

1. BACKGROUND

There has been periodic discussion within the HSAF on the need for Guidance Notes to assist in the use and understanding of the protocol. Several questions and various possible approaches emerge. This purpose of this paper is to frame the discussion of those questions and approaches.

Recall from the minutes of the Brazil meeting:

The meeting attendees discussed what they had in mind in terms of guidance notes to accompany the Protocol. All agreed that guidance notes would be an important component of the Draft Revised Protocol.

There were differing ideas on how they would be presented, e.g. as a few detailed notes on key issues, as simple sentence notes, as full page documents, or a mix.

One model discussed is to have one guidance note for each aspect and supplementary guidance notes for key cross-cutting issues.

There were also mixed views on whether the Forum members produce these themselves versus contracting the work out.

Areas flagged as priorities for guidance notes were communications, transparency, auditing, environmental flows, community support, free prior and informed consent, human rights, grievance mechanisms, and some of the common process attributes such as scope and participation.

(HSAF Mtg5 Minutes - Agenda Item 13 – Guidance Notes)

Note: It has been agreed by Forum members that guidance notes are an important component to have in the Draft Hydropower Sustainability Assessment Protocol. The Draft Protocol will be developed between Forum meetings 6 and 7, which allows for a time period of about eight weeks and no budget available for this area. This requires separation out of a long-term vision for Guidance Notes and short-term practicalities of what is needed to be able to apply and trial the Draft Protocol.

This paper addresses the issue of guidance notes in the Hydropower Sustainability Assessment Protocol. There are a number of questions which it explores:

1. What is the purpose or are the purposes of guidance notes?
2. What types of guidance notes do we need, and how might these be structured within the Protocol?
3. What will be the process for developing guidance notes?

To assist the consideration of these issues for Forum members, the following sets out a range of relevant issues and ideas for each topic, identifies key questions, and based on this analysis makes proposals as to how best to address the issue.

2. PURPOSE OF GUIDANCE NOTES

The Forum has indicated that each section of the Protocol should be able to stand alone and be useful in assessing sustainability at each stage of a project or system of projects. It has

indicated that the Protocol should be useable for a variety of potential purposes at each stage. The design of the Protocol is not being tied to a definite method of application (e.g. certification), but rather it is intended that the tool itself be independent of any particular method. Consequently, it is necessary that the tool be neutral and flexible as to the method of application. Accordingly, the Protocol document needs to be as self explanatory as possible, and readily accessible to users of different levels of capacity and expertise.

Guidance notes are potentially aimed at a diverse audience, including but not limited to:

- project developers, owners or operators needing guidance to understand how to prepare for a Protocol assessment, and also better understanding of what the important issues and management approaches are;
- government agencies needing guidance on how to apply the Protocol in assessing or regulating a hydropower project or operating facility;
- financing institutions needing guidance on how to apply the Protocol in assessing a hydropower project for finance;
- civil society or other third party stakeholders needing guidance on the role of the Protocol, how it works, and greater information and understanding on particular sustainability issues; and
- independent professional auditors needing guidance on how to apply the Protocol in undertaking an assessment, and how to report on the results.

Without further guidance, one might expect a high degree of variance from one user to another due to subjective interpretation of the protocol language.

In terms of undertaking assessments using the Protocol, much of Protocol is in technical language, resulting from fairly extensive substantive discussions with a significant degree of expert input. Users should not be presumed to start with the same level of background.

Identification of levels of performance against expected standards, whether it be best practice, common practice or acceptable practice, may not be evident from the language of the aspects and attributes themselves. Guidance notes can describe the possible range from best practice to clearly lacking, which will aid an auditor in assigning numeric grades.

There are broader roles the Protocol can provide, in terms of education on key sustainability issues relevant to hydropower and how to address them. The notes could provide a description and explanation of the concepts being evaluated. In many cases these concepts are not necessarily self explanatory and would require that some of the accumulated knowledge on the issue be provided. It would be important in this regard, however, to not be “re-inventing the wheel” by trying to produce information that already exists in many forms elsewhere.

A useful information platform on sustainable hydropower issues, that in the long-term could be re-tailored towards providing information to support application of the emerging Protocol, is the Sustainable Hydropower Website (www.sustainablehydropower.org). Forum members are encouraged to visit this site and become familiar with its structure, which has the considerable advantage of allowing tiers of information to be provided, examples of projects which have successfully addressed critical hydropower sustainability issues, and reference to lists of more in-depth information.

Key Questions: Should the guidance notes be targeted at a particular user and use of the Protocol, or try to cater to as broad a user base as possible? What degree of technical expertise and background should be assumed by the Protocol user? To what degree should guidance notes be endeavouring to present accumulated knowledge?

Proposal: The Forum recognises the considerable potential that guidance notes offer, and develops a long-term vision for these which includes answers to the above questions. At this point in the Forum process, it is proposed that the primary purpose of guidance notes is to provide sufficient information so that the draft Protocol can be trialled in a systematic manner during July-August 2009.

3. TYPES OF GUIDANCE NOTES

In consideration of guidance notes, the highest priority and most immediate need can be seen for three types:

- Guidance on Application of the Protocol
- Guidance on Attribute Types
- Guidance on Specific Aspects

Other options include guidance on thematic issues (e.g. strategic assessments), guidance on cross-cutting issues (e.g. climate change, human rights), or guidance on very specific attributes (e.g. grievance mechanisms).

3.1. Guidance on Application of the Protocol

Some guidance on the use of the assessment tool itself will be necessary. This could or should encompass information on:

- purpose and uses of the Protocol;
- understanding the Protocol structure and definitions;
- what section to apply;
- who is an assessor;
- what happens during an assessment and who participates;
- what prior preparation is required;
- how to undertake the scoping step;
- what is objective evidence;
- how to use the guidance notes;
- how to assign scores;
- how to aggregate scores; and
- how to write up and present the results.

Key Questions: Is this list comprehensive? Is this one guidance note or a number? Does this information sit up at the front of the Protocol? How long is it? Are all of these considerations equally important to have addressed in the Draft Protocol to be developed by June 2009?

Proposal: The Forum agrees on the need for Guidance on Application of the Protocol. It is proposed that this information sits up front in the document as per the existing Protocol, and succinctly addresses all of the above points in no more than 10 pages.

3.2. Guidance on Attribute Types

In the Forum Meeting 6 papers entitled Proposal on Standardizing Attributes (Mtg6 Paper5) and Proposal on Approach to Scoring (Mtg6 Paper6), the case is made that defining attribute types could facilitate a more systematic and consistent approach to aspect presentation and scoring.

Types of attributes commonly recurring across many aspects include:

- quality of the assessment process;
- quality of the management planning process;
- quality of the consultative process;
- level of compliance; and
- level of stakeholder support.

More of these attribute types are likely to emerge as the Forum looks more closely at Sections III and IV, for example quality of the management system.

Forum members will need to agree if they want to utilise an approach involving attribute types, and if they want the scoring instructions provided in guidance notes. If this model is utilised, an attribute type guidance note would spell out what would need to be demonstrated for a project to receive a score of 0, 1, 2, 3, 4 or 5. These would be generic guidance notes that would be look up sheets for that attribute type.

Key Questions: Does the Forum want to use an approach that centres strongly around generic guidance notes for attribute types? What would these look like? Where would they sit in the document?

Proposal: Defining systematic scoring approaches based on a succinct number of attribute types will be highly efficient in getting the Draft Protocol developed, and is recommended. It is proposed that these would sit at the end of the document and should be no more than one page each.

3.3. Guidance on Specific Aspects

The model of a guidance note for each aspect was posed at Forum Meeting 5. It is very clear that Forum members are keen to share knowledge on key sustainability issues, and the lean structure of the Key Components Document has not provided a platform for this knowledge to be shared.

Aspect-specific guidance notes are, however, potentially a very bulky addition to the Protocol document, and need to be carefully considered. In the long-run, in a scenario where guidance notes can be provided in a web-based format with tiers of information such as used for the Sustainable Hydropower Website, there is the potential to have guidance notes on each aspect with considerable levels of information and reference material. In the short-run, unless there is a very constrained view as to what these are, it would not be possible given time and resources to get these developed for the Draft Protocol.

Given the proposal that guidance notes for the Draft Protocol encompass a minimum level of information needed to trial the document, it might make sense to develop a model of what Aspect Guidance Notes could look like, and then prioritise what elements of this would be of highest priority to have completed for the Draft Protocol.

An option for a standard format or outline for an Aspect Guidance Note might be:

- Introduction/Purpose of Guidance Note
- Description and background
- Policy objective (expanding on the brief one sentence in the Protocol sheet)
- Standards (reference to formal international standards, if any; or where such standards might typically be found in national or regional legislation. policies or plans)
- How a project could or should address this aspect
- Important process attributes and how to assess them (scoring instructions on a scale of 0-5)
- Important performance attributes and how to assess them
- Examples of objective evidence
- Reference material

An example draft guidance note is attached for the Environmental Flows and Downstream Sustainability aspect (Attachment 1a), to support the aspect content which has been provided as an aspect scoring sheet (Attachment 1b) following the template developed at Forum Meeting 5. This was developed by David Harrison of The Nature Conservancy, and even with considerable tailoring is still lengthy as a model that might be used for a number of aspects. This example has a strongly educational flavour and primary emphasis on describing best practice.

A minimalist extraction from this, that might be practicably realisable in the narrow timeframe for development of the Draft Protocol, would be to have aspect-specific attribute scoring instructions. This would dovetail well with the model of guidance notes on common attribute types. There are in some cases aspect-specific process attributes, and in almost every case aspect-specific performance attributes. There would be a desire to make these indicators as quantitative as possible. These might be able to be presented in a fairly lean format at the back of the document.

Some examples, for illustrative purposes, might be:

***Example 1 - Section II Cultural Heritage – Aspect Specific Performance Indicator
Level of Protection of Cultural Heritage***

- Level 5 – 100% of all identified cultural heritage assets collectively agreed to be of high value are protected and conserved.
- Level 4 – 80% of all identified cultural heritage assets collectively agreed to be of high value are protected and conserved.
- Level 3 – 60% of all identified cultural heritage assets collectively agreed to be of high value are protected and conserved.
- Level 2 – 40% of all identified cultural heritage assets collectively agreed to be of high value are protected and conserved.
- Level 1 – 20% of all identified cultural heritage assets collectively agreed to be of high value are protected and conserved.
- Level 0 – 0% of all identified cultural heritage assets collectively agreed to be of high value are protected and conserved.

An option for a more succinct way to express the same thing:

5 = 100% high value heritage items protected; **4** = >80%; **3** = >80%; **2** = >80%; **1** = >80%; **0** = >80%.

**Example 2 - Section II Resettlement – Aspect Specific Performance Indicator
Level of Protection of Cultural Heritage**

- Level 5 – Cohesion of resettled communities fully retained at all stages of the resettlement process.
- Level 4 – Cohesion of resettled communities retained at most stages of the resettlement process, and never disrupted for more than 1 month.
- Level 3 – Cohesion of resettled communities retained at most stages of the resettlement process, and fully restored within 3 months of resettlement commencing.
- Level 2 – Cohesion of resettled communities not retained during the resettlement process, but will be restored within 6 months of resettlement commencing.
- Level 1 – Cohesion of resettled communities not retained during the resettlement process, but will be restored within 12 months of resettlement commencing.
- Level 0 – Cohesion of resettled communities not retained during the resettlement process, with no clear indication of that it will be restored.

An option for a more succinct way to express the same thing:

5 = cohesion not disrupted; **4** = cohesion disrupted for <1 month; **3** = <3 months; **2** = <6 months; **1** = <12 months; **0** = cohesion completely disrupted with no indication of restoration.

An important question would be where aspect guidance notes would sit within the Protocol document, or outside of the Protocol document. It may be that the same guidance note would serve as guidance for an aspect that appears in multiple sections of the Protocol. If guidance notes were expansive educational documents, they would lend themselves to being located separate from the Protocol document. Lean look-up tables for scoring reference could be attached as an appendix to the document, or linked directly to the aspect they refer to (the latter might be less desirable if the same look-up table could be applied for the same aspect in multiple sections).

Key Questions: Do all aspects have guidance notes? How comprehensive are these aspect guidance notes? To what degree are they educational? If we can't do all of them, which ones do we do? What is most critical to produce for the Draft Protocol by June 2009?

Proposal: It is proposed for the Draft Protocol that guidance on scoring of aspect-specific attributes is provided, in as lean a format as possible to be attached as an appendix to the Protocol. It is further proposed that a Forum sub-committee is formed to develop a longer term vision for guidance notes, and to develop a standard template and start getting contributions to the content for aspects.

3.4. Other Types of Guidance Notes

Other options for types of guidance notes were identified to include:

- guidance on thematic issues (e.g. strategic assessments);
- guidance on cross-cutting issues (e.g. climate change, human rights); and
- guidance on specific attributes (e.g. grievance mechanisms).

Key Questions: To what degree should the Forum consider these opportunities for other types of guidance notes in the short-term, leading up to development of the Draft Protocol, versus in the long-term?

Proposal: At a minimum, a 'guidance note' could be provided at the front of the Protocol identifying some of the key cross-cutting issues and mapping where they are addressed throughout the Protocol document. In the longer term, the guidance note sub-committee could consider which, where and in what form these might best be included.

4. PROCESS FOR DEVELOPMENT OF GUIDANCE NOTES

This analysis suggests that the Forum needs a short-term and a long-term strategy for guidance notes.

In the short-term, the proposal for guidance notes to accompany the Draft Hydropower Sustainability Assessment Protocol to be provided at Forum Meeting 7 (18-21 June 2009) is:

1. Guidance Notes on Application of the Protocol – maximum 10 pages at the front of the document.
2. Guidance Notes on Scoring of Common Attribute Types – One for each agreed attribute type, maximum of 1-page each, that sit as an appendix to the Protocol and provide instruction on how to determine a score of 0, 1, 2, 3, 4 or 5 for each attribute type. Likely to be less than 12 notes.
3. Guidance Notes on Scoring of Aspect-Specific Attributes – One for each aspect-specific attribute, maximum of ½ page each but potentially as succinct as 2 lines, that sit as an appendix to the Protocol and provide instruction on how to determine a score of 0, 1, 2, 3, 4 or 5 for each attribute type.

It is proposed that the instructions for scoring of the common attribute types are developed at Forum Meeting 6 either out of session as a proposal to bring into the session, or during one of the parking lot sessions. If this is not able to be complete during Forum Meeting 6, it would ideally be achieved by the end of March 2009 so that it can be available for drafting workshops.

The Forum has the opportunity to get some expert input into drafting Protocol content through several drafting workshops planned for April and May 2009. These are:

- Social issues workshop – 2 days between 31 March and 2 April 2009 at the World Bank, Washington, DC.
- Environmental issues workshop – 2 days between 31 March and 2 April 2009 at the World Bank, Washington, DC.
- Economic and Finance issues workshop – 2 days between 31 March and 2 April 2009 at the World Bank, Washington, DC.
- Technical and Governance issues workshop – 15-16 April in London, location to be determined.
- Forum member overview workshop – 12, 13, 14 May 2009 at the offices of JP Morgan in London.

It is proposed that the experts providing input into the development of the draft Protocol content would not only be putting the aspect key components into the agreed format, but

would work on specifying the scoring instructions for any associated aspect-specific attributes.

These workshops provide a unique opportunity to get high level input in a concentrated form within the time frame necessary to develop the draft Protocol, and allows for ample opportunity for Forum member review and refinement.

Note that Forum members have the opportunity in May to review all of the content generated in early April, and make any changes or adjustments necessary in the interests of consistency before the draft Protocol is compiled for presentation at Forum Meeting 7. The document will be further reviewed by all Forum members at Forum Meeting 7, with any changes deemed necessary made prior to the document going out for consultation and trialling during July-August 2009. The consultation and trialling themselves are going to highlight areas of adjustment necessary.

It is further proposed that the guidance notes sub-committee of the Forum set themselves the objective to bring to either Forum Meeting 7 or Forum Meeting 8 a proposal for a longer-term vision of guidance notes.

Attachment 1a: Draft Guidance Note – Environmental Flows and Downstream Sustainability

Introduction: Purpose of Guidance Note.

Downstream effects of dam development have become recognized as a critical aspect for planning and management of large dam infrastructure. Environmental, social and economic impacts have often been underestimated in project planning and design. Because assessment of downstream sustainability involves fairly complex and technical concepts which are rapidly evolving in the field, this guidance note is intended to provide some background into the area and guidance on how to assess projects with respect to environmental flows and downstream sustainability.

Description and Background

“Environmental flows” refers to the patterns of flow of water in a river or lake that sustains healthy ecosystems and the goods and services that humans derive from them. International practice for recommending, prescribing and implementing environmental flow releases downstream of hydropower projects has undergone considerable evolution in recent years. Prior sustainability standards have often deferred to whatever downstream flow releases that were acceptable to stakeholders and regulators, without further reference to objective and substantive standards. In general, environmental flows have become more sophisticated, comprehensive, and scientifically based than earlier practice. Single minimum flow rate numbers for year-round release have given way to a range of flow levels and components (e.g., high-flow pulses) that are associated with desired ecological, environmental or social-cultural functions {Bunn, 2002 #1842; Poff, 1997 #1100}

The clear articulation of those *desired flow-related outcomes* is a key step. The term “environmental flows” has come to connote more than just ecological flow-related functions, but to include other social and cultural functions as well. The downstream flow regime below any dam or system of dams will be of defining importance for the full array of environmental, social and economic functions, and hence is referred to here in terms of “environmental flows and downstream sustainability”. Certain threshold requirements will be needed to support the continuity of ecological functioning and of social and cultural survival of humans living in the downstream area; certain flow aspects will be necessary just to allow the functioning of the infrastructure project. Ideally the process of defining downstream sustainability will go beyond simply balancing the competing functions, but seeking a best fit or an optimization that accomplishes the most of each function that is possible, and all of them at or above required thresholds of sustainability.

Current state-of-the-art approaches for environmental flow prescription generally encompass a suite of different environmental flow components, each related to certain desired functions. These environmental flow components typically consist of specific hydrologic events or patterns such as periodic flood flows during the historical flood season; smaller magnitude high-flow pulses, and base flows that approximate natural flow patterns during the low-flow season (e.g., flows that are neither too low *nor* too high). Flow recommendations also prescribe rates of change in flow rates designed to reduce impacts from rapid fluctuations {Postel, 2003 #977}.

Policy Objective

This objective is intended to ensure that a downstream flow regime is designed to achieve the best fit between biodiversity, habitat, ecosystem services, social and economic objectives, including power and other multi-purpose outcomes of the hydropower facility, taking into account regional and system-wide plans for hydropower and water resources development. It will generally not be likely that 100% of each desired outcome will be able to be achieved – many of these desired outcomes will be at cross-purposes with others. The intention, however, is to try, by trial and error or otherwise, to find a flow regime that is likely to produce the most of each of those purposes, and at or above a threshold level of each that is satisfactory and sustainable over the long run. A balance of competing objectives that produces probable outcomes below satisfactory levels for each -- a least common denominator – should not be considered a satisfactory outcome.

Attachment 1a: Draft Guidance Note – Environmental Flows and Downstream Sustainability

Standards of Practice

While there is not currently a single formally recognized standard of practice in this area, the following steps contribute to an effective flow recommendation process and would generally be recognized as international best practice:

- 1. Identification of downstream stakeholders and their flow-related needs.** In addition to environmental health, the flow regime influences a variety of downstream goods and services that have social, cultural and/or economic value. Therefore, a flow recommendation process must be informed by the input of downstream stakeholders who can identify these desired goods and services.
- 2. Assembly of relevant information.** The flow recommendation process should be informed by the available data and information about the river system and the linkages between the flow regime and environmental processes and socially desired goods and services. This information base can include scientific papers (both peer-reviewed and “gray literature”), agency reports and data, and traditional ecological knowledge. While information from the river system in question is the most valuable, such geographically specific information is often not available, and therefore the information base should be augmented by research and information developed within similar river basins, in terms of geology, hydrological patterns, ecosystem types, etc. Where little or no information exists for a river system, traditional ecological knowledge can be particularly important. *[Insert cite to Esselman, Opperman paper]*
- 3. Convene a multidisciplinary workshop of experts.** Because of the complexity of these flow recommendations, it is common practice to convene a multi-disciplinary workshop of experts representing all of the relevant disciplines for a particular river or basin {Richter, 2006 #1442}. This group would review the available data, make preliminary flow recommendations, and/or recommend further scientific studies to reduce uncertainties. These experts should represent a broad range of scientific disciplines, including those that can articulate and evaluate the various social and economic functions that are linked to the flow regime *[Insert illustrative list of disciplines]*
- 4. Flow recommendations and adaptive management.** Each flow recommendation (e.g., for a particular flow component such as a small flood) should be defined in terms of magnitude, frequency, duration, season, and rate of change. Further, each recommendation should be linked to a clear desired outcome or objective, which provides a foundation for a monitoring and adaptive management program. For example, a recommendation for a small flood would define the flood in terms of its magnitude, duration, etc. and then describe how the intended outcome are linked to those parameters. A small flood intended to benefit fish spawning on the floodplain would need to define the magnitude at which the river becomes connected to the floodplain, the season during which the focal fish species spawn, the duration required for successful spawning, and the inter-annual frequency required to maintain the fish populations. The objective of maintaining fish spawning could then be monitored, and the linkages between spawning success and flow magnitude, duration, etc. could be studied to allow adaptive refinement of the flow recommendation.
- 5. Integrating flow recommendation with dam operations.** The flow recommendation will need to be translated into terms that dam operators can effectively incorporate into their operation plans and decisions. For example, the release of certain recommended flow components could be triggered based on inflow data and reservoir levels. When incorporating flow recommendations into the operation plan, dam managers should examine potential synergies between environmental flows and other sectors, such as water supply, flood control, and floodplain management.
- 6. Relationship to system planning.** The flow recommendations for a single project should be considered in the context of an overall system. For example, a comprehensive regional planning process may result in a strategy in which much of the desired conservation and social value outcomes are accomplished through the establishment of freshwater conservation management areas. An individual dam built pursuant to this plan may therefore have a reduced need to maintain the full suite of environmental processes, goods and services in its downstream reach, in view of sustainability services being provided elsewhere in the basin. Therefore, such a dam would have reduced environmental flow requirements compared with a dam developed in the absence of a regional plan.

Attachment 1a: Draft Guidance Note – Environmental Flows and Downstream Sustainability

Important Process attributes and how to score them

In Section II of the protocol it is contemplated that a project or system of projects is being proposed and planned. Final arrangements for environmental flows likely will not have been completed, but will be in progress. The assessment of process attributes will focus on those activities committed to and in process and the likelihood that they will produce the intended results. For example to produce a top score with respect to process attributes, it would be expected that:

- *Comprehensive plans and process have been specified for researching and defining desired outcomes for environmental flow management, based on ecosystem requirements and stakeholder concerns and needs*
- *Specific recommendations for environmental flow management, ranging from low flows to floods, necessary to attain desired outcomes will be defined by an inter-disciplinary expert team utilizing all available information, state-of-the-art methods and tools, traditional ecological knowledge and stakeholder input*
- *A monitoring program to track environmental flow outcomes will be planned in order to inform needed adjustments in environmental flow management.*

The score for this process attribute would be reduced to the degree that lesser certainty of outcome or commitment to carry through the process exists.

Important Performance Attributes and How to Assess Them.

Again, at the Section II stage of project development, it is contemplated that a project or system of projects is being proposed and planned. Final regulatory or implementation commitments will not yet be in place, and the assessment will generally be focused on the likelihood of those commitments being implemented. For example to produce a top score with respect to process attributes, it would be expected that:

- *Proposed environmental flow management plan that addresses all desired outcomes is highly likely to be agreeable to regulators and stakeholders.*
- *Applicant has committed to explicitly defining a full range of desired outcomes for environmental flow management, including specific indicators to be monitored.*
- *A regulatory system sufficient to enforce environmental flow provisions is in place; alternatively, third party enforceable commitments for maintaining e-flows are in place.*

The score for this performance attribute would be reduced to the degree that lesser certainty of regulatory outcome or implementation commitment exists.

Objective Evidence [Insert here instead of at foot of Aspect scoring sheet?]

- Reports of environmental flow recommendation process.
- Regional or system-wide development plans that provide the context for objectives for environmental flows at the proposed project.
- Environmental Management Plan.
- Licenses or permits for the project explicitly include provisions on environmental flows and monitoring requirements

Attachment 1b: Aspect Sheet – Environmental Flows and Downstream Sustainability

Aspect: Environmental Flows and Downstream Sustainability

Description: This aspect addresses the design of environmental flows associated with 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: This objective is important to ensure that a downstream flow regime is designed to achieve the best fit between biodiversity, habitat, ecosystem services, social and economic objectives, including power and other multi-purpose outcomes of the hydropower facility, taking into account regional and system-wide plans for hydropower and water resources development.

Auditor's Comment on Relevance of this Aspect to Project being Assessed:

<i>Process Attributes</i>	<i>Examples of Assessment Questions</i>	5 <i>Outstanding / Strong / Comprehensive</i>	4	3	2	1	0 <i>Very poor</i>
Quality of identification of environmental, social and economic objectives for environmental flows (consistent with the Environmental Management Plan).	<i>Were clear objectives for different aspects of environmental flows identified by a broad range of multi-disciplinary experts taking into account all identified stakeholder interests? Were objectives determined taking into account regional and system-wide development plans?</i>						
Understanding of relationship between hydrology and ecosystems.	<i>Was all available data and understanding (including indigenous knowledge where appropriate) taken into account?</i>						
Understanding of relationship between hydrology and desired social and economic outcomes.	<i>Was all available data and understanding taken into account?</i>						
Quality of design of the environmental flow (e.g. pattern of flow, balance between objectives)	<i>Does the recommended flow regime include a variation of different flows designed to provide for the variety of identified objectives? Are recommendations included for low flows, periodic flood flows, small peak flows, and limitations on rates of change of flows? Do the various aspects of the flow regime provide the basis for monitoring and adaptive management to assure objectives may be ultimately be achieved?</i>						

Attachment 1b: Aspect Sheet – Environmental Flows and Downstream Sustainability

Quality of participatory process (stakeholder engagement / regulator, variety of perspectives)	<i>Was the full range of stakeholders identified? Was reasonable access to the process provided, and/or was reasonable representation of all stakeholder interests provided? Was sufficient technical assistance available to permit understanding and appropriate input into the process?</i>						
Performance Attributes	Examples of Assessment Questions	5 <i>Outstanding / Strong / Comprehensive</i>	4	3	2	1	0 <i>Very poor</i>
Flow regime is likely to achieve specific environmental, social and economic desired outcomes	<i>What was the degree of confidence of experts who were involved in the environmental flow recommendation process? How well documented was the process and the resulting environmental flow recommendation?</i>						
Monitoring and adaptive management programme is adequately designed and resourced and is likely to measure progress toward the desired outcomes. Environmental flow is fully integrated in infrastructure design, operations management, economic/financial analyses, and the Environmental Management Plan. Environmental flow was integrated with site selection, design optimisation and project management plan. Regulator support Stakeholder support	<i>What was the degree of confidence of experts who were involved in the monitoring and adaptive management process? How well documented was the process and the resulting monitoring and adaptive management plan? Are there specific provisions for on-going oversight and on-going funding of the monitoring plan?</i>						

Examples of Objective Evidence to Support Scoring:

- Reports of environmental flow recommendation process
- Regional or system-wide development plans that provide the context for objectives for environmental flows at the proposed project
- Environmental Management Plan
- Licenses or permits for the project explicitly include provisions on environmental flows and monitoring requirements

Attachment 1b: Aspect Sheet – Environmental Flows and Downstream Sustainability