

# III

MRC SEA FOR HYDROPOWER ON THE MEKONG MAINSTREAM

## INCEPTION REPORT

VOL III

### NATIONAL SCOPING CONSULTATION SUMMARIES

23 OCTOBER 2009

*The MRC SEA of Hydropower on the Mekong mainstream comprises 4 main phases: (i) scoping, (ii) baseline assessment, (iii) opportunities & risks assessment, and (iv) avoidance, enhancement and mitigation assessment.*

*This Inception report formally concludes the scoping phase of the SEA and reports on the outcomes of the scoping consultations as well as the methodology and design of the SEA for the subsequent phases.*

*The Inception report has five volumes including supporting materials and reports:*

**VOLUME I: Main Inception Report**

**VOLUME II: Mainstream project profile summaries**

**VOLUME III: National scoping consultation summaries**

**VOLUME IV: SEA Theme papers and additional studies proposals**

**VOLUME V: The SEA Communications, Consultations and Capacity Building Plan**



ICEM – International Centre for Environmental Management

## Disclaimer

This document was prepared for the Mekong River Commission Secretariat (MRCS) by a consultant team engaged to facilitate preparation of a Strategic Environment Assessment (SEA) of proposals for mainstream dams in the Lower Mekong Basin in the 2009-2010 timeframe.

This document was prepared to assist the Secretariat as part of the information gathering activity. The views, conclusions, and recommendations contained in the document are not to be taken to represent the views of the MRC. Any and all of the MRC views, conclusions, and recommendations will be set forth solely in the MRC reports.

This document is a record of a meeting. All stakeholders whether at the meeting or not are invited to submit written contributions via the MRC website.

For further information on the MRC initiative on Sustainable Hydropower (ISH) and the implementation of the SEA of proposed mainstream developments can be found on the MRC website:

<http://www.mrcmekong.org/ish/ish.htm> and <http://www.mrcmekong.org/ish/SEA.htm>

The following position on mainstream dams is provided on the MRC website in 2009.

### MRC position on the proposed mainstream hydropower dams in the Lower Mekong Basin

More than eleven hydropower dams are currently being studied by private sector developers for the mainstream of the Mekong. The 1995 Mekong Agreement requires that such projects are discussed extensively among all four countries prior to any decision being taken. That discussion, facilitated by MRC, will consider the full range of social, environmental and cross-sector development impacts within the Lower Mekong Basin. So far, none of the prospective developers have reached the stage of notification and prior consultation required under the Mekong Agreement. MRC has already carried out extensive studies on the consequences for fisheries and peoples livelihoods and this information is widely available, see for example report of an expert group meeting on dams and fisheries. MRC is undertaking a Strategic Environmental Assessment (SEA) of the proposed mainstream dams to provide a broader understanding of the opportunities and risks of such development. Dialogue on these planned projects with governments, civil society and the private sector is being facilitated by MRC and all comments received will be considered.

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## *About the MRC SEA of Hydropower on the Mekong mainstream*

*The Mekong River Commission (MRC) is an international, country-driven river basin organisation that provides the institutional framework to promote regional cooperation in order to implement the 1995 Agreement. The MRC serves its member states by supporting decisions and promoting action on sustainable development and poverty alleviation as a contribution to the UN Millennium Development Goals.*

*In a region undergoing rapid change and economic growth, the MRC considers the development of hydropower on the Mekong mainstream as one of the most important strategic issues facing the Lower Mekong region. Through the knowledge embedded in all MRC programs and coordinated through the new MRC Initiative for Sustainable Hydropower (ISH), the MRC seeks to assist Member states to work together and make the best decisions for the basin.*

*Eleven hydropower schemes have been proposed for the Lao, Lao-Thai and Cambodian reaches of the Mekong mainstream. Implementation of any or all of the proposed mainstream projects in the Lower Mekong Basin (LMB) could have profound and wide-ranging socio-economic and environmental impacts in all four riparian countries (Cambodia, Thailand, Thailand, Vietnam). The LMB governments decided that MRC ISH should conduct a Strategic Environmental Assessment (SEA) of all the proposed projects to fully assess their potential cumulative and multiplier effects.*

*The Initiative for Sustainable Hydropower (ISH) is a cross-cutting program working with all MRC programmes, focussing on balancing social, environmental and economic considerations of potential energy futures for the Lower Mekong Basin. The MRC recognises that there are two main decision-making spheres in the LMB; the IWRM sphere (where integrated basin planning is undertaken) and the Power sector and industry sphere (where decisions on hydropower are taken). The ISH, through its projects and activities, aims to bring these two decision-making worlds together.*

*This MRC ISH SEA seeks to identify the potential opportunities and risks, as well as contribution of hydropower to regional development, by assessing alternative mainstream Mekong hydropower development strategies. In particular the SEA focuses on regional distribution of costs and benefits with respect to economic development, social equity and environmental protection. The SEA began in May 2009 and is scheduled to complete the final report and recommendations by mid-2010.*

*This document is one of a series of documents arising from an intensive program of consultations in the Lower Mekong Basin and detailed expert analysis of the issues associated with developing hydropower on the Mekong mainstream. The intention is to consolidate SEA activities and progressively make conclusions and outputs available for public and critical review, so that stakeholder engagement can contribute to the SEA in a meaningful way. A full list of documents is available on the MRC SEA website.*

*The context and aims of the MRC SEA of Proposed Hydropower Schemes on the lower Mekong mainstream*

**MRC GOALS (2006 - 2010)**

1. To promote and support coordinated, sustainable, and pro-poor development
2. To enhance effective regional cooperation
3. To strengthen basin-wide environmental monitoring and impact assessment
4. To strengthen the Integrated Water Resources Management capacity and knowledge base of the MRC bodies, National Mekong Committees, Line Agencies, and other stakeholders

**MRC PROGRAMMES**

- 1 Basin Development Plan and IWRM Strategy
2. Facilitate effective dialogue and communication to reinforce multi-disciplinary cooperation, and functional partnering with regard to hydropower and the PNPCA process
3. Support technical knowledge sharing and capacity building within MRCS, NMCs, line agencies, regulatory bodies and other stakeholders
4. Embed sustainable hydropower into the regional planning processes of Member States

**SEA**

1. Helps to integrate energy and power sector into the BDP
2. Understand development risks and opportunities of mainstream developments and their regional distribution
3. Contributes to the framework for project-specific evaluation
4. Strengthen the respective analytical SEA capabilities in the concerned line agencies of the MRC Member States

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## 1 INTRODUCTION

This document is a supplement to the MRC Inception report and summarizes the results of the four national scoping workshops. During the scoping phase of the SEA, the team met with representatives from government and civil society organisations (CSOs) in a program of meetings and workshops. They include:

- Vietnam SEA national scoping workshop (03 JULY 2009)
- Lao PDR SEA national scoping workshop (8-09 JULY 2009)
- Lao PDR SEA national CSO meeting (09 JULY 2009)
- Cambodian national scoping workshop (16-17 JULY 2009)
- Cambodian nation CSO meeting (17 JULY 2009)
- Vietnam national CSO meeting (03 AUGUST 2009)
- Thailand National Scoping Workshop (14 AUGUST 2009)

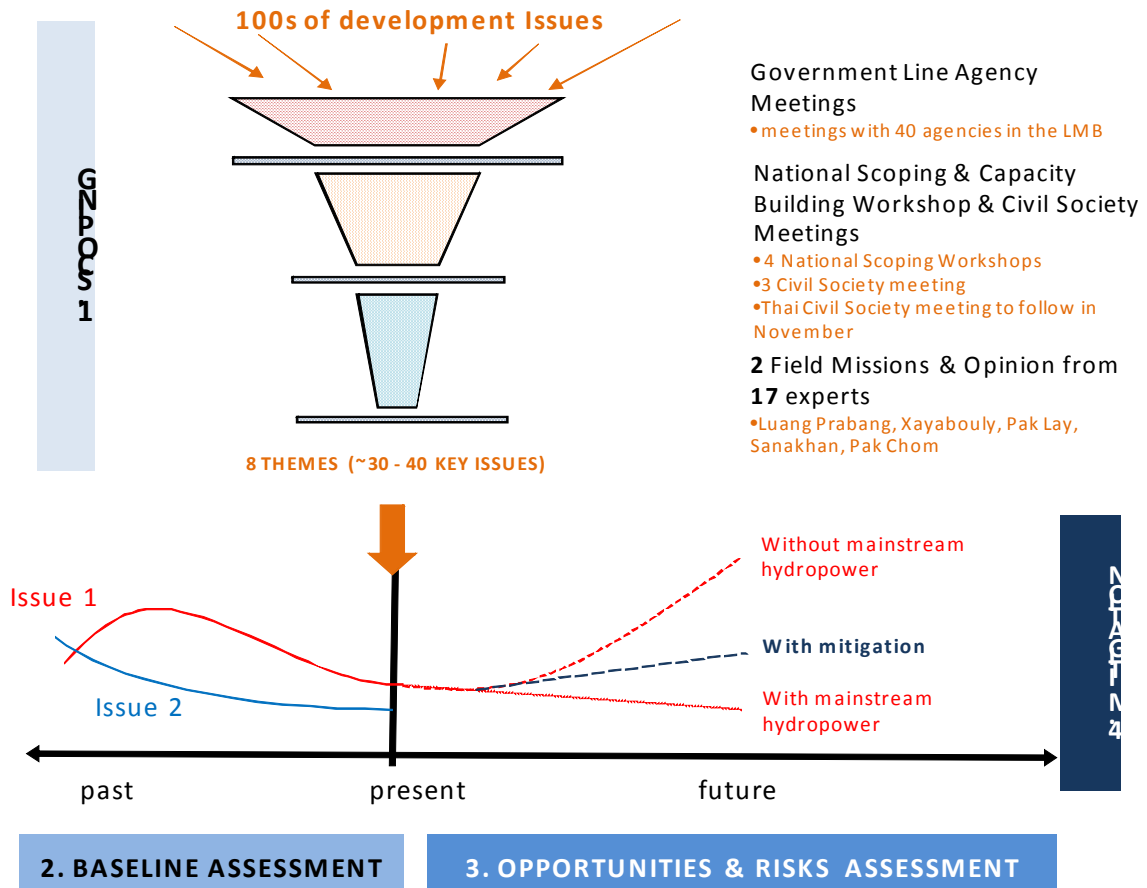
The Scoping mission consultations were an important start in integrating the concerns and views of each national government in the SEA process, as well as improving initial awareness and understanding of the SEA methodology to build a strong participatory platform for future SEA activities. Their primary aim is for the governments – the key strategic stakeholder in the SEA – to identify the important *development issues* of concern and group them into *themes*. Once consolidated with inputs from other stakeholders (Civil Society and the donor community), these issues and themes will form the substantive scope of the SEA.

The four steps to be undertaken in the SEA are represented in the Figure 1. All phases build upon the scoping phase and rely on it to identify the key development issues the SEA should address.

This Volume begins with an comparative overview of the national issues expressed as being of importance for the four LMB governments. It summarizes the governmental concerns and the nuance within strategic issues which could benefit or hinder the SEAs success as a regional planning aide.

This volume then continues by presenting four detailed summaries for each of the government workshops and all meetings held with government line agencies. And then presents summaries of the three CSO meeting held to date (the Thai CSO meeting is scheduled for 03 Novemebr).

Figure 1 Key Phases in the SEA approach



## PART A: OVERVIEW OF THE NMCS AND LINE AGENCIES PERSPECTIVES

### 2 COMPARATIVE SUMMARY OF THE FOUR GOVERNMENT SCOPING WORKSHOPS

The purpose of this section is to present for comparison the types of issues identified in each riparian nation as being of strategic concern for current and future development of the Mekong River region. It should be stressed that participants from a wide spectrum of government line agencies were asked to identify the strategic development issues independent of the opportunities and risks of mainstream dams. Future stages of the SEA will then take these themes and overlay future possibilities with and without mainstream hydropower. Themes were identified using facilitated working sessions and the conclusions of plenary discussions.

#### 2.1 OVERVIEW OF THE NATIONAL STRATEGIC THEMES

Box 1 lists the themes recommended by the national governments during the workshop sessions. In Thailand, the themes were identified only by plenary discussion and it was decided to not rank the themes at this stage of the process. In the other riparian states, both working sessions and plenary discussion were used, first splitting the attendees into two groups and then combining the results of their sessions in a joint plenary discussion.

#### Box 1 SEA Themes identified in the National Scoping Workshops (July-August 2009)

<ul style="list-style-type: none"> <li>A. Fisheries</li> <li>B. Agriculture</li> <li>C. Wetlands &amp; biodiversity conservation</li> <li>D. Navigation</li> <li>E. Health</li> <li>F. Local Livelihoods &amp; Poverty reduction</li> <li>G. Migration</li> <li>H. Irrigation</li> <li>I. Energy Security/ energy poverty</li> </ul>	<ul style="list-style-type: none"> <li>A. Fisheries (1)</li> <li>B. Power generation (2)</li> <li>C. Navigation (2)</li> <li>D. Tourism (3)</li> <li>E. Manufacturing/processing Industry (4)</li> <li>F. Water Quality, sedimentation &amp; erosion (5)</li> <li>G. Resettlement &amp; cultural heritage (6)</li> </ul>
<ul style="list-style-type: none"> <li>A. Fishery (1)</li> <li>B. Power &amp; Energy (1)</li> <li>C. Poverty and livelihood (2)</li> <li>D. Hydrology and water quality (2)</li> <li>E. Agriculture and water supply (3)</li> <li>F. Terrestrial ecology and land use (3)</li> <li>G. Aquatic diversity and ecosystems and fisheries (3)</li> <li>H. Navigation (8)</li> </ul>	<ul style="list-style-type: none"> <li>A. Agriculture (1)</li> <li>B. Fisheries (2)</li> <li>C. Transport &amp; inland waterways (3)</li> <li>D. Ecosystem integrity and environment (3)</li> <li>E. Hydrology and climate change (4)</li> <li>F. Power generation (unranked)</li> </ul>



Ranking, where available, is given in brackets

2.2 NATIONAL ISSUES SUMMARY

For each theme a record was kept of; the key strategic issues, relevant government policy and sustainability objectives for them. These issues are summarized in Table 1.

Table 1: Summary of strategic themes and key issues identified by line agencies in the four LMB countries

THAILAND	
THEME	ISSUES
<i>Fisheries</i>	<ul style="list-style-type: none"> <li>• cultural value of signature species</li> <li>• productivity</li> <li>• migration</li> <li>• spawning grounds</li> <li>• reservoir fisheries</li> <li>• songkhram is a significant area for forestry – and there is a clear ecosystem function link between the areas fisheries and forestry</li> <li>• change of fish species</li> <li>• Goal of preserving catfish of Thailand</li> <li>• Take into account different species of fish and different migration of fish, different areas and periods of fish</li> <li>• Impacts of diversity of fish, production capacity is the most important. In mainstream, the production depends upon the production in the tributaries</li> </ul>
<i>Agriculture</i>	<ul style="list-style-type: none"> <li>• The north eastern province has high population, low rainfall and poor soils. These people’s livelihoods will be greatly improved if the region can improve the area irrigated by Mekong mainstream waters. This means that hydropower projects should be developed as multi-use so that all important water usage – not just power generation – is optimized</li> </ul>
<i>Wetlands &amp; biodiversity conservation</i>	<ul style="list-style-type: none"> <li>• Effects on tributaries – this is clearly within the jurisdiction of the LMB cooperation. How do we engage the PNPCA(Prior notification Prior Consultation Agreement) process into tributary decision making</li> <li>• songkhram area – floodplain fisheries is important, with influence on local livelihoods</li> <li>• potential for permanent year-round flooding</li> <li>• changes to fish spawning grounds</li> </ul>
<i>Navigation</i>	<ul style="list-style-type: none"> <li>• allow free passage</li> </ul>
<i>Health</i>	<ul style="list-style-type: none"> <li>• malnutrition needs to be considered as an effect of food and livelihood security and ecosystem integrity</li> <li>• social aspects refer to malnutrition, should broaden the mandate to include HIAs (Health Impact Assessments) as well</li> </ul>
<i>Local Livelihoods &amp; Poverty reduction</i>	<ul style="list-style-type: none"> <li>• Poverty and agricultural land in the north eastern region is closely linked. The region is poorer than the rest of Thailand</li> <li>• Poverty alleviation plan goes down to sub-district. But socio-economic estimates at provincial level. For NE region is the lowest in the country, calculated by using consumer price index. People in NE mostly elderly, young people are remitting from urban areas</li> <li>• In 30 years time, population in NE region, will not be more than 23 million, because of low birthrate and migration. Young people</li> </ul>

	move to urban centres. Shortage of labor
<i>Migration</i>	<ul style="list-style-type: none"> <li>• high migration rate from northeast provinces to cities</li> </ul>
<i>Irrigation</i>	<ul style="list-style-type: none"> <li>• Effects on water utilization – especially for irrigation in Thai Mekong Provinces</li> </ul>
<i>Energy Security/ energy poverty</i>	<ul style="list-style-type: none"> <li>• Fuelwood</li> <li>• There are forestry implications associated with energy security in Thailand</li> <li>• Trade between neighbouring countries – ASEAN powergrid, have to incorporate 2<sup>nd</sup> tier of energy consumption</li> </ul>
<i>Other (mainly governance)</i>	<ul style="list-style-type: none"> <li>• what is the national principle objectives for the Mekong region in terms of energy sources and also for the regional water use</li> <li>• Are the projects dams or barrages?</li> <li>• Mutual benefit: we know we have an agreement in the LMB, but no agreement on the UMB (Upper Mekong Basin). This implies a different planning context</li> <li>• What are the products and follow up activities for regional decision making</li> <li>• CHINA DAMS: another outstanding concern is in sediment flux, how this is changing and the effects on bank erosion – also an important issue for regional communities</li> <li>• SEA needs to build strategies on what happens when regional cooperation (including china) falls below expectations. If we cannot address this worst case scenario then we cannot provide useful policy briefs</li> <li>• MRC should not infringe on Thai sovereignty</li> <li>• poverty index is an important choice. Have poverty, happiness, sustainability index</li> <li>• Other countries at different stages of development of SEA</li> <li>•</li> </ul>

LAO PDR	
THEME	ISSUES
<i>Fisheries &amp; agriculture</i>	<ul style="list-style-type: none"> <li>• Existing biodiversity the base for majority of people's livelihoods</li> <li>• Key source of nutrition for Lao people</li> <li>• Decrease/loss of Indigenous fish species and decreasing catch</li> <li>• Livelihood dependence on fisheries</li> <li>• Agriculture (rice, swidden, maize, river bank gardens) crucial for local livelihoods</li> <li>• Loss of aquatic ecosystem, spawning areas &amp; deep pools</li> <li>• Blocking of fish migration routes</li> <li>• Annual fishing quotas for both Lao &amp; Thai sides need monitoring in 2-party agreement</li> <li>• Changes in water flows &amp; levels creating adverse impacts</li> <li>• Loss of agricultural land</li> <li>• Watershed protection. If no forests, then no water resources.</li> <li>• Effectiveness of commercial reforestation compared with indigenous species.</li> <li>• Water collection fees covering water services for many sectors</li> <li>•</li> </ul>
<i>Power generation</i>	<ul style="list-style-type: none"> <li>• Rural electrification</li> <li>• Foreign export earnings &amp; economic development</li> <li>• High energy vulnerability</li> </ul>

	<ul style="list-style-type: none"> <li>• National economic growth and poverty reduction</li> <li>• Overall sustainability of power development, how to manage it, where the money comes from to finance social and environmental performance indicators\ Tariffs to bear costs of sustainable hydropower, particularly electricity tariff.</li> <li>• Major LMB regional and national differences in per capita electricity use, and in fuelwood share as contribution to total energy sources (e.g. 88% fuelwood Cambodia, 16% Thailand)</li> <li>• Other renewable energy sources are not well</li> </ul>
<i>Navigation</i>	<ul style="list-style-type: none"> <li>• transport-related livelihoods; small boats are unable to cope with changed water levels and water flows</li> </ul>
<i>Tourism</i>	<ul style="list-style-type: none"> <li>• Foreign exchange earnings</li> <li>• Consequences of flooding on tourism</li> <li>• Natural habitats are important for tourism</li> <li>• Tourism is a higher priority in some provinces affected by dams (e.g. Champassack/Luang Prabang) than others, and therefore higher provincial concerns for impacts</li> </ul>
<i>Manufacturing/processing Industry</i>	<ul style="list-style-type: none"> <li>• Seen as a real potential for increased economic growth, largely through: <ul style="list-style-type: none"> <li>○ Mining</li> <li>○ Processing of raw materials (rubber)</li> <li>○ Small-scale 'cottage' industries (textiles, handicrafts)</li> <li>○ Value-added timber products (furniture)</li> </ul> </li> <li>•</li> </ul>
<i>Hydrology, water Quality, sedimentation &amp; erosion</i>	<ul style="list-style-type: none"> <li>• Uncertainty in understanding predicted impacts on river hydrology</li> <li>• Bank erosion</li> <li>• Changes in water quality</li> <li>• Downstream influence of the China dams</li> <li>• The flood pulse</li> <li>• Associated erosion problems created by other activities, e.g. removing soil from wetlands for biofertiliser, removing gravel and sand from river banks and deltas</li> </ul>
<i>Resettlement &amp; cultural heritage</i>	<ul style="list-style-type: none"> <li>• Natural beauty</li> <li>• Loss of cultural heritage</li> <li>• Riverine/riparian areas already highly populated and among the best agricultural land. Severe impacts on livelihoods.</li> <li>• Lack of replacement land for resettlement and livelihood, due to steep upland catchments</li> <li>• Provincial capacity to carry out resettlement</li> </ul>
<i>Other (mainly governance)</i>	<ul style="list-style-type: none"> <li>• Pace and intensity of economic investment and provincial development increasing faster than GoL capacity to deal with it on a number of fronts</li> <li>• Transboundary impacts of development &amp; limitations of regional cooperation</li> <li>• Objectives of different agencies/sectors within the same country are at odds with each other (e.g. hydropower/tourism/forestry)</li> <li>• Government targets on electrification do not identify financial sources to enable targets to be reached (e.g. 70%hhs electrified by 2010). Will electricity reach the people, or will people be transferred to locations where electricity is available?</li> <li>• Provincial objectives of changing the economic structure, moving away from high agricultural dependence</li> <li>• Provincial expected targets and outcomes problematic, and growth slow compared with potential.</li> </ul>

	<ul style="list-style-type: none"> <li>• Sometimes differing objectives and reduced cooperation between provinces and national government</li> <li>• Existing transboundary accusations, e.g. Cambodia accusing Laos of waste disposal and plastic bags problems, Laos counters with accusations of Cambodian boats illegally crossing boundaries and causing the problem</li> <li>• Financial consequences/burden of transboundary impact mitigation - joint protection sought (e.g. watersheds)</li> <li>• Difficulty of clarifying/accepting what is a national issue and what is a transboundary issue, and related financial consequences</li> <li>• General principle of developer pays costs for adverse impact mitigation, environmental protection, dam maintenance, community livelihood restoration. Single/unified chart of payments needed with % from royalties. However, developer refusing to pay or to allocate royalties towards such higher costs.</li> <li>• GoL human &amp; budgetary capacity very limited (particularly at provincial and district levels) to deal with hydropower planning, tariff discussions, social &amp; environmental mitigation measures, monitoring</li> <li>• Tendency to approve projects without anticipating or allocating finances to address problems</li> <li>• Timing and extent of public disclosure of project-specific EIAs, who can have access and who will publicise to be included in new decree</li> <li>• Legal and institutional framework form social and environmental safeguards and monitoring poorly understood (particularly at provincial and district levels) and legislation inadequately linked to process</li> <li>• Familiarity with preparation of S/EIAs and CIAs (since 2004), but less familiarity with how to implement. No frameworks in place to link in various factors re. private development.</li> <li>• Difficulty of obtaining accurate overall information for ministries to report to central Gov.</li> <li>• Difficulty of defining risks accurately</li> </ul>
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VIET NAM	
THEME	ISSUES
<i>Agriculture</i>	<ul style="list-style-type: none"> <li>• Freshwater annual demand is 30 bil m3 in Mekong Delta. Currently a major management issue to supply this demand and retain freshwater during the dry season</li> <li>• Issues of water transfer from one subcatchment or ecosystem to another has been raised. This can have wide-reaching socio-economic and environmental implications</li> </ul>
<i>Fisheries</i>	<ul style="list-style-type: none"> <li>• Fish migration routes critical for Delta fisheries productivity – will they be blocked</li> <li>• The health of Delta aquatic ecosystems are key to many economic sectors and livelihoods – they are being lost and degrading</li> </ul>
<i>Transportation &amp; inland waterways</i>	<ul style="list-style-type: none"> <li>• A major upgrade of the inland waterway system is underway – it is the foundation of agricultural exports</li> </ul>
<i>Ecosystem integrity &amp; environment</i>	<ul style="list-style-type: none"> <li>• The coastal and inland forest systems play an important role in protection from natural disasters – any changes in the process of sedimentation and flooding will affect these systems.</li> </ul>

<i>Hydrology &amp; climate change</i>	<ul style="list-style-type: none"> <li>• Flood control is a complex process with complicated management needs, dams may further complicate the seasonal flooding regime</li> <li>• SEA needs to define scope of positive and negative impacts; in existing assessments negative impact have not been addressed properly</li> <li>• Daily regulation has strong impact on flows in downstream</li> <li>• Tonle Sap Lake in Cambodia has a larger storage capacity (80 bil m3). It is one of the dominant features of the Delta hydrology</li> </ul>
<i>Power generation</i>	<ul style="list-style-type: none"> <li>• Regional power trade &amp; Vietnam's position is complex: Vietnam is a major power importer especially from China and Laos as well as one of the nations to be affected by hydropower development</li> <li>• Trade-off analysis among countries is needed</li> <li>• The new Mekong Delta Power Centre in Ca Mau to supply power to the delta by 2020</li> <li>• National initiative to develop nuclear power by 2020</li> <li>• By 2015 proportion of hydropower in national power mix = 23%</li> <li>• Yali is a govt priority and used as a model for the study of hydropower</li> </ul>
<i>Other(mainly governance)</i>	<ul style="list-style-type: none"> <li>• Mekong Delta is well studied and understood but poverty levels remain high and the benefits of development are not well shared: there are complex reasons for this which the SEA should be aware of.</li> <li>• SEA must be based on principles of good scientific understanding. Because hydropower is a hot issue there is the potential to lose focus and integrity</li> <li>• MRC's role in regional planning is becoming more crucial – need to review its authority and function in this respect</li> <li>• Regulation regime of each project and all projects are important – effective coordination in their operations will be essential – is their capacity for this?</li> </ul>

<b>CAMBODIA</b>	
<b>THEME</b>	<b>ISSUES</b>
<i>Aquatic diversity, ecosystems and fisheries</i>	<ul style="list-style-type: none"> <li>• Government maintain the fish catch around 400,000/year and will increased to 600,000 to 700,000 tonnes by 2020 due to increased of population</li> <li>• Decrease/loss of indigenous fish species</li> <li>• Livelihood dependence on fisheries</li> <li>• Loss of aquatic ecosystem</li> <li>• Loss of spawning areas &amp; deep pools</li> <li>• 90% of fish species are migratory species</li> <li>• Current EIA on Lower Sesan 2 shows 66% of total fish species affected by dam construction. This will be even worse for the mainstream such as in Sambor and Stung Treng</li> <li>• Impact on wetland and fish stock in Tonle Sap Lake</li> <li>•</li> </ul>
<i>Power &amp; Energy</i>	<ul style="list-style-type: none"> <li>• Generating national income through hydropower revenues</li> <li>• Energy vulnerability high and rising</li> <li>• Not contribute directly to poverty alleviation in rural areas, but to export to neighboring countries such in Vietnam and Thailand</li> <li>• Supports &amp; encourages foreign investors for investment opportunities (e.g. mining)</li> </ul>

	<ul style="list-style-type: none"> <li>• Development of hydropower sector relies on its ability to cooperate with other sectors</li> <li>• Electricity sector responsibility to mitigate adverse impacts of power development</li> <li>• Major LMB regional and national differences in per capita electricity use, and in fuelwood share as contribution to total energy sources (e.g. 88% fuelwood Cambodia, 16% Thailand)</li> <li>• Other power sources (e.g. renewables) not considered sufficiently</li> </ul>
<i>Poverty and livelihood</i>	<ul style="list-style-type: none"> <li>• Loss of livelihoods depending on agriculture, fisheries, water transport, sand and gravel extraction, with no direct replacement options. Existing biodiversity the base for majority of people's livelihoods</li> <li>• Riverine/riparian areas already highly populated and among the best agricultural land. Severe impacts on livelihoods</li> <li>• Lack of replacement land for resettlement and livelihood</li> <li>• Riverine/riparian areas already highly populated and among the best agricultural land. Severe impacts on livelihoods</li> <li>• Diverse ethnic people are living within Kratie and Stung Treng provinces. They are vulnerable to natural resource changes and resettlements</li> <li>• Mekong has more meaning than just water, with long-associated livelihoods dependence, cultural associations (e.g. river "nagas"), transportation and resources for economic development, social and political boundaries</li> <li>• Dolphin and man depend on fish. Without fish, there will have no dolphin which is attractive for tourists and conservation</li> <li>• Eco-tourism and cultural tourism are high priority in northeast provinces such as Kratie, Stung Treng, Rattanakiri and Mondulakiri in order to reduce pressure on Siem Reap and surrounded areas</li> <li>• National program on nutrition focusing on children and mother</li> </ul>
<i>Hydrology and water quality</i>	<ul style="list-style-type: none"> <li>• Changes in water flows creating adverse impacts</li> <li>• Changes in water levels creating adverse impacts</li> <li>• Uncertainty whether water levels increasing or decreasing, and timing of changes</li> <li>• Unknown whether Chinese dams contributed to 2008 Vientiane flooding</li> </ul>
<i>Agriculture and water supply</i>	<ul style="list-style-type: none"> <li>• Irrigation Service Fee (ISF) collection, operation and maintenance</li> <li>• Rain fed agriculture are still dominant. The country has produced rice surplus in recent years</li> <li>• Government plan to increased 4%/year for irrigated areas</li> <li>• Clean water supply are still low in the two provinces (Kraties and Stung Treng)</li> <li>• Groundwater table fluctuates but can be seasonally close to the surface</li> </ul>
<i>Terrestrial ecology and land use</i>	<ul style="list-style-type: none"> <li>• Reservoirs will flood forest. Forest decayed will generate more CH<sub>4</sub></li> <li>• Watershed protection necessary</li> <li>• Most provinces have commercial planting in mind when talking of reforestation, not of indigenous species. This is not genuine reforestation and cannot protect the environment</li> <li>• Associated erosion problems created by other activities, e.g. removing soil from wetlands for biofertiliser, removing gravel and sand from river banks</li> <li>• Protection of riparian forest from 500 to 1000 m from river bank</li> </ul>

	and stream (also lapse with proposed logging concession)
<i>Migration and population growth</i>	<ul style="list-style-type: none"> <li>•</li> </ul>
<i>Navigation</i>	<ul style="list-style-type: none"> <li>• Decreased revenues from transport and related income-generation activities</li> <li>• Loss of transport-related livelihoods for those with small boats unable to cope with changed water levels and water flows</li> <li>• Water flow/level changes impeding navigation</li> </ul>
<i>Other issues (mainly governance)</i>	<ul style="list-style-type: none"> <li>• Increasing provincial decision-making independence from central govt. The recent introduction of D and D ( Deconcentration and Decentralisation process). Individual developers negotiate separately with provinces. Lack of transparency and clarity over process</li> <li>• Existing transboundary accusations,</li> <li>• Lack of experiences in hydropower construction and development, lack of human &amp; budgetary capacity among government institutions in hydropower planning, tariff discussions, social &amp; environmental mitigation measures, monitoring</li> <li>• Legal and institutional framework form social and environmental safeguards and monitoring poorly understood (particularly at provincial and district levels) and legislation inadequately linked to process</li> <li>•</li> </ul>

## PART B: GOVERNMENT SCOPING WORKSHOPS & MEETINGS SUMMARIES

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## PART C: CSO MEETING SUMMARIES

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