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## BACKGROUND

There is a resurgence of interest in hydropower as a result of the needs for a low carbon economy, energy security and improved water management.

There have been considerable contributions towards understanding and guiding sustainability performance in the dams sector generally and hydropower particularly, the most notable being the World Commission on Dams (WCD) assessment in 1998-2000. Despite prior efforts, there is presently an absence of a broadly agreed hydropower sustainability assessment tool and standard, and disparate approaches are being used at local, national and regional levels. The International Hydropower Association (IHA) in close collaboration with a range of partners launched the Hydropower Sustainability Assessment Forum (the “Forum”) in March 2008 to address this gap. The Forum is a cross-sectoral group that aims to establish a broadly endorsed sustainability assessment tool to measure and guide performance in the hydropower sector, based on the existing IHA Sustainability Assessment Protocol (2006). Forum members include governments of developed and developing countries, commercial and development banks, social and environmental NGOs, and the hydropower sector.

The Forum is operating over a two year period. Following the Forum launch in March 2008 in Washington DC, Forum meetings have been held in July 2008 (USA), September 2008 (Zambia), October 2008 (China), December 2008 (Brazil), and March 2009 (Turkey). The Forum next meets in June 2009 (Iceland), with a further two meetings planned in October 2009 and February 2010 (locations to be confirmed). The Forum has been determining the relevant issues to be included in the assessment protocol and the measurement approach for each of these issues. The work plan has involved input from experts on key hydropower sustainability themes, on-ground assessments of hydropower projects, workshop sessions, input from key stakeholder reference groups, and input from an open consultation period around the proposed key components of the assessment tool (January-February 2009).

This document is the first full draft of the Hydropower Sustainability Assessment Protocol (the “Protocol”), dated July 2009, and represents the recommendations of the Hydropower Sustainability Assessment Forum on a globally applicable hydropower sustainability assessment tool. The Draft Protocol is to be subject to a period of trialling and a second phase of consultation during August-October 2009. The intent is that the Draft Protocol will be finalized, incorporating the outcomes of the consultation and trialling, by early 2010. A subsequent work phase intends to focus on potential Protocol applications potentially including pathways towards a sector standard and certification scheme.

Full background on the Hydropower Sustainability Assessment Forum and the process leading to development of the Draft Protocol can be found at [www.hydropower.org/sustainable\\_hydropower/hsaf.html](http://www.hydropower.org/sustainable_hydropower/hsaf.html)

## INTRODUCTION

This section provides information on the Protocol's guiding principles, and about the assessment tool, the assessment process and the assessment results.

### *Guiding Principles*

- Hydropower, developed and managed sustainably, can provide national, regional, and local benefits, and has the potential to play an important role in enabling communities to meet sustainable development objectives.
- Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

- Sustainable development embodies reducing poverty, respecting human rights, changing unsustainable patterns of production and consumption, long-term economic viability, protecting and managing the natural resource base, and responsible environmental management.
- Sustainable development calls for considering synergies and trade-offs amongst economic, social and environmental values. This balance should be achieved and ensured in a transparent and accountable manner, taking advantage of expanding knowledge, multiple perspectives, and innovation.
- Social responsibility, transparency, and accountability are core sustainability principles.

### ***Purposes and Uses of the Protocol***

The Hydropower Sustainability Assessment Protocol is an assessment framework of sustainability for hydropower projects. It outlines the important sustainability considerations for a hydropower project, and sets out a framework to measure that particular project on a graded spectrum of practice. Four different sections of the protocol are dedicated to different life cycle stages of a hydropower project, as the critical issues and criteria to evaluate performance differ in these different stages. Assessment relies on objective evidence to support a score, that is, evidence that is factual, reproducible, objective and verifiable.

The Hydropower Sustainability Assessment Protocol has not been developed for a single purpose, but for a broad range of potential applications all in the interests of lifting sustainability performance for hydropower developments and operations. Potential users and uses include, but are not limited to:

- All sectors, including project affected communities, providing a common basis for dialogue on sustainability issues;
- Governments, potential financiers and other decision-makers to ensure that new hydropower developments are an appropriate solution for the context in which they are proposed;
- Companies, governments, financial institutions and NGOs to guide development of new hydropower facilities;
- Companies, governments and development agencies to assess the sustainability of existing operations and develop programs for improvement;
- NGOs and civil society to evaluate the sustainability of hydropower projects at different life cycle stages, to form their own views on the sustainability performance of operators and financiers with respect to hydropower projects, and to form a basis for dialogue on these projects;
- Developers, financial institutions and other investors in assessing the risks of potential investments and as part of due diligence;
- The hydropower sector in seeking external qualification for financing from banks, carbon credits (e.g. CDM/JI), renewable energy credits (e.g. RECs), recognition in voluntary markets (e.g. green certificates); and the administrators of these schemes in judging admission;
- Verification agencies certifying a level of sustainability; and
- Hydropower owners/operators for corporate sustainability management and training.

A broadly endorsed assessment tool can be a foundation document from which there are many forward pathways, including identification of acceptable levels of performance for the different sustainability issues addressed in the protocol. The multitude of potential pathways forward will be considered by a second phase of effort in 2010, once the Hydropower Sustainability Assessment Protocol has been finalised. These potential pathways include sector guidelines, sustainability and performance standards, awards and recognition schemes, industry benchmarking, capacity building through training programs, admission criteria for specific

markets, sustainability certification schemes, informational websites, reflection in national and regional legislation and policies, and reflection in bank safeguards policies.

**The Protocol Structure**

The Protocol is built around Sections, Aspects and Attributes. The hydropower sustainability assessment protocol consists of four sections which reflect different stages of the project life cycle. Each section has a set of aspects, reflecting the key sustainability considerations at that stage of the project life cycle. Each aspect is assessed on up to seven attributes, or scoring components.

**Protocol Sections**

The four sections – Strategic Assessments, Project Preparation, Project Implementation, and Project Operation – are designed to be stand-alone assessment tools applied at particular stages of the project life cycle and have the potential to assist in the formulation of views on key decision points, as shown in Figure 1.

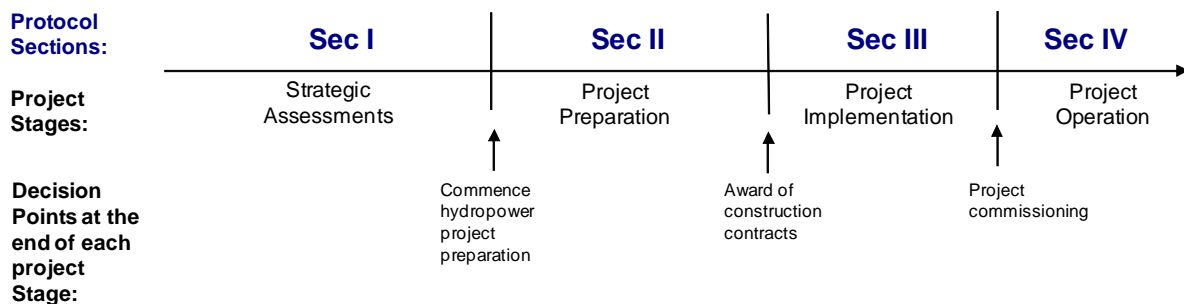


Figure 1 Protocol Sections and Major Decision Points

**Section I** assesses the strategic basis for a hydropower project. There is potentially a dual function of Section I, depending on the interests and needs of the user. It can be used to assess the strategic environment from which a hydropower project might emerge, or the fit of a potential hydropower project or system of projects within the strategic environment. Section I is considered valuable to demonstrate the strategic basis for the project, so that it is clear where a particular project fits within a strategic framework for development or sustainability (e.g. is a preferred source of electricity). Section I is seen as critical to getting support from all stakeholders for a project, because project criticisms can often relate back to the strategic basis for the project. Section I will identify consistencies and conflicts with important contextual components such as energy, water, conservation and economic development plans for the relevant country/region. This section of the Protocol can be used prior to and to inform the decision that there is a strategic basis to move forward with project preparation.

**Section II** assesses the preparation stage of a hydropower project, during which investigations, planning and design are undertaken for all aspects of the project. Following project preparation, there is a critical decision point in the decision to award the construction contracts. An assessment conducted at this point in time would assess whether all preparatory requirements have been met, management plans are in place, and commitments are appropriate and binding. This section of the Protocol can be used prior to, and to inform, the decision to move forward with project implementation. Following this point, construction commences along with relevant elements of environmental and social action plans.

**Section III** assesses the implementation stage of a hydropower project, during which construction, resettlement, environmental and other management plans and commitments are implemented. Commissioning of the power station enables the project to start to earn money, and in fact often some units (i.e. turbines) of a multiple unit power station are commissioned while others are still being installed to assist in meeting the financial commitments of the project. An assessment made prior to the decision to commission any units would assess

whether all commitments have been met, and can inform the timing and conditions of project commissioning.

**Section IV** assesses the operation of a hydropower facility. This section of the protocol can be used to inform the view that the facility is operating on a sustainable basis with active measures in place towards monitoring, compliance and continuous improvement.

Each section is a stand-alone assessment tool to measure performance of a hydropower project against sustainability criteria appropriate to that point in the project life cycle. Figure 2 illustrates which section would be applied at what point in the project life cycle. Hydropower projects tend to have an extensive lifetime, with many projects having been in service for more than a century. Major project decisions relating to project or network re-optimisation, project life extension or decommissioning would ideally go back to Section I Strategic Assessments. Project decisions relating to refurbishment could go back to a Section II Project Preparation assessment. In the case of re-licensing which would be assessing existing operations, Section IV Project Operation should be appropriate for the assessment.

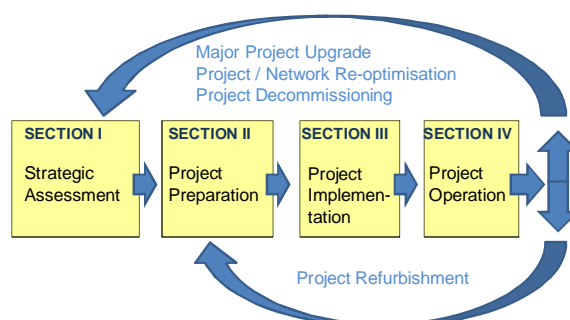


Figure 2 – Protocol Sections and the Project Life Cycle

### Protocol Aspects

Within each Protocol section is a set of aspects important to forming a view on the overall sustainability of that project at that point in its life cycle. The term aspect is used because they are not only sustainability issues being assessed, but also management systems and processes and other perspectives on sustainability performance. Aspects, when taken together, provide the list of issues that must be considered to confidently form a view on the overall sustainability of a hydropower project at a particular point in its life cycle.

Table 1 presents the aspects included in the Protocol, and groups them by the perspective they capture so that the relationships amongst the aspects can be better seen.

Perspective	Aspect Name	Sections
Regional / Strategic Perspective	- Demonstrated Need & Strategic Fit	I, II
	- Regional & National Policies & Plans	I
	- Options Assessment	I
	- Additional Benefits & Economic Viability	II, III, IV
Governance Perspective	- Institutional Capacity	I
	- Political Risk	I
	- Public Sector Governance & Regulatory Approval	II, III
Geographic / Spatial Perspective	- Corporate Governance	II, III, IV
	- River Basin & Transboundary Issues <i>(also relevant to regional perspective)</i>	II, III, IV
	- Catchment Management	II, III, IV
	- Reservoir Management	II, III, IV
Management Systems Perspective	- Downstream Flows & Environmental Sustainability	II, III, IV
	- Integrated Programme Management & Communications	II, III
	- Construction Management	II, III
	- Environmental Impact Assessment & Management <i>(also relevant to environmental issues perspective)</i>	II, III, IV
Social Impact Assessment & Management <i>(also relevant to social issues perspective)</i>	- Social Impact Assessment & Management	II, III, IV

Technical Issues Perspective	- Hydrological Resource Availability & Management	II, III, IV
	- Project Siting & Design Optimisation	II
	- Financial Viability	II, III, IV
	- Procurement	II, III, IV
	- Asset & Community Safety	II, III, IV
	- Asset Reliability & Efficiency	IV
Social Issues Perspective	- Markets, Innovation & Research	IV
	- Project Affected Community	II, III, IV
	- Indigenous Peoples	II, III, IV
	- Benefit Sharing	II, III, IV
	- Resettlement	II, III
	- Labour & Working Conditions	II, III, IV
Environmental Issues Perspective	- Cultural Heritage	II, III, IV
	- Public Health	II, III, IV
	- Biodiversity & Invasive Species	II, III, IV
	- Erosion & Sedimentation	II, III, IV
	- Water Quality	II, III, IV
	- Waste, Noise & Air Quality	III

*Table 1 Hydropower Sustainability Assessment Protocol Aspects*

The list of aspects for each section, including an explanation of what each aspect addresses and the aspect intent, is provided at the front of the relevant section content. Not every aspect will be relevant to every project, and so at the front of each section is Aspect Relevance Guide to assist in determining relevant aspects. For example, if there is no reservoir storage the Reservoir Management aspect does not need to be assessed, and if there is no Resettlement the Resettlement aspect does not need to be assessed.

**Protocol Attributes**

Each aspect in the section being applied is assessed on up to seven attributes, as relevant to that aspect. These attributes are divided into process and performance as shown in Table 2.

<b>Process Attributes</b>	<b>Focal Area</b>
Quality of the Assessment Process	Addresses assessment requirements for a particular aspect, including identification of the baseline condition; legal and other requirements; impact, risk and opportunity assessment.
Quality of the Management Process	Addresses management planning and implementation for a particular aspect, including objectives and targets, resource allocation, roles and responsibilities, implementation strategies, checking and evaluation, and continuous improvement.
Quality of the Consultation Process	Addresses the consultation process undertaken for a particular aspect, including stakeholder mapping, engagement processes, support for stakeholders in the consultation process, transparency, grievance and dispute mechanisms.
<b>Performance Attributes</b>	<b>Focal Area</b>
Level of Stakeholder Support	Addresses the level of stakeholder support for the process and performance for a particular aspect, with respect to those stakeholders identified in the consultation process.
Level of Compliance	Addresses the level of compliance with legal requirements and other public commitments that have been made for a particular aspect.
Level of Conformance with Plans	Addresses the level of conformance of implementation measures with most up-to-date project-related plans, with a particular emphasis on the quality of internal business systems and processes.
Level of Effectiveness	Addresses the effectiveness of implementation activities for that aspect, in terms of on-ground outcomes, desired outcomes and/or agreed performance measures

*Table 2 Process and Performance Attributes Scored for Each Aspect*

## *Application of the Protocol*

### **Conducting a Protocol Assessment**

The Protocol is designed to be used for a wide range of purposes, including self-assessments for project continuous improvement. If the assessment has a high degree of formality or the results are going to be presented publicly, assessments are ideally done by an auditor or audit team trained or experienced in application of the Protocol. In the future it is envisaged that a training and accreditation program will be developed for auditors applying the Protocol.

In the assessment process, the auditor interviews the project developer / owner / operator and a range of relevant stakeholders, plus reviews evidence, to form scores for each of the aspects (issues) addressed within the relevant Protocol section.

Assessments are conducted at the hydropower project site, with a typical itinerary is as follows:

- **First Day** - Initial meeting at which are provided presentations by auditor about the assessment process, and by the project owners and others (such as government agencies) about the project. This is typically followed by a tour of the project, including downstream impacted areas and resettlement areas as far as practicable given travel times, practical logistics, and key areas of focus for the project.
- **Intermediate Days** - Interviews by the auditor in relation to all Protocol aspects. These interviews would be with the project developer/owner/operator, and also with other stakeholders (e.g. government, experts, NGOs, civil society, project affected communities) relevant to the different Protocol assessment requirements. The auditor will also spend time reviewing evidence typically in the form of reports and documents. The number of days may be 1, 2 or 3 depending on size and complexity of the project, and also travel times.
- **Final Day** - Close out meeting between the auditor and the project representatives, typically involving a presentation and discussion on key assessment findings and areas of strength, weakness and opportunity for the project.

### **Steps in the Protocol Assessment Process**

Figure 3 outlines the process for application of the Protocol.

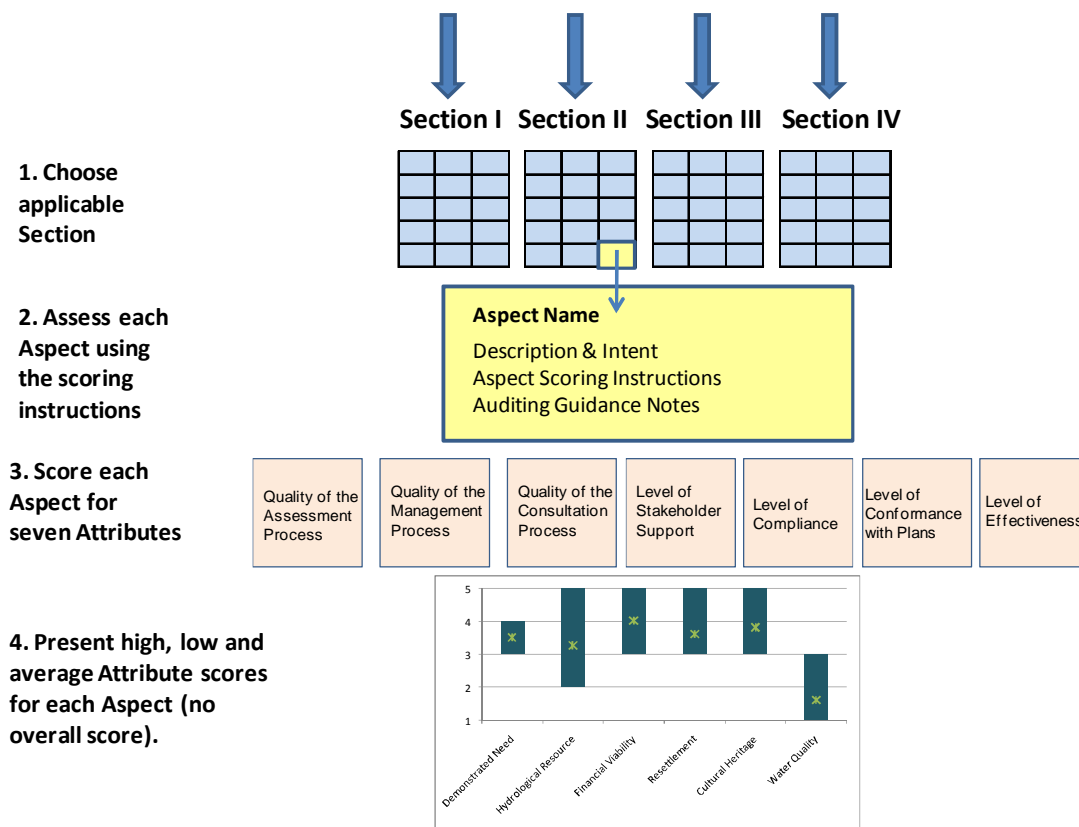


Figure 3 – The Protocol Assessment Process

## Understanding the Aspect Pages

Figure 4 shows the layout for each aspect page within each Protocol section.

ASPECT REFERENCE CODE	ASPECT NAME	RELEVANT SECTION			
INTRODUCTORY DESCRIPTIVE STATEMENTS: Statement of what the aspect addresses. Statement of the aspect intent.					
CRITERIA FOR ASPECT TO BE CONSIDERED NOT RELEVANT: Not all aspects will be relevant to every project.					
CONSIDERATIONS IN RELATION TO PROJECT CONTEXT OR SCALE: Any notes that might assist the auditor in understanding the application of the scoring instructions to projects in differing countries, geographic settings, types or size.					
TABLE OF SCORING INSTRUCTIONS: Each cell has the requirements to be met to receive that score. All requirements must be met in that score to receive that score.					
<b>Process Attributes</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
Assessment					
Management					
Consultation					
<b>Performance Attributes</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
Stakeholder Support					
Conformance with Plans					
Compliance					
Effectiveness					
AUDITING GUIDANCE NOTES: Any notes that may assist the auditor in determining a score.					
EXAMPLES OF EVIDENCE: Types of evidence that the auditor might ask about in relation to the attribute scoring. There will be others, those provided are not an exclusive list.					

Figure 4 – Layout of an Aspect Page

Each aspect contains Criteria to be Met for the Aspect to be Considered Not Relevant. This is consistent with the Aspect Relevance Guide at the front of the section.

Considerations in Relation to Project Context or Scale provide advice for the auditor on any considerations relating to project type, size or location. This is in recognition that the Protocol is intended to be a global tool and there is a lot of variety that must be accommodated. These considerations might be with respect to, for example, public or private sector projects, mainstem or tributary stream siting, multi-unit versus single-unit design, single versus multi-use purpose, reservoir versus run-of-river design, or different country approaches to an issue.

### **Scoring**

Each of the seven attributes for each aspect is scored from level 1 to 5. Levels are meaningful and recognisable milestones without specifying a level of acceptability. Level 1 is understood to be the absence of or very poor practice. Level 3 is understood to be basic good practice, with a particular consciousness of what is achievable in countries with minimal resources or capacities or with projects of smaller scales and complexities. Level 5 is understood to be proven best practice, but conscious of the global applicability of this tool, so that it is not only attainable by the largest projects with the most resources at their disposal.

The aspect score instructions for each section identify the requirements to be met to receive a particular score. For example, the Quality of the Assessment Process attribute for the Water Quality aspect would receive a score of 3 if it meets all of the specifications in the scoring instructions for the Water Quality aspect for a score of 3; if not, the next lowest score would be assigned. For some attributes it is indicated on the aspect scoring instructions that it is Not Relevant to that aspect in that particular section; in this case, the scores for that aspect would present the high, low and average aspect scores based on the number of relevant attributes.

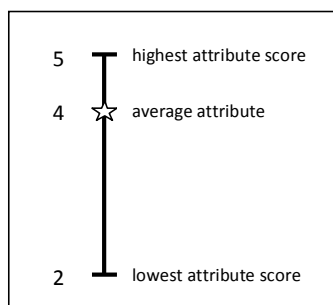
These scores are assigned by the auditor based on observations, interviews with relevant stakeholders, and review of objective evidence. The term objective evidence refers to evidence provided by an auditee and used by an assessor to verify whether and to what degree an attribute has been met. Evidence can be qualitative or quantitative information, records or statements of fact, either verbal or documented. It is retrievable or reproducible, is not influenced by emotion or prejudice, and is based on facts obtained through observation, measurements, documentation, tests or other means.

Scores are assigned at the lowest level for which evidence is provided. In the absence of evidence, the lowest score is assigned. The developer / owner / operator is responsible for providing the evidence to justify scores; however the auditor may conduct independent research to identify issues that may have been raised in relation to the project.

### **Presenting the Results**

Table 3 is an auditor worksheet to document the findings of the assessment of each aspect. The intention is to have a worksheet completed for each aspect, and a summary table of results.

A summary aspect score diagram will be used for each aspect to show highest, lowest and average attribute scores, as per Figure 5.



*Figure 5 Example Aspect Scoring*



**Table 3 - HYDROPOWER SUSTAINABILITY ASSESSMENT PROTOCOL AUDITOR WORKSHEET**

**PROJECT NAME:** \_\_\_\_\_

**ASPECT NAME:** \_\_\_\_\_

**SCORING SUMMARY: Highest Attribute Score:** \_\_\_\_\_ **Lowest Attribute Score:** \_\_\_\_\_ **Average Attribute Score:** \_\_\_\_\_

<b>ATTRIBUTE</b>	<b>SCORE (1-5)</b>	<b>PARTIES INTERVIEWED</b>	<b>EVIDENCE</b>	<b>NOTES</b>
<b>Quality of the Assessment Process</b>				
<b>Quality of the Management Process</b>				
<b>Quality of the Consultation Process</b>				
<b>Level of Stakeholder Support</b>				
<b>Level of Conformance with Plans</b>				
<b>Level of Compliance</b>				
<b>Level of Effectiveness</b>				

**AUDITOR NAME / DATE:** \_\_\_\_\_

***Auditor Guidance Notes***

In a number of cases, the criteria for evaluating an attribute are common to many aspects. In this case, there will be a note in the aspect scoring table for that aspect saying “See (Attribute Name) Guidance Note”. These attribute guidance notes are provided here, followed by a section called Understanding of Gradations in Scoring and then a Glossary.

Fundamental to understanding the scoring approach is to understand the concepts of “suitable<sup>1</sup>”, “adequate<sup>2</sup>” and “effective<sup>3</sup>”. These terms are utilized to ensure that expectations are appropriate to the needs at hand, and “gold-plating” or investing more and more resources (time, money, data collection and analysis) into something is understood to have an optimum beyond which is not considered sustainable. This is also consistent with avoiding association of those projects with the most resources available to them as being the most sustainable.

**Guidance Note – Quality of the Assessment Process**

The assessment process underpins the understanding of the issue, the arrangements for management, and the ability to evaluate effectiveness. Considerations relevant to quality of the assessment process include:

1. Identification of baseline condition. This includes evaluation of issues relevant to that aspect, geographic coverage with respect to the project’s area of influence, methodologies, type and length of data set, and type of analysis.
2. Clarity of definition of the role and responsibility of the proponent and accountability of other parties (e.g. government).
3. Identification of legal and other requirements.
4. Identification of potential positive and negative impacts related to project implementation and operations.
5. Risk assessment of potential impacts. This includes likelihood and consequences of particular impacts occurring, and addressing of uncertainties for example by extending data sets, forecasting/modeling, and parallel studies.
6. Opportunity assessment to determine if improvements could be made to the existing condition.
7. Evaluation of scenarios, including alternative project siting and design options, and alternative management and mitigation measures.
8. Allocation of resources to the assessment process. This includes qualifications/expertise of those involved, utilization of local knowledge as appropriate, scale of resource commitment, and continuity (for example project preparation may take 5-10 years).

<b>Score</b>	<b>Requirements</b>
5	<ul style="list-style-type: none"> <li>• Suitable, adequate, and effective assessment process with no gaps.</li> <li>• In-depth analysis of all components.</li> </ul>
4	<ul style="list-style-type: none"> <li>• Suitable, adequate, and effective assessment process with very few non-critical gaps.</li> <li>• Good analysis of all components and in-depth analysis of some.</li> </ul>
3	<p>Suitable, adequate, and effective assessment process with a number of non-critical gaps in components.</p> <ul style="list-style-type: none"> <li>• Good analysis of all components.</li> </ul>
2	A number of critical gaps in components results in an assessment process that is significantly less than suitable, adequate, and/or effective.
1	<ul style="list-style-type: none"> <li>• A large number of critical gaps in the assessment process.</li> </ul>

**EXAMPLES OF EVIDENCE:** - Assessment reports, - Risk and uncertainty analyses, - Scenario analyses, - Expert advice

<sup>1</sup> Suitable - Appropriate for a desired purpose, condition, or occasion  
<sup>2</sup> Adequate - Sufficient or enough to satisfy a requirement or meet a need  
<sup>3</sup> Effective - Producing or capable of producing an intended, expected, and/or desired effect

### Guidance Note – Quality of the Management Process

The quality of management planning and implementation are a key measure of present and likely future sustainability performance. Considerations relevant to this attribute include:

<b>Assess</b>	1. Integration of the assessment process as the basis for development of planned arrangements.
<b>Plan</b>	2. Formulation of plans or planned arrangements <sup>4</sup> . Plans outline measures to manage (avoid, minimise, mitigate, compensate) risks and enhance opportunities, including the establishment of achievable objectives and targets.
<b>Do</b>	3. Implementation of the planned arrangements. This includes utilising appropriate and effective methodologies. 4. Allocation of resources. This includes qualifications/expertise of those involved; utilization of local capacity as appropriate; scale of resource commitment; continuity of resources through project preparation, implementation and operation; and contingency planning.
<b>Check</b>	5. Clarity of roles, responsibilities and accountabilities. 6. Effective strategies for identifying and managing change.
<b>Act</b>	7. Checking and evaluation, including monitoring, auditing, and management review. 8. Continual improvement and adaptive management, including management of nonconformities, corrective and preventive actions, and any necessary plan revision.

Score	Requirements
5	<ul style="list-style-type: none"> <li>• Suitable, adequate, and effective management process with no gaps, described in a management system<sup>5</sup> that meets relevant and recognised standards.</li> <li>• Planned arrangements are closely monitored and promptly improved as issues arise.</li> </ul>
4	<ul style="list-style-type: none"> <li>• Suitable, adequate, and effective management process with very few non-critical gaps, integrated into a management system that meets relevant and recognised standards.</li> <li>• Planned arrangements are regularly and frequently reviewed, and improved as necessary.</li> </ul>
3	<ul style="list-style-type: none"> <li>• Suitable, adequate, and effective management process with a number of non-critical gaps in components.</li> <li>• Planned arrangements are periodically reviewed and improved.</li> </ul>
2	<ul style="list-style-type: none"> <li>• A number of critical gaps in management process results in management plans that are significantly less than suitable, adequate, and effective.</li> <li>• Critical gaps in the review and improvement of planned arrangements.</li> </ul>
1	<ul style="list-style-type: none"> <li>• A large number of critical gaps in management process.</li> <li>• Planned arrangements are not reviewed or improved.</li> </ul>

**EXAMPLES OF EVIDENCE:** - Management plans, - Change management process, - Monitoring and management reviews, - Audit reports.

<sup>4</sup> Management measures to address an issue may not always be formalised into management plans, but may be documented planned arrangements, for example based on agreements for forward actions made at meetings

<sup>5</sup> A management system is the framework of processes and procedures used to ensure that an organisation can fulfill all tasks required to achieve its objectives. In the case of some aspects, management of that aspect may be incorporated into a higher level management system (e.g. management of Water Quality within the Environmental Management System).

**Guidance Note – Quality of the Consultation Process**

Effective consultation is a fundamental requirement for ensuring positive and sustainable outcomes for both the project and the stakeholders<sup>6</sup> directly or indirectly affected by it. Considerations relevant to this attribute include:

<b>Assess</b>	1. Identification of issues and associated affected stakeholders. This includes stakeholder mapping and engagement guided by the consideration of rights, risks and responsibilities.
<b>Plan</b>	2. Formulation of the consultation plan. This includes consultation objectives and targets over an appropriate time period.
<b>Do</b>	3. Appropriateness and transparency of the engagement processes. This includes freedom to participate, assistance to stakeholders, timing, location, accessibility of information, and feedback procedures, 4. Allocation of resources for consultation. This includes appropriateness, scale, continuity and capability. 5. Consultation developed with informed participation of affected peoples, respectful of rights, culturally sensitive, and gives appropriate attention to gender, minorities, level of literacy, and others who might require particular assistance. 6. Integration of the consultation plan, processes and outcomes with other relevant plans and arrangements. 7. Issues raised in the consultation considered in the decision-making.
<b>Check</b>	8. Grievance and dispute resolution processes. This includes grievance mechanisms in appropriate languages, and evaluating if they were developed with affected stakeholder participation.
<b>Act</b>	9. Monitoring, evaluation, review, and continual improvement of the consultation plan.

<b>Score</b>	<b>Requirements</b>
5	<ul style="list-style-type: none"> <li>• Suitable, adequate, and effective consultation process with no gaps.</li> <li>• Consultation is fully integrated with other relevant plans and arrangements</li> <li>• Consultation is closely monitored, frequently reviewed, and promptly improved as issues arise; and where necessary includes an iterative process.</li> </ul>
4	<ul style="list-style-type: none"> <li>• Suitable, adequate, and effective consultation process with very few non-critical gaps.</li> <li>• Consultation is integrated with other relevant plans and planned arrangements.</li> <li>• Consultation is regularly reviewed, and improved as necessary.</li> </ul>
3	<ul style="list-style-type: none"> <li>• Suitable, adequate, and effective consultation process with a number of non-critical gaps.</li> <li>• Consultation is integrated with other relevant plans and planned arrangements with only non-critical gaps.</li> <li>• Consultation is periodically reviewed and improved.</li> </ul>
2	<ul style="list-style-type: none"> <li>• A number of critical gaps in components results in the consultation process that make it less than suitable, adequate, and effective.</li> <li>• Consultation is only partially integrated with other relevant plans and planned arrangements.</li> <li>• Critical gaps in the review and improvement of consultation process.</li> </ul>
1	<ul style="list-style-type: none"> <li>• A large number of critical gaps in the consultation process.</li> <li>• Consultation is not integrated with other relevant plans and planned arrangements.</li> <li>• Consultation is not reviewed or improved.</li> </ul>

**EXAMPLES OF EVIDENCE:** - Stakeholder maps, - Consultation plan / program including engagement strategies, - Records of meetings, surveys, web information, written materials, media information and various forms of engagement, - Grievance and dispute resolution procedures, - Consultation analysis reports, - Consultation response reports, - Interviews with stakeholders.

<sup>6</sup> Stakeholder – one who is involved in or affected by a course of action. Directly affected stakeholders are those with clear rights, risks and responsibilities in relation to the project. Stakeholder groups are groups of stakeholders with common characteristics or interests.

**Guidance Note – Level of Stakeholder Support**

This attribute assesses the level of support, with respect to a particular issue, of those stakeholders identified and engaged in the consultation process who are considered directly affected by the project. Considerations relevant to this attribute include:

1. Level of support of stakeholder groups directly affected by that issue for the assessment, management and consultation processes for the issue, and associated review and improvement.
2. Level of support of stakeholder groups directly affected by that issue for the outcomes.
3. Level of success in resolving disputes.

Score	Requirements
5	<ul style="list-style-type: none"> <li>• Nearly all stakeholder groups directly affected by that issue support the assessment, management and consultation processes for the issue.</li> <li>• Nearly all stakeholder groups directly affected by that issue support the outcomes.</li> <li>• Full resolution of any disputes.</li> </ul>
4	<ul style="list-style-type: none"> <li>• A large majority of stakeholder groups directly affected by that issue support the assessment, management and consultation processes for the issue, and/or only very low opposition.</li> <li>• A large majority of stakeholder groups directly affected by that issue support the outcomes, and/or only very low opposition.</li> <li>• Resolution of all major disputes.</li> </ul>
3	<ul style="list-style-type: none"> <li>• A majority of stakeholder groups directly affected by that issue support the assessment, management and consultation processes for the issue.</li> <li>• A large majority of stakeholder groups directly affected by that issue support the outcomes, and/or low opposition.</li> <li>• Resolution of most major disputes.</li> </ul>
2	<ul style="list-style-type: none"> <li>• Low support amongst stakeholder groups directly affected by that issue of the assessment, management and consultation processes for the issue.</li> <li>• Low support amongst stakeholder groups directly affected by that issue for the outcomes, and/or a majority oppose.</li> <li>• Absence of resolution on a number of major disputes.</li> </ul>
1	<ul style="list-style-type: none"> <li>• Very low support amongst stakeholder groups directly affected by that issue of the assessment, management and consultation processes for the issue.</li> <li>• Very low support amongst stakeholder groups directly affected by that issue for the outcomes, and/or a large majority oppose.</li> <li>• Little prospect of resolution, on many major disputes.</li> </ul>

**EXAMPLES OF EVIDENCE:** - Agreements / contracts with stakeholders, - Interviews with various stakeholder groups, - Minutes of stakeholder meetings, - Media and website surveys, - Results of surveys and polls, - Public disclosure of complaints and actions undertaken, - Independent and regular monitoring and transparent reporting of stakeholder views, - Independent assessments

**Guidance Note – Level of Compliance**

This attribute relates to compliance with relevant legal requirements and other publicly stated commitments on the part of the developer / owner / operator. These commitments may include, for example, a commitment to adhere to international standards, declarations or conventions on particular issues. Considerations relevant to this attribute include:

1. Compliance with relevant legal requirements and other public commitments made by the developer/owner/operator<sup>7</sup>.
2. Number, level, significance, persistence and ease of remedy of non-compliances.

<b>Score</b>	<b>Requirements</b>
5	<ul style="list-style-type: none"> <li>• No non-compliances.</li> </ul>
4	<ul style="list-style-type: none"> <li>• Very few minor non-compliances that can be readily remedied.</li> </ul>
3	<ul style="list-style-type: none"> <li>• A number of minor non-compliances that can be readily remedied.</li> </ul>
2	<ul style="list-style-type: none"> <li>• Major<sup>8</sup> non-compliance.</li> </ul>
1	<ul style="list-style-type: none"> <li>• Major and persistent non-compliances.</li> </ul>

**EXAMPLES OF EVIDENCE:** - Register of relevant legal requirements and other public commitments, - Records showing compliance with legal requirements and other commitments, - Audit reports, - Evidence of regulatory breaches, prosecutions, fines, - Interviews with regulators, - Evidence of community concerns

**Guidance Note – Level of Conformance with Plans**

Conformance with plans measures the degree to and quality with which the developer / owner / operator is implementing its plans and planned arrangements<sup>9</sup>. This differs from level of compliance in that it is not restricted to legal requirements and public commitments of the developer / owner / operator, but is looking at the quality of internal business systems and plans. Considerations relevant to this attribute include:

1. Level of conformance with relevant management plans and other associated documents.
2. Number, level, significance, persistence and ease of remedy of non-conformances.

<b>Score</b>	<b>Requirements</b>
5	<ul style="list-style-type: none"> <li>• No non-conformances with relevant management plans and other associated documents.</li> </ul>
4	<ul style="list-style-type: none"> <li>• Very few minor non-conformances with relevant management plans and other associated documents that can be readily remedied.</li> </ul>
3	<ul style="list-style-type: none"> <li>• A number of minor non-conformances with relevant management plans and other associated documents that can be readily remedied.</li> </ul>
2	<ul style="list-style-type: none"> <li>• Major<sup>10</sup> non-conformances with relevant management plans and other associated documents.</li> </ul>
1	<ul style="list-style-type: none"> <li>• Major and persistent non-conformances with relevant management plans and other associated documents.</li> </ul>

**EXAMPLES OF EVIDENCE:** - Records showing conformance with planned arrangements, - Records demonstrating achievement of objectives and targets, - Audit reports, - Evidence of incorporation of opportunities for improvement, preventive action, and/or corrective action

<sup>7</sup> These public commitments may include commitments to adhere to international standards and conventions

<sup>8</sup> A major non-compliance is that it could incur litigation, prosecution, fines, penalties, or is very difficult to remedy

<sup>9</sup> Management measures to address an issue may not always be formalised into management plans, but may be documented planned arrangements, for example based on agreements for forward actions made at meetings

<sup>10</sup> A major non-conformance is that it could incur a substantial consequence (e.g. with respect to severity, extent or duration), or is very difficult to remedy

**Guidance Note – Level of Effectiveness**

Level of effectiveness measures the effectiveness of the implementation of management plans in terms of on-ground outcomes. Impacts are considered within the framework of desired outcomes as reflected in management objectives. It measures the degree to which the aspect intent has been met with respect to agreed performance measures. Considerations relevant to this attribute include:

1. Degree to which negative impacts have been avoided, minimised, mitigated, and managed and/or compensated.
2. Degree to which positive impacts have been achieved and optimised.
3. Degree to which baseline condition enhanced.
4. Absolute / quantitative performance indicators on an issue-by-issue basis.
5. Evaluation of effectiveness taking into account the extent of developer / owner / operator influence and responsibility on an issue-by-issue basis.

<b>Score</b>	<b>Requirements</b>
5	<ul style="list-style-type: none"> <li>• Avoidance or comprehensive mitigation of negative impacts.</li> <li>• Enhanced outcomes.</li> <li>• Contribution to addressing issues beyond those impacts caused by the developer / owner / operator.</li> </ul>
4	<ul style="list-style-type: none"> <li>• Avoidance or mitigation of negative impacts.</li> </ul>
3	<ul style="list-style-type: none"> <li>• Minimisation and management of negative impacts</li> </ul>
2	<ul style="list-style-type: none"> <li>• Deterioration in baseline condition with some delay or difficulties in addressing negative impacts.</li> </ul>
1	<ul style="list-style-type: none"> <li>• Significant and potentially long-term deterioration in baseline condition.</li> </ul>

**EXAMPLES OF EVIDENCE:** - Condition reports, - Predictive analyses, - Third party reviews, - Expert reviews

### Understanding Gradations in Scoring

Table 6 is provided to assist in understanding of the gradations in scoring that are commonly found in the aspect scoring pages. Definitions of these terms can be found in the Glossary which follows.

Standard Attribute Guidance Note Scoring					
	5	4	3	2	1
	<ul style="list-style-type: none"> <li>Quality of assessment, management, consultation processes, and level of performance on stakeholder support, compliance, conformance with plans and effectiveness, where reference is made to guidance notes for scoring guidance, e.g. [*** refer to Level of Conformance with Plans guidance note ***]</li> </ul>				
	Excellent	Very Good	Good	Poor	Very Poor
Some Non-Standard Process Attributes					
	5	4	3	2	1
<b>Assessment</b>	<ul style="list-style-type: none"> <li>Understanding of something</li> </ul>				
	Excellent	Very Good	Good	Poor	Very Poor
<b>Consultation</b>	<ul style="list-style-type: none"> <li>Engagement with stakeholders</li> </ul>				
	Frequent and two-way, stakeholder involvement in decision-making	Regular and two-way	Regular, often one-way (for project to inform)	Some	None
<b>Management</b>	<ul style="list-style-type: none"> <li>Integration of something into something else</li> </ul>				
	Excellent	Very Good	Good	Poor	Very Poor
	<ul style="list-style-type: none"> <li>Comprehensiveness of something, e.g a plan</li> </ul>				
	All components included	All components included with very few non-critical gaps	Most components included with a number of non-critical gaps	Many critical components not included	No Plan
Some Non-Standard Performance Attributes					
	5	4	3	2	1
<b>Effectiveness</b>	<ul style="list-style-type: none"> <li>Likelihood of some effect being realised or success in that effect being realised</li> </ul>				
	Very High	High	Fair	Minimal	None
	<ul style="list-style-type: none"> <li>Degree to which negative project impacts to something are identified, avoided, mitigated and/or compensated</li> </ul>				
	All major and minor negative impacts with no gaps	All major and minor negative impacts with very few non-critical gaps	All major negative impacts with a number of non-critical gaps	All major negative impacts with some critical gaps	All major negative impacts with many critical gaps
	<ul style="list-style-type: none"> <li>Optimisation of something</li> </ul>				
	Fully optimised with no gaps	Close to fully optimised with very few non-critical gaps	Well-optimised with a number of non-critical gaps	Somewhat optimised with critical gaps	Not optimised
	<ul style="list-style-type: none"> <li>Maximisation of something</li> </ul>				
	Fully maximised with no gaps	Close to maximised with very few non-critical gaps	Significantly maximised with a number of non-critical gaps	Somewhat maximised with critical gaps	Not maximised

Table 6. Commonly found gradations in scoring

### Glossary of Terms

**Adequate:** Sufficient or enough to satisfy a requirement or meet a need.

**Community Groups:** Groups of people with common characteristics or interest living together within the larger society. There are many different ways to view these groups, and these will need to be defined in meaningful ways for the project. These may include, by way of example, urban dwellers, rural dwellers, indigenous

peoples, ethnic minorities, people of a common profession or religion, disabled, elderly, illiterate, women, men, children, etc.

**Compliance:** Addresses the level of compliance with legal requirements and other public commitments that have been made for a particular aspect.

**Comprehensive:** All components have been considered.

**Conformance:** Addresses the level of conformance of implementation measures with most up-to-date project-related plans, with a particular emphasis on the quality of internal business systems and processes.

**Critical:** Essential to for something to be suitable, adequate or effective.

**Directly Affected Stakeholder:** Those stakeholders with clear rights, risks and responsibilities in relation to the project.

**Effective:** Producing or capable of producing an intended, expected and/or desired effect.

**Engaged:** Interacted with, often through consultation processes.

**Evidence:** Evidence provided by an auditee and used by an assessor to verify whether and to what degree an attribute has been met. Evidence can be qualitative or quantitative information, records or statements of fact, either verbal or documented. It is retrievable or reproducible; not influenced by emotion or prejudice; based on facts obtained through observation, measurements, documentation, tests or other means; factual; reproducible; objective and verifiable.

**Excellent:** Grading term used for a score of 5 for process attributes. Refers to suitable, adequate and effective with no gaps. Evidence would include expert testimony, field data, analytical reports, modelling reports, etc.

**Good:** Grading term used for a score of 3 for process attributes. Refers to suitable, adequate and effective with a number of non-critical gaps. Evidence would include verbal advice, desk-top or interview-based analyses, visual inspections, etc.

**Integrated:** Merged, interspersed, embedded into something.

**Livelihood:** Refers to the capabilities, assets (stores, resources, claims and access) and activities required for a means of living.

**Living Standards:** Could include indicators of many dimensions of household well-being such as consumption, income, savings, employment, health, education, nutrition, and housing.

**Long-Term:** The planned life of the hydropower project.

**Management System:** The framework of processes and procedures used to ensure that an organisation can fulfill all tasks required to achieve its objectives.

**Maximised:** Achieved to as great an extent practicable, taking into account all constraints.

**Minimised:** Achieved to as little an extent practicable, taking into account all constraints.

**Non-Critical:** Not essential for something to be suitable, adequate and/or effective.

**Optimal:** Best fit, once all considerations have been factored in, based on the outcomes of a consultative process.

**Planned Arrangements:** Management measures to address an issue may not always be formalised into management plans, but may be documented planned arrangements, for example based on agreements for forward actions made at meetings.

**Practicable:** Capable of being done with means at hand and circumstances as they are.

**Programme:** Relates to the hydropower development programme, which encompasses all project streams (construction, environmental, social, resettlement, finance and procurement, and communications, etc.).

**Project-Affected Area:** The catchment, reservoir, and downstream of the project site and associated dams; the area affected by any associated infrastructure developments (e.g. roads, transmissions lines, quarries, construction villages, etc); and any area to which project affected people might be relocated.

**Project Affected Community:** The interacting population of various kinds of individuals living in the region that is directly affected by the hydropower project preparation, implementation and/or operation. These may be within the catchment, reservoir area, downstream, or in the periphery where project-associated activities occur.

**Project Streams:** Individual streams within an overall hydropower development programme, including construction, environmental, social, resettlement, finance and procurement, and communications.

**Short-Term:** Covers day-to-day operations.

**Stakeholder:** One who is involved in or affected by the hydropower development and associated activities.

**Stakeholder Group:** A group of stakeholders with a common characteristics or interests.

**Suitable:** Appropriate for the desired purpose, condition or occasion.

**Transparent / Transparency:** Open to public scrutiny, publicly available, posted on a website, and/or able to be viewed or disclosed to the public on request.

**Vulnerable Social Groups:** Social groups who are marginalised or impoverished with very low capacity and means to absorb change.

### ***High Profile and Cross-Cutting Issues***

Table 6 lists some high profile and cross-cutting issues that are not apparent in the names of the aspects and attributes, and identifies where they are addressed within the Protocol structure.

Issue	Where Addressed (Relevant Sections)
IWRM	Integrated Water Resource Management is addressed most directly in the aspect called River Basin and Transboundary Issues (II, III, IV). It is also included in Regional & National Policies & Plans (I) as a type of policies and plans.
Climate Change	Climate Change is addressed in five aspects. Regional & National Policies & Plans (I) include climate-related policies and plans that might influence choices made to address water and energy needs. Site Selection & Design Optimisation (II) includes consideration of a range of considerations including the potential for greenhouse gas emissions generation. Financial Viability (II) includes options for finance, including carbon finance. Hydrological Resource Availability & Management (II, IV) includes understanding of hydrological trends and long-term availability which may be influenced by climate change, and the ability of the project to adapt. Reservoir Management (II) directly addresses reservoir greenhouse gas emissions.
Corruption	Corruption is addressed in Political Risk (I), Public Sector Governance & Regulatory Approvals (II), Corporate Governance (II, III, IV), and Procurement (II, III, IV).
Communication	Communication is addressed in Integrated Programme Management & Communications (II, III) with respect to internal and external communications about the programme and its major project streams (e.g. technical, construction, environmental, social). Communications is also a strong theme in Project Affected Community (II, III, IV). Communication is also addressed in every aspect through the attribute called Quality of the Consultation Process.
Transparency	Transparency is addressed in many aspects through the attribute called Quality of the Consultation Process.
Human Rights	The attribute called Quality of the Consultation Process outlines identification of project stakeholders based on rights, risks and responsibilities. Human rights is most directly addressed through the aspect called Project Affected Community (II, III, IV). Corporate Governance (II, III, IV), Indigenous Peoples (II, III, IV), Resettlement (II, III), Asset & Community Safety (II, III, IV) and Labour & Working Conditions (II, III, IV) also addresses many human rights considerations.
Gender	Gender is addressed through Social Impact Assessment & Management (II, III, IV), Project Affected Community (II, III, IV), Indigenous Peoples (II, III, IV), Resettlement (II, III, IV), Benefit Sharing (II, III, IV), Labour & Working Conditions (II, III, IV), and Public Health (II, III, IV).
Complaints Mechanisms	Complaints and grievance mechanisms are addressed through the attribute called Quality of the Consultation Process. It is also singled out in a number of aspects including Procurement (II, III, IV), Labour & Working Conditions (II, III, IV), and Resettlement (II, III, IV).
Livelihoods	Livelihoods are addressed in Social Impact Assessment & Management (II, III, IV), Project Affected Community (II, III, IV), Indigenous Peoples (II, III, IV), Resettlement (II, III), and Benefit Sharing (II, III, IV).
Multi-Purpose Hydro	Multi-purpose hydro is most directly addressed in an aspect called Additional Benefits & Economic Viability (II, III, IV).
Legacy Issues	Legacy issues are relevant with respect to (1) how to deal with unmitigated impacts of previous projects and (2) how to avoid creating legacy issues with new projects. The former is relevant to Options Assessment (I) and Additional Benefits & Economic Viability (II); the latter is relevant to Social Impact Assessment & Management (II, III, IV) and Environmental Impact Assessment & Management (II, III, IV).

*Table 6 High Profile and Cross Cutting Issues in the Protocol*

### ***Further Information***

The Hydropower Sustainability Assessment Protocol is supplemented by an Appendix providing information notes as appropriate on the attributes, aspects, and major cross-cutting and high profile issues.