Hydropower Sustainability Assessment Protocol:

What role can the Early Stage tool play?

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Hydropower Growth Expectation?

Installed Capacity Scenarios (GW)

- WEC 2014 (Symphony)
- WEC 2014 (Jazz)

Projected capacities for different years, with a trendline showing growth.
Sustainable Hydropower Expectation?

Will the next 1,000 GW **ALL** be SUSTAINABLE projects?

Are we effectively filtering out unsustainable projects quite early to concentrate on the potentially sustainable options?
Project Challenges

- Unfortunately projects continue to be rejected by Governments, or resisted by stakeholder groups, deep into the project development cycle.

- Could such outcomes be averted by improving the early identification of significant sustainability risks aiming for projects that:
  - align with market needs;
  - fit with the environmental and social context;
  - deliver economic returns?
Stage Gate Filtering Approach

Surveys

Early Stage
- Master Plan
- Basin Development Plan
- Strategic Environmental Assessment
- Pre-Feasibility Study

Preparation Stage
- Feasibility Study
- Environmental & Social Impact Assessment
- Detailed Design & Bidding Documents
Early Project Development Phases
Issues in Early Stage Analysis

• **Objectivity/Impartiality:**
  • potential pitfalls include lack of internal expertise, lack of impartiality, and excessive project momentum/inertia/optimism;

• **Identifying “show stoppers”:**
  • Some fatal flaws / show stoppers like a lack of public acceptance may be outside the traditional technical-economic focus of pre-feasibility studies.

• **Value of neutral party review:**
  • The use of third party reviews at the Early Stage can bring vital external views to the table

• **Need for a standardised evaluation approach:**
  • While a significant amount of information is generated at the early stage it can be of variable quality and there is value in subjecting it to a standardised evaluation approach.
Hydropower Tools for Early Stage Analysis

Only a few tools have been specifically designed for hydropower:

**RSAT (Rapid Basin-wide Hydropower Sustainability Assessment Tool)**
Specifically designed to look at a whole set of hydropower projects and their cumulative impacts.

**Hydropower Sustainability Assessment Protocol – Early Stage Assessment Tool**
A tool developed specifically to evaluate and improve the effectiveness and objectivity of early stage analysis and decision making in the hydropower sector.
“a preliminary screening tool to assess the strategic environment from which proposals for hydropower emerge. It identifies risks and opportunities …. in order to identify the challenges and management responses to proceed with a more detailed project investigation.”

It may also be usable for “the identification of opportunities to improve the sustainability context of hydropower investments.”

“Such assessment would inform a proponent as to whether there is a strategic basis to move forward with a project proposal”
Early Stage Assessment Tool Includes:

Published elements
- 9 key topics relating to the strategic environment
- Basic and Advanced Expectations for each topic
- Assessment guidance – heading outlines only

Accredited Assessors
Trained as auditors in teams drawn from different areas of expertise and companies, able to bring the experience of international hydropower practice to the assessment.

Currently not published
Early Stage Handbook for Accredited Assessors – prepared to elaborate on international practice and experience on each Early Stage (ES) topic.
Topics in Early Stage Assessment

ES-1 Demonstrated Need
ES-2 Options Assessment
ES-3 Policies & Plans
ES-4 Political Risks
ES-5 Institutional Capacity
ES-6 Technical Issues & Risks
ES-7 Social Issues & Risks
ES-8 Environmental Issues & Risks
ES-9 Economic & Financial Issues & Risks
Two formal applications of the Early Stage Assessment tool to date:

**Program Sava, Croatia - August 2014**
A multipurpose scheme on the Sava River incorporating up to 7 hydropower schemes totaling up to 156 MW

**Volta Basin, Ghana - April 2015**
Six proposed projects in the Volta Basin
What role can the Early Stage tool play?

Focus to date has been on implementing the Protocol’s other three stages to build credibility for the Protocol overall.

Protocol Governance Council is assessing the value of outputs from Ghana and Croatia and considering how to direct efforts on implementation of the Early Stage (ES) tool.
Considerations from the initial Assessments

The initial third party assessments raised the dual character of the ES tool:

1. Evidence gathering based on the standardised topic reviews

2. Expert judgment to interpret the evidence (or lack thereof) and predict likely results of subsequent preparation studies

The ES tool does not employ a scoring approach like the other Protocol stages

While this dual character was observed in formal third-party assessments, the same elements would occur if the tool were used in self-assessment mode.
Next steps for Early Stage Assessments

• The ES tool is more ‘free flow’ in style than the more prescriptive other sections of the Protocol.
• Recognised need for:
  • some topic refinement
  • more support information to guide both self-assessment and Accredited Assessor use.
• However, more field examples are needed to refine how the tool can best be used in both Private and Government sector environments
Considerations from the initial Assessments

- Experience from the two initial assessments provided confidence that an external assessment of the early stage analysis of a hydropower project offers the potential to provide:
  - Objectivity/Impartiality
  - Early Identification of “show stoppers”
  - A standardised evaluation approach
  - Independent expert opinion based on comparison with international hydropower sustainability practice
http://www.hydrosustainability.org/

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