EXPORT CREDIT GUARANTEES OF THE FEDERAL REPUBLIC OF GERMANY

Hermes Cover

Questionnaire for mining, oil and gas (sector-related questions)

The completion of this questionnaire is voluntary. However, replying to the relevant questions as completely as possible will facilitate and speed up the assessment of the environmental, social and human rights impacts of the project for which the German export supplies or services offered for cover are intended. This – together with the questionnaire not related to a particular sector, the completion and submission of which should also be considered in order to speed up the assessment procedure – can replace the description of the environmental, social and human rights impacts in the memorandum.

The questionnaire provides guidance on what information may be important for this sector. It is based on the World Bank/IFC General Environmental Health and Safety (EHS) Guidelines and the EHS Guidelines for Mining. Additional information on the applicable standards can be found on the website AGA-Portal.

This is a list of possible questions. Depending on the individual case only some of them, or perhaps also additional information, may become relevant in the course of the application procedure. Because of the specific features of each project further clarification may be required.

CONTENT

A. Mining of metals and minerals

A.1. Exploration/Closure

1. What minerals are to be mined?
2. What methods will be used to mine the minerals (e.g. open pit, underground or solution mining, in situ leaching, drilling, multi-bucket excavators, dredging)? Will beneficiation and processing take place on site?
3. What type of geological, in particular hydrogeological research is to be carried out (long-term pumping, injection or tracer tests)? How much fresh water is used for these tests and what tracers (radioactive substances, salts) are used if necessary?
4. How much land will be used for the entire mining operation?
5. How are the finished products transported from the site?
6. Does a production-related connection with other (planned) facilities exist (e.g. power generation, port facilities, waste dumps, roads)?
7. Please describe the mining area (flora, fauna, commercial use of the surrounding area, etc.).
8. Is the project site located in or near a sensitive area[1]?
9. Does the mining affect protected flora and fauna?
    a. If so: Have mitigation measures already been taken or are such measures (protected areas, relocation, passageways, offset measures, etc.) planned?
    b. If so: Do management plans exist or are such plans planned (e.g. Biodiversity Action Plan, Biodiversity Offset Management Plan)?
10. Does the project involve resettlements[2], expropriation of land or impacts on minorities or indigenous people[3]?
    a. If so: Have mitigation measures been taken or are such measures planned (financial compensation, provision of alternative land for use or residential building, etc.)
    b. If so; is the implementation of the resettlement/expropriation based on a written process description/a management plan, e.g. Resettlement Action Plan?
11. In the case of coastal marine mining and deep sea mining:
    a. Please describe the mining area (size, depth of water, sea currents, flora, fauna, protected maritime area etc.).
    b. Do the dredgers generate marine / deep sea tailings?
    c. What measures are taken to reduce sediment resuspension?
12. Please describe the measures of the mine management, mine closure and recultivation plan.
13. If a mine closure plan exists: How high are the financial reserves earmarked for mine closure and post closure?

A.2. Open pit mining

1. Please provide the maximum area of the open pit mine (m^2).
2. What measures are in place to protect the topsoil in the surroundings against erosion and contamination?
3. What measures will be taken to restore natural physical/chemical soil properties?
4. Were local communities involved (informed and/or consulted) or is this still to happen? If so, please provide more detailed information on this matter.

[1] Definition: Sensitive areas include National Parks and other protected areas identified by national or international law and other sensitive locations of international, national or regional importance, such as wetlands, forests with high biodiversity value, areas of archaeological or cultural significance, and areas of importance for indigenous peoples or other vulnerable groups.
[2] Resettlement refers to both physical and economic displacements (loss of assets or access to assets resulting in the loss of sources of income or other means of livelihood).
[3] Indigenous peoples are considered to be distinct social and cultural groups who (a) regard themselves as members of such a distinct indigenous cultural group and are recognised as such by others, (b) show a collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources thereof, (c) have customary cultural, economic, social or political institutions that are separate from those of the mainstream society or culture or (d) speak an distinct language or dialect that often differs from the official language of the country or region.

A.3. Hazardous substances and Processing

1. What separation process is used and what substances are used here (e.g. cyanide, mercury)?
2. What hazardous substances are used at the site?
3. How is the protection of the environment guaranteed during transport, storage, handling and disposal of hazardous substances?
4. What flotation reagents are used if necessary?

A.4. Emissions and ambient air quality

1. Please state the maximum values for particulate matter (PM) emitted in mg/Nm³. What harmful substances are possibly contained therein (e.g. radioactive substances and salts)? Will there be a release of methane or other harmful gases? Please state the amounts emitted in mg/Nm³.
2. What measures are taken to reduce the dust load (e.g. wetting down, revegetation, agglomeration additives)?
3. How high is the sulphur content of the ores? Is AMD generated and in what quantities? What treatment measures are planned?
4. What limit values for ambient air quality are applicable in the buyer's country (please make a table available)? Please state the relevant expected emission levels. Please comment on any changes in the ambient air quality before and after the project implementation. If there are no national limit values, please use the table below.

WHO Ambient Air Quality Guidelines

	Averaging Period	IFC Guideline Value [µg/m³]	Guideline Value Host country	Project Value (baseline status) [µg/m³]	Project Value (after implementation) [µg/m³]
Sulfur dioxide (SO_2)	24-hour	125 (Interim target-1) 50 (Interim target-2) 20 (guideline)			
	10 minute	500 (guideline)			
Nitrogen dioxide (NO_2)	1-year	40 (guideline)			
	1-hour	200 (guideline)			
Particulate Matter (PM_{10})	1-year	70 (Interim target-1) 50 (Interim target-2) 30 (Interim target-3) 20 (guideline)			
	24-hour	150 (Interim target-1) 100 (Interim target-2) 75 (Interim target-3) 50 (guideline)			

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Particulate Matter ($PM_{2.5}$)	1-year	35 (Interim target-1) 25 (Interim target-2) 15 (Interim target-3) 10 (guideline)			
	24-hour	75 (Interim target-1) 50 (Interim target-2) 37.5 (Interim target-3) 25 (guideline)			
Ozone	8-hour daily maximum	160 (Interim target-1) 100 (guideline)			
Source: WORLD BANK/IFC GENERAL EHS GUIDELINES 2007, page 4					

5. Please describe the on-site monitoring of air emissions as well as ambient air quality levels.

A.5. Noise

1. Are noise mitigation measures necessary or planned? If so, what measures?
2. Please state the noise impact (existing background noise level and additional noise emissions of the project) on the nearest receptors (industrial estates and residential areas) in dB(A) for day and night after completion of the project in accordance with the table below.

Noise Level Guidelines[1]				
	One Hour LA_{eq} (dBA)			
Receptor	**Guideline Value Daytime (07:00-22:00)**	**Project Value Daytime (07:00-22:00)**	**Guideline Value Nighttime (22:00-07:00)**	**Project Value Nighttime (22:00-07:00)**
Residential; institutional; educational[2]	55		45	
Industrial; commercial	70		70	
Notes: [1] Guidelines values are for noise levels measured out of doors. Source: Guidelines for Community Noise, WHO, 1999. [2] For acceptable indoor noise levels for residential, institutional, and educational settings refer to WHO (1999).				
Source: WORLD BANK/IFC GENERAL EHS GUIDELINES 2007, page 53				

3. Do the project's noise emissions lead to an increase of the background noise level at the nearest receptors by more than 3 dB(A)?
4. How far is the nearest residential area away?

A.6. Fresh water and effluents

1. How much (fresh) water is used on site? Is the water recirculated?
2. What wastewater streams are generated?
3. Where and how is the water withdrawn?
4. Is the area concerned an arid region?
5. Is it a region where seasonal heavy rainfalls or flood events (e.g. due to snow melting) occur?
6. What measures are taken to protect nearby water bodies and the groundwater?
7. Does the mining involve a lowering of the groundwater table? Please describe the measures that are taken (e.g. well boring) and the impacts on the adjacent area (in particular on biodiversity and other water users, e.g. agriculture) as well as any mitigation measures to be implemented.
8. How are effluents treated before they are discharged? Please also state whether effluents are discharged into a public sewage treatment system or into surface water bodies (river, lake, sea). If there are discharges, please provide information on the quantities of the wastewater streams (e.g. m^3/h or l/s).

9. If wastewater is discharged directly into a surface water body, please state the values of the wastewater's pollution levels in mg/l (table: "Effluent Guidelines"). Occasionally, not all pollutants listed in the table are emitted or others specific to the project have to be added. Please inform us if that is the case.

Effluent Guidelines

Parameter	Units	Guideline Value	Project Value
Total Suspended Solids (TSS)	mg/L	50.0	
pH value	pH	6-9	
COD	mg/L	150.0	
BOD	mg/L	50.0	
Oil and Grease	mg/L	10.0	
Arsenic	mg/L	0.1	
Cadmium	mg/L	0.05	
Chromium (VI)	mg/L	0.1	
Copper	mg/L	0.3	
Cyanide	mg/L	1.0	
Cyanide Free	mg/L	0.1	
Cyanide WAD	mg/L	0.5	
Iron (total)	mg/L	2.0	
Lead	mg/L	0.2	
Mercury	mg/L	0.002	
Nickel	mg/L	0.5	
Phenols	mg/L	0.5	
Zinc (Zn)	mg/L	0.5	
Temperature	°C	degree differential <3	

Note: Metals concentrations represent total metals.

Source: WORLD BANK/IFC EHS Guidelines MINING 2007, page 26

10. If effluents are discharged directly into a surface water body, please explicitly comment on a temperature increase at the point of discharge, describe possible effects of the discharge on the ecology of the water bodies and provide information on the condition and size of the water body (e.g. flow values, flow rate). Please give also details on protection measures.

11. What national standards are applicable in the buyer's country for the discharge of sanitary sewage? How is sewage treated before it is discharged? Please state the expected values of the pollution levels in the sewage. If there are no national limit values, please use the table below.

Indicative Values for Treated Sanitary Sewage Discharges[1]			
Pollutants	**Units**	**Guideline Value**	**Project Value**
pH	pH	6-9	
BOD	mg/L	30	
COD	mg/L	125	
Total nitrogen	mg/L	10	
Total phosphorus	mg/L	2	
Oil and grease	mg/L	10	
TSS	mg/L	50	
Total coliform bacteria	MPN[2]/100 ml	400[1]	
Notes: [1] Not applicable to centralized, municipal, wastewater treatment systems which are included in EHS Guidelines for Water and Sanitation. [2] MPN = Most Probable Number			
Source: WORLD BANK/IFC GENERAL EHS GUIDELINES 2007, page 30			

A.7. Waste

1. What measures are taken to avoid, treat and dispose of the waste (solid/liquid) generated and where/how is it deposited if necessary?
2. What measures are taken to treat and dispose of the waste generated in the course of the exploration (in particular excavated material, cuttings, drilling mud, process water, chemicals)?
3. How is the waste landfilled (e.g. tailings)?
   a. What type of tailings / spoil heap is concerned?
   b. How many tailings storage facilities (TSF) are planned?
   c. Please give details (shape of the dam, height, width, holding capacity etc.).
   d. What safeguarding measures are planned for the tailings dams?
   e. What material (extraneous material and/or excavated earth) is used for the construction of the dams?
   f. Are any certifications for the properties and condition of the dams planned after their completion?
   g. Are there any residential developments downstream from the TSF?
      i. Does a contingency and evacuation plan for the communities located downstream exist?
      ii. How is an awareness of the potential risk of the TSF and the evacuation plan created in the communities located downstream?

A.8. Occupational health and safety

1. In the case of an underground mining project: Please state the average minimum illumination at designated mine locations in accordance with the table below.

Minimum average illumination for designated mine locations and activities		
Location / activity	**Minimum Illumination (Lux) Guideline Value**	**Project Value**
Emergency lighting	5	
Walkways and passages	5 – 10	
Dynamic locations – production and development areas	5 – 50	
Areas with occasional and simple manual tasks	5 – 100	
Workstations and areas with medium to high precision manual tasks	150 – 400	
Source: WORLD BANK/IFC EHS GUIDELINES FOR MINING 2007, page 27		

2. Please state the mine workers' ionizing radiation exposure in accordance with the table below.

Effective dose limits for occupational Ionizing Radiation Exposure		
Dose	**Exposure**	**Project Value**
Five consecutive years average – effective dose	20 mSv/year	
Single year exposure – effective dose	50 mSv/year	
Source: WORLD BANK/IFC EHS GUIDELINES FOR MINING 2007, page 27		

A.9. Community health and safety

1. What measures are taken to minimize impacts and possible risks for adjacent communities in particular with regard to the storage and transport of chemicals, noise, odour, dust, traffic, sulphur and nitrogen emissions, fire and explosions?
2. Is the preparation of an Emergency Response Plan planned?
   a. Are the employees familiar with the Emergency Response Plan?
   b. Does the Emergency Response Plan also include any rules on how to deal with leakages?
3. Is the security personnel at the site armed? If so, is the security personnel deployed in accordance with the IFC "Good Practice Handbook on the Use of Security Forces"?

B. Crude oil and natural gas

B.1. Onshore (exploration and production)

1. Please give a technical description of the work performed. Does a first processing take place on site?
2. Does a production-related connection with other (planned) facilities exist (e.g. power generation, port facilities, roads)?
3. Please describe the production area (altitude, weather conditions, flora, fauna, commercial use of the surrounding area, etc.).
4. How much land will be used for the project?
5. Is the project site located in or near a sensitive area[4]?
6. Does the project affect protected flora and fauna?
   a. If so: Have mitigation measures already been taken or are such measures (buffer zones, relocation, passage-ways, offset measures, etc.) planned?
   b. If so: Do management plans exist or are such plans planned (e.g. Biodiversity Action Plan, Biodiversity Offset Management Plan)?
7. How is the protection of the environment guaranteed during transport, storage, handling and disposal of hazardous substances?
8. Were local communities involved (informed and/or consulted) or is this still to happen? If so, please make more detailed information available to us.
9. Does the project involve resettlements[5], expropriation of land or impacts on minorities or indigenous people[6]?
   a. If so: Have mitigation measures been taken or are such measures planned (financial compensation, provision of alternative land for use or residential building, etc.)
   b. If so: is the implementation of the resettlement/expropriation based on a written process description/a management plan, e.g. Resettlement Action Plan?
10. What method is used for the exploration (blasting engineering, vibroseis method, etc.)?
11. What measures are taken to protect the overlying rock layers and aquifers against damage?
12. Please state the maximum values of the parameters for any waste gases emitted in mg/Nm³, especially for SO_x (for oil production), NO_x.
13. How often and at what pressure does flaring and venting take place?
    a. What measures are taken to reduce flaring and venting?
    b. What measures to reduce emissions are implemented in this connection?
14. Are greenhouse gas emissions monitored (diffuse and trapped)? If so, please describe how.
15. What measures are taken to detect hydrogen sulphide emissions? What concentration will trigger an alarm?
16. Please state the maximum values of the effluent parameters in mg/l, especially for oil and grease (daily maximum and average monthly values, concentration in the surface water running off the platform). How high is the chlorine concentration in relation to fresh water used or brackish receiving water?
17. What measures are taken to detect radioactivity in the course of the production?
18. Are the operating materials (especially production fluids) recycled?
19. Please describe the measures taken to guarantee the safety of the well (pipe installation, cementing, etc.).
20 What measures are taken to avoid, treat and dispose of any waste generated in the course of the exploration (especially cuttings, drilling mud, etc.) and where/how is it disposed of?
21. How is oil or gas transported from the site (pipeline: please also reply to B.3.)?

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[5] Resettlement refers to both physical and economic displacements (loss of assets or access to assets resulting in the loss of sources of income or other means of livelihood).

[6] Indigenous peoples are considered to be distinct social and cultural groups who (a) regard themselves as members of such a distinct indigenous cultural group and are recognised as such by others, (b) show a collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources thereof, (c) have customary cultural, economic, social or political institutions that are separate from those of the mainstream society or culture or (d) speak an distinct language or dialect that often differs from the official language of the country or region.

22. Is the construction of loading facilities (e.g. jetties) planned? If so, please describe the area on which they are to be built.
23. Please describe the measures of the site management, site closure and recultivation plan.
24. If a mine closure plan exists: How high are the financial reserves earmarked for closure and post closure?
25. NOISE - Please answer the questions under A.5.
26. COMMUNITY HEALTH & SAFETY – Please answer the questions under A.9.

B.2. Offshore (exploration and production)

1. Please describe the production area (size, depth of water, ocean currents, flora, fauna, maritime conservation area, etc.).
2. Please indicate the size of the area which is not or only partially usable for other activities (e.g. fishing, water sports) during production.
3. Is the project site located in or near a sensitive area[7]?
4. Does the mining affect protected flora and fauna?
   a. If so: Have mitigation measures already been taken or are such measures (protected areas, relocation, passageways, offset measures, etc.) planned?
   b. If so: Do management plans exist or are such plans planned (e.g. Biodiversity Action Plan, Biodiversity Offset Management Plan)?
5. How is the protection of the environment guaranteed during transport, storage, handling and disposal of hazardous substances?
6. Were local communities involved (informed and/or consulted) or is this still to happen? If so, please make more detailed information available to us.
7. Does the project involve economic resettlements or impacts on minorities or indigenous people[8]?
   a. If so: Have mitigation measures been taken or are such measures planned (financial compensation, provision of alternative land for use, etc.)
   b. If so: is the implementation of the economic resettlement based on a written process description/a management plan, e.g. Resettlement Action Plan?
8. Please give a technical description of the work carried out.
9. Does a production-related connection with other (planned) facilities exist (e.g. power generation, port facilities)?
10. What method is used for the exploration (blasting engineering, air pulse technique, etc.)?
11. Are the operating materials (especially production fluids) recycled?
12. Please describe the measures taken to guarantee the safety of the well (pipe installation, cementing, etc.).
13. What measures are taken to protect the overlying rock layers and aquifers against damage?
14. If a closure and/or recultivation plan exists:
   a. What kind of disposal or further use is planned for the oil rig after the end of the production? Please describe the measures planned.
   b. How high are the financial reserves earmarked for closure and post closure?
15. Please state the maximum values of the parameters for any waste gases emitted in mg/Nm³, especially for SO_x (for oil production), NO_x.
16. How often and at what pressure does flaring and venting take place?
   a. What measures are taken to reduce flaring and venting?
   b. What measures to reduce emissions are implemented in this connection?
17. Are greenhouse gas emissions monitored (diffuse and trapped)? If so, please describe how.
18. What measures are taken to detect hydrogen sulphide emissions? What concentration will trigger an alarm?

[7] Definition: Sensitive areas include National Parks and other protected areas identified by national or international law and other sensitive locations of international, national or regional importance, such as wetlands, forests with high biodiversity value, areas of archaeological or cultural significance, and areas of importance for indigenous peoples or other vulnerable groups.

[8] Indigenous peoples are considered to be distinct social and cultural groups who (a) regard themselves as members of such a distinct indigenous cultural group and are recognised as such by others, (b) show a collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources thereof, (c) have customary cultural, economic, social or political institutions that are separate from those of the mainstream society or culture or (d) speak an distinct language or dialect that often differs from the official language of the country or region.

19. Please state the maximum values of the effluent parameters in mg/l, especially for oil and grease (daily maximum and average monthly values, concentration in the surface water running off the platform). How high is the chlorine concentration in relation to fresh water used or brackish receiving water?
20. What measures are taken to minimize, treat and dispose of any waste generated (equipment, cuttings, drilling mud, extracted sand, etc.) and where/how is it disposed of? What standards are adhered to? Please give details, especially regarding hazardous waste, such as e.g. solvents, batteries, cleaning pig sludge, contaminated chemicals and radioactive waste.
21. What measures are taken to detect radioactivity in the course of the production?
22. Is the construction of loading facilities (e.g. jetties) planned? If so, please describe the area on which they are to be built.
23. How are oil and gas transported from the site (pipeline: please also reply to B.3.)?

B.3. Transport of oil/gas via pipeline

1. Please indicate the length of the pipeline.
2. Is the project site located in or near a sensitive area[9]?
3. Does the mining affect protected flora and fauna?
   a. If so: Have mitigation measures already been taken or are such measures (protected areas, relocation, passageways, offset measures, etc.) planned?
   b. If so: Do management plans exist or are such plans planned (e.g. Biodiversity Action Plan, Biodiversity Offset Management Plan)?
4. Are any waterbodies and bodies of groundwater crossed? Please provide a technical description of the measures planned.
5. Were local communities involved (informed and/or consulted) or is this still to happen? If so, please make more detailed information available to us.
6. Does the project involve resettlements[10], expropriation of land or impacts on minorities or indigenous people[11]?
   a. If so: Have mitigation measures been taken or are such measures planned (financial compensation, provision of alternative land for use or residential building, etc.)
   b. If so: is the implementation of the resettlement/expropriation based on a written process description/a management plan, e.g. Resettlement Action Plan?
7. Are the pipes laid above ground and/or underground?
8. What emissions (air, water, waste) are generated during the construction and how are they reduced?
9. What safety measures and/or control systems are planned to prevent accidents from happening during the construction phase and during operation (especially damage due to oil spills, explosions, leakages, etc.)?
10. What protective measures are taken against destruction due to external causes (e.g. hot tapping)?
11. Please state the maximum values of the parameters for exhaust fumes emitted from any pumping and compressor stations that may exist in mg/Nm³, especially for PM_{10}, NO_x as NO_2, SO_2.
12. NOISE (Construction Phase) – Please answer the questions under A.5.
13. COMMUNITY HEALTH & SAFETY – Please answer the questions under A.9.

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