

## **OPIC Environmental & Social Review – Dam Projects**

**Dam Categorical Prohibition.** OPIC does not support the construction of dams that significantly and irreversibly cause any of the following impacts at unacceptable levels:

- **Disrupt Natural Ecosystems.** Disruption of natural ecosystems may result from barring passage of anadromous (migratory) fish; restricting the mobility of terrestrial species; modifying the timing and concentration of nutrient releases downstream; reducing or eliminating downstream flow; or reducing or permanently inundating critical or sensitive terrestrial habitat. Additional guidance may be found in WCD Guideline 14 (Baseline Ecosystem Surveys) and Guideline 16 (Maintaining Productive Fisheries).
- **Alter Natural Hydrology.** Alteration of natural hydrology may result from the elimination of, or significant reduction in, stream flow; significant alteration of diurnal or annual stream flow; modification of groundwater levels; or induced seismicity. Additional guidance may be found in WCD Guideline 4 (Strategic Impact Assessment) and WCD Guideline 12 (Operating Rules).
- **Inundate Large Land Areas.** A simplified cost benefit analysis is used to assess whether an unreasonably large land area is inundated relative to the power generated. For irrigation dams, acreage inundated is compared to new acreage that could be irrigated as a result of the project. Additional guidance may be found in WCD Strategic Priority 2 (Comprehensive Options Assessment).
- **Impact Biodiversity.** Impacts on biodiversity may result from ecosystem and habitat impacts elimination or reduction of habitat due to land take, or the increased potential for species exploitation due to improved access to the site. Additional guidance may be found in WCD Policy Principle 4.4 (Avoiding significant impacts on threatened and endangered species).
- **Displace Inhabitants.** Evaluation of this impact is based on a quantitative threshold (5000 person displacement). Additional guidance may be found in WCD Guideline 19 (Mitigation, Resettlement and Development Action Plan).
- **Impact on Local Inhabitants' Livelihoods.** Impacts on livelihoods may result from impairment or elimination of traditional hunting or fishing methods; elimination of scarce agricultural lands; elimination of access to drinking or irrigation water; or project-related increases in endemic diseases. Additional guidance may be found in WCD Strategic Priority 1 (Gaining Public Acceptance), Strategic Priority 2 (Comprehensive Options Assessment), Strategic Priority 4 (Sustaining Rivers and Livelihoods), Policy Principle 4.1 (Basin-wide understanding of ecosystem and livelihood issues), Policy Principle 4.2 (Precautionary Approach) and Policy Principle 4.5 (Release of Environmental Flows).

**Other Dam Projects.** For dam projects determined to be eligible categorically for further consideration, OPIC continues the environmental and social assessment process. OPIC's assessment also may include an evaluation of the following factors:

- **Hydrological and Limnological Impacts.** Impacts on water resources due to impoundments include effects on stream flow; groundwater; surface water quality; potential for increased floods; and potential for alteration of sediment deposition patterns. Additional guidance may be found in WCD Strategic Priority 4 (Sustaining Rivers and Livelihoods).
- **Catchment Area Impacts.** Impacts on terrestrial environments surrounding impoundments include induced seismic and geologic events, impacts on terrestrial wildlife and impacts on downstream aquatic life. Additional guidance may be found in WCD Strategic Priority 4 (Sustaining Rivers and Livelihoods).
- **Construction Impacts.** Impacts resulting from land use requirements in excess of the dam/reservoir footprint include supportive power structures, worker housing, borrow areas, access roads, power transmission corridors, and waste disposal units.
- **Air Quality and Global Climate Change Impacts.** Impacts evaluated include decomposition of submerged biomass; vehicle and machinery emissions; and potential impacts associated with deforestation and elimination of potential carbon sinks. Additional guidance may be found in WCD Strategic Priority 2 (Comprehensive Options Assessment) and Guideline 8 (Greenhouse Gas Emissions).
- **Resettlement.** Factors evaluated include public consultation and disclosure procedures; community development planning; livelihoods assessment; potential for income restoration; compensation; and dispute resolution mechanisms. Additional guidance may be found in WCD Guideline 18 (Impoverishment Risk Assessment) and Guideline 19 (Mitigation, Resettlement and Development Action Plan).
- **Safety.** Factors include structural stability of the dam and the capacity of the spillway(s) to pass flood flows. In the case of high hazard potential dams the analysis must examine the capacity to pass the probable maximum flood, the adequacy of monitoring and warning devices, and downstream warning and evacuation procedures. Additional guidance may be found in WCD Strategic Priority 2 (Comprehensive Options Assessment), Strategic Priority 3 (Addressing Existing Dams) and Guideline 11 (Economic Risk Assessment).
- **Project Acceptability.** Factors include an evaluation of consultation and disclosure procedures; land acquisition process; stakeholder identification; and compliance with local laws and regulations. Additional guidance may be found in WCD Strategic Priority 1 (Gaining Public Acceptance), Strategic Priority 5 (Recognizing Entitlements and Sharing Benefits) and Guidelines 17 (Baseline Social Conditions),

19 (Mitigation, Resettlement and Development Action Plan) and 20 (Project Benefit-Sharing Mechanisms).