

**Section III Key Components – Project Implementation**

Note that a number of aspects are repeated from previous sections. The purpose is to enable each section to be applied as a stand-alone assessment; and because some aspects are legitimately reassessed in more than one point in the project cycle.

Section III Economic / Technical Aspects / Governance	Section III Social Aspects	Section III Environmental Aspects
Integrated Project Management	Social Management Plan	Environmental Management Plan/System
Public Sector Governance	Cultural Heritage	Catchment Management
Transboundary Issues	Indigenous Peoples	Reservoir Management
Corporate Governance	Public Health	Environmental Flows and Downstream Sustainability
Construction Management Plan	Resettlement	Biodiversity, Habitats and Protected Areas
	Community Acceptance	Pest and Invasive Species
	Labour and Working Conditions	Sedimentation, Erosion and Water Quality
	Suppliers and Service Providers	Waste, Noise and Air Quality Management
	Communications	
	Project Benefits	
Asset and Community Safety		

*Working Set of Section III Aspects*

**8.1 Integrated Project Management**

**DESCRIPTION:** This aspect addresses the developers’ capacity to coordinate and manage all components of the hydropower project including construction, environmental, social, resettlement, contracts and procurement.

This aspect is important for efficient and sustainable, implementation and future operation of the project, and to ensure that all programme elements progress without hindering other elements.

**POLICY OBJECTIVE:** The objective is to ensure that the developer makes provision for the complex nature of hydropower development, with particular regard to integrating technical, social and environmental elements of the overall programme, ensuring one does not progress at the expense of another, and that interfaces and feedback loops across elements are managed well.

**PROCESS ATTRIBUTES:**

- Quality of the integrated management plan
- Quality of the communication plan
- Level of accountability for all aspects of project management
- Quality of plans to mitigate and overcome capacity gaps
- Quality of the monitoring and response system

**PERFORMANCE ATTRIBUTES:**

- Degree to which potential interface problems are being mitigated
- Degree to which project scheduling is controlled
- Degree to which costs are controlled
- Degree to which adaptive management can be demonstrated
- Level of stakeholder support
- Level of regulator support

**EXAMPLES OF EVIDENCE:**

- Integrated programme management plan
- Programme management reports
- Records of meetings

**8.2 Public Sector Governance**

**DESCRIPTION:** This aspect addresses the adequacy of the legal, judicial and institutional structures important to project development.

This aspect is important because it promotes efficient and effective project development and operation and avoids political and corruption risk.

**POLICY OBJECTIVE:** The objective is to ensure that the project is implemented in an economically efficient and equitable manner, and to ensure that political and corruption risks are appropriately mitigated.

**PROCESS ATTRIBUTES:**

- Level of understanding of legal, judicial and institutional structures and capacity
- Level of understanding of political risks
- Level of understanding of corruption risks
- Quality of corruption assessment and governance improvement plan

**PERFORMANCE ATTRIBUTES:**

- Degree to which corruption risks are being mitigated
- Degree to which political risks are being mitigated
- Degree to which capacity shortfalls are compensated and managed
- Level of stakeholder support
- Level of regulator support

**EXAMPLES OF EVIDENCE:**

- Identification of appropriate government policies
- Compatibility of proponent policies on employee health, well-being and equality, with government policies
- Compensation for gaps in government policies

### **8.3 Transboundary Issues**

**DESCRIPTION:** This aspect addresses the adequacy of the legal, judicial and institutional structures relevant to transboundary issues for those projects with shared catchments, reservoirs, assets and/or downstream river systems.

This aspect is important because it promotes regional cooperation and avoids conflict.

**POLICY OBJECTIVE:** The objective is to ensure that the project is implemented in an economically efficient and equitable manner, taking into account sustainable development objectives and priorities of all riparians as well as upstream and downstream impacts, and to ensure that conflict is avoided or minimised.

**PROCESS ATTRIBUTES:**

- Level of understanding of legal, judicial and institutional structures and capacity in each of the countries involved
- Level of understanding of transboundary risks
- Quality of transboundary agreements and frameworks
- Quality of institutions for ongoing implementation

**PERFORMANCE ATTRIBUTES:**

- Degree of conformance with relevant regional and international protocols and conventions
- Degree to which conflict is avoided
- Degree to which agreements are/have been reached
- Level of stakeholder support
- Level of regulator support

**EXAMPLES OF EVIDENCE:**

- Transboundary agreements and frameworks

### **8.4 Corporate Governance**

**DESCRIPTION:** This aspect addresses corporate governance of the project manager/ implementer with respect to ethical business practices; addressing corruption risks; management of risk; business administration, policies and processes; corporate social responsibility; stakeholder relations; and compliance.

This aspect is important to minimise corporate reputational risk and thereby facilitate multi-stakeholder support for the project and the project manager/ implementer .

**POLICY OBJECTIVE:** The objective is to ensure that the project manager/ implementer has sound business structures, policies and practices and that every action of the project manager/ implementer that could affect the project is undertaken with due attention to transparency, integrity and accountability.

**PROCESS ATTRIBUTES:**

- Level of comprehensiveness of business policies and processes
- Quality of the corporate risk assessment and management processes

- Quality of systems to ensure compliance
- Degree to which accountability is defined and implemented at the executive and board level
- Quality of plans to identify and mitigate corruption risks, including relationships with external partners and country and project risk

**PERFORMANCE ATTRIBUTES:**

- Level of compliance
- Level of transparency
- Level of conformance with established policies and procedures, both internal and external
- Level of effectiveness of risk assessment and management processes
- Level of effectiveness of corporate anti-corruption program, including relationship with external partners and country and project risk

**EXAMPLES OF EVIDENCE:**

- Corporate policies and programs with particular attention to sustainability, corporate social responsibility and ethics
- Corporate annual reporting
- Document setting out developer's policy and detailed program to address bribery and other corrupt practices, including addressing relationships with external partners and country and project risk

**8.5 Construction Management Plan**

**DESCRIPTION:** This aspect addresses the construction implementation requirements, including contractual arrangements, bid documents and scheduling, including managing the environmental, social and safety aspects of construction.

This aspect is important because it promotes efficient project construction.

**POLICY OBJECTIVE:** The objective is to ensure that the construction of the project will proceed in a well-planned, coordinated, transparent and cost-effective manner, including management of the environmental, social and safety aspects of construction.

**PROCESS ATTRIBUTES:**

- Quality of the contractual arrangements
- Quality of the bidding documents
- Quality of the scheduling and interface among different components, including the critical path linking social, environmental and technical activities
- Quality of the inclusion of environmental, social and safety aspects of construction
- Degree to which local labour and industry have been included in the plan
- Level of transparency in the bidding process
- Level of accountability for all aspects of planning for construction management
- Level of capacity to manage project construction

**PERFORMANCE ATTRIBUTES:**

- Degree to which potential interface problems are being mitigated
- Degree to which project scheduling is controlled
- Degree to which costs are controlled

- Level of compliance
- Explicit coordination and linked decisions/milestones among technical, social and environmental activities

**EXAMPLES OF EVIDENCE:**

- Construction management plan
- Protocols and agreements regarding construction workforce
- Social and environmental plans relating to construction impacts, including associated infrastructure, e.g. roads

**8.6 Social Management Plan**

**DESCRIPTION:** This aspect addresses the management of social impacts associated with the hydropower development and planned operation.

This aspect is important because it identifies and assesses the social management measures to avoid, minimise, mitigate and compensate for social impacts and, where possible, enables enhancement of social benefits.

**POLICY OBJECTIVE:** The objective is to ensure that management measures have been designed that comprehensively and effectively address social impacts for the implementation and operation of the project, and seek opportunities for positive impacts.

**PROCESS ATTRIBUTES:**

- Quality of social management planning
- Level of adequacy of capacity and resources to implement
- Degree of alignment with the social impact assessment
- Quality of participatory process (stakeholder engagement / regulator, variety of perspectives)
- Quality of mechanisms for monitoring and continual improvement throughout the life of the project

**PERFORMANCE ATTRIBUTES:**

- Level of well-being of groups directly and indirectly affected by the project
- Level of regulatory support for SMP
- Level of stakeholder support for SMP
- Degree to which the SMP has been integrated with design optimisation and project management plan
- Degree to which SMP has been costed and integrated within the overall project budget
- Degree to which the SMP has effective measures to comprehensively avoid, minimise, mitigate and compensate for social impacts and where possible enable social enhancement

**EXAMPLES OF EVIDENCE:**

- Existing SMP plan
- Reports/ Minutes of stakeholder meetings and/ or information material
- Agreements with stakeholders and/or regulators
- Independent expert testimony on SMP plans or contents

### **8.7 Cultural Heritage**

**DESCRIPTION:** This aspect addresses the level of impact and planning for protection and conservation of tangible and intangible forms cultural heritage.

This aspect is important because cultural heritage artifacts can be damaged or lost through the physical landscape changes brought about by hydropower project construction and operation, as well as through associated infrastructure impacts (e.g. new roads, transmission lines). Furthermore, non-physical cultural heritage such as traditions, festivals and rituals can also be impacted through hydropower project impacts to local communities.

**POLICY OBJECTIVE:** The objective is to ensure that cultural heritage has been identified, recognised and conserved.

**PROCESS ATTRIBUTES:**

- Comprehensiveness of the list of cultural heritage identified
- Quality of the cultural heritage management plans
- Degree to which local knowledge and expertise is utilised in assessment and development of management plans
- Quality of the consultative process

**PERFORMANCE ATTRIBUTES:**

- Level of stakeholder support/community acceptance
- Level of regulator support

**EXAMPLES OF EVIDENCE:**

- Heritage impact statements
- Conservation plans
- Heritage plans and agreements

### **8.8 Indigenous Peoples and Ethnic Minorities**

**DESCRIPTION:** This aspect addresses the particular issues, risks and opportunities of the project with respect to indigenous people and ethnic minorities.

This aspect is important because indigenous peoples and ethnic minorities may be more vulnerable and face greater risks due to a hydropower development. They may need support to understand the project purpose and implementation process, what it means for them, what their options and rights are with respect to the project, and to not be disempowered by the project. Meaningful engagement with indigenous peoples and ethnic minorities might also help inform on other aspects (e.g. cultural heritage).

**POLICY OBJECTIVE:** The objective is to ensure that indigenous and ethnic minority communities affected either directly or indirectly by the project should have been specifically identified, adequately represented in any consultation process, and not adversely affected by the project.

**PROCESS ATTRIBUTES:**

- Quality of the identification process of indigenous people and ethnic minorities
- Understanding of legal rights as embedded in national and international law

- Quality of identification of special requirements of indigenous peoples and ethnic minorities
- Level of participation of indigenous peoples and ethnic minorities
- Comprehensiveness of the plan to address project-related issues for indigenous peoples and ethnic minorities
- Quality of the monitoring program

**PERFORMANCE ATTRIBUTES:**

- Degree to which indigenous people's plan is developed with comprehensive participation of indigenous peoples and ethnic minorities and mutually acceptable independent experts
- Level of integration of indigenous peoples and ethnic minorities issues, values and knowledge in other aspects of project planning and preparation
- Level of stakeholder support for plan
- Level of support for plan from indigenous peoples and ethnic minorities

**EXAMPLES OF EVIDENCE:**

- Assessment report of indigenous peoples and ethnic minorities
- Management plan
- Records of meetings and interviews

**8.9 Public Health**

**DESCRIPTION:** This aspect addresses public health risks and opportunities associated with the hydropower project throughout the project life cycle.

This aspect is important because hydropower projects can create public health risks through introduction of the construction workforce, impacts to local communities, and through creating conditions conducive to waterborne diseases (e.g. schistosomiasis). At the same time, through stimulating the local economy, developing new infrastructure and provision of electricity, water supply, and sanitation there is the potential to upgrade the existing public health facilities in the project affected area.

**POLICY OBJECTIVE:** The objective is to ensure that public health risks are avoided and opportunities to enhance public health are identified alongside other potential project benefits.

**PROCESS ATTRIBUTES:**

- Quality of assessment of public health risks and opportunities
- Quality of collection of public health baseline data
- Quality of public health management plan
- Thoroughness of identification of relevant public health standards
- Quality of the communications / engagement process
- Degree to which an indigenous people's public health plan is developed with comprehensive participation of indigenous peoples and ethnic minorities and independent experts

**PERFORMANCE ATTRIBUTES:**

- Degree of mainstreaming of public health plan into public health system
- Level of public health impact and risk minimisation and mitigation
- Degree to which public health benefits are being realised
- Level of stakeholder support for public health management plan

- Level of compliance with public health legislation, standards, and management plan targets

**EXAMPLES OF EVIDENCE:**

- Public health risk assessment
- Assessment of public health enhancement opportunities
- Public health management plans

**8.10 Resettlement**

**DESCRIPTION:** This aspect addresses voluntary and involuntary resettlement relating to the hydropower development.

This aspect is important because poor management of involuntary resettlement has been one of the most high profile issues creating controversy with hydropower projects, in cases resulting in disenfranchisement and negative impacts on living standard and quality of life, especially for the rural poor. It needs to be managed well.

**POLICY OBJECTIVE:** The objective is to ensure that project resettlement is dealt with in a fair and equitable manner, that displaced groups are at a minimum re-established at no disadvantage, and ideally that standards of living are improved for both displaced and host communities.

**PROCESS ATTRIBUTES:**

- Quality of the resettlement baseline survey
- Quality of the stakeholder identification process
- Level of disclosure of information relating to resettlement
- Level of informed participation of affected peoples
- Quality of the options assessment
- Quality of the consultation and negotiation process
- Quality, funding and management structure of resettlement plan
- Quality of the communications and engagement planning
- Quality of the monitoring, evaluation and review process

**PERFORMANCE ATTRIBUTES:**

- Degree of resettlement impact avoidance, minimisation, mitigation
- Level of stakeholder / regulator support for resettlement plan
- Appropriateness of timing of resettlement
- Degree of change in living standard of directly affected stakeholders
- Degree of cohesiveness of resettled communities
- Level of compliance with resettlement legislation and standards requirements
- Level of compliance with resettlement plan targets and commitments

**EXAMPLES OF EVIDENCE:**

- Documented compensation agreements
- Resettlement plan
- Minutes from meetings
- Resettlement report

### **8.11 Community Acceptance**

**DESCRIPTION:** This aspect addresses the degree of community acceptance for the project and all associated assessments, programs and plans, and the processes used to maintain that acceptance. This aspect addresses acceptance in aggregate; other aspects include attributes related to stakeholder acceptance on specific items (e.g. cultural heritage management plan).

This aspect is important because developing and maintaining community engagement and support for a project can considerably facilitate many aspects of hydropower project development and ongoing operations.

**POLICY OBJECTIVE:** The objective is to gain acceptance of communities for the project implementation and operation, and to achieve the confidence of communities in project impact avoidance, mitigation and management plans, through negotiated agreements with affected communities where possible.

#### **PROCESS ATTRIBUTES:**

- Quality of the stakeholder / community identification process
- Level of disclosure of information
- Quality of the community participation and consultation plan
- Quality of the communication strategies / engagement process
- Quality of the grievance process / dispute resolution process

#### **PERFORMANCE ATTRIBUTES:**

- Quality of the community / stakeholder confirmation / agreements
- Level of community / stakeholder support
- Comprehensiveness of meeting targets of consultation plan
- Quality of resolution of grievances / disputes

#### **EXAMPLES OF EVIDENCE:**

- Records of meetings
- Documentation of agreements
- Surveys and polls

### **8.12 Labour and Working Conditions**

**DESCRIPTION:** This aspect addresses labour and working conditions, including employee opportunity, equity, diversity, health and safety

This aspect is important because workers need to be treated fairly and protected, and expectations on labour and working conditions are well-established in national and international standards and comparable industry practice.

**POLICY OBJECTIVE:** This objective is to ensure that workers are treated fairly and protected.

#### **PROCESS ATTRIBUTES:**

- Quality of the labour management system
- Thoroughness of identification of relevant policy, law and standards

- Quality of the negotiation process where relevant
- Quality of issues and risk identification and prioritisation
- Quality of communications and engagement process
- Quality of workforce planning
- Quality of the occupational health and safety program

**PERFORMANCE ATTRIBUTES:**

- Level of compliance
- Degree of risk of labour conflicts or interruptions
- Degree of risk of staff safety incidents
- Levels of employee safety, occupational health and wellbeing performance
- Levels of employee equity, opportunity, diversity
- Level of engagement / relationship with labour representatives
- Level of staff satisfaction
- Levels of conflicts and disputes

**EXAMPLES OF EVIDENCE:**

- Staff satisfaction surveys
- Corporate policies and programs, e.g. on equity, occupational health & safety, workforce planning
- Employee and management profiles

**8.13 Suppliers and Service Providers**

**DESCRIPTION:** This aspect addresses the procurement of civil works, goods and services (including consultancies) relevant to development of the hydropower project, not just relating to the site development but also to any project-related activities including associated off-site works and social and environmental assessment and planning.

This aspect is important because (i) timely and reliable procurement of civil works contracts, services and supplies is critical for the project to meet its scheduling milestones to deliver on the development objectives; (ii) the quality of components and maximizing local procurement are important dimensions of the sustainable performance of the project, and (iii) all aspects of procurement need to be undertaken transparently and with full accountability.

**POLICY OBJECTIVE:** The objective is to ensure that procurement is equitable, transparent, and accountable; promotes opportunities for local industries; and articulates and ensures developer and contractor obligations for environmental, social and ethical obligations.

**PROCESS ATTRIBUTES:**

- Level of understanding of sustainability issues and corruption risks in procurement of project contracts, goods and services
- Degree to which sustainability issues are factored into procurement decisions and documentation
- Level of transparency in the procurement process Quality of the contractual arrangements including penalties for the developer and procurers relating to non-compliance with anti-bribery requirements
- Quality of the bidding documents, including addressing antibribery issues
- Level of independent monitoring of the procurement processes

- Quality of the contract supervision mechanisms and of the internal and external government control bodies with responsibilities on overseeing the procurement processes.
- Quality of the complaints and dispute resolution system, including an effective and timely appeal mechanisms

**PERFORMANCE ATTRIBUTES:**

- Degree to which local labour and industry is included
- Quality and reliability of procured goods and services
- Level of competence of the suppliers and service providers
- Degree to which procurement decisions are accepted as economically efficient, fair, transparent and accountable by project stakeholders, including civil society
- Number of disputes
- Percentage of disputes successfully resolved

**EXAMPLES OF EVIDENCE:**

- Tender requirements / specifications
- Evaluation of supplier performance
- Purchasing policy / procedures
- Procurement ledgers, auditing records, accounting records

**8.14 Communications**

**DESCRIPTION:** This aspect addresses the effective use of communication to measure and address expectations and risks regarding the sustainable performance of the hydropower project as seen from all stakeholder perspectives. It encompasses communication within the company, communication between the company and external stakeholders (e.g. affected communities, governments, key institutions, partners, contractors, catchment residents, etc), communication mechanisms used by the developer to ensure sound business management and stakeholder relations, and the overall level of transparency in the communications about the project.

This aspect is important because of the cross-cutting need to coherently involve people in decisions that affect them and to support functional partnerships essential to deliver sustainable performance in all dimensions of hydropower development and operation. The quality of communications (alongside quality processes and products) can greatly influence the employee, contractor, regulator and stakeholder trust and confidence in the developer, and the efficiency of business processes.

**POLICY OBJECTIVE:** To ensure that project communications support all aspects of the project's sustainability performance, address stakeholder perceptions and concerns, and add value for all involved.

**PROCESS ATTRIBUTES:**

- Degree to which analytical based-assessments are used to identify communication needs of stakeholders
- Quality of the project communications strategy (e.g. comprehensive, linked to project objectives, prepared collaboratively)
- Level of communication support for key project partnerships
- Level of communication support to empower stakeholder voices
- Quality of the processes to review, refine and adjust communication strategies over time

- Adequacy of a developer's communication unit (with qualified staff) in the project management structure to coordinate communication inputs

**PERFORMANCE ATTRIBUTES:**

- Degree to which stakeholder views are reflected in the project communication strategy
- Number of stakeholder complaints on lack of project status information or responsiveness to raised concerns
- Number of communication failures on key project partnerships

**EXAMPLES OF EVIDENCE:**

- Project communication plans and strategies
- Independent surveys
- Records of stakeholder input and feedback

**8.15 Project Benefits**

**DESCRIPTION:** This aspect addresses project benefits with a particular focus on benefit sharing, including revenue sharing, entitlements and access to resources and equitable access to electricity for those in the resettlement zone and immediate project area.

This aspect is important because through project benefits there is the potential to improve livelihoods of host communities and the broader region, and to potentially support broader economic development, and through benefit sharing strategies it can clearly be demonstrated that the project adds value to all affected parties.

**POLICY OBJECTIVE:** The objective is to ensure that (i) opportunities for provision of benefits to the region have been identified and explored; and that (ii) opportunities for provision of benefits to project affected people have been identified and are implemented, that project affected people share in those benefits, and that they have a role in decision making on optimizing and sharing of those benefits throughout the project life.

**PROCESS ATTRIBUTES:**

- Quality of the project benefit analysis
- Quality of the benefit sharing assessment
- Quality of the benefit sharing plan
- Quality of the participatory process
- Quality of the monitoring, evaluation and review plan to ensure commitments are met

**PERFORMANCE ATTRIBUTES:**

- Level of finance secured for revenue sharing
- Level of stakeholder support
- Likelihood of extent to which opportunities identified and prioritised by project affected people can be realised.
- Extent of livelihood restitution and food security attained

**EXAMPLES OF EVIDENCE:**

- Benefit sharing plan

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- Independent assessments of poverty, living standards, food security, access to electricity and access to resources
  - Stakeholder interviews

### **8.16 Asset and Community Safety**

**DESCRIPTION:** This aspect addresses planning for asset and community safety through implementation and operation periods.

This aspect is important because the first priority for dam designers, builders, owners and operators is dam safety and the protection of life, property and the environment from the consequences of dam failure and other safety risks (e.g. road, construction and water management, or personal safety of non-project locals).

**POLICY OBJECTIVE:** This objective is to ensure the protection of life, property and the environment from the consequences of dam failure and other safety risks.

**PROCESS ATTRIBUTES:**

- Quality of the safety management and monitoring plan
- Quality of the Emergency Preparedness Plan (EPP) / asset safety implementation
- Quality of the auditing and reporting on safety performance
- Quality of the community and staff consultations and training for safety and EPP
- Quality of the log of complaints and suggestions
- Quality of the communications / engagement planning
- Comprehensiveness of the identification and prioritisation of risks

**PERFORMANCE ATTRIBUTES:**

- Degree of involvement of regulators and safety-oriented stakeholders in monitoring, testing, reporting
- Degree of effectiveness of the complaints mechanism
- Level of community participation and support
- Level of performance on safety performance statistics
- Level of adherence to planned arrangements during safety drills and incidents

**EXAMPLES OF EVIDENCE:**

- Safety management plans
- Emergency preparedness plans
- Safety monitoring reports and records

### **8.17 Environmental Management Plan**

**DESCRIPTION:** This aspect addresses the management of environmental impacts associated with the hydropower development and planned operation.

This aspect is important because it identifies and assesses the environmental management measures to avoid, minimise, mitigate and/or compensate for environmental impacts and, where possible, enables environmental enhancement.

**POLICY OBJECTIVE:** The objective is to ensure that management measures are designed to comprehensively and effectively address environment impacts for the implementation and operation of the project.

**PROCESS ATTRIBUTES:**

- Quality of environmental management planning
- Level of adequacy of capacity and resources to implement
- Degree of alignment with the environmental impact assessment
- Quality of participatory process (stakeholder engagement / regulator, variety of perspectives)
- Quality of mechanisms for monitoring and continual improvement throughout the life of the project

**PERFORMANCE ATTRIBUTES:**

- Level of regulatory support for EMP
- Level of stakeholder support for EMP
- Degree to which the EMP has been integrated with site selection, design optimisation and the project management plan
- Degree to which the EMP has effective measures to comprehensively avoid, minimise, mitigate and compensate for environmental impacts and where possible enable environmental enhancement

**EXAMPLES OF EVIDENCE:**

- Existing EMP
- Agreements with stakeholders and/or regulators
- Independent expert testimony on EMP plans or content
- Records of measures and processes in place which address environmental impacts

**8.18 Catchment Management**

**DESCRIPTION:** This aspect addresses the proponent's role in catchment management in relation to other stakeholders and managers.

This aspect is important because (i) the health of the catchment and present and future land uses may have implications for hydropower operations; and (ii) management actions of the developer can affect environmental, social and economic values in the catchment.

**POLICY OBJECTIVE:** The objective is to promote catchment management that ensures good environmental, social and economic outcomes, taking into consideration the specific role and responsibility of the proponent.

**PROCESS ATTRIBUTES:**

- Level of understanding of the catchment, land uses, interactions and other influences on catchment condition
- Clarity of definition of the role and responsibility of the proponent and accountability of other parties
- Quality of identification of environmental, social and economic objectives for catchment management
- Quality of the catchment management planning process

- Quality of participatory process (stakeholder engagement / regulator, variety of perspectives)
- Degree of integration of catchment management planning with broader regional conservation and land-use priorities

**PERFORMANCE ATTRIBUTES:**

- Degree to which the catchment management plan is achieving desired specific environmental, social and economic outcomes
- Degree to which the monitoring and adaptive management programme is adequately resourced and is achieving desired outcomes
- Level of regulator support
- Level of stakeholder support

**EXAMPLES OF EVIDENCE:**

- Design plans for land restoration and rehabilitation
- Catchment management agreements or planning
- High-value terrestrial habitat retention or protection programs

**8.19 Reservoir Management**

**DESCRIPTION:** This aspect addresses the planning for management of environmental, social and economic issues within and around the reservoir area during project development and operation.

This aspect is important because there are some particularly critical issues relevant to the reservoir area to be addressed at all stages: (i) during construction (e.g. clearing of vegetation, contaminated sites, cultural heritage); (ii) during reservoir filling (e.g. water quality, wildlife management, community impacts, land stability); and (iii) during operations (e.g. optimising power generation, integrating multiple uses, commercial uses, rights of access, safety, aesthetics). The potential for production of greenhouse gases needs assessment at the project preparation stage with feedback into siting and design considerations.

**POLICY OBJECTIVE:** The objective is to ensure that the reservoir is designed and managed to achieve a balance among biodiversity, habitat and ecosystem services and social and economic objectives, including power and other multi-purpose outcomes of the hydropower facility.

**PROCESS ATTRIBUTES:**

- Quality of identification of environmental, social and economic objectives for reservoir management
- Quality of design of the reservoir and ongoing operation and maintenance of the reservoir
- Quality of participatory process (stakeholder engagement / regulator, variety of perspectives)
- Quality of the assessment of greenhouse gas emissions

**PERFORMANCE ATTRIBUTES:**

- Degree to which reservoir design and management are achieving desired specific environmental, social and economic outcomes
- Degree to which monitoring and adaptive management programme is adequately resourced and likely to achieve desired outcomes.
- Degree to which reservoir management is fully integrated in infrastructure design, operations management and economic / financial analysis

- Level of regulator support
- Level of stakeholder support

**EXAMPLES OF EVIDENCE:**

- Reservoir design documents
- Model output for reservoir operations
- Documented environmental, social, and economic objectives for reservoir management

**8.20 Environmental Flows and Downstream Sustainability**

**DESCRIPTION:** This aspect addresses the design of environmental flows in relation to environmental, social and economic impacts and benefits downstream of the planned hydropower development and operation.

This aspect is important because flow regulation can affect the viability of representative ecosystems and habitats for rare, endemic and endangered fresh water dependant species, and ecosystem services as well as social and economic objectives.

**POLICY OBJECTIVE:** The objective is to ensure that a downstream flow regime has been designed to achieve the best fit between biodiversity, habitat, ecosystem services and social and economic objectives, including power and other multi-purpose outcomes of the hydropower facility.

**PROCESS ATTRIBUTES:**

- Quality of identification of environmental, social and economic objectives for environmental flows
- Level of understanding of relationship between hydrology, ecosystems and social uses
- Level of understanding of relationship between hydrology and environmental, social and economic objectives
- Quality of design of the environmental flow (e.g. pattern of flow, balance between objectives)
- Quality of participatory process (stakeholder engagement / regulator, variety of perspectives)

**PERFORMANCE ATTRIBUTES:**

- Degree to which the flow regime is likely to achieve environmental, social and economic objectives
- Degree to which the monitoring and adaptive management programme is adequately resourced and likely to achieve desired outcomes
- Degree to which the environmental flow is fully integrated in infrastructure design, operations management and economic / financial analyses
- Level of regulator support
- Level of stakeholder support

**EXAMPLES OF EVIDENCE:**

- Documented environmental, social, and economic objectives for downstream flows
- Documented measures and processes in place to manage downstream flows
- Surveys or other measures of stakeholder opinion
- Investigations and scientific reports

### **8.21 Biodiversity, Habitats and Protected Areas**

**DESCRIPTION:** This aspect addresses ecosystem values, habitat and specific issues such as threatened species and fish passage in the catchment, reservoir and downstream areas. It also looks at management actions to protect habitats and specific areas of high conservation value and assesses opportunities for enhancement / restoration of biodiversity resources.

This aspect is important because hydro projects can have significant impacts on biodiversity and because development of all types may create cumulative impacts on biodiversity.

**POLICY OBJECTIVE:** The objective is to ensure the protection of biodiversity and high conservation value areas through the implementation and operation of the project, and to enhance where practicable opportunities arise.

#### **PROCESS ATTRIBUTES:**

- Quality of identification of objectives for biodiversity and conservation area management, including target species and habitats
- Quality of plans to manage for biodiversity and conservation objectives
- Quality of participatory process (stakeholder engagement / regulator, variety of perspectives)
- Degree of integration with broader regional conservation and biodiversity priorities

#### **PERFORMANCE ATTRIBUTES:**

- Degree to which biodiversity and habitat management plan is achieving objectives
- Degree to which monitoring and adaptive management programme has been adequately resourced and is likely to achieve objectives
- Level of regulator support
- Level of stakeholder support

#### **EXAMPLES OF EVIDENCE:**

- Research and database on biodiversity and threatened species
- Interviews with regulators
- Independent assessment by appropriately qualified individuals or groups

### **8.22 Pest and Invasive Species**

**DESCRIPTION:** This aspect addresses potential impacts arising from pest and invasive species associated with the hydropower project.

This aspect is important because pests and invasive species can have significant impacts on indigenous biodiversity and the social and economic activities in the project area including the future operation of the hydropower project.

**POLICY OBJECTIVE:** The objective is to ensure the protection of biodiversity and social and economic values in the catchment area, reservoir and downstream environment from the impacts of pest and invasive species.

#### **PROCESS ATTRIBUTES:**

- Quality of the risk assessment of potential pests and invasive species

- Quality of planning to prevent the introduction and manage the spread of pests and invasive species, including setting objectives
- Degree of integration with broader regional pest and invasive species management programmes

**PERFORMANCE ATTRIBUTES:**

- Degree to which pest and invasive species management plan is achieving objectives
- Degree to which monitoring and adaptive management programme has been adequately resourced and is likely to achieve objectives
- Level of regulator support

**EXAMPLES OF EVIDENCE:**

- Research and database on pest and invasive species
- Interviews with regulators
- Independent assessment by appropriately qualified individuals or groups
- Documents on measures and processes in place to control pest and invasive species

**8.23 Sedimentation and Erosion and Water Quality**

**DESCRIPTION:** This aspect addresses the management of potential impacts arising from sedimentation and erosion associated with the hydropower development.

This aspect is important because sedimentation and erosion can affect the functioning of the hydropower facility, the lifetime of the reservoir, and the environmental, social, economic values and safety in the reservoir and downstream areas.

**POLICY OBJECTIVE:** The objective is to ensure that the project as a whole is designed and managed to avoid, minimise and mitigate reservoir and downstream impacts related to sedimentation and erosion.

**PROCESS ATTRIBUTES:**

- Quality of risk assessment of potential sedimentation and erosion issues in the reservoir and downstream area
- Quality of the planning for the siting, design and operations of the hydropower project to manage risks associated with sedimentation and erosion.

**PERFORMANCE ATTRIBUTES:**

- Degree to which siting, design and operations of the hydropower project are likely to achieve desired level of risk management in relation to sedimentation and erosion
- Degree to which the monitoring and adaptive management programme is adequately resourced and likely to achieve desired outcomes.
- Degree to which the sedimentation and erosion management is fully integrated in site selection, design, operations planning, economic / financial analysis and environmental flow planning.
- Level of regulator support

**EXAMPLES OF EVIDENCE:**

- Sedimentation and erosion risk management planning

- Investigations into sedimentation and erosion issues in the reservoir and downstream
- Interviews with stakeholders and regulators

#### **8.24 Waste, Noise and Air Quality Management**

**DESCRIPTION:** This aspect addresses the management of potential impacts arising from the construction of a hydropower project on waste generation, noise levels and air quality.

This aspect is important because during the construction and implementation of a hydropower project can have impacts on the amount of waste and noise generated and on the air quality of the surrounding environment and habitats.

**POLICY OBJECTIVE:** The objective is to ensure that the construction phase is designed and managed to avoid, minimize and mitigate potential impacts on waste generation, noise levels and air quality.

**PROCESS ATTRIBUTES:**

- Quality of impact assessment of potential pollution and waste and noise generation
- Integration of measures to control and minimize waste, noise and pollution during the construction

**PERFORMANCE ATTRIBUTES:**

- The waste generation is controlled and managed, potential recycling and depositing opportunities are identified
- Potential sources of noise generation are identified. Necessary steps have been taken to reduce their impact on the surrounding environment and habitats
- The generation of pollution during the construction phase is controlled and managed

**EXAMPLES OF EVIDENCE:**

- Research and reporting on potential pollution, waste generation and noise levels
- Existing plans to manage waste, noise and air quality
- Evidence of waste, noise and air quality management procedures