

# EMBRACING THE HYDROPOWER SUSTAINABILITY ASSESSMENT PROTOCOL IN HYDRO POWER PROJECT: GOVERNANCE, COMMUNICATION AND CONSULTATION

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## ABSTRACT

In 21<sup>st</sup> century, hydropower continues to catalyse growth around the world. Being the world's largest source of renewable energy, it plays a vital role in reducing the world's dependence on fossil fuel. Significant development in hydropower development is concentrated in China, Latin America and Africa. Asia however has the largest unutilised potential, estimated at 7,195 TWh per year, likely to lead market for future development<sup>1</sup>.

As State wholly-owned company, Sarawak Energy Berhad (Sarawak Energy) is entrusted to develop hydropower projects for generating globally competitive priced, sustainable and renewable energy by harnessing the hydropower potential upstream of Sarawak's major rivers. In line with Sarawak Energy's vision, "*To achieve sustainable growth and prosperity for Sarawak by meeting the region's need for reliable, renewable energy*", Sarawak Energy is committed in executing its projects in a sustainable manner. Sarawak Energy had started to incorporate and embrace Hydropower Sustainability Assessment Protocol ("the Protocol") requirements in the development process of its hydropower projects. Managed by International Hydropower Association (IHA), of which Sarawak Energy is a member, the Protocol is a globally recognised framework for assessing hydropower projects against comprehensive range of social, environmental, technical and economic considerations.

This paper focused on how HSAP will greatly assist in mitigating the risks associated to governance, communication and consultation in hydropower project development cycle. HSAP requirements are also aligned with the global sustainability principles and goals, where the assessment will be based on international best practices in hydropower development and operation.

**Keywords:** Hydropower Sustainability Assessment Protocol; Sustainable Hydropower Development; Sustainability Risk Perspectives

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<sup>1</sup> World Energy Resources Hydropower | 2016

## INTRODUCTION

Hydropower is the leading renewable source for electricity globally, supplying 71% of all renewable electricity. Reaching 1,064 GW of installed capacity in 2016, it generated 16.4% of the world's electricity from all sources. Being the world's largest source of renewable energy, hydropower plays a vital role in reducing dependency on fossil fuel<sup>2</sup>.

In 21st century, hydropower continues to catalyse growth around the world and estimates indicate that approximately 10,000 TWh/year of hydropower potentials are unutilised worldwide. Significant development in hydropower is concentrated in China, Latin America and Africa. Asia however has the largest unutilised potential, estimated at 7,195 TWh per year, likely to lead market for future development<sup>2</sup>.

The Sarawak State's vision is to transform Sarawak into a developed state by 2030 with first world's infrastructure and amenities<sup>3</sup>. The challenge is to make sure that the economic transformation is inclusive of Sarawak's dispersed heartland rural communities. A long-term 2008 – 2030 economic development plan had been launched, known as Sarawak Corridor of Renewable Energy (SCORE)<sup>4</sup>.

SCORE focuses on growing the energy sector and targets 10 high-impact priority industries, which may create downstream opportunities for smaller businesses. SCORE offers substantial benefits to potential investors and is a safe and vibrant location to base businesses. Blessed with high rainfall and an abundance of rivers, key element in SCORE development strategy is to fast-track hydropower development and deliver affordable, clean and reliable electricity supplies to energy intensive industries.

For nearly 100 years, Sarawak Energy Berhad (Sarawak Energy) has played a crucial role in supporting the business of commercial and industrial customers and the homes of domestic customers in Sarawak as well as some part of West Kalimantan Indonesia. As State wholly-owned company, Sarawak Energy is entrusted to develop hydropower projects in line with SCORE development strategy by harnessing the hydropower potential upstream of Sarawak's major rivers.

Sarawak Energy is committed in executing its projects in a sustainable manner and is now a member of International Hydropower Association (IHA), world's most extensive hydropower network. Sarawak Energy had started to incorporate and embrace Hydropower Sustainability Assessment Protocol ("the Protocol").

In 2014, an internal HSAP assessment team was established to strengthen the embedding of the Protocol in the way Sarawak Energy develop its hydropower projects. In addition, it's part of the internal capacity development in understanding and assessing Sarawak Energy sustainability performance in hydropower development.

The protocol is governed by a multi-stakeholder body who meets four times a year to discuss on its work programme. Having four (4) main tools, namely Early Stage Tool, Preparation Tool, Implementation Tool and Operation Tool, the protocol can be used at different stages of hydropower development.

The Protocol benefits hydropower developer in many ways, some may use the protocol to guide them in addressing sustainability issues, benchmarking with international best practices. This paper will discuss on how the Protocol can assist the project developers in managing and mitigating the social risks that related in governance, communications and consultation in the development of hydropower projects in Sarawak. In addition, this paper will also touch on the findings from HSAP's internal assessment which can guide Sarawak Energy in assessing our sustainability performance and identify the gaps against international basic good practices or proven best practices.

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<sup>2</sup> World Energy Resources Hydropower | 2016

<sup>3</sup> [www.sarawakenergy.com.my](http://www.sarawakenergy.com.my)

<sup>4</sup> [www.recoda.com.my](http://www.recoda.com.my)

## METHODOLOGY<sup>5</sup>

Each Protocol assessment tool comprises of a set of topics which integrate four major perspectives covering issues that must be considered to determine the overall sustainability performance of a hydropower development project at any given lifecycle. Perspectives cover by the topics are Environmental Perspective, Social Perspective, Technical Perspective and Economic/ Financial Perspective.

Governance and Communications & Consultation are among the areas which needs early involvement and intervention to ensure mitigation plans are executed properly. Taking into account to the potential risk, HSAP, has integrated all possible topics within the Social Perspective to be part of the assessment in each stage. One of the most important aspects within the Social Perspective is on stakeholders' satisfaction. This can be discussed and assessed under relevant social topics, in which this paper will focus on two (2) topics i.e. Governance and Communications & Consultation.

Depending on the topic in each Protocol assessment tool, the following criteria may be utilised to determine against basic good practices and proven best practices statement:

- Assessment
- Management
- Stakeholder Engagement
- Stakeholder Support
- Outcomes
- Conformance/ Compliance

These criteria provide the basis of assessment for both processes in place to ensure sustainability of the project or operation, and the performance of that project or operation on that particular sustainability topic. Each criteria will be assessed against basic good practices (Scoring Level 3) and proven best practices (Scoring Level 5).

## CASE STUDY

### Baleh Hydro Electric Project

To meet demand growth, the company generates power from Sarawak's indigenous resources of hydro, coal and gas and supplies electricity to customers through an extensive network system. To date, Sarawak has a total of three hydroelectric plant (HEP) and five thermal plants. A balanced generation mix is necessary for the effective development of Sarawak's energy future – while hydro potential is the best option to supply Sarawak's present and future needs, coal and gas plants are required for energy security.

The Baleh Hydroelectric Project is the third big hydro dam project to be executed by Sarawak Energy. The Project is located on the Baleh River for about 95km from its confluence with the Rajang River in the Kapit Division. The 1,285MW hydropower project comprises of 5,625 sq km catchment area, harnessed through a 588 sq km reservoir impounded by a 188 m high concrete faced rockfill dam.

Sarawak Energy received Social Environment Impact Assessment (SEIA) approval for Baleh HEP in 2015 from Natural Resources and Environment Sarawak (NREB) and State Cabinet approval in 2016.



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<sup>5</sup> Hydropower Sustainability Assessment Protocol | November 2010

## FINDINGS

### Governance

- Governance addresses corporate and external governance considerations for the project. The intent is that the developer has sound corporate business structures, policies and practices; addresses transparency, integrity and accountability issues; can manage external governance issues (e.g. institutional capacity shortfalls, political risks including transboundary issues, public sector corruption risks); and can ensure compliance<sup>6</sup>.

#### a) Assessment

- The primary objective of Baleh HEP is to contribute to the State of Sarawak's agenda of sustainable development. The use of clean and renewable energy from the project will contribute to the environmental sustainability of Sarawak by displacing power generated from fossil fuels therefore reducing emissions of greenhouse gases and pollutants such as carbon monoxide, oxides of nitrogen, sulphur and particulates.
- Assessment has been undertaken on potential political and public sector requirements and issues at a corporate and project level. Assessment of the requirement to develop Baleh HEP has been done internally and externally through the State Government. Sarawak Energy aware of the increasing of SCORE customers over time competing for the remainder of Phase 1, thus an opportunity to move forward to the next phase of SCORE.

#### b) Management

- In Baleh HEP Project Execution Plan, risk management process and procedures has been deliberated through SOPs and Guidelines. The risk were assessed between the Owners Engineers and SEB project team. Risk Mitigation Plans were then determined and assigned to respective risk owner to carry out the mitigation measures. In line with this, regular risk workshops are conducted to identify new risks and manage the existing risks. Project Risk Register is used to track and monitor project risks to ensure mitigation actions are timely implemented throughout the project cycle. Although there is no specific process and procedures in managing the political and public sector risk, the Key Project Risk has been developed through PMO portal based on the specific issues arise which also describe the mitigation measures and contingency plan.

#### c) Stakeholder Engagement

- Stakeholder engagement is at the top of the agenda for Baleh HEP project management. Sarawak Energy is highly interested in pro-actively managing social issues related to its stakeholders. The project team at senior management is directly involved in stakeholder engagement, particularly at the level of the government and community.
- Corporate communication strategy map has been structured to enhance and embody positive corporate reputation. This includes communication plan for Baleh HEP. A range of corporate and project related media releases and advertorial are published in newspaper, corporate website, twitter as well as annual reports.
- Stakeholder engagement with government departments and agencies has been properly planned and delivered to update on the project status and obtain issues pertaining to the project.
- Sarawak Energy has established community relation office in Kapit for a regular stakeholder engagement based on the principle of free, prior and informed consultation. This allows the communities the right to voice their views and grievances on the project at any stage. The set-up is in line with the establishment of Pertubuhan Kebajikan Penduduk Baleh (PKPB) which representing the views of the Baleh community.

#### d) Outcome

- There are no significant unresolved corporate and external governance issues identified. Whilst there are issues on the land acquisition, the Company has processes in place which are being used to resolve all those issues. This is seen as on-going part of this phase. As such, this are not considered to be a significant gap against this criteria.
- The Project team has focused on the governance issues at corporate and external level through engagement process.

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<sup>6</sup> Hydropower Sustainability Assessment Protocol | November 2010

e) Compliance

- In the pre-construction phase, Baleh HEP project has obtained all the required licences and approval from regulatory agencies.
- The Baleh HEP Project Execution Plan has provided an intensive terms and condition of compliances and non-compliances implication to the Project and to the Company.

**Communications & Consultation**

- This topic addresses ongoing engagement with project stakeholders, both within the company as well as between the company and external stakeholders (e.g. affected communities, governments, key institutions, partners, contractors, catchment residents, etc). The intent is that stakeholders are identified and engaged in the issues of interest to them, and communication and consultation processes maintain good stakeholder relations throughout the project life<sup>7</sup>. This topic will utilise four (4) of the scoring criteria namely Assessment, Management, Stakeholder Engagement and Conformance/ Compliance.

a) Assessment

- Stakeholder mapping had been formally identified and analysed in the early preparation stage. This stakeholder mapping focuses on establishing external stakeholders (especially directly affected communities) and shall form part of the Project's Stakeholder Engagement Plan and Communications Strategy. The stakeholders are identified and classified based on their influence to the project as well as interest on the project, scaled from low to high. The map had been updated several times to ensure the identified stakeholders are still relevant and any emerging interested parties are not left out, however there is a gap in planning in terms of frequency and scope to be implemented.
- Issues matrix and communication strategy is prepared to guide the Project team in dealing with stakeholders. In this matrix, issues are grouped based on its likelihood of occurrence and impact on company's or project's reputation. This will enable the Project team in scooping priority issues and highlighted any high-risk groups or issues require special attention at specific stage of the project. Communication priorities are also set through outcomes or feedbacks from regular engagements with stakeholders.

b) Management

- In principle, communications and consultation plans and processes are guided by guidelines at Corporate level. For Baleh HEP, a high level communication plan, objective and strategy are outlined in the Baleh Project Execution Plan (PEP) Rev.0.3. The objectives of the communications strategy for Baleh are:
  - i. To maintain and enhance Sarawak Energy's reputation both locally and globally during the different development stages of the Baleh HEP.
  - ii. Initiatives to be developed for the Baleh community including successful improvement of livelihood of affected persons to enhance Sarawak Energy's reputation locally and globally.
  - iii. To manage communications during the programme by identifying key stakeholders and responding swiftly, concisely and accurately to their concerns.
- The communications and consultation needs and approaches are also based on various focused groups and issues. A grievance mechanism has been set up to address the grievances raised by the affected communities or individuals. These grievances can be related to routine emerging complaints from project-affected communities and other stakeholders, as well as high level issues such as compensation for lands and assets. Depending on the issues or complaints raised, the matter can be resolved at working committee level or higher authorities. By having a well outlined grievance mechanism in place, Project team can spot emerging risk earlier and thus come up with mitigation plan to avoid the issues becoming more serious and eventually affect the overall project progress.

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<sup>7</sup> Hydropower Sustainability Assessment Protocol | November 2010

#### c) Stakeholder Engagement

- Engagement with directly affected stakeholders has started at the earliest stage possible. In the context of Baleh HEP, introduction of the project to the directly affected communities started after the project had passed Decision Gate (DG2) approval in accordance to SEB's Project Model (SPM). Prior to DG2 approval, high level engagement were conducted between Sarawak Energy and State Government.
- All the engagement and intensive dialogues were conducted in a two-way manner and in a good faith. For e.g. to explain to local communities on the project, give information on how the local communities may be affected and explain to them on the work plan for the near future months. The Project team had also consulted local communities on specific ceremony to be observed prior to carrying out the planned works.
- During the preparation of SEIA, the consultant had specific engagements with the directly and indirectly affected communities. The focus of this engagement was to log local communities concerns and views in the area of socio-economic especially on how the project might affect them.
- Project updates and progress are regularly disseminated by the Project Team. Grievance mechanism is part of the ongoing processes for stakeholders to raise issues and get feedback.

#### d) Conformance/ Compliance

- At the point of assessment, there is no non-compliance and non-conformance recorded. All committed KPIs and objectives are met or on track to be met.

### CONCLUSION

- The Hydropower Sustainability Assessment Protocol (HSAP) is a tool that promotes and guides hydropower projects. The protocol offers way to assess the performance of a hydropower project across more than 20 sustainability topics. Assessments are based on objective evidence and the results are presented to see how the Project is performing against international basic good practices and eventually proven best practices.
- Sarawak Energy have established the internal assessment to intensify its effort's to incorporate sustainability into its hydropower development and operation processes. This is to ensure the hydropower development and operations aligned with the Corporate sustainability agenda.
- The internal assessment findings will assist and guide Sarawak Energy, particularly the Project team in strengthening internal processes in developing the Project in a sustainable manner.
- In Governance, the project have shown that the implementation of Baleh HEP at Preparation and Implementation stages have met basic good practices against the protocol. However there are rooms for improvement towards proven best practices by addressing the identified gaps.
- In Communications & Consultation, Sarawak Energy is consulting and communicating with external and internal stakeholders through various focused groups engagements, meetings and briefings. Overall findings concluded that there is needs to perform a strategic assessment considering the risks and opportunities to maximize the project benefits as well as to develop a comprehensive management plan.

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