



MRC INITIATIVE ON  
SUSTAINABLE HYDROPOWER

# KNOWLEDGE BASE ON BENEFIT SHARING

VOLUME 1 OF 5

SUMMARY  
AND GUIDE TO THE KNOWLEDGE BASE  
(KB) COMPENDIUM

(VERSION 1)



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Initiative on Sustainable Hydropower

# PREFACE AND KEY MESSAGES

This Knowledge Base (KB) was assembled by the Mekong River Commission (MRC) Initiative on Sustainable Hydropower (ISH) in mid-2011 as a first step to implement ISH Output 4.1c, “Benefit-Sharing Mechanisms Elaborated at Regional, National and Community Levels”.<sup>1</sup>

This report is Volume 1 of the KB. The accompanying Compact Disk (CD), called the KB-CD (Ver-1) contains Volumes 2 to 5. The KB-CD has over 120 documents on topics that range from the theory and practice of benefit sharing to case studies and examples of national legislation and regulation.

## PURPOSE OF THE KNOWLEDGE BASE

ISH Output 4.1c supports awareness raising, information sharing and multi-stakeholder dialogue among MRC Member Countries. One primary aim is to foster a common understanding of evolving experience with benefit sharing and enable Member Countries to cooperate in drawing lessons from experiences today, not only from the Mekong and wider Asian Region, but also from the growing pool of world-wide experience.<sup>i</sup>

Version 1 of the KB is a first effort to compile a body of information in one place. It has been shared with National Mekong Committee Secretariat (NMCS) staff in Cambodia, Lao PDR, Thailand and Viet Nam and NMCS stakeholders in government, civil society and private sectors who participate in the activities described herein. The Knowledge Base is otherwise an internal information resource to update periodically in formats to share more widely with all interested MRC stakeholders.

## CONTENTS OF THE KNOWLEDGE BASE

Volumes on the KB-CD include:

Volume I:	Summary and Guide to the Knowledge Base (this document)
Volume II:	Compilation of Articles and Reports on BSM
Volume III:	Compilation of PowerPoint Presentations on BSM from different sources
Volume IV:	Compilation of BSM Case Studies from around the World
Volume IV:	Examples of BSM Legislation and Regulations

This first Volume:

- Reviews the concepts and principals of benefit sharing as well as the main categories, types and mechanisms for hydropower and other natural resource extraction sectors;
- Sets out and responds to issues NMCS and MRC stakeholders have raised in ISH-supported dialogue to date on the relevance and value of benefit sharing in the Mekong context and the MRC role;
- Highlights national experience to date regarding benefit sharing in Mekong Countries to inform national dialogue process and the Member Country discussion in the MRC platform;
- Highlights examples of benefit sharing mechanisms introduced in different regions of the world, which may be studied more in-depth by Mekong readers for lessons; and

<sup>1</sup> Assembled by Lawrence J.M. Haas (ISH Policy and Strategy Consultant 2009-2011 at MRCS Offices in Vientiane) and Voradeth Phonekeo, ISH Manager at MRCS Offices in Vientiane, Lao PDR

- Concludes by outlining documents in the KB-CD that people can refer to.

Volume 1 includes a Frequently Asked Questions (FAQ) section. The idea is to gradually expand the FAQ to help structure BSM dialogue around the questions and record stakeholder views. The FAQ help to focus quickly on the Mekong relevant aspects, which is useful because benefit sharing has a wide scope.

Volume 1 uses bullet point format to make it easier to read, digest and convey information.

## IMMEDIATE NEXT STEPS – ISH ACTIVITIES PLANNED IN 2011

Planned activities and milestones for 2011 under ISH Output 4.1c are noted below.

Output 4.1c Benefit-Sharing Mechanisms at Regional, National and Community Levels	
Activities /Milestones in 2011	<ol style="list-style-type: none"> <li>1. Assemble the Knowledge Base (KB compendium) on benefit sharing including CD containing relevant documents for easy access (Q2).</li> <li>2. Prepare TOR and engage national consultants in each Member Country to help NMCS gather information and do a BSM survey / questionnaire (Q2).</li> <li>3. Form an informal knowledge sharing network with ISH National Coordinators and concerned line-agencies (e.g. list of people to contact routinely) (Q2).</li> <li>4. Hold TRG meeting on benefit sharing mechanisms, with first in-depth review of the 11 RSAT topics.</li> <li>5. Prepare &amp; hold a regional workshop on benefit sharing with MRC stakeholders and invited international observers as participants.</li> <li>6. Routinely respond to Member Countries for information on Benefit Sharing and offer other county-specific information support.</li> <li>7. Conduct Mekong-region study tour (venue to be decided in consultation with NMCS).</li> <li>8. Prepare a multi-year programme for information sharing and dialogue among MRC Member Counties over the 2012-2015 timeframe (Q4).</li> </ol>
Interfaces	<ul style="list-style-type: none"> <li>▪ MRCS Management, NMCS, Line Agencies, RBCs / RBOs</li> <li>▪ The ISH Technical Review Group and Advisory Committee</li> <li>▪ Regional Development Partners</li> <li>▪ ISH Development (Funding) Partners</li> <li>▪ ECSDH Partners (ADB and WWF) and the World Bank later</li> </ul>
Implementation	<ul style="list-style-type: none"> <li>▪ By in-house capacity, and</li> <li>▪ Consulting services (national and international)</li> </ul>

Subsequent to preparing the 2011 Work Plan and based on discussions with NMCS, instead of holding a Technical Review Group Meeting in late Q2 (item 4), four National BSM workshops were scheduled in Q3 and Q4 to consider the Knowledge Base and initiate national BSM dialogue processes. The Regional BSM Workshop (item 5) and Mekong-region BSM study tour (item 7) were put back to 2012-13.

## LONG TERM SUPPORT: ACTIVITIES PLANNED FOR 2012-2015

In October 2010, the ISH Regional Advisory Committee (AC) endorsed multi-year support to Member Countries on benefit sharing under ISH Output 4.1c entitled, “Benefit-Sharing Mechanisms Elaborated at Regional, National and Community Levels”.

Benefit sharing is otherwise imbedded in other management tools that Member Countries are developing in collaborative processes under the MRC framework; including the rapid hydropower sustainability assessment

tool (RSAT).<sup>2</sup> Benefit Sharing is also part of voluntary international Protocol for hydropower sustainability assessment trialled in the Mekong by the MRC.<sup>3</sup>

As agreed at the ISH Advisory Committee Meeting held on 21 February 2011 involving MRC Member Countries and the ISH Development Partners (donors), the ISH will lead MRC efforts to share information on national-to-local forms of benefit sharing under ISH Output 4.1c. At the same time, the ISH will cooperate with other MRC Programmes to facilitate information gathering and knowledge sharing on transboundary benefit sharing (TBS). The main avenue for formal dialogue on transboundary benefit sharing is through the Basin Development Strategy (BDS) and related MRC mechanisms.

## KEY MESSAGES

Benefit sharing is a widely accepted way to spread resource utilization benefits across the economy, catalyse broader-based growth and support social equity policies.

1. Despite the prominence of benefit sharing, the concept is not always clearly defined. In part, this is due to the many different objectives and ways to share benefits in different sectors.
  - Experience shows that people bring many pre-conceptions, views and different ideas to the table when benefit sharing is discussed in multi-stakeholder venues – especially around water and energy infrastructure like hydropower and large dams;
  - It is important for government authorities leading dialogue processes to have a clear understanding of the different benefit sharing mechanisms (BSM) and how they work in practice.
2. As set out the MRC Basin Development Strategy (2011), benefit sharing can be considered at different scales (e.g., at region, national, sub-basin, and local scales). Two main categories are national-to-local and transboundary benefit sharing:
  - A defining feature of transboundary benefit sharing, in its various forms, is the approach and the mechanisms for sharing benefits is fundamentally based on negotiated outcomes and Agreements. No international law “prescribes” what needs to be shared, or in what manner.
  - In contrast, the approaches and mechanisms for national-to-local forms of benefit sharing are best set out by governments in enabling legislation and supporting regulations.
  - Regulation helps to ensure a consistent approach is followed, not only on public and private sector hydropower projects, but also on existing and new projects. It reduces risk of unnecessary controversy that would undermine public confidence in sustainable hydropower.
3. With national-to-local benefit sharing, there are various approaches, types and mechanisms that Mekong governments may consider to share the benefits of hydropower with local communities, river basin residents and among different levels of government (e.g. municipal, district or provincial levels):
  - These include localized, non-monetary mechanisms (related to improving local access to natural resources), the equitable sharing of project outputs, maximizing indirect and additional benefits (such as investments in local roads and job creation), and sharing of monetary benefits.
  - Mechanisms for sharing monetary benefits take many forms (e.g. revenue sharing, equity sharing, taxes, royalties, and preferential tariffs for local communities), though revenue sharing is perhaps most common and practical; and often a mix of BSM mechanisms are used.

<sup>2</sup> <http://www.mrcmekong.org/news-and-events/news/innovative-tool-for-mekong-basin-wide-sustainable-hydropower-assessment-launched/>

<sup>3</sup> The Protocol was developed in an international Forum process led by the International Hydropower Association (IHA) to ensure multi-stakeholder perspectives [http://hydropower.org/sustainable\\_hydropower/HSAF.html](http://hydropower.org/sustainable_hydropower/HSAF.html)

- Monetary forms of benefit sharing are ultimately reflected in the electricity tariffs paid by all electricity consumers, consistent with the IWRM principle of water as an economic good.
4. Mekong countries have experience with one or more forms of national-to-local and project-level benefit sharing in the hydropower sector. There is a growing body of experience to share to take good practice forward in a consistent way.
- All Mekong countries have experience optimizing indirect and additional benefits of hydropower. Among recent steps to advance and improve BSM in the Mekong, along the lines of international good practice, include:
    - In Thailand, local Community Development Funds (CDFs) intended improve the environment, socio-economic conditions and quality of life of people living in the vicinity of power projects (within 5 kilometres) were introduced in national policy in 2007. By 2009 a total of 102 power plants located in 39 provinces, including 26 power plants of EGAT had established CDFs funded by revenue streams (CDFs were revised to Power Development Funds (PDFs) in 2011).<sup>4</sup>
    - In Viet Nam, since 2007 the power sector regulator (the Electricity Regulatory Authority of Viet Nam - ERAV) has been developing provisions of a draft Decree Law for BSM on hydropower with a multi-Ministry Steering Group. Provisions were pilot tested on a 210 MW project in cooperation with provincial authorities in Quang Nam Province in 2010. In 2011, a Decree Law on Payment for Forest Ecological Services (PES) for hydropower to contribute revenue to funds was promulgated.
    - Lao PDR has experience with innovative approaches that target hydropower revenue to support poverty alleviation and raise local income for people affected by or in the vicinity of hydropower projects. Lao PDR also has revenue management provisions on donor-supported projects that contribute to poverty alleviation programmes at sub-national and national levels, and
    - China has laws that allocate a portion of revenue from hydropower projects to permanent local development and reconstruction funds in reservoir areas and measures for longer-term (20-year) compensation (including hydropower projects in the Lancang-Mekong River cascade).
5. World-wide experience suggests a systematic, collaborative approach is needed to introduce comprehensive forms of benefit sharing that reflect good practice and meet growing stakeholder expectations. It is also important to provide for continuous improvement, recognizing benefit sharing is dynamic and often measures need to be introduced in stages to allow capacities to be built.

Steps countries often take to systematically to introduce more comprehensive approaches and enhance current arrangements include:

- i. starting with awareness raising, engaging with all stakeholders;
  - ii. undertaking pilot projects to build confidence and seek stakeholder consensus on approaches and mechanisms most suited for the delivery of benefits;
  - iii. introducing appropriate enabling policies and legislation based on accepted good practice;
  - iv. adequate consideration of actions needed at all stages of the infrastructure project cycle;
  - v. carefully choosing the sources of finance (or mix) to share monetary benefits;
  - vi. selecting appropriate mechanisms for delivery of benefits, regardless of financing sources;
  - vii. introducing appropriate institutional arrangements, minimizing need for new structures; and
  - viii. ensuring effective 2-way communication, and encouraging partnership approaches.
6. Benefit sharing is positive from all stakeholder perspectives, when introduced in a consistent and systematic way with appropriate participation of beneficiaries and stakeholders.

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<sup>4</sup> See Section 2 for further discussion. While required on all projects in including hydropower most CDFs today have been on thermal projects (gas, coal and oil-fired generation).

- All stakeholders from governments to hydropower investors and owners, to national electricity consumers, to local communities see their risks reduced.
  - Among the main challenges in introducing benefit sharing are the complexity of some mechanisms, and the required investments in capacity building.
  - More specific challenges relate to addressing:
    - Misconceptions about benefit sharing that may hinder, slow or frustrate progress;
    - Ensuring bottom-up processes to decide local mechanisms for delivery of benefits and to choice of what benefits within the framework of regulations set by government;
    - Ensuring that benefit delivery mechanisms are properly integrated with existing local, governance and development systems so they complement efforts and add value, and
    - Ensuring open and transparent implementation arrangements for BSM.
7. The theory and practice of benefit sharing applies not only to hydropower, but also to other resource extraction sectors in the Mekong such as the mining, forestry and genetic resources harvesting (i.e. harvesting plants for medicines funded by the pharmaceutical industry):<sup>5</sup>
- World-wide experience with benefit sharing in all sectors is growing. At the same time, there is a mix experience (i.e. remarkable successes as well as some clear failures);
  - The pool of existing experience creates opportunities for cross-fertilization of ideas and sharing lessons among sectors to identify best practice, and critically to minimize miss-steps;
  - Opportunities exist to link sector-based strategies for BSM (e.g., in the mining, forestry, agriculture, ecotourism and hydropower sectors) to challenges that many emergent river basin organizations face coordinating sustainable management of land-water resources at basin and sub-basin scales.
8. New thinking on ways to develop synergies among various Funds for water resource protection and managements and to integrate implementation on the ground is increasingly important. While this is an opportunity to optimize development at a basin and sub-basin scale, it is also essential to avoid confusion over what Fund does what, which leads to implementation delay or duplication of effort.<sup>6</sup>
- Use of development Funds (in some countries called Trusts), which operating as mechanisms to receive revenue (of various kinds) to fund resource development and management activities is a trend in the Mekong as elsewhere (e.g. funds for environment protection, water resource protection, payment for ecological services or benefit sharing). These Funds often employ partnership approaches with the private sector, civil society supporting local action.
  - Hydropower in many Mekong countries increasingly makes revenue contributions to these development funds. While payment or fees may depend on project size or generated output, payments are ultimately reflected in electricity tariffs (i.e. the electricity consumer pays).
  - From MRC's perspective as a regional river basin organization, such Funds have direct relevance to the capacity of MRC Member Countries to cooperate in delivering the core River Basin Management functions in the MRC Strategic Plan 2011-2015.
  - Opportunities to integrate the delivery of benefits from such funds are often present. These opportunities can be explored to make the funds more effective, have less stakeholder confusion and respond to situations where there is limited implementation capacity.

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<sup>5</sup> As advanced under the Convention on Biodiversity (CBD) and RAMSAR.

<sup>6</sup> As in the case of Viet Nam, where the trialling of benefit sharing mechanisms on hydropower projects and the draft BSM Decree was perceived by some stakeholders to be in competition with Payment for Ecosystem Services (PES), when in reality they are highly complementary, but involve different river basin communities and project-affected communities.

9. Benefit sharing is an integral element of sustainable forms of hydropower (i.e. social, environment and economic performance) consistent with IWRM principles. BSM underpins efforts to maximize the contribution of hydropower to sustainable management and development of river basins.
  - Consensus among MRC stakeholders when the Initiative on Sustainable Hydropower was formulated in 2008-2009 was benefit sharing must featured in the ISH Work Plan;
  - The new generation hydropower sustainability assessment tools recently emerging at international and regional levels use benefit sharing as key criterion to measure hydropower sustainability;
  - Benefit sharing is today widely seen as a powerful, practical tool to advance cooperation on sustainable water infrastructure development and management in river basins,
  - It is helpful to place decisions about hydropower management and development in a river basin perspective using IWRM principles (which the 1995 Mekong Agreement is based on).
  
10. Benefit sharing is an important tool to balance development opportunities and risks related to hydropower at all scales of development in the Mekong, from regional to local scales.
  - Local benefit sharing mechanisms allow communities affected by hydropower or “hosting” hydropower projects in their locale to implement local actions which they see as vital to balance their own local development opportunities and risks arising from project.
  - Similarly, MRC Countries aim to balance the development opportunities and risks across economic sectors and at the regional scale through transboundary benefit sharing mechanisms.

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**Benefit sharing is a widely accepted way to spread resource utilization benefits across the economy, catalyse broader-based growth and support social equity policies. Benefit sharing is attracting increasing attention worldwide as a uniquely powerful, practical and adaptable management tool to advance inclusive, sustainable development of natural resources.**

## 1 FROM CONCEPT TO GOOD PRACTICE - AN OVERVIEW

Benefit sharing has been a recurrent theme in international and national debates about hydropower and cooperation on sustainable management of water resources for over two decades.

Despite its prominence, benefit sharing is not always clearly defined, at least not well enough to satisfy all people. The concept, in fact, is almost unique in the sense that various disciplines use it regularly, but without precise definition (Schroeder 2006).<sup>ii</sup> In part, this is because there are many different objectives and actual ways to share benefits. Moreover, it is not always clear what the types of benefits need to be shared (e.g. financial benefits or in-kind benefits such as access to services) and how these balance with costs. It may also be unclear how 'legitimate' beneficiaries should be identified, or how benefit sharing systems can be managed across different scales (e.g. regional, national, local, and even within communities).

Accepting this diversity, benefit sharing mechanisms have been successfully introduced for hydropower in many developing and developed countries. This has led to positive outcomes for all stakeholders from governments and the general public represented by national electricity consumers, to hydropower investors and operators to local basin communities that “host” hydropower projects in their area.

Benefit sharing is widely seen today as a practical and powerful way to advance cooperation on sustainable water infrastructure development and management. As the World Bank said in its 2009 global strategy for hydropower, “Directions in Hydropower”, the policy priority is shifting towards development “done right” through comprehensive environmental management and benefits sharing.<sup>7</sup>

For MRCS and Mekong officials exploring benefit sharing in-depth, it is important to recognize that people will bring many different pre-conceptions, views, and ideas to the table when this topic is first discussed in depth – and also each time thereafter, often with considerable emotion. There are competing views and constituencies with different aspirations for sharing benefits, even within government.

<sup>7</sup> [http://siteresources.worldbank.org/INTWAT/Resources/Directions\\_in\\_Hydropower\\_FINAL.pdf](http://siteresources.worldbank.org/INTWAT/Resources/Directions_in_Hydropower_FINAL.pdf).

For many reasons, it is important for authorities to have a clear understanding of the different approaches to benefit sharing and experience with them. It is also important to understand how Mekong stakeholders actually perceive benefit sharing, and how they feel it can add value.

## 1.1 WHAT IS BENEFIT SHARING?

The professional literature has much discussion about the concepts, practice and promises of benefit sharing. This is not only for hydropower and the wider water resource management sector, but also for other resource based industries found in the Mekong today, like the mining and forestry sectors.

### In conceptual terms

- Views vary on why, how and when to introduce benefit sharing mechanisms (BSM). Also on the relative value. On this point, international experience reveals that:
  - Some stakeholders see benefit sharing mostly in terms of ***an ethical principle*** – an inclusive and equitable sharing of benefits must underpin the sustainable use of natural resources.
  - Other stakeholders see benefit sharing more as ***a practical tool*** – their motivation is to adopt tools already proven to work for investments in hydropower, and in other sectors.
  - Still others see benefit sharing mostly as a tool to ***manage development risks and enhance development opportunities for all, not only for some*** – in the sense of sharing risks and opportunities. This means not only focusing on risks for financial investors, or developers or countries. It is also about enabling local communities and river basin residents to better manage the development risks they may face, and equally important, to provide them with means to realize development opportunities that hydropower projects may unlock for them. <sup>iii</sup>
  - Finally, some stakeholders feel the more traditional (indirect) forms of benefit sharing are all that is needed today (e.g. investments in local roads, public services and the local job creation). They feel other forms of benefit sharing are an unnecessary distraction, even a complication.
- Modern approaches to benefit sharing link many of the linguistic, legal and ethical considerations in natural resource extraction and sustainable development and use of natural resources. <sup>iv</sup> And today sharing benefits is often part of wider discussion on how to cooperate on mutually beneficial development of international river systems, how to practically apply IWRM principles, and especially how to improve the social sustainability aspects of water infrastructure like hydropower. <sup>8</sup>

### In practical terms

- Moving beyond the conceptual justifications, for hydropower, benefit sharing is a practical response to the scale of investment and also the scale of the cross-sector impacts that hydropower often involves. In this respect, large hydropower schemes:
  - Draw on the financial resources of the nation, that is national electricity consumers and taxpayers, irrespective of the project financing method used (public or private);
  - Are often described in terms of the uniquely large, social and ecological “footprint” in river basins, larger than many other forms of water and energy infrastructure, and
  - People are impacted in ways that go well beyond resettlement, despite common practice to define affected people only in terms of resettlement. A far larger number of people may be potentially

<sup>8</sup> It is about distributing both the benefits and costs of water resource transformation and use within society.

affected (in varying degrees) by permanent changes in the resource transformations hydropower involves and the changes in access to natural resources, especially where the capacity to adapt to such change is limited or weak.

The argument is therefore, national investments in hydropower should be conceived as part of a national strategy to foster regional and local development. Hydropower investments should not be seen only narrowly as the provision of water and energy services.

- On a practical level, the explicit provision of benefit sharing arrangements perceived to be fair, developed in a collaborative (so they are supported by the public) can help turn potential conflict into consensus on many hydropower development and management activities. Not all, but many.
- Few people will actually argue against the principle of sharing benefits. The mechanisms underpin the sort of partnerships that genuinely involve people in development decisions that affect them. One practical need is to find the right balance and package of measures to meet stakeholder expectations.

## 1.2 WHAT ARE THE MAIN CATEGORIES AND TYPES OF BENEFIT SHARING?

There are several different approaches to share benefits with project affected communities and residents of the river basin where hydropower projects operate or are planned.

- Transboundary and national-to-local benefit sharing are the two broader categories relevant to the Mekong situation. Descriptions on these are offered in Section 1.2.1 later. In brief:
  - National-to-local forms involve sharing benefits of hydropower among national and sub-national levels in a particular country. Certain benefits may be shared with river basin residents at provincial, distinct, municipal and local levels - or a combination of these.<sup>9</sup>
  - Transboundary benefit sharing is a wider consideration of equitable utilization and sharing of benefits (and costs) of water resource development and use, involving two or more counties on international watercourses. It is based on principles embodied in IWRM practice, negotiation and agreements.
- Within these two broader categories several forms of benefit sharing are common. These are introduced briefly below, and explained later in Section 1.2.2. They include:
  - **Monetary forms** of benefit sharing, which involve sharing some portion of the “economic rent” generated by hydropower projects (the term economic rent is explained later). Revenue sharing is the most common form of sharing monetary benefits.
  - **Non-monetary forms** of benefit sharing, which encompasses all the steps that governments (at different levels) may take to give local communities better access to natural resources (in whole or in part) to offset resource access lost (e.g. such as issuing permissions and removing unnecessary barriers that impede access to land or forest resources locally).
  - **Equitable sharing of project services** is another form of benefit sharing, which means ensuring that local communities who “host” a hydropower project are among the first to be electrified, not the last. It recognizes the local benefits that derive from improved levels of electrical service.
  - **Indirect or additional benefits** include the range of benefits realized because the hydropower project proceeds; for example, investments in local roads that give local communities improved access to markets for agriculture produce, employment opportunities and local development stimulus created by the project investments, including the project demand for local goods and services.

<sup>9</sup> This links to the IWRM concept that decisions on water resources are made at the lowest appropriate management or organizational level, where there is multi-stakeholder participation.

Certain forms of benefit sharing (national-to local) can be targeted to help achieve poverty reduction targets. This especially is helpful when poverty levels in the areas where hydropower projects exist, or are planned, are higher than provincial or national poverty averages. This is often the case in remote, rural areas where Mekong tributary hydropower sites are located. Targeting can be done for a period of time until poverty levels are reduced to agreed levels; thereafter, targets may focus on other socio-economic indicators that the intended beneficiaries deem as most important.

### 1.2.1 TRANSBOUNDARY AND NATIONAL-TO-LOCAL BENEFIT SHARING

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The main principles apply equally to transboundary and national-to-local benefit sharing.

□ **Transboundary benefit sharing (TBS):**

- TBS is sharing between two or more counties on an international river system, such as the Mekong, based on Agreements and negotiated outcomes. There are no international laws that prescribe what transboundary benefit sharing must be, only normative frameworks based on values.
- TBS aims to bring about mutually beneficial development outcomes in each country from the beneficial management and use of shared water and related resources;
- The agreements for TBS can be bilateral, regional in nature, or a mix.

MRC Programme work reveals many different views on what transboundary benefit sharing could, and perhaps should encompass. In some respects the differences are a matter of emphasis. Upper and lower riparian countries always have different perspectives that must be reconciled through negotiation.

In the international literature it is evident that:

- Some observers see transboundary benefit sharing primarily in terms of **equitable water allocation**. They place emphasis on developing and allocating reasonable and equitable water shares across boundaries. This is not only for consumptive use, but also for water flows to maintain aquatic ecological services and agreed standard of water quality.
- Other observers advocate going beyond looking at water quantity-quality, to an approach that equitably allocates not water alone, but also the various human and ecological benefits that can be derived from sustainable utilization and co-management of water quantity, flows and quality.
- Still other observers such see the negotiation space for transboundary benefit sharing as necessarily (and pragmatically) extending outside the boundaries of the water and services (e.g. power sector) alone. Where appropriate, negotiations can include benefits outside the river basin and bring in other sectors of mutual interest including trade.

Modern approaches of course tend to see transboundary benefit sharing as potentially including a mixture of all the above aspects. The emphasis should be placed according to the need, the situation and the agreements struck. Another argument is that many potential benefits are actually lost if there is no transboundary cooperation – which in practice means that each country ends up spending more to achieve the same level of benefit, if they act independently.

This thinking is illustrated in the table below, from an article in the Journal on Water Policy, entitled “Beyond the river: the benefits of cooperation on international rivers.”<sup>10</sup>

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<sup>10</sup> The work of D. Gray and C. Sandoff from the World Bank (see Volume 2 of the KB-CD).

<b>Table 1: Types of benefits and cooperation on international rivers</b>		
<b>Four Types</b>	<b>The Challenge</b>	<b>The Opportunities</b>
<b>Type 1:</b> increasing benefits “to the river”	Degraded water quality, watersheds, wetlands, and biodiversity	Improved water quality, river flow characteristics, soil conservation, biodiversity and overall sustainability
<b>Type 2:</b> increasing benefits “from the river”	Increasing demands for water, sub-optimal water resources management and development	Improved water resources management for hydropower and agricultural production, flood-drought management, navigation environmental conservation, water quality and recreation
<b>Type 3:</b> reducing costs “because of the river”	Tense regional relations and political economy impacts	Policy shift to cooperation and development, away from dispute/conflict; from food (and energy) self-sufficiency to food (and energy) security; reduced dispute/conflict risk and military expenditure
<b>Type 4:</b> increasing benefits “beyond the river”	Regional fragmentation	Integration of regional infrastructure, markets and trade

D. Gray and C. Sandoff, (see Volume 2 of the KB-CD).

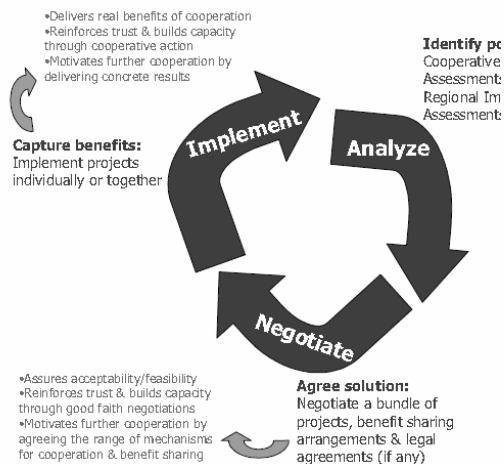
The World Commission on Dams in the final report (WCD, 2000) made similar recommendations still valid today. In Strategic Priority 7 (Sharing Rivers for Peace and Security), the WCD noted the benefits that can be shared between States may include hydropower generation, irrigated agriculture, flood regulation, navigation, and increased trade. The WCD also noted that other non-monetary benefits (e.g., peace and security, regional economic integration) may be as valued as monetary benefits.

- One illustration of seeking benefits “beyond the river” (i.e., type 4 transboundary cooperation and benefit sharing, as noted in the previous table) comes from Central Asia. The case study is elaborated more in Section 2 and provided in Volume 4 of the KB-CD). In brief:
  - After the break-up of the former Soviet Union, controversy arose in five newly independent States in Central Asia sharing the Amu Darya and Syr Darya river systems that drain into the Aral Sea.<sup>11</sup> While many things were in dispute, one controversy was over conflicting needs for winter-time water releases for hydropower generation, as desired by the upper riparian states, and maintaining summer release schedules for irrigation, as desired by lower riparian.
  - National governments eventually agreed to cooperate on measures within the framework of what emerged as the Aral Sea Basin Program (ASBP) in 1992. But it was not until 1999 that a workable resolution was found. The negotiations and the agreement that resulted linked the regulation of flow from the Toktogul Reservoir in the Naryn-Syr Darya River in a hydropower cascade in the Kyrgyz Republic to a compensatory scheme for oil and gas transfers.
  - Here, electric power generation in excess of summer demand in the Kyrgyz Republic is now sent through Central Asian power grids to Kazakhstan and Uzbekistan in equal portions. In return (and as compensation for agreeing to a reduction in winter season generation in favour of summer water releases for irrigation), the Kyrgyz Republic receives coal, gas, heavy oil, and other types of petroleum products from downstream countries (mainly Kazakhstan).

<sup>11</sup> The Republics of Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan

- The central importance of negotiation to open the space for transboundary cooperation and TBS is illustrated in the following graphic (also from the authors cited previously (D. Gray and C. Sandoff)).

Cycle involving negotiation



This reinforces the notion that transboundary benefit sharing is a negotiation outcome – requiring good faith negotiation between two or more States.

Source: D. Gray and C. Sandoff

- There are far more examples of functional transboundary benefit sharing agreements involving bilateral agreements between two countries than multi-state agreements.
- This is illustrated in examples from Latin America (e.g. many Bi-National projects among the 5 countries forming the La Plata River Basin) and the Columbia Basin Treaty between Canada and the United States, as noted in Section 2.

In the Mekong, transboundary benefit sharing (TBS) is highly relevant to balancing the regional development opportunities and risks in each Member Country, in a concrete way, consistent with the 1995 Mekong Agreement. The broader approach Member Countries agreed on TBS is explained in the Basin Development Strategy that endorsed by MRC Bodies in January 2011.

- The Integrated Water Resources Management-based **Basin Development Strategy for the Mekong** was published in mid-2011.<sup>12</sup> This Strategy identifies a Development Opportunity Space (DOS); the Strategic Priorities for both Basin Development and Basin Management; and prioritised studies of strategic importance and water resources management.
- Sharing benefit features is one of the seven Strategic Priorities for Basin Development (Strategic Priority 5: *Seek options for sharing the potential benefits and risks of development opportunities*).
- Among studies of strategic importance, the Strategy calls for the ISH to support a NMCS-led process, called ISH13, to deliver products for “Benefit sharing options for Mekong Tributaries Identified and Reported” by 2013. ISH13 covers both TBS and national-to-local BSM.

□ **National-to-local benefit sharing:** <sup>v</sup>

- This is more common than transboundary (TBS) because governments have jurisdiction over what happens within their boundaries. Sometimes national-to-local benefit sharing is actually provincial-to-local, or is referred to as project-level benefit sharing.<sup>13</sup>

<sup>12</sup> <http://www.mrcmekong.org/publications/>

<sup>13</sup> The term national-to-local is generic. However, if in a particular setting (e.g. Canada) Provinces have primary jurisdiction over water resources, then it may be better described as Provincial-to-local benefit sharing mechanisms. In MRC Member Countries policies such as benefit sharing are normally provided at national levels, though national levels may not preclude Provinces taking their own initiative. It depends on the Constitution and legal framework of the country.

- National-to-local forms are normally set out in government regulations that prescribe both the financing sources and the mechanisms to deliver benefits, as well as the institutional arrangements and eligibility criteria for benefit sharing.
- There are several approaches to implement BSM (discussed further in Section 1.2.2). A common feature is all approaches seek to improve the distribution of hydropower benefits within the country (i.e., fairness and equity as perceived by the general public, interested parties and stakeholders).
  - Governments use public or private sector financing models to invest in strategic infrastructure such as hydropower, or a mix of the two. The important point is the hydropower developer or owner (public or private) is not the main principal in the benefit sharing equation.
  - Rather, the sharing of hydropower benefits is primarily a relationship between the electricity consumers on the national power grid and local communities and residents of the river basin where the project is located. Or in other words:
    - Benefit sharing is a long-term relationship between the main beneficiaries of hydropower, on one hand, meaning the national economy (budgets) and electricity consumers. And on the other hand, the local communities (mainly rural) and river basin residents who may give up land or resource access (in varying degrees) in order for the hydropower project to proceed and generate benefits in terms of electrical services enjoyed largely by others.
    - The majority of the primary beneficiaries of electrical services (e.g. households, and commercial and industrial customers) may be located far away from hydropower project, or outside the river basin, or even in another country - if the power is exported.
    - This does not preclude hydropower developers and owners from playing a role, either to help fund or implement agreed benefit sharing mechanisms.
    - The hydropower project entity, which typically has a concession for a period of time, may not be around for the economic life of the project (e.g. in the case of an IPP or power sector restructuring). Benefit sharing is over the economic life of the project and not a temporary measure while project debt is retired, for instance.
    - Hydropower developer/ operators are not the primary drivers of BSM, or entities to set the “rules” for BSM. That is the role of government, which is especially important if there is a mix of IPP and public sector hydropower projects as in the Mekong.<sup>14</sup>
  - Many countries share monetary benefits of hydropower with local communities by establishing local community (or local area) development funds, financed with money from the hydropower revenue stream according to formula set in regulation (i.e., from tariffs).
    - In parallel, government may also choose to make additional investments from national budgets to boost development in the district, or area of the province where the project is located. These arrangements are typically negotiated.
    - In effect these additional investments use a portion of the net gain realized by central government accounts (or provincial accounts) from taxes, duties, fees and other revenue (e.g. from exports) from hydropower that accrue at the national level
    - Or the additional investments may be finance by loans repaid from national sources.
    - Such investments are also made to maximize (or optimize) the additional benefits that hydropower generates, which are situation-specific such as roads, local job creation, and

<sup>14</sup> If certain situations where there is only one shareholder of a public power utility that owns and operates hydropower projects (i.e. the government is sole shareholder) and there are no IPP projects, then government policy on BSM may be elaborated and implemented by the utility acting on behalf of government – as in Canada with Hydro Quebec for example.



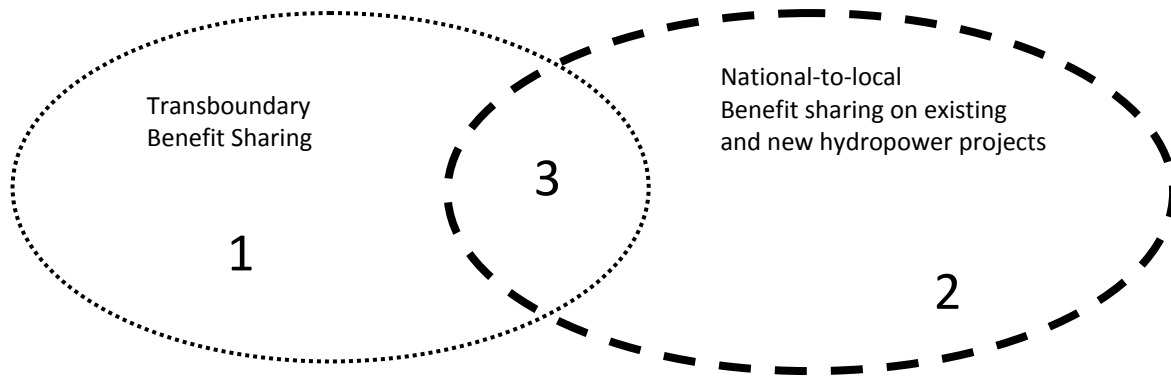
local economic stimulus (see the definition of additional benefits in Section 1.2.2) and also to manage potential for “boom and bust” cycles due to high investment during construction periods and lower investment flows locally after the project is commissioned.

- In other countries, an explicit mechanism is used to distribute some portion of the monetary benefits that hydropower generate among different levels of government. Often something like a fixed percentage of gross hydropower revenue as calculated by record on generation from the proceeding year is allocated to the development budgets of municipal, district, and /or province levels where the project is located.
- For reasons cited above and discussed later in Section 1-4, accepted good practice is the national government takes the lead in BSM by providing the enabling legislation and regulatory framework.
  - This is best done using open and transparent processes, and in a manner that ensures a consistent approach to BSM is followed on all hydropower projects in the country.
  - Otherwise there may be unnecessary controversy, which in turn undermines the very aims of benefit sharing and public confidence in hydropower (for this reason also BSM needs to be introduced on both existing and proposed hydropower projects).
- Section 1.4.1 explains steps that countries typically take to introduce national-to-local BSM on existing and proposed hydropower. Section 2 provides examples and points to a number of case studies and sample legislation from around the world that is contained in the KB-CD.
- The important point is to have a systematic approach to balance the development opportunities and risks at different scales, and not leave people behind in terms of development – in particular the local communities that are often among the poorest and most vulnerable in society.

#### **How do the two main categories of benefit sharing link?**

Figure 1 below illustrates the conceptual relationship between transboundary and national-to-local benefit forms of benefit sharing with a Venn diagram. Reference is made to the Mekong situation in Figure 1. The more controversial or difficult aspect is noted as the transition zone (3) where riverine communities in one country may be affected by hydropower projects in another country (either upstream or downstream) where power services are actually being enjoyed in these two countries or a third country.

Figure 1 also illustrates that the linkage may be thought of as benefits flowing (regional < > national < > local) in a way that maximizes synergies in development between each level.



**1- Addressed by the MRC via the 1995 Agreement + BDP**

- Equitable and mutually beneficial sharing of water resources among States
- Requires agreements and negotiated outcomes (bilateral or multi-State)
- Principles are embodied to some extent in 1995 Mekong Agreement (e.g. related to Equitable and Reasonable Utilization, No Harm and Freedom of Navigation)
- Sharing benefits is explicit in the 2011 Basin Development Strategy as one of 7 Strategic Priorities

**3-Transition Zone**

- Applies more to traditional water users
- Relevant to mainstream and tributary projects
- Requires Agreement and negotiated outcomes (Bilateral or multi-State)
- Is perhaps the most difficult aspect of benefit sharing to define, agree on and implement
- Links to national-to-local forms of benefit sharing

**2- Addressed by National Polices and Legislation**

- Sharing of benefits mainly accruing at national levels with sub-national levels.
- Especially sharing with local communities impacted by or otherwise “hosting” projects in their locality.
- Includes a range of monetary, non-monetary and indirect forms of benefit sharing.
- Addresses a real or perceived disconnect between national and local development with hydropower.

**1.2.2 MONETARY, NON-MONETARY AND INDIRECT FORMS OF BENEFIT SHARING**

The main types of national-to-local benefit sharing common in international practice today include:

- **Non-monetary benefits** – covering a range of resource access privileges that may be extended to local communities to enable them to enhance their resource-based livelihoods and social welfare through local action. One aim is to offset, or replace some, or all of the resource access that is lost because of the resource transformations caused by the hydropower project. Often this requires some form of government regulation, or permit issued at the local, municipal or provincial level.
  - Non-monetary measures include resource access rights for families, communities, or groups who may be adversely affected by projects, or have the potential to gain from the project due to the resource transformations and other effects of project-related investment. The measures most appropriate depend on the local situation and must be based on preferences of local communities themselves.<sup>vi</sup>
  - When combined with long-term financial support from revenue sharing, communities are better able to restore livelihoods and extend livelihood opportunities.

- To illustrate, measures for enhancing natural resource access in the project area in developing country situations like those in the Mekong River Basin may include, extending entitlements, permissions or rights as necessary to:
    - intensify or extend agro-forestry and animal husbandry;
    - improve forest access to gather forest products and have community managed forestry;
    - facilitate arrangements between local communities and state forest enterprises for sustainable harvesting of timber products, as are often embodied in forest laws but not always acted upon;
    - establish reservoir fisheries programs and activities such as patrolling, stocking etc., subject to approval of hydropower enterprises with land and water rights, and
    - establish aquaculture activities in areas where it is feasible.
  - Similarly, measures for enhancing livelihood opportunities may include extending entitlements, permissions, or rights as necessary to:
    - extend vocational training for new livelihood, new job skills and income diversification;
    - start-up local enterprises and businesses based on ecotourism and other opportunities created with the formation of reservoir and new wetland areas;
    - enable ecosystem services that benefit sustainable hydropower and livelihoods (e.g.; planting trees and maintaining headwater forests that have multiple benefits including protecting reservoirs from sedimentation – thus protecting long-term hydropower revenue);
    - help with market access to sell locally produced goods and services; and
    - otherwise facilitate and support community-defined local actions that enable communities to improve their quality of life through local action.
  - Non-monetary benefits are particularly important for people living in subsistence and low-income situations, who rely heavily on natural resources for their day-to-day livelihoods, health, and culture. Under BSM arrangements they are long-term (essentially permanent in nature);
  - International literature shows that many countries already have laws and regulations to help local communities with enhanced resource access. But all too often, the laws that would help are not applied locally, or not given systematic support. This is due to various reasons including lack of awareness, monitoring and follow-up, or limited local government capacities.
  - Moreover, often the support is temporary or short-term and not extended over the economic of the life of the project where the stream of benefits is generated.
- **Monetary benefits** means sharing the economic and financial gains from hydropower that normally accrue at the national level with affected communities and residents of river basins. In economic terms, it means sharing a portion of the “economic rent” that investments in hydropower generate.<sup>15</sup> As noted earlier, revenue sharing is perhaps the most recognized form of sharing monetary benefits in the hydropower sector, as well as other sectors such a mining and forestry.<sup>16</sup>
- Revenue sharing mechanisms may transfer a portion of the monetary benefits (revenue from electricity tariffs, taxes, royalties or other financial sources arising from power production) to either provincial, municipal or local levels.
  - Different approaches are use to transform the money to actual benefits; the two main ones are:

<sup>15</sup> Economic rent is a term that development economists use. For hydropower investments, economic rent may be defined as the “competitively determined electricity price minus the marginal cost of producing the hydroelectric power”. For revenue sharing to be viable, there must be an economic surplus, where the cost of all factors of electricity production is less than the tariff. In practice, Mekong governments set electricity tariffs (often ceilings).

<sup>16</sup> Revenues sharing mechanism are essentially tariff-based measures; they are directly (or indirectly) taken from the revenue stream of hydropower projects which consumers pay. As noted in the previous section, revenue sharing is fundamentally a relationship between electricity consumers (who pays) and local communities and basin residents (who host projects). Revenue sharing reflects the user pay principle in IWRM that treats water as an economic good.

- funding an annual increment in the local development budget of communities or towns located in the project area (e.g. the model that countries like Nepal use), and <sup>17</sup>
- funding a Community Development Fund (CDF), or a local area development fund – the term varies from country to country (e.g. the India model, and the approach adopted in many countries world-wide, as described in Sections 2.1 and 2.2).
- Other mechanisms commonly used to capture and spread monetary benefits of hydropower include equity sharing, where the communities, local municipality or Province where the project is located receives an equity share in the project company established to develop and operate the asset.
  - In some countries this equity share may be self-financed, such as by Provinces.
  - In other cases the central government may provide the equity financing on behalf of the local community, or a basin resident fund.
  - The equity share derives an annual revenue of anywhere from about 10-20 percent return on equity, which is then spent on BSM according to criteria the communities establish themselves (e.g. equity sharing is one of several financing mechanisms employed in Canada as described in Section 2).
- Countries often choose to share a portion of the revenue between different levels of government down to the community level.
  - On the November 2010 MRC technical visit to the La Plata River Basin in Latin America, MRC participants saw first-hand how Brazil shares hydropower revenue among the central government, provinces and municipalities where hydropower projects are located in a standard formula set out in laws. <sup>18</sup>
  - A fixed percentage goes to each level (as elaborated in Section 2.2.2). This arrangement applies to all existing and new hydropower projects in Brazil (as required in the country's Constitution).
  - In Argentina, all revenue generated from bi-national hydropower projects is given to Provinces where the project is located, calculated on the basis of the extent of the reservoir inundation. No funds are sent to central government accounts.
    - The national benefit in Argentina was seen to be (i) a secure supply of lower cost power for national electricity consumers, as well as long-term price stability, and (ii) the national economy gain from avoiding the import of expensive fossil fuels for conventional thermal power generation, otherwise be needed if hydropower was not available.
    - Estimates provided by Argentinean officials during the MRC visit to the 1,890 MW Salto Grande power complex on the Uruguay River (forming the international boundary between Argentina and Uruguay) suggest that Argentina avoided \$US 50 billion in imported fuel purchase since 1979 using its 50% share of output from the Salto Grande project. <sup>19</sup>
  - In Nepal, from 1999 national laws have stipulated that 1% of revenue from projects above 1 MW is to be collected by the national electricity regulator (the Electricity Development Department) and credited to pay for rural electrification in the project area and Development District.

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<sup>17</sup> While at the same time ensuring the budget from normal government sources would not be reduced (otherwise there would be no net benefit).

<sup>18</sup> See the MRC Study Visit Report to Transboundary River Basins And Binacional Projects In The La Plata River Basin In Latin American November 2010, MRC Initiative for Sustainable Hydropower, Dec 2010 in Volume 3 of the KB-CD.

<sup>19</sup> That gross estimate of national economic benefit was based on the actual year-by-year accumulated fuel import savings from Argentina's 50% share of the Salto Grande project output, recognizing also that all project debt for the Salto Grande project was retired on schedule by 1994 and year to year international energy prices.

- A percentage of royalties collected for power generation (taken from the revenue stream generated by consumer payments) is also allocated to development budgets of districts and communities where the hydropower projects are located (see Section 2.2.1 for more details and in the Nepal article on the legal arrangements in Volume 5 in the KB-CD).
- In general, some monetary benefits of hydropower realized at the national level are easily quantifiable (e.g. the taxes and duties paid during construction phases, and the taxes, royalties and possibly export revenue during operation phases). Other direct and indirect benefits are more difficult to quantify precisely. The various quantifiable and less quantifiable national-level benefits generally include:
  - Those benefits realized by electricity consumers connected to grids, who see more stable long-term tariffs (e.g. avoiding reliance on oil imports from volatile international energy markets if imported oil, gas or coal is the main alternatives for bulk power supply – as assessed in the Argentina case).
  - Lower electricity tariffs over the longer-term, especially after project debt is retired, regardless of whether the project is financed by public or private sector borrowing, or bond issue.
  - Revenue inflow to national accounts, such as from royalties, water utilization or other fees, as well as income taxes and duties hydropower companies pay as any production enterprise pay.
  - For hydropower projects that generate export earnings, additional national economic gains accrue in relation to balance of trade and foreign exchange earnings.
  - Less quantifiable benefits, such as:
    - The economic value of ancillary services unique to hydropower that lower the required national investments in power generation and power grids (and ultimately help to reduce upward pressure on consumer electricity tariffs),
    - The value ascribed to energy security (e.g. realized by using indigenous renewable energy resources and avoiding reliance on international energy prices)
    - The economic benefits of externalities like the avoided GHG emissions that would happen if conventional thermal generation was needed (as is the case for most bulk generation supply in the Mekong) as well as the avoided air pollution from thermal power with impacts on human health, buildings (via sulphur dioxide (SO<sub>2</sub>), effects on crop yield and environment quality.
  - All these factors all have a monetary value and overall national benefit. Depending on the assumptions these amounts can be considerable (e.g. full development of the LMB hydropower potential would realize about 80 million tonnes CO<sub>2</sub> equivalent savings per year for the four MRC Member Countries (net of reservoir emissions).<sup>20</sup>
  - It is important to note also that these quantifiable and less quantifiable benefits need to be considered against the full set of quantifiable and less quantifiable adverse economic impacts of hydropower to inform decisions on whether and how to proceed with new projects.
- **Equitable sharing of project services (outputs)** is where households in the project area receive improved access to water / energy services in return for having the hydropower project located in their area. The aim is to ensure these households, and not just resettled households, are not the last to receive access to

<sup>20</sup> See the Energy and Power Working Paper in the MRC SEA of Mainstream dams. Because exact measurement of economic rent and monetary value is difficult, tax or royalty regimes have often been used to attempt to capture some of the rent, without explicitly measuring it.

services. It recognizes that reliable access to electricity can significantly contribute to quality of life, and helps people to realize their development aspirations.

- Generally this aspect focuses on both first time access and improving levels of service to households to acceptable levels. This form of benefit sharing is particularly relevant in remote, rural areas where household electrification ratios remain well below national or even provincial averages.
  - For example, in Viet Nam, while the overall national electrification ratio may be over 85% today, in certain remote areas of the Central Highlands where many hydropower projects are being located, electrification ratios are still as low as 35%.<sup>21</sup>
  - Such areas often have a high proportion of ethnic minorities. They enjoy priority in national programmes as “areas of extreme hardship and difficult economic conditions”.
  - Moreover, the poorest and most vulnerable households often need support to access electricity even if it is available locally, and may need support to afford using electricity.
  - Where power connections are already available, the question becomes whether an improved level of electrical service is important. This question should be answered by beneficiaries themselves.
- Mekong public-sector power utilities (EDC, EdL, EGAT, and EVN) already have policies to electrify the resettlement communities and resettlement host communities for hydropower projects they build. It is important to ensure also that private IPP hydropower projects do the same. This creates a level playing field not only for public and private investors, but also the communities involved.
- Otherwise, measures to enhance the equitable sharing of project outputs must be linked to the national or provincial rural electrification policies / strategies for that particular area.
  - Government authorities need to indicate clearly what sort of support the local communities can expect for rural electrification – often a first question people ask is, “How will we benefit from the hydropower project in our area?”
  - Electrical services do not have to physically come from the project.
  - What matters is the electrical services are provided, either through grid-based solutions or from off-grid supply sources if they are more economical in remote rural situations.
- Targeted assistance may be also offered through rural electrification programmes (using benefit sharing revenue) to help vulnerable households with the safe, efficient and productive use of electricity. Support may be extended in a several ways, such as:
  - to assist the poorest segments of the project-area community with one-time household electrical connection costs (which they otherwise may not be able to afford, as illustrated in surveys in Viet Nam to get local views on what form benefit sharing should take there).<sup>22</sup>
  - to provide electrical safety awareness and training.
  - to assist with access to energy-efficient appliances (e.g. high efficiency light bulbs to reduce electricity bills in poorest households, who may otherwise not be able to actually afford monthly electricity bills), and

<sup>21</sup> See the final report of ADB TA 6489 on developing benefit sharing mechanisms in Viet Nam provided in Volume 2 of the KB and the field survey of the A’Vuong Project (Volume 3, Appendix L of the final report).

<sup>22</sup> In the case of the A’Vuong Project in Vietnam, “before the project that was commissioned in 2009, there was not electricity in the area”. After construction the A’Vuong project gave the area a chance to access to the National Power Network, now electricity has come to each village... In resettlement sites, electricity has been supplied to each household. Installed electric capability in the area required was: lighting of houses of 0.3 KW/household, agricultural production of 0.23 KW/ha, industrial production unit of 7 KW/unit, school, clinic of 0.25-1.5 KW each unit. Number of households who use electricity is 90% the total households. (In contrast, in the poorer) Macooih commune among 380 resettle households, 330 used electricity, the rest could not because they were too poor to pay connection fees and use.”

- to consider preferential tariffs on a targeted basis to locally affected communities for some period of time after commissioning the project (e.g. 5 to 10 years).
- **Indirect and additional benefits** typically include additional investments and measures leveraged by the project that help to diversify and boost local and regional development.
- Examples include capacity building, training and local employment; local infrastructure such as bridges and all weather river crossings, access roads; improved government services such as for health and education; support for other water usages such as irrigation, local navigation, flood/drought control, aquaculture, and leisure; increased water availability for industrial and municipal water supply; and benefits through integrated water resource management.
  - Investments may either come from project capital budgets (i.e. from developers, if negotiated and agreed to between developers and government and reflected in Concession Agreements) or in whole, or in part, from government development budgets or government borrowing on commercial or concessionary terms.
  - Experience shows that skills development and training programmes help to maximize local benefits from job creation. There are examples in the literature of trades training programmes and other unskilled labour training that go beyond only on-job safety training. That means training offered to local residents is not just the absolute minimum needed to hold a temporary, unskilled construction job, but training that is useful for other employment beyond the project.
  - Indirect investments in benefit sharing (as well as measures funded under revenue sharing arrangements when the project begins to operate) must be integrated with, and be consistent with local development plans and budgets.

It is important also to avoid, or otherwise minimize well-know adverse impacts of the boom-bust cycles for local jobs and local demand for goods and services. Both fall off dramatically after construction phase. And again, there is a significant opportunity to target measures to poverty eradication strategies.

### 1.2.3 BENEFIT SHARING IS A PACKAGE OF MEASURES, NOT A SINGLE MEASURE

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It is better to think of benefit sharing as taking advantage of all opportunities present for inclusive development, and not think of it as a single mechanism. Modern approaches aim to incorporate all types of benefit sharing in a systematic way, including the forms mentioned above including:

1. *Non-monetary forms of benefit sharing*
2. *Revenue sharing*
3. *Equitable sharing of project services, and*
4. *Traditional indirect forms of benefit sharing and*
5. *Additional benefits*

National policy and regulations should offer guidance when choices must be made on how to combine these types of measures for an optimal mix.

### 1.2.4 BENEFIT SHARING, PLANNING AND THE PROJECT CYCLE

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The project cycle extends from project planning and preparation through construction, operation and refurbishment stages.<sup>23</sup> Key decisions are taken at each stage of the project cycle relevant to the sharing benefits either in the short-term, or over the longer-term. Some features of benefit sharing arrangements in relation to the infrastructure project cycle and the various studies that inform decisions are as follows.

<sup>23</sup> Some stakeholders include decommissioning stages in the project cycle (see the WCD Report, 2000)

*Note to the Reader: While the following discussion mostly reflects national-to-local benefit sharing considerations, the points also have relevance for transboundary benefit sharing.*

- By definition, benefit sharing applies over the economic life of the project. Why is this so? Because the benefits themselves flow over the economic life of the project, and most often, beyond. Similarly, adverse impacts of hydropower are generally permanent, irreversible and long-term in nature.
- Different types of benefit sharing may be introduced during the project construction and operation phases. Some measures may overlap. For example:
  - Indirect and non-monetary forms of benefits such as investments related to maximizing local job creation and supply of local goods and services to the project can start during project construction, which may last several years or more.
  - Infrastructure investments other than the project facilities during the construction period may also have long lasting development returns (e.g. investments made to improve local access roads and the additional natural resource access entitlements given to locally communities, as discussed under non-monetary benefits in the previous section).<sup>24</sup>
  - Revenue sharing and the equitably sharing of projects services, of course, only start after the project starts to generate services and revenues.
- The actual design and planning for implementation of BSM needs to start in up-front strategic planning stages and be routinely integrated with project preparation studies leading to decision on whether to build the project or not, and if yes, how it would be constructed and operated.
- For new hydropower projects, the three main reasons why BSM should be considered in up-front planning and studies are:
  - Firstly, this enables a “least-cost” approach to sharing benefits over the economic life of the project. This is a real consideration. Why? Because certain decisions about the physical design of the project and how it is to be operated influence how project benefits (as well as impacts and costs) would be distributed among people and spread overtime.
    - This includes decisions about the size of bottom flow outlets relevant to flushing and environment flow provision, consideration of downstream re-regulation structures, incorporation of fish pass ways, multiple-level water intakes, switchyards having transformers of a size to ensure power supply locally, and reservoir operation strategies (e.g. extent an periodicity of reservoir draw down).
    - Any such decisions about enhancement of the physical parameters of the project to improve flexibility to share benefits over the longer term (due to operation) need to be made at project design stages. Why? Because it is more expensive, or not possible to “retrofit” physical changes 10, 20 or 50 years later.
    - Benefit sharing (especially revenue sharing) must also be reflected in the project financial analysis, and most important in any project agreements signed between the government and developer. This is to the extent relevant, such as when there are impacts on total project costs, tariffs in Power Purchase Agreements (PPAs), projected revenue streams for return on equity, or the allocation of risk).

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<sup>24</sup> Types of benefit sharing prior to project completion include investments to maximize local employment among in the construction work force and to maximize the local supply of goods and services to the workforce and the project itself, as well as key strategic investments in physical infrastructure. This includes investments in local roads (e.g. that not only service the project but also increase community access to agriculture markets), investments in improved healthcare for villages near reservoirs, as well as other public services that have sustainable, long-term benefits for communities.



- Secondly, this approach (of bring benefit sharing considerations into up-front project planning and preparation stages) enables early input from local communities to decide what benefits will be delivered by the project, and especially how they are shared locally, within the framework of applicable laws, regulations or Agreements.
    - Positive synergies can be created in discussions between the developers, local community and government facilitators about the proposed environment and social management measures when the form and nature of long-term benefit sharing are known.
    - The clarity that is provided when BSM is set out in regulations means that everyone knows the rules. And expectations are more realistic.
  - Thirdly, this approach enables all stakeholders in government-led processes to bring the different forms of benefit sharing together early, in a systematic way.
    - It gives lead time to plan investments that may be part of an agreed benefit sharing “package”, accepting there is always scope for negotiation within the regulatory context, and that various interests do compete to maximize their own share of the benefits.
    - It also gives lead time to integrate the delivery of benefits measures with existing local area development planning systems, and to arrange for timely capacity building.
- An early start to multi-stakeholder discussions about benefit sharing conducted within the framework of clear government regulation for BSM sends a strong message that basin residents and local communities in particular will have ample opportunity to input and influence outcomes (again within the scope and parameters of regulation). Local communities thus have a higher degree of assurance they will be treated fairly, even as development partners, and have their expectations met.
  - Regulations should give clear guidance on how benefit sharing mechanisms fits into the normal infrastructure project cycle. In this respect, regulation on BSM should aim to set out clearly the responsibilities of the different government agencies, the developer conducting project studies and local community leaders and guide on how benefit sharing is to be addressed in project preparation studies.
  - Regulations need to be clear on how benefit sharing mechanisms will be introduced on existing hydropower projects. International experience shows the public, and certainly the communities involved, will find it profoundly unfair if benefit sharing is applied only to new hydropower projects.
  - Capacity building is generally needed to implement benefit sharing mechanisms, especially for local governance mechanisms and management of community development funds of various kinds. From the view of the project cycle, capacity building should start as early as possible after the agreement to proceed with the project is reached. After the project is generating a revenue stream, ongoing costs of capacity building can be internalized with revenue sharing arrangements so it is self-supporting.

### 1.2.5 BENEFIT SHARING IN DIFFERENT RESOURCE DEVELOPMENT SECTORS

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As mentioned, there is a lot of information today about introducing benefit sharing mechanisms in extractive industries and natural resource development sectors. Among these include in:

- The power sector (i.e. not only hydropower but also conventional and other RE power generation)
- Resource based extractive industries (e.g., mining and petroleum)
- The forestry sector (especially related to community managed forestry practices)
- The tourism sector (especially regarding eco-tourism in rural areas), and
- Access and benefit sharing (ABS) for plants and other genetic resources use by the pharmaceutical industry for medicines.

Volume 2 of the KB-CD offers some examples of benefit sharing mechanisms in sectors other than hydropower. A number of lessons may be drawn for the hydropower sector.

In summary:

- Benefit sharing is now widely accepted as a way to spread resource utilization benefits across the economy, catalyse broader-based growth and support social equity policies.
- Numerous national models exist in the mining, petroleum and forestry sectors. There is no single approach on how it is done. The examples range from nationally administered revenue funds that target improvements in public services of local communities, to revenue sharing contracts between companies (or state production enterprises) and local indigenous or minority peoples groups.<sup>vii</sup>
- Similarly to hydropower, revenue may be shared among different levels of government (national, provincial, district or municipal, etc.) depending on administrative jurisdictions in the country.
- Benefit sharing is also found in emerging resource management fields today supported by International Conventions and Agreements. For example:
  - The Convention on Biological Diversity (CBD) and intergovernmental bodies under the United Nations are actively developing national guidelines for benefit sharing to cover international bio-trade in genetic resource utilization.
    - The philosophy is to share income from sources, like international patents of pharmaceutical companies among governments and local communities where medicinal plants are found.<sup>viii</sup>
  - The REDD+ network is an example of a network that is promoting targeted agreements for carbon financing by reducing deforestation and degradation. REDD + aims to transfer financial incentives from developed to developing countries. Examples are provided in Volume 2 of the KB-CD.<sup>25</sup>
- Payments for ecological or environment services (PES) is a new tool now in the legislation of some Mekong countries (e.g. Viet Nam since 2010 for forest PES). PES provides local incentive to change land management practices to sustainable approaches and to enhance ecosystem services in ways important to sustainable river basin management and also sustainable operation of hydropower.<sup>ix</sup>
  - In this respect, ecosystem services covers a wide range of services that natural ecosystems provide, including hydrological services and water quality services, and a range food and fibre products to sustain riverine community livelihoods, health, culture and welfare.
  - Financial resources for PES can come from several sources, including revenue sharing from hydropower projects. This is a form of benefit sharing when PES empowers local actions, such as tree planting to extend the operating life of hydropower reservoirs (and thus protect long-term revenue flows from hydropower), while contributing to local incomes for communities who actually plant and sustainably manage trees in headwater forests.
  - It makes economic and financial sense when the assurance of small payments to local community organizations, or individual land users from the project revenue stream tips the balance in favour of a mutually beneficial land use and more sustainable hydropower.
- World-wide, benefit sharing legislation is being introduced in different sectors in a dynamic way. To illustrate two examples from the mining sector – one each from a “BRIC” and OECD economy.
  - In India, the draft Mines and Minerals (Development & Regulation) Act (2010) proposes to provide 26% of after-tax mining revenue to local communities on an annual basis. While there is controversy

<sup>25</sup> <http://redd-net.org/themes/benefit-sharing> - REDD stands for 'reducing emissions from deforestation and degradation', and is part of global policies to address climate change.

over the draft proposal, in particular regarding the percentage which industry regards as far too high, it is an indication of the direction of thinking and how far it has come.<sup>26</sup>

- In Canada, the government of the Province of British Columbia (B.C.) announced its new Resource Revenue Sharing Policy for the mining sector in 2008, which is now being implemented.<sup>27</sup>
- The Province of Ontario is planning a Resource Revenue Sharing policy for the mining sector, but will use a different model than British Columbia. In Ontario, a provincial-level Trust Fund will be set up, with 1% of all gross revenues from new mines and expansions throughout Ontario fed into the Trust. The manner for sharing with local groups is reportedly yet to be determined (reported in 2009).

Volume 2 of the KB-CD contains a review of international experience with benefit-sharing in the extractive resources (2007) that was funded by the World Bank and the Government of Norway.

That review looks international experience (theory and practice) managing resource revenues in mining, petroleum and hydropower sectors mainly. It concluded that global experience varies widely and argues for more transparent mechanisms that the beneficiaries can understand.

### 1.3 WHY IS BENEFIT SHARING ATTRACTING SUCH INTEREST TODAY?

#### 1.3.1 Benefit sharing encapsulates many trends in water reform

One reason why benefit sharing has come to the forefront in thinking about sustainable hydropower is the principles for equitable sharing benefits are embodied in many broader, complementary trends in water governance reform (IWRM) and in sustainable development.

In the water sector, benefit sharing links to ongoing effort to:

- Find concrete ways to adopt integrated water resources management (IWRM) principles that treat water as an economic, social and environmental good. All stakeholders, rather than water organizations alone, must work in partnerships to achieve the integration of these elements and dimensions;<sup>x</sup>
- Ensure poverty alleviation is an explicit focus in infrastructure provision, especially large dams that often have a disproportionately adverse impact on local communities and traditional river users, while the primary benefits of project services often derive by people elsewhere, even outside the river basin;
- Capture cross-sector synergies in land management, local income generation and sustainable management of dams as physical assets. For example, extending operating lives of reservoirs by planting trees in headwater areas or shifting to agriculture and livestock grazing practices that combat desertification, soil erosion and sediment processes in river catchments – providing multiple benefits;<sup>xi</sup>
- Funding local actions to protect and manage aquatic ecosystem functions and services in rivers, flood plains and wetland areas that people rely upon for livelihoods; and
- Provide innovative measures and incentive mechanisms that build local capacity to adapt land-water resource systems to climate change.<sup>xii</sup>

The equitable sharing of benefits is a practical approach to join many strands of sustainable thinking under the IWRM framework.

<sup>26</sup> <http://www.cseindia.org/content/cse-welcomes-government's-proposal-provide-26-cent-mining-profits-local-communities> The media articles suggest some observers regard this as a "first step towards repairing and repaying the damages done to poor communities living on mineral-rich lands. Some industry observers oppose the proposal and call it "unjust and untenable".

<sup>27</sup> [http://www.martindale.com/mining-metals/article\\_Lang-Michener-LLP\\_872918.htm](http://www.martindale.com/mining-metals/article_Lang-Michener-LLP_872918.htm)

### Underlying principles for revenue sharing

Three underlying principles for revenue sharing (national-to-local forms) often cited in the literature concerning BSM associated with hydropower are:

- i. First, the significant economic rent and public benefits that hydropower generates that can be justifiably shared with people adversely affected by projects and river communities on several ethical and development grounds.
  - As noted in previously, economic rent a term economists use to describe the competitively determined price of services minus the marginal cost of producing the service.
  - For benefit sharing to be viable on dams (revenue sharing) there must be an economic surplus, where the cost of all factors of electricity production, is less than the tariff.
- ii. Secondly, many primary beneficiaries of hydropower usually live far away from the dam sites, or are not exposed directly to the adverse impacts in river systems. Inclusive development means hydropower benefits should be equitably shared between affected rural populations and urban centres outside project areas, taking into account all the development impacts; and<sup>28</sup>
- iii. Thirdly, recognizing the scale of investments in large hydropower and dam developments, national investments in large hydropower schemes should be conceived as part of local and regional development strategies, and to catalyse more inclusive growth.

The notion of benefit sharing thus goes beyond conventional thinking only in terms of one-time compensation of local communities for land or property loss to recognize they can claim entitlement to part ownership of economic rent that hydropower generates.

- This is the legal principle behind revenue sharing in Latin America (e.g. Brazil and Argentina examples).
- It reflects the notion that stewardship, and management of local resources is a responsibility of all communities and river basin citizens and enterprises.

Equally important, dam-affected local populations have an important role to play in sustainable management of dams. This refers to taking appropriate local action, such as measures concerning land-water management, protection of heritage and the environment they live in.

#### 1.3.2 BENEFIT SHARING IS POSITIVE FROM ALL STAKEHOLDER PERSPECTIVES

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Practitioners increasingly argue that a comprehensive approach to benefit sharing is in everyone's interest. This point is important to emphasize. Often a key consideration in national dialogue processes is whether, or not, to introduce (or to strengthen) benefit sharing mechanisms.

To illustrate, benefit sharing is positive from all view points in that:

- It allows project-affected people and traditional river users as well as river basin residents involved in catchment management to become partners in projects. Otherwise, it provides them with a stronger voice in decisions that affect them, and an opportunity to be first among project beneficiaries, not last.
- From the government perspective, benefit sharing is a practical policy tool to achieve greater social inclusiveness and balance social, economic and environmental factors in planning, design, implementation and operation of hydropower projects.<sup>xiii</sup>
- From the hydropower developer and operator perspective, benefit sharing increases capacity to work effectively with local communities. Good community relations are important for many reasons, ranging

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<sup>28</sup> It is analogous to the principle of compensation to a State that is obliged to waive an activity in order to reconcile divergent uses that benefit other states, as contained in the Niger Basin Water Charter (2008).

from the reduced risk of project delays on new projects, to improved prospects for local cooperation in catchment management and implementing environment mitigation measures the operator is responsible for, as prescribed by law. Reducing reputational risk is also a factor.

- From the perspective of potential investors, the presence of an explicit policy framework with realistic provisions for local benefit sharing is an indicator that locally affected communities and general public are more likely to support a project – all things considered. As a result, the investor’s risk exposure is reduced. Investors are more inclined to become financing partners. This can reduce the cost of money the society pays for hydropower investments (regardless of whether it is public or private sector borrowing, e.g. reductions in interest rates on debt financing).
- From the electricity consumer perspective (i.e. households, consumers in the service sector, and industry users) it means the government can reach decisions to optimally develop water resources and provide what are potentially more stable tariffs, and reliable power supply and ultimately less expensive water and energy services.

It is not enough only to debate perspectives on these points. They must be clearly demonstrated as real. Pilot projects which genuinely demonstrate the value and practical nature of BSM are helpful.

### 1.3.3 BENEFIT SHARING IS KEY TO ADVANCE SUSTAINABLE HYDROPOWER

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When the MRC Initiative on Sustainable Hydropower was formulated in multi-stakeholder processes in 2008-2009, consensus was benefit sharing was a key ingredient in sustainable hydropower. Consequently, benefit sharing was included in the ISH Work Plan (e.g. this Output).

- It is clear that principles of benefit sharing are embodied in the policies and legislation of Mekong countries that define sustainable development:
  - In Viet Nam, for example, sustainable development is legally defined as: *“Development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs, on the basis of a close and harmonized combination of economic growth, assurance of social advancement and environmental protection”*.<sup>29</sup>
  - Benefit sharing mechanism help make the “assurance of social advancement” a reality, not just for some, but for all stakeholders.
  - At the same time, BSM help bring all three dimensions of sustainability together, which is important because these aspects are often inseparable to people living in riverine communities.
  - Other Mekong countries have similar legal definitions that reflect internationally accepted definitions enshrined in UN Conventions Mekong countries are signatories to (e.g. Agenda 21).
- The world view is also that sharing of benefits across all stakeholders is an integral part of sustainable hydropower. Moreover, sustainability is a collective responsibility of government, civil society and industry. This shared responsibility is clearly seen by the prominence of benefit sharing themes in today’s new generation of hydropower sustainability assessment tools developed in multi-stakeholder processes at international levels, as discussed in Section 2. 3.
  - At the regional level, the MRC is helping Member Countries to identify, measure and monitor steps to improve sustainable outcomes in hydropower. A key initiative is collaborative development of the rapid basin-wide hydropower sustainability assessment tool (RSAT). The tool is currently undergoing field trials in tributary basins in Mekong countries coordinated by the MRC.

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<sup>29</sup> Article 4 of the Electricity Law (2004) that calls to, “... develop sustainable power sector based on optimal development of all sources...” and Article 1 of the revised Law on Environment Protection (2005) that came into effect in July, 2006 – which defines sustainable development for all sectors of the economy.

- This basin / sub-basin hydropower sustainability assessment tool is the product of several years of conceptualization and preparation under the Partnership Initiative called the Environment Criteria for Sustainable Hydropower (ECSHD) with the ADB, MRC and WWF.
- RSAT was developed in close collaboration with NMCS and national line agencies in processes led by the ISH working with the Environment Division of MRCS.
- RSAT considers what needs to be taken into account at all stages of the project-cycle from planning and design through operations. The range of topics and criteria in RSAT reinforces the inherent multi-disciplinary nature of the sustainability hydropower challenge.
- Benefit sharing is one of the 11 assessment topics in RSAT, namely *“TOPIC 8: Sharing of benefits and use of innovative financing measures for sustainability (local and transboundary).*
  - o Topic 11 addresses equitable distribution of project benefits to different groups within the river basin and across jurisdictions.
  - o In the RSAT method, an assessment is made of the presence BSM or the unrealized opportunities for BSM in terms of (i) equitable access to electricity services ii) non-monetary entitlements to enhance resource access, and (iii) revenue sharing.
  - o RSAT is not a prescriptive tool. Rather it engages people in structured and informed discussions that point to areas where stakeholders can agree the scope for progressive improvement in current practices.
- Multilateral Development Finance institutions including the Asian Development Bank (ADB) and World Bank proactively support benefit sharing as a key aspect to advance sustainable forms of hydropower in their project lending, as noted in Section 2.3.2.
- The 1995 Mekong Agreement is of course central to sharing benefits across transboundary dimensions and across different scales (regional to national to local).
  - The principles of transboundary benefit sharing embodied in 1995 Mekong Agreement are related to clauses on:
    - Equitable and Reasonable Utilization
    - No Harm, and
    - Freedom of Navigation.
  - Recently the MRC Basin Development Strategy clarified the approach to discuss sharing benefits as part of the development opportunity space (DOS). In comments on priorities for the MRC to help advance sustainable hydropower.<sup>xiv</sup>
    - The BDS notes the “DOS can also be used as a “cooperation space” or “negotiation space” to explore mutually beneficial option (as discussed further in Section 4.1.2 of this Volume).
    - When discussing hydropower, the BDS notes the range of indirect and additional benefits to be derived, and the need for attention to, “detailed identification of impacts and of mitigation and benefit-sharing measures, and to coordination between LMB countries on tributary dam operation and with China on Lancang dam operation.”
    - To move toward sustainable development of hydropower on tributaries, the BDS notes the need for “evaluating benefit-sharing options, such as watershed development and management benefiting hydropower generation and funded from hydropower revenues”.<sup>xv</sup>

The above points highlight the importance of BSM to achieve sustainable forms of hydropower development and management, also with regard to the scale (e.g., transboundary to national-to-local benefit sharing).

## 1.4 HOW DO COUNTRIES TYPICALLY INTRODUCE NATIONAL-TO-LOCAL BENEFIT SHARING MECHANISMS?

As noted in the practitioner literature, there is no single approach to introduce benefit sharing with dam affected communities and residents of river basins. Approaches depend on the country legal framework, precedents, and other factors such as whether a functional river basin organization exists.

Features common to all models of BSM that give some insight to ways forward are:

1. By starting with awareness raising, engaging all stakeholders
2. By undertaking pilot projects to build confidence and seek consensus on approaches
3. By introducing appropriate enabling policies and legislation based on good practice
4. By adequate considerations of actions to take at all stages of the project cycle
5. By carefully choosing the sources of finance (or mix) for sharing monetary benefits
6. By selecting appropriate mechanisms for the delivery of benefits
7. By introducing appropriate institutional arrangements, minimizing where possible new structures
8. Through effective 2-way communication and partnership approaches

These are highlighted as follows:

### 1.4.1 BY STARTING WITH AWARENESS RAISING - ENGAGING ALL STAKEHOLDERS

Certain aspects of benefit sharing are new to the Mekong region. This is not surprising, because benefit sharing has only become highly visible world-wide in the last few decades.

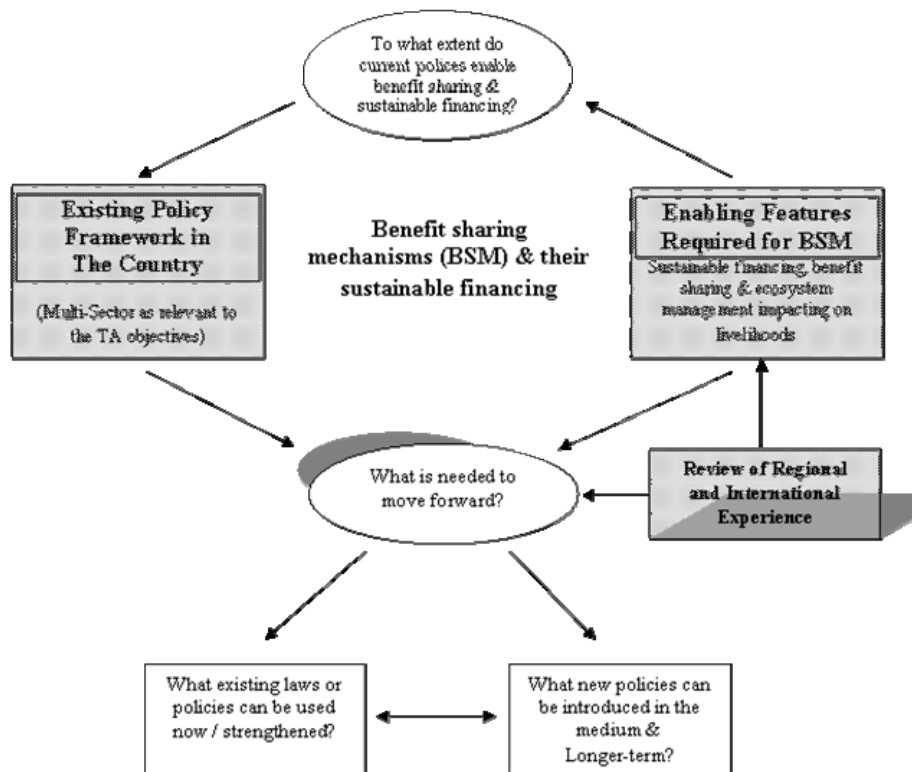
- MRC Member Countries have reached the awareness raising stage on transboundary benefit sharing, reflecting the way steps were set out in the Basin Development Strategy (endorsed in Jan 2011).
- The Mekong region actually has a range of experience with national-to-local forms of benefit sharing on hydropower, certainly with the more traditional, indirect forms and maximizing additional benefits (as discussed previously in Section 1.2.2).
- Nonetheless, many MRC stakeholders and the general public are not aware of the current situation, and they are perhaps even less aware of the opportunities to take things to next level.

In general:

- There are many myths and pre-conceived ideas about what benefit sharing is, which need to be addressed to reach a shared understanding;
- For this, views and expectations of MRC stakeholders need to be identified and informed dialogue facilitated to achieve a “sufficiently” common understanding;
- MRC Programmes are helping Member Countries with these initial awareness raising steps (e.g. that is one aim of this KB and activities set out in MRC Basin Development Strategy);
- In parallel, Member Countries can take steps within their own national planning systems to raise national awareness, and thereby to better inform policy-making.

The Figure below illustrates how Viet Nam set out to systematically raise awareness about benefit sharing with local communities adversely affected by hydropower projects in an ADB-supported TA in 2006. This addressed three questions, namely (i) what does international experience offer as lessons for Viet Nam? (ii) to what extent do current policies and laws enable benefit sharing? and (iii) what is needed to move forward?

*Note to the Reader: A copy of the Viet Nam Policy Review is available in Volume 2 of the KB-CD.*



- Structuring awareness raising around a concrete or results-oriented activity like a policy review, is important for several reasons. In Viet Nam’s case, the review demonstrated that:
  - National legislation in Viet Nam already called for benefit sharing in other sectors; therefore there were legal precedents especially for revenue sharing. It was not “new” in that sense.
  - Introducing benefit sharing was specifically consistent with national laws for sustainable development of the power sector (as contained in the Electricity Law and cross-referenced in other Laws).
  - The best way to introduce benefit sharing was to develop a Decree Law (long term) similar in structure to the Decree Law for resettlement compensation (short term).
  - The institutional arrangements to deliver benefits, needed to be placed under the Provincial-Level Peoples’ Committee jurisdiction with guidance from the State level Ministries, and
  - The best approach to handle benefit sharing on rivers shared between two or more Provinces in Viet Nam was clarified, based on precedents in other sectors.

This policy review was presented to an inter-government Steering Committee, then to a national level multi-stakeholder workshop. These steps actually went a long way to raise awareness not only of the opportunity but also to build consensus on how to proceed. One outcome was instead producing general guidelines for BSM in subsequent phases of the, TA the “guidelines” took the form of a Draft Decree Law.

#### 1.4.2 BY UNDERTAKING PILOT PROJECTS TO SEEK CONSENSUS ON APPROACHES

Many governments start with a pilot project to inform preparation of national legislation and regulations on BSM. Pilot projects are particularly useful to:

- Field trial and evaluate specific provisions in draft laws and regulations, especially mechanisms for delivery of benefits and thereby to fine tune laws and regulations.



- Identify, understand and reconcile competing views about the best approaches to introduce BSM, recognizing there are always different points of emphasis and view points not only among local communities but also among officials at different levels of government, and in line-agencies.
- Build wider consensus on how to scale-up BSM on the project in question, and also to apply the measures to other projects in the sub-basin and country, and
- Prepare capacity building tools and training materials to be shared, in a timely way, to support national implementation of BSM on all projects (as legislation may require).

For certain mechanisms, like revenue sharing, actual procedures transfer money to a Fund or development budget can be relatively straight forward. What may take more time to clarify and agree upon are the most appropriate arrangements and institutional responsibilities to deliver benefits. This is not a new task for Mekong Countries, in the sense that all benefit sharing measures ultimately relate to advancing inclusive forms of rural and regional development – which is normal government business, not something new.

### 1.4.3 BY INTRODUCING ENABLING POLICIES AND LEGISLATION

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A question that often arises is what enabling policies and legislation are required to introduce benefit sharing mechanisms in a systematic way?

Note to the Reader: Volume 5 of the KB-CD has examples of enabling legislation and legal instruments such as Acts and Decrees. More examples can be found and translated such as PRC Laws.

International experience on national-to-local BSM shows:

- If a country has only one hydropower project, or only a few projects, BSM can be introduced through Project Agreements directly. There may be no need for an overarching national law.
  - For example, if the power utility is wholly government-owned (i.e. the government is the only shareholder) and the utility has exclusive mandate to “plan/finance/build/operate” all hydropower projects, then benefit sharing can be delivered by government direction to the utility.
  - This is the situation with Hydro Quebec in Canada, which has one of the most extensive regimes for benefit sharing (especially revenue and equity sharing) in the world, with multi-billion dollar agreements negotiated with local indigenous communities - despite no explicit law or regulation.<sup>30</sup>
- When a country has a larger number of hydropower projects (existing, planned or proposed), and there is mix of public and private development, enabling legislation is appropriate. Comprehensive legislation and supporting regulation generally would provide clarity on:
  - Which hydropower projects BSM applies to ( e.g. all existing and new hydropower projects? the scale of project applicable? e.g. all projects above a certain MW size, or all projects on which there is a legal requirement for an EIA, both domestic and export projects, etc.);
  - On the requirement to consider all forms of benefit sharing, or as a package of measures (as described in Section 1.2.3) and how to implement them in a consistent way, and adapt them as needed to circumstances of existing and new hydropower projects and to different local situations;
  - On the rates that would apply to monetary forms of benefit sharing such as a what percentage of the tariff for revenue sharing and the mechanism how it is to be paid (e.g. collected by government or

<sup>30</sup> As discussed in Section 2, Hydro Quebec adopts a triple bottom-line approach to hydropower (the social, environmental and economic triple bottom line). What is important is social aspect comes up first for in-depth consideration. Hydro Quebec negotiations with local communities for acceptance of the project as a first steps. And project-specific negotiations around benefit sharing are primary mechanisms for this, and communities eventually vote to accept or reject the proposals before them.

paid into a Fund, recognizing that actual revenue flow is from the electricity consumer to the distribution / transmission entity (the power company) and on to government (taxes, royalties, etc.) with some financial flows directed to generators that are legal entities needed to cover debt, operation and equity payment according to PPAs and Concession Agreements.

- On the persons, groups or parties that will be eligible to participate in BSM, as well as the types measures that can be supported by revenue for BSM;
- On how decisions on BSM, especially delivery of benefits are coordinated with existing government planning systems, including:
  - existing rural development planning systems - so that any investments from BSM funding sources or non-monetary benefits complement or reinforce existing local development structures and capacities, and not undermine them;<sup>xvi</sup>
  - rural electrification programs and plans – so that measures for equitable access to electricity services can be determined taking into account existing and planned rural electrification, and help support it;<sup>xvii</sup>
  - poverty reduction strategies – so that decisions on targeting of benefit sharing mechanisms to the poorest and most vulnerable in the project area can be taken where appropriate;
  - Ethnic and minority programmes - similarly, so that targeting of measures can take place, and where appropriate, and to link effectively to existing government programme support for ethnic and minority groups (recognizing these groups often comprise most of the population in remote, upland areas);
  - basin and sub-basin development plans – so that decisions on BSM may be integrated with catchment management and measures contained in basin development plans and coordinated with activities of RBC/RBOs;
  - environment and social impact mitigation, management and monitoring (EMMMP) programmes – so that synergies in the implementation of the project-specific measures can be realized (e.g. to maximize local community income in implementing EMMMP measures supported by the appropriate training and extension services, where appropriate);
- On how to bring long-term benefit sharing considerations into discussion between project developers and communities about resettlement and livelihood restoration (in the case of new dams), and processes to update environment mitigation/ management programs (in the case of existing dams);
- On how to ensure benefit-sharing thinking is reflected in all stages of dam planning, design, implementation, operation so that “least-cost” approaches for BSM are pursued.<sup>xviii</sup>
- On transparency mechanisms and measure to combat corruption and avoid abuse of power, which is often reported as the most serious threat to the success of benefit sharing.
- On procedures and techniques to ensure a bottom-up decision-making on types of benefits to be delivered and effective communication with all stakeholders; and
- On the roles and responsibilities of all stakeholders including the national / provincial line agencies, different levels of government (State, provincial, municipal, village), the project developer / operator, regulatory authorities and concerned river basin entities.

*Note to the Reader: The literature in Volumes 2 to 5 of the KB-CD offer many examples of the various provisions that regulations may cover.*

#### 1.4.4 BY TAKING ACTION AT ALL STAGES OF THE PROJECT CYCLE

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As mentioned, steps at all stages of the planning and infrastructure project cycle are needed to ensure that benefit sharing mechanisms are effectively managed and the costs are efficiently controlled. For new projects this includes introducing benefit-sharing principles in project planning and preparation studies.

- To illustrate, BSM considerations would be introduced in:
  - **EIAs/SIAs:** Why? Because EIA/SIAs are important to define the impact zones of hydropower projects, which informs decisions on eligible parties (e.g. the households, organizations, communities etc.) who can be beneficiaries of BSM, as well as the type of measures to plan for.
  - **Resettlement Action Plans and Livelihood Restoration Plans:** Why? Because these studies and the negotiation that inevitably take place around them need to factor in and be informed by expected BSM activities that are long-term in nature. It is common sense. When people know there will be long-term support with benefit sharing (financial and otherwise), the discussions between developers and local communities about resettlement support and compensation tend to become much less acrimonious and people can more easily agree to cooperate.
  - **Environment Mitigation, Management and Monitoring Plans (EMMMP):** Why? Because EMMMPs typically identify a range of measures, some of which may be undertaken through local actions, and thus they involve local communities. Most important, they may be delivered in way that maximize local participation, income opportunity, and link to local development aspirations.
  - **Project Feasibility studies:** Why? To bring consideration of benefit sharing into the project design and related project Agreements. This should be in that way (i) the revenue sharing formula set out in regulations can be reflected in economic and financial appraisals of hydropower projects, (ii) physical measures can be incorporated in the project design to build in operational flexibility, and (iii) any incremental costs can be reflected in the project capital cost.
  - **Rural electrification strategies and plans** for the project area and catchment: Why? Because these studies are needed to assess the scope for equitable sharing of project services and plans to improve electricity access, or improve levels of service for communities in the project area.
  - **Provincial or national poverty reduction strategies** for the project area and catchment: Why? Because targeted implementation of benefit sharing measures in the project area can provide significant and material support to poverty reduction strategies.
- The wider family Environment Assessment (EA) analytical tools used at different stages of the project cycle, and the EIA together with the RAP in particular, represent important entry points to introduce benefit-sharing assessments on proposed projects.

#### 1.4.5 BY CAREFULLY CHOOSING THE SOURCES OF FINANCE FOR SHARING MONETARY BENEFITS

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Different sources of finance may be used to redistribute a portion of monetary benefits that large dams generate (e.g. revenue sharing, equity sharing, taxes, royalties, and preferential tariffs).

Mekong governments may choose among these sources, or they may choose a mix, for example where:

- A portion of the project revenue stream, royalty payments or water resource utilization fees generated by dam projects is utilized, according to a formula defined in regulations, typically linked to the project capacity or annual outputs;<sup>31</sup>
- Part or full equity ownership of the project by a representative local community entity or at the municipal or provincial level (equity sharing), for which the annual return on equity is used as a fund;
- Annual revenue transfers from nationally collected taxes to affected municipalities, watershed management agencies and conservation authorities in the basin of the dam, and other revenues that stem from public benefits of dams (e.g. flood management benefits if there is no revenue stream from the project);
- Local authorities levying property taxes on land used for dam facilities and reservoirs, the measure can reduce taxes paid by local communities and/or raise funds;
- Direct long-term contracts between the hydropower developer / owner and local communities; and
- More recently, use of carbon financing to capitalize local development Funds, as explored in the Bumbuna HEP in Sierra Leone (in Section 2.2.1).

Revenue sharing is often the most practical.

- In accordance with economic principles in IWRM, the cost of BSM must be incorporated in bulk tariffs for water and energy services that consumers mainly in urban centres enjoy.
- Revenue mechanisms are more complex on multi-purpose projects with no hydropower component.
- While revenue streams from bulk water tariffs, navigation fees or irrigation supply can be tapped, there is less international experience with these approaches.

#### 1.4.6 BY SELECTING APPROPRIATE MECHANISMS FOR DELIVERY OF BENEFITS

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Mekong governments may choose from a range of mechanisms to deliver benefits to local communities and basin residents, regardless of the financing source.

- The two broader models are (i) providing increments to existing development budgets, and (ii) the establishment of development funds.
  - **Increments to local development budgets:** The first generic approach provides increases in the development budgets of villages, or municipalities where hydropower projects are located.
    - These may be “ring fenced” in the sense conditions may be attached, such as (i) to ensure the development budget that would have been received if there was no project is not reduced, otherwise there is no net benefit, and (ii) to offer guidance on targeting the delivery of benefits and the type of eligible expenditures (e.g. money cannot be used for recurrent expenditures);
    - Within the regulatory guidance that governments sets for benefit sharing, local governance structures prioritise the spending of funds in ways similar to any other development expenditure. In this sense revenues sharing is a “topping up” of existing development budgets;
    - The delivery of benefits, in most cases, would thus be arranged through existing line-agency programmes and local government support mechanisms.
    - However, this does not preclude the local government from sub-contracting to civil society or private entities, or even the hydropower project entity, from delivery of some benefits.

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<sup>31</sup> This is most common. While it leads to some multi-year variation in actual funds available for revenue sharing (due to hydrological variability) it has not proven to be a serious concern to date for various reasons and can be planned for in disbursement of revenue sharing funds.

- The sources of financing would be those discussed in Section 1.4.5, though again, revenue sharing is often the most common and practical financing mechanism.

- **Local Area Development Fund:** The second generic approach is to establish a development fund with a distinct identity and mandate to deliver benefits to affected communities and basin residents according to regulations. As mentioned, this fund is alternatively called a benefit sharing fund, revenue sharing fund, or community development fund (CDF).

- Fund managers would administer the allocation of money to local development through various programmes including grant application procedures. The governance structure of such Funds typically includes representatives of beneficiary groups in the local community, different levels of government (and departments) and the project entity.

- The literature has many examples of ways to structure and manage Funds for local area development and Mekong countries have experience with such Funds in different sectors.

*Note to the Reader: the KB-CD has examples of funds and fund management approaches. The final report on the Benefit sharing pilot in Viet Nam has the example of a Funds Management Board, required under Viet Nam Law that was introduced just as the Pilot started.*

- To ensure participatory approaches, consensus and transparency in operating Funds, good practice approach is to prepare a “Fund Charter”. Within the framework of regulations, this Charter sets out clearly consensus among the beneficiaries on factors such as :

- The principles and operation practices for the Fund (e.g. for delivery of benefits using money placed in the Fund);
- The principles for equitable sharing of project services and enhanced access for communities living in the project area;
- The percentage the Funds total capitalization to be allocated to different categories of support on an annual basis (for example, how much would be allocated for non-farm skills training and enhanced farm-related extension services, how much for micro grants, for fisheries programmes or to incentivize and support community managed forestry initiatives).
- Criteria for the identification of eligible parties, the use of benefit sharing funds and the mechanisms available for delivery of benefits.
- Terms and conditions of people on the Fund governance body (and Fund staff) including length of service for individual positions on the committee or council, and
- Any other provisions that may be decided in consultation with beneficiary communities, and
- How the Fund Charter will be updated in consultation process with beneficiaries.

- The content, format and nature of public discussion to formulate the Charter would follow guidance provided in regulation and models supplied by the regulators. Typically, after the Fund Charter is agreed upon in draft by stakeholder representatives, it would be sanctioned by the appropriate level of government (in the Viet Nam pilot it was the Provincial Peoples Committee).

- All activities under such Fund are necessarily integrated with existing local development and basin management organizations (where they exist).

- In making the choice between these two generic models for delivery of benefits, governments typically consider factors such (i) the number of hydropower projects in the country (or basin), and existing stipulations in water, energy and environment laws for such Funds.

- A mix of these two models may also be used. For example, the province and municipalities where the project is located may receive an increment to its local development budget and a Community Development Fund may be established in the immediate project area.

- As described in Section 2.2.1, India's hydropower policy provides for using both methods.<sup>32</sup>
- Alternatively, the development fund may be located at the basin, sub-basin level, or even at the Provincial level.
  - Again the choice depends on what may be practical, including the number of hydropower projects in a particular province, basin or sub-basin.
  - The situation can also evolve over time. For example, the approach may be to start with project-based funds. Overtime, as RBC/RBOs become fully functional, the project-level funds may be merged into a basin fund administered by the RBC/RBO.
  - The Columbia Basin Trust Fund in the province of British Columbia in Canada is an example of a basin-level fund covering many projects and basin-level benefit sharing programmes funded by hydropower revenue and water regulation revenue.

#### 1.4.7 BY INTRODUCING APPROPRIATE INSTITUTIONAL ARRANGEMENTS – MINIMIZING NEED FOR NEW STRUCTURES

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The institutional arrangements most appropriate in a particular setting depend in part on the choice basic models just discussed, and the measures selected for BSM.

For national-to-local BSM, what is appropriate is also influenced by factors such as (i) the normal rural development practice in the country (ii) the legal system (iii) what is practical to minimize the creation of new institutions, and (iv) the overall development situation.

In general:

- The specific Institutional arrangements depend on the scale of benefit sharing under consideration (i.e., transboundary or national-to-local BSM).
- It is important to distinguish between (i) ***mechanisms for sources of financing***, and revenue transfer procedures, and (ii) ***mechanisms for deliver of benefits***.
- At the local and sub-national scales, mechanisms to deliver benefits must accommodate factors mentioned previously in Section 1.4., i.e. enabling effective coordination with:
  - rural development planning, budgeting and extension services
  - poverty reduction programmes
  - rural electrification programmes
  - functioning of river basin organizations
  - EMMPs on hydropower projects
- Especially at the local scale, the institutional arrangements should be flexible to accommodate various channels to deliver benefits (e.g. via the civil society, the private sector, through existing government programmes, and to empower local entrepreneurial actions).<sup>33</sup>
- In the Mekong setting institutional arrangement need to be sufficiently robust or flexible, to deploy financial contributions, toward a range of preferred development support methods, for example:

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<sup>32</sup> In India, 14% of gross project revenue is allocated to the State (province) where the project is located. Of this, 12% of is invested in any manner the State feels appropriate for regional development, with the stipulation that it must fund development expenditures and not recurrent expenditures. 2% is to be allocated to a local area development fund, where a representative committee of area residents is chaired by an appointed government representative.

<sup>33</sup> Often community-driven development (CDD) approaches are use to equitably distribute benefits at the local level and to empower local action according to beneficiary preferences.

- Incremental funding for local development assistance programs delivered through provincial or national target programs, e.g. for:
    - Construction of village-scale infrastructure (e.g. for small local roads, clinics, schools, irrigation systems, water supply and sanitation systems and market areas);
    - Enhancement of agricultural / forestry / fisheries extension services;
    - Support for headwater forest management with community forestry methods; and
    - Training of for local development activities or service provision.
  - Community-based activities funded in part by a contribution in kind from local communities, e.g. for:
    - National or provincial programs that require local contribution of labour;
    - Youth and women's programs;
    - Local community and local cultural centres;
    - Local development initiatives of civil society organizations;
    - Cultural activities at the community level.
  - Operation of small loan or micro-credit facilities, including those of a revolving nature, e.g.
    - micro-credit schemes and entrepreneur schemes to diversify local income generation.
    - credit facilities to a community-based organization organisation such as the local farmers Union or women's Union to run the credit program.<sup>34</sup>
  - Investments in expanding connection to electrical services as noted Section 1.2.2 or use of isolated on-spot electrical generation in areas uneconomical for grid-connected supply.
  - Other investments for local socio-economic and cultural advancement of common interest to beneficiaries, such as to establish and operate a community newsletter or radio service that keeps beneficiaries informed and active in exchange views on experiences and effective use and monitoring of benefit sharing funds in their locality. The communication outreach can be sponsored by the Fund management board, local government or even the Project authorities, but should be funded from revenue sharing allocations.
- Another institutional consideration in the Mekong setting is whether and how to integrate different funds that hydropower projects are increasingly required by law to contribute, e.g. to water resource protection, environment protection, payment for ecological services, and benefit sharing (e.g., Community Development Funds and Power Development Funds). Again, this depends on the legal framework.

To illustrate:

- Viet Nam for several years has applied a water resources utilization fee set at 2% of gross revenue generated from hydropower projects.
  - The revenue is allocated to the Province budget where the project is located, and intended as a contribution to water resource protection measures to be funded by the Province. This contributes for example, to flood protection works and flood management;
  - The water utilization fee is an indirect form of benefit sharing with downstream communities, accepting also that the reservoir must be managed to play a role in flood mitigation;
  - Each year the provincial allocation is calculated based on the previous year's generation (GWh) from the project in question, multiplied by a unit rate that is linked to the prevailing bulk electricity tariff set at the central level.
- Viet Nam also recently introduced new legislation for Payment for Ecological Services (PES) as part of its national environmental legislation. A required contribution is set in laws. Viet Nam has also been

<sup>34</sup> Revolving funds are typically more complex to manage than simple grant awards, but are common. They can be managed with appropriate transparency and social accountability provisions.

undertaking a pilot project to trial a draft Decree Law for benefit sharing on hydropower projects, where it is proposed that 2% of gross revenue be allocated to a local benefit sharing Fund.

- The PES provision also has up to 2% of gross revenue from hydropower projects allocated to qualifying PES measures.
  - In the case of the 210 MW A' Vuong Hydropower project where the BSM pilot is undertaken, the 2% would generate close to \$US 1.0 million per year.
  - Together these three provisions amount to 6% of gross revenue (water resources fee, the contribution to PES funds, and the draft BSM Decree Law is for 2% is implemented). The question arose during national stakeholder dialogue on whether that was affordable? Analysis contained in the ADB TA in 2008 suggests yes.<sup>35</sup>
  - But it means that consideration needs to be given to these three aspects, and specifically how capture synergies in the institutional arrangements and delivery mechanisms.
- Procedures are also needed to introduce benefit-sharing mechanisms systematically into the project cycle, starting in up-front strategic and project planning stages (as discussed in Section 1.4.4). These arrangements and mechanisms are within the remit of the concerned Ministries (e.g. for energy (hydropower), water resource management and environment).

*Note to the Reader: Details are provided in the draft Decree Law for Viet Nam in Volume 5 of the KB-CD. The details and the aims of each section of the draft Decree Law are discussed in the Final TA Report 6489 in Volume 2-1.*

### Transboundary Benefit Sharing

- The main institutional arrangements for transboundary cooperation and TBS are already in place in the Mekong (i.e. the 1995 Mekong Agreement and MRC Bodies).

In this respect also:

- The MRC Basin Development Strategy document (January 2011) outlined the approach and steps to address transboundary benefit sharing (as noted in Section 4.1.2)
- Previously recommendations have been made on the longer-term institutional options in the form of MRC Joint Committee Briefings and in studies undertaken by MRCS.
  - One example is the Note for Information on “Initial considerations on a possible regional initiative for financing sustainability of hydropower” on the option of a regional-level Fund tabled at the 31st Meeting of the MRC JC in Nov 2009. This noted:

“A possible regional initiative or mechanism such as a basin fund administered under the MRC would ideally consider multiple sources and uses of funds. The mechanism would be appropriately designed to attract donor investment and be funded by a mix of other sources where agreement between Member States can be reached, such as transboundary mitigation / benefit sharing revenue derived from tariffs; contributions from the private developers; and new sources such as carbon financing. For certain sources of funds Member States would need to agree to include appropriate provisions in project-specific legal instruments such as concession agreements and power purchase agreements. Similarly, the regional

<sup>35</sup> The analysis shows that on average, up to 10% of revenue could be allocated before the economics of hydropower projects was impacted to the extent that other power generation options would become more attractive to the utility (the analysis compared the marginal cost of generation from coal, oil and gas in 2007). Since 2007 the relative cost of conventional thermal options has increased significantly, making the “headroom” for revenue sharing even greater today (i.e. more than the 10% combined total can be afforded). As a comparison also India allocates 12% of gross revenue to the Province where the project is located and 2% to the Local area development Fund.



initiative could have multiple financing windows that extend across the interests of the 1995 Agreement.)<sup>36</sup>

#### 1.4.8 THROUGH EFFECTIVE COMMUNICATION AND PARTNERSHIP APPROACHES

Because benefit sharing involves a range of stakeholders and professional disciplines, effective communication strategies are essential.

- To Increase awareness of the opportunity and value to Mekong society;
- To address myths, remove barriers, and move to consensus;
- To better inform political decision-makers and generate the necessary political will to frame legislation and regulation as needed;
- To demonstrate benefit sharing is in the interests of all stakeholders – reducing risks from all perspectives;
- To bring stakeholders to a common level of understanding and agree to form partnerships – people tend to oppose things they don't understand, and
- Ensure the mechanisms for openness and transparency are in place to minimize abuse of power or corruption in use of funds and ensure all actors and partners are behaving responsibly.

### 1.5 HOW DO COUNTRIES SEEK TO AVOID MISSTEPS?

Challenges that countries around the world have faced and have overcome in introducing benefit sharing mechanisms are documented in the literature.<sup>37</sup>

As mentioned in the beginning of Section 1, one challenge is people will naturally bring many different pre-conceptions, views, and ideas to the table the first time this topic is discussed. Some key lessons are the following. The FAQ in Section 4 expand further on selected issues.

#### 1.5.1 WHAT MISSTEPS MAY OCCUR

Among the missteps that can undermine successful outcomes in national-to-local BSM include:

- Lack of transparency and accountability, which some observers regard as perhaps the single greatest threat to successful introduction of benefit sharing measures.<sup>38</sup>
- Poor or ill advised mechanisms for delivery of benefits, which are not coordinated with local planning systems and IWRM implementation;
- Creating unrealistic expectations among affected the intended beneficiaries from the start about what benefit sharing is and is not;
- Confusion over who can participate in benefit sharing;
- Using benefit sharing as a new ground to fight ideological battles (pro- or anti-dam), rather than focusing on enhancing sustainable outcomes in hydropower development and management.

<sup>36</sup> Note for Information "Initial considerations on a possible regional initiative for financing sustainability of hydropower", 31st Meeting of the MRC Joint Committee Agenda B.4 Mekong River Commission.

<sup>37</sup> These documents include comprehensive works on sharing benefits with local communities (e.g. Égré, 2007), and sharing between riparian states on international rivers (Yu, 2008).

<sup>38</sup> When surveyed, local participants in the Viet Nam benefit sharing trials on the A'Vuong project indicated abuse of power by officials was their major concern – and thus to have an open and transparent system for allocation of micro grants.

- Thinking only of benefit sharing narrowly as revenue sharing, without regard to concerns about resource access and equitable electricity access;
- Not giving the beneficiaries adequate voice in how the funds from revenue sharing can best be used, or choice in what support they wish;
- Applying benefit sharing only to new hydropower projects. Experience shows this can lead to a large outcry on existing dams. And here it is important to recall benefit sharing is over the economic life of the project, not a short term measure.

### 1.5.2 IDENTIFYING AND CLEAR UP MISCONCEPTIONS FROM THE START

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A clear strategy to raise awareness on how benefit sharing helps to overcome the many real and perceived shortcomings of dam planning and management is important.

- This strategy to raise awareness would ideally be based on a policy review and survey of stakeholder views (as noted in Section 1.4.1) and a set of key messages;
- Regional and international experience would inform the communication strategy.
- The strategy needs to be developed in cooperation with representatives of the different beneficiary groups at different levels and address misconceptions that can distort or frustrate progress.

It is important to ensure there is sufficient understanding and consensus on issues such as:

- The distinction between compensation and resettlement and longer-term benefit sharing mechanisms;<sup>39</sup>
- That benefit sharing is not only for resettlement or resettlement host communities, but also for all communities in the project area who may give up resource access in varying degrees and also for basin residents more generally.
- Benefit sharing is implemented even if there are no resettled people;
- Revenue sharing is not part of the project capital budget, it is mainly derived from the revenue stream the project generates and other monetary benefits that relate directly or indirectly to project outputs.
- Similarly, revenue sharing is not negotiated between local communities and hydropower developers or owners. It is a relationship between consumers of dam services (hydropower) and host communities for projects / basin residents, as set out in government regulation.
- Revenue sharing is not something only for rich developed countries, or too complex for developing countries; and.
- Benefit sharing needs to apply to both existing and new dams, otherwise there may be unnecessary social unrest and protest.

Most important, revenue sharing is not politically “unfeasible”. Experience shows if it is clearly explained how a small increment in generally electricity tariff pays for equitable sharing of benefits and costs with dam-affected rural communities – the public is generally willing to share and pay a marginal increase in tariff.

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<sup>39</sup> Compensation for land or property recovered by the State is generally governed by separate laws

### 1.5.3 GENUINELY ADDRESSING STAKEHOLDER EXPECTATIONS

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Addressing MRC stakeholder expectations on BSM is important for many reasons. Initially, understanding these expectations is necessary to arrive at a consensus so governments can take informed decisions. Partnerships are needed to work out different aspects of the legislation.

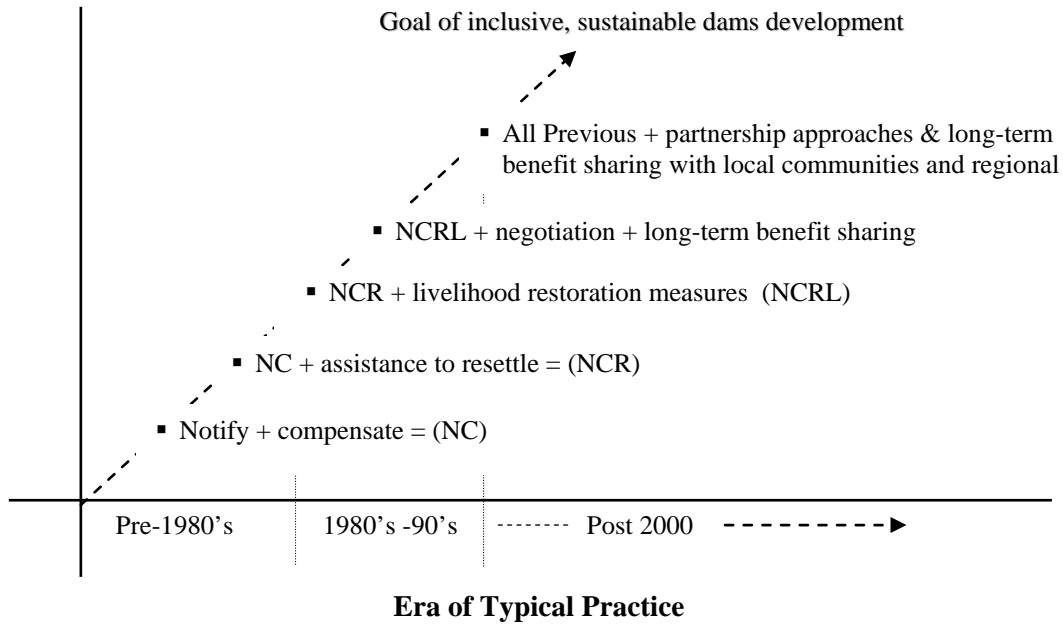
Thereafter, mechanisms for feedback on how MRC stakeholder expectations are being met are important to identify where adjustment in practices are needed.

Often the concerns arise around the mechanisms for delivery of local benefits. Many issues can be addressed when representatives of the different beneficiaries are part of the Fund governance mechanisms.

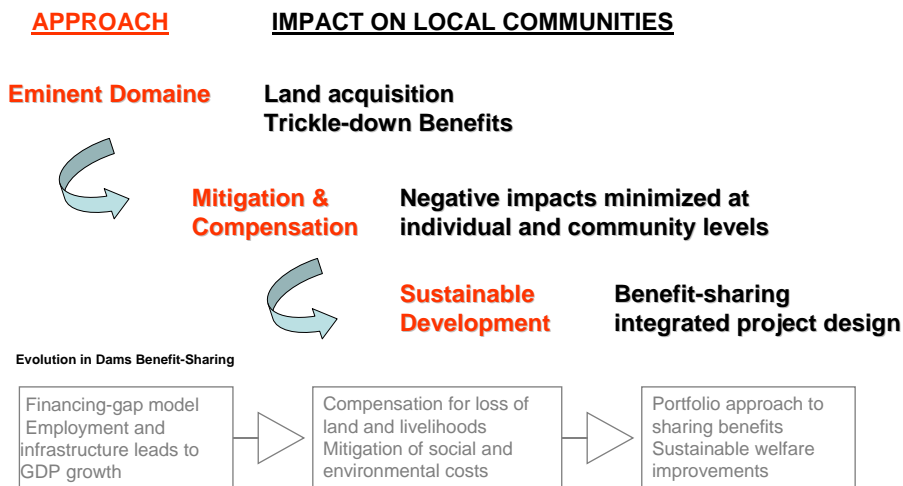
- MRC Stakeholder expectations are that good practice will be adopted
  - There is no shortage of examples of good practice for Member Countries to draw lessons from and assure people good practice is being followed.
  - One of the purposes of this Knowledge Base is to assemble information on good practice.
- Good practice is constantly evolving
  - As in all professional fields including implementation of IWRM principles in water management, good practice is not static.
  - Benefit sharing itself is a logical progression in how affected communities have been seen and engaged by governments on large hydropower projects from a historical perspective, not only in the Mekong but also world-wide.
  - The two accompanying Figures illustrates the change in thinking over time. Practices common in different countries today can be located along different points of this spectrum.
  - As shown in the first Figure:
    - In the early part of the 20th century some countries only notified local communities they had to move for a dam, and then offered some compensation for land or property lost.
    - Eventually it became standard practice in most regions of the world to offer some form of resettlement support.
    - With sustainable development coming on to the agenda in from the 1990's "good practice" has evolved to the point of ensuring that local communities become development partners.
    - Benefit sharing tools are important for this purpose.
- Tools are available assess good practice
  - Among the tools that MRC has to compare Mekong practices today with accepted "good practice" in introducing benefit sharing mechanisms and sustainable hydropower development and management more generally are:
    - The Hydropower Sustainability Assessment Protocol.
    - The Rapid Sustainability Assessment Tool (RSAT)

Section 6 looks in more detail how the MRC is helping Member Countries apply them.


**Evolution in the view and treatment of dam affected communities**



**Benefit Sharing - An evolution in thinking....**



Source: World Bank 2007



It is widely accepted today that investments in hydropower must deliver economic, social and environment value for all stakeholders, not just some. Moreover, flexibility must be “built into” the design and operation of dams to allow future generations to adjust that balance over the longer term, as development priorities and conditions in the basin or sub-basin evolve.

## 2 MEKONG AND INTERNATIONAL EXPERIENCE

This section highlights a range of Mekong and international experience on hydropower benefit sharing. More in-depth information is provided in documents referred to in Volumes 2 to 5 of the accompanying knowledge base that has over 129 documents (KB-CD).

Because Volume 1 is a working document, NMCS and line agencies may pose additional questions on this material and thus add to the FAQ in Section 3, when Volume 1 is updated again. ISH can provide responses to share with everybody. If warranted, ISH can also establish a panel of practitioners and experts to respond to NMCS and line-agency questions.

### 2.1 EXPERIENCE INTRODUCING BENEFIT SHARING IN THE MEKONG

#### 2.1.1 Experience in MRC Member Countries

The pool of experience with benefit sharing in the Mekong is growing, not only in the hydropower sector but also in other sectors. There is critical mass of experience with national-to-local forms of benefit sharing for MRC Member Countries to start exchanging views.

The following is an overview of current BSM-related experience and trends in Member Countries. The review suggests there is interest, a degree of enthusiasm in some stakeholder groups, and many opportunities to anchor national-to-local benefit-sharing mechanisms within the regulatory frameworks for water management and integrated river basin management at regional, national and local levels.

*Note to the Reader: See the questionnaire and TOR for a national consultant engaged by ISH to support NMCS in updating country-specific information (Annexes 1 and 2).*

- **Cambodia and Lao PDR** in meetings with MRCS in 2010, NMCS staff expressed interest in learning more about the body of regional and international experience with benefit sharing. Their interest was to draw lessons to inform internal discussions on possible measures for a national policy framework.

- Presently, Lao PDR has a TA for Capacity Development in Hydropower and Mining Sector, supported by the World Bank and Australian Aid.<sup>40</sup> As noted in the World Bank Appraisal Report (PAD), the TA offers capacity building for sustainable hydropower development and more attention to benefit sharing at the local level. Studies under that TA consider BSM in assessing scope for improvement in revenue management (both in the hydropower and mining sectors).
- Initial meetings were held in late 2010 between MRCS officers (i.e. the CEO and ISH Team) and the TA Study Team to gather information and exchange views with MRC. ISH also provided WREA officials in the Lao PDR with a briefing on benefit sharing mechanisms with WWF. At present, there is no information on the status of any draft legislation or regulation emerging from the TA.
- As noted, Cambodia and Lao PDR have been implementing many indirect forms of local and sub-national benefit sharing and also taking steps to enhance the additional and indirect benefits of hydropower projects. These have evolved over time much like practices have evolved in other regions of the world. Current practice, moving beyond compensation, includes attention to enhancing the various direct and indirect measures that are consistent with the philosophy of sharing or spreading benefits of national investments in water infrastructure such as:
  - The local and regional roads, the project-related jobs, and the demand for local services that serve as a local economic stimulus;
  - The electrification of resettlement areas and resettlement host communities; and
  - Leveraging other local and regional development investments that are either made by the project Developer (as agreed with the Government in Concession Agreements) or by government development budgets directly.
- There is a difference regarding practices of different projects in relation to the funding source. On public and IPP projects where multi-lateral or bilateral development Banks participate, experience indicates some very innovative steps to optimize the additional benefits for different groups and to otherwise spread benefits have been introduced. These are mostly on a case-by-case basis, e.g.:
  - Revenue management plans used to allocate resources for poverty alleviation in targeted ways (such as the well-documented revenue and expenditure management plan for the Nam Theun 2 Hydropower Project in Lao PDR that supplies the Lao and Thailand power markets). As noted in the NT2 documentation, one aim is to, “generate revenues to finance spending on priority poverty reduction and environmental programs in Lao PDR through environmentally and socially sustainable exploitation of NT2’s hydropower potential”;<sup>41</sup>
  - There are several examples of livelihood improvement measures on donor-supported projects in recent years that go beyond legal requirements for compensation and resettlement, although these are generally time-limited and mostly apply to resettlement communities only, and
  - There are also some interesting and innovative examples of developer-agreed steps to achieve income raising targets in areas around projects, not just the immediate resettlement areas (e.g. the Theun Hinboun Extension Project (THXP (60MW + 220 MW) in Lao PDR. In this case, compensation and livelihood restoration measures were linked achieving local income targets, following that principle established on the NT2 project.
- As yet there is no explicit, overall BSM policy framework for public sector and IPP hydropower projects in Cambodia or Lao PDR. Benefit sharing arrangements to date tend to be negotiated

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<sup>40</sup>

<http://web.worldbank.org/external/projects/main?pagePK=64283627&piPK=73230&theSitePK=40941&menuPK=228424&Projectid=P109736>

<sup>41</sup> [http://siteresources.worldbank.org/INTLAOPRD/147273-1092045101973/20395394/technical\\_brief\\_revenue\\_management.pdf](http://siteresources.worldbank.org/INTLAOPRD/147273-1092045101973/20395394/technical_brief_revenue_management.pdf)

project-by-project and are short-term, or extend only a few years beyond commissioning in many cases. Nonetheless, there is considerable experience with various indirect and infrastructure improvement measures to form part of a more comprehensive approach to benefit sharing.

- **Thailand** moved toward revenue sharing in 2007 when it introduced requirements for Community Development Funds (CDFs) on all EGAT and IPP power generation projects. A Cabinet Resolution June 19, 2007 approved the establishment of a 3-tiered CDF system with the stated aim of raising capital to “improve the quality of life of people and the environment in the vicinity of power plants”.
- The CDFs were designed to be financed by revenue from electricity generated by the projects. Though pending the establishment of the full mechanism, the Cabinet resolution in 2007 stipulated EGAT would be responsible to pay into Funds and later recovering the costs from revenue streams in an agreed manner with the regulator. There is limited information on the evaluation of the CDFs (in English language). CDFs may be for a fixed and limited period of time. Nevertheless, CDFs do establish the principle of local and regional revenue sharing from power projects in Thailand.
- The MRCS was informed that in 2010 the CDFs were changed to Power Development Funds (PDFs) by the Energy Regulatory Commission of Thailand (ERC). Thai media reports in 2011 indicate the ERC plans to collect 2.1 billion THB per year from revenue for the Power Development Funds, which will be applicable to power plants with production capacity over 1 megawatt. A portion of that would be allocated to local funds to “develop and rehabilitate a community that is affected by the power plant operation”.<sup>42</sup>

Some of the background on the CDFs is helpful to understand the evolving situation:

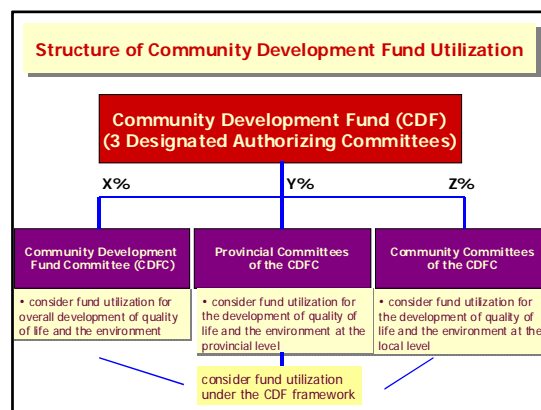
- The strategy document prepared by Thailand’s Energy Policy and Planning Office (EPPO) of the Ministry of Energy in 2007 indicated that EGAT would be responsible to implement CDFs in vicinities of power projects.<sup>43</sup> The money to capitalize CDFs was to come from levies on power plants greater than 1.0 MW installed capacity (EGAT generation projects (public) and IPPs).<sup>44</sup> The framework for authorization of expenditures was divided into 3 categories, or levels, namely:

- **Category Part 1:** For overall development of quality of life and the environment, the authorization is under the Community Development Fund Committee (at the national level);

- **Category Part 2:** For the development of quality of life and the environment of the people in the provinces where power plants are located, the authorization

(expenditure) is trusted to the respective Provincial Committees; and

- **Category Part 3:** For the development of quality of life and the environment of the people in the localities where power plants are located, the authorization (expenditure) is trusted to the respective Community Committees.



The graphic extracted from the EPPO Strategy Document in the KB-CD Volume 2 illustrates the 3-tiered system.

<sup>42</sup> <http://thaifinancialpost.com/2011/01/18/erc-targets-collection-of-2-1-bn-thbyr-in-power-development-fund/>

<sup>43</sup> Entitled Energy For Thailand’s Competitiveness [www.eppo.go.th/doc/strategy2546/strategy.doc](http://www.eppo.go.th/doc/strategy2546/strategy.doc)

<sup>44</sup> It was noted the rates will be 1.30 Satang/Kwh (1 Satang = 0.30 US cents, therefore .39 Usc/Kwh) for lignite and coal-fired power plants, and 1.00 Satang/Kwh for other types of power plants. <http://www.eppo.go.th/doc/strategy2546/strategy.doc>

- EGAT documents from 2008 reported that from July 2007, EGAT's power plants, as well as domestic IPPs with agreements to sell 6 MW of electricity, or greater paid into the Fund at rates varying according to fuels used (as set at that time):
  - 2.0 Satang/kWh for coal, lignite, and hydropower,
  - 1.5 Satang/ kWh for fuel oil and diesel oil,
  - 1.0 Satang/kWh for natural gas, biomass, agricultural residual and municipal waste, and
  - 0.0 Satang/kWh for wind turbine and solar energy power plants.<sup>45</sup>
- In 2008 EGAT documents reported a total of 102 power plants located in 39 provinces, including 26 power plants of EGAT would pay into the CDF.
  - Management of the project area CDF fund was to stress public participation.
  - Each fund was to be managed by a Community Development Fund Management Committee with more than half of the total members being selected from the public sector.
  - Other members of the committee were to represent the government sector, the power plant and qualified experts.
- EGAT noted that beneficiaries of the local CDF were communities living in a 5-km radius surrounding a power plant and other nearby areas, as may be prescribed by the local fund management committee.
  - Proceeds will be allocated to the communities for purposes of development of livelihood and quality of life, supporting activities related to education, religion, culture, sports and music,
  - As well as public health and environmental activities, renewable energy development, immediate aid to alleviate damage resulting from any impact caused by the power plant, and others as prescribed by the committee.
- Among the top five CDF Funds reportedly established in 2008 (by capitalization) included:
  - Lampang Province Community Development Fund (328 million baht/yr)
  - Mab Ta Phut Industrial Estate Community Development Fund (261 million baht/yr)
  - Ratchaburi Electricity Generating Company Community Development Fund (280 million baht/yr)
  - Gulf Cogeneration & Gulf Power Generation Community Development Fund (99 million baht/yr)
  - Bang Pakong Power Plant Community Development Fund (97 million baht/yr)
- In 2009, Thai media articles suggested that experience with CDFs was growing. For example, the Nation reported Dec 2009 on the first two years of Ratchaburi Power Project CDF as follows:<sup>xix</sup>
  - "The two-year-old Community Development Fund (CDF) for areas surrounding power plants has proved successful, although to what degree is yet to be measured. The CDF of Ratchaburi Power Project (is reportedly the second largest in Thailand .... and has Bt280 million per year" or about \$US 8 million/yr (allocated to revenue sharing from this project).
  - Ratchaburi is Thailand's largest thermal power complex (3,625 MW) located southwest of Bangkok. It consists of two power plants; one a conventional dual fuel (oil and gas) thermal plant (2,125 MW) commissioned in 2002, and, the second a 1,400 MW combined cycle plant (two units) commissioned in 2008.
- Media reports in 2010 indicated that decisions on the future of CDFs were pending with the EPPO, and the CDFs were reformulates as part of the new power development Fund. The rules and regulations for the relevant Power Development committees were to be published in the Royal Gazette in 2011.

<sup>45</sup> pr.egat.co.th/all\_work/annual2007/eng/E8.pdf



As part of the MRCS processes, it would be helpful to verify the status of Power Development Funds, and particular whether there is specific guidance on how they are to be established on existing hydropower projects, and is there any implications for power import projects. Potentially there is scope for the MRC to cooperate in a partnership to prepare such guidelines.

- **Viet Nam** has been developing and trialling benefit sharing mechanisms for local communities adversely affected by hydropower projects since 2006, mainly through Technical Assistance (TA) Projects supported by the ADB. A draft Decree Law on benefit sharing was prepared in 2008, though recent information indicates the draft is no longer actively advancing and is linked to the progress with overall Power Market reform in Viet Nam. If formally adopted, BSM provisions would apply to all existing and new hydropower projects with a legal requirement to undertake an EIA. The proposed 2% of gross revenue allocated to revenue sharing would generate in the order of \$US 20 million per year for benefit sharing all existing hydropower projects in Viet Nam, and those coming on-line by 2010 (2008 figures).

The TA Project utilized to prepare the draft legal instruments and a pilot project to trial the draft provisions was executed by the Electricity Regulatory Authority of Viet Nam (ERAV) reporting to the Ministry of Industry, Trade and Telecommunication (MITT):

- The initial policy review that kicked-off the process in Viet Nam in late 2006 was illustrated earlier in the graphic in Section 1.4.1 of this Volume.
- It started with three questions, namely (i) what does international experience offer as lessons for Viet Nam (ii) to what extent do current policies and laws enable benefit sharing in Viet Nam, and (iii) what is needed to move forward?
- The policy review to kick off discussions on BSM considered the range of policies, law and regulations in Viet Nam in nine categories:
  - The State Constitution
  - The Power Sector
  - The Water Resources Sector
  - The Environment Sector
  - The Forest Sector
  - The Fisheries Sector
  - The Finance Sector including Land Administration (i.e. resettlement policy)
  - The Social Sectors including Ethnic Minorities
  - International Conventions and Agreements Ratified by Viet Nam

It was important also to look at legislation beyond the power sector, not only because of the cross-sector nature of BSM but also because the principles of benefit sharing and especially revenue sharing could be identified in current laws and overlaps could be identified, and precedents for implementation mechanisms and institutional arrangements could be identified.

The findings were summarized in a SWOT analysis that indicated opportunities to go forward.

- The initial TA (completed in December 2008) produced a first version of a draft Decree Law and a work plan to pilot test the provisions on the 210 MW A'Vuong hydropower project in the Central Highlands of Quang Nam Province. Subsequently, the first phase of that Pilot was funded by ADB in cooperation with WWF. The pilot was completed in 2010. It was implemented by ERAV working in close cooperation with the Provincial Peoples' Committee (PPC) of Quang Nam Province). This overall arrangement reflected the division of responsibility in the Viet Nam political system between central and provincial governments. In this case:
  - i. ERAV under MOIT and the provincially-based DOIT would be responsible for the financing mechanism - the revenue transfer mechanism that moves revenue collected from electricity consumer tariffs into project-level benefit sharing Funds that are established under provincial

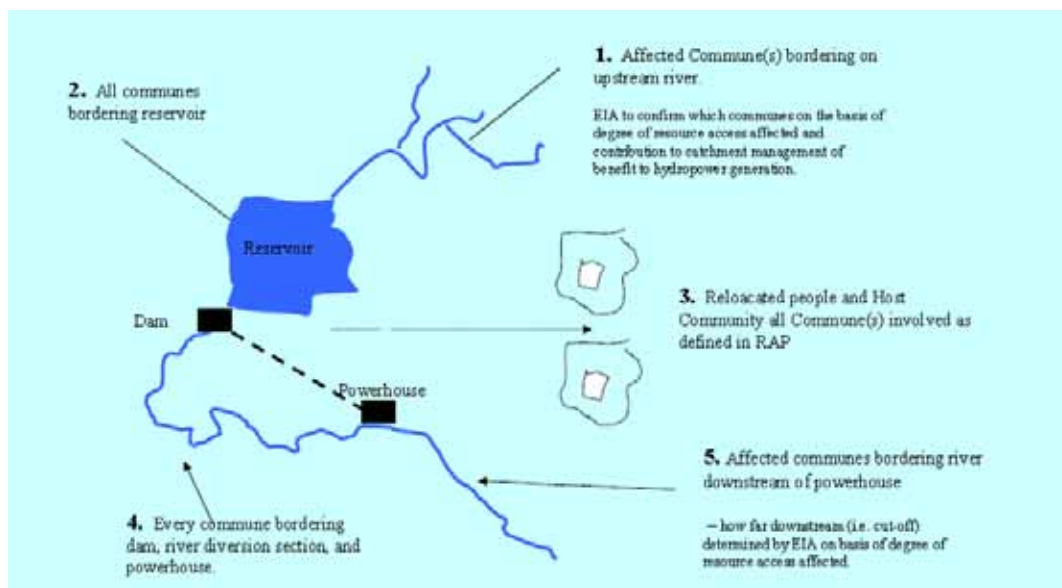
authority. This required revenue off-takes and related legal arrangements consistent with power market reforms. The cost was actually a pass-through for hydropower companies in the sense it was funded by tariffs and not Project companies themselves.

- ii. Quang Nam Provincial Peoples Committee (PPC) would be responsible for the mechanisms for the delivery of benefits, in keeping with the primary (constitutional) responsibility of provinces to oversee and ensure local area development. This entailed appointed the Benefit Sharing Council (BSC) to preside over the long-term delivery of benefits (similar to existing laws where a Resettlement Council presides over implementation of short-term resettlement measures); and establish a Fund Management Board (FMB) a legal requirement for all Funds in Viet Nam.
  - iii. The BSC role reporting to the PPC was to oversee application of funds made available by ERAV/MOIT mechanisms, as well as all other aspects of BSM set out in the draft Decree Law in a comprehensive way (i.e. the resource access, equitable sharing of project services aspects, targeting to support poverty reduction goals, etc).
- The 210 MW A'Vuong hydropower project was selected as the pilot project. The A'Vuong project became operational in 2010. It was developed and is operated by Viet Nam Electricity (EVN), the public utility presently under going restructuring to provide for competitive markets for power generation, transmission and distribution. The A'Vuong project is the first of several large projects planned in the Vu Gia-Thu Bon river basin.

*Note to the Reader: See the TA-4689 (VIE) completion reports on the ADB website in the footnote.<sup>46</sup> These documents are also provided in Volume 2 of the KB-CD. The reader is also referred to the Ten Steps to Benefit sharing also available on the web and in Volume 2 of the KB-CD).*

- In the first phase of the TA in 2007-2008, ERAV used a multi-stakeholder dialogue process to solicit views and inputs on design of draft provisions for a Decree Law. This involved national NGOs, mass organizations, other Ministries, Provincial representatives and Viet Nam's Development Partners in three one-day workshops over a period of about 14 months. These consultations proved highly important and necessary because they brought out wide-spread support for benefit sharing, and especially support from the Provinces and mass organizations (civil society) in Viet Nam.
- The government regulator (ERAV) as process manager was supported by an inter-government Steering Committee consisting of national line agency and EVN representatives.<sup>xx</sup> The draft Decree Law was prepared in 2008 and subsequently updated as part of the Pilot Trial on A'Vuong in 2010. It is understood the updated version this will be used for a second phase of the A'Vuong project pilot, reportedly set to proceed with ADB financial support in 2011-2012.
- Below is a graphic from the Public Consultation workshop on the A'Vuong BSM trial implementation to illustrate benefit sharing applies not only to the resettlement community, but also to other riverine communities upstream and downstream who "host" the project in their area, and river basin residents more widely.

<sup>46</sup> Trialling on the 210 MW A'Vuong hydropower project located in the central highlands of Quang Nam Province. The completion report of the Phase 1 Trialling is at <http://www.adb.org/Water/PDA/PDFs/VIE-200901.pdf> The design phase document, including the first draft of the decree law is at: <http://www.adb.org/Documents/Produced-Under-TA/39379/39379-VIE-DPTA.pdf>



- In the Viet Nam process, consensus on the objectives of benefit sharing was reflected in Article 4 of the Draft Decree Law.
  - i. To advance sustainable forms of hydropower development and management.
  - ii. To provide stable, long-term mechanisms to maximize the socio-economic contribution of hydropower for the benefit of all citizens in-line with State electricity development policy.
  - iii. To reinforce national efforts to close the income gap between urban and rural populations in a period of accelerated growth and modernization and boost local development in minority areas and areas of difficult or extremely difficult socio-economic conditions where many hydropower projects are located;
  - iv. To support implementation of relevant domestic law and international commitments to advance sustainable land and water resource management practices, where the management of hydropower projects is an important consideration;
  - v. To ensure the protection of State interests and the rights and benefits of relevant organizations and individuals and the ecological environment in rural areas;
  - vi. To promote equitable electricity access to people living in remote and remote areas affected by hydropower development, including a large portion of ethnic peoples; and
  - vii. To enhance entitlements for natural resource access and ensure local communities have financial support to take advantage of local development and entrepreneurial opportunities that hydropower projects offer.
- As noted in Section 1.4.7, Viet Nam has a water resource utilization fee equivalent to 2% of gross revenue from hydropower projects, which is allocated to provincial budgets. Viet Nam also adopted a Law on payments for forest ecological services (PES) where different economic enterprises (e.g. forest enterprises, ecotourism industries, and hydropower projects) would contribute revenue for (PES) including the distribution of payments to households who participate in activities to manage forest ecological services locally.<sup>47</sup>

<sup>47</sup> Media articles say that in 2008 the Viet Nam's government's Decision 380 on the "Pilot Policy for Payment for Forest Ecosystem Services" got the ball rolling by determining who were the buyers and sellers. By 2009, Decision 380 generated about 77 billion Vietnam Dong revenue (approximately US \$4 million). As reported in the article in the next footnote, it is also suggested that the Vietnamese PES model has already been adopted in Cambodia, Laos, and Thailand.

- There are different formulas for PES payments each sector. The PES payment level for hydropower plants using water as a production input was set at 20 VND (0.125 cents) per kilowatt hour. For water supply companies, it was 40 VND (0.25 cents) per one cubic meter (m<sup>3</sup>) of water supplied.<sup>48</sup>
- As the Viet Nam experience illustrates, there is potential for confusion among the various Funds increasingly applied for natural resource management, which hydropower revenue (tariffs) are required to make a contribution. As the ADB supported TA Reports on Benefit Charing noted, it was important to closely coordinate these forms of revenue sharing, which are in fact for complementary but different purposes in basin management. Namely:
  - i. Water resource protection
  - ii. Environment protection (including PES), and
  - iii. Benefit sharing

### 2.1.2 Experience in the Wider Mekong Region

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No information was available on benefit sharing in Myanmar in the international literature. Since the 1980's, China has introduced various forms of benefit sharing, and more recently, reinforced and integrated BSM with policies to promote sustainable hydropower.

On the MRC visit to hydropower projects in the Lancang-Mekong in June 2010, these aspects were discussed with China's Ecosystem Study Commission for International Rivers (ESCIR) and senior representatives and staff of the HydroLancang Power Company.

The background is:

- China has built almost half the world's large dams (over 22,000 large dams, many for hydropower). Historically, China has been a pioneer in the international arena for introducing new approaches for benefit sharing with local communities (China also participates on the International Forum for Sustainable Hydropower that prepared the IHA Protocol that included benefit sharing, as discusses in Section 2.3)
- From the 1980's a portion of the hydropower revenue from the Danjiangkou dam that created the largest man-made lake in Asia when it was built in 1966, was placed in a "remaining problems" fund. This Fund financed livelihood restoration for people living around the reservoir perimeter who had fallen behind development in other areas. Measures to rectify social problems associated with previous project phases were introduced after local political pressures.
- Reservoir Maintenance Funds for Hydropower Projects were first set up in China in 1981 (over 30 years ago), when the Ministries of Finance and Electric Power co-issued a decree establishing guidelines for these Funds using revenue from electricity sales. The aim was to assist all people resettled in reservoirs on existing projects, who were lagging behind average rural incomes. There was local political pressure to address "remaining problems" on many dams and the Danjiangkou experience proved positive. These funds were financed on the basis of 0.001 Yuan/kWh (or 0.012 US cents/kWh) for the life of the hydropower plant.
- The arrangement in China is these funds are managed by the local County resettlement offices and hydropower plant authorities. The laws stipulate that the Funds are to be used for:
  - maintaining reservoir facilities;
  - maintaining infrastructure for irrigation and drinking water and transportation infrastructures benefiting people that were resettled;
  - Providing economic support to the populations displaced by the reservoir.

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<sup>48</sup> [http://www.ecosystemmarketplace.com/pages/dynamic/article.page.php?page\\_id=7593&section=news\\_articles&eod=1](http://www.ecosystemmarketplace.com/pages/dynamic/article.page.php?page_id=7593&section=news_articles&eod=1)

- There have been several innovations and adjustments to China’s approach over time and also new approaches. One example is where the Hubei Hydropower Development Authority (in 2002) established a partnership agreement based on equity sharing with local governments plus revenue sharing to target poverty alleviation in the project area (this project was supported by the World Bank).<sup>xxi</sup>
- In a major update of policies, In 2007, the PRC introduced regulations to provide uniformity in revenue management and revenue transfers from the power sector to regional and local authorities. The stated policy aims at that time were:
  - To boost regional development around hydropower projects
  - To provide long-term infrastructure financing for reservoir areas, including areas where dam affected people were resettled, and
  - To provide long-term and also retroactive compensation to dam resettled populations.
- Two main thrusts were (i) establishment of a national resettlement fund that has 20-year payment timeframe and offers 600 Yuan per year for 20 years to each household member. This is awarded on top of the statutory one-time compensation payment for land or property recovered by the State, and (ii) updating and standardizing the long-term (and permanent) reservoir area infrastructure improvement funds for hydropower projects that started in 1981.
- Both of these measures are funded by hydropower revenues. The long-term Fund named the Reservoir Area Reconstruction and Development Fund is applied to hydropower projects on the Lancang-Mekong by Yunnan Province and is based on national guidelines.
- Money placed in this Fund is used for various local infrastructure and development investments in the reservoir area, though it is understood the Fund does not support communities in downstream areas. It is important to note that China also has a range of other financing mechanisms, including municipal taxes applied to hydropower that support development in the reservoir area and other areas. Decisions on whether these monies support affected people upstream and downstream are made locally with Provincial oversight.

*Note to the Reader: More in-depth discussion of PRC experience is offered in the Dams and Development Project (DDP) report prepared under UNEP; entitled Compendium on Relevant Practices - 2nd Stage. That document is provided in Volume 2 of the KB-CD. Efforts will be made by ISH in future to get English language translations of many articles by PRC Authors that are only available at the moment in Chinese language.*

China is otherwise an important knowledge sharing partner for MRC Member Country discussions on national-to-local BSM. The MRC Basin Development Strategy sets out a separate process where MRC would engage China on issues connected to transboundary benefit sharing. Any such formal discussions will be separate to the implementation of this work under the ISH Output 4.1c.

## 2.2 EXPERIENCE WITH BENEFIT SHARING IN OTHER REGIONS OF THE WORLD

This sub-section introduces examples of BSM in other regions of the world. A collection of documents on these examples plus others not mentioned here are available to readers in the KB-CD Volumes 2-5.

A general observation to start is (i) while experience varies across regions and countries, the basic thrust is similar, and (ii) there is a rich body of information for MRC Countries to draw lessons relevant to the Mekong.

### 2.2.1 Asia Region beyond the Mekong

Apart from China, two Asian countries most often mentioned in practitioner literature are India and Nepal. Both countries have existing hydropower and are actively developing new large hydropower schemes.

For several years **India** States (equivalent to provinces) have been allocated 10% electricity output from hydropower projects. They derive a financial return from the sale of this power. States in northern India often use a large portion of this allocation to provide free electricity (or subsidize rates) for farmers that use irrigation pumps (tube wells). Indian States can also use the money for any State budget items.

Previously there was no requirement, for example, for Indian States to direct any portion of these funds to project-affected communities. Civil society and public pressure grew to the point where central Government prepared a draft national regulation to provide local benefit sharing. In 2007, the allocation to Indian States was increased to 12% of the generation power from hydropower projects in their jurisdiction. In mind of other successful models to target benefit sharing to local communities using local area development Funds, the central Indian Government also announced plans (via its new hydropower strategy), where:

- Permanent local area development funds will be established on all hydropower projects in future;
- The local area fund will have a multi-stakeholder board composed of representatives of project-affected communities and local governance structures.
- A local government representative appointed by the State will chair the fund;
- Beneficiary preference will be reflected in how the money is spent, and expenditures will be monitored by each State.

As yet, there is limited information on India's experience in implementing these local area development funds in the international (English language) literature and media.

It is also not entirely clear whether the local area funds also apply to existing projects, or whether they will be introduced only for new MOUs; for example, as officials are quoted in the media, "All memorandum of understandings (MOUs) proposed between the Central power generation companies and states like Himachal Pradesh, Uttarakhand and J&K will have a provision of separate local area development funds, besides 12 per cent free power for the States."<sup>49</sup>

The World Bank is supporting the Rampur HEP (a loan extended in 2007) that includes a Local Area Development Fund. In this case the public sector power company, Satluj Jal Vidyut Nigam Limited (SJVN) is developing a 412 MW run-of-river project on the Satluj river in India's Northern State of Himachal Pradesh to feed India's Northern Electricity Grid. Statements by the Company say that innovative benefit-sharing measures have been launched, including the Fund to build community infrastructure in project-affected villages, and provide education support and healthcare for the local people (as reported in 2006).<sup>xxii</sup>

As mentioned in Section 1.2.5, India has prepared draft legislation for revenue sharing in the mining sector. The draft legislation which is generating some controversy proposes 23% of after tax profits of mining companies allocated to local area development funds.

In **Nepal**, the 1992 Hydropower Policy and 1992 Electricity Act requires hydropower projects to pay a royalty to government. In 1999, the Local Self-Governance Act and Local Self-Governance Regulations stipulated that the central government would redistribute part of these royalties to (i) the village development councils in the project area, and (ii) districts the region where the project is located.

While the specific arrangements have evolved over time, since 2004, regulations stipulate for all existing projects above 1 MW generation:

- 1% of the royalty amount collected by the Central government be transferred to the Village Development Committees (VDC) directly affected by the hydropower infrastructure for the sole purpose of expanding village electrification in these VDC areas;

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<sup>49</sup> As reported in the Indian Financial Times. And in articles such as "Displaced families to get stake in hydel projects" Manoj Kumar Tribune News Service, <http://www.tribuneindia.com/2006/20060926/biz.htm#1>

- 12% of the royalty be transferred to District Development Committee (DDC) where the project is located for district development investments, and
- 38% of the royalty be transferred and divided among all other Districts of the development region where the hydropower project is located.

Apart from stipulation that 1% will be dedicated to improving local access to electricity services, the Nepal regulations do not say how the money should be spent within a particular district, only that it must be used to fund development activities and not be used for general administration. Those decisions are left to the locally elected Councils and Committees.

The revenue flows from hydropower have a significant impact in rural areas of Nepal. In some Districts, it was reported the hydropower revenue sharing arrangements represent up to 65% of the District's total revenue from all sources, including government administration and development budgets.<sup>xxiii</sup>

Participants in a national multi-stakeholder workshop in Nepal 2006 gathered to review the status of the revenue sharing reportedly noted that (i) while the funds are highly beneficial and hugely important, there needs to be more transparency in how funds are used (ii) revenue sharing might also be targeted to communities in upstream watersheds of hydropower plants, such as for payment for ecological services, and (iii) the arrangements at that time (in 2006) tended to focus on the powerhouse areas and ignored people downstream who were also adversely affected by the river resource transformations of the hydropower projects. The view was that communities in downstream areas should also be entitled to some share of royalty to help adapt to their permanent change in resource access and guidance should be provided.<sup>xxiv</sup>

#### **A transboundary example in Central Asia**

One example of the complexity of transboundary benefit sharing with hydropower and water resources more generally comes from Central Asia, where two main river systems, the **Amu Darya and the Syr Darya** feeding the Aral Sea are shared by five states **Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan**.

In the Soviet era (pre-1989) there were fixed allocations of water from these river systems for each Republic and regimes for flow regulation in the entire basin. For example, the Kyrgyz Republic, an upper riparian, was allocated 25 percent of the water originating in its territory (for abstraction), including both surface and groundwater. In other words it could internally consume up to 25 percent of its water resources, but had to pass on 75 percent of the resource. Also, in the Soviet era, some 39 large water reservoirs had been built to regulate flows and support diversions, including five major reservoirs in the Syr Darya basin and two in the Amu Darya basin. The water release patterns from these reservoirs (including large hydropower schemes in the upstream countries such as the Toktogul reservoir in the Kyrgyz Republic) were optimized for downstream irrigation during the summer growing season, and to provide storage for drought security.

After the break-up of the Soviet system, controversy arose over conflicting needs for winter-time water releases for hydropower generation, as desired by the upper riparian, and maintaining the summer release schedule for irrigation, as desired by the lower riparian.<sup>50</sup> Because there was no binding interstate legal framework, the Soviet era arrangements came under pressure when newly independent countries sought to maximize water used within their own boundaries.

The five national governments eventually agreed to cooperate on water resource management measures within the framework of what later emerged as the Aral Sea Basin Program (ASBP). An Interstate Agreement was signed in February 1992, expressing the principles of co-operation, management, utilization, and protection of water resources in the Aral Sea Basin and the need for joint measures to address the Aral Sea problem.<sup>51</sup> Recognizing the key role of water storage and hydropower operations in minimizing conflict over

<sup>50</sup> Apart from water rights, regional water and energy trade issues also were included in these discussions about economic cooperation and peace and security in the region after the break-up of the Soviet system.

<sup>51</sup> This agreement established a new Interstate Commission for Water Coordination (ICWC). The agreement also confirmed the existing water allocations to each county as permanent water rights (adopting the formula for water sharing that

basin development, one of the functions of a new Interstate Commission for Water Coordination (ICWC) was to determine and approve the annual water operation strategies of the main reservoirs in the Aral Sea basin to manage operational conflicts between irrigation and hydropower.

The aim was also to broaden cooperation on water and energy management to increase the scope and range of tradeoffs outside water alone.

For example, the 1999 agreement linked the regulation of the Toktogul Reservoir in the Naryn-Syr Darya River cascade to a compensatory scheme for oil and gas transfers. Here, electric power generation in excess of summer demand in the Kyrgyz Republic is sent through the Central Asian power grid to Kazakhstan and Uzbekistan in equal portions. In return (and as compensation for agreeing to a reduction in winter season generation in favour of summer releases for irrigation), the Kyrgyz Republic receives coal, gas, heavy oil, and other types of petroleum products from downstream countries (mainly Kazakhstan).

The policies for the Toktogul Reservoir operation, power transfers, and quantity of resources (oil, gas, etc.) that is received are approved annually by bilateral and multi-lateral committees, which operate within the 1998 Agreement framework. Decisions on day-to-day water releases are made by the BVO Syr Darya (based on irrigation activities and needs in Kazakhstan) and the Central Asian Unified [Electricity] Dispatch Centre (based on regional power dispatch schedules). However, the BVO Syr Darya has no direct authority over Toktogul operations.

The broader picture in this Central Asian region shows that experience and confidence is being gained using different mechanisms, but there are still controversial issues. Consequently, the prevailing view for a number of years after the 1998 Agreement, and possibly still today, was that the mechanisms for interstate cooperation need to be considered as transitional, and be adapted over time to match the constantly evolving political and economic circumstances of the region.

*Note to the Reader: More information on this Central Asian contained in the case study in Volume 4 of the KB CD in the form of a 7 page case study.*

## 2.2.2 Latin-American Region

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The literature shows that Latin America has been pro-active in benefit sharing since the major political-economic transformations in that region, starting in the 1970's. Many Latin American countries have constitutional and other legislative provisions to share a portion of the revenue from hydropower with residents of river basins to advance sustainable development and management of natural resources, and otherwise boost development and enhance poverty alleviation.

Benefit sharing in all resource sectors (especially mining and hydropower) was seen as a political priority in the transition from military regimes to democratically elected governments in the late 20<sup>th</sup> Century.

- In November 2010, representatives of the four MRC Member Countries and MRCS visited the La Plata River basin shared by Argentina, Brazil, Bolivia, Paraguay, and Uruguay. The La Plata is the fifth largest river basin in the world.
- The basin is confronted with many issues on transboundary water resource cooperation. The study visit organized and funded through the ISH included site visits to the Salto Grande, Yacyretá and Itaipu bi-national hydropower complexes on mainstreams of the Uruguay and Parana rivers. There were meetings with Bi-national Commissions established for these projects and also the 5-country La Plata Intergovernmental Coordination Committee in Buenos Aires.

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evolved in Soviet times). It was an important start, but there was growing dissatisfaction, especially by the two upstream states, about accepting the "inherited" water allocations. In May 1999, Tajikistan joined this agreement.



While the objective of the visit was to consider Latin American experience in transboundary water cooperation, where mainstream hydropower is a major consideration, the benefit sharing theme was very prominent and discussed.<sup>52</sup> The Trip Report on the information collected on the visit (material not in Spanish) is provided in the knowledge Base CD Volume CD. A separate CD is also available from ISH with all the documentation, presentations and reports gathered on the La Plata Visit.

As noted in the La Plata Trip Report issued by the ISH in Dec 2010, overall the La Plata visit showed:

- Based on the Latin American experience, national-to-local benefit sharing, was implemented under an explicit national policy and regulations, which clearly state the objectives of the State and mode of benefit sharing to be followed including the revenue sharing formula;
- The impact of the revenue sharing on average electricity tariffs in Latin America was seen to be small – and otherwise it was not a controversial public issue – in fact it was quite the opposite. The revenue sharing enjoyed considerable Public support.
- One lesson drawn from La Plata was the public, as electricity consumers, will support revenue sharing measures that increase tariffs, when it is clearly explained how the money for benefit sharing will be used to support local communities and be shared among river basin residents.
- The impacts of benefit sharing are clearly seen in the development progress on the ground in the municipalities, and sub-regionally in the La Plata countries (projects have been operating for a few decades or more).
- The effect in boosting development was particularly evident at the large Itaipu complex (14,000 MW), even considering that Itaipu is also somewhat a special case because it has an explicit regional development agenda. Revenues from Itaipu fund many enterprise local development programmes, as well as catchment management and conservation programmes.
- In terms of boosting local and regional development, Itaipu revenue is complemented by tourism revenue generated by public visits to both Iguassu Falls and Itaipu. The synergies were well exploited. As a result impact on the local area economy and jobs is enhanced.

Argentina and Brazil have legislation for long-term benefit sharing, in particular the revenue sharing arrangements with locally affected communities, municipalities and provinces / states. The two countries have a slightly different approach.

- In **Brazil**, rather than taxing revenue on the sale of energy, the national Constitution (1988) charges a fee for water used to generate electricity. This is part of a general resource use tax that applies to other resources as well, including petroleum and mineral resources.
  - Under a Constitutional provision revenue sharing is required on major resource development sectors. Law 7990 (December 28, 1989) and Law 8001 (March 13, 1990), stipulate for use of water resources mechanisms are required to share revenue from hydropower projects with a capacity larger than 10 MW. Under Law 8001, the amounts collected are distributed as follows

<sup>52</sup> Among the aims of the study visit were (i) to have technical discussion at the three existing bi-national projects in the La Plata River basin, namely; the Salto Grande, Yacyretá and Itaipu hydropower complexes on mainstream of the Uruguay and Parana rivers. Discuss factors like the project motivations and legal history, the key design and multi-purpose operations features, environment and social mitigation experiences, and otherwise look at these projects through a sustainability “lens” (ii) To have open, informal and wide-ranging discussion with the 5-country La Plata CIC and governing board members of bi-national entities comparing institutional and water governance challenges in each region, including experience with benefit sharing mechanisms, approaches to transboundary water resource conflict avoidance, and the overall trends in bilateral and multi-State cooperation for sustainable management of international rivers, and (iii) to explore the scope for further value-added exchange of experience between the Mekong and La Plata regions on innovative solutions to common challenges.

- 45% (forty-five percent) of income from the water-use tax (some call a royalty for use of water resources) annually to municipalities losing land to reservoir inundation;
  - 45% (forty-five percent) to the state or provincial authorities where the project is located;
  - 10% (ten percent) to the federal government to finance regulatory functions (i.e. 8% to the Federal Electricity Regulatory Agency (ANEEL), and 2% to the Ministry of Science and Technology).<sup>xxv</sup>
- Further legislative updates were provided in 2007, where reportedly Law 9433 (1997) outlines the national water resources policies and guidelines and introduces the concept of payment for water use. In 2000, Law 9984 created the National Water Regulatory Agency increased the amount paid by utilities (based on a reference tariff), from 6% to 6.75% where the additional 0.75% was payment for water use.<sup>53</sup>
  - While the Laws apply to all hydropower projects above 10 MW in Brazil, there is additional specific legislation on the 14,000 MW Itaipu project:
    - In 2009 the tax or royalties for use of water resources at Itaipu were based on a reference of US\$ 4.82/MWh or 0.48 US cents / kwh, linked to average generation costs in the country.<sup>54</sup>
    - Under this formula Itaipu generates about \$US 3.3 Billion/yr in “revenue equivalent” on an annual basis (the maximum generation was 94,685 GWh in 2008).<sup>55</sup>
    - On-site discussions between MRC delegates and Itaipu staff suggested on average, Itaipu thus generates about \$US 400 million in “royalties” (around 12% of the inferred gross revenue).
    - Under the formula mentioned, 45%, or just under \$US 200 million is divided among the 341 municipalities affected by Itaipu and its long reservoir, apportioned to each municipality according to the relative extent of land lost from inundation).
  - In addition to these provisions, hydropower projects in Brazil may also enter into long-term contracts with locally communities (as Itaipu did). These contracts may cover a range of investments, including support for community development and agreements on local hiring policies and employment in project-related activities.
- In **Argentina**, royalties for hydropower are reportedly set at 14% of gross annual revenue generated by law. The Argentine government actually sets the tariff which the national power utility will pay for power from Bi-national project, and thus, the revenue sharing amounts are in effect determined at the State level. What is significantly different to the Brazil case, is in Argentina the revenue from royalties is entirely allocated to Province (s) hosting the project (i.e. no royalty funds flow to the national treasury).
- The royalties from the 1,800 MW Salto Grande project are allocated to three provinces (67% to Entre Rios Province, 27.5 % to Corrientes Province and 5% to Misiones Province).
  - As discussed Section 1 of this Volume, instead of payments to the national Treasury the national benefit of the Salto Grande is seen to be stable, long-term power supply (the debt on the Salto Grande facility was retired in 1994).

<sup>53</sup> The latter amount is paid to the Ministry of Environment to support the implementation of the National Policy on water resources. The 10% to the Federal Government is apportioned as 30% for electricity services supervisory activities, 30% for National Resources Secretariat and 40% for the National Fund for Science and Technology.

<sup>54</sup> Brazil's 50% share of project output in the case of a bi-national project such as Itaipu.

<sup>55</sup> The equivalent cost of energy (Kwh) in Brazil and Paraguay is calculated each year. The equivalent cost of Energy in 2009 was calculated US\$ 37.21 / MWh or 3.7 cents /Kwh.

- Salto Grande estimated the national economic benefit of accumulated fuel savings (assuming the cost of alternative thermal generation in the country) amounted to \$US 40 billion since the Salto Grande project (1,800 MW) started first unit generation in 1979 (about 32 years).
- In **Paraguay and Uruguay** all the revenues generated by the 50% national share of power from Bi-National projects reportedly go to the central government treasury.
  - There was no information available on how central government revenue was allocated or managed, in terms of returns that enabled local / regional revenue sharing.
  - Base on the site discussions, the suggestion was the local and regional benefit on the Paraguay and Uruguay sides was mainly seen as indirect and additional benefits, including local infrastructure investment such as improved roads, stable power supply and jobs.

Laws in several Latin American countries specify payments for managing ecological functions and the environment services transformed by hydropower project must be provided from hydropower revenue. This is on top of support for social development needs of communities that host projects. There are also approaches where the developers are required to negotiate with local communities.

To briefly illustrate:

- In **Columbia**, legislation stipulates that 3% of revenues generated by hydropower projects must be transferred annually to the watershed agency of the dam to fund watershed management activities in the basin working with the basin communities.<sup>xxvi</sup>
  - Funds must be used to protect the environment in the watershed upstream of the dam and in downstream areas influenced by flow changes.
  - Colombian legislation on the management of the environment and renewable resources in Colombia and on revenue transfers from the Electricity Sector to regional environmental agencies and municipalities contained in Law 99 of 1993 and Decree 1933 of 1994 further stipulate that:
    - Another 1.5% of project revenues must be transferred to municipalities bordering the reservoir;
    - Also 1.5% of project revenues must be devolved to the municipalities located in the watershed upstream of the dam – used for infrastructure projects in municipal development plans. Water quality (i.e. sewage treatment projects as well as liquid and solid residue disposal projects) are to be prioritized.
    - For thermal power stations, 2.5% of the revenue is transferred to regional environmental agencies that have jurisdiction where the project is located, and 1.5% of revenue is transferred to the municipality where the plant is located.
- In 1998 **Panama** adopted environmental legislation that requires resource developers and extractors to negotiate compensation and benefit-sharing agreements with the affected population.

### 2.2.3 Africa Region

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The Africa region offers many examples of national-to-local benefit sharing at various stages of consideration and implementation. Africa also has active initiatives aiming to develop, and agree on, more encompassing forms of multi-state cooperation on international rivers.

There is much information in the literature on these efforts that paints a picture of a dynamic, ongoing process. The MRCS itself hosted a 2-day Transboundary Water Cooperation Workshop in Vientiane, Laos from 20-22 January 2010 as one of a series of workshops sponsored by the Ministry of Foreign Affairs of Denmark and Danish Water Forum since 2007. The Workshop had a focus on “Sharing Benefits from Transboundary Water Management” on international river systems in Africa and the Mekong.

Representatives from Africa came from:

- The Nile River basin (9 Riparian States)<sup>56</sup>
- Zambezi River basin (8 riparian States)
- The SADAC region in Southern Africa (15 Member States)<sup>57</sup>

The 12 PowerPoint presentations from the MRC Workshop are provided in Volumes 3 of the KB-CD for the reader's convenience. Volume 2 (has some of the papers).

Transboundary benefit sharing is also being explored in West Africa, which has a number of international rivers including the Senegal river. The International Institute for Environment and Development (IIED) is helping to catalyse a process to consider pilot trialling of BSM in the Senegal River Basin and multi-stakeholder workshops have been held.



An initial step taken by IIED toward this aim was preparation of a report on the experience with displacement of affected people in West Africa over the last 40 years, and an examination of mechanisms for distributing the benefits of dams more equitably and ensuring that affected people are better off. It explains how making affected people one direct beneficiary of dam projects promotes public acceptance, reduces risks to developers and reduces the risk of long term conflicts between those displaced and the villages that host them. (Available in the KB Volume 2)

More recently a series of reports, entitled, "Sharing the water, sharing the benefits: lessons from six large dams in West Africa."<sup>58</sup> The recent publication asks to what extent the affected communities have indeed benefited from the dam and how the multiple positive consequences from water use have been shared between different actors. The report proposes the following lessons that can be learned from these experiences and guide future decision making:

- Involve local people in the benefits the dam creates and in all decisions about its construction, investment, compensation, relocations, etc.
- Replace compensation policies that reproduce previous living conditions with ones that enable local people to adapt to the changes the dam will bring, and to benefit from them.
- Develop local production systems by ensuring access to land and resources in ways that are compatible with both national law and customary practices.
- Establish local regulations in agreement with local stakeholders to enable fair and sustainable use of resources
- Support local people's access to the dam's benefits by establishing preferential local access to benefits such as irrigation and electricity and by creating a local development fund that is financed by the dam's economic activity.

It notes that over 150 large dams have been built in West Africa over the last 50 years. Many more are in the planning stages to meet the region's demands for energy, water and food and their reservoirs will displace many thousands of local people. Success in resettling affected people and in rebuilding their livelihoods has been mixed in the region.

<sup>56</sup> [http://www.nilebasin.org/newsite/index.php?option=com\\_content&view=article&id=71%3Aabout-the-nbi&catid=34%3Anbi-background-facts&Itemid=74&lang=en](http://www.nilebasin.org/newsite/index.php?option=com_content&view=article&id=71%3Aabout-the-nbi&catid=34%3Anbi-background-facts&Itemid=74&lang=en)

<sup>57</sup> <http://www.sadc.int/>

<sup>58</sup> <http://pubs.iied.org/17510IIED.html> and [http://www.iucn.org/fr/propos/union/secretariat/bureaux/paco/programmes/prezoh/gwi\\_dams/gwi\\_ressources/gwi\\_publications/](http://www.iucn.org/fr/propos/union/secretariat/bureaux/paco/programmes/prezoh/gwi_dams/gwi_ressources/gwi_publications/)

*Note to the Reader: A comparative study of BDM status on international rivers in Africa in the 2007 paper, "Benefit Sharing in International Rivers: Findings from the Senegal River Basin, the Columbia River Basin, and the Lesotho Highlands Water Project, Winston H. YU, The World Bank, Africa Region, Sustainable Development Department, 2007". That is in Volume 2-5 of the KB-CD.*

### National-to-local benefit sharing in Africa

Many examples of national-to-local benefit sharing in Africa are pursued with support from IFIs like the World Bank and International NGOs like IIED and IUCN. Two examples of World Bank supported initiative are the Lesotho Fund for Community Development (LFCD) in Southern Africa region and the Bumbuna Trust in Sierra Leone in the West Africa region.

**The Kingdom of Lesotho** set up the Community Development Fund in 1999 co-financed by power and water sale export revenue from the bi-national Lesotho Highlands Water Project (LHWP) and a World Bank grant. The 1986 Treaty between the Governments of Lesotho and South Africa formed the basic agreement between the two States to implement the Lesotho Highlands Water Project (LHWP). The Treaty was amended in 1999 to elaborate mechanisms for the countries to share cooperative gains, instead of only physically sharing water itself.

One motivation for the Lesotho to set up the Fund was, while the overall LHWP (involving multiple dam projects) would contribute to water and income for national economic growth, it was not specifically geared to employment creation and needs of the highland rural poor in Lesotho where dams would be located.<sup>xxvii</sup> Thus in 1999 LFCD was established to promote community-driven development (CDD), employment generation, and poverty reduction targeting poor districts in the Highlands, and also poor peri-urban areas of the city of Maseru, the main urban centre and capital city of the country.<sup>xxviii</sup>

While many initiatives were successfully implemented by the Fund, how the LFCD it was implemented also illustrates avoidable failures that can occur.<sup>xxix</sup> The World Bank ended its involvement in the LFCD in 2003, when M&E reviews rated the outcome as "highly unsatisfactory". One main reason (reports are publicly available on the World Bank website) was the governance arrangement for the Fund were not implemented as planned, and were not demand responsive.<sup>xxx</sup> Specifically:

- A nine-member Board was established to govern the LFCD and four Ministers ran the Fund, which was in contrast to the design team recommendations of having Principal Secretaries, community and NGO representatives on the governance Board.
- Other reasons cited in the M&E report were:
  - Failure to fully test the community driven development (CDD) approaches that were utilized. These CDD approaches were to be the main way to deliver benefits as recommended in the multi-stakeholder consultative process that was set up to inform the Fund design.
  - Lack of beneficiary involvement in producing operating manuals (OMs) for the Fund, and
  - Failure to monitor the impacts of the benefits delivered and changes in poverty levels.<sup>xxxi</sup>

A retrospective comment on the LFCD limitations is also offered by Yu, 2008. That analysis noted the general challenges Lesotho faced at that time were numerous and complex ... " including weak and politicised implementation, low capacity of communities to manage larger construction projects (e.g. regional roads) that the Fund tended to go for instead of the smaller CDD initiatives, the lack of local government structures, a selection of projects that was not demand driven (i.e., they were not based on demonstrated need and beneficiary preference), lack of technical support to communities when implementing initiatives, and lack of an overall monitoring strategy."

The LFCD experience thus illustrated the importance of establishing and implementing sound institutional procedures and appropriate governance arrangements to manage such Funds.<sup>xxxii</sup>

In **Sierra Leone** the Bumbuna Trust is planned for the 50 MW Bumbuna hydropower project, which became operational in early 2010. During the project design stage in 2004-2006, the Bumbuna Trust was conceived as a multi-purpose fund to support long-term benefit-sharing arrangements with local communities as well as programmes for sustainable social and environmental management of the Bumbuna project.

Financing the Fund by revenue sharing and also carbon financing was seen as way to relieve government budgets of the responsibility (the post-war government had little money).<sup>xxxiii</sup>

The 50 MW Bumbuna project is the first of a potential five-stage 275 MW development on the Seli River that flows to the Atlantic. Construction was 85% completed when the project was abandoned in 1997 due to the escalating rebel-war. After the restoration of peace in 2002, the international community pledged to support completion of the Bumbuna project as a post-war reconstruction priority.<sup>xxxiv</sup>

- As part of that effort, two stages were planned to establish the local community benefit sharing mechanism. The first stage was to undertake the pilot Upper Seli Community Development Initiative (USCDI) under a World Bank grant before the project became operational. This became effective in 2005, provided funding of just under \$US 2.0 million.
- The USCDI was developed in consultation with the local communities.<sup>xxxv</sup> This approach was to deliver a menu of community selected micro-projects and youth capacity building initiatives at the district, ward and community levels. It was targeted to local communities who lived in the immediate catchment area and upstream and downstream of the project, who were not part of the compensation and resettlement programmes, but were adjacent to the communities who were.<sup>59</sup> In the post-war context that was a source of local tension.
- The USCDI was also test the delivery of benefits via CDD mechanisms for the longer-term Bumbuna Trust, assist with CDD capacity building and test governance arrangements for the Bumbuna Trust.

When the project was approved in 2003, it was anticipated the Bumbuna Trust would come into operation when the project was commissioned, financed by two main sources (i) certified emission reduction credits (CERs) under the Clean Development Mechanism (CDM) and (ii) revenue from the sale of power.<sup>60</sup> To facilitate the carbon financing, an Emission Reduction Purchase Agreement (ERPA) was successfully negotiate and signed between the Government of Sierra Leone and the Government of the Netherlands in 2005.<sup>61</sup> The ERPA was to provide financing of close to \$US 2.0 million annually up to 2012, with the stipulation that all money derived from the ERPA was to be used for local development via the Bumbuna Trust.

The Bumbuna Trust itself is to be governed by a multi-stakeholder Board and link the traditional tribal governance systems to the modern Council system of elected representatives. The Trust was conceived as operating different grant-financing windows.<sup>xxxvi</sup>

- The benefit-sharing window supporting community-managed projects (e.g. for village micro-infrastructure such as local roads, schools, health posts, market areas, etc., and for grants to youth groups for social activities, training and trade skills development).

<sup>59</sup> The USCDI would run in parallel with the compensation, resettlement and livelihood restoration programs for the adjacent, directly affected communities

<sup>60</sup> Core long-term financing for the Bumbuna Trust was also to come from the Bumbuna revenue stream, which in the World Bank Project Appraisal Documents) was provisionally estimated as 0.5 cents US/kwh.

<sup>61</sup> The CDM is under the Kyoto Protocol. Hydropower is the largest single activity financed under the CDM. As of October 2009 the situation was reported as :

- 1386 hydro projects with an installed capacity of 57,901 MW were registered or seeking CDM registration
- 910 (35,455 MW) of these hydro projects are in China
- 640 (51,065 MW) of hydro were large projects (greater than 15 MW capacity)
- 449 (70.16%) of these large projects are in China

- Thus will cover all communities in the wider project area (taking over from the USCDI) and cover the resettled communities.
- The basis for accessing Trust funds would be a grant application procedure. Capacity in the form of trained community coaches would be provided support to prepare grant applications. Implementation would be linked to government support services, as needed, but otherwise CDD approaches would be followed with independent CSO/NGO monitoring.

Other programme windows proposed for the Bumbuna Trust to support included:

- A new Bumbuna Watershed Management Agency (BWMA) to deliver land and soil management, agro forestry, and agriculture transformation programs in the catchment, which have combined aims to modernize agriculture practices, raise farm incomes, and provide erosion and sediment management to minimize reservoir sedimentation; as well as fisheries programs for communities in the reservoir and downstream of the dam;
- A conservation offset, the Bumbuna Conservation Authority (BCA) to support a community-managed protected wildlife area in the catchment for biodiversity conservation (Financed initially by a GEF project);
- Another further grant window to fund rural electrification in the towns immediately around the project including the district Headquarters (that had its power supply destroyed in the war).

The concept was that over time, additional grant windows could be considered, such as for small-scale renewable options for off-grid areas and revolving rural micro-credit schemes. Other financing partners would also be sought. A further line of thinking was the Trust would eventually evolve into a River Basin Organization and encompass benefit sharing for all five-stage 275 MW development on the Seli River.

There were some hiccups. The original completion date for the Bumbuna Project was moved from 2007 to 2010 due to a variety of issues unrelated to benefit sharing arrangements. As a consequence the benefit sharing financing needed to be reformulated, especially because the window for implementing the carbon financing deal with the Government of the Netherlands which was tied to the Kyoto Protocol schedule had lapsed.

The Government of the Netherlands reluctantly redirected its carbon funding support elsewhere to meet its own obligations under the Kyoto Protocol to fund emission reduction initiatives in developing countries (the Bumbuna power displaced imported oil used in diesel generation).<sup>xxxvii</sup> A refinancing plan for the Bumbuna Trust was thus needed. The USCDI itself is today proceeding under a rescheduled and restructured World Bank grant. Arrangements to establish the Bumbuna Trust were reportedly made in 2010 and a first stakeholder meeting held, though there are no easily accessible reports to confirm if the Bumbuna Trust is functional as yet or the status and current thinking otherwise.<sup>xxxviii</sup>

#### 2.2.4 Developed Country (OECD) Experience

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It is important to note the situation in OECD countries with hydropower is somewhat different than developing countries for two main reasons. Firstly, most OECD countries developed their large hydro project resource potential post World War II up until the 1980's and 1990's. The current focus today in hydropower in many OECD countries is on hydropower refurbishment and uprating (including climate proofing such as enlarging spillway capacities) plus adding other renewable energy generation technologies to their grid systems using subsidies to complement hydro and reduce fossil fuel power generation.

Secondly, the OECD countries as a group generally, had more resources to invest in the indirect and additional benefits associated with hydropower, relative incomes in rural areas are much higher, and livelihood dependence on river ecosystems is lower. Thus there is slightly a different context for benefit sharing.

Two notable exceptions in the OECD are Canada (about 60% of the power generation in the country is by hydropower, serving Canadian and United States power markets) and Norway (over 99% of power generation by hydropower for domestic and export power markets in Europe).<sup>xxxix</sup>

#### □ **Columbia Basin Trust (CBT) in Canada**

A leading example of a basin-level benefit sharing programme on an international river system is the Columbia Basin Trust (CBT) in the Province of British Columbia in western **Canada**.<sup>xi</sup> The Columbia River Basin Treaty between the Government of Canada and the United States was under consideration from the mid-1940's, and eventually implemented in 1964. The Treaty stipulated the mode of development of large dams on the Canadian side of the border. It was a bi-national benefit sharing arrangement, details of which summarized more in the article by (Yu, 2008 provided in Volume 2 of the KB).

Under the Columbia Treaty, the United States makes payments to Canada to regulate the large dams in Canada in ways that are beneficial to the downstream hydropower projects in the USA. Canada later transferred its obligations under the Columbia Treaty to the Province of British Columbia, which owns and operates all hydropower facilities in the upper Columbia basin, through the provincially-owned BC Hydro.

By the early 1990's, it was apparent to communities living in the river Basin in Canada that the principal benefits from upstream storage dams in Canada (built in their locality) were conferred upon major regional population centres in the USA and Canada, where power services were delivered.

At the same time, the local communities in dam-affected areas felt they received little in the way of direct economic benefits. The residents in the basin in British Columbia (about 160,000 people today) felt there was a lack of prior consultation in decisions about both the development and operation of dams in their area (including 2,300 residents at that time who were displaced by flooding of their communities and farms including 60,000 ha of high value land when reservoirs were created). Numerous indigenous First Nations' cultural and archaeological sites were also submerged.

The communities in the basin (in British Columbia) finally came together in the early 1990s and had a series of demonstrations to petition to BC Provincial Government for recognition of what they called "the injustice of the situation".<sup>xii</sup> They coordinated their petition efforts at the regional, district and tribal council levels under the Columbia River Treaty Committee. Under this growing political pressure, the Province of BC eventually agreed to set up the Columbia Basin Trust (under the CBT Trust Act, 1995), as a mechanism to share a portion of hydropower revenues from the hydropower projects in the basin in BC (exploring power to the USA and serving and BC electricity consumers) as well as the payments for downstream flow regulation that the Province received annually from the United States.<sup>xiii</sup>

The specific aims of the CBT, as noted on its website are to "... support efforts by the people of the Columbia Basin to create a legacy of social, economic, and environmental well-being and to achieve greater self sufficiency for present and future generations." The CBT also functions as a basin-wide public monitoring mechanism publishing annual reports to Residents of the Basin on the state of Basin, with indicators to illustrate changes in the ecological, economic and social health of the basin.

- When it was formed, the Columbia Basin Trust received an initial \$295 million endowment from the Province of BC.
- Of this amount, \$45 million was reinvested for the benefit of Basin residents through a range of community development and grant-based programs (e.g. short-term cash investments, business loans, real estate ownership, and venture capital projects).
- In addition, the CBT receives \$2 million per year (from 1996 to 2012, paid by Provincial royalties charged on generation reflected in the power export tariffs).



- The Province of BC committed to transfer a further \$250 million to an entity called the Columbia Power Corporation (CPC), a specialized equity vehicle, which is the CBT's Joint Venture Partner in power projects in the Basin.
- From the CPC, 50 % of the net profits go to the CBT. This is to be spent on social, economic and environmental benefits for the residents of the Basin. The delivery of benefits under the CBT is community managed with an elected Board of basin residents.

*Note to the Reader: Details on the Columbia Basin Trust in the Canadian Province of British Columbia and the benefit sharing programmes it funds, its governance structure, Charter and examples of the annual reports to Residents of the Basin are provided in Volume 2 of the KB-CD. These are otherwise available at the CBT website <http://www.cbt.org/>*

#### □ Other Canadian examples

There are many examples of revenue sharing and equity participation in the Canadian provinces of Quebec (Quebec Hydro) and Manitoba (Manitoba Hydro) on projects that supply provincial demand and export power to the United States. And as noted in section 1.4.3, Quebec has arguably one of the most extensive regimes for revenue sharing in the world with multi-billion dollar arrangements with local indigenous communities and equity sharing in hydropower projects.<sup>62</sup>

One example of equity sharing is on the Eastmain-1-A / Rupert Hydropower Project Agreement between the James Bay Cree and the Government of Québec. Before signing in 2003, a referendum was held among Cree community groups, 70% of whom voted in favour of the agreement.<sup>xliii</sup> Only then did the project proceed to full feasibility and EIA study. At the start the community will have a 51% equity share, but ultimately all equity will be transferred to the community.

The Compendium on Relevant Practices - 2nd Stage, Final Report (2007) for the Dams and Development Project (UNEP) in Volume 2 provides case studies of a number of Canadian projects including:

- i. Columbia Basin Trust: on the Duncan, Keenleyside and Mica dams
- ii. Hydro-Québec's approach on partnership with aboriginal communities: The Minashtuk Project
- iii. Hydro-Québec's approach on partnership with aboriginal communities: The Toulmoustouc Project
- iv. Paix des Braves agreement between the Government of Québec and the Grand Council of the Crees,
- v. The Eastmain-1 Project and the Eastmain-1-A and Rupert Diversion Project

#### □ Norway

Norway derives virtually all its national power supply from hydropower and also exports to other Nordic countries to enable them to displace fossil generation and to NordPool, which is connected to northern European grids. This interconnection enables countries such as Denmark to have extensive wind power and to maximize other RE sources. When the wind dies down in Denmark, it turns to NordPool (and Norway) to import hydropower. This is an example of regional-level cooperation for power exchange to enable multiple regional benefits from maximizing indigenous RE sources.

Norway is also relatively unique in the sense there was little resettlement in its hydropower development over the years due to its geography. Generally the large storage projects are located in remote and sparsely populated mountain areas, whereas hydropower projects in the more populated lowland areas are typically run-of-river, and many dams are part of the regulation schemes for the existing natural lake systems and designed also for flood management.

<sup>62</sup> As discussed in Section 2, Hydro Quebec adopts a triple bottom-line approach to hydropower (the social, environmental and economic triple bottom line). What is important is social aspect comes up first for in-depth consideration. Hydro Quebec negotiations with local communities for acceptance of the project as a first step; project-specific negotiations around benefit sharing are primary mechanisms for this, and communities eventually vote to accept or reject the proposals before them.

Norway is also a pioneer in many different forms of national-to-local benefit sharing with affected communities and river basin residents. Municipalities where hydropower projects are located receive income from a variety of sources. These include:

- Taxes and fees paid to regional and local authorities (from taxes on profits by power companies, licence fees and a resource use tax);
  - The resource use tax is calculated on the basis of the average power generation from the plant over the last seven years.
  - The rate was 0.172 ¢ per kWh in 2004 of which 74% goes to the municipality;
- Equity sharing (revenues received by counties and municipalities in the form of dividends, many municipalities have equity shares in hydropower projects);
- Property taxes (most municipalities levy an annual municipal property tax based on 0.7% of the market value of the power facilities);
- Preferential electricity rates (for municipalities that host hydropower projects); and
- Business development funds (municipalities are entitled to receive from the electricity production company a non-recurrent amount to be used in a local area business development fund).

The Norwegian legislation has a variety of measures that explicitly recognize project-affected people and populations of municipalities in which water resources are exploited must receive a share of the project benefits, over and above mitigation and compensation measures.<sup>xiv</sup>

*Note to the Reader: The case study report on hydropower in the Glomma Laagen River Basin (prepared in 2000 by Norwegian interests in a national multi-stakeholder process facilitated by the World Commission on Dams) looks in depth at the Norwegian history of hydropower and river basin management and provides considerable detail of the various benefit sharing measures. Volume 5 also contains a summary article on the Norwegian legislation.*

## 2.3 SUPPORTING ACTIVITIES OF INTERNATIONAL BODIES AND ORGANIZATIONS

United Nations Bodies, international development organizations (IFIs), international non-government organizations and associations all pro-actively support the introduction of benefit sharing in resource extraction and management sectors today, not just hydropower.

### United Nations Bodies and Affiliates

- UNEP, World Commission on Dams and DDP
  - As noted, the World Commission on Dams (2000) in its final Report Dams and Development: A New Framework for Decision-Making captures emerging trends in benefit sharing in two of its seven strategic priorities:
    - SP-5 “Recognizing entitlements and sharing benefits”, on sharing with local communities; and, SP-7 “Sharing rivers for peace and development”, on sharing between riparian states. The texts of the WCD Strategic Priorities relevant to benefit sharing are in Volume 2 of the KB-CD.
    - One policy principle of Strategic Priority 7 of the WCD, “ Riparian States go beyond looking at water as a finite commodity to be divided and embrace an approach that equitably allocates not the water, but the benefits that can be derived from it. Where appropriate, negotiations include benefits outside the river basin and other sectors of mutual interest”.
  - The UNDP sponsored Dams and Development Project (DDP) was a follow-up to the WCD. It highlighted regional experience in benefit sharing on hydropower projects and brought together a

number of good practice examples.<sup>63</sup> Examples of benefit sharing are in the DDP Compendium of relevant practices for improved decision-making on dams and their alternatives (Volume 2).

□ CBD & RAMSAR

- UN Convention of Biodiversity CBD and other UN-supported or accredited bodies such as **RAMSAR** provide a range of guidance CBD focusing on access and benefit sharing (ABS) relating to plant genetic resources. The CBD is supporting a number of global and regional initiatives to develop the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity.<sup>xlv</sup>
- The CBD describes the **Nagoya Protocol** as “an international agreement to share benefits from use of genetic resources in a fair and equitable way, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding, thereby contributing to the conservation of biological diversity and the sustainable use of its components.”
- The Protocol was adopted by the Conference of the Parties to the CBD at its tenth meeting on 29 October 2010 in Nagoya, Japan.
- A number of regional bodies in Asia also support dissemination of information on access and benefit sharing on CBD topics.<sup>64</sup>
- RAMSAR also has a focus on benefit sharing related to the management of wetland areas and IWRM river basin management, and also looks holistically at opportunities such as benefit sharing with local communities in wetland-related ecotourism.

Other UN affiliates such as the **FAO** support the introduction of benefit sharing in forestry, ecotourism, fisheries and agriculture sectors. The FAO indicates it is actively working to address some of the shortcomings that have arisen in the new multilateral system for ABS relating to the FAO International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). This underlined the complexity of some forms of regional and international benefit sharing, and the time it takes to reach Agreements.<sup>65</sup>

### 2.3.1 INTERNATIONAL NGOS, CSOS AND INDUSTRY ASSOCIATIONS

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A number of international CSO and NGOs are proactively promoting benefit sharing in various resource sectors. These initiatives are important in early stage awareness raising and knowledge dissemination and to help catalyze and support government action. To illustrate:

□ INGO/CSOs

- **WWF** is supporting international efforts in all sectors. In the Mekong, WWF is collaborated by providing financial support to the grant programme of the Viet Nam benefit sharing trial on the A’Vuong hydropower project seeking to bring upstream and downstream issues into the picture.
- **IUCN** is active in benefit sharing in all resource sectors. In the water sector, in 2008 IUCN produced a guideline book called “Share” as part of the Water and Nature Initiative (WANI) series. As the IUCN website on this notes:<sup>66</sup>

<sup>63</sup> <http://www.unep.org/dams/> and <http://www.unep.org/dams/documents/default.asp?documentid=642>

<sup>64</sup> [http://www.aseanbiodiversity.org/index.php?option=com\\_content&view=article&id=456&Itemid=191](http://www.aseanbiodiversity.org/index.php?option=com_content&view=article&id=456&Itemid=191)

<sup>65</sup> For example, despite the intuitive appeal of local to national benefit sharing on international use of genetic resources, achievements under the Treaty are limited to voluntary donations by a very few number of Contracting Parties and International Organizations. <http://www.evb.ch/en/p25019092.html>

<sup>66</sup> <http://www.iucn.org/about/work/programmes/water/resources/toolkits/?4916/Share--managing-waters-across-boundaries>

- “SHARE uses case studies from around the world to describe the benefits to be gained from cooperation and the challenges of constructing legal frameworks, institutions, management processes and financing, and partnership strategies to govern transboundary waters equitably and sustainably.
- Share presents practical tools in plain language to help practitioners and stakeholders conceptualize and implement cooperative, participatory and sustainable water management. It emphasizes the value of information, communication, institutions and adaptability.
- Share also underscores the broad range of benefits that can be derived through cooperative management of international rivers and the need for equity in benefit sharing, particularly with regard to project-affected people.”

*Note to the Reader: A PDF copy of the IUCN Publication “SHARE” is provided in Volume 2 of the KB-CD.*

- **The International Institute for Environment and Development (IIED)** – as noted earlier in Section 2.2.2 the IIED is supporting a process of awareness raising on benefit sharing on large dams in West Africa, with a view to helping to establish the first pilot project in that region.
- The International Hydropower Association (IHA)
  - The **IHA** is a UN affiliate body formed under the auspices of the UNESCO 1995. The IHA has members in more than 80 countries drawn from organisations and individuals in industry, international organisations, governments, scientific and academic institutions, and civil society.
  - IHA states one of its purposes is to "address the role of hydropower in meeting the world’s growing water and energy needs as a clean, renewable and sustainable technology".
  - As noted in Section 1.3.3 the Hydropower Sustainability Assessment Protocol is accepted as one of the main, new tools to assess what makes hydropower sustainable. The Protocol was first developed by the International Hydropower Association (IHA) in 2004, and then elaborated in a multi-stakeholder international process in 2010 .<sup>xlvi</sup>
    - The Protocol assesses the four main stages of hydropower development: Early Stage, Preparation, Implementation and Operation. The assessments rely on objective evidence to create a sustainability profile against some 20 topics depending on the relevant stage of hydropower, covering all aspects of sustainability.
    - As one of the topics, the Protocol assesses what additional benefits derive from hydropower projects and the degree of sharing of benefits, which is defined as going beyond one-time compensation payments or resettlement support for project affected communities.
      - The Protocol defines benefit sharing in terms of (i) equitable access to electricity services
      - ii) non-monetary entitlements to enhance resource access, and (iii) revenue sharing.
    - The IHA notes that intention of the Protocol is that opportunities for additional benefits and benefit sharing are evaluated and implemented, in dialogue with local communities and basin residents, so that benefits are delivered in a manner that enhances public acceptance.

*Note to the Reader: Sections of the IHA Protocol on introducing and implementing benefit sharing at each stage of the project cycle are contained in Volume 2 of the KB-CD for ease of access.*<sup>67</sup>

<sup>67</sup> The full hydropower sustainability assessment protocol is at <http://hydrosustainability.org/>

□ Other Intergovernmental organizations

- Groups such as the International Commission on Large Dams (**ICOLD**) and the International Commission on Irrigation Development (**ICID**) and the International Energy Agency (**IEA**) actively support benefit sharing on hydropower projects as good practice.
  - The IEA refers to good practice on benefit sharing on hydropower.<sup>xlvii</sup>
  - ICOLD and CHCOLD (the China branch of ICOLD) noted benefit sharing with local communities was key to sustainable hydropower in the Beijing Declaration adopted at the UN Symposium on Hydropower and Sustainable Development, Beijing, China, 29 October 2004
    - The reference to benefit sharing was in relation to resolutions on how to implement sustainable hydropower policy.<sup>68</sup>
    - “With respect to social aspects, we note that the key ingredients of successful resettlement include minimization of resettlement, commitment to the objectives of the resettlement by the developer, rigorous resettlement planning with full participation of affected communities, with particular attention to vulnerable communities. We are encouraged by the trend of some governments to go beyond good practice resettlement **by providing benefit sharing with host communities, and call on governments to consider incorporating such approaches in their legal and regulatory frameworks.** We further call upon Governments and regional and local authorities to accord special consideration to culturally sensitive areas.”
- These organizations see BSM as a way to advance public acceptance of sustainable hydropower projects, rather than hinder infrastructure strategies of countries.

### 2.3.2 INTERNATIONAL DEVELOPMENT AND FINANCIAL COMMUNITY

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The international financial community involved in project lending for hydropower is supportive of benefit sharing and support BSM adoption in various ways from policy to practice, as part of their operations.

□ International Financial Institutions

- **World Bank** – The World Bank has helped to catalyse national efforts on World Bank-supported dam projects in the past decade. These include the formative Bumbuna Trust in Sierra Leone and Lesotho Fund for Community Development (LFCD) noted in Section 2.2. These initiatives are valuable not only in offering good practice, but also offering practices to avoid, such as ensuring revenue sharing fund have genuine multi-stakeholder governance as in the Lesotho Highland example.

Other activities of the World Bank relevant to the KB objectives include:

- The World Bank has been compiling and disseminating emerging good practice. One example is the desk study, 'Benefit Sharing from Dam Projects', in 2002 that drew on 11 case studies from Canada, China, Latin America, Norway and Southern Africa.<sup>xlviii</sup> Most are hydropower projects. The principal author updated the Deck study in 2007 as input to the DDP Compendium.<sup>xlix</sup>
- More recently, as part of scaling-up its investments in hydropower projects globally the World Bank has embarked on a new program of case studies and preparation of a toolkit for operational staff and client governments.<sup>1</sup> In 2009 World Bank publication “Directions in Hydropower”

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<sup>68</sup> <http://www.icold-cigb.net/pagearticle.aspx?ssmenu=210&numarticle=2023&codeouverture=2&urlrubrique=&taille=420>

identified the sharing of the hydropower benefits of development across all stakeholders as a key criterion for sustainable hydropower.

- World Bank staff also produced a number of key documents on benefit sharing, such as those referred to in the KB-CD, especially on transboundary water cooperation. Some key documents are provided in Volume 2 of the KB-CD.<sup>69</sup>
- **Asian Development Bank** - As noted the ADB is supporting knowledge development and dissemination on a number of aspects of benefit sharing.
  - The ADB has Technical Assistance Projects to help Asian region countries introduce benefit sharing mechanisms for people adversely affected by hydropower projects (as discussed elsewhere in Volume 1);
  - The ADB is also collaborating with MRC and WWF on the RSAT where benefit sharing is one of the 11 assessment topics, namely "*TOPIC 8: Sharing of benefits and use of innovative financing measures for sustainability (local and transboundary)*, as discussed in Section 1.3.3.
- OECD Bilateral Agencies - these development organizations directly and by virtue of support for WCD in EU Directives embrace and promote BSM in a number of sectors.

Further examples are provided in the documents in the KB-CD Volumes, as listed in Section 5.

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<sup>69</sup> Such papers note (Wu, 2008) that despite the intuitive appeal of benefit sharing, clear benchmarks and good practices in structuring agreeable benefit sharing arrangements are lacking. Lessons from past experience are critical for guiding emerging regional institutions and potential water-related investments.



Benefit sharing applies at different scales in the Mekong (e.g. regional, basin, national and local scales).

Local mechanisms for benefit sharing enable communities to implement local actions they want to balance their own local development opportunities and risks arising from hydropower; much like MRC Counties seek to balance opportunities and risks at the regional scale through transboundary benefit sharing.

### 3 TEN FREQUENTLY ASKED QUESTIONS ON BENEFIT SHARING (FAQ)

This Section offers 10 FAQ as a starting point for dialogue. These particular FAQ mainly concern national-to-local forms of benefit sharing.

- An updated FAQ list can be prepared by ISH to record ongoing discussions with NMCS, MRCS and national line agencies. This may be useful to keep everyone up-to-date with access to the same information, and also allow everyone to see the sort of questions their colleagues in other countries are asking;
- Other FAQ can be identified, for example (i) in dialogue processes under this Output (ii) from the regional workshops, which will bring in a wider range of MRC stakeholders and practitioners, and (iii) from the BSM study tour (s) to see how things work on the ground;
- FAQ may also come from the Questionnaire provided in Annex 2 of this Volume. It is proposed that the national consultants engaged by the ISH (see Annex 1 TOR) would survey a number of MRC stakeholders in each country to ask what they regard a priority information needs on BSM.
- In addition, if NMCS wish, more detailed categories of FAQ can be introduced later in dialogue processes.

These initial 10 FAQ below reflect the sort of questions that NMCS and others already directed to the ISH in 2010 and 2011, such as the questions noted in previous TRG Minutes and ISH AC Meeting Minutes.

Both short and longer answers are offered for each FAQ.

#### Q1. WHAT IS THE DIFFERENCE BETWEEN COMPENSATION, LIVELIHOOD RESTORATION AND BENEFIT SHARING?

This question is frequently asked by hydropower developers and electricity utilities. It is linked to the underlying question – is benefit sharing really needed, if resettlement compensation policies and investments in indirect benefits are already made, such as local roads and job creation?

- The short answer is:

- Benefit sharing mechanisms enable societies to equitably spread both the benefits and costs of hydropower development within society, over the long-term. Resettlement compensation support involves one-time or short term payments in the implementation phase of projects;
  - Hydropower may impact a much larger number of people in varying degrees, and certainly many more people than those resettled. Sustainable hydropower by definition looks beyond the resettlement and livelihood restoration measures.
  - Measures to assist other communities impacted by resource transformations of hydropower, including those who are receiving a range of indirect benefits are highly positive, but they are often limited in scale and duration and may be diffuse.
  - Explicit and clearly recognizable measures for benefit sharing are today seen as a key ingredient of sustainable hydropower, especially to provide assurances of social advancement for local communities and sustainable regional benefits through a systematic and coordinated approach.
- A longer response is:
- The longer answer links to discussions about evolving good practice in sustainable hydropower development and management, and fundamentally, government improving its capacity to respond to what people collectively expect from inclusive and mutually beneficial forms of water resource development in the 21st century, where people are not left behind.
    - There is no doubt that practices have been improving around all the sustainable dimensions in hydropower (e.g. improving the social, environment and economic performance of hydropower). It is fair to say that practices today are not the same as practices 20 years ago in most Mekong countries.
    - All Mekong countries today have laws that require project capital budgets to pay for compensation for land or property recovered by the State from local communities, often as one time payment, or in short term payment schedules.
    - Some Mekong projects have gone further to introduced livelihood restoration or even enhancement programmes that may extend for a given period of time after the project completion. However, livelihood restoration programmes are not standard practice. Often livelihood restoration programmes occur only on donor supported hydropower projects, and in most cases they not sustained over the long term, even though evidence on the ground suggests it can take a decade, or more, to fully restore some livelihoods.
    - It is also fair to say some Mekong Governments have been gradually increasing their attention to indirect benefits of hydropower and to maximizing what are today called the additional benefits, which hydropower may bring to boost local and regional development. Experience around the world shows these additional benefits can be significant, if and when they are systematically exploited in a collaborative way, and funded in a sustainably manner.
    - Nonetheless, there is a mixed picture on the ground concerning demonstrable improvement in income and welfare of people in rural situations who host, or otherwise are affected by the resource transformations of hydropower during construction and operation. The picture varies from project to project (and all too often depends on who the financing partners are, and thus what countermeasures are used).
  - Benefit sharing looks beyond resettlement issues alone. It recognizes that fact that measures for compensation and livelihood restoration generally apply to a small percentage people, while a far greater number of people may be impacted in varying degrees by hydropower construction and operations. Moreover, there are frequently disputes over what degree of impact is actually felt in different locations outside resettlement areas and resettlement host communities.



- An explicit and systematic approach to local benefit sharing helps address this common situation and achieve a number of important shared development aims. To illustrate, the following is a list of the objectives of local benefit sharing extracted from Article 5 of the draft Decree law on Benefit Sharing in Viet Nam, mentioned in Section 2.1.1:
  - Ensuring that people who permanently give up land or natural resource access for investments in hydropower are first among the beneficiaries of hydropower projects;
  - Ensuring that communities that host hydropower projects in their locality become long-term partners in sustainable management of hydropower assets;
  - Ensuring that communities receive financial incentive for helping to maintain revenue flows from hydropower assets over the long-term by taking local actions in land-water management that help to manage the physical sustainability of project outputs over time;
  - Ensuring that financing mechanisms for payment of ecological services of benefit to affected communities are available, including local actions which contribute to sustainable management of catchments, local biodiversity and headwater forests;
  - Ensuring that investments supported by revenue-sharing funds raise income levels of adversely affected communities to at least average provincial levels, and meet evolving local development, cultural and welfare needs of communities hosting the project;<sup>li</sup>
  - Ensuring that investments made with revenue sharing funds reflect beneficiary preferences and are awarded on a grant-application basis or equivalent methods using a bottom-up process offering choice;
  - Ensuring that preparations for long-term benefit sharing start in early stages of planning and project design to help ensure (i) least-cost approaches to benefit sharing are identified, and (ii) opportunities to built-in physical flexibility to re-balance hydropower operation over time to meet future priorities are provided;<sup>70</sup>
- Benefit sharing provides a systematic framework to ensure that large national investments in water infrastructure bring maximum long-term returns to local and regional development in a sustained way. At the local level, mechanism allow beneficiaries to define priority needs to take actions that balance their own development opportunities and risks, much like MRC Counties seek to do at the regional level through transboundary benefit sharing.

## Q2. CAN DEVELOPING COUNTRIES REALLY AFFORD TO INTRODUCE BENEFIT SHARING MECHANISMS?

This question relates to concerns often raised that benefit sharing mechanisms can be complex, difficult to implement and require institutional capacity. Moreover, in developing country situations government budgets are limited, plus Governments are constantly under pressure to keep electricity tariffs low. It recognizes that sharing of monetary benefits (e.g. via revenue sharing ) will ultimately impact on the electricity tariffs.

□ The short answer is:

<sup>70</sup> This refers to, for example, incorporating bottom flow outlets in dams to provide flexibility to operate with a wider range of downstream release patterns. This will enable regulators to accommodate findings of scientific environmental flow assessments and establish consensus on re-balancing economic, environment and social factors. International experience shows that flexibility the in operating strategy for the reservoir is important as conditions and development priorities within the basin evolve –given the long economic life of hydropower assets. As discussed in the policy review, this can also include consideration of other steps like installing fish-friendly turbines to reduce fish mortality. This cost additional money up-front, but can have returns in terms of the increased value of fish catch and biodiversity conservation.

- Benefit sharing is equally important in developed and developing country situations.
  - Benefit sharing mechanisms are especially important in river basins with large rural populations who depend on rivers for livelihoods, nutrition, health and welfare, where hydropower brings significant resource transformations.
  - There is no evidence to suggest benefit sharing reduces, or impinges on the development of hydropower and sustainable operation of hydropower. In fact, the evidence is quite the opposite.
  - Benefit sharing reduces risks for all stakeholders helps reduce controversy and contributes to more constructive dialogue. All things considered, government is more likely to gain public support for hydropower projects, and investors are more likely to commit financing.
- A longer response is:
- The examples in Section 2 showed the positive development outcomes achieved with benefit sharing in developing country situations with high levels of absolute and relative poverty. Mekong governments, including China today acknowledge that closing the growing income gap between rural and urban areas is a new development priority.
  - In the hydropower sector, benefit sharing is founded on universal principles of fair and equitably sharing of benefits and costs between local communities (mainly rural) and river basin residents with the main beneficiaries of hydropower (e.g. national electricity consumers), the majority of which may be located far away from, or even outside the river basin where the main project impacts are felt.
  - Societies can use benefit sharing mechanisms to materially accelerate and underpin current efforts to diversify, boost and otherwise modernize the local economies of rural areas. Many different types and forms of benefit sharing (as identified in Section 1) can be systematically included under a benefit sharing package tailored for local-area develop. Some elements may have a short-to medium-term focus on helping to meet poverty alleviation targets.
  - The presence of long-term local benefit sharing mechanisms provides local communities with the confidence, time and material support they need to restore livelihoods, and the means to take advantage of new development opportunities that hydropower may unlocked for them (e.g., via long-term financial support from grant programmes funded by revenue sharing mechanisms);
  - Given the scale of national investments in hydropower (regardless of whether public or IPP financing models are used), maximizing the contribution that large hydropower makes to local and regional development is not only consistent with developing government strategic goals and policies, but also widely supported by MRC stakeholders.

### Q3. WHAT IMPACT DOES REVENUE SHARING HAVE ON ELECTRICITY TARIFFS?

Many people ask this questions to help understand the sort of trade-offs involved. While policy-makers may wholeheartedly support benefit sharing, they need to know how measures like revenue sharing will impact on electricity tariffs, and as a consequence, public support for them.

- The short answer is:
- Experience around the world shows the general public will support an increase in electricity tariffs of a reasonable amount if (i) the money is used to fairly distribute benefits of hydropower within society, especially to poor rural areas where projects are built, and (ii) the information is conveyed in a clear, consistent, transparent way bringing in endorsing / supportive voices from civil society.
  - As noted in Section 2, some countries such as Nepal and China have a percentage for revenue sharing in laws equivalent to about 1.0 to 3.0 percent of gross revenue generated by the project on an annual

basis. In other developing countries (e.g. in Latin America and in India), the total percentage allocation of hydropower revenue sharing is in the order of 10 to 14% of gross revenue.

- It is demonstrated in these countries this level of sharing does not make hydropower projects less financially attractive to investors, as compared to alternatives.
  - The impact on electricity tariffs is typically quite modest. The actual impact also depends on many factors such as the proportion that hydropower represents of total electricity generation, and how the cost is distributed among different tariff categories.
- A longer response is:
- In addressing this question it is important to have a clear understanding of what sharing monetary benefits actually means and who is involved so discussion are informed and constructive.
  - As note in the draft Viet Nam Decree law, benefit sharing is essentially a long-term relationship, on one hand, between the main consumers of grid electricity services in towns, cities and industry, and on the other hand, the local communities and residents of the river basin.
  - Revenue sharing is not a “profit sharing” arrangement between hydropower entities and local communities, where the local community is left on their own to negotiate with hydropower developers and owners a fair arrangement. For many reasons discussed in Section 1 and 2, that approach lead to potential conflict. Arrangements on each project would be different.
  - Otherwise, for reasons relating to debt repayment and tax deductions, actual “profits” to share may be limited, especially in the early years as project debt is serviced. This would reduce revenue sharing negotiations to an accounting exercise in many respects.
  - Profit sharing is more relevant to equity sharing, where a local community or local government receives some agreed share of project equity and receives a revenue stream from the return on equity, like any other shareholder. Examples of equity sharing are referred to in Section 2 of Volume 1 and in the Case Studies in Volume 3 from Latin America, China and Canada. In those cases the equity shares of local communities were either significant or are combined with revenue sharing.
  - Experience suggests the easiest, most common approach to share monetary benefits is from the project revenue stream. This has implications for tariffs; but at the same time, it places the beneficiary relationship in a proper context – that is a sharing relationship between the consumers of electricity services and the communities and residents of the river basin.
  - As noted in Section 2, revenue-sharing arrangements as low as 1% of the gross revenue are significant when allocated to local development in poor, remote rural areas, and even considering some revenue may be split between municipal, distinct and provincial levels.
  - On the 210 MW A’Vuong project in Vietnam 2% revenue sharing will generate near \$US 1.0 million for the local development fund. In India and Latin America, revenue sharing amounts are higher, in the order of 10 to 14% of gross revenue though they are also shared with provincial, municipal and local levels. In Canada, long term arrangements for multi-billion dollar revenue transfers to indigenous people in northern areas are negotiated made on projects that supply Canadian and United States power markets.
  - In the end, it is a question of ensuring the real cost of hydropower is covered by tariffs, which reflects the “user pay” principle in IWRM (water and an economic good). Ultimately, the percentage of revenue to be shared is political choice, within the practical scope of what is economical for hydropower, relative to other electricity supply options.

- If there are concerns about tariff implications, additional safeguards can be introduced, such as to ensure that no major adverse impacts on “life-line” tariff rates, or the lowest consumption category in tariff blocks, typically for the lowest income consumers in developing countries.<sup>71</sup>

#### Q4. IS ENABLING LEGISLATION AND SUPPORTING REGULATION REQUIRED TO INTRODUCE BENEFIT SHARING?

This responds to questions about how Mekong governments may best proceed, if consensus is achieved to take benefit sharing mechanisms forward; also to consider how to set up benefit sharing mechanisms where there is a mix of public and private investment in hydropower.

□ A short answer is:

- Based on international experience, good practice is to provide clear national legislation (enabling legislation) with supporting regulations on benefit sharing.
- In this manner all stakeholders know the rules of the game, including existing hydropower operators, potential investors, local communities, municipal and provincial authorities and river basin organizations. All have an interest in supporting the equitable sharing of benefits.
- This clarity is particularly important when countries have a number existing hydropower projects, plan to develop more, or have a mix of public and private investment.
- Legislation ensures a consistent approach is followed and creates a “level playing field”, not only for investors, but also for communities and regions so they know where they stand.

□ A longer response is:

- There are many examples of national policy, legislation and regulations that Mekong countries can refer to.<sup>72</sup> Also a number of Mekong countries already have draft legislation, or active legislation of one kind or another.
- Legislation and regulation helps avoid unnecessary controversy arising due difference in benefit sharing practices and levels of entitlement in different locations in the same sub-basin or country. Experience shows that communities near hydropower projects that receive less benefit, often feel they are treated unfairly. This has led to demonstrations in some countries and otherwise increases the chance of political unrest and undermines public support for hydropower.
- It is also important to ensure a consistent approach is followed on new and existing and projects, on public sector and private sector projects, and for different groups, especially ethnic communities that often comprise a large proportion of project-affected people. Where differences in levels of entitlement are appropriate, they must be explained clearly and beneficiaries given a genuine chance to raise concerns they may have about differences before they are fixed.
- Experience elsewhere suggests good practice is where governments lead or facilitate a step-wise collaborative approach that offers:

<sup>71</sup> Tariffs must take into account the cost of the service, the level of the service, the extent to which the service is being used and the ability to pay for the service. For example, in South Africa, life line tariffs are for domestic customers in poor areas can afford to have electricity in their households. In the “lifeline” tariff there is no basic levy, customers are offered 50 kWh of electricity free every month and any electricity used above that amount is charged at 29.4 cents per kWh (unit). [http://www.joburgnews.co.za/july\\_2002/power.stm](http://www.joburgnews.co.za/july_2002/power.stm)

<sup>72</sup> As discussed in Section 2, though a full set of examples from all regions is difficult as legislation has not been translated to English – a task ISH may consider on future.

- A clear advocacy strategy to raise awareness on how benefit sharing overcomes real and perceived shortcomings in dam planning and management, and clear up common misconceptions that confuse, slow or frustrate the adoption of BSM;
  - A critical mass of multi-stakeholder partners and a dialogue platform to identify the sort of leadership, coalitions and practical next steps to adapt many successful models for benefit sharing to the Mekong situation;
  - A suitable existing dam project, proposed project and river basin to field trial implementation of local benefit sharing mechanisms, and to refine and amplify good practice;
  - Political will to link the outcome of field trials to government-led processes to prepare the follow-up legislation and regulations, drawing on relevant models and lessons from the growing body of regional and international experience; and
  - A coalition of partners to help achieve the critical threshold of consensus as early as possible, after which the national efforts will become self-sustaining.
- In the Mekong context, this requires linking to existing network activities and initiatives in promoting dam development and management in IWRM river basin management context, as reflected in the principles in national legislation and the 1995 Mekong Agreement.

#### Q5. WHAT ARE THE MAIN CHALLENGES IN INTRODUCING BENEFIT SHARING?

Decision-makers need to know the practicalities of benefit sharing; and what can go wrong. Also they want to understand the sort of investments involved (time, people, and money) in order to make informed decisions on the approach, modes of implementation and assignment of responsibility.

□ The short answer is:

- Benefit sharing is positive from all stakeholder perspectives, when introduced in a consistent and systematic way with the appropriate participation of beneficiaries and other stakeholders.
- The main challenges with benefit sharing are the potential complexity of some measures, and the required investments in time and capacity building.
- As discussed in Section 1.4, several specific challenges relate to ensuring adequate information sharing to address misconceptions, identifying institutional arrangements (while minimizing new structures), integrating benefit sharing with existing local development mechanisms, and ensuring open and transparent implementation arrangements.
- Transboundary benefit sharing depends on negotiated outcomes. International experience shows that this can be a lengthy process, spanning many years if not decades.

□ A longer response is:

- The positives that come from benefit sharing are numerous. They are not in dispute. Time and investments are nonetheless required. As the World Bank 2009 global strategy for hydropower, “Directions in Hydropower” noted, the policy priority is shifting towards development “done right” through comprehensive environmental management and benefits sharing.
- Section 1.4 offers steps that all countries may consider to overcome the inevitable challenges introducing benefit sharing in the hydropower sector. These include:
  - starting with awareness raising - engaging all stakeholders
  - undertaking pilot projects – to build confidence and seek consensus on approaches
  - introducing appropriate enabling policies and legislation based on reviews of good practice
  - adequate considerations of actions needed at all stages of the infrastructure project cycle

- carefully choosing the sources of finance, or mix of finance for sharing monetary benefits
- selecting appropriate mechanisms for delivery of benefits, regardless of the financing source
- introducing appropriate institutional arrangements, minimizing where possible new structures
- ensuring effective 2-way communication, and encouraging partnership approaches
- A further challenge is to ensure that mechanisms are transparent and beneficiaries are well represented in the BSM governance structures, especially community development Funds or local area development funds supported by revenue sharing mechanisms.
- Otherwise, examples of common failures in implementation of BSM are traced to factors such as:
  - lack of clarity in the regulations that support enabling legislation;
  - failure to provide capacity building support to local levels of government who are key partners in the delivery of benefits;
  - failure to integrate benefit sharing mechanisms with local or district / regional development planning systems, so they reinforce, rather than undermined normal development structures;
  - failure to fully test the community driven development (CDD) approaches that are utilized to deliver benefits, and offer choices to beneficiaries;
  - Lack of beneficiary involvement in producing the various guidance materials and operating manuals (OMs) needed to run benefit sharing delivery mechanisms and funds,
  - Failure to monitor the impacts of the delivery of benefits on changes in poverty levels in the project impact area, including failure to set targets, and
  - Failure to build-in community awareness programmes and information sharing among beneficiaries about how to access and get the most from the benefit sharing arrangements, and to have open forums to discuss positive results as well as those less successful, or failing.

#### Q6. WHAT ARE THE MAIN SOURCES OF FUNDING BENEFIT SHARING?

There are several approaches to share the monetary benefits of hydropower. One or more sources of financing can be drawn upon. What is most appropriate in a particular country depends on a factors such as the legal framework, precedents in other sectors and what is practical.

- The short answer is:
  - Different sources of finance may be tapped to redistribute a portion of monetary benefits that hydropower generates to local communities, river basin residents and potentially various levels of government where the project is located (e.g. municipal, district or provincial levels);
  - Among the sources and mechanisms include revenue sharing, equity sharing, general taxes, royalties, preferential tariffs, and carbon financing.
  - Revenue sharing mechanism that tap the revenue stream of hydropower projects are perhaps the most common, understandable, practical and straightforward.
  - Ultimately revenue sharing is reflected in the electric tariff. This is positive, because it reinforces the idea that benefit sharing is fundamentally a sharing relationship between electricity consumers on the one hand, and local communities and residents of river basins who host projects, on the other.
- A longer response is:

- Mekong governments may choose from a mix the different financing sources and mechanisms to redistribute a portion of monetary benefits that hydropower generates. Often governments choose a mix. As noted in Section 1.4.5, options include:
  - A portion of the project revenue stream, or royalty payments, or water resource utilization fees generated by dam projects, distributed in a formula defined in regulations, typically linked to the project capacity (MW) or annual outputs (e.g. GWh);
  - Part or full equity ownership of the project by a representative local community entity (equity sharing), for which the annual return on equity is used to fund and deliver local benefits;
  - Annual revenue transfers from general taxes to affected municipalities, watershed management agencies and conservation authorities in the basin of the dam, which stem from public benefits of hydropower;
  - Local authorities levying property taxes on land used for dam facilities and reservoirs, the measure can reduce taxes paid by local communities and/or raise funds;
  - Direct long-term contracts between the dam owner and affected communities; and
  - More recently, use of carbon financing to capitalize local development Funds.
- Revenue sharing is often the most practical as noted. In accordance with economic principles in IWRM, the cost is incorporated in bulk tariffs for water and energy services.
- Revenue mechanisms are more complex on multi-purpose projects that have no hydropower component. Though revenue streams from bulk water tariffs, navigation fees or irrigation supply can be tapped, there is less international experience with these approaches.

#### Q7. WHAT DO HYDROPOWER INVESTORS, DEVELOPERS AND OPERATORS THINK ABOUT BENEFIT SHARING?

This question is important because hydropower developers, operators, utilities and investors are part of the benefit sharing equation. The key benefit for hydropower developers and operators is risk reduction. Good practice nonetheless is for government to take the lead setting the overall legal framework.

□ The short answer is:

- Experience shows that the initial reaction of some developers and investors can be very negative, if they misinterpret benefit sharing as primarily the responsibility of project companies - both to pay for and to organize complex mechanisms.
- This view changes to highly positive when it is understood that government is responsible to provide clear regulation and create a level playing field for investors and developers. Hydropower entities would be partners, but not lead implementation.
- Developers and hydropower owners (public and private projects) value the improved community relations that benefit sharing mechanisms helps to foster and maintain.
- Most investors and hydropower project companies feel their risks are reduced if they can work in partnership with local communities on common concerns such as protecting long-term, sustainable hydropower operation while materially helping to realize local development aspirations.
- Hydropower industry associations pro-actively actively support benefit sharing. They advocate their use and acceptance by industry and utilities.

□ A longer response is:

- As elaborated in Section 1.3.2 benefit sharing is in the interests of all MRC stakeholders, from governments to hydropower developers and operators, to local communities. BSM helps reduce risks for all, and helps to turn controversy into cooperation and partnerships.
- A common misconception is that benefit sharing is an agreement to be negotiated between project developers (or owners in the case of existing projects and local communities). That is only the case in countries where the project company is 100 percent owned by government, and the government instructs the public company to act on its behalf.
- While developer / operators must be a partner in benefit sharing arrangements, the rules must come from government regulatory authorities framed under enabling laws. Moreover, the developer must not be in a dominant position in any governance arrangements for long-term benefit sharing mechanisms that operate over the economic life of the projects.
- As noted in Section 2.3 virtually all international bodies and organization that advocate hydropower and in particular sustainable hydropower actively support benefit sharing. The International Hydropower Association (IHA) actively supports the introduction of benefit sharing mechanisms on existing and new hydropower projects with the Hydropower Sustainability Assessment Protocol.

#### Q8. HOW DOES BENEFIT SHARING CONTRIBUTE TO SUSTAINABLE HYDROPOWER?

The answer is contained in the definition of sustainable development in the legal frameworks of MRC Member Countries, namely: “development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs, on the basis of a close and harmonized combination of economic growth, assurance of social advancement and environmental protection”.

- The short answer is thus:
  - Benefit sharing is consistent with the accepted definition of sustainable development, applied to water and energy infrastructure.
  - Benefit sharing is widely seen as a practical tool to improve social, environmental, and economic performance of hydropower projects.
  - Benefit sharing is an important element of hydropower sustainability assessment tools developed at international and regional levels, including the Protocol recently developed by the International Hydropower Association.
  - Benefit sharing is otherwise consistent with IWRM principles, which aim to place decisions on hydropower development and management in the river basin management perspective.
- A longer response is:
  - Sections 1 and 2 of this Volume discuss principles and practices of benefit sharing. Country examples provided in the KB-CD from developed and developing Countries indicate the widespread and extensive endorsement of benefit sharing to achieve sustainable outcomes.
  - Policymakers and practitioners have long advocated that benefit sharing as an important element of sustainable hydropower, and as noted, it is prominent in the new generation of hydropower sustainability assessment tools.
  - When the ISH was formulated in national and regional multi-stakeholder processes in 2008-2009, the consensus view overwhelmingly was benefit sharing was an integral part of sustainable hydropower in the Mekong situation at all scales. As a consequence, benefit sharing was a theme in the formulation of the first ISH work plan for 2008-2011.



- When discussing sustainable hydropower, the recent MRC Basin Development Strategy (approved in January 2011) notes :
  - the range of indirect and additional benefits from hydropower.
  - the need for “detailed identification of impacts and of mitigation, and benefit-sharing measures, and to coordination between LMB countries on tributary dam operation and with China on Lancang dam operation.”
  - To move toward sustainable development of hydropower on tributaries, “evaluating benefit-sharing options, such as watershed development and management benefiting hydropower generation and funded from hydropower revenues”.

## Q9. WHO OR WHAT GROUPS ARE TYPICALLY ELIGIBLE TO ACCESS FUNDS FOR BENEFIT SHARING?

This question is asked by policy-makers when legislation and regulations are under consideration. It is also a question local communities ask when benefit sharing is first introduced in site meeting discussions.

- The short answer is:
  - In the case of a Local Community Development Fund, Thailand uses the criteria of people living within 5 kilometres of the project, whether it is a thermal project or hydropower project.
  - For local benefit sharing on hydropower, the beneficiaries are normally communities living in the project area. Good practice is to use the project impact zone, as it is identified in the EIA /SIA and EMMP to inform decisions on what people are eligible to participate.
  - This would typically include people, households, entrepreneurs, society organizations, and local business based in the project area.
  - The essential point is to move beyond the resettlement community to recognize communities in the reservoir area, as well as upstream and downstream who may be impacted by resource transformations of the project.
- A longer response is:
  - Who is eligible is a key questions at times of implementation. To a large extent, the mechanisms selected need to reflect the objective of equitably sharing benefits among all people in the project area and residents of the river basin. Within certain rules, there may be a targeting of some portion of the financial resources for a period of time to achieve poverty reduction targets.
  - Using the example of the draft Decree Law for Viet Nam, “Parties” deemed eligible to participate in local area benefit sharing programmes for hydropower projects were “... people, households, community-based organizations, mass organizations and local family-scale enterprises and other such legal entities in the project area.”<sup>73</sup>
    - This referred to people living or working in the project impact area of the project. For new hydropower projects (Article 25) it was stipulated that procedures during project feasibility stages, i.e., in the conduct of EIA/SIAs were:
      - “EIAs for hydropower projects shall incorporate a concise assessment of potential benefit sharing provisions. These assessments shall be linked to existing EIA requirements for identification and mitigation of adverse social and environmental impacts of the project during construction and operation phase.”<sup>lii</sup>

<sup>73</sup>

- EIAs for all hydropower projects shall provide a clear indication of:
  - The geographic extent of the project impact area
  - The communes, or parts of communes which reside in the project impact area
  - The numbers of households in each commune in the project impact area
  - The nature of the potentially adverse impacts on communities in each area.
- Feasibilities studies of hydropower projects shall incorporate benefit-sharing assessments linked to existing study topics in the feasibility study. In relation to assessment of the status of electricity access of households, hydropower feasibility studies shall:
  - Assess the current level of rural electrification and quality of electrical service in the project impact zone defined by the EIA/SIA;
  - Provide specifications and indicative costs to electrify the resettlement households and the resettlement host community if not connected;
  - For communities living the project impact area with no electricity service, provide an indicative cost of electrification via grid extension or via alternative small-scale isolated generation where grid connection is not considered to be economically feasible;
  - For communities with existing electrical service, assess provide an indicative cost for refurbishment of electrical supply equipment to improve levels of service and reliability of supply;
  - Where feasible, provide a breakdown of household electricity access with income levels”
- Similarly, for existing hydropower projects (Article 27) the requirement was to review existing EIAs (if they existed), where they did not exist, or were very old, the authorities would “complete (or cause to be completed) a rapid environmental impact assessment to establish.
  - The geographic extent of the project impact area,
  - The communes, or parts of communes which reside in the project impact area,
  - The numbers of households in each commune in the project impact area,
  - The nature of the potentially adverse impacts on communities in each area,

And also, review or direct the review of the status of electricity supply and electricity access to households in the project impact area.”
- Moving up to the district and provincial levels where the project is situated, the mechanisms to deliver benefits, and consequently who is eligible is broader and more diffuse. As discussed in Section 1.1, beneficiaries can be all residents in the river basin who derive benefit from an increment to municipal, district or provincial level development budgets.

#### Q10. ARE BENEFIT SHARING APPROACHES AND MECHANISMS TRANSFERABLE BETWEEN DIFFERENT SECTORS LIKE HYDROPOWER, MINING AND FORESTRY?

This question is often asked because of the many common aspects and synergies regarding BSM in different sectors such as the hydropower, mining and forestry sectors. Moreover, they all connect to rural development and sharing of monetary benefits between different levels of government.

□ The short answer is:

- It is practical and useful for national regulators to examine experience with the introduction of benefit sharing mechanisms in other sectors, and precedents in other sectors.
- The general principles are common. The arguments to make the case to decision-makers and the general public similar.

- Beyond the practice of sharing lessons there are often synergies to explore in terms of implementation of measures that relate to local development.
- A longer response is:
  - There are many examples in the international literature of benefit sharing in different resource extraction sectors, which as a body, provide a useful basis to consider good practice applicable to hydropower in the Mekong setting.
  - There are also precedents in the Mekong for benefit sharing in the form of payments for ecological services, which have moved forward in legislation and into pilot projects. These have a direct linkage to benefit sharing on hydropower projects.
  - It is practical and useful to include BSM practitioners in other sectors in discussions about benefit sharing on hydropower in the Mekong situation. However, there are of course features of the mechanisms that are unique to each sector.
  - There is an opportunity to explore potential synergies between benefit sharing in different sectors, in particular revenue sharing in Mekong tributary basins that have all three forms of resource development (hydropower, mining and mineral development and forest resource development).
  - There are opportunities to improve coordination among benefit sharing initiatives in these sectors such as through river basin organizations, which may be appropriate to consider.



Benefit sharing is now widely accepted as a way to spread resource utilization benefits across the economy, catalyse broader-based growth and support social equity policies.

## 4 MRC SUPPORT TO MEMBER COUNTRIES ON BENEFIT SHARING

As noted in the ISH Work plan 2011, the ISH will lead MRC efforts to share information on national-to-local forms of benefit sharing. At the same time, the ISH will cooperate with other MRC Programmes, such as the BDP, to facilitate awareness raising and dialogue on transboundary aspects of benefit sharing.

Transboundary forms benefit sharing, as mentioned in Section 1, are more complex and involve negotiation between and among countries.

### 4.1 SUPPORT BY THE ISH AND OTHER MRC PROGRAMMES

The following summarizes the nature of the support that the MRC provides to Member Countries on this theme, with a view to highlighting the activities already identified for the 2011-2015 timeframe in MRC documents such as the ISH work plan and the Basin Development Strategy.

#### 4.1.1 SUPPORT THROUGH THE ISH WORK PLAN 2011-2015

ISH support for benefit sharing is extended under Outcome 4 in the ISH programme structure, under Output 4.1c, “Benefit-Sharing Mechanisms Elaborated at Regional, National and Community Levels”. It is part of MRC support to increase awareness and ultimately enable Member Countries to take maximum advantage of the various innovative financing mechanisms increasingly found in Asia and world-wide. This includes emerging opportunities for revenue sharing, carbon finance and payments for ecological services (PES), which channel funds to measures that improve sustainable outcomes in hydropower.

The text Outcome 4 is provided in Endnote on this document.<sup>liii</sup> Under Outcome 4 it is noted:

- **Output 4.1c** supports awareness raising and dialogue on experiences in the Asia region and world-wide on a full spectrum of hydropower benefit sharing aspects. This includes the theory and motivation for benefit sharing, the value it adds for achieving sustainable hydropower and links to IWRM basin management, different approaches successfully pursued in different situations, the types of legislation and regulation most effective, the sort of partnerships that can be formed for trialling and demonstration projects to build stakeholder consensus on the best approaches, key messages for decision-makers, and the practice and outcomes on the ground to date.<sup>74</sup>

<sup>74</sup> It is noted also that, in the Mekong context, benefit sharing happens at two complementary levels, namely: (i) sharing benefits from national-to-local levels (or benefit sharing within countries), and (ii) sharing benefits between two or more

The table below shows the activities and milestones for 2011.

<b>Output 4.1c Benefit-Sharing Mechanisms at Regional, National and Community Levels</b>	
Activities /Milestones in 2011	<ol style="list-style-type: none"> <li>1. Next TRG meeting to cover benefit sharing mechanisms (i.e. as a first in-depth topic in RSAT to review with countries in a systematic process).<sup>75</sup></li> <li>2. Form the informal knowledge network with ISH National coordinators and concerned line-agencies to share information and practices (list of people)</li> <li>3. Prepare presentations and a Mekong “issues and options” paper or compendium report on benefit sharing experience and the status in the Mekong. This will include a CD containing a knowledge base (May–June).</li> <li>4. Prepare and hold a regional workshop on benefit sharing with MRC stakeholders and invited international observers (October)</li> <li>5. Respond to requests from MRC Member countries on their experience with Benefit sharing mechanisms and offer county-specific information support.</li> <li>6. Conduct a Mekong-region study tour (the venue to be decided in the TRG meeting and in consultation with NMCS).</li> <li>7. Prepare a detailed multi-year programme for technical exchange among MRC Member Counties for the 2012-2015 timeframe</li> </ol>
Interfaces	<ul style="list-style-type: none"> <li>▪ MRCS Management, NMCS, TRG, Line Agencies, RBC/RBO</li> <li>▪ Regional Partners</li> <li>▪ GIZ Programme</li> <li>▪ ECSDH Partners (ADB and WWF)</li> </ul>
Implementation	<ul style="list-style-type: none"> <li>▪ By in-house capacity</li> <li>▪ Consulting services</li> </ul>
Timing	<ul style="list-style-type: none"> <li>▪ From Q2</li> </ul>
Status	<ul style="list-style-type: none"> <li>▪ Briefs on benefit sharing mechanisms were previously prepared and delivered to the Electricity Regulatory Agency (ERAV) in Viet Nam and WREA in Lao PDR</li> <li>▪ Benefit sharing considerations are incorporated in RSAT</li> <li>▪ NMCS have asked for information on how it is applied.</li> </ul>

The schedule for the major activities in 2011 is indicated in the following graphic, extracted from the ISH 2011 work plan.

states. The transboundary benefit aspect also includes an element of sharing among the different groups within States who rely on international rivers (water and related resources) including the modern sectors and traditional resources users  
<sup>75</sup> The TRG Minutes of June 2010 indicate benefit sharing will be the first topic considered in-depth at the first TRG meeting in 2011. Timing of the meeting will link to progress on RSAT trialling in Member countries.

Initiative on Sustainable Hydropower - Work Plan 2011			2011											
WBS	ISH Output Number	Task Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ISH.4		<b>Outcome 4: Sustainability Assessment and Financing</b>												
ISH.4.1	ISH.04.1a	Financing Mechanisms for Sustainability Measures for Proposed Mainstream Dams Identified												
ISH.4.2	ISH.04.1b	Sustainability Incentives within Market and Regulatory Frameworks Introduced												
ISH.4.3	ISH.04.1c	<b>Benefit-Sharing Mechanisms elaborated and Knowledge Sharing Network established</b>												
ISH.4.3.1		Assemble Knowledge Base (KB compendium) on benefit sharing with CD												
ISH.4.3.13		Prepare TOR and engage national consultant to support NMCS in national information gathering and questionnaire												
ISH.4.3.10		Form informal knowledge sharing network with ISH National Coordinators (compile list of people)												
ISH.4.3.9		Hold TRG meeting on benefit sharing mechanisms (i.e. first in-depth review of 11 RSAT topics)												
ISH.4.3.8		Prepare for and follow-up on regional workshop with MRC stakeholders / international observers												
ISH.4.3.11		Hold Regional Workshop on Benefit Sharing												
ISH.4.3.7		Respond to requests from Member Countries and offer country-specific information support												
ISH.4.3.6		Plan for and Conduct Mekong-region study tour												
ISH.4.3.5		Prepare detailed multi-year programme on Benefit Sharing in 2012-2015												

#### 4.1.2 SUPPORT THROUGH THE MRC BASIN DEVELOPMENT STRATEGY (BDS)

The main avenue for formal MRC dialogue on transboundary benefit sharing is through the MRC Basin Development Strategy and related mechanisms.

As noted in Section 1 of this Volume, transboundary benefit sharing is relevant to balance regional development opportunities and risks in each Member Country, consistent with the 1995 Mekong Agreement as well as other regional and bilateral spheres of cooperation.

The broader approach is explained in the Basin Development Strategy document endorsed in the 33<sup>rd</sup> Meeting of the MRC Joint Committee in January 2011. In this respect:

- The BDS document clarifies the approach to negotiate the sharing of benefits as part of consideration of a development opportunity space (DOS). Benefit sharing is also referenced in the list of priorities for MRC support to help advance sustainable hydropower.<sup>iv</sup>
  - The Basin Development Strategy recognized that the “DOS can also be used as a “cooperation space” or “negotiation space” to explore mutually beneficial options, including benefit and impact sharing agreements that go beyond the specific project level, and to consider other opportunities or one (possibly unrelated to water - e.g. trade or transport) for facilitating equitable outcomes.”
  - The strategy further notes the DOS can be further enhanced, moving toward sustainable development, through a transparent process that: (i) explores joint and mutually beneficial development opportunities beyond national plans, within and outside the water sector; and (ii) closes knowledge gap and develops mitigation measures that will facilitate the review and decision making for future development opportunities.
  - When discussing hydropower, the BDS notes the range of indirect and additional benefits to be derived, and gives attention to, “detailed identification of impacts and of mitigation and benefit-sharing measures, and to coordination between LMB countries on tributary dam operation and with China on Lancang dam operation.”
  - To move toward sustainable development of hydropower on tributaries the BDS stipulates, “evaluating benefit-sharing options, such as watershed development and management benefiting hydropower generation and funded from hydropower revenues”.<sup>iv</sup>

The MRC Basin Development Strategy set sharing of benefits as one of seven strategic priorities for basin development, and a timetable for further work on BSM options. Benefit sharing is otherwise imbedded in

management tools Member Countries are developing in collaborative processes under the MRC framework, including the hydropower sustainability assessment tool (RSAT). ISH will cooperate with other MRC Programmes to facilitate awareness raising and information sharing on transboundary aspects of benefit sharing.

## 4.2 ACTIVITIES SUPPORTED BY THE ISH BUDGET AND WORK PLAN IN 2011

The following observations are made on the four main activities scheduled for 2011. The details and timing as well as who will participated are subject to further discussion with NMCS.

### 4.2.1 THE KNOWLEDGE BASE (COMPENDIUM)

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This Volume and the compilation of material in Volumes 2 to 5 of the CD respond to item 3 in the 2011 work plan (i.e. to prepare a knowledge base as a first step to support national dialogue processes). This Volume constitutes the first working draft of the Knowledge Base.

- This Volume 1 and the CD (which together constitute the knowledge base) will be circulated to NMCS and national line agencies to support discussions on next steps.
- Volume 1 herein represents the Mekong “issues and options” paper in the task list.
- The expectation is this Knowledge Base would be updated periodically as additional information is gathered from Member Countries, from the regional workshop and study tours

The aim is to ensure everyone has access to the information, which can be shared more widely with MRC stakeholders.

### 4.2.2 A MEKONG REGIONAL WORKSHOP: POLICY AND PRACTICE

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Item 4 in the 2011 work plan is, “Prepare and hold a regional workshop on benefit sharing with MRC stakeholders and invited international observers”.

- It is expected the regional workshop would be held in Q3 or Q4 of 2011, though this may be rescheduled to 2012.
- There are two main options for the workshop:
  - Option 1: is to have a one-day workshop with invited speakers and presentations.
  - Option 2: is to have a more complete 2-3 day session with invited speakers and practitioners on BSM from different regions of the world and number of working sessions.
- In the case of Option 1, participants would largely be from NMCS and national line agencies. In Option 2, a wider group of MRC stakeholders would be invited to participate. Invited speakers would include practitioners from MRC Member Countries and China involved in benefit sharing, as discussed in Section 2.1 and 2.2.
- Under Option 2, invited speakers to be added would also include practitioners from developed and developing countries involved in benefit sharing mentioned in Section 2.3 (e.g., a speaker each from Latin America, Central Asia, Africa, Nepal / India, Canada and Norway).
- The venue and details of the workshop would be decided in consultation with NMCS.

#### 4.2.3 A SITE VISIT AND STUDY TOUR:

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Item 6 in the 2011 work plan is, “Conduct a Mekong-region study tour (the venue to be decided in the TRG meeting and in consultation with NMCS).”

- It is expected the regional workshop would be held after the Regional Workshop.
- It is planned to visit venues in the Mekong to see people and organizations involved in activities discussed in Sections 2.1.1 and 2.1.2
- Consideration will also be given to a component of the Study tour including non-Mekong regions as discussed in Section 2.2.

#### 4.2.4 MULTI-YEAR IMPLIMENTATION PLAN FOR ISH OUTPUT 4.3C

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Item 7 in the 2011 work plan is, “Prepare a detailed multi-year programme for technical exchange among MRC Member Counties for the 2012-2015 timeframe.”

- It is expected this will be prepared in Q4 in the form of a Road Map;
- This will reflect dialogue and lessons gained in the regional workshop and study tours noted previously;
- This will inform preparation of the ISH 2012 Work Plan.





## 5 USING THIS COMPENDIUM AND ACCOMPANYING CD

The purpose of this section is to explain what the Knowledge Base CD contains. There are over 120 documents in the CD.

### 5.1 TARGET AUDIENCE

The target audience for this first working draft of the KB is:

- MRCS Programme Staff
- NMCS / Line Agencies
- Technical Review Group Members
- MRCS consultants and stakeholders actively participating in benefit sharing tasks under ISH Outputs.

After NMCS have reviewed the KB, and following the regional workshop and study tour, a public version of the KB-CD can be prepared and shared with all MRC stakeholders.

### 5.2 CONTENT OF THE KNOWLEDGE BASE COMPACT DISK (CD)

The following highlights documents available in each Volume of the KB-CD. The use of Volumes is simply for the convenience of readers. Documents can be categorized and found easily. In a few cases, the same document appears in more than one Volume.

Some suggestions on key articles to read are also provided.

#### VOLUME 2: COMPILATION OF ARTICLES AND REPORTS ON BENEFIT SHARING

This Volume contains 75 documents under the six sub-categories as noted. The file name and document title is illustrated and where appropriate the Author is cited.

##### 1-MRC Countries and MRCS

V2-1-1 VN TA 4689 Inception Report-Final.pdf

Benefit Sharing Mechanisms for People Adversely Affected by Power Generation Projects in Viet Nam  
Asian Development Bank TA-4689 (VIE), 2006

- V2-1-2-VN TA 6489 BSM Policy Review.pdf  
Policy Review of Review of Viet Nam's legislation and policies for BSM Design
- V2-1-3-VN TA 6489 - Stakeholder Consult Plan.pdf  
Stakeholder consultation for BSM Design on hydropower projects in Viet Nam
- V2-1-5-VN TA 4689 Interim Rpt-2 Final.pdf
- V2-1-6 VN TA 4689 - Final Report.pdf  
Final report with draft BSM legislation and work plan for a pilot project, 2008
- V2-1-7 VN TA 6498 BSM Pilot Final Rpt 2011.pdf  
RETA 6498: Knowledge and Innovation Support for ADB's Water Financing Program. Final Report for Phase 1 Field Trial on the 210 MW A'Vuong Project in Quang Nam Province, 2010
- V2-1-8 VN -10 Steps in BSM.pdf  
Doan Van Binh, Deputy Director, Institute of Energy Science, Hanoi, 2010, prepared for the Centre for River Basin Organizations and Management, Solo, Central Java, Indonesia
- V2-1-9 Thai - EPRO Strategy on Community Development Funds.pdf  
Extracts On Community Development Funds from, "Energy Strategy: Energy For Thailand's Competitiveness" The EPPO Office, MOE, 2007.
- V2-1-10 Thai-EGAT Statements on CDF 2008.pdf  
Contained in the EGAT 2007 Annual Report
- V2-1-11 Thai EGAT Statements on CDF 2009.pdf  
Contained in the EGAT 2007 Annual Report
- V2-1-12- MRCS RSAT Extract on BSM Topic.pdf
- V2-1-14- MRCS ISH Note on Carbon Financing.pdf
- Other Documents:
- Nam Theun 2 revenue management.pdf  
RSAT-Revision-3 (OCT-3-2010).pdf  
Sustainable Dev for VN Communities.pdf

**2-Wider GMS and Asia Regions**

- V2-3-1 Nepal BSM Concepts and Experience.pdf  
Concepts And Methodologies On Benefit-Sharing For Large Hydro Dams: Experiences From Nepal, for UN Symposium on Hydropower and Sustainable Development, October 27-29, 2004, Beijing, China
- V2-3-2 China Hubei Project.pdf  
Hubei Hydropower Development In Poor Areas, Partnership agreement using equity sharing and revenue sharing funding of poverty alleviation plans
- V2-3-3 Central Asia TBS .pdf  
Central Asia: Aral Sea Basin Multistate Water Resource Cooperation concerning hydropower, irrigation and cross-sector trade

### 3- Other Developing Country Regions

- V2-3-1 West Africa - Benefit Sharing pdf  
Introducing local benefit sharing around large dams in West Africa Drawing on regional and International experience, 2008
- V2-3-2-Africa -Sierra Leone BSM.pdf  
Institutional Arrangements: The Upper Seli Community Development Initiative and proposed Bumbuna Trust - Benefit sharing on the Bumbuna Hydroelectric Project in Sierra Leone
- V2-3-3 BSM and Zambezi River Basin.pdf  
The Zambezi: Benefit Sharing in Integrated Water Resources Management
- V2-3-4 SADC Benefit Sharing Guidelines.pdf
- V2-3-5 Ecuador equity sharing.pdf  
Proyecto Hidroamazonico (Proha): The Jondachi Hydroelectric Project
- V2-3-6 MRCS Remarks at DWF WShop on TBS 2010.pdf
- V2-3-7 Lesotho Highlands Community Dev Fund.pdf

#### Other Documents:

MRC Study Visit Report To Transboundary River Basins And Binacional Projects in the La Plata River Basin In Latin American November 2010, ISH

### 4-OECD Countries

- V2-4-1 Columbia Basin Trust and BSM.pdf
- V2-4-2 DDP Compendium of Practices with OECD-2007.pdf
- V2-4-3 WBank BSM Workshop Papers 2007-2.pdf
- V2-4-4 Canada Hydro Quebec Examples.pdf
- V2-4-5 Norway - Glomma and Lagen basin.pdf
- V2-4-6 Canada Eastmain\_Rupert Project.pdf

### 5-International Bodies

- V2-5-1 DDP BSM Review Paper-2007.pdf  
Compendium on Relevant Practices - 2nd Stage, Revised Final Report 2007, (Benefit Sharing Issues), Mr. Dominique ÉGRÉ (from which a number of case studies are in Vol 3) (Revenue sharing, Development funds, Equity sharing, Property taxes, Preferential electricity rates)
- V2-5-2- SIWI-Theory Practice TBS -2009.pdf  
Getting Transboundary Water Right: Theory and Practice for Effective Cooperation, 2009, Anders Jägerskog, Mark Zeitoun, and Anders Berntell
- V2-5-3 WBank Authors-Beyond the river 2002.pdf  
Beyond the river: the benefits of cooperation on international rivers, The World Bank, Printed in Water Policy 4 (2002) 389–403, Claudia W. Sadoff, David Grey
- V2-5-5 SIWI BSM in Int River Basins 2008.pdf  
Benefit Sharing in International Rivers ( A featured article),
- V2-5-6 WBank Multi-State TBS 2008 Wu .pdf  
Report no. 46456 Africa Region Water Resources Unit Working Paper 1 Benefit Sharing in International Rivers: Findings from the Senegal River Basin, the Columbia River Basin, and the Lesotho Highlands Water Project, Winston H. YU

- V2-5-7 WBank Briefing Note 8 on TBS 2006.pdf  
 Integrated Water Management: From Concepts to Good Practice - Briefing Note 8: Transboundary Water Sharing, prepared by Peter Millington, Douglas Olson, and Shelley McMillan
- V2-5-8 IUCN Publication SHARE-on BSM 2008.pdf  
 Share, Managing Water Across Boundaries, Edited by Claudia Sadoff, Thomas Greiber, Mark Smith, and Ger Bergkamp, IUCN, Water and Nature Initiative, 2008
- V2-5-9 WCD Paper BSM and Dams 2000.pdf  
 Joseph Milewski; Dominique Egre; V. Roquet, Hydro-Quebec, Canada, Prepared for WCD Thematic Review I.1: Social Impacts of Large Dams Equity and Distributional Issues
- V2-5-10 UK ODI - Practical TBM Review.pdf  
 Practical approaches to transboundary water benefit sharing, Halla Qaddumi, Working Paper 292 Results of ODI research, 2007
- V2-5-11 WBank BSM Workshop Brief 2007.pdf  
 International Experience Sharing Workshop on “Land Acquisition, Resettlement and Rehabilitation, and Benefit Sharing” July 21 to 25, 2007 (World Bank) Executive Summary
- V2-5-12 WBank BSM Workshop Papers 2007-2.pdf  
 Background Sector Papers for a World Bank Benefit Sharing Workshop 2007. Theme discussions: Hydropower, Land Acquisition, R&R, and Benefits-Sharing;
- V2-5-13-WB Hydropower Policy and BSM - 2009.pdf  
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- V2-5-14 IHA Protocol Extracts on BSM.pdf  
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- V2-5-18 NGO BSM Review and Synthesis.pdf  
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V2-6-1 BSM in extractive industries 2007.pdf  
International Experience With Benefit-Sharing Instruments For Extractive Resources, 2007

V2-6-2 BSM Lessons from the Mining Sector.pdf  
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V2-6-3- Compendium of Nat Laws on ABS.pdf  
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V2-6-4 IDRC ABS Legal Framework.pdf  
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V2-6-5 CBD on Genetic Res BSM.pdf  
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V2-6-6 BSM in Forest Products.pdf  
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**On Transboundary Benefit sharing:**

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Report no. 46456 Africa Region Water Resources Unit Working Paper 1 Benefit Sharing in International Rivers: Findings from the Senegal River Basin, the Columbia River Basin, and the Lesotho Highlands Water Project, Winston H. YU, 2008

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V2-5-2- SIWI-Theory Practice TBS -2009.pdf

Getting Transboundary Water Right: Theory and Practice for Effective Cooperation, 2009, Anders Jägerskog, Mark Zeitoun, and Anders Berntell

V2-3-1 West Africa - Benefit Sharing pdf

Introducing benefit sharing around large dams in West Africa Drawing on regional and International experience, 2008

**On National-To Local Benefit Sharing**

V2-5-1 DDP BSM Review Paper-2007.pdf

Compendium on Relevant Practices - 2nd Stage, Revised Final Report 2007, (Benefit Sharing Issues), Mr. Dominique ÉGRÉ (from which a number of case studies are in Vol 3) (Revenue sharing, Development funds, Equity sharing, Property taxes, Preferential electricity rates)

V2-1-7 VN TA 6498 BSM Pilot Final Rpt 2011.pdf

RETA 6498: Knowledge and Innovation Support for ADB's Water Financing Program. Final Report for Phase 1 Field Trial on the 210 MW A'Vuong Project in Quang Nam Province, 2010

V2-1-6 VN TA 4689 - Final Report.pdf

Final report with draft BSM legislation and work plan for a pilot project, 2008

V2-3-2 China Hubei Project.pdf

Hubei Hydropower Development In Poor Areas, Partnership agreement using equity sharing and revenue sharing funding of poverty alleviation plans

V2-3-2-Africa -Sierra Leone BSM.pdf

Institutional Arrangements: The Upper Seli Community Development Initiative and proposed Bumbuna Trust - Benefit sharing on the Bumbuna Hydroelectric Project in Sierra Leone

## VOLUME 3: COMPILATION OF POWER POINT PRESENTATIONS ON VARIOUS BENEFIT SHARING TOPICS

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The list of the presentations contained in the volume include:

- V3-1 DWF Workshop TBD Concepts 2010.pdf
- V3-2 DWF Framework for BSM.pdf
- V3-3 DWF MRCS TBS in the BDP.pdf
- V3-4-DWF Transboundary MRCS.pdf
- V3-5 DWF Nile Basin Initiative Cooperation.pdf
- V3-6 DWF Perspectives on BSM on the Zambezi.pdf
- V3-7 DWF Nile stakeholder views on BSM.pdf
- V3-8 DWF SADC Stakeholder Eng.pdf
- V3-9 DWF SADC BSM Guide.pdf
- V3-10 DWF Case Study Viet Nam.pdf
- V3-11 DWF Socio-economic N Basin BSM.pdf
- V3-12-DWF Stung Treng CSO Perspectives.pdf
- V3-13 ISH on TBS .pdf
- V3-14 IHA HSAF Briefing on BSM .pdf
- V3-15 ADB TA 4689 - Workshop 1.pdf
- V3-16 ADB TA 4689 - Workshop 2.pdf
- V3-17- VN TA 4689 - Workshop 3.pdf
- V3-18 WB Knowledge Sharing on BSM.pdf
- V3-19 WB Workshop on VN Benefit Sharing.pdf
- V3-20 DWF TB Overview to MRC.pdf

## VOLUME 4: COMPILATION OF CASE STUDIES

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The list of the documents contained in this Volume of the KB include:

- V4-1 Collection of Mini Case studies 2008.pdf
- V4-10 Lesotho Highlands Community Development Fund.pdf
- V4-2 China Hubai Project .pdf
- V4-3 Case Study Viet Nam.pdf
- V4-4 Central Asia TBS .pdf
- V4-5 Ecuador project equity sharing.pdf
- V4-6 VN -10 Steps in BSM.pdf
- V4-7 Hydro Quebec Miashtuk project.pdf
- V4-8 Hydro Quebec and Development Fund.pdf
- V4-9 Hydro Quebec and Revenue Sharing.pdf

Other Volume 4 docs

- Case Study Bhutan Trust Fund.pdf
- Case Study of BSM in Forest Management.pdf
- Case Study of National Parks and BSM.pdf
- Case Study REDD+ in Forestry.pdf

## VOLUME 5: EXAMPLES OF LEGISLATION AND REGULATIONS FOR BENEFIT SHARING

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The list of the documents contained in this Volume of the KB include:

- V5-1 Viet Nam Draft Decree Law on BSM.pdf
  - Draft Decree Law on establishing long-term benefit sharing arrangements with local communities adversely affected by hydropower projects, 2010

V5-2 Canada - Columbia Basin Trust Act.pdf

COLUMBIA BASIN TRUST ACT. Government of British Columbia. 1996

V5-3 Article on Brazil Legislation.pdf

Brazilian Legislation On Revenue Transfers From The Power Sector To The Federal Government, States And Municipalities: The Itaipu Project

V5-4 Article on Columbia Legislation.pdf

Colombian Legislation On Revenue Transfers From The Power Sector To Regional Environmental Agencies And Municipalities: The Urra 1 Project

V5-5 Article on Nepal Legislation.pdf

Nepalese Legislation On The Payment Of Royalties To Districts And Villages: The Kali Gandaki Hydropower Project

V5-6 Article on Norwegian Legislation.pdf

Norwegian Legislation Relating To Taxes and License Fees: The Glomma And Laagen River Basin Development And The Tokke Hydropower Project

V5-7 CBT Charter.pdf

Charter prepared by basin residents for the Columbia Basin Trust



## Annex 1: Draft TOR for National Consultants to assist NMCS

### National Consultant Terms of Reference

#### ISH OUTPUT 4.1C, “BENEFIT-SHARING MECHANISMS ELABORATED AT REGIONAL, NATIONAL AND COMMUNITY LEVELS”.

This TOR is to engage four national consultants, one in each MRC Member Country, to support work under ISH Output 4.1c in 2011. The national consultants will undertake several tasks working in close cooperation with the ISH Team in MRCS and the ISH National Coordinators in the NMCS.

#### BACKGROUND:

Benefit sharing has been a recurrent theme in international and national debates about hydropower and water resource infrastructure for the past two decades. Benefit sharing is an aspect of the recently approved MRC Basin Development Strategy, and part of the approved ISH activities for the 2011-2015 timeframe.

ISH Output 4.1c supports awareness raising and dialogue on experiences in the Asia region and world-wide on a full spectrum of hydropower benefit sharing aspects. This includes the theory and motivation for benefit sharing, the values it adds for achieving sustainable hydropower and links to IWRM basin management, different approaches successfully pursued in different situations, the types of legislation and regulation most effective, the sort of partnerships that can be formed for trialling and demonstration projects to build stakeholder consensus on the best approaches, key messages for decision-makers, and the practice and outcomes on the ground to date.

In 2011 activities include (i) preparing a knowledge base (compendiums) of information on benefit sharing (ii) conducting ISH TRG meetings on benefit sharing (iii) undertaking a study tour in the Mekong region and possibly with an international component (iv) preparing and holding a regional workshop on benefit sharing, and (iv) preparing a multi-year Programme for ISH Output 4.1c and ISH support to the BDP-led work on the transboundary aspects.

Local consultants are required to support NMC and the ISH team in information gathering and providing outputs. Up to 15 days of work are allocated to tasks noted below. This time allocation may be extended to assist with preparations for the regional workshop and study tour.

#### SCOPE OF WORK

The National Consultant tasks will include:

- (1) **Complete a questionnaire** - The questionnaire is provided as Annex 1 to this TOR. The questionnaire aims to get the information in a clear and focused way concerning:
  - A. Topics of most interest to national stakeholders
  - B. Attitudes of national stakeholders to Benefit Sharing
  - C. Experience to date with Benefit Sharing in MRC countries
  - D. Views on effective implementation of ISH Output 4.1c activities

The Consultant will complete the questionnaire on the basis of (i) structure interviews with national stakeholders as noted in task 2 below (ii) internet based searches, and (iii) professional knowledge and experience.

- (2) **Structured interviews** – the Consultant will undertake structured interviews with key people in each country to calibrate what stakeholders think. The questionnaire will be the basis for the interviews. Interview would be held with key stakeholder interests identified in cooperation with the ISH National Coordinator and ISH Team at the MRCS. These would include:
- The ISH National Coordinator in each NMC
  - NMC Chairperson or NMCS Director (or a designated spokesperson as appropriate)
  - The DGs of the water, energy and environment departments in each country
  - A utility representative (e.g. EGAT, EVN, EDL etc) and an electricity regulator representative if there is one (e.g. like ERAV), and
  - CSO / NGO spokesperson
- Outcomes of each structured interview would be written up in bullet form as a record.
- (3) **Key Questions List**- based on the above tasks, the consultant would prepare a list of the top 10 questions that the country stakeholders interviewed had about benefit sharing. This will guide what should be addressed in the compendium and otherwise featured in the workshop discussions and give some focus for our invited speakers from other regions.
- (4) **Short Survey / Review**: The consultant will a concise 5-page survey report on the current policies / mechanisms / pilot projects in each country that address benefit sharing principles and mechanisms, or otherwise the create enabling conditions conducive for exploring national to local benefit sharing in the hydropower sector. This will include recommendations on future improvements of the Knowledge Base
- (5) **Other tasks** – as may be agreed

## TIMING AND OUTPUTS

Work would be 15 days over the period May to June 2011.

The main task related outputs are:

1. The completed questionnaire
2. bullet form records of structured interviews
3. A concise report as defined in task 4 of 5-pages

All deliverables will be in the English language.

## REPORTING RELATIONS

The national consultant will report the MRCS, ISH Task Leader / Manager. The national consultant will work closely with the NMCS in day-to-day implementation of the assigned tasks. The ISH International Policy and Strategy Consultant will provide directional guidance through the MRCS ISH Task Leader / Manager.



Annex 2: Draft BSM Survey / Questionnaire

**Survey / Questionnaire**

**- Draft -**

**ISH OUTPUT 4.1C, “BENEFIT-SHARING MECHANISMS ELABORATED AT REGIONAL, NATIONAL AND COMMUNITY LEVELS”.**

This questionnaire is to support work on ISH Output 4.1c. The questionnaire will be completed by a local consultant in each MRC country. The questions will help to structure initial interviews with government, civil society and private sector representatives in each MRC Member Country.

Questions are organized under 4 categories:

- A. Topics of most interest to national stakeholders
- B. Attitudes of national stakeholders to Benefit Sharing
- C. Experience to date with Benefit Sharing in MRC countries
- D. Views on effective implementation of ISH Output 4.1c activities

Initial information on all these aspects is contained in Volume 1 of the Knowledge base.

**A. TOPICS OF MOST INTEREST TO NATIONAL STAKEHOLDERS**

**Q1. Which of the two following categories of benefit sharing do you see is of most interest to stakeholders in your country?**

Check which is appropriate.	Very Interested in all aspects	Interested in general information	Interested in knowing what information is available	Not very Interested at all
- National to local benefit sharing				
- Transboundary benefit sharing				
<p><i>Any additional remarks: (optional, expand as needed)</i></p> <ul style="list-style-type: none"> <li>▪</li> <li>▪</li> <li>▪</li> </ul> <p><i>Background to the Question:</i></p> <p>Benefit sharing occurs at different levels. In the Mekong context, these include transboundary benefit sharing (sharing between States on an international river on the basis of negotiated outcomes) and national to local forms of benefit sharing (sharing between different groups within a national society such as between the national levels, provincial and municipal levels and local communities).</p>				

**Q2. Which of the following forms of benefit sharing that are found in Asia and around the world in hydropower are stakeholders in your county likely to be interested in?**

Check which is appropriate.	Very Interested in all aspects	Interested in general information	Interested in knowing what information is available	Not very Interested at all

1. Equitable sharing of project services:				
2. Non-monetary forms of benefit sharing				
3. <i>Non-monetary forms of benefit sharing</i>				
4. <i>Indirect forms of benefit sharing</i>				

*Background information on this Question:*

1. *Equitable sharing of project services:* where local populations as target beneficiaries receive equitable access to the water and energy services produced by dam projects to support their development and welfare opportunities.
2. *Non-monetary forms of benefit sharing:* where target beneficiaries receive entitlements enabling them access to other natural resources, or support to pursue other forms of livelihood and welfare improvement, which offset permanent loss or reduction of land or water resource access caused by the dam, and
3. *Revenue sharing:* where target beneficiaries share part of the monetary benefits the project generates, typically expressed as a portion of revenue from bulk electricity sales or bulk water sales on an annual basis.
4. *Indirect forms of benefit sharing and additional benefits:* where investments in project-related infrastructure such as roads and public facilities, demands for local services and jobs add to the local area economy and regional economy.

**Q3. Which aspect of benefit sharing are stakeholders in your country interest in?**

Check which is appropriate.	Very Interested in details as well	Interested in general information only	Interested in knowing what information is available	Not very Interested at all
1. Information on the concepts and underlying theory of benefit sharing				
2. Advocacy materials and arguments in support of benefit sharing to present to decision-makers?				
3. <i>Samples of Legislation and regulation</i>				
4. <i>Illustrations of Institutional mechanisms</i>				
5. <i>Case studies in the Mekong and wider GMS region</i>				
6. <i>Case studies from the wider Asian region and from developing and developed countries</i>				
<i>Any additional remarks: (optional, expand as needed)</i>				
<ul style="list-style-type: none"> <li>▪</li> <li>▪</li> <li>▪</li> </ul>				

**Q4. Which of the following statements concerning knowledge sharing and Member Country dialogue on benefit sharing do you feel stakeholders in your country would most agree or disagree with?**

Check which is appropriate.	Agree Fully	Agree Partially	Agree a little	Not Agree at all
Information on benefit sharing is not readily available and is a major barrier to awareness raising				
MRC Countries will benefit by sharing information on national level				

dialogue on national-to-local benefit sharing				
<i>Any additional remarks: (optional, expand as needed)</i>				
<ul style="list-style-type: none"> <li>▪</li> <li>▪</li> <li>▪</li> </ul>				

**Q5. What would you say are the top frequently asked questions (FAQ) on benefit sharing in your country?**

<i>(List at least five FAQ here, expand if needed)</i>
1.
2.
3.
4.
5.

**B. ATTITUDES OF NATIONAL STAKEHOLDERS TO BENEFIT SHARING**

**Q6. What would you say is the general attitude toward benefit sharing among the different stakeholders groups in your country?**

Check which is appropriate.	Fully Supportive and on record as such	Interested but cautious	Have not seen the relevance	Opposed to benefit sharing	Are not aware of the concept or practice
Government: environment agencies					
Civil Society					
Hydropower Developers and Operators					
Electricity Consumer groups					
National utilities (e.g. EAC, EdL, EGAT, ERAV)					
Others?					

**Q7. Which of the following statements about general attitudes to benefit sharing do you feel stakeholders in your country would most agree with or disagree with?**

Check which is appropriate.	Agree Fully	Agree Partially	Agree a little	Not Agree at all
Stakeholders have very little information about benefit sharing and how it may impact on them or their interests				
Benefit sharing is something only affordable in wealthy countries and is something only for the long-term future in the Mekong				
Benefit sharing is most important in the Mekong because of the extensive use of river resources for livelihoods and well being				
<b>Background information on this Question:</b>				
There are a number of misconceptions about benefit sharing. One purpose is to identify misconceptions and respond				

by providing accurate information for stakeholders to consider.

**Any additional remarks:** (optional, expand as needed)

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**Q8. How should local community, NGO, and other civil society stakeholders be involved in discussion about national policies on benefit sharing?**

*(List 3 top views / suggestions (expand if needed))*

- 1.
- 2.
- 3.

**Q9. How should hydropower investors, developers and operators be involved in discussion about national policies on benefit sharing?**

*(List 3 top views / suggestions (expand if needed))*

- 1.
- 2.
- 3.

**Q10. How would you describe the role of MRC in supporting Member Countries on transboundary forms of benefit sharing and national-to-local forms of benefit sharing?**

*(List 3 top views / suggestions (expand if needed))*

<i>Transboundary Benefit Sharing</i>	<i>National to local benefit sharing</i>
1.	1.
2.	2.
3.	3.

**Q11. Which Ministry, Department or Agency is mandated to lead a national dialogue on benefit sharing in the hydropower sector? Is it not clear? Are there different views?**

*(Identify and add comment if needed)*

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- 
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**C. EXPERIENCE TO DATE WITH BENEFIT SHARING IN MRC COUNTRIES**

**Q12. Which of the following statements that probe experiences with benefit sharing in your country do you feel stakeholders in your country would most agree or disagree with?**

Check which is appropriate.	Agree Fully	Agree Partially	Agree a little	Not Agree at all
There is existing legislation and supporting regulations on project-related (national to local benefit sharing) on hydropower in the country.				
There is no existing legislation or regulation on benefit sharing; however there are many examples of indirect benefit sharing such as local investments in roads and policies to maximize local job creation.				
There are no clear, existing examples of benefit sharing in the county in any sector in the country (hydropower, the wider power sector, or resource extraction industries such as mining, forestry and genetic material for medicines).				
There is growing interest in understanding the value that benefit sharing mechanisms may offer for sustainable development in the water resource and hydropower sectors.				
There are a few examples of pilot projects that are supported by development partners by few people are actually aware of them				
<p><i>What is the source of additional information on examples identified? Here the respondent would be expected to identify key documents available, how they can be obtained by NMCS and made available to put in the KB-CD and website addresses if they are available) expand as needed</i></p> <ul style="list-style-type: none"> <li>▪</li> <li>▪</li> <li>▪</li> </ul>				

**Q13. Are there any projects (TAs or grant / loan projects) underway now in your country looking at benefit sharing policy or practice? What are they?**

*(List an briefly describe the status and contacts)*

- 1.
- 2.
- 3.
- 4.
- 5.

**Q14. Are there any examples of local Community Development Funds in your country in any sectors?**

Check which is appropriate.	Yes	No	Not sure
▪ On hydropower projects			
▪ Other power projects			
▪ For agriculture extension services			
▪ In the mining sector			
▪ In the forestry sector			
▪ In any other sector			



*If yes. Indicate the source of additional information on examples identified. Here the respondent would be expected to identify key documents available, how they can be obtained by NMCS, or made available to put in the KB-CD; and website addresses if they are available) expand as needed.*

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**Q15. What key observations would you make to describe the enabling environment for benefit sharing on hydropower projects in the country?**

*(Describe the policy environment, present and likely future in point form)*

- 
- 
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**D. VIEWS ON EFFECTIVE IMPLEMENTATION OF ISH OUTPUT 4.1C ACTIVITIES**

**Q16. How useful do you feel stakeholders will see the various support activities for Member countries delivered under ISH output 41.c planned for 2011.**

Check which is appropriate.	Very useful	Some useful	Useful only to some
▪ Compilation of the Knowledge Base (CD with documents)			
▪ Benefit sharing study tour			
▪ Regional Workshop			
▪ Multi-year Activity Plan			

*Any additional remarks: (optional, expand as needed)*

- 
- 
- 

**Q17. What suggestions are there to improve the Knowledge Base CD? Such as updating the Knowledge base frequently? Expanding it?**

*(List 3 top suggestions (expand if needed)*

- 1.
- 2.
- 3.

**Q18. What topics do you feel should be covered at the planned regional benefit sharing workshop in late 2011?**

*(List at least five topics here (expand if needed)*

- 1.
- 2.
- 3.
- 4.
- 5.

**Q19. Which of the following do you feel are most important to have as participants at the planned regional workshop in late 2011?**

Check which is appropriate.	Very important	Some what important	Only if budget permits – or they self-finance	Not needed at this stage
▪ NMCS representative				
▪ Government – power sector representative				
▪ Government – environment sector representative				
▪ Government – social sector representative				
▪ NGO / CSO representative				
▪ Utility representative				
▪ RBO / RBC staff or representatives				
▪ Hydropower developer / operator representative				
▪ MRC Programme staff				
▪ MRC Development Partners				
<p><i>Any additional remarks: (optional, expand as needed)</i></p> <ul style="list-style-type: none"> <li>▪</li> <li>▪</li> <li>▪</li> </ul>				

**Q20. For the planned benefit sharing study tour planned in 2011, which of the following do you feel are most important to have as participants?**

Check which is appropriate.	Very important	Some what important	Only if budget permits – or they self-finance	Not needed at this stage
▪ NMCS representative				
▪ Government – power sector representative				
▪ Government – environment sector representative				
▪ Government – social sector representative				
▪ NGO / CSO representative				
▪ Utility representative				
▪ RBO / RBC staff or representatives				
▪ Hydropower developer / operator representative				
▪ MRC Programme staff				
<p><i>Any additional remarks: (optional, expand as needed)</i></p> <ul style="list-style-type: none"> <li>▪</li> <li>▪</li> <li>▪</li> </ul>				

**Q21. What field locations (e.g., pilot projects in your country) could be candidates for the Mekong portion of the study visit?**

<p><i>(List at least five topics here (expand if needed))</i></p> <ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> </ol>
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- 4.
- 5.

**Q22. What organizations or projects in your country) should be included in the Mekong portion of the study visit?**

*(List at least five topics here (expand if needed)*

- 1.
- 2.
- 3.
- 4.
- 5.

**Q23. What capacity building do you feel would be most helpful for NMC and national line agencies? Can you specify the types?**

*(List at least five topics here (expand if needed)*

- 1.
- 2.
- 3.
- 4.
- 5.

## Endnotes

<sup>i</sup> The aim is to offer insights which may be helpful to introduce for the first time, or strengthen existing benefit sharing mechanisms on existing and proposed dams consistent with the 1995 Mekong Agreement and IWRM practice.

<sup>ii</sup> Extract from research article, Benefit Sharing: it's time for a definition. Author D. Schroeder, commenting on the definition of benefit sharing related to genetic resource use and medicine (arguments) that also applies to defining benefit sharing in other sectors. <http://jme.bmj.com/content/33/4/205.full>

Extract, "Two questions are interesting for philosophers in the context of this study: one about the concept of benefit sharing and the other about the internal structure of the definition. What kind of concept is benefit sharing? An ethical principle comparable to autonomy or justice? No. Benefit sharing, as defined in this paper, is a tool to achieve commutative justice,<sup>27</sup> an item on a mental tick list. To be just, we have to give a portion of advantages/profits derived from the use of genetic resources to resource providers. Done! What is the internal structure of the definition? Using the last definition, we can distinguish three elements: (i) description of a tool (ii) justification for its existence in the form of a fundamental ethical principle; and (iii) limited advice for its use. Strictly speaking, the first part of the definition would have been sufficient to capture the essence of benefit sharing. Benefit sharing is the action of giving a portion of advantages/profits derived from the use of human genetic resources to the resource providers.

<sup>iii</sup> These people essential "host" hydropower projects in their locality and some part of that community may give up land or resource access in varying degrees in order for the project to proceed.

<sup>iv</sup> Schroeder (2006) argues that conceptually benefit sharing it is an exchange between those who grant access to a particular resource and those who provide compensation, or rewards, for use of the resource. In the water resources sector there are different legal interpretations about who is actually granting access to water resources (i.e., the State alone, or the State plus others such as provinces or local communities where the resources are found and in what measure).

<sup>v</sup> National-to-local benefit sharing is normally reflected in national policies prescribing the use of benefit sharing mechanisms for hydropower projects in a country, province or river basin. There are many approaches that can be considered, though fundamentally, benefit sharing is a way for governments to improve the distribution of the benefits and costs of hydropower within society (i.e., fairness and equity as perceived by the society and stakeholders). A key point is benefit sharing needs to be applied in a consistent manner. Thus guidance from government is needed to avoid ad hoc approaches. National to local benefit sharing is otherwise a way for societies to address what is sometimes described as a "disconnect" between national and local development, where hydropower is often criticised (rightly or wrongly) as widening the income gap between rural and urban areas, and even exacerbating local poverty – when policy aims are the opposite. Some people argue this is more likely to occur if hydropower projects have limited, or no obvious sustainability features beyond compensation for involuntary relocation and narrow environment mitigation (e.g. projects lacking in measures that contribute to longer-term economic, social and environmental sustainability in ways communities affected by the project feel important). Revenue sharing is perhaps the most recognized form of benefit sharing. Revenue sharing mechanisms transfer some part of the economic benefits of hydropower projects that accrue at the national level to the provincial, sub-provincial, municipal or local levels. As the MRC visit to Latin America showed all levels may share a portion of the monetary benefits. The important aspect is that revenue sharing mechanism are essentially tariff-based measures, where the electricity consumer (the ultimate beneficiary of hydropower) pays a little more to share the benefits of hydropower development with the affected communities and thus enable the communities to invest in their local development to offset the permanent adverse impacts. This essentially allows balancing development opportunities and risks at the local level, which extends the MRC thinking of balancing development opportunities and risks at the national and regional levels to the local level - consistent with IWRM principles. In addition to revenue sharing, other forms of non-monetary benefit sharing may be conferred to local communities adversely impacted by the land and water resource transformation related to hydropower development and operation. Many non-monetary benefits are particularly important to people living in subsistence and low-income situations and rely heavily on natural resources for their livelihoods, health welfare and culture. Among the non-monetary measures applied in the Asia region and world-wide include enhance resource access rights (land, water or forest related). Local communities collectively may also have a permanent share in the monetary benefits arising from new resource management and development opportunities created by the hydropower project (i.e., again to help balance the development opportunities and development risks at the local level, and not only at the national level or regional level). Experience shows that a consistent approach to benefit sharing needs to be followed in the same country, which means legislation or regulation is needed. This not only creates a level-playing field for all potential and existing hydropower project investors, developers and owners, but critically, it also helps avoid unnecessary social controversy due different benefit sharing practices and levels entitlement in different locations. It is also important to ensure a consistent approach is followed on new and existing and projects, on public sector and private sector projects and for different groups, especially ethnic communities that in the Mekong context often comprise a large proportion of project-affected people.

<sup>vi</sup> International experience also shows that, apart from improving access to electrical services, rural people often choose to invest money from benefit sharing funds in a mix of basic infrastructure services at the community and grass-roots levels

that directly improve health and welfare. Other local preferences centred on livelihood enhancement, not only to restore pre-project income levels, but also to meet development aspirations, such as: moving to modern forms of cultivation (e.g. moving away from unsustainable slash and burn practices in subsistence agriculture); improving local natural resource access through community-managed forestry and related schemes in the immediate watershed; and, pursuing non-farm training and income opportunities to diversify the local economy, particularly for youth. Traditional water resource users living downstream similarly have used funds derived from benefit sharing to cope with adverse, permanent transformations of ecosystem services (e.g. for food, fibre, water access, etc.) and to establish alternative livelihoods.

<sup>vii</sup> Carolyn Fischer, International Experience With Benefit-Sharing Instruments for Extractive Resources, May 2007, <http://www.rff.org/rff/Documents/RFF-Rpt-BenefitSharing.pdf>. Looks at examples in the mining petroleum industries. In Vietnam individuals and communities receive payments for protecting watersheds by planting trees under Forestry Program 661. Other laws provide for direct sharing of revenue from forest product sales between local communities and State Forest Enterprises (SFEs) to ... “ensure a harmonious benefit-sharing relationship between, on one hand, laborers and the State and the SFEs, and on the other, between SFEs and localities”. Article 2 (item 3) of the PMO Decision 187, 1999

<sup>viii</sup> <http://www.cbd.int/abs/>

<sup>ix</sup> IUCN Publication Share: Managing Water Across Boundaries, 2008  
<http://www.iucn.org/resources/publications/index.cfm?uNewsID=2185>

<sup>x</sup> Forum Bulletin 7, A Daily Report of the 3rd World Water Forum and Ministerial Conference Published by the International Institute for Sustainable Development (IISD) in collaboration with the 3rd World Water Forum Secretariat and the Ministry of Foreign Affairs of Japan. March 2003. These calls were reinforced at the 4<sup>th</sup> WWF in Mexico in 2006.

<sup>xi</sup> Extending the operating lives of dam reservoirs extends multiple-benefits and revenue generation.

<sup>xii</sup> In connection with the role benefit sharing plays in increasing capacity to implement community-managed catchment management measures that help adapt to climate change, as well as adaptively manage dams to maximize development returns over the longer-term, as hydrological conditions vary.

<sup>xiii</sup> If dam are best development option it also means less vulnerability to international oil price shocks in power generation and related unsustainable debt burdens for fuel imports in countries such as Sierra Leone.

<sup>xiv</sup> The strategy notes that, “Development Opportunity Space. The Strategy employs the “Development Opportunity Space” (DOS) to present both water resources development opportunities (i.e. how much water can be used for industrial water supply, irrigation and hydropower) and water-related opportunities contributing to improved livelihoods (fisheries, flood warning, watershed management, biodiversity conservation, river trade, climate change adaptation) or improving the management of water and related resources (basin monitoring systems, navigation systems, and policy, institutional and capacity development). Together, these two areas of the DOS represent the opportunities for coordinated basin development and management. The boundaries of the DOS are set by the agreed basin environmental and social objectives and indicators as well as thresholds set out in MRC Procedures, such as the flows framework to be maintained under the PMFM and the water quality standards for human and aquatic health under the PWQ.”

<sup>xv</sup> The measures the BDS identifies to move towards sustainable development of hydropower on tributaries include:

- Identifying sub-basins with high ecological value to be protected and those where hydropower can be developed with limited social and environmental impacts;
- Evaluating hydropower projects from a multi-purpose perspective to increase overall economic benefits and decrease adverse effects on other water uses;
- Mitigating negative impacts of hydropower, such as through: re-regulation reservoirs downstream of peaking projects; multi-level water intakes or aeration facilities to manage water quality/temperature; fish passage; and minimizing sediment entrapment;  
Developing management plans for environmental hotspots impacted by changed flow regimes; and
- Evaluating benefit-sharing options, such as watershed development and management benefiting hydropower generation and funded from hydropower revenues.

<sup>xvi</sup> As noted in Annex 1, the Bumbuna Trust are to be coordinated with the Local Council budget expenditures, and line ministries must sign off on measures involve government budgetary commitment such as teachers for schools or medical staff for rural health posts. In Vietnam all expenditures must be consistent with the integrated rural development plans sanctioned by the People's Committee's from the village to Provincial level.

<sup>xvii</sup> Especially in situations where rural electrification requires considerably more investment than available revenue sharing funds that need to cover non-power development aspects. For example, legislation may require resettlement communities to be electrified as part of the project capital budget. Dam affected communities along the reservoir perimeter may receive priority in the province, district or national rural electrification Programme.

<sup>xviii</sup> Experience world wide shows there are opportunities, for example, to build flexibility to structures (e.g. bottom flow outlets, variable level intakes where appropriate) to enable flood simulation releases and adjustment of environment flow releases over time).

<sup>xix</sup> THE NATION, December 11, 2009, "The two-year-old Community Development Fund (CDF) for areas surrounding power plants has proved successful, although to what degree is yet to be measured". The CDF of Ratchaburi Power Project is reportedly the second largest in Thailand and has a contribution of Bt280 million per year. The media reports note that Thailand's Energy Policy and Planning Office (EPPPO) of the Ministry of Energy is responsible for drafting regulations on the future status and operation of such funds. <http://www.nationmultimedia.com/home/2009/12/11/business/Community-development-fund-seen-as-a-success-30118305.html> and [http://pr.egat.co.th/all\\_work/annual2007/eng/E4.pdf](http://pr.egat.co.th/all_work/annual2007/eng/E4.pdf)

<sup>xx</sup> The first phase Report for TA-6689, provides results of the national policy review, the consultation arrangements, and the first draft of the Draft Decree Law to apply to both existing and new hydropower projects)Trialling on the 210 MW A'Vuong hydropower project located in the central highlands of Quang Nam. The completion report of the Phase 1 Trialling is at <http://www.adb.org/Water/PDA/PDFs/VIE-200901.pdf> The design phase document, including the first draft of the decree law is at <http://www.adb.org/Documents/Produced-Under-TA/39379/39379-VIE-DPTA.pdf> .

<sup>xxi</sup> The World Bank provided a loan of US\$105 million for the Hubei Hydropower Development in Poor Areas Project was approved in 2002. The Hubei project proposes to build four multi-purpose dams that will be designed and operated by four county-registered, limited liability companies whose shareholders are power generation or power financing companies owned by provincial, municipal and county governments. Financial returns on equity invested by these county-owned power companies are expected to be in the range of 15 to 25% per year. Some argue these returns to the local counties would be even larger if appropriate changes were made to the current energy pricing formula, or if a local resource tax could be introduced to capture more of the economic rent. (Benefit Sharing Synthesis Report, Jason Paiement)

<sup>xxii</sup> [http://www.portofentry.com/site/root/resources/industry\\_news/5082.html](http://www.portofentry.com/site/root/resources/industry_news/5082.html)

<sup>xxiii</sup> One nuance is there is a tax holiday on some portion of the royalties that the project would pay in the first 15 years. After 15 years, royalties are 10% of generation (GWh calculated linked to the PPA rate) plus a charge on capacity (MW). Nevertheless, even in the initial years the amounts have a significant impact in rural areas in Nepal. In some Districts, the money available from hydropower revenue sharing arrangements represent up to 65% of the districts total revenue from all sources, including government administration and development budgets). Égré (2007) reporting on analysis of the Makawanpur District Development Committee (DDC) expenditures (Uppadyaya, 2006)

<sup>xxiv</sup> Also Uppadyaya, 2006

<sup>xxv</sup> WCD (2000) In addition large projects such as Itaipu have long-term contracts between the affected communities and the project entity.

<sup>xxvi</sup> <http://www.worldwaterweek.org/stockholmwatersymposium/workshop7.asp>

<sup>xxvii</sup> Initially royalties from the LHWP began to flow in 1996 and a significant portion of these revenues was initially placed into the Lesotho Highlands Revenue Fund (LHRF). The intention was some of the expenditure could have a poverty focus, however because of from a number of weaknesses Fund operation was suspended in 1997. All of the LHRF assets and liabilities were transferred to LFCD, including 18 on-going sub-projects, which the LFCD was expected to complete.

<sup>xxviii</sup> The Government of Lesotho's (GOL) use of a portion of the revenues from LHWP for poverty reduction was a pre-condition for the Bank going to the Board with Phase 1B in June 1998 (World Bank ICR Report).

<sup>xxix</sup> It is reported that the funds had gone into building 1,100 km of rural roads, 210 earth-fill dams, 60 footbridges and forestry conservation works by 2002.

<sup>xxx</sup>

<http://web.worldbank.org/external/projects/main?pagePK=64283627&piPK=64290415&theSitePK=40941&menuPK=228424&Projectid=P058050>

<sup>xxxi</sup> Another factor was that in 2001, as the LFCD became operational, the existing District Development Councils and Village Development Councils were abolished. This decision left a vacuum where these key players had been expected to play a major role in providing technical, supervisory and monitoring support to sub-projects and the CDD approach.

<sup>xxxii</sup> It demonstrates the importance of investing in 2-way communication with the beneficiaries. Additionally, it shows how a poorly executed benefit sharing project can discourage further initiatives of its kind - even if proper arrangements are made drawing lessons from the previous failure. And as some observers noted, it emphasized the importance of transparent mechanisms, "Specific rules on ensuring transparency in the management of the Fund, and public information on its activities and programs should have been put in place. An independent oversight committee with the participation of civil society representatives could have helped ensure that the funds were allocated to benefit the population of Lesotho and in particular the affected communities in the Highlands."(Thamae and Pottinger, 2006, as reported by Dominique Egré (2007).

<sup>xxxiii</sup> Details of what was planned in 2005 are provided in the Project Appraisal Document

[http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2005/05/27/000012009\\_20050527095956/Rendered/INDEX/31844.txt](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2005/05/27/000012009_20050527095956/Rendered/INDEX/31844.txt)

<sup>xxxiv</sup> The priority was to restore power supply to the Freetown area, where many of the war refugees from rural areas have located and where much of the commerce is based. Benefit sharing arrangements with local communities were incorporated in the design of the Bumbuna completion project. This recognized that a major contributing factor to the 11-year war was the lack of local sharing of resource development revenue, especially from mining development. A large section of the rural population marginalized from the political process was deprived of social services and economic development opportunities.

In this manner also, the immediate needs of some of the poorest communities in the country who lived in absolute poverty could be met (Sierra Leone was then ranked as the poorest country in the world). Moreover, the real risk of rekindling previous inter-communal conflict around the question of who was to receive benefits, and who was not - would be avoided. This issue was particularly important, given that all local communities in the post-war situation fully expected to receive some benefit from the Bumbuna project as it was a major national investment (i.e. in particular via access to electricity services they had been long promised), when in fact the government had no financial resources for rural electrification in the near term.

<sup>xxxv</sup> <http://web.worldbank.org/external/projects/main?pagePK=64312881&piPK=64302848&theSitePK=40941&Projectid=P086801>

<sup>xxxvi</sup> A World Bank grant will finance the environment and social management components during project implementation and lay the groundwork for establishment of the Bumbuna Trust. <http://www.bumbuna.com/>

<sup>xxxvii</sup> Additionally, there was a failure to secure its approval of the ERPA from the CDM after three applications, due to what was cited as “uncertainty over the level of reservoir emissions”.

<sup>xxxviii</sup> Lessons drawn for the West African context include importance of reflecting agreements appropriately in legislation, beyond commitments in donor-supported initiatives. In this case while legislation was prepared and approved by Parliament (i) to endorse the Kyoto Protocol to enable participation in the CDM for the ERPA, and (ii) to create the public private special project company structure for the Bumbuna project. However, no legislative provisions were made for the revenue sharing aspect, despite the overwhelming support of the government of day for the arrangement. Otherwise, the approach is a good model in terms of an integrated approach to sustainable management of hydropower projects and benefit sharing with poor rural communities as well as dealing with post-war realities.

<sup>xxxix</sup> These two countries are still actively building and reconfiguring hydropower and also adopting a basin management orientation along IWRM principles, which came to the forefront only in the 1990's. The basin orientation is partly because there is often more than one hydropower facility in a basin. Consequently, the adverse impacts are difficult to disaggregate, such as the impacts of river flow changes on downstream communities.

<sup>xl</sup> <http://www.cbt.org/main/default.asp>

<sup>xli</sup> As noted on the CBT website <http://www.cbt.org/>

<sup>xlii</sup> This CBT ACT (1995) granted the affected communities (through the CBT) a part equity share in hydro projects that BC Hydro owned in the basin. In addition, the provincial government provided an establishment grant to the CBT for a period of 5-years. The long-term equity holdings of the CBT generated a return on investment of \$ Canadian 3.8 million in 2004.

<sup>xliii</sup> The Eastmain-1-A / Rupert project in Quebec is an example. This project resulted from the Paix des Braves, a historic agreement between the James Bay Cree and the Government of Québec. Before its signing, a referendum was held among Cree community groups, 70% of whom voted in favour of the agreement. The Cree have been involved in the project every step of the way, from the preliminary studies to phases now in development.

[canhydropower.org/hydro\\_e/pdf/submission\\_Eastmain\\_Rupert.pdf](http://canhydropower.org/hydro_e/pdf/submission_Eastmain_Rupert.pdf)

<sup>xliv</sup> WCD case study on the Glomma and Laagen (G&L) basin (2000) and (Egre, 2007)

<sup>xlv</sup> Extract from <http://www.cbd.int/abs/> The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity is an international agreement which aims at sharing the benefits arising from the utilization of genetic resources in a fair and equitable way, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding, thereby contributing to the conservation of biological diversity and the sustainable use of its components. It was adopted by the Conference of the Parties to the Convention on Biological Diversity at its tenth meeting on 29 October 2010 in Nagoya, Japan. The Nagoya Protocol will be open for signature by Parties to the Convention from 2 February 2011 until 1 February 2012 at the United Nations Headquarters in New York.

The fair and equitable sharing of the benefits arising out of the utilization of genetic resources is one of the three objectives of the Convention on Biological Diversity. For background information on the Convention's work programme on access and benefit-sharing prior to the adoption of the Nagoya Protocol and information on the negotiations of the Nagoya Protocol, please visit the following pages: Background and ABS Developments under the CBD Prior to the Nagoya Protocol.

<sup>xlvi</sup> The IHA Protocol is the result of intensive work from 2008 to 2010 by the Hydropower Sustainability Assessment Forum, a multi-stakeholder body with representatives from social and environmental NGOs (Oxfam, The Nature Conservancy, Transparency International, WWF); governments (China, Germany, Iceland, Norway, Zambia); commercial and development banks (Equator Principles Financial Institutions Group, The World Bank); and the hydropower sector, represented by IHA. The Protocol is presently governed by a multi-stakeholder interim governance committee, with the final governance structure to be confirmed at the IHA World Congress in June 2011.

<sup>xlvii</sup> Including the IHA, ICOLD, ICID and the International Energy Agency (IEA). See the IEA Hydropower Agreement. Annex III/5: Hydropower and the environment: present context and guidelines for future action, Vol. II: Main report and Vol. III Appendices. <http://www.adb.org/Water/topics/dams/pdf/HyA3S5V2.pdf> Page 99. Allocate resources and share benefits: An excellent way to ensure that members of displaced communities are better off after the project is to provide such communities with long-term revenue streams based on benefit sharing mechanisms.

<sup>xlviii</sup> Egré, D., Roquet, V. and Durocher, C. 2002. Benefit Sharing from Dam Project. Phase 1: Desk Study Report prepared for Alessandro Palmieri, World Bank.

<sup>xlix</sup> This report was updated by updated by Dominique ÉGRÉ for the Dams and Development Project in 2007 [www.unep.org/dams/files/Compendium/Report\\_BS.pdf](http://www.unep.org/dams/files/Compendium/Report_BS.pdf)

<sup>l</sup> The initial steps have brought together international experts and Bank staff to discuss and provide inputs from their own experience a 3-day session on Enhancing Development Benefits to Local Communities in Hydropower Projects in 2008, and work on the toolkit is ongoing in 2009. From the World Bank Website: The main deliverables of the work program are a series of individual case studies with synthesis report highlighting the main lessons learned good practices and key success factors for effective enhancement of benefits and a guidance note/toolkit for use by Bank staff. Examples of benefits-sharing programs will be assessed using social, economic and institutional indicators. The study will pay particular attention to non-monetary forms of benefits sharing such as water management, community participatory mechanisms, and other innovative approaches.

<sup>li</sup> Or a poverty reduction target established by Provincial People's Committees in conjunction with national bodies like the Ethnic Minorities Committee and the affected communities.

<sup>lii</sup> Article 18 of the Law of Environment Protection establishes the contents of EIAs that are form one basis for approval of the project by the competent State agencies. This requires the identification of adverse impacts in the project impacts zone and long-term mitigation plans for both construction and operation phases. Also there are guidelines for EIAs issued by the National Environmental Protection that are relevant, as noted in the policy review.

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**Outcome 4:** IO-4a.) Hydropower sustainability assessment tools are in place at project and sub-basin levels to identify opportunities and to measure progress introducing sustainable hydropower considerations in the Mekong region; IO-4b.) Innovative financing mechanisms, especially for benefit sharing, are increasingly evaluated and introduced on LMB hydropower projects.

This Outcome has two complementary streams of activities. The first stream encourages and supports Member Country cooperation in the development and use of hydropower sustainability assessment tools suited to the Mekong setting. Apart from the development and trialing of these tools, these Outputs encompass (i) capacity building for use of the tools (ii) systematic comparison of Mekong experience with international good practice (i.e. benchmarking progress, recognizing the dynamic nature of hydropower practices), and (iii) building a dialogue "platform" to enable Member Countries to routinely share experiences and lessons on hydropower sustainability assessments and also action on recommendations emerging from such processes.

This stream of work is timely for many reasons. One critical aspect is a new generation of sustainability assessment tools are now available for both project and basin / sub-basin level applications. <sup>liii</sup> Further, it is expected that use of these tools will strengthen capacities in Member Counties to apply other legal tools intrinsically linked to sustainable outcomes in hydropower, such as project-level EIAs / EMPs and multi project SEAs / CIAs. The new sustainability assessment tools are designed to facilitate and structure dialogue to make multi-stakeholder engagements and partnerships more effective. One example is to help new river basin management entities (RBCs/RBOs) on Mekong tributaries establish themselves by engaging with IWRM and hydropower constituencies in structured, result-oriented processes around these assessments.

<sup>liv</sup> The strategy notes that, "Development Opportunity Space. The Strategy employs the "Development Opportunity Space" (DOS) to present both water resources development opportunities (i.e. how much water can be used for industrial water



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supply, irrigation and hydropower) and water-related opportunities contributing to improved livelihoods (fisheries, flood warning, watershed management, biodiversity conservation, river trade, climate change adaptation) or improving the management of water and related resources (basin monitoring systems, navigation systems, and policy, institutional and capacity development). Together, these two areas of the DOS represent the opportunities for coordinated basin development and management. The boundaries of the DOS are set by the agreed basin environmental and social objectives and indicators as well as thresholds set out in MRC Procedures, such as the flows framework to be maintained under the PMFM and the water quality standards for human and aquatic health under the PWQ.”

<sup>lv</sup> The measures the BDS identifies to move towards sustainable development of hydropower on tributaries include:

- Identifying sub-basins with high ecological value to be protected and those where hydropower can be developed with limited social and environmental impacts;
- Evaluating hydropower projects from a multi-purpose perspective to increase overall economic benefits and decrease adverse effects on other water uses;
- Mitigating negative impacts of hydropower, such as through: re-regulation reservoirs downstream of peaking projects; multi-level water intakes or aeration facilities to manage water quality/temperature; fish passage; and minimizing sediment entrapment;  
Developing management plans for environmental hotspots impacted by changed flow regimes; and
- Evaluating benefit-sharing options, such as watershed development and management benefiting hydropower generation and funded from hydropower revenues.