

**Rapid Environmental Assessment (REA) Checklist**

**Instructions:**

- (i) The project team completes this checklist to support the environmental classification of a project. It is to be attached to the environmental categorization form and submitted to the Environment and Safeguards Division (RSES) for endorsement by the Director, RSES and for approval by the Chief Compliance Officer.
- (ii) This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB's (a) checklists on involuntary resettlement and Indigenous Peoples; (b) poverty reduction handbook; (c) staff guide to consultation and participation; and (d) gender checklists.
- (iii) Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

**Country/Project Title:**

**Sector Division:**

SCREENING QUESTIONS	Yes	No	REMARKS
<b>A. Project Siting</b> Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site			
▪ Protected Area			
▪ Wetland			
▪ Mangrove			
▪ Estuarine			
▪ Buffer zone of protected area			
▪ Special area for protecting biodiversity			
<b>B. Potential Environmental Impacts</b> Will the Project cause...			
▪ impairment of historical/cultural monuments and other areas, and loss/damage to these sites?			
▪ encroachment into precious ecosystem (e.g. sensitive habitats like protected forest areas or terrestrial wildlife habitats?			
▪ dislocation or involuntary resettlement of people?			

SCREENING QUESTIONS	Yes	No	REMARKS
<ul style="list-style-type: none"> <li>▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ aesthetic degradation and property value loss due to establishment of plant and ancillary facilities?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ noise and dust from construction activities?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ short-term soil erosion and silt runoff due to construction?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ fugitive dust during transportation, unloading, storage, and processing of coal, and polluted runoff from coal storage?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ risk of oil spills, which could pollute surface and groundwater and soil?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ hazards in gas pipeline operation and gas storage at power plant sites?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ changes in flow regimes downstream of the water intake due to abstraction for cooling purposes?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ pollution of water bodies and aquatic ecosystem from wastewater treatment plant for boiler feed, bleed-off from cooling towers, boiler blowdown and wash-water, and effluent from ash pond?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ air pollution from fuel gas discharged into the atmosphere?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ public health and safety hazards due to solid waste disposal in sanitary landfills (see Matrix of Impacts and Measures for Solid Waste Disposal)?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ social conflicts if workers from other regions or countries are hired?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ risks community safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?</li> </ul>			

SCREENING QUESTIONS	Yes	No	REMARKS
<ul style="list-style-type: none"> <li>▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project (e.g. ash pond) are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?</li> </ul>			

Climate Change and Disaster Risk Questions The following questions are not for environmental categorization. They are included in this checklist to help identify potential climate and disaster risks.	Yes	No	Remarks
<ul style="list-style-type: none"> <li>▪ Is the Project area subject to hazards such as earthquakes, floods, landslides, tropical cyclone winds, storm surges, tsunami or volcanic eruptions and climate changes (see Appendix I)?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ Could changes in precipitation, temperature, salinity, or extreme events over the Project lifespan affect its sustainability or cost?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ Are there any demographic or socio-economic aspects of the Project area that are already vulnerable (e.g. high incidence of marginalized populations, rural-urban migrants, illegal settlements, ethnic minorities, women or children)?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ Could the Project potentially increase the climate or disaster vulnerability of the surrounding area (e.g., increasing traffic or housing in areas that will be more prone to flooding, by encouraging settlement in earthquake zones)?</li> </ul>			

**Appendix I: Environments, Hazards and Climate Changes**

Environment	Natural Hazards and Climate Change
<b>Arid/Semi-arid and desert environments</b>	Low erratic rainfall of up to 500 mm rainfall per annum with periodic droughts and high rainfall variability. Low vegetative cover. Resilient ecosystems & complex pastoral and systems, but medium certainty that 10–20% of drylands degraded; 10-30% projected decrease in water availability in next 40 years; projected increase in drought duration and severity under climate change. Increased mobilization of sand dunes and other soils as vegetation cover declines; likely overall decrease in agricultural productivity, with rain-fed agriculture yield reduced by 30% or more by 2020. Earthquakes and other geophysical hazards may also occur in these environments.
<b>Humid and sub-humid plains, foothills and hill country</b>	More than 500 mm precipitation/yr. Resilient ecosystems & complex human pastoral and cropping systems. 10-30% projected decrease in water availability in next 40 years; projected increase in droughts, heatwaves and floods; increased erosion of loess-mantled landscapes by wind and water; increased gully erosion; landslides likely on steeper slopes. Likely overall decrease in agricultural productivity & compromised food production from variability, with rain-fed agriculture yield reduced by 30% or more by 2020. Increased incidence of forest and agriculture-based insect infestations. Earthquakes and other geophysical hazards may also occur in these environments.
<b>River valleys/deltas and estuaries and other low-lying coastal areas</b>	River basins, deltas and estuaries in low-lying areas are vulnerable to riverine floods, storm surges associated with tropical cyclones/typhoons and sea level rise; natural (and human-induced) subsidence resulting from sediment compaction and ground water extraction; liquefaction of soft sediments as result of earthquake ground shaking. Tsunami possible/likely on some coasts. Lowland agri-business and subsistence farming in these regions at significant risk.
<b>Small islands</b>	Small islands generally have land areas of less than 10,000km <sup>2</sup> in area, though Papua New Guinea and Timor with much larger land areas are commonly included in lists of small island developing states. Low-lying islands are especially vulnerable to storm surge, tsunami and sea-level rise and, frequently, coastal erosion, with coral reefs threatened by ocean warming in some areas. Sea level rise is likely to threaten the limited ground water resources. High islands often experience high rainfall intensities, frequent landslides and tectonic environments in which landslides and earthquakes are not uncommon with (occasional) volcanic eruptions. Small islands may have low adaptive capacity and high adaptation costs relative to GDP.
<b>Mountain ecosystems</b>	Accelerated glacial melting, rockfalls/landslides and glacial lake outburst floods, leading to increased debris flows, river bank erosion and floods and more extensive outwash plains and, possibly, more frequent wind erosion in intermontane valleys. Enhanced snow melt and fluctuating stream flows may produce seasonal floods and droughts. Melting of permafrost in some environments. Faunal and floral species migration. Earthquakes, landslides and other geophysical hazards may also occur in these environments.
<b>Volcanic environments</b>	Recently active volcanoes (erupted in last 10,000 years – see <a href="http://www.volcano.si.edu">www.volcano.si.edu</a> ). Often fertile soils with intensive agriculture and landslides on steep slopes. Subject to earthquakes and volcanic eruptions including pyroclastic flows and mudflows/lahars and/or gas emissions and occasionally widespread ashfall.