Butt, H. L. Beyer, et al., Biodiversity Risks from Fossil Fuel Extraction, Science, 2013,
- researchgate.net/publication/258044612 Biodiversity Risks from Fossil Fuel Extraction.
- Convention on Biological Diversity, Mainstreaming of Biodiversity into the Energy and Mining Sectors, 2018,
- 156 cbd.int/doc/c/278a/e222/7deeb28863d046c875885315/sbi-02-04-add3-en.pdf.
- 157 M. B. J. Harfoot, D. P. Tittensor, et al., Present and future biodiversity risks from fossil fuel exploitation,
- Conservation Letters, 2018, conbio.onlinelibrary.wiley.com/doi/full/10.1111/conl.12448.
- 159 Intergovernmental Panel on Climate Change (IPCC), Climate Change and Biodiversity, 2002,
- archive.ipcc.ch/pdf/technical-papers/climate-changes-biodiversity-en.pdf.
- 161 Intergovernmental Panel on Climate Change (IPCC), Climate Change and Land An IPCC Special Report on
- 162 climate change, desertification, land degradation, sustainable land management, food security, and greenhouse
- gas fluxes in terrestrial ecosystems: Summary for Policymakers, 2019, ipcc.ch/site/assets/uploads/2019/08/4.-
- 164 SPM Approved Microsite FINAL.pdf.
- 165 K. Leach, S. E. Brooks, and S. Blyth, Potential threat to areas of biodiversity importance from current and emerging oil
- and gas activities in Africa, 2016, unep-
- 167 wcmc.org/system/dataset_file_fields/files/000/000/394/original/African_threat_mapping_270716.pdf?147004614
- 168 0
- The Energy & Biodiversity Initiative (EBI), Integrating Biodiversity Conservation into Oil & Gas Development, 2003,
- portals.iucn.org/library/efiles/documents/2003-037.pdf.
- 171 Waste
- 172 Alberta Energy Regulator, Tailings, aer.ca/providing-information/by-topic/tailings.html, accessed on 31 May
- 173 2020.
- 174 Alberta Government, Lower Athabasca Region: Tailings Management Framework for the Mineable Athabasca Oil
- 175 Sands, 2015,



- 176 open.alberta.ca/dataset/962bc8f4-3924-46ce-baf8-d6b7a26467ae/resource/7c49eb63-751b-49fd-b746-
- 177 87d5edee3131/download/2015-larp-tailingsmgtathabascaoilsands.pdf.
- 178 P. D. Cameron and M. C. Stanley, Oil, Gas, and Mining: A Sourcebook for Understanding the Extractive Industries,
- 179 2017, documents.worldbank.org/curated/en/222451496911224999/pdf/115792-PUB-PUBLIC-PUBDATE-6-6-
- 180 17.pdf.
- 181 Canada's Oil Sands, Tailings Ponds, capp.ca/explore/tailings-ponds, accessed on 31 May 2020.
- 182 Circle Economy, The Circularity Gap Report, 2019,
- 183 assets.website-files.com/5e185aa4d27bcf348400ed82/5e26ead616b6d1d157ff4293 20200120%20-
- 184 %20CGR%20Global%20-%20Report%20web%20single%20page%20-%20210x297mm%20-%20compressed.pdf.
- 185 European Commission, Extractive Waste, ec.europa.eu/environment/waste/mining, accessed on 31 May 2020.
- 186 International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Crude Oil and Petroleum
- 187 Product Terminals, 2007, ifc.org/wps/wcm/connect/83036b30-f957-4e0e-a662-2df991dcdfa0/Final%2B-
- 188 %2BCrude%2BOil%2Band%2BPetroleum%2BProduct%2BTerminals.pdf?MOD=AJPERES&CVID=jqevC2Q&id=1
- 189 323162170625.
- 190 International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Gas Distribution Systems,
- 191 2007, ifc.org/wps/wcm/connect/88f41d8f-bd85-4535-a689-066d41b7ee29/Final%2B-
- 192 %2BGas%2BDistribution%2BSystems.pdf?MOD=AJPERES&CVID=jqezuZM&id=1323162128496.
- 193 International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Liquefied Natural Gas
- 194 Facilities, 2017, ifc.org/wps/wcm/connect/ab72db72-736a-43e7-8c81-f2d749ec3ad1/20170406-
- 195 FINAL+LNG+EHS+Guideline April+2017.pdf?MOD=AJPERES&CVID=IJuCgVs.
- 196 International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Mining, 2007,
- 197 ifc.org/wps/wcm/connect/595149ed-8bef-4241-8d7c-50e91d8e459d/Final%2B-
- 198 %2BMining.pdf?MOD=AIPERES&CVID=jqezAit&id=1323153264157.
- 199 International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Natural Gas Processing,
- 200 2017, ifc.org/wps/wcm/connect/ab72db72-736a-43e7-8c81-f2d749ec3ad1/20170406-
- 201 FINAL+LNG+EHS+Guideline April+2017.pdf?MOD=AJPERES&CVID=IJuCgVs.
- 202 International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Offshore Oil and Gas
- 203 Development, 2015, ifc.org/wps/wcm/connect/e2a72e1b-4427-4155-aa8f-
- 204 c660ce3f2cd5/FINAL_Jun+2015_Offshore+Oil+and+Gas_EHS+Guideline.pdf?MOD=AJPERES&CVID=kU7RMJ
- 205 6.
- 206 International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Onshore Oil and Gas
- Development, 2017, ifc.org/wps/wcm/connect/8eb48de5-748e-4d62-bcfe-
- 208 40814dee7f0f/Onshore+Oil+and+Gas+Development+EHS+Guideline+-
- 209 +clean+draft+revised+version.pdf?MOD=AJPERES&CVID=IIWn.4z.
- 210 International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Petroleum Refining, 2016,
- 211 ifc.org/wps/wcm/connect/bde2da1d-3a09-400b-be24-3f6a60353ddc/2016-
- 212 EHS+Guidelines+for+Petroleum+Refining+FINAL.pdf?MOD=AJPERES&CVID=lxPS7Bu.
- 213 International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Retail Petroleum
- 214 Networks, 2007, ifc.org/wps/wcm/connect/80003f2b-2c37-45ea-93c5-0bb6032d8f6f/Final%2B-
- 215 %2BRetail%2BPetroleum%2BNetworks.pdf?MOD=AJPERES&CVID=jqevKsA&id=1323152536731.
- 216 International Association of Oil and Gas Producers (IOGP), Drilling Waste Management Technology Review, 2016,
- 217 iogp.org/bookstore/product/drilling-waste-management-technology-review.
- 218 International Association of Oil and Gas Producers (IOGP), Environmental management in Arctic oil & gas
- operations: Good practice guide, 2013, iogp.org/bookstore/product/environmental-management-in-arctic-oil-gas-
- 220 operations-good-practice-guide.



- 221 UNEP Industry and Environment, Environmental management in oil and gas exploration and production: An overview
- of issues and management approaches, 1997, wedocs.unep.org/bitstream/handle/20.500.11822/8275/-
- 223 Environmental%20Management%20in%20Oil%20%26%20Gas%20Exploration%20%26%20Production-
- 224 19972123.pdf?sequence=2&isAllowed=y.
- Union of Concerned Scientists, 'The Hidden Cost of Fossil Fuels', 2008,
- ucsusa.org/resources/hidden-costs-fossil-fuels, accessed on 31 May 2020.
- 227 United Nations Development Programme (UNDP), Circular Economy Principles for NDCs and Long-term
- 228 Strategies, 2019,
- 229 ndcs.undp.org/content/dam/LECB/events/2019/20190625-circular-economy/undp-ndcsp-1.5Degree-circular-
- economy-I4C-2019-Workshop-Summary.pdf.
- United Nations Environment Programme (UNEP), Towards a Pollution-Free Planet, 2017,
- wedocs.unep.org/bitstream/handle/20.500.11822/21800/UNEA_towardspollution_long%20version_Web.pdf?se
- quence=I&isAllowed=y.

Water and effluents

- 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.
- 238 P. D. Cameron and M. C. Stanley, Oil, Gas, and Mining: A Sourcebook for Understanding the Extractive Industries,
- 239 2017, documents.worldbank.org/curated/en/222451496911224999/pdf/115792-PUB-PUBLIC-PUBDATE-6-6-
- 240 17.pdf.
- 241 International Energy Agency (IEA), Water Energy Nexus: Excerpt from the World Energy Outlook 2016, 2016,
- 242 bt-projects.com/wp-content/uploads/documents-public/Environment/IEA-2017-Water-Energy-Nexus.pdf.
- International Energy Agency (IEA), 'Water for Energy', World Energy Outlook 2012, chapter 17, 2012.
- webstore.iea.org/world-energy-outlook-2012-2.
- S. Osborn, A. Vengosh, et al., Methane contamination of drinking water accompanying gas-well drilling and hydraulic
- fracturing, Proceedings of the National Academy of Sciences, 2011, pnas.org/content/108/20/8172.
- 247 United Nations Conference on Trade and Development (UNCTAD), Commodities at a Glance: Special Issue on
- Shale Gas, 2017, unctad.org/en/PublicationsLibrary/suc2017d10_en.pdf.
- United Nations Environment Programme (UNEP), Towards a Pollution-Free Planet, 2017,
- 250 wedocs.unep.org/bitstream/handle/20.500.11822/21800/UNEA towardspollution long%20version Web.pdf?se
- 25 I quence=I&isAllowed=y.
- United States Environmental Protection Agency (US EPA), Hydraulic Fracturing for Oil and Gas: Impacts from the
- 253 Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States, 2016, epa.gov/hfstudy.
- 254 United States Environmental Protection Agency (US EPA), Profile of the Fossil Fuel Electric Power Generation
- 255 Industry, 1997,
- web.archive.org/web/20101223225135/http://www.epa.gov/compliance/resources/publications/assistance/sector
- 257 s/notebooks/fossilsn.pdf.
- 258 United States Environmental Protection Agency (US EPA), Study of Oil and Gas Extraction Wastewater
- 259 Management Under the Clean Water Act, EPA-821-R19-001, draft May 2019,
- epa.gov/sites/production/files/2019-05/documents/oil-and-gas-study draft 05-2019.pdf.
- 261 World Bank Group, Thirsty Energy (II): The Importance of Water for Oil and Gas Extraction, 2016,
- 262 openknowledge.worldbank.org/bitstream/handle/10986/23635/Thirsty0energy0l0and0gas0extraction.pdf?seque
- 263 nce=1.
- 264 Closure and decommissioning



- P. D. Cameron and M. C. Stanley, Oil, Gas, and Mining: A Sourcebook for Understanding the Extractive Industries,
- 266 2017, documents.worldbank.org/curated/en/222451496911224999/pdf/115792-PUB-PUBLIC-PUBDATE-6-6-
- 267 17.pdf.
- 268 Environmental Protection Authority (EPA), Environmental Factor Guideline: Benthic Communities and Habitats,
- 269 2016, epa.wa.gov.au/sites/default/files/Policies and Guidance/Guideline-Benthic-Communities-Habitats-
- 270 131216_2.pdf.
- 271 IPIECA, Oil and gas industry guidance on voluntary sustainability reporting, 3rd ed., 2015,
- 272 ipieca.org/media/2849/og industry guidance on voluntary sustainability reportnig 3rd ed 2016.pdf.
- 273 UNEP Industry and Environment, Environmental management in oil and gas exploration and production: An overview
- of issues and management approaches, 1997, wedocs.unep.org/bitstream/handle/20.500.11822/8275/-
- 275 Environmental%20Management%20in%20Oil%20%26%20Gas%20Exploration%20%26%20Production-
- 276 19972123.pdf?sequence=2&isAllowed=y.
- United Nations, Guidance Note on the Tax Treatment of Decommissioning for the Extractive Industries, 2016,
- 278 un.org/esa/ffd/wp-content/uploads/2016/10/12STM_CRP3_AttachmentA_Decommissioning.pdf.
- World Bank, Towards Sustainable Decommissioning and Closure of Oil Fields and Mines: A Toolkit to Assist
- 280 Government Agencies, 2010, siteresources.worldbank.org/EXTOGMC/Resources/336929-
- 281 1258667423902/decommission toolkit3 full.pdf

282 Asset integrity and process safety

- 283 American Petroleum Institute (API), American Petroleum Institute Guide to Reporting Process Safety Events Version
- 3.1, api.org/~/media/Files/Oil-and-Natural-Gas/Refining/Process%20Safety/API_Guide_to_Report_PSEs.pdf.
- 285 Australian National University (ANU) and Investor Group on Climate Change (IGCC), Assessing Climate
- 286 Change Risks and Opportunities, Oil and Gas Sector, igcc.org.au/wp-content/uploads/2016/04/Oil-and-Gas.pdf.
- 287 M. Christou and M. Konstantinidou, Safety of offshore oil and gas operations: Lessons from past accident analysis,
- 288 2012, publications.jrc.ec.europa.eu/repository/bitstream/JRC77767/offshore-accident-analysis-draft-final-report-
- dec-2012-rev6-online.pdf.
- 290 Environmental Defense Fund (EDF), Why are natural gas leaks a problem?, edf.org/climate/methanemaps/leaks-
- 291 problem, accessed on 31 May 2020.
- 292 International Association of Oil and Gas Producers (IOGP), Process safety: Recommended practice on Key
- 293 Performance Indicators, 2018, iogp.org/bookstore/checkout/order-
- received/113880/?key=wc_order_iCl59yFYt5dHZ.
- 295 IPIECA, Oil and gas industry guidance on voluntary sustainability reporting, 3rd ed., 2015,
- ipieca.org/media/2849/og industry guidance on voluntary sustainability reporting 3rd ed 2016.pdf.
- 297 Pipeline and Hazardous Materials Safety Administration (PHMSA), Pipeline Incident 20 Year Trends,
- phmsa.dot.gov/data-and-statistics/pipeline/pipeline-incident-20-year-trends, accessed on 31 May 2020.
- 299 R. Sullivan, D. Russell, et al., Managing the Unavoidable: investment implications of a changing climate, 2009,
- acclimatise.uk.com/wp-content/uploads/2018/01/Managing_the_Unavoidable_FINAL_Nov2009.pdf.
- 301 UNEP Industry and Environment, Environmental management in oil and gas exploration and production: An overview
- of issues and management approaches, 1997,
- 303 wedocs.unep.org/bitstream/handle/20.500.11822/8275/-
- 304 Environmental%20Management%20in%20Oil%20%26%20Gas%20Exploration%20%26%20Production-
- 305 19972123.pdf?sequence=2&isAllowed=y.
- 306 United States Environmental Protection Agency (US EPA), Oil and Natural Gas Sector Leaks, 2014,
- 307 ourenergypolicy.org/wp-content/uploads/2014/04/epa-leaks.pdf.
- 308 T. Williams, Pipelines: Environmental Considerations, Ottawa, Canada, Library of Parliament, 2012,
- 309 lop.parl.ca/staticfiles/PublicWebsite/Home/ResearchPublications/InBriefs/PDF/2012-37-e.pdf.



310 Occupational health and safety

- 311 Canadian Centre for Occupational Health and Safety (CCOHS), Cold Environments: Working in the Cold,
- 312 ccohs.ca/oshanswers/phys_agents/cold_working.html, accessed on 31 May 2020.
- Health and Safety Executive (HSE), Biological hazards, hse.gov.uk/offshore/biological-hazards.htm, accessed on
- 314 31 May 2020.
- Health and Safety Executive (HSE), Heat stress, hse.gov.uk/temperature/heatstress, accessed on 31 May 2020.
- 316 International Association of Oil and Gas Producers (IOGP), Safety performance indicators 2018 data Fatal
- 317 incident reports, 2018, iogp.org/bookstore/product/safety-performance-indicators-2018-data-fatal-incident-
- 318 reports.
- 319 International Labour Organization (ILO), Current and future skills, human resources development and safety training
- for contractors in the oil and gas industry, 2012, ilo.org/wcmsp5/groups/public/---ed_dialogue/---
- 321 sector/documents/meetingdocument/wcms 190707.pdf.
- International Labour Organization (ILO), Oil and gas production and oil refining sector,
- 323 ilo.org/global/industries-and-sectors/oil-and-gas-production-oil-refining/lang--en/index.htm, accessed on 31 May
- 324 2020.
- International Labour Organization (ILO), Social dialogue and industrial relations issues in the oil industry, 2009,
- 326 ilo.org/wcmsp5/groups/public/---ed dialogue/---sector/documents/meetingdocument/wcms 161662.pdf.
- 327 International Labour Organization (ILO), Working Paper No. 276: Working conditions of contract workers in the oil
- and gas industries, 2010, ilo.org/wcmsp5/groups/public/---ed_dialogue/---
- 329 sector/documents/publication/wcms 161194.pdf.
- 330 International Labour Organization (ILO), Working towards sustainable development: Opportunities for decent work
- and social inclusion in a green economy, 2012, ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---
- publ/documents/publication/wcms_181836.pdf.
- 333 IPIECA, Human Rights Training Tool, 3rd ed., 2014, ipieca.org/resources/good-practice/human-rights-training-
- 334 tool-3rd-edition.
- 335 IPIECA and International Association of Oil and Gas Producers (IOGP), Managing psychosocial risks on
- expatriation in the oil and gas industry, 2013, ipieca.org/resources/good-practice/managing-psychosocial-risks-on-
- 337 expatriation-in-the-oil-and-gas-industry.
- 338 IPIECA, Oil and gas industry guidance on voluntary sustainability reporting, 3rd ed., 2015,
- ipieca.org/media/2849/og_industry_guidance_on_voluntary_sustainability_reportnig_3rd_ed_2016.pdf.
- 340 Occupational Safety and Health Administration (OSHA), Health and Safety Risks for Workers Involved in Manual
- Tank Gauging and Sampling at Oil and Gas Extraction Sites, 2016, osha.gov/Publications/OSHA3843.pdf.
- 342 Occupational Safety and Health Administration (OSHA) US Department of Labor, Silica, Crystalline: Health
- 343 Effects, osha.gov/dsg/topics/silicacrystalline/health_effects_silica.html, accessed on 31 May 2020.
- Occupational Safety and Health Administration (OSHA) US Department of Labor, Hydrogen Sulfide: Hazards,
- osha.gov/SLTC/hydrogensulfide/hazards.html, accessed on 31 May 2020.
- 346 The Advocates for Human Rights, Promoting Gender Diversity and Inclusion in the Oil, Gas and Mining Extractive
- 347 Industries: A Women's Human Rights Report, 2019,
- 348 unece.org/fileadmin/DAM/energy/images/CMM/CMM CE/AHR gender diversity report FINAL.pdf.
- Wipro, Safety and Health Management in Oil and Gas Industry, wipro.com/oil-and-gas/safety-and-health-
- 350 management-system-in-oil-and-gas-industry, accessed on 31 May 2020.
- World Health Organization (WHO), Preventing Disease Through Healthy Environments: Exposure to Benzene A
- 352 Major Public Health Concern, 2010, who.int/ipcs/features/benzene.pdf.



353

- World Nuclear Association, Naturally-Occurring Radioactive Materials, 2019, world-nuclear.org/information-
- 355 library/safety-and-security/radiation-and-health/naturally-occurring-radioactive-materials-norm.aspx, accessed
- 356 on 31 May 2020.

357 Employment practices

- 358 C. Forde, R. MacKenzie, et al., Good industrial relations in the oil industry in the United Kingdom, 2005,
- ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/publication/wcms_161188.pdf.
- 360 C. Hidalgo, K. Peterson, et al, Extracting with Purpose: Creating Shared Value in the Oil and Gas and Mining Sectors'
- 361 Companies and Communities, 2015, fsg.org/publications/extracting-purpose.
- 362 International Finance Corporation (IFC), IPIECA, and United Nations Development Programme (UNDSP),
- Mapping the oil and gas industry to the Sustainable Development Goals: An Atlas, 2017,
- 364 undp.org/content/undp/en/home/librarypage/poverty-reduction/mapping-the-oil-and-gas-industry-to-the-sdgs--
- 365 an-atlas.html.
- Institute for Human Rights and Business (IHRB) and Shift, Oil and Gas Sector Guide on Implementing the UN
- 367 Guiding Principles on Business and Human Rights, 2017, ihrb.org/pdf/eu-sector-guidance/EC-Guides/O&G/EC-
- 368 Guide_O&G.pdf.
- 369 International Labour Organization (ILO), Mining (coal; other mining) sector, ilo.org/global/industries-and-
- 370 sectors/mining/lang--en/index.htm, accessed on 31 May 2020.
- 371 International Labour Organization (ILO), Social dialogue and industrial relations issues in the oil industry: Report for
- 372 discussion at the Tripartite Meeting on Promoting Social Dialogue and Good Industrial Relations from Oil and Gas
- Exploration and Production to Oil and Gas Distribution, 2009, ilo.org/wcmsp5/groups/public/---ed_dialogue/---
- 374 sector/documents/meetingdocument/wcms_161662.pdf.
- Industria All Global Union, 'Nigerian oil and gas unions fight against precarious work', 2017, industriall-
- union.org/nigerian-oil-and-gas-unions-fight-against-precarious-work, accessed on 31 May 2020.
- IndiustriAll Global Union, 'Norwegian oil company DNO targeted by unions', 2017, industriall-
- union.org/norwegian-oil-company-dno-targeted-by-unions, accessed on 31 May 2020.
- IndustriAll Global Union, 'Shell's hidden shame: Contract workers on the poverty line in Nigeria', 2018,
- 380 accessed on 31 May 2020.
- 381 Industri Energi, 'The strike is necessary to level out differences in the oil industry', 2016,
- industrienergi.no/nyhet/the-strike-is-necessary-to-level-out-differences-in-the-oil-industry, accessed on 31 May
- 383 2020.

394

- 384 Organisation for Economic Co-operation and Development (OECD), Due Diligence Guidance for Meaningful
- 385 Stakeholder Engagement in the Extractives Sector, 2015, oecd-ilibrary.org/docserver/9789264252462-
- 386 en.pdf?expires=1582289252&id=id&accname=guest&checksum=2CBB833A4481670870D12EEB71007A32.
- 387 F. Todd, 'What are the pros and cons of automation in the oil and gas industry?', 2019,
- 388 nsenergybusiness.com/features/oil-and-gas-automation, accessed on 31 May 2020.
- 389 S. Tordo, M. Warner, et al., Local Content Policies in the Oil and Gas Sector, 2013,
- 390 documents.worldbank.org/curated/en/549241468326687019/pdf/Local-content-in-the-oil-and-gas-sector.pdf.
- United Steelworkers, 'National Oil Bargaining Talks Break Down: USW Calls for Work Stoppage at Nine Oil
- Refineries, Plants', 2015, usw.org/news/media-center/releases/2015/national-oil-bargaining-talks-break-down-
- usw-calls-for-work-stoppage-at-nine-oil-refineries-plants, accessed on 31 May 2020.

Forced labor and modern slavery

- 395 EarthRights International, Total Impact: The Human Rights, Environmental, and Financial Impacts of Total and
- 396 Chevron's Yadana Gas Project in Military-Ruled Burma (Myanmar), 2009, earthrights.org/wp-
- 397 content/uploads/publications/total-impact.pdf.



- 398 Global Slavery Index, 'Global Findings', Global Slavery Index 2018, chapter 3,
- 399 globalslaveryindex.org/resources/downloads.
- 400 GRI, Responsible Labor Initiative, Advancing modern slavery reporting to meet stakeholder expectations, 2019,
- 401 globalreporting.org/resourcelibrary/RLI-GRI_Advancing-Modern-Slavery-Reporting-to-Meet-Stakeholder-
- 402 Expectations.pdf.
- 403 Fédération Internationale pour les Droits Humains (FIDH), Info Birmanie, La Ligue Des Droits de l'Homme et La
- 404 FIDH Dénoncent l'accord Intervenu Entre Total et Sherpa, 2005, fidh.org/fr/regions/asie/birmanie/Total-en-
- 405 Birmanie/Info-Birmanie-la-Ligue-des-droits.
- 406 International Labour Organization (ILO), Labour Migration in the Arab States,
- 407 ilo.org/beirut/areasofwork/labour-migration/WCMS_514910/lang--en/index.htm, accessed on 31 May 2020.
- 408 International Labour Organization (ILO) and Walk Free Foundation, Global estimates of modern slavery: forced
- 409 labour and forced marriage, 2017, ilo.org/wcmsp5/groups/public/---dgreports/---
- 410 dcomm/documents/publication/wcms 575479.pdf.
- 411 International Transport Workers' Federation (ITF), 'ITF and Malaviya Seven crew dismayed by delay', 2017,
- 412 itfglobal.org/en/news/itf-and-malaviya-seven-crew-dismayed-delay, accessed on 31 May 2020.
- National Union of Rail, Maritime and Transport Workers (RMT), 'Modern day slavery charge made by RMT',
- 414 2016, rmt.org.uk/news/modern-day-slavery-charge-made-by-rmt, accessed on 31 May 2020.
- 415 UNICEF, Oil and Gas Scoping Paper, 2015, unicef.org/csr/files/Oil and Gas Scoping Paper 19012015.pdf.

416 Diversity and non-discrimination

- 417 A. Alook, I. Hussey, and N. Hill, 'How gender and race shape experiences of work in Alberta's oil industry',
- 418 2017, parklandinstitute.ca/how gender and race shape experiences of work in albertas oil industry,
- 419 accessed on 31 May 2020.
- Business & Human Rights Resource Centre (BHRRC), 'Azerbaijan: Abuses by oil companies include workplace
- 421 discrimination, illegal termination of contracts, health & safety violations, sexual harassment, environmental
- 422 pollution, say NGO reports; includes company comments', 2018, business-humanrights.org/en/azerbaijan-
- 423 abuses-by-oil-companies-include-workplace-discrimination-illegal-termination-of-contracts-health-safety-
- violations-sexual-harassment-environmental-pollution-say-ngo, accessed on 31 May 2020.
- 425 Digby Brown Solicitors, Oil and Gas contract restrictions removed after discrimination employment advice,
- digbybrown.co.uk/clients-we-have-helped/oil-and-gas-contract-restrictions-removed-after-discrimination-
- 427 employment, accessed on 31 May 2020.
- 428 International Labour Organization (ILO), Current and future skills, human resources development and safety training
- for contractors in the oil and gas industry, 2012, ilo.org/wcmsp5/groups/public/---ed dialogue/---
- 430 sector/documents/meetingdocument/wcms 190707.pdf.
- 431 International Labour Organization (ILO), Social dialogue and industrial relations issues in the oil industry, 2009,
- 432 ilo.org/wcmsp5/groups/public/---ed dialogue/---sector/documents/meetingdocument/wcms 161662.pdf.
- 433 Institute for Human Rights and Business (IHRB) and Shift, Oil and Gas Sector Guide on Implementing the UN
- 434 Guiding Principles on Business and Human Rights, 2017, ihrb.org/pdf/eu-sector-guidance/EC-Guides/O&G/EC-
- 435 Guide_O&G.pdf.
- 436 Iraqi Center for Policy Analysis & Research (ICPAR), Institutional Discrimination in Iraq's Oil and Gas Sector,
- 437 iraqcr.com/details.aspx?=hewal&jmare=2072&Jor=1&Jor2=15, accessed on 31 May 2020.
- 438 J. Soper, 'Ghanaian Workers Fight Pay Discrimination', 2015, pulitzercenter.org/reporting/ghanaian-workers-
- fight-pay-discrimination, accessed on 31 May 2020.
- The Advocates for Human Rights, Promoting Gender Diversity and Inclusion in the Oil, Gas and Mining Extractive
- 441 Industries: A Women's Human Rights Report, 2019,
- unece.org/fileadmin/DAM/energy/images/CMM/CMM_CE/AHR_gender_diversity_report_FINAL.pdf.



- The Boston Consulting Group (BCG) and World Petroleum Council, Untapped Reserves: Promoting Gender
- 444 Balance in Oil and Gas, 2017, world-petroleum.org/docs/docs/Gender/WPC_BCG-Untapped-Reserves-July-
- 445 2017.pdf.
- 446 United Nations Environment Programme Financial Initiative (UNEP FI), Human Rights Guidance Tool for the
- 447 Financial Sector, Mining and Metals, unepfi.org/humanrightstoolkit/mining.php, accessed on 31 May 2020.

448 Freedom of association and collective bargaining

- M. Carpenter, 'Restrictions on freedom of association potential powder keg for oil companies', 2017,
- 450 maplecroft.com/insights/analysis/restrictions-on-freedom-of-association-potential-powder-keg-for-oil-
- 451 companies, accessed on 31 May 2020.
- 452 I. Graham, International Labour Organization (ILO), Working conditions of contract workers in the oil and gas
- 453 industries, 2010, ilo.org/wcmsp5/groups/public/---ed_dialogue/---
- 454 sector/documents/publication/wcms 161194.pdf.
- 455 IndustriAll, 'Nigerian oil and gas unions fight against precarious work', 2017, industriall-union.org/nigerian-oil-
- and-gas-unions-fight-against-precarious-work, accessed on 31 May 2020.
- 457 International Labour Organization (ILO), 386th Report of the Committee on Freedom of Association, 2018,
- 458 ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_631904.pdf.
- 459 International Trade Union Confederation (ITUC), 2016 ITUC Global Rights Index: The World's Worst Countries for
- Workers, 2016, ituc-csi.org/IMG/pdf/survey ra 2016 eng.pdf.
- 461 International Trade Union Confederation (ITUC), Saudi Arabia bans trade unions and violates all international
- 462 labour standards, 2012, ituc-csi.org/saudi-arabia-bans-trade-unions-and, accessed on 31 May 2020.
- 463 United States Central Intelligence Agency, Country comparison: Crude oil: Exports, 2015,
- 464 cia.gov/library/publications/resources/the-world-factbook/fields/262rank.html, accessed on 31 May 2020.

465 **Economic impacts**

- 466 Bill & Melinda Gates Foundation, Paper 7: Leveraging extractive industries for skills development to maximize
- sustainable growth and employment, 2015,
- 468 afdb.org/fileadmin/uploads/afdb/Documents/Publications/Leveraging extractive industries for skills developm
- ent to maximize sustainable growth and employment.pdf.
- 470 Extractive Industries Transparency Initiative (EITI), Social and economic spending: The impact of the extractive
- 471 industries on economic growth and social development, eiti.org/social-economic-spending, accessed on 31 May
- 472 2020.
- 473 IPIECA, Local content: A guidance document for the oil and gas industry, 2nd ed., 2016, ipieca.org/resources/good-
- 474 practice/local-content-a-guidance-document-for-the-oil-and-gas-industry-2nd-edition.
- J.-F. Mercure, H. Pollitt, et al., 'Macroeconomic impacts of stranded fossil fuels assets', Nature Climate Change,
- 476 vol. 8, pp. 588-593, 2018, nature.com/articles/s41558-018-0182-1, accessed on 31 May 2020.
- 477 Organisation for Economic Co-operation and Development (OECD), OECD Principles for Private Sector
- 478 Participation in Infrastructure; 2007, oecd.org/daf/inv/investment-policy/38309896.pdf, p. 9.
- 479 C. Sigam and L. Garcia, Extractive industries: Optimizing the value retention in host countries, 2012,
- 480 unctad.org/en/PublicationsLibrary/suc2012d1_en.pdf.
- 481 K. Storey, 'Fly-in/Fly-out: Implications for Community Sustainability', Sustainability, vol. 2, pp. 1161-1181, 2010,
- 482 pdfs.semanticscholar.org/2fcf/9f3e837d5593f57b1c3ed523618e02e343fd.pdf.
- 483 United Nations Office for Disaster Risk Reduction (UNISDR), Words into Action Guidelines: National Disaster Risk
- 484 Assessment, Special Topics, D. Direct and Indirect Economic Impact, 2017,
- preventionweb.net/files/52828 deconomicimpact%5b1%5d.pdf.

486 Local community impacts



- 487 Cordaid, Informing Local Communities, Civil Society and Local Government about Oil & Gas: A Practical Guide on
- 488 Technical Aspects, 2016, commdev.org/pdf/publications/P_2016-Oil-Gas-Practical-Guidebook-on-Technical-
- 489 Aspects-2.pdf.
- 490 Cordaid, When Oil, Gas or Mining Arrives in Your Area: Practical Guide for Communities, Civil Society and Local
- 491 Government on the Social Aspects of Oil, Gas and Mining, 2016, cordaid.org/en/wp-
- 492 content/uploads/sites/11/2016/10/161017-Cordaid-Social-Aspects-Guide-final.pdf.
- 493 Institute for Human Rights and Business (IHRB) and Shift, Oil and Gas Sector Guide on Implementing the UN
- 494 Guiding Principles on Business and Human Rights, 2017, https://www.ihrb.org/pdf/eu-sector-guidance/EC-
- 495 Guides/O&G/EC-Guide O&G.pdf.
- 496 International Finance Corporation (IFC), Unlocking Opportunities for Women and Business: A Toolkit of
- 497 Actions and Strategies for Oil, Gas, and Mining Companies, 2018,
- 498 ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/gender+at+ifc/resources/unlocking-
- 499 opportunities-for-women-and-business, accessed on 31 May 2020.
- International Finance Corporation (IFC), IPIECA, and United Nations Development Programme (UNDP),
- Mapping the oil and gas industry to the Sustainable Development Goals: An Atlas, 2017,
- 502 undp.org/content/undp/en/home/librarypage/poverty-reduction/mapping-the-oil-and-gas-industry-to-the-sdgs--
- an-atlas.html.
- Oil and Gas Accountability Project (OGAP), Oil and Gas At Your Door? A Landowner's Guide to Oil and Gas
- Development, 2nd ed., 2005,
- 506 earthworks.org/cms/assets/uploads/archive/files/publications/LOguide2005book.pdf.
- 507 Organisation for Economic Co-operation and Development (OECD), Due Diligence Guidance for Meaningful
- 508 Stakeholder Engagement in the Extractives Sector, 2015, oecd-ilibrary.org/docserver/9789264252462-
- 509 en.pdf?expires=1582289252&id=id&accname=guest&checksum=2CBB833A4481670870D12EEB71007A32.UN
- 510 EP Industry and Environment, Environmental management in oil and gas exploration and production: An overview of
- 511 issues and management approaches, 1997, wedocs.unep.org/bitstream/handle/20.500.11822/8275/-
- 512 Environmental%20Management%20in%20Oil%20%26%20Gas%20Exploration%20%26%20Production-
- 513 19972123.pdf?sequence=2&isAllowed=y.
- 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 31 May 2020.
- 516 Land use and resettlement
- 517 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-
- 519 content/uploads/2014/09/ASF UG ExtractiveSectorHRImplications.pdf.
- 520 P. D. Cameron and M. C. Stanley, Oil, Gas, and Mining: A Sourcebook for Understanding the Extractive Industries,
- 521 2017, documents.worldbank.org/curated/en/222451496911224999/pdf/115792-PUB-PUBLIC-PUBDATE-6-6-
- 522 17.pdf.
- Daily Monitor, 'Are oil activities hurting Bunyoro heritage?', 2019, monitor.co.ug/News/National/oil-activities-
- 524 Bunyoro-heritage-Kasande-Buliisa-Byakutaga/688334-5181142-d67547/index.html, accessed on 1 June 2020.
- 525 European Union and UN Interagency Framework Team for Preventive Action, Toolkit and Guidance for
- 526 Preventing and Managing Land and Natural Resources Conflict: Land and Conflict, 2012, un.org/en/land-natural-
- resources-conflict/pdfs/GN Land%20and%20Conflict.pdf.
- 528 GRI, Land Tenure Rights: The need for greater transparency among companies worldwide, 2016,
- 529 globalreporting.org/Documents/ResourceArchives/GRI-G4-Land-Tenure-Rights.pdf.
- Institute for Human Rights and Business (IHRB) and Shift, Oil and Gas Sector Guide on Implementing the UN
- Guiding Principles on Business and Human Rights, 2017,.ihrb.org/pdf/eu-sector-guidance/EC-Guides/O&G/EC-
- 532 Guide_O&G.pdf.



- 533
- 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, ipbes.net/sites/default/files/ipbes_7_10_add.1_en_1.pdf?file=1&id=35329&type=node.
- International Council on Mining & Metals (ICMM), Land Acquisition and Resettlement, 2015,
- icmm.com/website/publications/pdfs/social-and-economic-development/9714.pdf.
- 539 IPIECA and International Association of Oil & Gas Producers (IOGP), Key questions in managing social issues in
- oil & gas projects, 2002, iogp.org/bookstore/product/key-questions-in-managing-social-issues-in-oil-gas-projects.
- 541 Organisation for Economic Co-operation and Development (OECD), Due Diligence Guidance for Meaningful
- 542 Stakeholder Engagement in the Extractives Sector, 2015, oecd-ilibrary.org/docserver/9789264252462-
- 543 en.pdf?expires=1582289252&id=id&accname=guest&checksum=2CBB833A4481670870D12EEB71007A32.
- 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 1 June 2020.
- 547 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 31 May 2020.
- 549 United Nations Human Rights Office of the High Commissioner website, Land and Human Rights,
- ohchr.org/EN/Issues/LandAndHR/Pages/LandandHumanRightsIndex.aspx, accessed on 31 May 2020.
- 551 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:
- 553 10.1080/14615517.2017.1278671.

Rights of indigenous peoples

- 555 A. Alook, I. Hussey, and N. Hill, Indigenous gendered experiences of work in an oil-dependent, rural Alberta
- 556 *community*, 2019,

554

- assets.nationbuilder.com/parklandinstitute/pages/1681/attachments/original/1550688239/indigenousexperiences
- 558 .pdf?1550688239.
- 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 31 May 2020.
- 562 Amnesty International, Out of sight, out of mind: Gender, indigenous rights, and energy development, 2016,
- amnesty.ca/sites/amnesty/files/Out%20of%20Sight%20Out%20of%20Mind%20EN%20FINAL%20web.pdf.
- A. Anongos, D. Berezhkov, et al., Pitfalls and pipelines: Indigenous peoples and extractive industries, 2012,
- iwgia.org/images/publications/0596_Pitfalls_and_Pipelines_-
- __Indigenous_Peoples_and_Extractive_Industries.pdf.
- J. Burger, Indigenous peoples, extractive industries and human rights, 2014,
- 568 europarl.europa.eu/RegData/etudes/STUD/2014/534980/EXPO STU(2014)534980 EN.pdf.
- 569 European Parliament, Committee on Foreign Affairs, Report on Violation of the Rights of Indigenous Peoples in the
- World, Including Land Grabbing, 2018, europarl.europa.eu/doceo/document/A-8-2018-0194 EN.html, accessed
- 571 31 May 2020.
- 572 G. Gibson, K. Yung, et al. with Lake Babine Nation and Nak'azdii Whut'en, Indigenous communities and industrial
- 573 camps: Promoting healthy communities in settings of industrial change, 2017, firelight.ca/wp-
- 574 content/uploads/2016/03/Firelight-work-camps-Feb-8-2017_FINAL.pdf.
- 575 Global Witness, Defenders of the earth: Global killings of land and environmental defenders in 2016, 2017,
- 576 globalwitness.org/en/campaigns/environmental-activists/defenders-earth.



- 577 K. Herbertson, 'Momentum Builds for Gaining the Consent of Indigenous Peoples', 2010,
- 578 wri.org/blog/2010/05/momentum-builds-gaining-consent-indigenous-peoples, accessed on 31 May 2020.
- 579 Indigenous Environmental Network, 'Native Leaders Bring Attention to Impact of Fossil Fuel Industry on
- Missing and Murdered Indigenous Women and Girls', 2018, ienearth.org/native-leaders-bring-attention-to-
- 581 impact-of-fossil-fuel-industry-on-missing-and-murdered-indigenous-women-and-girls, accessed on 31 May 2020.
- International Finance Corporation (IFC), Projects and People: A Handbook for Addressing Project Induced In-
- 583 Migration, 2009, ifc.org/wps/wcm/connect/topics ext content/ifc external corporate site/sustainability-at-
- ifc/publications/publications handbook inmigration.
- International Labour Organization (ILO), Observation (CEACR) adopted 2018, published 108th ILC session
- 586 (2019) Indigenous and Tribal Peoples Convention, 1989 (No. 169) Venezuela, Bolivarian Republic of (Ratification:
- 587 2002), 2019,
- ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:13100:0::NO::P13100 COMMENT ID,P11110 COUNTRY ID,P1
- 589 III0_COUNTRY_NAME,PIIII0_COMMENT_YEAR:3962283,102880,Venezuela,%20Bolivarian%20Republic
- 590 %20of,2018.
- 591 B. McIvor, First Peoples Law: Essays in Canadian Law and Decolonization, 2018, firstpeopleslaw.com/public-
- education/publications.php.
- T. Perreault, Natural Gas, Indigenous Mobilization and the Bolivian State, 2008,
- 594 unrisd.org/80256B3C005BCCF9/httpNetlTFramePDF?ReadForm&parentunid=D96F71885FB60F74C12575120
- 595 02F471E&parentdoctype=paper&netitpath=80256B3C005BCCF9/(httpAuxPages)/D96F71885FB60F74C125751
- 596 2002F471E/\$file/Perr-paper.pdf.
- 597 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
- 599 group meeting, 2012, undocs.org/E/C.19/2012/6.
- 600 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,
- un.org/development/desa/indigenouspeoples/meetings-and-workshops/7136-2.html.
- United Nations Department of Economic and Social Affairs (UN DESA), Indigenous Peoples, Climate Change,
- un.org/development/desa/indigenouspeoples/climate-change.html, accessed on 1 June 2020.
- United Nations Human Rights Council (HRC), Report of the Special Rapporteur on the rights of indigenous peoples,
- lames Anaya Extractive industries and indigenous peoples, 2013,
- 607 ohchr.org/EN/HRBodies/HRC/RegularSessions/Session24/Documents/A-HRC-24-41 en.pdf.
- 608 Conflict and security
- 609 European Union and UN Interagency Framework Team for Preventive Action, Toolkit and Guidance for
- 610 Preventing and Managing Land and Natural Resources Conflict: Extractive Industries and Conflict, 2012,
- 611 un.org/en/land-natural-resources-conflict/pdfs/GN Extractive.pdf.
- 612 Institute for Human Rights and Business (IHRB), From Red to Green Flags: The Corporate Responsibility to Respect
- Human Rights in High-Risk Countries, 2011, ihrb.org/uploads/reports/complete_report.pdf.
- 614 IPIECA, Guide to Operating in Areas of Conflict, 2008, ipieca.org/resources/good-practice/guide-to-operating-in-
- 615 areas-of-conflict-for-the-oil-and-gas-industry.
- 616 K. Neu, and D., Avant, Overview of the relationship between PMSCs and extractive industry companies from
- 617 the Private Security Events Database, 2019,
- 618 ohchr.org/Documents/Issues/Mercenaries/WG/PrivateMilitarySecurity/DenverUni.pdf.
- Office of the High Commissioner for Human Rights (OHCR), Basic Principles on the Use of Force and Firearms by
- 620 Law Enforcement Officials, 1990, ohchr.org/Documents/ProfessionalInterest/firearms.pdf.
- 621 Office of the High Commissioner for Human Rights (OHCHR), 'Call for submissions: the relationship between
- 622 private military and security companies and extractive industry companies from a human rights perspective in



- 623 law and practice',
- 624 ohchr.org/EN/Issues/Mercenaries/WGMercenaries/Pages/CallforsubmissionesPrivateMilitarySecurity.aspx,
- 625 accessed on 31 May 2020.
- Office of the High Commissioner for Human Rights (OHCR), Code of Conduct for Law Enforcement Officials,
- 627 1979, ohchr.org/Documents/ProfessionalInterest/codeofconduct.pdf.
- 628 Office of the High Commissioner for Human Rights (OHCR), Private military and security companies in extractive
- industries impact on human rights, 2017,
- 630 ohchr.org/Documents/Issues/Mercenaries/WG/ConceptNoteExpertConsultationPMSC20July0217.pdf.
- United Nations Environmental Programme (UNEP), From Conflict to Peacebuilding: The Role of Natural Resources
- and the Environment, 2009, postconflict.unep.ch/publications/pcdmb_policy_01.pdf.
- United Nations Environment Programme Financial Initiative (UNEP FI), Human Rights Guidance Tool for the
- 634 Financial Sector, Oil and Gas, unepfi.org/humanrightstoolkit/oil.php, accessed on 31 May 2020.
- Voluntary Principles on Security and Human Rights, The Voluntary Principles on Security and Human Rights, 2000,
- docs.wixstatic.com/ugd/f623ce 808340b074b041e8b5ec7d441f768012.pdf.

637 Anti-competitive behavior

- European Commission, Case AT.39816: Upstream Gas Supplies in Central and Eastern Europe, 2018,
- 639 ec.europa.eu/competition/antitrust/cases/dec docs/39816/39816 10148 3.pdf.
- 640 European Commission, The economic impact of enforcement of competition policies on the functioning of EU energy
- markets: Non-technical Summary and Technical report, 2016,
- ec.europa.eu/competition/publications/reports/kd0216007enn.pdf.
- Extractive Industries Transparency Initiative (EITI), Discussion paper: The EITI's Role in Fighting Corruption, 2019,
- eiti.org/files/documents/eiti_global_conference_discussion_paper_-_eitis_role_in_fighting_corruption_l.pdf.
- 645 International Trade Center (ITC), Combating Anti-Competitive Practices: A Guide for Developing Economy Exporters,
- 646 2012, intracen.org/Combating-Anti-Competitive-Practices.
- Organisation for Economic Co-operation and Development (OECD), Cartels and anti-competitive agreements,
- oecd.org/competition/cartels, accessed on 31 May 2020.
- Organisation for Economic Co-operation and Development (OECD), Competition in Road Fuel, 2013,
- oecd.org/competition/CompetitionInRoadFuel.pdf, accessed on 31 May 2020.
- 651 United Nations Conference on Trade and Development (UNCTAD), The role of competition policy in promoting
- sustainable and inclusive growth, 2015, unctad.org/meetings/en/SessionalDocuments/tdrbpconf8d6_en.pdf.
- 653 H. Qaqaya and G. Lipimile, eds., The effects of anti-competitive business practices on developing countries and their
- development prospects, 2008, unctad.org/en/Docs/ditcclp20082_en.pdf.
- Vinsion & Elkins, 2018 Energy and Chemicals Antitrust Report, 2019, velaw.com/insights/2018-energy-and-
- 656 chemicals-antitrust-report.

657 Anti-corruption

- 658 Ernst & Young (EY), Managing bribery and corruption risks in the oil and gas industry, 2014,
- 659 ey.com/Publication/vwLUAssets/EY-Managing-bribery-and-corruption-risk-in-the-oil-and-gas-industry/\$FILE/EY-
- Managing-bribery-and-corruption-risk-in-the-oil-and-gas-industry.pdf.
- 662 FATF, FATF guidance: Politically exposed persons (recommendations 12 and 22), 2013, fatf-
- gafi.org/media/fatf/documents/recommendations/Guidance-PEP-Rec12-22.pdf.
- 664 Global Witness, 'Shell knew: Emails show senior executives at UK's biggest company knew it was party to a
- vast bribery scheme', 2017, globalwitness.org/en/campaigns/oil-gas-and-mining/shell-knew, accessed on 31 May
- 666 2020.

661



- M. Martini and Transparency International, Local content policies and corruption in the oil and gas industry, 2014,
- transparency.org/files/content/corruptiongas/2014-15.pdf.
- Organisation for Economic Co-operation and Development (OECD), Convention on Combating Bribery of Foreign
- Public Officials in International Business Transactions and Related Documents, 1997, oecd.org/daf/anti-
- 671 bribery/ConvCombatBribery ENG.pdf.
- Organisation for Economic Co-operation and Development (OECD), Corruption in the Extractive Value Chain:
- Typology of Risks, Mitigation Measures and Incentives, 2016, oecd-ilibrary.org/development/corruption-in-the-
- extractive-value-chain 9789264256569-en.
- A. Sayne, A. Gillies, and A. Watkins, Twelve Red Flags: Corruption Risks in the Award of Extractive Sector Licenses
- and Contracts, 2017, resourcegovernance.org/sites/default/files/documents/corruption-risks-in-the-award-of-
- 677 extractive-sector-licenses-and-contracts.pdf.
- Transparency International, Corruption Perceptions Index 2018, 2018,
- transparency.org/files/content/pages/CPI_2018_Executive_Summary_EN.pdf.
- 680 E. Westenberg and A. Sayne, Beneficial Ownership Screening: Practical Measures to Reduce Corruption Risks in
- 681 Extractives Licensing, 2018, resourcegovernance.org/sites/default/files/documents/beneficial-ownership-
- 682 screening 0.pdf.
- A. Williams and K. Dupuy, Deciding over nature: Corruption and environmental impact assessments, 2016,
- cmi.no/publications/file/5986-deciding-over-nature.pdf.

685 Payments to governments

- 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,
- 689 eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32013L0034&from=EN.
- 690 Extractive Industries Transparency Initiative (EITI), Nigeria EITI: Making transparency count, uncovering billions,
- 691 2012, eiti.org/files/documents/Case%20Study%20-%20EITI%20in%20Nigeria.pdf.
- 692 Extractive Industries Transparency Initiative (EITI), Project-level reporting in the extractive industries, 2018,
- eiti.org/document/projectlevel-reporting-in-extractive-industries, accessed on 31 May 2020.
- 694 Global Witness, 'Shell knew: Emails show senior executives at UK's biggest company knew it was party to a
- vast bribery scheme', 2017, globalwitness.org/en/campaigns/oil-gas-and-mining/shell-knew, accessed on 31 May
- 696 2020.
- 697 Organisation for Economic Co-operation and Development (OECD), Inclusive Framework on Base Erosion
- and Profit Shifting, Action 13 Country-by-Country Reporting, oecd.org/tax/beps/beps-actions/action13,
- 699 accessed on I June 2020.
- 700 P. Poretti, Transparency in the First Trade, 2019,
- 701 eiti.org/files/documents/eiti_commodity_trading_transparency_may2019_web_0.pdf.
- 702 PricewaterhouseCoopers (PwC), Financial reporting in the oil and gas industry: International Financial Reporting
- 703 Standards, 2017, pwc.com/gx/en/services/audit-assurance/assets/pwc-financial-reporting-in-the-oil-and-gas-
- 704 industry-2017.pdf.
- A. Sayne, A. Gillies, and A. Watkins, Twelve Red Flags: Corruption Risks in the Award of Extractive Sector Licenses
- and Contracts, 2017, resourcegovernance.org/sites/default/files/documents/corruption-risks-in-the-award-of-
- 707 extractive-sector-licenses-and-contracts.pdf.
- Transparency International, Under the Surface: Looking into Payments by Oil, Gas and Mining Companies to
- 709 Governments, 2018, transparency.eu/wp-content/uploads/2018/10/Under-the-Surface Summary.pdf.

710 Public policy and lobbying

711 Australasian Centre for Corporate Responsibility (ACCR), Politics – BHP, 2017, accr.org.au/politics/bhp.



- D. Coady, I. Parry, et al., Global Fossil Fuel Subsidies Remain Large: An Update Based on Country-Level Estimates,
- 713 2019, imf.org/en/Publications/WP/Issues/2019/05/02/Global-Fossil-Fuel-Subsidies-Remain-Large-An-Update-
- 714 Based-on-Country-Level-Estimates-46509.
- 715 N. Graham, S. Daub, and B. Carroll, Mapping Political Influence: Political donations and lobbying by the fossil fuel
- 716 industry in BC, 2017, policyalternatives.ca/sites/default/files/uploads/publications/BC%20Office/2017/03/ccpa-
- 717 bc_mapping_influence_final.pdf.
- 718 S. Hayer, Fossil Fuel Subsidies, 2017,
- 719 europarl.europa.eu/RegData/etudes/IDAN/2017/595372/IPOL IDA(2017)595372 EN.pdf.
- 720 InfluenceMap, Big Oil's Real Agenda on Climate Change, 2019, influencemap.org/report/How-Big-Oil-
- 721 Continues-to-Oppose-the-Paris-Agreement-38212275958aa21196dae3b76220bddc, accessed on 31 May 2020.
- 722 InfluenceMap, Climate Lobbying: How Companies Really Impact Progress on Climate, 2018,
- 723 influencemap.org/climate-lobbying, accessed on 31 May 2020.
- 724 InfluenceMap, Trade association and climate: Shareholders make themselves heard, 2018,
- 725 influencemap.org/report/Trade-associations-and-climate-shareholders-make-themselves-heard-
- 726 cf9db75c0a4e25555fafb0d84a152c23, accessed on 31 May 2020.
- D. Koplow, C. Lin, et al., Mapping the Characteristics of Producer Subsidies: A review of pilot country studies, 2010,
- 728 iisd.org/gsi/sites/default/files/mapping_ffs.pdf.
- 729 J. Levin, 'We stopped the oil and gas industry from gutting Canada's environmental laws!', 2019,
- environmental defence.ca/2019/06/27/we-stopped-the-oil-gas-industry-from-gutting-canadas-environmental-
- 731 laws, accessed on 31 May 2020.
- 732 Organisation for Economic Co-operation and Development (OECD) Anti-corruption & Integrity Hub,
- 733 Lobbying, oecd.org/corruption-integrity/explore/topics/lobbying.html.
- 734 J. B. Skjærseth and T. Skodvin, Climate change and the oil industry: Common problem, varying strategies, 2003,
- books.google.nl/books/about/Climate_Change_and_the_Oil_Industry.html?id=8pDSgfw6v9MC&printsec=front
- 736 cover&source=kp_read_button&redir_esc=y#v=onepage&q&f=false.

