Hydropower Sustainability Assessment Protocol

Section I Strategic Assessments

Draft1 Final 26th April 2010

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Section I – Strategic Assessments – Draft1 Final – 26th April 2010

About this Document

This document is one of a progression of documents for review by the Hydropower Sustainability Assessment Forum members and their reference groups, in the process of moving towards a Final Protocol.

This document provides the Hydropower Sustainability Assessment Protocol (HSAP) Draft1 Final Section I, and is distributed as one of the meeting papers for Forum Meeting 9. A summary of the issues arising and decision points required is provided below.

The intention is for Forum members and their reference groups to review this and the accompanying documents (HSAP Draft1 Final Introduction, Section II, Section III, Section IV and Supplement) in the week prior to Forum Meeting 9. Forum Meeting 9 will be held from 3-6 May 2010 in Vientiane, Laos.

Forum member discussion and agreements on these HSAP Draft1 Final documents will guide production of a HSAP Draft2 Final at Forum Meeting 9.

Issues Raised in Consultation, Trialling and Redrafting

Section I is different to Protocol Sections II, III and IV. It endeavours to update the existing IHA Sustainability Assessment Protocol (SAP) 2006 Section A which focuses on new energy options, and considers a potential hydropower project compared to other potential energy development options. Section A in the IHA SAP 2006 is presented as guidelines rather than a scoring approach.

Section I has been supported as an important part of the Draft Protocol, but it has caused some confusion in practice because of its different nature. In particular, a major question has been is it assessing governments and their policies and functions, the country and its particular context, or a hydropower project? In the Draft Protocol in some ways it was trying to do all these things, and provided instruction on which topics or components of topics were relevant to governments versus developers. Whilst there was general support that the topics that were being considered were of high importance at this stage of a project life cycle, it was difficult in practice to know how to apply.

In trialling, it was used to assess a project, the electricity master planning approach of a country, and a river basin with many projects at different stages of the life cycle. The range of types of trials in itself is revealing that how this section is intended to be used, and by whom, is confusing.

Comments received on Section I content in the HSAF Phase 2 Consultation also reflected that there were very diverse ideas about what this section is trying to do:

- Aspect 1-8 evaluates if a project delivers environmental benefits but this is not the purpose of a hydropower project
- Difficult to evaluate existence of a management system in Section I
- Need to further emphasize which parts are to be completed by government vs developers.
- Aspects labeled “for Developers” should still be addressed even when there are no specific projects on the table.
- Section I needs to be restructured in order to reflect present business practice
- Reduce/limit scoring range for Section 1
- Section I should only be a simple YES/NO checklist with considerations about management options for identified risks, as at this very early stage information regarding specific projects are not yet available and these type of investigations are often of confidential commercial nature (see scoring section).

- Section I should be split into two parts A and B, with one focused on government responsibilities and the other on industry.
- Include a strategic assessment of business risks and opportunities related to a potential project region/country
- Political risk should address issue of corruption and transparency, and ability to mitigate political risk; institutional capacity should emphasize public sector governance capabilities; and technical issues and risks should include capacity to mitigate risks.

The Forum formed a working group to evaluate options for Section I. The working group felt that the overall theme to the issues arising is that the purpose and use of the Section is confusing. This likely arises because of the dual functions that the Draft Protocol attempted to fulfill – the first to assess the governmental environment within which any project would be planned; and the second to assess the fit of a particular project with strategic needs and plans in that governmental environment. Related is the question of just who would use the section, and what or who is being assessed. And is it appropriate to call for an assessment of entities beyond a project proponent over which the proponent does not have control?

A number of options were raised in the HSAF Phase 2 Consultation and in discussions at Forum Meeting 8. These include:

1. Eliminate Section I altogether.
2. Target the section solely at an assessment of the governmental environment, and design it primarily for use by project developers to assess the risks they will face in planning and proposing a project.
3. Target the section solely at an assessment of projects under consideration, and design it to be used to assess the fit of any particular project with the strategic needs and plans of that governmental environment, and the risks of proceeding with a project in that context.
4. Continue to address dual functions, but separate the section into two parts – Section IA targeted at an assessment of the governmental context, and Section IB targeted to the assessment of projects under consideration.

The working group also considered questions about scoring and whether to maintain the present 5 point scale or to move to some other system – possibly a yes/no evaluation as to whether something had been done; or possibly a 3 point score (high, medium, low). It was recognized that at this earliest stage of a project consideration, the level of available information may not be well developed and so may not support a 5 point gradation. However it was felt that there should be sufficient information, “fit for purpose”, to address these topics, otherwise the likelihood of moving toward a sustainable project is in fact at risk. Furthermore there will be some situations with sufficient information that compressed scales will not provide enough gradation.

The working group provided a concept note to the Forum which proposed tightening of the intended purpose and use, so that it at least could provide one function effectively rather than trying to provide many functions ineffectively. It was felt that other approaches could be developed to assess important pre-project questions such as the quality of the electricity master plans.

Interim redrafting presented an alternative Section I which utilised the same topics as in the Draft Protocol, but was more tightly focussed on what might be useful to a developer to assess a potential hydropower project before making a decision to invest in project preparation. The introduction to Section I provided wording to alleviate industry concerns particularly about insufficient access to information at this early stage and about confidentiality of such assessments.

Industry concerns have not been alleviated. Outstanding issues that the IHA Reference Group has brought forward include:

- Section I could be used to preclude much needed development projects in the poorest countries due to the the often prevailing deficiencies regarding information and policy availability (i.e. will it impede good projects as well as bad in those countries with weak policies and institutions and high political risks?).
- The relevance of scoring Section I the same way than the other three sections has been strongly questioned. A proposal has been made to adopt a more succinct assessment method which takes into consideration the special context of the early project planning phase such as confidentiality and limited availability of information.
- First preliminary investigations are usually done on a purely internal basis as an input for a company's decision-making whether to further investigate in detailed studies, and whether to make a public announcement of potential project intentions. Bad projects are usually already ruled out at this stage. In addition, the competitive context of liberalised energy market puts en extra emphasis on confidentiality at this very early stages.
- Instead of using the same detailed scoring system as in Sections II, III and IV, while there is only preliminary information available, the rating of Section I could be removed. This recommendation was established after extensive discussion, including consideration of binary scoring system and Strenth, Weakness, Opportunity and Threat (SWOT analyses).
- Clearer guidance should be provided on when in the project planning process Section I should be used, and under which circumstances it would be more appropriate to use Section II. It might be difficult to provide information to complete Section II at the beginning of project preparation cycle.
- Given the difference of Section I compared to the other sections, and the fact that at such an early project stage it is difficult to score a "project's sustainability" if the project exists just at an embryonic stage, it was suggested to give it a different status by for example not calling it a Section but a Preliminary Screening Tool.
- Because Section I is not as advanced and matured as the other sections, in order to avoid delaying the adoption of the other three sections, it was suggested to consider the option of taking Section I out of the Protocol package and putting it into the educational supplement until an agreement has been reached during a later review phase.

In this Draft1, each topic has a similar presentational approach to the other Sections. Statements are provided only for level 3 basic good practice, using the Assessment and Outcomes criteria. Scoring statements for levels 0, 1, 2, 4 and 5 are not provided. Instead, the level 3 statements are followed by an indication of what types of further measures a proponent could undertake to go beyond basic good practice. This approach has assessment guidance notes, definitions and examples of evidence still included, but not reference to potential interviewees.

The Draft Protocol name is retained at present, but if this approach is agreed it will need to be revisited. Alternatives proposed include:

- Preliminary Screening Tool
- Strategic Project Assessment Guidance Document
- Preliminary Screening Guidance Document
- Preliminary Project Considerations

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Overview of Section I

Section I assesses the strategic basis for a hydropower project. 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 I is targeted at industry to assess risks and opportunities at the early project identification stage, to define the need to develop management responses, and to inform the decision whether to proceed with project preparation. By covering the overriding early stage sustainability topics with respect to a potential project, Section I provides the basis for a proponent's assessment of risk in proceeding with the project. Ultimately, the objective is to get better hydropower projects by encouraging better early stage analysis and planning.

The most likely users of the Protocol as a whole will be assessors and representatives of the project, and the Protocol language and guidance is tailored around these most likely users; however the Protocol is open for anyone to use. Issues for all users will be access to information, which may be absent, patchy or only very high level at this early stage. The information available will be less detailed than at later stages addressed by Sections II, III and IV. There will be a need to reconsider similar sustainability questions at the project preparation stage, at which point more detailed information should be available.

The difference between Sections I and II is in timing of the assessment, degree of detail, and level of information that can be accessed. Section I is designed to be used at the point at which a decision is made to proceed with project preparation; any earlier stage use of Section I will inform what measures would ideally still be undertaken or advanced to inform this decision. It is assumed that project preparation commences when a proponent makes it known that it is investigating a project, and contracts to undertake specific investigations are put out to tender.

Much of the use of Section I may be by proponents of a potential project to do self-assessments, and there may be a tendency at such early stages to maintain a high level of confidentiality. There is no particular pressure on industry to make the findings of a Section I assessment public. A tool even if mostly used for internal self-assessments that helps industry think about sustainability of a project before committing to project preparation is considered to be of high value to the hydropower sector as a whole.

I-1: Demonstrated Need

This topic addresses the needs that justify management and infrastructure investments in water and energy services, and how the hydropower project under consideration supports those needs. The intent is that the capability of the particular hydropower project under consideration to contribute to established needs can be demonstrated.

This topic is important in order to support sustainable development objectives at the local, regional, national and transboundary levels; and avoid over-or under-investment in energy and water services. It is also important as it seeks a balanced approach between water management and needs and energy management and needs.

Basic Good Practice:

- **Assessment**: An assessment of identified needs for water and energy services has been undertaken that includes environmental, social and economic needs.
- **Outcomes**: The project can make a positive contribution to demonstrated needs.

Continuous Improvement:

Greater than basic good practice could be indicated by, for example:

- a high level of confidence supported by objective evidence that the project can make a significant contribution to demonstrated needs, or can contribute to many demonstrated needs; or
- a broad interpretation of water and energy services with respect to considering environmental and social dimensions.

Assessment Guidance:

Water services examples include: water for energy generation, fisheries, floodplain agriculture, food supply, water storage capacity, drinking water supply, sanitation, water for business and industry, irrigation water supply, flood management, navigation, recreation, domestic needs of riparian dwellers, tourist opportunities, vehicle for transboundary cooperation, ecosystem services (e.g. floodplain maintenance, connectivity for migratory species, maintenance of off-river wetlands, nutrient and sediment balance, delta sediment replenishment, estuarine flushing, spawning ground access and maintenance), etc.

Energy services examples include: provision of electricity to meet local, regional, national and/or international demand or opportunities; provision of grid stability; provision of peak load; provision of ancillary benefits such as spinning reserve, system regulation and improved thermal efficiency, etc.

Examples of evidence: Energy Master Plan; Water Development Plan; country or regional development report; analysis of project fit with demonstrated needs

I-2: Options Assessment

This topic addresses the fit of the hydropower project under consideration amongst the options available to a region to meet energy and water needs, as well as the early stage process undertaken for considering project siting and design alternatives. The intent is that the hydropower project under consideration is supported as one of the priority options for addressing the need for energy and water services, and siting and design alternatives are considered at an early stage.

This topic is important because it compares hydropower options with other options such as other resources types and/or conservation. It adopts a sustainability perspective to ensure a realistic and comprehensive comparison of options across a range of economic, technical, environmental and social factors.

Basic Good Practice:

- **Assessment**: An assessment has been undertaken of the options available to meet demonstrated energy and water needs that considers a range of planning approaches.
- **Outcomes**: The project is one of the priority options for addressing the need for energy and water services.

Continuous Improvement:

Greater than basic good practice could be indicated by, for example:

- a high level of confidence supported by objective evidence that the project is one of the highest priority options; or
- a high quality approach taken to the options assessment, for example through the breadth of planning approaches considered, or the engagement of stakeholders in the analysis of options, or the criteria utilised for the analysis of options strongly emphasising sustainability or regional/basin-wide considerations.

Assessment Guidance:

Options assessment refers to an assessment that has been undertaken by government, river basin organisations, or other external organisations; however in the absence of any available options assessment the proponent may undertake or prompt such an exercise to be undertaken.

The full range of planning approaches includes policy, institutional, management and technical.

Energy options examples include: energy efficiency measures (conservation, policies, transmission and distribution measures), increased efficiency in generation (refurbishment and upgrades of existing power stations), the full range of types of energy, and the option of no development.

Water options examples include: a range of infrastructure options as well as conservation, policies, distribution mechanisms, demographic and land use issues.

Criteria or principles for analysis of alternatives might include, by way of example, siting on tributary streams rather than mainstem rivers; avoidance of high value biodiversity areas; avoidance of resettlement, increasing the effectiveness of existing water and energy infrastructure; etc.

Examples of evidence: options assessments, analysis of existing options assessments

I-3: Policies & Plans

This topic addresses the context set by regional and/or national policies and plans for hydropower project planning, implementation and operations, and how a particular hydropower project fits in with these. The intent is that shortfalls, gaps or complexities in regional and national policies and plans can be managed with respect to development and operation of the particular hydropower project under consideration.

This topic is important because the sustainability of hydropower development can be influenced by the quality of integrated planning for resource development, and if the planning context is weak compensation measures on the part of the developer will be required (for example through corporate policies).

Basic Good Practice:

- **Assessment**: An assessment of the most relevant policies and plans has been undertaken, including any basin development or integrated water resource management plans.
- **Outcomes**: The project fits with existing policies and plans, and any gaps or shortfalls can be managed.

Continuous Improvement:

Greater than basic good practice could be indicated by, for example:

- a high level of confidence supported by objective evidence that the project fits with the policy and planning context, and that gaps or shortfalls can be managed; or
- a broad approach taken with identification and analysis of relevant policies and plans, including social and environmental; or
- an analysis undertaken of strengths, weaknesses, opportunities and threats of the project with respect to managing gaps or shortfalls in the policy and planning context.

Assessment Guidance:

Regional and national policies and plans examples include: development, energy, water, biodiversity, climate, conservation, transboundary, etc. Because hydropower sits at the nexus of energy and water, it touches on a wide array of types of policies and planning instruments. There may be an absence of planning frameworks relevant to certain critical hydropower issues, or dated, poor quality or even contradictory with other policies and plans. Policies and plans may provide insufficient guidance on regulatory requirements for project preparation, approvals, implementation and operation. Potential hydropower projects may have implications that cross jurisdictional boundaries, in which case different sets of policies and plans would be relevant.

Social and environmental related policies and plans examples include: poverty eradication, maintenance of fisheries, protection of high value sites (e.g. national parks, World Heritage sites, Ramsar wetlands, sites of cultural significance, recognised significant landscapes), etc.

Examples of evidence: regional and national policies and plans, evaluation of project fit with policies and plans, evaluation of status of river basin plans and river basin sustainability issues

I-4: Political Risks

This topic addresses political risks of a region that may have implications for hydropower project development and operations. The intent is that political risks influencing development and management of the hydropower project under consideration are understood and can be managed.

This topic is important because the risk that a government may unilaterally repudiate its obligations or prevent others in its jurisdiction from honouring their obligations may affect the level and lending terms of financing for hydroelectric projects in its jurisdiction, as well as long term sustainability of the projects themselves.

Basic Good Practice:

- **Assessment**: An assessment has been undertaken of political risks most relevant to the project, including transboundary issues.
- **Outcomes**: The project can manage identified political risks.

Continuous Improvement:

Greater than basic good practice could be indicated by, for example:

- a high level of confidence supported by objective evidence that the project can manage a broad range of political risks; or
- opportunities for the project to contribute to or cooperate with measures that encourage reduction or mitigation of political risks; or
- an analysis undertaken of strengths, weaknesses, opportunities and threats of the project with respect to managing political risks.

Assessment Guidance:

Political risk is a risk of financial loss or inability to conduct business faced by investors, corporations, and governments due to government policy changes, government action preventing entry of goods, expropriation or confiscation, currency inconvertibility, politically-motivated interference, government instability, or war.

Transboundary issues would take into account upstream and downstream of the project and basin-wide sharing of resources

Reducation or mitigation of political risks can be through, for example: energy sector reform, sound fiscal management, anti-corruption strategies, etc.

Examples of evidence: analysis of political risk, analysis of transboundary issues, agreements and institutions; authoritative assessment of political risk / sovereign stability; National Governance Audits; options to address political risks; records of meetings with representatives from governments, transboundary institutions and other key stakeholder groups

I-5: Institutional Capacity

This topic addresses the capacities of the institutions that have a role in the development and operation of hydropower projects, and their implications for development of the hydropower project under consideration. The intent is that institutional capacity requirements and the existing capacity with respect to the hydropower project under consideration have been evaluated, and capacity shortfalls can be addressed.

This topic is important because the development of water and energy services in general, and of a hydropower project in particular, requires a comprehensive and balanced set of capacities amongst a range of stakeholders, namely governments/regulators, developers, financial institutions, contractors, suppliers, labour force, civil society and affected people. Where such skills are lacking in any of these sectors, such shortfalls may be mitigated by drawing on externally available resources, with the eventual objective of developing local capacity by transferring skills and technology.

Basic Good Practice:

- **Assessment**: An assessment of the capacities of institutions most relevant to the hydropower project has been undertaken.
- **Outcomes**: The project can manage critical shortfalls, gaps or complexities.

Continuous Improvement:

Greater than basic good practice could be indicated by, for example:

- a high level of confidence supported by objective evidence that the project can manage critical shortfalls, gaps or complexities; or
- a rigorous and broad approach taken to identification and assessment of institutions and capacities; or
- opportunities for the project to contribute to or cooperate with measures that encourage strengthening of institutional capacities; or
- an analysis undertaken of strengths, weaknesses, opportunities and threats of the project with respect to managing critical shortfalls, gaps or complexities in institutional capacities.

Assessment Guidance:

Institution examples include: the executive, the legislature, political parties, anticorruption organizations, judiciary, grievance addressing mechanisms (e.g. the Ombudsman), specific civil service/public sector agencies, law enforcement agencies, Freedom of Information, media, local and regional government, civil society, private sector, international institutions (e.g. some provide peer review of anti-corruption efforts), audit/oversight institutions, public contracting system, etc.

Examples of evidence: analysis of institutional capacities; options to address institutional capacity shortfalls; records of meetings with representatives from government, key institutions, independent analysts and other key stakeholder groups

I-6: Technical Issues & Risks

This topic addresses early identification and analysis of technical issues and risks that may influence decisions to invest in preparation of the hydropower project under consideration. The intent is that technical issues and risks have been evaluated at an early stage, and decisions to invest in project preparation are informed on these matters.

This topic is important because without an early stage analysis, technical issues and risks may be encountered after the developer has made significant investments into project preparation and it may be difficult to consider an alternative project.

Basic Good Practice:

- **Assessment**: An assessment has been undertaken of technical issues and risks most relevant to the project.
- **Outcomes**: The project can manage technical issues and risks.

Continuous Improvement:

Greater than basic good practice could be indicated by, for example:

- a high level of confidence supported by objective evidence that the project can fully manage technical risks; or
- an analysis undertaken of strengths, weaknesses, opportunities and threats of the project with respect to managing technical risks.

Assessment Guidance:

Technical issues and risks might relate to, for example: availability and reliability of the hydrological resource, seismic stability, other natural hazards, geotechnical stability, access to construction materials, asset safety, etc.

Examples of evidence: desk-top analyses of technical issues and risks, area-specific analyses, expert opinions; records of meetings with relevant technical experts

I-7: Social Issues & Risks

This topic addresses early identification and analysis of social issues and risks that may influence decisions to invest in preparation of the hydropower project under consideration. The intent is that social issues and risks have been evaluated at an early stage, and decisions to invest in project preparation are informed on these matters.

This topic is important because without an early stage analysis, social issues and risks may be encountered after the developer has made significant investments into project preparation and it may be difficult to consider an alternative project.

Basic Good Practice:

- **Assessment**: An assessment has been undertaken of social issues and risks most relevant to the project.
- **Outcomes**: The project can minimise and manage negative social impacts.

Continuous Improvement:

Greater than basic good practice could be indicated by, for example:

- a high level of confidence supported by objective evidence that the project can avoid, minimize, mitigate and/or fully compensate negative social impacts; or
- the assessment takes into account opportunities, and there is potential for some social opportunities or enhancements to existing environmental issues to be realised; or
- the assessment takes into account risks relating to legacy issues or cumulative impacts; or
- an analysis undertaken of strengths, weaknesses, opportunities and threats of the project with respect to managing social risks.

Assessment Guidance:

Social issues and risks might relate to, for example: project affected community composition, socio-economic status and livelihoods, likelihood of resettlement requirements, labour and workforce capacity, community safety, public health, cultural heritage, likelihood of community acceptance, communication and consultation needs and issues, legacy issues, cumulative impacts, social unrest, etc.

Examples of evidence: desk-top analyses of social issues and risks and social benefit opportunities; area-specific analyses; expert opinions; records of meetings with representatives from government, NGOs, potential project affected communities, indigenous communities and other key stakeholder groups.

I-8: Environmental Issues & Risks

This topic addresses early identification and analysis of environmental issues and risks that may influence decisions to invest in preparation of the hydropower project under consideration. The intent is that environmental issues and risks have been evaluated at an early stage, and decisions to invest in project preparation are informed on these matters.

This topic is important because without an early stage analysis, environmental issues and risks may be encountered after the developer has made significant investments into project preparation and it may be difficult to consider an alternative project.

Basic Good Practice:

- **Assessment**: An assessment has been undertaken of environmental issues and risks most relevant to the project.
- **Outcomes**: The project can minimise and manage negative environmental impacts.

Continuous Improvement:

Greater than basic good practice could be indicated by, for example:

- a high level of confidence supported by objective evidence that the project can avoid, minimize, mitigate and/or fully compensate negative environmental impacts; or
- the assessment takes into account opportunities, and there is potential for some environmental opportunities or enhancements to existing environmental issues to be realised; or
- the assessment takes into account risks relating to legacy issues or cumulative impacts; or
- an analysis undertaken of strengths, weaknesses, opportunities and threats of the project with respect to managing environmental risks.

Assessment Guidance:

Environmental issues and risks might relate to, for example: biodiversity, migration of aquatic species, threatened species, wetlands of significance, critical habitats, weeds, pest species, greenhouse gas emissions from the reservoir, erosion, sedimentation, water quality, air quality, legacy issues, cumulative impacts, etc.

Examples of evidence: desk-top analyses of environmental issues and risks and environmental enhancement opportunities; area-specific analyses; expert opinions; records of meetings with representatives from government, NGOs, local and other key stakeholder groups

I-9: Economic & Financial Issues & Risks

This topic addresses early identification and analysis of economic and financial issues and risks that may influence decisions to invest in preparation of hydropower project or system of projects. The intent is that economic and financial issues and risks have been evaluated at an early stage, the project will deliver a net benefit, and decisions to invest in project preparation are informed on these matters.

This topic is important because without an early stage analysis, economic and financial issues and risks may be encountered after the developer has made significant investments into project preparation and it may be difficult to consider an alternative project.

Basic Good Practice:

- **Assessment**: An assessment has been undertaken of financial issues, risks and opportunities most relevant to the project, and likely costs and benefits.
- **Outcomes**: The project can manage financial issues, be commercially viable, attract finance, and deliver a net benefit to project affected communities.

Continuous Improvement:

Greater than basic good practice could be indicated by, for example:

- a high level of confidence that the project can be strongly commercially viable and readily attract finance; or
- a high level of confidence supported by a broad consideration of potential costs and benefits including social and environmental externalities that the project can be deliver significant and sustainable net benefits to project affected communities; or
- an analysis undertaken of strengths, weaknesses, opportunities and threats of the project with respect to managing financial risks.

Assessment Guidance:

Financial issues and risks examples include: very high project costs; uncertainties with respect to revenue streams; currency exchange instability; difficulties in access to project finance; access to renewable incentive schemes; regional pricing; market stability; market access; likelihood of major inflation or depreciation; etc.

Economic issues and risks examples include: few identifiable opportunities for additional benefits; early stage cost-benefit analysis shows no net project benefit; excessive social and environmental costs; etc.

Social and environmental externalities refers to by-products of activities that affect the well-being of people or damage the environment, where those impacts are not reflected in market prices (for example, pollution); costs or benefits associated with externalities do not enter standard cost accounting schemes.

Examples of evidence: evaluation of financial issues and risks; early stage cost-benefit analysis; identification of sources of finance; economic and finance issues and risk assessment; records of meetings with representatives from government, financial institutions, development banks and key stakeholder groups