MAKING HYDROPOWER MORE SUSTAINABLE?

A sustainability measurement approach led by the Hydropower Sustainability Assessment Forum

Tira Foran

M-POWER
Mekong Program on Water Environment and Resilience

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By

Tira Foran
Unit for Social and Environmental Research,
Faculty of Social Sciences, Chiang Mai University

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By **Tira Foran**
Unit for Social and Environmental Research, Faculty of Social Sciences, Chiang Mai University

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CONTENTS

The purpose of this paper is to increase understanding about the Draft Hydropower Sustainability Assessment Protocol (HSAP). The 2009 Draft HSAP is designed to be a practical sustainability measurement tool that will be endorsed by many stakeholders, including civil society.

This paper provides an independent analysis. We compare the Draft HSAP with the World Commission on Dams decision making framework. We emphasize issues that deserve further thought and discussion.

Large hydropower dams tend to produce not just energy, but large volumes of debate. Governments and energy companies view the ability to transform flowing water into electricity as a precious economic resource. Critics argue that large dams in the Mekong region are associated with serious and often unresolved negative impacts on ecosystems and vulnerable people (Molle et al. 2009).

In contexts where state regulation is still weak, or where clear economic incentives to improve environmental and social performance are lacking, what can be done? One approach is to begin by inviting project developers and other interested groups to assess the sustainability of hydropower development, in an objective manner. This brief introduces a protocol for hydropower assessment, supported by the International Hydropower Association (IHA).

In 2007, IHA in collaboration with World Wildlife Fund (WWF) and The Nature Conservancy (TNC) established a "Hydropower Sustainability Assessment Forum" (HSAF). The focus of the Forum is to review and recommend enhancements to the existing IHA Sustainability Assessment Protocol (IHA 2006).[1] The Forum includes representatives from industry, government, and four international NGOs.[2] In 2008–09, HSAF members worked together to refine the assessment methodology, with the aim of developing an objective and broadly useful tool. In August 2009 the Forum released an important Draft Hydropower Sustainability Assessment Protocol ("Draft HSAP") (HSAF 2009a). The Draft HSAP was a product of consensus-based negotiation between Forum members.

The Forum's work has attracted both support and useful criticism from a range of actors. The purpose of this discussion paper is to increase stakeholder understanding about the Draft HSAP. We review the HSAF's approach to sustainability, and compare it against the World Commission on Dams (WCD) framework. We emphasize issues in the Draft Hydropower Sustainability Assessment Protocol that deserve further thought and discussion.

BACKGROUND

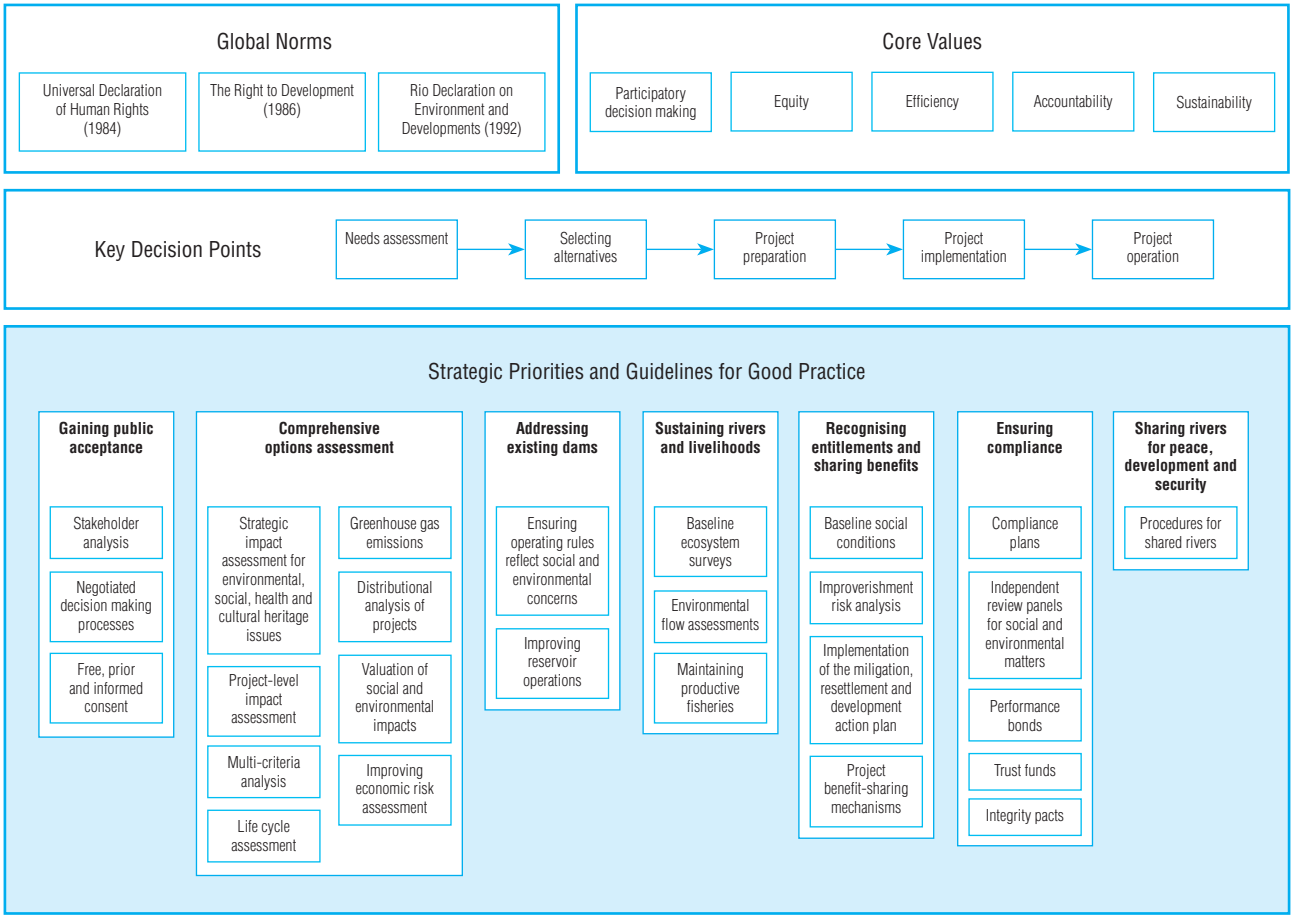
Probably the most comprehensive, substantive, and ambitious decision-making framework for water and energy projects is that developed by the World Commission on Dams. To understand the HSAF's current approach and its implications, it is helpful to first review the WCD. WCD was a large multi-stakeholder process that ran from 1998–2000. It reviewed the effectiveness of large dams in terms of achieving economic and social development objectives.

WCD consisted of a twelve-member expert panel, including representatives of the hydropower industry, civil society, affected people, government, and academia. The commissioners were supported by a professional secretariat of ten staff members, and reported their progress to a stakeholder forum consisting of 68 organizations (one of which was the IHA).

WCD studied seven dams and three dam-building countries in depth, and also published 130 technical papers. It carried out consultations in different parts of the world with 1,400 participants, and accepted 950 submissions from experts and the public (World Commission on Dams 2000). By late 2000, it had produced the world's most comprehensive and substantive decision-making framework for water and energy projects, backed by an accessible knowledge base.

The framework drew on the Commission's findings about the effectiveness of large dams. A key finding was that large dams too often failed to deliver a fair distribution of benefits and impacts. WCD anchored its new framework for decision-making in an approach to economic and social development in which the rights of affected people and citizens took center stage. This was consistent with U.N. development discourse at the time (Dubash et al. 2001: 100). Peoples' right to development as well as their fundamental human rights could be protected, WCD argued, by observing a set of seven development objectives. These "strategic priorities" include gaining public acceptance, comprehensive options assessment, sustaining livelihoods, and sharing benefits (see Figure 1). To help implement its seven strategic priorities, WCD issued a more detailed set of 26 "guidelines for good practice".

Figure 1 WCD framework for decision making



Source: Dore et al. (2004)

Arguably, the WCD framework has become the world's most prominent framework for assessing the sustainability of large dam projects. Any large dam project that wants to sell carbon credits in the EU carbon trading system must comply with the WCD framework (International Rivers 2008). The World Bank, export credit agencies and the IHA all endorse the WCD Strategic Priorities, but take different positions regarding specific WCD guidelines.

One important criticism of the WCD is that its framework makes it more time consuming and difficult for countries to build dams that may be urgently needed. The WCD, for example, calls for "demonstrable public acceptance" of all key decisions, achieved through fair and participatory negotiation among all stakeholders. The WCD also calls for the "free, prior, informed consent" (FPIC) of indigenous and tribal people, to be achieved through their formal and informal representative bodies (WCD 2000: 219–220). Developers argue that this recommendation gives veto rights over development projects to a small minority. On the other hand, affected peoples' groups and development NGOs support FPIC. They see FPIC as an ongoing process of establishing and maintaining consensus between sponsors and representatives of all people affected by a reservoir or dam, not only indigenous people (Dubash et al. 2001; Simon 2009).

In summary, the WCD offered a set of high standards for the review of existing and planned dams and for addressing outstanding or legacy issues in existing projects. The WCD recommendations, if implemented, would indeed slow down decision-making, because they require any large dam project to be assessed from a number of different perspectives. The WCD argues that ordinary people, and affected people, have the right to directly and actively shape decisions about energy, water, and dams. This recommendation of course implies profound changes to existing planning and approval practices. In most countries, such welcome changes are most likely to take place over an extended period of time. They require ongoing reflection, debate and dialogue between state, the private sector, and the diverse elements of civil society.

AN INDUSTRY-LED APPROACH TO SUSTAINABILITY

IHA's approach begins with the conviction that hydropower of all sizes offers the world highly efficient and non-polluting energy (International Hydropower Association 2003). On many points, the industry-led approach is similar to that of the WCD. IHA supports the WCD's core values and strategic principles. In its own words, it supports "the principle of an integrated planning process, comprehensive options assessment, optimized development, and responsible management" as well as "consideration of social equity at all stages of project implementation through a planned programme of community consultation" (IHA 2003: 12, 94).

IHA's concept of planning combines design optimism with pragmatism. Optimism here means the belief that good energy projects can be identified and built, and complex environmental and social problems satisfactorily identified and resolved. Pragmatism refers to the idea of achieving practices which are good, but not necessarily perfect (IHA 2003: 95).

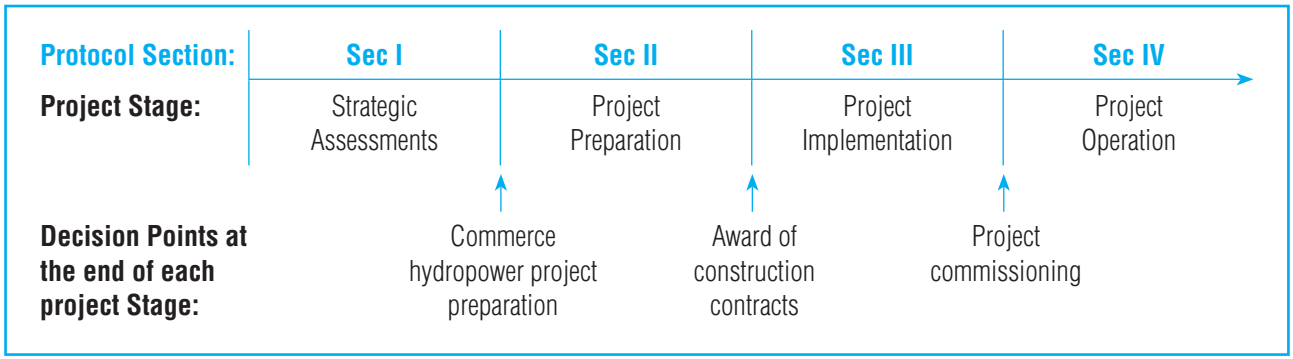
HOW THE HYDROPOWER SUSTAINABILITY ASSESSMENT PROTOCOL IS INTENDED TO WORK

The HSAP is intended to be a set of practical guidelines to allow hydropower projects – existing and planned – to be audited in a timeframe that is primarily responsive to the needs of private financiers, developers, operators. However, the HSAF hopes that its 2009 protocol will be tested by a wide range of groups, including civil society, and eventually endorsed by civil society as well.

The HSAP is divided into four sections (International Hydropower Association 2009b). The framework covers the different stages of a project cycle, beginning with (1) strategic assessment of projects to provide energy and water services; (2) preparation of hydropower projects (i.e. various studies and plans conducted prior to award of construction contracts); (3) implementation of hydropower projects, and (4) operation of hydropower projects.

Each section includes a number of issues (economic, social, environmental, political) against which a hydropower project or development initiative can be scored from low to high according to observed practices (see Figure 2 and Table 1). Each section builds on previous sections, but is also designed to work as a stand-alone assessment.

Figure 2 Structure of Sustainability Assessment Protocol



Source: IHA (2009b)

Table 1 Draft Hydropower Sustainability Assessment Protocol: summary of assessment criteria and indicators

Section / Purpose	Examples of key criteria and associated questions
(I) Strategic Assessment Assess strategic basis for a proposed hydropower project	A set of nine criteria (Aspects), including: **Demonstrated need** – Is the proposed project justifiable as a preferred source of electricity and/or water services? When demand for electricity and water services is assessed, what is the quality of that assessment process? When energy and water development goals have been set, what is the quality of the consultation process? **Options assessment** – Does it cover the full range of planning approaches including energy and water conservation? What is the quality of the analytical framework? How well do directly affected stakeholders support options assessment? **Regional and national policies and plans** – What is quality of existing plans for energy, water, conservation, and economic development? How well do plans provide guidance for hydropower project planning? How consistent is a proposed project with plans? **Political risk** – How comprehensive is political risk assessment? What is the level of political risk? (Examples of political risk include: risk of political interference, corruption, expropriation of a company, problems with currency conversion, and political violence.) **Institutional capacity** – Do management plans exist to deal with public sector capacity limitations? To what degree can such limitations be managed? *Results can inform decisions to invest (or not invest) in preparation of a new project. For existing projects, results can inform major decisions related to improving or decommissioning.*
(II) Project Preparation Assess quality of various project investigations, plans, and designs	**A set of 28 criteria (Aspects)**, including: economic and financial viability, environmental impact assessment (EIA), social impact assessment, benefit sharing, project affected communities, resettlement, indigenous peoples and ethnic minorities, transboundary issues, environmental flows and downstream sustainability, regulatory approval, corporate governance Each criterion has its own set of indicators (assessment questions). Section II requires assessment of demonstrated need (assessed in Section I). *Results can inform the decision to approve the project and award (or not award) construction contracts.*

Table 1 Draft Hydropower Sustainability Assessment Protocol: summary of assessment criteria and indicators (Cont'd)

Section / Purpose	Examples of key criteria and associated questions
(III) Project Implementation Assess quality of construction and social and environmental management programs	A set of **26 criteria (Aspects)**, 24 of which are repeated from Section II (allowing reassessment). Each criterion has its own indicators. *Results can inform decision to commission (or not commission) projects.*
(IV) Project Operation Assess quality of operational projects	A set of **23 criteria (Aspects)**, 21 of which are repeated from Sections III or II (allowing reassessment). Each criterion has its own indicators. *Results can inform decisions to allow or modify ongoing operations.*

Source: based on HSAF 2009a.

Note: The questions in this table are the author's interpretation, based on wording of indicators. The HSAF refers to criteria as "Aspects" and indicators as "Attributes."

The HSAF's goal is to develop a technique that allows objective, systematic evaluation of the performance and sustainability of different hydropower projects. Ideally, the tool should provide enough structure so that whoever does the assessment, whether a hydropower developer, an NGO concerned with local impacts, or an external, independent organization, would reach similar conclusions.

Status

In 2009, the Forum presented the basic structure and content of the Draft Protocol in a "Key Components Document", which essentially was a scoping paper (IHA 2009b). The Forum then conducted a first round of public consultation January–March 2009 to raise awareness about its process, and to get feedback on the Key Components Document. The consultation used an online questionnaire and key stakeholder interviews. The Key Components Document received a wide range of comment from actors inside and outside the hydropower industry (see ARUP 2009).

In August 2009, the HSAF released a Draft Hydropower Sustainability Assessment Protocol (see HSAF 2009a). The Forum announced a second round of public consultation (online and face-to-face) and trialing during September–November 2009. The second round focuses on the content and practical applicability of the August 2009 Draft Protocol.

KEY ISSUES FOR THE MEKONG REGION

By "Mekong region" we refer to a political construct that includes Cambodia, Lao PDR, Myanmar, Thailand, Vietnam, and China's Yunnan and Guangxi provinces. Defined this way, the region is three times larger in area than the Mekong river basin, and home to 300 million people (Lebel et al. 2007). Until the 2008 global economic slowdown, the region experienced a boom in the promotion of large hydropower and water resources development projects. The Government of Lao PDR for instance, has 8 dams under construction, and 16 dams in advanced planning. It has signed preliminary agreements with developers for another 45 hydropower projects (MEM 2009).

The region's boom is essentially the outcome of (1) government policies to grow economies by building dams and selling electricity; (2) belief among energy planners that hydropower offers important advantages compared to fossil-powered electricity; (3) a regulatory environment that gives priority to commercial viability over high social and environmental performance (Molle et al. 2009).

In recent years, the region has experienced an increase in the number of dams developed and financed or co-financed by "new" financiers (that is, actors that are not multilateral development banks such as The World Bank and Asian Development Bank). The largest of the new financiers are state-owned Chinese banks. Other new financiers include state-owned and/or publicly-listed companies based in the region or in Organization for Economic Co-operation and Development (OECD) countries.

The following section is based on our examination of the draft Protocol (HSAF 2009; IHA 2009b), on comments received by the Forum after the first round of consultation (ARUP 2009), on the HSAF's response to those comments (International Hydropower Association 2009a), and on expert interviews. We also compare the HSAF's general approach with other sustainability frameworks, and reflect about how the proposed HSAP might work in the context of the Mekong's rapid embrace of hydropower.

Our review reveals a number of issues that deserve further discussion.

Connection to other assessment frameworks

Connection to WCD – Both WCD and HSAF frameworks endorse the idea of rational, long-term, water resources planning. The key difference between them is the role they assign to ordinary people. The WCD has a distinctly human-rights-centered logic, whereas the draft HSAP is more state-centric and technocratic, and also tends to assume that a hydropower project or set of projects has already been identified.

During the first consultation, stakeholders who support the WCD approach told the Forum that "they had engaged extensively and in good faith in WCD and did not want to expend time on any process that was not clearly building on it" (see ARUP 2009: 8–9).

The HSAF explicitly states that it draws on WCD Core Values and Strategic Priorities, along with other existing principles and policies (International Hydropower Association 2009a). The Forum has published a comparison of how the WCD conclusions relate to its key components paper (HSAF 2009b).

The HSAP contains many elements that are similar to the WCD strategic priorities. Overall, however, the WCD extends democratic rights more broadly than the Draft HSAP. For example, with respect to the rights of affected communities to negotiated entitlements, the Draft HSAP suggests granting this right to indigenous communities, those who must resettle, and those whose land is acquired (HSAF 2009b). The WCD framework by contrast calls for agreements to be negotiated with all communities whose livelihoods are negatively impacted (WCD 2000: 240).

Connection to IFC Performance Standards – The performance standards of the International Finance Corporation, the private-sector arm of The World Bank, focus on analyzing and managing risks to financial investors. The Draft HSAP lays out a more sector-specific set of indicators compared to the IFC Standards (IFC 2006) or the Equator Principles (2006). Respondents from the financial sector wanted to see the HSAP revised to be consistent with the IFC Standards. The Draft HSAP makes an explicit link to IFC Standards for criteria related to Indigenous Peoples and Resettlement and Land Acquisition. It remains to be seen if the financial community will request more explicit harmonization.

Range and adequacy of criteria

Stakeholders who participated in the Phase 1 consultation disagree about the proper scope of assessment. Developers, for example, might focus on assessing different **risks to a proposed project. Non-developers** would also be interested in assessing the quality of national or regional **energy policy** (ARUP 2009: 14).

During the first round of consultation, respondents stated that the treatment of **affected people** in the Key Components Document (IHA 2009b) was not yet adequate. Downstream communities are not covered. Social experts criticized the protocol for insufficient attention to the risk of impoverishment. They wanted the Protocol to focus on getting **resettlement** issues right and fair, on **acceptance**, and on **benefit sharing**. Other respondents wanted a tool to assess sustainability at the **river basin scale** (ARUP 2009: 13). The HSAF has tried to respond to these issues in the August 2009 Draft HSAP.

Importance of strategic planning

The Draft HSAP is divided into four sections, applicable to different stages of the hydropower project life cycle (Figure 2). This design is useful, because many disputes over hydropower projects are disputes over the adequacy of strategic justification for a project. Issues related to strategic planning are explicitly covered in Section 1 of the Draft HSAP. Strategic planning may be debated for a number of reasons. Points of debate could range from demonstrated need (e.g. does the supply of proposed hydro projects exceed a region's economically efficient demand for electricity?), to disputes about what constitutes appropriate economic development (e.g. is hydropower-led development an effective pro-poor strategy for a particular region?).

It is useful therefore to have an assessment tool that allows the quality of strategic planning to be evaluated separately and before project-level evaluation.

However, in cases where a project has already commenced *preparation* (e.g. Don Sahong in Laos), *implementation* (e.g. Nam Theun 2 in Laos; Ilisu in Turkey), or *operation* (e.g. Three Gorges in China; Pak Mun in Thailand), is it necessary to conduct a Section 1 assessment? What weight should be given to Section 1 relative to other sections?

In the case of Nam Theun 2, critics would want to do a full assessment. They argue that weaknesses exist in the quality of the Thai customer's power development plan (du Pont 2005; Greacen and Palettu 2007), and also in the reasoning that underpins the Lao government's national development plan (Cavallo et al. 2008). By contrast project sponsors might want to begin the assessment at Section 2, related to implementation. There is thus potential for disagreement between different coalitions of actors about the scope of assessment.

In an ideal project development context, strategic planning (e.g. electricity options assessment, various national and regional development plans) takes place in a transparent, objective, and participatory manner.

Strategic planning occurs regularly, and precedes various project-level studies. The structure of the HSAP reflects this planning ideal. Actual practice in the Mekong region, however, is far from this ideal. Planners at electricity utilities, for instance, do not include energy efficiency projects as candidate investment options in their long-term power development plans (du Pont 2005; Greacen and Palettu 2007). In hydropower supplying countries, screening studies exist, but seldom guide prioritization of hydropower sites in a transparent, participatory manner. Hydropower projects instead are developed according to an entrepreneurial and highly exclusive process.[3] In this context, a willingness to conduct Section 1 assessment in a transparent, objective, and participatory manner is one of the clearest commitments to sustainable development a hydropower company or host government could make.

Socio-political context in which assessment is conducted

How should assessments be organized? Whose assessment matters? The Protocol should provide sufficient guidance so that whoever does the assessment would reach similar conclusions. The Draft Protocol does not yet provide enough guidance, as we explain below.

Since hydropower sustainability assessment covers a wide range of criteria, expertise in multiple disciplines is important. A multi-disciplinary team of experts, following the HSAP, could produce a credible assessment. In order to do so, they would need a methodology to incorporate the knowledge of marginalized and vulnerable people. Assessments should also make other key sources of knowledge (e.g., hydrologic simulations, economic and financial models) accessible for public review.

The Draft Protocol does not discuss the governance of an assessment in detail. It may be unrealistic or undesirable to expect all interested actors to collaborate in the production of a single assessment. In any case, large, controversial projects deserve rigorous independent assessments.

Analysis of proposed protocol design

Summary

As Table 1 shows, the Protocol requires many different criteria ("Aspects") to be assessed. HSAF has proposed that every Aspect be addressed by one general method:

(1) Each Aspect contains up to seven standard assessment indicators:

- Quality of the assessment process
- Quality of the management process
- Quality of the consultation process
- Level of stakeholder support
- Level of compliance
- Level of conformance with plans
- Level of effectiveness
  (HSAF 2009a: Section 1, p.6)

The Draft Protocol refers to these indicators as "Attributes." For each of these Attributes, the Protocol includes guidance notes of varying length.

(2) After gathering sufficient data, the assessment team will give numerical scores to each of the above Attributes (1 = "very poor", 5 = "excellent").

(3) The Protocol may further split each of the above Attributes into a number of sub-questions. For example, Figure 3 shows that answering the quality of assessment process requires answering four sub-questions.

Figure 3 "Demonstrated Need," Aspect I-1

Process Attributes	5	4	3	2	1
Assessment	• Quality of the process leading to an understanding of local, regional, national and international need for energy services[1]				
	Excellent	Very Good	Good	Poor	Very Poor
	• Quality of the process leading to an understanding of local, regional, national and international need for water services[2]				
	Excellent	Very Good	Good	Poor	Very Poor
	• Quality of the process leading to an understanding of local, regional, national and international development objectives				
	Excellent	Very Good	Good	Poor	Very Poor
	• For project developers, quality of the process leading to an understanding of project strategic fit with development needs and objectives				
	Excellent	Very Good	Good	Poor	Very Poor
Management	Generally not relevant at strategic assessments stage				
Consultation	• For governments, quality of the consultation with respect to demonstrated needs [see Consultation guidance note]				
	Excellent	Very Good	Good	Poor	Very Poor
Performance Attributes	**5**	**4**	**3**	**2**	**1**
Stakeholder Support	• For governments, stakeholder support for the determination of development needs and objectives [see Stakeholder Support guidance note]				
	Excellent	Very Good	Good	Poor	Very Poor
Conformance with Plans	Generally not relevant at strategic assessments stage				
Compliance	Generally not relevant at strategic assessments stage				
Effectiveness	• For developers, likely contribution of project to development needs and services				
	Very High	High	Good	Minimal	None

Source: HSAF (2009a: Section 1, p. 23)

Analysis

Ambiguity in wording – For the Protocol to be useful, it needs clear, logical and accurate specification of criteria (Aspects) and indicators (Attributes). Some criteria in the Protocol, such as Options Assessment, have been clearly specified. Many others are described in a confusing manner. For example, in the criterion Demonstrated Need (Figure 3), the following two indicators (Attributes) are confusing:

i) "Quality of the [assessment] process leading to an understanding of local, regional, national and international development objectives."

ii) "For developers, likely contribution of project to development needs and objectives"

(HSAF 2009a, p. 23)

Indicator (i) contains four geographic levels. An assessment of all four levels would mean four sets of evidence to be gathered and four scores to be given. But only one space is given for an answer.

Indicator (ii) is about effectiveness. It focuses on the effectiveness of a proposed project. However the question is actually relevant for all stakeholders to consider, not just developers.

More importantly, from a sustainability perspective, we need to assess not just the effectiveness of a proposed project. We also need to assess how effective particular "development needs and objectives" are at attaining sustainable development. This more fundamental effectiveness question is missing from the Demonstrated Need (see Section 5 below)[4] criterion. Compare this to the Options Assessment criterion (Aspect I-2), where the effectiveness indicator is more substantive:

> "Degree to which the options assessment guides development choices based on sustainability criteria." (HSAF 2009a, p. 24)

In Section 5, we discuss the importance of linking the HSAP to key "sustainability criteria."

Interpretivist method – the general assessment and scoring method is highly interpretivist. An interpretivist philosophy argues that no single reality exists. The quality of a particular energy plan or hydropower dam depends on how different actors interpret that plan or dam. This philosophy of science rejects the claim that any one "true" knowledge exists (Sayer 2000; Blaauw and Pritchard 2005).

Because the HSAP is an attempt to create an objective, quantified set of knowledge, we are surprised that it relies on a highly interpretivist method.

In the HSAP, numerical scoring is often based on language such as "adequate;" and "effective." Each of these key words appears multiple times. They are defined in terms that require further interpretation. According to the HSAF:

> "effective" means "producing or capable of producing an intended, expected and/or desired effect"
>
> "adequate" means "sufficient or enough to satisfy a requirement or meet a need."
>
> (HSAF 2009: Section 1, p. 17; emphasis added)

Who decides what effects (i.e. outcomes) are desired? Who defines what requirements and needs are legitimate? Conservatives might argue that "requirements" are no more than existing national laws and procedures, and desired outcomes appear in various existing development plans. Others argue that a more profound set of outcomes

and requirements must be met if human society is to provide "decent livelihoods for all without wrecking the planet" as Gibson (2006) memorably puts it.

According to the Draft, a score of 5 is to be given for "proven best practice." However, in keeping with the interpretivist method, the Draft Protocol allows "proven best practice" to vary between countries, and between projects of different sizes.

However, as part of the Phase 2 on-line consultation, the Forum asked the public to suggest examples of "proven best practice" for individual indicators in the Protocol (HSAF 2009a: 1).

The HSAP should certainly include more absolute standards.[5] Each indicator (Attribute) should give users clear examples of progressive practice against which to score observed practices.

Clear examples of progressive practice used or adopted by energy-related industry include:

- integrated electricity or water services planning (also known as integrated resource planning) which is a regulatory requirement for many energy organizations in North America (D'Sa 2005);
- obtaining free, prior, and informed consent from representatives of project-affected people, adopted by the Roundtable on Sustainable Palm Oil (RSPO 2007).

Stakeholder identification – As discussed above, the draft HSAP leaves the scoping of legitimate needs (and hence case-specific definitions of adequacy, suitability, and effectiveness) up to specific sets of stakeholders. Ideally this relative method would lead to open dialogue between auditors and other stakeholders about what important requirements and needs (i.e. social values, priorities, policies) should to be met. But the degree to which meaningful dialogue and assessment occurs depends on how stakeholders are identified and recruited to participate.

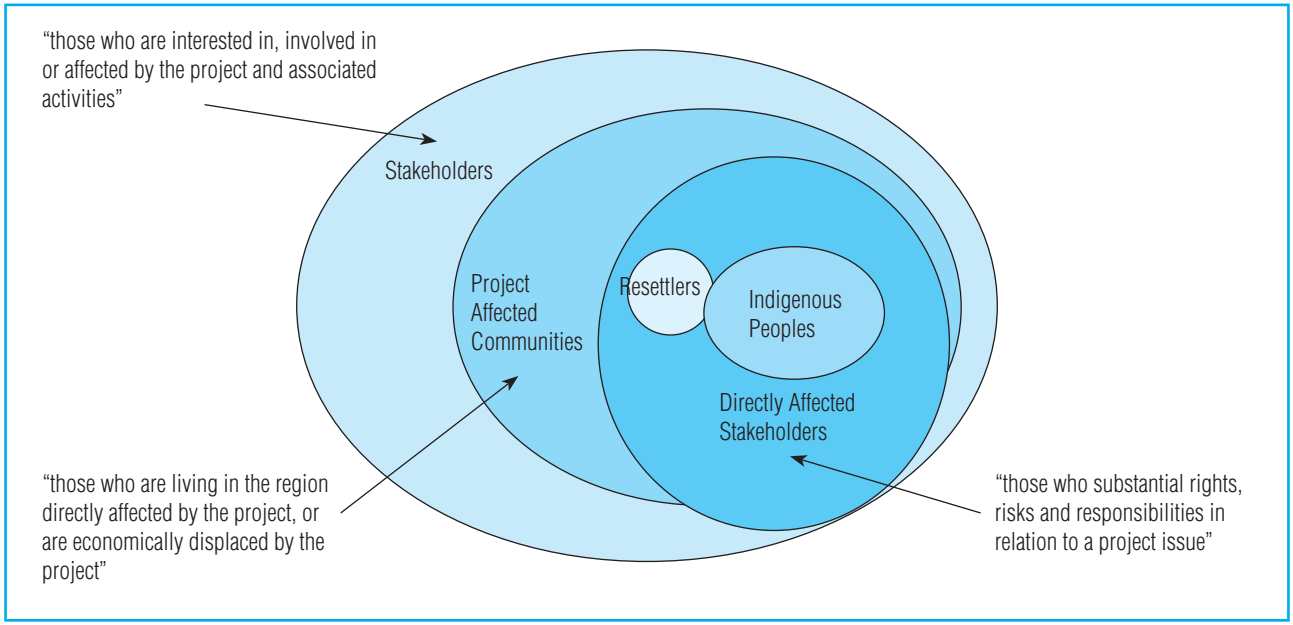
The HSAP recognizes five categories of stakeholder (see Figure 4). The degree to which different stakeholders *support* different assessment, management, and consultation processes and outcomes is an important indicator of sustainability. It is a standard indicator (Attribute) and appears throughout the Protocol.

However, in the draft Protocol, the indicator "stakeholder support" specifically concerns "directly affected" stakeholder groups. The focus is on the degree to which "directly affected" groups support a given process or outcome.

The proposed definition of "directly affected" stakeholder, as those with **"substantial rights, risks, and responsibilities in relation to a project issue"** (Figure 4), has several difficulties. First, it is vague. Who defines substantial?

Second, the notion that different actors are directly affected "in relation to a project issue" needs to be clarified. Many actors exist with a professional interest in energy, water and sustainable development: scientists, planners, public opinion-leaders, development workers, and representatives of project-affected communities. Note that this second set of actors crosses state and non-state organizations. Does each organization among this second set have to justify its claim, issue by issue, to being a "directly affected" stakeholder?

Figure 4 Definition of stakeholder types



Source: HSAF 2009a: Section 1, p. 19

Outside project-affected areas, the HSAP identifies financial institutions, project developers, and regulators, as actors who, conditionally, can be considered "directly affected" (HSAF 2009a: Section 1, p. 18). Presumably this is on the basis of their various legal, professional and ethical responsibilities. No explicit guidance is given for how to assess their eligibility.

Overall, the Draft HSAP does not require assessing the level of support of "stakeholders" in society. This proposed delineation of stakeholders may strike some readers as formalistic and unrepresentative of wider society. It may be unproductive if the goal is to foster serious discussion and debate in society.

Consistency in standard setting between criteria – For some criteria, the Draft HSAP provides more specific or substantive guidance about what is required to meet a standard. In other cases, it provides less:

- For criteria concerning Indigenous Peoples and Resettlement (see Aspects II-15 and II-16), to obtain a top score, the full consent of stakeholder groups with legally binding agreements is required. This is an example of clear and substantive guidance.
- For the criterion concerning Options Assessment (Aspect I-2), an integrated least-cost demand-side and supply-side assessment (for energy or water)

is not explicitly required to obtain a top score. This is an example of relative guidance.

Some criteria come with very detailed guidance notes (see Environmental Flows and Downstream Sustainability; Aspect II-25). However the level of detail provided for other equally important criteria is much less (see Options Assessment). The Draft HSAP does not yet offer clear absolute standards of progressive practice across all criteria.

Data identification and collection – The HSAF proposes that trials of the Draft Protocol could be completed by a team of three to six auditors over a period of three days (including site visits). Trials would be hosted by a hydropower company and supported by an interpreter. The company would facilitate the assessment team's access to key informants, including company and government representatives, community representatives, and local experts.

The range of data which the Draft Protocol regards as sources of "evidence" is not sufficient. The Draft HSAP proposes, for example, that the support of project-affected communities be assessed by examining various **surveys** and **opinion polls** conducted at the community level. The politics of hydropower development however often include strong lobbying at the local level by various authorities enlisted to support a proposed project. Polls and surveys may yield inaccurate results and need to be supplemented with more sensitive techniques, such as outreach to vulnerable or concerned people, followed by confidential interviews. Outreach requires establishing trust and rapport. Short data collection visits hosted by representatives of a hydropower company may be insufficient.

Weak requirements for documentation of process and outcome? – In order to complete an assessment, auditors must develop detailed understanding of planning processes and institutions in a specific country or region.

Detailed understanding is necessary, for example because the Draft Protocol requires auditors to state the degree to which different kinds of institutional challenges can be "managed." Examples include various "gaps" or "shortfalls" with respect to national policies, plans, and public sector capacities (HSAF 2009a: Section 1: pp. 26, 29).

This kind of evaluation requires, as a prior logical step, that the auditors understand what gaps exist in a particular planning process or institutional context. But strangely enough, the Draft Protocol does not require the auditors to report their understanding in detail.

It is valid for the HSAF to prioritize problem-management, but doing so in a way that by-passes objective documentation of various situations is counter-productive. It may strike some stakeholders as opaque or superficial. We suggest that audits also be accompanied by more detailed (case study) documentation.

Complexity and fragmentation – The length and complexity of the Draft Protocol (39 Aspects and >200 indicators requiring a score), may limit informed public participation. There is also a risk that when answering dozens of indicators, some key sustainability criteria get lost. For example, the Draft HSAP presents criteria for prioritization of energy and water service options only at the very bottom of the guidance note for Options Assessment (HSAF 2009a, Section 1, p. 25).

LIMITATIONS AND POTENTIAL OF THE DRAFT HSAP

The Draft HSAP is a multi-criteria evaluation method, in which a large number of qualitatively different criteria (Aspects) are given equal weight. As such, the Draft Protocol has the potential to inform public policy decisions, but cannot replace them.

In the Mekong region, critics of large hydropower dams have argued that electricity services can be met by a variety of technical alternatives, whereas the livelihoods of wetland – and river – dependent small farmers are not as substitutable (Foran and Manorom 2009; Ubon Ratchatani University [UBU] 2002). This argument involves favoring one set of criteria (sustaining common property aquatic resources to feed people) over another (hydropower). The draft HSAP as we understand it is intentionally neutral on how to weigh different goods.

Ultimately, the decision as to whether a particular dam is worth constructing, operating, or commissioning is one that would be made by different actors appealing to different values and arguments. Therefore, we also see the need for more fundamental guidance for stakeholders to think about sustainability.

Basic points about sustainability – To help stakeholders get more from sustainability assessment, it is worth reviewing key points in Robert Gibson's (2006) "practical approach" to sustainability assessment. Gibson, an environmental assessment expert with mining sector experience, argues that people are interested in secure livelihoods, healthy and vibrant communities, new opportunities and choice, and influence in decisions (2006: 173). Sustainability assessment should be an opportunity to learn and think about connections within social-ecological systems. He argues that:

> Sustainability assessment must take seriously the obligation to recognize interdependencies and to seek multiple reinforcing gains on all fronts. This is assisted by setting a comprehensive agenda that covers the full suite of core requirements for moving towards sustainability. Yet it is also crucial to establish firm guidance for trade-off decisions, to ensure that sacrifices are made only where there is no viable 'less bad' alternative. (Gibson 2006: 172; emphasis added)

Packed into this paragraph are three connected arguments, all of which emphasize the importance of interconnections. The notion of "reinforcing gains" suggests rigorous selection of the best plan or dam (as well as ongoing search), not merely an exercise in sorting out better plans or dams from worse.

Second, Gibson argues that it is possible to identify a basic, generally accepted set of **core sustainability requirements**. These we can state in different ways, but all requirements involve substantive criteria such as:

- reducing direct and indirect human threats to system integrity
- providing decent livelihood opportunities
- intragenerational equity
- intergenerational equity
- resource maintenance and efficiency
- socio-ecological civility and democratic governance

(Gibson 2006: 174)

For example, efficiency and equity imply developing less materially – and energy – intensive approaches to personal satisfactions among the advantaged, to permit material and energy sufficiency for all. Civility requires capacity building and mobilizing all producers and consumers to lower their socio-ecological footprint, not just the hydropower sector (2006: 174).

A detailed protocol like the HSAP should be explicitly linked to a set of core sustainability requirements. Doing so would give various stakeholders confidence that the HSAP builds on a strong intellectual foundation.

To be sure, the core sustainability requirements discussed above raise issues that go beyond hydropower development. Following these requirements would challenge the interests, institutions, and values that drive modern socio-ecological systems. But this is not a valid argument for the HSAP to avoid linking to some set of core requirements as clearly as possible.

Gibson's second point is that decision makers with a genuine commitment to sustainability must try to achieve positive gains in all of the above core areas before considering trade-offs. Third, when trade-offs are required, Gibson suggests that a set of basic rules will help, including:

- Maximum net gains – mutually reinforcing, cumulative, and lasting contributions
- Avoidance of significant adverse effects – no adverse effects on socio-ecological systems, unless the alternative is an even worse impact socio-ecological systems
- Protection of the future – no displacement of adverse effects into the future unless the alternative is an even worse displacement into the future
- Explicit justification – based on specific priorities, basic sustainability criteria, and trade-off rules
- Decision processes open to all stakeholders
- Burden of argument on proponent of the trade-off

Source: based on Gibson (2006: 176)

Our summary of one basic, but quite substantive framework (Gibson 2006) highlights the potential and limitations of the Draft HSAP. The HSAP has potential to inform public policy decisions. But to fulfill this potential, it needs to link its 39 specific criteria (Aspects) more clearly to underlying core sustainability requirements. Stakeholders might learn more from working with fewer, but more absolute criteria and indicators.

CONCLUSION

This discussion paper introduced the Draft Hydropower Sustainability Assessment Protocol (August 2009) and provided a detailed, but preliminary analysis of how it is designed to work. Our analysis uncovered several limitations in the draft. One obvious limitation is the length and complexity of the protocol, particularly in Sections II, III, and IV, which will limit informed public participation as well as widespread application. This problem can be solved by focusing on fewer high-priority criteria, identified based on prior discussion between or within stakeholder groups about which "core sustainability requirements" they wish to assess (see Section 5).[6]

Another important limitation is the Draft Protocol's use of interpretivist methods. The method allows particular actors scope to define key needs, requirements, and outcomes outside of the assessment. If assessment and pre-assessment are conducted with limited multi-stakeholder engagement – or with few clear examples of progressive practice – a flawed energy plan or hydropower dam may get a higher score than a plan or dam which is assessed more rigorously and thoughtfully.[7]

Context-specific discussion is certainly necessary. What specific outcomes are desired from a given dam, energy services plan, or regional development plan? We can agree on the need for this sort of (ongoing) discussion. But logically it does not follow that the Protocol itself needs to be based on a highly relativist methodology. Indeed, to further such ongoing public discussion, the HSAP should provide more substantive guidance about existing progressive practice, for all the sustainability criteria (Aspects). The August 2009 draft does not yet consistently do so. Examples of progressive practice used or adopted by energy-related industry include:

- IRP – integrated resource planning (D'Sa 2005)
- FPIC – obtaining free, prior, and informed consent from project-affected people (RSPO 2007)

In conclusion, the Hydropower Sustainability Assessment Forum has offered a revised tool to assess hydropower planning and development. The Forum's approach emphasizes practical problem management and continuous improvement towards sustainable practice. The Draft Protocol uses a multi-criteria design that captures many aspects of sustainable practice, but most indicators still need to be linked to substantive and progressive standards.

While the HSAF has emphasized the need for widespread assessment, it has been less vocal about how assessment should be managed as a social process. Governments and developers are key sources of information. What mechanism does the Forum propose to ensure that assessment results are disclosed to the public? Similarly, what mechanism does the Forum propose to ensure that third parties who wish to use the protocol can access key sources of evidence? As a voluntary (self-regulation) approach, the HSAF cannot compel particular levels of disclosure, access, or participation. But it can vigorously support the highest standards of governance around the use of the HSAP.

In the Mekong region, trials of the Hydropower Sustainability Assessment Protocol, even in its Draft form, could lead to new opportunities for meaningful, structured discussion. Discussion topics supported by a HSAP trial include energy needs, options and costs, as well as the environmental and social standards of hydropower projects in various phases of development and sponsorship. Issues of downstream sustainability, environmental flows, and transboundary and basin-wide assessment can also be explored in a trial. Stakeholders stand to learn a great deal just from working with three to six draft criteria in Section 1.

However, to explore such issues in a multi-stakeholder manner, any planned trial needs to also provide opportunity for meaningful participation. It is difficult to see how closed trials will meet the Forum's objective of creating a broadly endorsed sustainability assessment technique.

The HSAF invested significant effort into the August 2009 Draft Protocol. Further improvements are possible. Based on our observations in 2009, we believe the Forum welcomes public comments and will consider them seriously.

By 2010, the HSAF hopes to develop an assessment method that is not only “practical, clear, and objective,” but one that very different actors can agree on. If so, this would be a significant advance from the status-quo in the Mekong region.

ENDNOTES

[1] The IHA Sustainability Assessment Protocol (2006) is a voluntary tool developed by IHA to assess project performance against the IHA Sustainability Guidelines (2004).

[2] The primary sponsors of the Forum are the governments of Norway, Germany, and Iceland. In 2009, the Forum consisted of two members from the hydropower sector (Hydro Tasmania; IHA); two from the financial sector (one representative of Equator Principles financial institutions, one observer from World Bank); four members from international NGOs (World Wildlife Fund, The Nature Conservancy, Transparency International and Oxfam); and six representatives from government (Norway, Iceland, Germany, China (2), and Zambia).

[3] Customers negotiate power purchases from projects that have emerged from a bottom-up process. The process typically begins with developers bidding with government for exclusive rights to investigate sites. Developers then proceed to generate increasingly refined knowledge of impacts, costs, and returns. This knowledge supports a number of agreements negotiated with governments and buyers. The agreements become increasingly complex. Later, the public begins to learn about a project's details and participate in consultations. By this time, the sponsors' flexibility to revise environmental and social performance in response to public input has unfortunately decreased.

[4] For Demonstrated Need, the closest indicator related to this point is "quality of the consultation with respect to demonstrated needs."

[5] Under the current methodology, poor plans and projects assessed with limited multi-stakeholder engagement can get higher scores than plans and projects which are assessed more rigorously and thoughtfully.

[6] In this respect, the Forum and its stakeholders have already identified a number of high-profile, cross-cutting issues such as human rights, river basin and transboundary issues, climate change, corruption, communication, transparency, gender, complaints mechanisms, livelihoods, affected communities, and multi-purpose hydropower.

[7] The use of numbers to summarize findings creates a misleading sense of objectivity.

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M-POWER

Mekong Program on Water
Environment and Resilience

M-POWER (Mekong Program on Water Environment and Resilience) is a research collaboration among research and policy-oriented organizations active in the Mekong region. M-POWER's ultimate goal is improved livelihood security, human and ecosystem health in the Mekong Region through democratizing water governance. Rather than assuming that a single model of democratization fits all contexts, we believe action research can help societies explore and adaptively reform water governance. The ***Improving Mekong Hydro Investment*** project aims to explore and help improve the governance of decision-making around energy and water resources development in the Mekong region. We regard integrated electricity resource planning (IRP), and voluntary initiatives (such as use of the HSAP) as important practices, which, when implemented in a participatory manner, could improve decision making around energy and hydropower futures.

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