

Environmental Checklist: 1. Mining (1)

Category	Environmental Item	Main Check Items	Confirmation of Environmental Considerations
1 Permits and Explanation	(1) EIA and Environmental Permits	<p>Have EIA reports been officially completed?</p> <p>Have EIA reports been approved by authorities of the host country's government?</p> <p>Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied?</p> <p>In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?</p>	
	(2) Explanation to the Public	<p>Are contents of the project and the potential impacts adequately explained to the public based on appropriate procedures, including information disclosure? Is understanding obtained from the public?</p> <p>Are proper responses made to comments from the public and regulatory authorities?</p>	
2 Mitigation Measures	(1) Air Quality	<p>Does fugitive dust generated from mine workings and crushing plants comply with the country's emission standards?</p> <p>Do air pollutants other than fugitive dust comply with the country's emission standards?</p> <p>Do air pollutants emitted from the ancillary facilities, such as privately owned power plants comply with the country's emission standards?</p> <p>Is there a possibility that air pollutants emitted from the project will cause areas that do not comply with the country's ambient air quality standards?</p> <p>Does air quality within the working environments comply with the country's occupational health and safety standards? Are adequate worker protection measures, such as use of dust masks taken, if necessary?</p>	
	(2) Water Quality	<p>Do pollutants, such as pH, SS, heavy metals contained in effluents from various sources, such as concentrators, mine drainage, rainwater runoff, waste rock disposal sites, and tailing impoundment sites comply with the country's effluent standards?</p> <p>Do effluents from the ancillary facilities, such as privately owned power plants comply with the country's effluent standards?</p> <p>Do sanitary/domestic wastewaters from the buildings and housing complexes, such as accommodations and worker colonies comply with the country's effluent standards?</p> <p>Are adequate measures taken to prevent contamination of surface water and groundwater by these effluents? Is there a possibility that the effluents from the project will cause areas that do not comply with the country's ambient water quality standards?</p>	

Environmental Checklist: 1. Mining (2)

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2 Mitigation Measures	(3) Wastes	<p>Are wastes containing hazardous substances, such as removed soils, waste rock, waste sand, sludges and tailings properly treated and disposed of in accordance with the country's standards?</p> <p>Are wastes (e.g., waste oils, waste reagents) generated by mine operations or wastes such as coal ash generated from the ancillary facilities, such as privately owned power plants properly treated and disposed of in accordance with the country's standards?</p> <p>Are adequate measures taken to prevent contamination of soil and groundwater by leachates from the waste disposal sites?</p>	
	(4) Noise and Vibration	<p>Do noise and vibrations generated from various sites, such as mine workings comply with the country's standards?</p> <p>Do noise and vibrations within working the environments comply with the country's occupational health and safety standards? Are adequate protection measures, such as sound-proof barriers or ear plugs taken, if necessary?</p>	
	(5) Subsidence	<p>Are considerations given to the possibility of a surface cave-in or subsidence associated with underground mining? Is there a possibility that the surface cave-in or subsidence will affect the property of inhabitants or cultural heritage sites? Are adequate measures, such as backfilling of the underground workings planned to deal with such a possibility?</p> <p>In the case of extraction of a large volume of groundwater, is there a possibility that the extraction of groundwater will cause subsidence?</p>	
3 Natural Environment	(1) Protected Areas	<p>Is the project site located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?</p>	
	(2) Ecosystem	<p>Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)?</p> <p>Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions?</p> <p>If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem?</p> <p>Is there a possibility that the amount of water (e.g., surface water, groundwater) used by the project will adversely affect aquatic environments, such as rivers? Are adequate measures taken to reduce the impacts on aquatic environments, such as aquatic organisms?</p>	

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Category	Environmental Item	Main Check Items	Confirmation of Environmental Considerations
3 Natural Environment	(3) Management of Abandoned Sites	<p>Are environmental protection and restoration plans for the abandoned sites (such as reclamation, reforestation, mine drainage treatment) after mine closure properly developed in accordance with the country's laws and regulations?</p> <p>Is a sustainable management framework for the abandoned sites established?</p> <p>Are adequate financial provisions, such as a reserve fund secured to manage the abandoned sites?</p>	
4 Social Environment	(1) Resettlement	<p>Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement?</p> <p>Is adequate explanation on relocation and compensation given to affected persons prior to resettlement?</p> <p>Is the resettlement plan, including proper compensation, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement?</p> <p>Does the resettlement plan pay particular attention to vulnerable groups or persons, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples?</p> <p>Are agreements with the affected persons obtained prior to resettlement?</p> <p>Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan?</p> <p>Is a plan developed to monitor the impacts of resettlement?</p>	
	(2) Living and Livelihood	<p>Is there a possibility that the project will adversely affect the living conditions of inhabitants? Are adequate measures considered to reduce the impacts, if necessary?</p> <p>Are impacts on the living conditions of inhabitants properly estimated and adequate measures planned for each phase of the mine's life-cycle (mine development, mine operation, mine closure, etc.)?</p> <p>Is sufficient infrastructure (e.g., hospitals, schools, roads) available for project implementation? If existing infrastructure is insufficient, are plans developed to construct new infrastructure or improve existing infrastructure?</p> <p>Is there a possibility that large vehicle traffic associated with the project will cause impacts on road traffic in the surrounding areas? Are adequate measures considered to reduce the impacts on traffic, if necessary?</p> <p>Is there a possibility that diseases (including communicable diseases such as HIV) will be introduced due to immigration of workers associated with the project? Are adequate considerations given to public health, if necessary?</p>	
	(3) Heritage	<p>Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage sites? Are adequate measures considered to protect these sites in accordance with the country's laws?</p>	

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4 Social Environment	(4) Landscape	<p>Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?</p>	
	(5) Ethnic Minorities and Indigenous Peoples	<p>Does the project comply with the country's laws for rights of ethnic minorities and indigenous peoples? Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples?</p>	
5 Others	(1) Impacts during Construction	<p>Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)? If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts? If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts? If necessary, is health and safety education (e.g., traffic safety, public health) provided for project personnel, including workers?</p>	
	(2) Accident Prevention Measures	<p>Are adequate accident prevention plans and mitigation measures developed to cover both the soft and hard aspects of the project, such as establishment of safety rules, installation of prevention facilities and equipment, and safety education for workers? Are adequate measures for emergency response to accidental events considered? Are adequate accident prevention measures (e.g., installation of prevention facilities and equipment, establishment of prevention management framework, etc.) taken for dangerous materials (e.g., explosives, fuels, floatation reagents)? Are sufficient considerations given to the hazards associated with possible slope failures and erosion of soil storage stockpiles, waste rock dumps, and tailing impoundments when the sites were selected and the facilities were designed? Is there a possibility that hazards will affect the inhabitants living around the project site?</p>	
	(3) Monitoring	<p>Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts? Are the items, methods and frequencies included in the monitoring program judged to be appropriate? Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)? Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?</p>	

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6 Note	Reference to Checklist of Other Sectors	<p>Where necessary, pertinent items described in the Ports and Harbors checklist should also be checked (e.g., projects including construction of ports and harbors).</p> <p>Where necessary, pertinent items described in the Forestry Projects checklist should also be checked (e.g., projects including large areas of deforestation).</p> <p>Where necessary, pertinent items described in the Oil and Gas Pipelines checklist should also be checked (e.g., projects including construction of pipelines).</p> <p>Where necessary, pertinent items described in the Roads and Railways checklist should also be checked (e.g., projects including construction of large-scale roads and railways).</p> <p>Where necessary, pertinent items described in the Non-ferrous Metals Smelting and Refining checklist should also be checked (e.g., projects including construction of smelting works).</p>	
	Note on Using Environmental Checklist	<p>The impacts of the various phases of the project whole life cycle (mine development, mine operation, and mine closure, etc.) should be confirmed.</p> <p>If necessary, the impacts to transboundary or global issues should be confirmed (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming).</p>	

1) Regarding the term “Country’s Standards” mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are made, if necessary.

In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan' experience).

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which it is located.