



## Hydropower Development in the Mekong Region – Cycling through from Policy to Implementation

12-13 September 2013, Bangkok, Thailand

### Workshop Documentation

The Workshop “Hydropower Development in the Mekong Region – Cycling through from Policy to Implementation” constituted the latest addition to a series of workshops aiming at building capacity among different stakeholder groups regarding sustainable hydropower in the Mekong Region. After addressing the financial aspects of hydropower, hydropower technologies and the role of baseline information in 2011 and 2012 respectively, this workshop focused on the entire hydropower project development cycle and, in particular, the role of consultants in each of the steps.



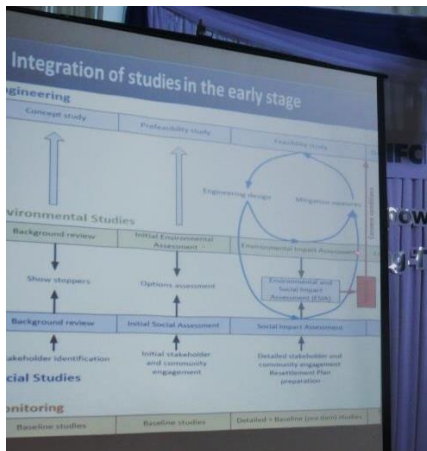
The workshop brought together more than 40 participants, mainly consultants, either working for consultant firms or as individuals involved in the different steps of the hydropower development cycle. A number of renowned speakers – mainly from Asia and in particular the Mekong Region, but also from Europe and Australia.

The 2-day workshop focused on the entire hydropower development cycle – from early investigations and pre-feasibility studies to Environmental Impact Assessments (EIAs) to the financial aspects related to Power Purchase Agreements (PPA) and finally to environmental and social management and monitoring plans. After a comprehensive presentation on the governance of hydropower development in the Mekong Region by **John Dore**, AusAid, and a first exchange of ideas by a panel of regional experts, participants were guided by presentations and discussions on the different steps of the hydropower cycle. An overview presentation on the different steps of the hydropower project cycle by **Roger Gill**, Hydro Focus Pty Ltd, Australia provided a further starting point.

### The Initial Steps of the Hydropower Project Cycle

The first set of presentations, focused on initial investigations and feasibility studies (**Bruce Taylor**, Entura), the role of Memoranda of Understanding (MoUs) in the hydropower sector (**Stephen**

Sparkes, Statkraft) and the importance of technical studies in project planning and development and the early project stages (Donna Brown, Entura).



A number of issues crucial for the successful completion of the initial steps of the hydropower project cycle and thus for the overall sustainability of a project were elaborated. For instance, participants highlighted that in the Mekong Region, initial investigations and preliminary planning efforts often only concern an individual project, neglecting cascade effects and the requirements of integrated river basin planning. Since these neglects can lead to severe negative effects for both the individual project as well as for the overall sustainable development of the basin, participants agreed that consultants have a particularly important role to play.

More specifically, with regard to the role of feasibility studies, the discussion revealed the particular challenges related to insufficient or unreliable data as well as to a lack of data sharing among government agencies themselves, with other stakeholders as well as at the international level in the case of transboundary rivers. While the use of sophisticated modeling techniques was discussed as one option to overcome such challenges, it became obvious that good baseline data and long-term monitoring should not be underestimated for the overall success and the long-term sustainability of the project. In this context, the role of consultants in gathering high-quality data but also in openly addressing the challenges related to insufficient data vis-à-vis the project developer as well as the government was highlighted.

Furthermore, the discussions emphasized the importance of integrating risk assessments at the planning stage of a project already – an issue where consultants' advice is particularly crucial in the hydropower development process. Only when high quality risk assessments are integrated into the planning process early on, decisions can be taken that ensure the long-term sustainability of the project in both economic but also environmental and social terms. This includes an assessment of the potential costs related to technical as well as non-technical risks as well as an adaptation of project siting and design to the most sustainable option available. In order to live up to these requirements, consultants could engage more intensively in these initial project development stages and guide technical and political decision-making with their knowledge – even in situations where legal requirements for sustainable hydropower remain weak.

And finally, with regard to the legal aspects in the early stages of the project cycle, discussions on MoUs revealed a number of challenges sustainable hydropower development is facing – both worldwide and specifically in the Mekong. They includes questions such as the selection of hydropower developers, the sharing of accountability between the government and the hydropower developer as well as legal and political means for ensuring due diligence on the side of the developer. In this context, participants highlighted the risks related to project-driven MoUs as they are found in the Mekong as well as the challenges that come with insufficient government capacity to deal with both the complexity as well as with the large number of MoUs.

## From Project Selection to the Concession Agreement

When selecting a hydropower project and planning its site, its design and its management, international standards as well as globally accepted sustainability assessment tools are essential. After **Sameer Singh**, IFC, provided an overview of environmental and social sustainability assessments and their respective similarities and differences, the International Hydropower Association's Hydropower Sustainability Assessment Tool (HSAP) and the Rapid Sustainability Assessment Tool (RSAT) were presented by **Cameron Ironside**, IHA, and **Voradeth Phonekeo**, MRC, respectively.

The following discussions highlighted the importance of such tools but also the challenges that come with them. With regards to HSAP, participants were particularly interested in the application of the tool and international experiences made so far along the different steps of the development process at which the tool can be applied. For RSAT, participants appreciated the basin-wide perspective of the tool, going beyond project-specific assessments and therefore allowing for assessing the costs and benefits of hydropower developments on



various economic, social and environmental aspects in an entire basin. Participants did nonetheless question the chances for wide application of the tool in the Mekong – especially given that most projects developed and financed by the private sector do not require the application of any sustainability assessment tools and governments that lack capacity to ensure their application is mandatory. Consultants can play an important bridging role by offering the application of such tools to hydropower developers, thus gradually promoting them.

At the same time, however, participants highlighted the increasing complexity of EIAs (as well as Social Impact Assessments (SIAs)) and other assessment techniques that make lacking technical and financial government capacity in parts of the Mekong particularly problematic. Especially the compliance with international standards such as the IFC Performance Standards was quoted as an example for generally high aspirations with regards to sustainable hydropower but often lacking capacity to implement them. As a consequence, the effective application of EIAs (or other assessments) as well as the implementation of the assessment's results with regards to the project's design and operation often depends on the willingness of the project developer rather than on the enforcement of legal and policy requirements. This holds particularly true for hydropower developments on transboundary rivers such as the Mekong River, where environmental and social impacts occur beyond the boundaries of nation states, further increasing the complexity of impact assessments. These challenges demonstrated, once again, the important role consultants have to play in the hydropower project development cycle by providing high-quality impact to impact assessments – potentially with the help of specific assessment tools such as HSAP and RSAT.

The next step in the project development cycle, the negotiation and signature of agreements related to the development of a project – namely the Project Development Agreement (PDA), the Tariff

Agreement and the Concession Agreement (CA) – were then presented by **Walter Heiser**, DFDL. This presentation as well as the related discussions constituted the transition from the project planning and decision-making stage of the hydropower development cycle to the actual implementation.

### **From PPAs over Project Construction to Operation and Monitoring**

In order to establish clarity about the future revenues of a project, a Power Purchase Agreement (PPA) is concluded between the project developer and the power purchaser. The details of the PPA and in particular its legal details were presented by **Elissa Taylor**, independent hydropower lawyer. The discussion focused on these complex legal details and the different provisions a PPA should or should not include. Here again, the role of consultants for the overall success of the project was highlighted – only when sufficient information about the project, stemming from the feasibility study as well as from impact assessments, is available can a PPA capture the actual price of electricity and ensure a fair deal for both sides involved. In this context, participants also discussed the pros and cons of fixed price schemes over the whole concession period – a practice particularly common with hydropower schemes currently developed in Lao PDR.



Moving on in the hydropower development process, the next presentations focused on design options for hydropower projects (**Simon Krohn**, MRC) and the actual construction of a project (**Natthawuth Udayasen**, Italian-Thai). In this context, participants discussed, for instance, available techniques for weighting different design options according to different sustainability criteria and then making decisions for or against specific options, thus minimizing risks and maximizing benefits. Consultants

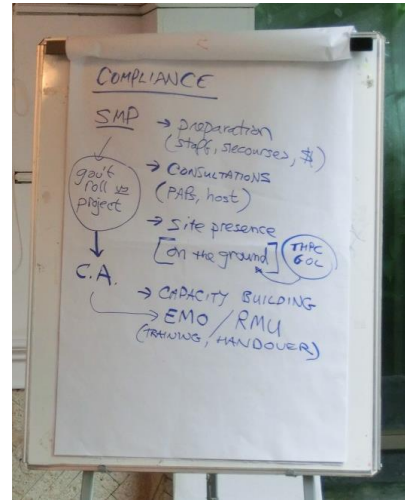
involved in these processes can thereby draw on a number of guidelines and techniques available globally and specifically for the Mekong River Basin, among them the MRC's Preliminary Design Guidance (PDG).

When moving to actual implementing a specific option by constructing a project, participants also discussed the implications of specific choices project developers have to make when choosing and hiring a contractor for construction. In this context, participants were particularly interested in the advantages and disadvantages that come with Engineering-Procurement-Construction (EPC) contracts, a very common form of contracting for construction in the Mekong River Basin and particularly in Lao PDR. Here again, consultants can provide valuable advice to all parties involved on how to ensure the technical as well as the economic sustainability of the project.

Once the project has been built, its compliance with previously agreed upon standards has to be monitored. This was addressed by **Sameer Singh**, IFC, in a presentation on the importance of compliance monitoring as well as on the different techniques available. What is the responsibility between the government, the project developer and other parties involved (such as the project financier) were raised.



Compliance monitoring needs to be accompanied by the implementation of Environmental and Social Management and Monitoring Plans. This was highlighted in a presentation by **Stephen Sparkes**, Statkraft, who provided insights from the Theun Hinboun Expansion Project in Lao PDR which has established extensive environmental and social management and monitoring plans and systems. The discussions emphasized the importance of linking environmental and social management and monitoring requirements to a project's legal basis, that is, its Concession Agreement and related documents, thus ensuring the compliance of project developers with government requirements or sustainability principles more generally. It also highlighted the role consultants can play in ensuring the long-term sustainability of hydropower projects – in this case by engaging in management and monitoring processes and providing their technical expertise to all actors involved, including government agencies, developers, financiers as well as affected communities.



This discussion was complemented by the presentation of one specific sustainability assessment and management tool that targets gender aspects in hydropower projects. **Michael Simon**, Oxfam, provided insights into the use of the Gender Impact Assessment (GIA) as a tool to ensure that gender aspects are accounted for throughout the project development cycle but in particular at the EIA/SIA stage as well as during the implementation of social management plans.

### Impact Assessments under Transboundary Implications

The last part of the workshop addressed a particular aspect of the hydropower development cycle the Mekong Region is faced with – the transboundary dimension of hydropower projects and their impacts. After a presentation by **Nguyen Huu Thien**, independent researcher, on the Strategic Environmental Assessment (SEA) for Mekong mainstream dams, commissioned by the MRC, participants engaged in a lively discussion of the transboundary aspects of hydropower. Participants were particularly interested in whether and how the different impacts and related costs and benefits could be measured and how such assessments could inform policy decisions at the international level.

This discussion stressed again the importance of including sustainability principles and criteria at all steps of the hydropower project development cycle since unforeseen or unaccounted for impacts do not only affect the country developing a hydropower project and thus benefiting from the project's positive effects but also neighboring countries who might face transboundary impacts that adversely affect their own socioeconomic development prospects.

### Conclusion

Overall, the workshop has highlighted the important role of consultants throughout the hydropower development project cycle. Consultants play a critical role in ensuring that hydropower is developed in a sustainable manner because they are the key player who is subcontracted by hydropower companies and provide expert advice throughout the hydropower cycle. From initial investigations and feasibility studies to the negotiation of Concession or Power Purchase Agreements on to the

implementation and monitoring of Environmental and Social Management and Monitoring Plans, consultants provide valuable advice to all actors involved in the project. This is especially due to their specific knowledge of the hydropower project development cycle and the technical expertise they can bring into a project – often not available from other actors involved in the project due to time, financial or technical constraints. This important technical role should, at the same time, provide incentives to consultants to regularly update their knowledge and expertise, e.g. by learning about newly developed assessment techniques and tools.



Also related to their role as knowledge sources, consultants are important for distributing knowledge about sustainability criteria, assessments and guidelines – especially in the Mekong River Basin, where government capacity for ensuring sustainable hydropower development varies considerably. Under these circumstances, consultants' capacity can sometimes be crucial for ensuring the sustainability of an entire project. This is particularly the case if consultants understand the entire hydropower project development cycle and incorporate such holistic perspective into the advice they provide to governments, project developers or financiers.

Moreover, given the complexity of the hydropower development cycle and the various steps involved – each of them requiring different sets of expertise – it is also important that consultants from different disciplinary backgrounds are involved in various aspects of the development cycle and communicate and exchange their ideas about the respective project and its sustainability. The workshop aimed to elevate the important role that consultants play in the hydropower development cycle and provide a starting point for increased communication among consultants in the Mekong Region.