

MEKONG PROJECT 4 ON WATER GOVERNANCE
Challenge Program for Water and Food Mekong

**DEVELOPMENT OF WATER RESOURCE INFRASTRUCTURES
AND LIVELIHOOD BENEFITS:
A CASE OF LOWER SESAN 2 PROJECT, CAMBODIA**

Seang Phyrom¹, Chay Keartha¹, Suon Seng¹, Edsel Sajor² and Rutmanee Ongsakul²

¹Centre for Development Oriented Research in Agriculture and Livelihood Systems, Cambodia

²Asian Institute of Technology, Thailand

July 2013



Table of Contents

Table of Contents.....	ii
List of Tables	iii
List of Figures	iii
List of Acronyms and Abbreviations	v
I. Processes of People Participation in Relation to Livelihood Agenda in the Hydropower Development Planning	1
1.1 Decision-Making and Participation Events Related to the Lower Sesan 2 Project.....	1
1.2 Public Participation in the LS2 Hydropower Development	4
1.3 Government Bodies Serve as the Venue for People’s Voice	6
1.4 Engagement and Deliberations between Local People and Government Officers.....	7
1.5 Local People’s Satisfaction with the Substance, Conduct, and Resolution	7
II. Intermediary Organizations: Role in Engagement and Dialogue	8
2.1 Culture and Environment Preservation Association	8
2.2 3S Rivers Project Network	9
2.3 River Coalition of Cambodia	9
III. Local Economy, Socio-Economic Profile and Livelihood Conditions in the 3S Basin and the Lower Sesan 2 Dam Area	12
3.1 General Description of the Sesan, Sekong and Srepok (3S) River Basin Area	12
3.2 Socio-economic Profile and Livelihoods of Population in 3S and Potentially Affected Communities in the LS2 Dam Area	12
IV. Description and Analysis of Omissions in the Planning Documents in Relation TO HPD	19
V. Conclusion	20

Tables and Figures

Table 3.1: Major household expenditures (in KHR/year per HH).....	16
Figure 3.1: Share in economic activities by the upstream villagers at the LS2 project site.....	13
Figure 3.2: Share in economic activities by the downstream villagers at the LS2 project site.....	13
Figure 12: Involvement of male/female household members in economic activities	14

List of Acronyms and Abbreviations

3S	:	Sesan, Sekong and Srepok River
3SPN	:	3S Rivers Protection Network
A/C	:	Approved for Construction
ADB	:	Asian Development Bank
ASEAN	:	Association of Southeast Asian Nations
AusAID	:	Australian Agency for International Development
BDC	:	Basin Development Challenge
BOT	:	Build Operate Transfer
CamboWP	:	Cambodia Water Partnership
CBO	:	Community Base Organization
CDC	:	Council for the Development of Cambodia
CDM	:	Clean Development Mechanism
CDTA	:	Cambodia Development Triangle Area
CEP	:	Core Environment Programme
CEPA	:	Culture and Environment Preservation Association
CETIC	:	Centre d'Excellence en Technologies de l'Information et de la Communication
CFDO	:	Community Fisheries Development Office
CLV	:	Cambodia - Laos – Vietnam
CMDG	:	Cambodian Millennium Development Goals
CNMC	:	Cambodia National Mekong Committee
CPWF	:	Challenge Program on Water and Food
DTA	:	Development Triangle Area
EAC	:	Electricity Authority of Cambodia
EATP	:	Environmental Activist Training Project
EDC	:	Electricite du Cambodge
EIA	:	Environmental Impact Assessment
EMP	:	Environmental Management Plan
EU	:	European Union
EVN	:	Electricity of Vietnam
FiA	:	Fishery Administration
FS	:	Feasibility Study
GDP	:	Gross Domestic Product
GMS	:	Greater Mekong Sub-region
HPD	:	Hydropower Development
IFAD	:	International Fund for Agriculture and Development
IR	:	International River
IRC	:	Inter-Ministerial Resettlement Committee
IRI	:	International Republic Institute
IWRM	:	Integrated Water Resources Management
JICA	:	Japan International Cooperation Agency
KCC	:	Key Consultants Cambodia
LMB	:	Lower Mekong Basin
LP	:	Letter of Permission
LS2	:	Lower Sesan 2
LS3	:	Lower Srepok 3
LS4	:	Lower Srepok 4
MAFF	:	Ministry of Agriculture, Forestry and Fisheries
MDG	:	Millennium Development Goals

MIME	:	Ministry of Industry, Mine and Energy
MK4	:	Mekong Project 4
MoE	:	Ministry of Environment
MoEF	:	Ministry of Economy and Finance
MoU	:	Memorandum of Understanding
MOWRAM	:	Ministry of Water Resources and Meteorology
MRB	:	Mekong River Basin
MRC	:	Mekong River Commission
MRD	:	Ministry of Rural Development
MSME	:	Micro, Small and Medium Enterprise
MWRAS	:	Mekong Water Resources Assistance Strategy
N/A	:	Not available
NCDD	:	National Committee for Sub-National Democratic Development
NGO	:	Non-governmental Organizations
NGO Forum	:	NGO Forum on Cambodia
NIS	:	National Institute of Statistics
NR	:	National Road
NSDP	:	National Strategic Development Plan
NTFP	:	Non-Timber Forest Product
PECC1	:	Power Engineering Consulting Joint Stock Company No1
PECC2	:	Power Engineering Consulting Joint Stock Company No2
PFS	:	Pre-Feasibility Study
PRDNEP	:	Project of Capacity Development of Provincial Rural Development in Northeastern Provinces
RCC	:	Rivers Coalition in Cambodia
RGC	:	Royal Government of Cambodia
SCABC	:	Staff Capacity Building Component
SEA	:	Strategic Environmental Assessment
SME	:	Small and Medium Enterprise
T/L	:	Transmission Line
TAI	:	Cambodian A2I Team
TVK	:	National Television of Kampuchea
U/C	:	Under Construction
UN	:	United Nations
UNFCCC	:	United Nations Framework Convention on Climate Change
USD	:	United State Dollar
USIAD	:	United States Agency for International Development
VDC	:	Village Development Committee
VN	:	Vietnam
WB	:	World Bank
WSI	:	Water Storage Infrastructure

I. PROCESSES OF PEOPLE PARTICIPATION IN RELATION TO LIVELIHOOD AGENDA IN THE HYDROPOWER DEVELOPMENT PLANNING

1.1 Decision-Making and Participation Events Related to Lower Sesan 2 Project

Located on the Sesan River between Plouk village and the convergence of the Sesan and Srepok rivers (PECC1 and KCC, 2009), the Lower Sesan 2 Hydropower Plant is expected to generate about 400 MW. Around 5,000 people from more than 1,000 families in four communes, namely, Srae Kor, Plouk, Ta Latt and Kbal Romeas, will be directly affected by the dam, which has a storage of approximately 335 Km². According to the Cambodian Government's draft law on compensation of Hydro Power Lower Sesan 2 Project, the Royal Group of Cambodia owns 90 percent stake in the dam in collaboration with Hydrolancang International Energy Co. Ltd from China, while its partner, the EVN International Joint Stock Company of Vietnam, owns 10 percent (RGC, 2013).

Decision-Making Process on Lower Sesan 2

It was in August 2006 that Cambodia and Vietnam started discussions on the possibility of building the LS2 dam¹. The following year, the Cambodian Ministry of Industry, Mines and Energy (MIME) and the state-controlled Electricity of Vietnam (EVN) signed a Memorandum of Understanding for the USD 16 million Lower Sesan 2 project. A company in Vietnam, Power Engineering Consulting Corporation 1 (PECC1), and a Cambodian company, Key Consultants Cambodia (KCC)², were named as the managing entities in this agreement.

On February 26, 2008, MIME and EVN Cambodia signed a new MoU to build a 100-KV transmission line to supply power to Stung Treng Province, a 220 KV sub-station in Ban Lung town to supply power to Ratanakiri province, and a 220-KV transmission line to export electricity from the Lower Sesan 2 dam to Ban Lung, and from there to Vietnam³.

The project received a big boost in January 2011, when Vietnam's Ministry of Planning and Investment licensed Electricity of Vietnam (EVN) to make a USD 800 million investment in the project. Construction started the same year. When complete, the power plant will have a capacity of 400 MW with an average output of 1,998 GWh per year. Then on April 24, 2011, Cambodia's Royal group announced its plan to start working on a USD 700 million hydroelectric plant along the Lower Sesan River along with its Vietnamese partner. The commercial operations are expected to begin in 2017.

On November 26, 2012, the government of Cambodia signed an agreement with the Lower Sesan 2 Hydropower for investment in the project. Several other important decisions were taken earlier this year when the Prime Minister signed the Draft Law on Compensation for the Lower Sesan 2 project⁴ on January 10, 2013. A month later, on February 15, 2013, the National Assembly of Cambodia approved a law guaranteeing that that government would make the payment for electricity if the Electricite du Cambodge (EDC) failed to pay for the Lower Sesan 2 project.

1 Ame Trandem, International Rivers, Bank Track-Lower Sesan 2 dam project, Feb 28, 2012

2 Ame Trandem, International Rivers, Bank Track-Lower Sesan 2 dam project, Feb 28, 2012

3 Ian G. Baird, Best practice in compensation and resettlement for large dam: The case of the plan on Lower Sesan II hydropower project in northeastern Cambodia, May, 2009.

4 Draft law on compensation of Lower Sesan 2 hydropower, 2012

Interactions between the Government and Local Communities

The first public consultation meetings were held by Key Consultants Cambodia (KCC) in Phluk, Kbal Romeas, Sre Angrang, Srekor and Talat communes in the Sesan district during KCC's social and wildlife surveys⁵ from January 29 to February 4, 2008. The following month, the Provincial Governor and His Excellency Mr. Suy Sem, Minister of the Ministry of Industry, Mines and Energy visited Stung Treng and organized a meeting to announce the government's plan to build a hydropower dam on the Sesan River. Elaborating on the main features of the dam, he also informed the people that the government had given permission to EVN to carry out an Environmental Impact Assessment (EIA). The minister further requested the commune council to spread this information among the affected communities. The minister and provincial governor also declared that the construction of the dam would generate plenty of well-paid jobs for the locals, as the company would need a large work force to complete the project.⁶

Villagers also reported another consultation, in which the Vietnamese and District Governor held a meeting. The meeting was attended by about 100 participants who were given a paper with a list of questions. The paper asked the participants whether they wanted the dam or not, according to a villager from Pluk village and a commune council member of Sre Kor commune, Stung Treng district. "Almost 75 to 80 percent of the people said they did not want the dam to be built. But nevertheless, the Vietnamese came again to measure the land from all sides, counted the trees, and took photographs of the owner of each household in front of his/her home. Villagers were told that if they were not present for this photograph of their house, they would not receive any compensation from the company," said the villager.

PECC1 and KCC held another public consultation meeting in Stung Treng on May 9, 2008, involving affected communities in Stung Treng and a few NGOs. PECC1 gave a presentation⁷ to district governors, commune chiefs and village chiefs. Representatives of a few NGOs, who were invited to the meeting, said the community members were silent during the meeting. NGOs also reported that the government arranged for local authorities officials to travel to Vietnam to visit the Yali Falls dam resettlement area. On their return from this field visit, some of the local officials agreed with the project, while a few others still had reservations about it.

Conduct of EIA

PECC1 and KCC conducted an Environmental Impact Assessment (EIA) for the Sesan 2 dam and completed it by October 2008⁸. The following year, on May 5, 2009, the MoE organized a consultation meeting to present the first full LS2 EIA draft report. During the meeting, which was attended by a number of NGOs and local people, the MoE requested for the inclusion of water data of the project into the EIA⁹. Recommendations were also made regarding resettlement and compensation packages that would be acceptable to the affected communities (Baird/3SPN 2009)¹⁰.

It was on June 26, 2009, that the Lower Sesan 2 dam EIA report was finally released to civil society organizations, nine months after its completion, and only two weeks before the deadline for comments. It was widely criticized in a response that was published in August¹¹. The review done by civil groups of the Sesan II found the EIA largely inadequate as it failed to comply with many national and international guidelines on planning, implementation, compensation and mitigation (NGO

5 PECC1 and KCC. Public Consultation Meeting for the EIA Study. Power Point Presentation from meeting in Stung Treng province, May 2008.

6 Tik Me Ta, villager from Pluk village, interviewed by Meach Mean, September 26, 2008.

7 Power Point Presentation written in English.

8 3SPN, Living river: News from Sesan, Sre Pok and Sekong in Cambodia, July-October, 2009

9 Letter from Samdech Dechor Hun Sen to H.E Son Chhay, dated: 29 July 2011

10 3SPN, Living river: News from Sesan, Sre Pok and Sekong in Cambodia, July-October, 2009

11 3SPN, Living river: News from Sesan, Sre Pok and Sekong in Cambodia, July-October, 2009

Forum on Cambodia 2009). The response report also recommended that the dam approval should be postponed until the EIA is revised and agreed upon by all project-affected communities in Cambodia¹². Further, the University of Life Sciences in Norway and STRIVER conducted another study of the Sesan river water quality at the same time, and found high levels of bacteria and associated health problems among villagers. A stagnant, polluted, upstream source seemed its most likely cause. And the Yali Falls dam reservoir was identified as the clear suspect¹³.

Despite these critical comments on the EIA report and the expressed need for further consideration of a number of omitted concerns of local communities and civil society organizations, and calls for more meaningful and inclusive consultations, the government of Cambodia approved the EIA in November 2010 and negotiations on a power purchase agreement for the project got underway¹⁴. By next month, a training workshop would be held on the final EIA Report of the LS2 Project in Stung Treng, from December 16 to 17, 2010. It was packaged as a sort of 'community consultation workshop'¹⁵. The following year, EIA training was conducted for all members of Rivers Coalition in Cambodia (RCC) at the NGO Forum office in Phnom Penh from March 21 to 24.

Local People's Voices on Hydropower Impacts

It was on March 1, 2010, that 3S Rivers Protection Network (3SPN) and NGO Forum organized an interaction with the media in which affected women expressed their frustration with the dams upstream in Vietnam as well as the LS 2 dam. Women representatives complained that "nearly every year the water is up and down, sometimes leading to floods many times a year, which destroy the rice fields, farms, and kill animals".¹⁶ Later in the month, community representatives from 74 villages in 20 communes from six districts prepared a statement to be given to Cambodian Prime Minister Samdach Hun Sen, during a consultation meeting from March 13 to 15. This statement was handed over to the Prime Minister when he inaugurated a national road in Ratanakiri on March 18. The purpose of the statement was to raise awareness about the increasing flood events and their impacts, which by then had begun occurring two or three times a year, apparently due to the hydropower dams located upstream in Vietnam. Communities were also concerned about the construction of the Lower Sesan 2 dam in Stung Treng province that would have an adverse effect on community livelihoods, environment, and their social and cultural fabric¹⁷.

The MRC and ADB organized a 3S trans-boundary impact meeting in Vietnam between 31 May and 2 June 2010. The representatives from 3SPN, NGO Forum, CEPA and Oxfam Australia gathered to share their feedback regarding the past and current water resources development projects that impact the livelihood of communities living along the banks of the 3S Rivers. The NGOs present at the meeting disclosed that although it was attended by representatives of local communities, they were provided little opportunity to speak as the entire meeting was dominated by ADB, MRC, and government representatives¹⁸.

In the first half of 2011, concerned NGOs started several initiatives to provide the local villagers a platform on which they could air their views about the dam. On March 4, 3SPN and RCC planned to organize a forum for the dam-affected women in Ban Lung, Ratanakiri Province, but it was not permitted by the provincial governor because the title of forum was deemed to be too sensitive. The forum was allowed only after the organizers changed the title to "3SPN 3 years celebration".

12 3SPN, Living river: News from Sesan, Sre Pok and Sekong in Cambodia, July-October, 2009

13 3SPN, Living river: News from Sesan, Sre Pok and Sekong in Cambodia, July-October, 2009

14 http://www.banktrack.org/show/dodgydeals/lower_sesan_2_hydropower_project

15 Minutes of the workshop: Agenda framing by RCC of the NGO Forum for social fairness from under construction hydro-power project of LS2

16 3SPN, Living river: News from Sesan, Sre Pok and Sekong in Cambodia, January-April, 2010

17 3SPN, Living river: News from Sesan, Sre Pok and Sekong in Cambodia, May-October, 2010

18 3SPN, Living river: News from Sesan, Sre Pok and Sekong in Cambodia, May-October, 2010

Hundreds of villagers from communities along the Sesan River met in Ratanakiri's Veun Sai district to protest against the dam on May 19, 2011. A few days later, RCC hosted a National Consultation Workshop on Lower Sesan 2 Hydropower Dam in Phnom Penh on May 31. About 50 participants attended the workshop as community representatives along with NGO-RCC members and government officials. Though project investors were also invited to the meeting, they chose not to attend it. The workshop concluded with the local people releasing a joint statement expressing their concern over the impending impact of the LS2 dam²⁰.

This chronology of events shows the limited response from the government to the requests of civil society organizations and communities. Government agencies continued with their plans regardless of the fears expressed by the local people.

1.2 Public Participation in LS2 Hydropower Development

1.2.1 Spaces of Participation

Closed/Uninvited – Participation is Closed: Major decision-making on hydropower development is closed and opaque. It is difficult to access information prior to project approval; more so, for non-government organizations and local communities who are seldom consulted by the top leadership of the government in the course of taking key decisions related to hydropower development. In case of LS2, information about this dam was released only after the Prime Minister of Cambodia pushed MIME to do so. Draft compensation law was released in 2013. Technical design of the dam is still not accessible to the public. In sum, the locals have very limited access to information on hydropower development in Cambodia.

Invitations – Participation is Controlled: The NGO Forum was invited by the Ministry of Environment to give comments on the quality of the EIA of LS2. But the time allowed was limited. MoE gave the NGO Forum only seven days to organize a consultation meeting with other members in the network and to give comments on the EIA. At the consultation too, only representatives of civil societies (NGOs) were invited, and not representatives of the affected communities. But experts say community people too are not yet prepared to discuss such issues in a public forum.

The law and policies of Cambodia allow participation of the concerned stakeholders at all stages: design and development of the plan as well as construction and operation of the projects (including hydropower projects). However, implementation is a different story. As for LS2, its design was discussed with a very limited number of stakeholders.

Referring to the Principle 10 of the Rio Declaration, it is learnt that access to information in Cambodia is low. The findings of Cambodian A2I Team (TAI, 2010) show one common thread among cases involving access to public information. The Cambodian government received high scores from researchers on access to information in cases involving non-controversial or sensitive domestic issues, such as those dealing with bird flu outbreak, flooding, and climate change. Natural disasters and crisis, such as disease outbreaks and flooding, have great impact on rural communities. In these situations, there is a potential for panic and rumor-mongering, which can lead to social unrest. In order to prevent these occurrences, the government therefore appears more willing and able to proactively provide the public with the required information.

On the other hand, issues concerning economic land concessions, mining projects, and garment factories often involve conflicting economic interests, as well as power imbalances between parties (such as poor villagers, factory workers and wealthy/powerful economic interests). Access to information was rated to be very low in such cases (TAI, 2010).

20 minutes of the workshop: National Consultation Workshop on Lower Sesan 2, Phnom Penh, Cambodia.
Date: May 31, 2011

Invitation for Public Participation is Superficial and Tokenistic - A Veil of Democratic Process: In reality, the government does not allow meaningful contribution and participation of NGOs, local people and local authorities in the project development. The presence of government officers at public events also is quite ritualistic or symbolic. All LS2 Public Forums organized by NGOs always invited the representatives of relevant ministries, but often the participants from each Ministry did not have the authority to provide any answers to the participants. Most of the time, they just came and said nothing. And when asked a question, their standard reply was: “It is above our capacity to give the answers”.

For example, during the National Workshop on Lower Sesan 2 at the Phnom Penh Hotel in Phnom Penh, the NGOs had invited representatives of various ministries, but no one from a government institution was willing to sit on the platform of honor because they did not want to say anything.

Claimed Space to Participate and Influence the Roles of Participation and Agenda

The communities affected by hydropower projects or other large-scale development projects have claimed compensation based on their traditional (customary rights) and cultural practices, on which their access to these resources have depended historically. However, these sets of rights are now challenged by a set of modern statutory laws of the land. Rights are now unclearly defined in the contestations involved in dam development: Who has the rights and who has the duty of serving the rights of others? And on what norms or forms of laws should the rights be based? For example, on the loss of land, resettlement package is provided if people have been residing there for over five years, according to the land law of Cambodia (RGC, 2001). However, most often, there are different interpretations of the nature of the settlement, whether it is permanent or temporary. According to the law of Cambodia, temporary settlement does not have the right to receive compensation.

The national policy on ethnicity in Cambodia also has given privileges to certain ethnic groups at places of their origin. They must either receive compensation or they have the right to settle in their original place if they do not want to resettle elsewhere (RPF, 2010). However, in the course of discussions, CBOs or NGOs are rarely heard raising this point to claim benefits for the affected ethnic groups. There seems to be a disconnect between these organizations’ claim-making discourses and the government’s own policy discourses on local entitlements to compensation. CBOs and NGOs instead often talk about “human rights”, the right to speak or to demonstrate²¹. On the other hand, affected communities rarely get organized and demand these rights articulated by non-government intermediaries since they do not understand these rights. Mostly, only NGOs who work on behalf of communities, or support communities demand the rights of the affected communities. This disconnect between NGO intermediaries, local communities, and government underlies the problems in decision-making processes in hydropower development²².

1.2.2 Various Levels of Institutional Arrangements and Interactions

Institutional arrangements and interactions are examined at three levels: the global, national and community levels as given below:

Global or Regional Level (IWRM and Global Water Partnership): The government of Cambodia is party to regional and global agreements in the water sector. The MRC has taken steps to facilitate its member countries draft the guidelines for Integrated Water Resource Management (IWRM). Cambodia too is in the process of drafting the IWRM guidelines (MRC, 2011).

Global Water Partnership in collaboration with Cambodia National Mekong Committee (CNMC) has assessed the implementation of IWRM in Cambodia. Cambodian Water Partnership (CamboWP) has conducted a series of stakeholders’ workshops to assess the implementation of the IWRM guidelines

21 Observation at many events organized by NGOs.

22 Observation at many events organized by NGOs.

in Cambodia²³. There are 17 ministerial representatives of the CNMC and other NGO representatives working in the water sector who have been invited to assess the performance and status of IWRM in Cambodia.

National Level: The existing institutional arrangements indicate that a number of institutions are involved in water-based or water-related sector. For example, Ministry of Agriculture, Forestry and Fisheries (MAFF) considers water a related sector essential for supporting farming activities; CNMC, which is the main point of coordination with MRC at the regional level on the Mekong River Basin, also considers water-based and water-related sector its core responsibility. Ministry of Water Resources and Meteorology (MOWRAM) too believes water is its main agenda. Therefore, in terms of participation, there is both inline ministry and cross-line discussion.

- **Participation in cross-line ministries:** Cross-line ministry is a major issue in Cambodia. Different ministries (at times different departments under the same ministries) have difficulty in working together due to a conflict of interests. It was clearly observed that during the CPWF Project workshop and the AusAID, Water-Food-Energy meeting, when the facilitator raised the question on how to work in collaboration with different or cross departments, the participants found it difficult to respond. The hierarchical arrangement is a constraint in terms of improving cross-line ministry collaboration.
- **Participation in inline ministry:** The inline ministry is not a major issue since it is under the same management line. However, it is important to understand its effectiveness, which depends on a number of factors: power, resources, and expertise.

Local or Sub-National Level:

NGOs working at the local level have found that if they want to organize meetings or events related to the effects of the dam, the local authorities will stop the meeting. However, if they change the title of the forum to something more generic, they may be able to organize it. As mentioned earlier, the workshop on women affected by dam organized by RCC and 3SPN was banned. But when the organizers changed the title of the event, it was allowed.

Many people, including government officers, have acknowledged the negative impacts of hydropower because of their experiences of the Yali Falls dam in Vietnam. However, they hesitate to discuss such issues and leave them to higher officials since they think hydropower is a national priority.

1.3 Government Bodies Serve as the Forum for People's Voice

The local authorities at village and commune level are the only permanent government bodies that have the mandate to represent the locals and influence deliberations relating to their livelihood and poverty concerns in the context of HPD in 3S. Putative representation of the local people rests with local authorities at the village, commune, district and provincial level as defined in the Organic Law of Cambodia. There are village heads, commune heads, district and provincial governors. Line ministry officers and the authorities at district and provincial levels support hydropower development because they are far from its impacts and may also gain from development. The local authorities at the village or commune level are living close to the local people and will also be affected by hydropower development. Therefore, it may be presumed that their voices would particularly represent the stakes of local people, or at least raise their concerns, especially on how the HP development might affect livelihood.

23 First workshop on UN Water Report June 23, 2011 and Second National Debate Meeting on UN Water Report, 1 July 2011

However, local authorities seem to have taken positions that echo those adopted by higher authorities in decision making. It is a result of the mindset that comes with being a government officer. They feel they need to obey the higher-ups in decision-making. At the same time, the higher levels also regulate or advise local authorities not to raise their voice against hydropower development since it provides much benefit to the nation. As mentioned earlier, back from a visit of the Yali settlement project, most local people's representatives agreed with LS2 project during a meeting with district governor and EVN representatives, but when called for a meeting with an NGO, all of them said they did not want the dam. Therefore, the local authorities at village and commune levels, despite being the government bodies supposed to present the local people's livelihood and poverty concerns, play a very limited role in this sphere.

1.4 Engagement and Deliberations between Local People and Government Officers

It is rare to have events where local people and their representatives meet government officers and talk about livelihoods. Most often, the events are organized by an NGO, which invites both the locals and government officers so that they can communicate with each other. However, the government officers always avoid talking about hydropower and its impact to local people and instead focus only on the benefits of hydropower. On the contrary, the events organized by NGOs always dwell on the negative impacts of hydropower dams. Following are some related events organized by government and companies:

- In March 2008, Provincial Governor and His Excellency Mr. Suy Sem, Minister of the Ministry of Industry, Mines and Energy (MIME) organized a meeting in Stung Treng to announce the government plan to build a hydropower dam on the Sesan River. The commune council is the representative of the local people. But at the meeting, the government officer continued to harp on the benefits that would be generated from hydropower for the nation, and the local people as well in terms of job opportunities.
- On May 05, 2009 the MoE organized a consultation meeting on the first full LS2 EIA with participants, including a number of NGOs and representatives of local people²⁴. It was reported that the local people accepted the mitigation and compensation measures raised by the EIA.

1.5 Local People's Satisfaction with the Substance, Conduct, and Resolution

The local people along the 3S River in Cambodia were worried about the impacts of hydropower dam development mainly because of their experiences of upstream hydropower development in Vietnam. It is worth noting that even though these people downstream suffered the impacts of the upstream dam in Vietnam, they never received any compensation or relief from the government²⁵.

It is significant that the proposed LS2 hydropower dam has earmarked 8.27 percent of its total budget for mitigation and restoration of any negative impacts of the dam²⁶. The budget proposes a committed fund of about USD 3,234,500 for 10 years. It has also committed a package of USD 1,638,000 for five years to support development projects for communities living on the project site. However, the affected people are still worried about their future since they don't have any clarity on the compensation.

Observations of the events related to hydropower development indicate that the affected people's demands for compensation and resolution are not far from what is proposed in the mitigation

24 Letter from Samdech Dechor Hun Sen to H.E Son Chhay, dated 29 July 2011

25 Communication with provincial official and NGO staff at Rattanakiri province, June, 2011.

26 Letter from Samdech Dechor Hun Sen to H.E Son Chhay, dated 29 July 2011

scheme of the EIA (Lower Sesan 2 EIA). For example, the affected people requested for agricultural land, implements, houses, fish farms and so on at the community consultation workshop in the Stung Treng province. If the LS2 project provides adequate compensation and budget for restoration of people's livelihood as stated in the EIA, the people could accept the project.

According to the draft law on compensation of Lower Sesan 2 hydropower project, the compensation provided to the relocated households will include 5 ha of land, a house on 80 sq m and electricity to all. The project has also promised to construct infrastructure, such as, roads, irrigation pipelines, hospitals and schools for the relocated communities.

II. INTERMEDIARY ORGANIZATIONS: ROLE IN ENGAGEMENT AND DIALOGUE

Several organizations are playing the role of intermediaries and representatives of local people on the issues of hydropower development in the 3S area. They are as following:

2.1 Culture and Environment Preservation Association

Culture and Environment Preservation Association (CEPA) was founded by four social and environmental activists in 1995, who were committed to the preservation of natural resources. Later on, it expanded to include advocacy on environmental rights, community-based forest management, and research.

CEPA's goal is to ensure environmental integrity and protection of Cambodia's natural resources and an equitable as well as sustainable livelihood of its people today and for generations to come.

CEPA program activities:

- To improve livelihood opportunities of people in the community and promote equality and equity for women and men to ensure the preservation of traditional culture, the promotion of social justice, and sustainable livelihood.
- To empower the people in the communities to have equality, equity and the right to use and manage the natural resources, and adapt to the changing climate.
- To promote networking as a means to communicate with members of society regarding their social, economic and environmental rights for increased social understanding and preservation of indigenous culture.

CEPA has been assisting local communities with both technical and financial aid to develop community-based forestry and fishery to ensure equitable and sustainable use and management of forests and fisheries in the province.

For advocacy work, CEPA has highlighted the impacts of national and international policies and projects, both in public and private sectors, on the livelihoods of the rural poor and on biodiversity. It also seeks to assist the affected communities in their struggle for recognition of their economic, social and cultural rights and as well as to promote access to information and public participation. CEPA also produces newsletters and articles to raise awareness about issues related to the development of local livelihoods²⁷.

27 <http://www.cepa-cambodia.org/programs.html>

2.2 3S Rivers Project Network

3SPN was founded in the Ratanakiri Province in 2001 under the umbrella of NTFP Organization (Non-Timber Forest Products Organization – a local community-based organization in Ratanakiri). The network was founded with the aim to assist dam-affected communities living alongside the Sesan River in Cambodia after facing the impacts of hydropower dam construction upstream. It has now expanded its scope to include the Srepok and Sekong Rivers. The 3SPN program activities are as follows:

- 3S Hydropower Advocacy Program
- Community Research and Documentation Program
- Community Dialogue Program
- Community Fishery Network Program

3SPN has assisted local communities living along the 3S Rivers in Cambodia to voice concerns about their livelihoods. It has also built the advocacy coalition of NGOs to support 3S communities through capacity building and forum organizing. 3SPN has helped community representatives organize yearly 3S Rivers Celebration for the past nine years at the local level. It also organizes dialogues at the district and commune levels to review the problems faced by local communities, and promote information sharing, and advocacy planning. In 2006, 3SPN, along with Oxfam Australia, supported people for establishing fishery communities.

Since March 2009, 3SPN has been providing support to indigenous people to fairly access economic and market services. This program aims to improve their livelihood conditions, knowledge and skills on trade, and ensure food security through full and fair access to market services and economic opportunities.

In 2010, 3SPN committed to undertake steps to develop and begin to transfer more community ownership and continue to build the capacity of community members whilst drawing up its own strategic plan for short and long-term actions.²⁸

2.3 River Coalition of Cambodia

The River Coalition in Cambodia (RCC) was established in early 2007, which derives from the 3S Working Group. RCC believes that existing and future hydropower dam projects should respect the rights of the affected people and ensure the sustainability of the environment and livelihoods. The RCC highlights hydropower dam projects that are negatively affecting the environment and the people of Cambodia. The priority area of the RCC continues to be the 3S river basin. Specifically, the RCC aims to address: 1) The right to redress; 2) The right to information; 3) The right to secure livelihoods; 4) The right to participate in decision-making processes; and 5) The right to access and manage natural resources.

Until now, RCC has undertaken investigation and monitoring of the impacts of dams in 3S and other parts of Cambodia. RCC has also raised awareness about the impacts of hydropower projects among affected communities and other sympathetic sectors (students, NGOs, companies, etc.). RCC has developed the capacity of local leaders to analyze the issues and communicate their concerns to decision-makers. In addition, RCC has promoted mechanisms for local, provincial, national and regional consultation and dialogue among different stakeholders, especially the communities. These efforts have led to the creation of public pressure and demand for transparency on how local and national authorities take decisions regarding energy production and development. The efforts of the

²⁸ <http://www.3spn.org/what-we-do/>

RCC have also led to the setting up of forums for bilateral and multilateral negotiations between Cambodia and other countries in the Lower Mekong Basin.

Initial successes of this work includes holding of the first bilateral stakeholder consultation workshop on the EIA report on hydropower projects in Vietnam on the Srepok River in Cambodia. The consultation led the Vietnam government to commit to improving downstream flows by building re-regulating dams on both the Srepok and Sesan rivers. The RCC and NGO Forum have published 25 reports on various hydropower issues, including the proposed Xayaburi Dam in the Lao PDR.

Members of RCC and Save the Mekong Coalition made remarkable strides during 2009-2011. The members have contributed many inputs to the Strategic Environmental Assessment (SEA) report of the MRC. As a result, the 10-year postponement of the Mekong Mainstream Hydropower Dam Development was released and published by the Mekong River Commission Secretariat (MRCS) on October 15, 2010.

In addition to supporting the campaign and activities of the RCC, the NGO Forum's Community Rights on Hydropower Development Project has been actively involved in organizing awareness-raising and advocacy-focused workshops and events. It also produces research and materials on hydropower projects and their impacts; carries out baseline studies of hydropower sites; and holds capacity-building trainings to strengthen members' advocacy work.

Joint Statement
National Consultation Workshop on Lower Sesan 2 Hydropower Dam- 400MW
31 May 2011

We, 68 representatives including 29 females, of indigenous people living along Sesan, Srepok and Sekong rivers, represent more than 500 families from Steung Treng province (6 communes and 18 villages) and from Ratanakiri province (6 districts, 21 communes and 74 villages), who have been seriously and negatively affected by the development of the Yali Falls Hydropower Dam in Vietnam. Given the fact that the construction of the 400 megawatt Lower Sesan 2 Hydropower Dam on the Sesan River in Steung Treng province is to be started in the coming days, today, we, come together again to express our concerns and propose our requests to the Government of Cambodia, as well as to the private companies, for their consideration into their planning related to the development of Lower Sesan 2 Hydropower Dam. The concerns and requests are as follows:

1. Review the quality of the Environmental and Social Impact Assessment (EIA) report related to the Lower Sesan 2 Hydropower Dam. The report is not accepted by the directly and indirectly affected communities and the compensation is not appropriate:
 - Review the impact mitigation measures defined in the environmental and social impact report.
 - The company has not yet conducted any studies on the indirectly affected communities living downstream and upstream of the dam (Sesan and Srepok rivers) and no appropriate compensation has been introduced.
 - If the Lower Sesan 2 Dam is developed, the affected communities would face the following issues:
 - ✓ Boat travel will be blocked and lost;
 - ✓ Income made of fishing will be lost;
 - ✓ Flooding will occur;
 - ✓ Community property will be lost;
 - ✓ Biodiversity will be lost;
 - ✓ Natural vegetables along the rivers will be lost;
 - ✓ Conflicts will occur due to the grabbing of agricultural, farming and housing land areas;
 - ✓ Children's schooling will be affected;
 - ✓ Water quality will be destroyed and the use of the river water will affect human and animal health, especially the health of women and children (during the construction period and operation of the dam in the first 5 years);
 - ✓ Psychological effects on communities (the noisiness of the construction activities or fear that the dam may break)
 - ✓ Downstream of the rivers will dry and fish habitats will be destroyed and fish migration will be banned and some fish species, like the Pas-e-y and Pawa will be lost;
 - ✓ An earthquake could occur in the reservoir area and riverbanks may slide;
 - ✓ Compensation policy is not clearly defined (especially for farming land, homes and housing land, fruit trees, etc.)
 - ✓ Local and ancestral culture and traditions of indigenous communities will be lost.
 - For the people living in Srekor 1 and Srekor 2 villagers, only 10 to 15 hectares of the 1,2038 hectares of land provided to 300 families is suitable for farming.
 - The company has not organized any meetings with affected communities to discuss resettlement.

The above statement was prepared by local people with the support of RCC members for the national workshop on Lower Sesan 2 hydropower project on May 31, 2011.

III. LOCAL ECONOMY, SOCIO-ECONOMIC PROFILE AND LIVELIHOOD CONDITIONS IN 3S BASIN AND THE LOWER SESAN 2 DAM AREA

This section aims to describe the past and present socio-economic trends and profile of the populations in the Sesan, Sekong and Srepok (3S) area in general, and in the potential affected areas of the LS2 Dam in particular. Data were drawn from secondary research in the form of desk review of pertinent documents, including government reports, past research and articles in the media. Primary data on the LS project site was gathered in December 2012 through a household survey and focused group interviews. There were 203 households that were randomly selected. Of these, 102 households were in the upstream and 101 households were downstream of the LS2 planned site.

3.1 General Description of the Sesan, Sekong and Srepok (3S) River Basin Area

The Sesan, Sekong and Srepok Rivers are important tributaries of the Mekong River, accounting for 19 percent of the flow of the Mekong's total annual discharge. The basins are trans-boundary in nature, situated in Vietnam, Cambodia and Lao PDR. The Sesan and Srepok flow from the central highlands of Vietnam through Cambodia's Ratanakiri, Mondulakiri, and Stung Treng provinces before converging into the Sekong River. The Sekong River begins in Vietnam, then flows through southern Laos into Cambodia and merges with the Sesan and Srepok rivers before finally reaching the Mekong River (3SPN, 2010). Within Cambodia, the 3S is located in the northeast and has an estimated area of 21,055 square kilometers which accounts for around 15 percent of the country's territory. It contains the entire Ratanakiri province and around half of Stung Treng and Mondulakiri provinces.

The catchment of the 3S Rivers is characterized by rugged terrain, with peaks over 1,546 meters high and valleys at about 0-36 meters of height. Majority of these areas remain under forest and woodland cover, with limited agricultural development in the valleys and shifting cultivation on the slopes. The steep slope of the river makes navigation in some areas possible only during the rainy season. The 3S Rivers are a source of vast biodiversity and are critical for migration of fish species traveling to and from Central Cambodia's Tonle Sap Lake and from upstream areas of the Mekong basin in Laos and Thailand (MRC, 2009). The rivers support hundreds of communities most of which are ethnic minorities whose livelihoods depend on natural resources (Trandem, 2012).

With more than 20 hydropower dams already built on the 3S Basin and 26 more planned, many stakeholders are now concerned about the threat of large-scale environmental damage due to poorly planned projects. The Lower Sesan 2 Dam is one of these controversial projects. It is planned on one of the last remaining free-flowing stretches of the 3S in Cambodia located at the confluence of the Sesan and Srepok Rivers. The project could cause damage to fish biomass and block the basin's sediment flows, which would result in loss of income and disrupt the food security of the region's fishers and farmers (Grimsditch, 2012).

3.2 Socio-economic Profile and Livelihoods of the Population in 3S and Potentially Affected Communities in the LS2 Dam Area

3.2.1 Population

There are 39,322 households (193,031 people) living in the 3S area in Cambodia (2010). The population is concentrated mostly in the Sesan (19,315 households) and Srepok basin (16,101 households), with a lower concentration of people in the Sekong basin (3,906 households). The average population density in the 3S is very low and hovers around 7 persons per sq.km as compared to the average population density of 75 persons per sq km in Cambodia (NIS, 2009). The population is mainly concentrated in the provincial towns and surrounding areas. The annual population growth rate is 1.7 percent, which is similar to the national population growth rate of 1.54 percent. The 3S area has also witnessed an increase in the number of migrants in the recent years (NIS, 2009). There

is a significant proportion of ethnic groups in this area accounting for around 70 percent of the total population in Ratanakiri and Mondulakiri provinces, and 23 percent in Stung Treng (CNMC, 2005). The study found a diversity of ethnic groups, including Lao, Khmer, Prov and Phnong, in the sampling households around the LS2 site. The average household size consists of five to six members in which male and female members are relatively equal in the household composition. Around 10 percent of the study households were headed by women.

3.2.2 Occupations

Most people living in the 3S area in Cambodia rely on agriculture for their livelihoods. Upland paddy rice is the main crop for the majority of farmers, and it is mostly rain-fed cropping since the area is poorly covered by irrigation systems. Other livelihood activities include fisheries, livestock, and logging. Mining and cash crops have also become increasingly popular, led mainly by investors from Kampong Cham and other provinces. By 2009, there were 54 mining exploration companies in the area making a capital investment of over USD 30 million and generating an employment of more than 500 workers. There are at present 30 companies running rubber plantation enterprises in the three 3S provinces accounting for around 260,000 ha of rubber trees. (CNMC, 2009).

Figure 3.1 Share in economic activities of the upstream villagers of the LS2 Project site

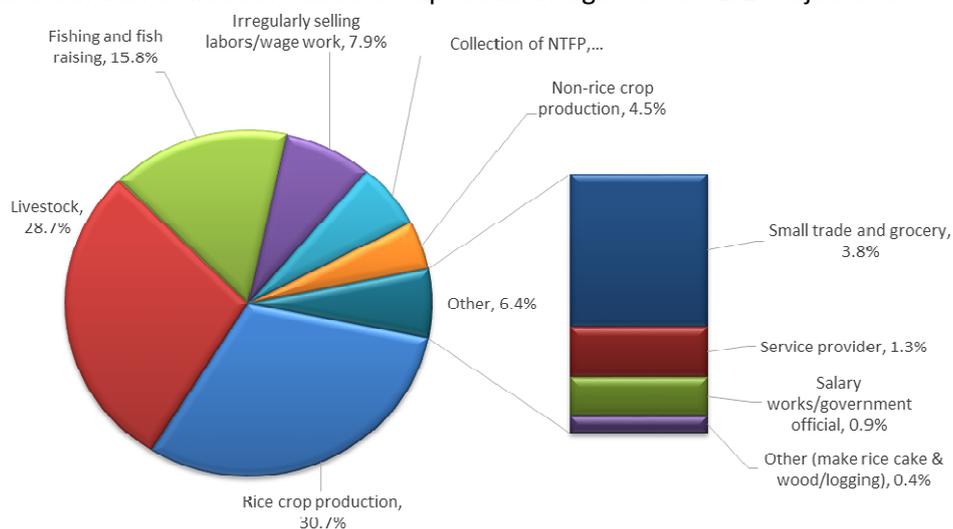
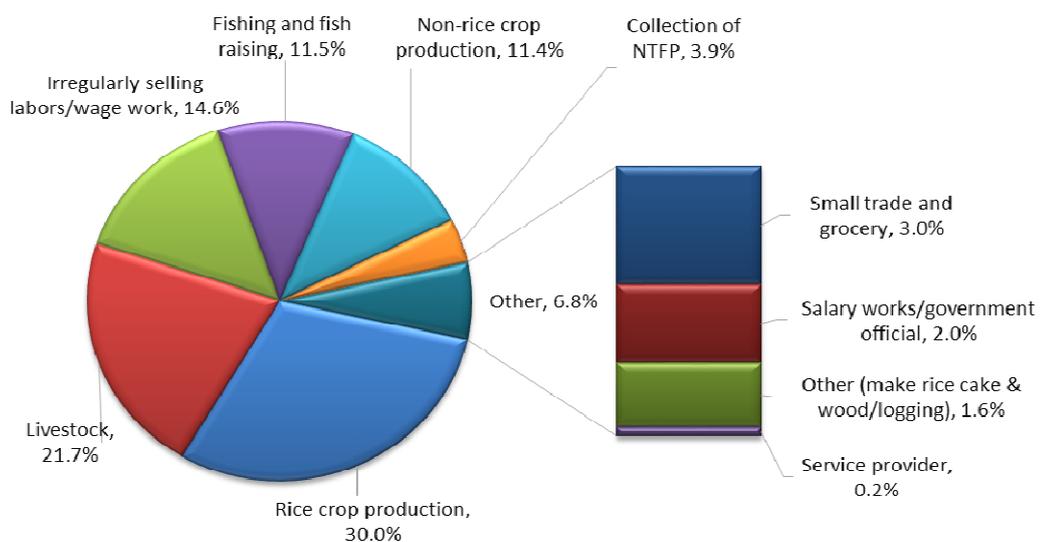


Figure 3.2 Share in economic activities of the downstream villagers of the LS2 Project site

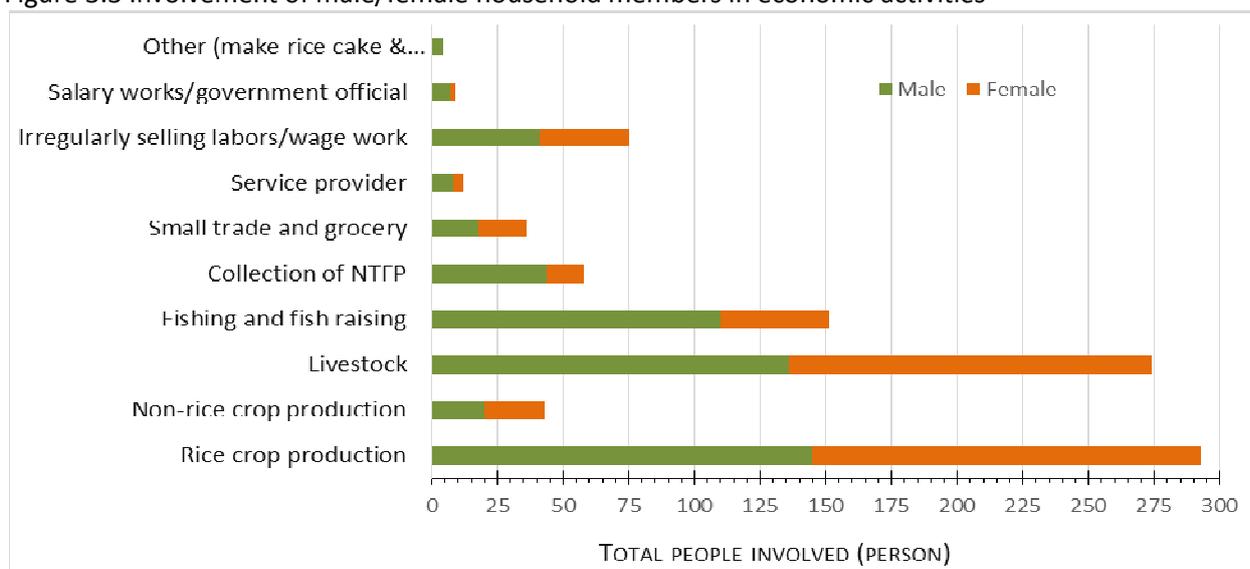


Source: Household survey (December 2012).

Indigenous people tend to rely more heavily on natural resources for their livelihoods. Members of an ethnic group generally collectively govern a forest territory whose boundaries are known though not marked. Within this land, each family is allocated land resource necessary for household subsistence farming. The ecologically sustainable cultivation cycle lasts for 10-15 years and the group then moves on to another territory. Historically, the slash-and-burn cultivation was the common form of agriculture within the 3S area. It is now seldom practiced due to opposition by the agricultural policy as it is a source of forest fire. The ethnic communities supplement their subsistence farming by hunting, fishing, and gathering non-timber forest products (NTFPs). Forest vegetables are very important in the diet of indigenous communities, especially in times of hardship, such as, in years of poor rice harvest or unfavorable weather conditions. In the recent years however, some indigenous people have also begun to get involved in trading besides growing industrial crops such as cassava and rubber (CEPA, 2008; CNMC, 2009).

In the LS2 area in particular, the current economic activities of the upstream and downstream villagers are similar, and include mainly rice crop production, followed by livestock rearing, fishing, and wage labor (Fig 3.1 and 3.2). Although most of the people continue to be involved in agriculture, there is an increasing trend of people engaging in non-agricultural activities as well. As per the survey, 34 percent of respondent households in the upstream and 44 percent of respondent households in the downstream were also engaged in wage labor. Both males and females were found equally engaged in all economic activities except the collection of NTFPs and fishing that were mostly dominated by men (Fig 3.3).

Figure 3.3 Involvement of male/female household members in economic activities



Source: Household survey (December 2012).

In terms of income generation, households in the upstream of the dam site had an average income of 13 million KHR/year, which was higher as compared to the households in the downstream who earned around 9 million KHR/year. The activity that generated the highest income was petty trading though only few respondent households engaged in it.

3.2.3 Accesses to Basic Public Infrastructure and Facilities

Water supply

Development of water supply facility in the region remains limited. Only 41 percent of the total households have access to pipe water. At the commune level, 11 communes reported that less than 10 percent of the households have access to water supply (CNMC, 2009). The interviews and official

reports show the wide gap between the demand and supply of water. The water supply capacity of Ratanakiri is only 50 m³/hour while the provincial demand is around 500 m³/hour. In Stung Treng, the supply is 120 m³/hour while the provincial demand is about 150 m³ per hour. The tariff is also relatively high, considering the low income levels of the local people.

There was, however, a significant improvement in plugging water loss during distribution, and it has decreased from 35 percent to 26 percent in Stung Treng, and from 35 percent to 17 percent in Ratanakiri from 2004 to 2009. In addition, there are a number of ongoing donor-funded projects on clean water supply in the area. In 2010, two Japanese projects, Clean Water Supply Project for Ratanakiri town and Clean Water Supply Project for Sen Monorom in Mondulakiri, were implemented. An ADB project has recently completed its study under the Clean Water and Hygiene Project for cities along the Mekong in the provincial towns of Stung Treng. A USAID project is also being undertaken to promote clean water in the provinces of 3S (CLV, 2010).

Access to electricity

According to the CNMC report, only around 10 percent of the households in 3S area have access to electricity. At the basin level, the access rate ranged from 4.7 percent in the Sekong to 13.8 percent in the Sesan. At the commune level, 32 out of 72 communes in the 3S area have no access to electricity (CNMC, 2009).

Different measures have been implemented to address this serious shortage and increasing demand for electricity in the near future. Since 2010, Stung Treng has imported 2 MW electricity from Lao PDR through the sub-transmission lines of 22 KV. This has helped in lowering the electricity tariff from Riel 2,000 to 980 per KWh. However, the future demand for electricity in Stung Treng is expected to reach 50 MW if electricity is to be brought to all households by 2020. In Ratanakiri, the tariff is now as low as Riel 670 per KWh due to the operation of a small-scale hydropower dam in O Chum (supply capacity of 1MW). This supplements the existing generator with a supply capacity of 1MW. As the current demand of the whole province is still not met, the government has now inked an agreement with the Vietnamese government to import electricity through the sub-transmission of 35KV. The sub-transmission lines and poles are in the process of being erected. In Mondulakiri, the two sources of electricity supply include a power generator with a supply capacity of 370 KW and two micro-hydropower plants in O Romis and O Mleng with a combined supply capacity of 360 KW. However, the supply is sufficient only for Sen Monorom town. To meet the local electricity demand, the government is in talks with the Vietnamese government to import electricity for Keo Seima district.

Access to transportation and markets facilities

The 3S area has poorly laid and inadequate road infrastructure. Though the existing roads have been repaired from time to time, these are only the main roads connecting the district and provincial towns to other provinces. These roads do not link to the remote villages along the rivers or tributaries. Hence, the population in these areas is still heavily dependent on the waterways for its transportation (CNMC, 2009).

According to key informants, the local farmers around the dam site normally sell their agricultural produce to middlemen, mainly due to far-flung markets and poor access to roads.

3.2.4 Poverty and Food Security

The 3S area is known to be the least developed area in Cambodia in terms of socio-economic conditions. In 2009, the average per capita GDP of the four provinces in the region, i.e. Stung Treng, Ratanakiri, Kratie and Mondulakiri, was USD 470, accounting for 63 percent of the nationwide average per capita GDP. In the area around the Lower Sesan 2 hydropower site in particular, the per capita GDP was only 51 percent of the average national per capita GDP (RCC, 2012). Transportation

infrastructure, electricity, water supply, and post and telecommunications facilities are still inadequate though the government has begun to invest in these fields. The services sector and tourism are also being developed at a slow pace, and are yet to cash in on the region's potential (CLV, 2010).

The area also has high incidence of poverty. The data from the National Committee for Sub-national Democratic Development (NCDD) revealed that the poverty rate in the provinces of 3S was around 40 percent in 2010, which was still higher than the average rural poverty rate in Cambodia of 33.6 percent. Poverty rate in some communes, for instance in Dakdam commune (O Reang district, Monduliri), is as high as 87 percent (MOP, 2010). Also, around 11 percent of the total population in the area was reported to be under-nourished (CNMC, 2009).

Although majority of the people in the 3S are involved in agricultural activities, most of the area is rice-deficit, except for Stung Treng that has a small rice surplus. In 2002, the total milled rice deficit in the 3S was 21,088 tons, while the country's total milled rice surplus stood at 416,118 tons. In 2009, 3S experienced a modest milled rice surplus of 43,391 tons, while the country's total milled rice surplus was 2,244,598 tons. The increase in rice surplus was due to the expansion of rice planting area (from 67,374 to 104,930 hectares) and increase in rice productivity (from 1.6 tons to 2.4 tons per hectare). However, the production rates vary from place to place. In Monduliri, it is noteworthy that 54 percent of the rice cultivation area is concentrated in one district of Koh Nhek, with a productivity of around 2.4 tons per hectare. This is higher than that of other districts in Monduliri where the yield stands at 1.5 tons per hectare. There are also disparities in access to food and nutritional well-being. While some communes have enough, food shortage remains a problem and challenge for many other communes within the area (CNMC, 2009).

Table 3.1 Major household expenditures (in KHR / year per HH)

Household expenditures	Upstream villages		Downstream villages	
	Mean	% of total HH respondents	Mean	% of total HH respondents
Rice consumption	2,187,284	100%	1,789,186	100%
Fish consumption	1,016,971	100%	1,011,234	100%
Fuel/transport	1,000,747	89%	706,688	77%
Vegetable consumption	730,402	100%	645,469	100%
Medical service fee	700,044	82%	547,856	96%
Meat consumption	470,353	100%	407,554	100%
Clothes	432,224	96%	419,462	92%
Traditional ceremony participation	353,745	96%	406,071	97%
Condiments	327,755	100%	265,446	100%
Electricity/battery charge	292,765	90%	222,741	98%
Agriculture inputs	198,333	6%	78,796	27%
Fruit consumption	190,500	99%	131,206	96%
School expenses	156,436	11%	428,235	17%
Total annual expenses	7,435,388	100%	6,415,993	100%

Source: Household survey (December 2012).

The Project's survey of areas around the Lower Sesan 2 hydropower site also revealed similar results. Food shortage is still a problem as data on household expenditure shows that a large proportion of expenses is dedicated to food consumption, including rice (Table 3.2). The annual expenditure of households in the upstream of the dam site is slightly higher than that of downstream, largely due to the higher cost of rice and transportation.

Dry season rice is cultivated only in Kratie because of the availability of irrigation systems. Of the 285 irrigation systems in 3S, 181 fall in Kratie province, only 28 in Stung Treng, 58 schemes (only four in operation) in Ratanakiri, and 18 schemes (none in operation but five under repair) in Mondulakiri. The development of irrigation systems has led to an increase in the area under dry season rice cultivation in Kratie from 8,052 hectares in 2004 to 14,036 hectares in 2009. 3S, therefore, requires more robust and well-spread irrigation systems to increase rice production without expanding the area under rice. Besides agriculture, trade, and labor work are also becoming important sources of household income. Better transportation facilities are needed, especially for those living in the provincial towns and also for the rural people to help them bring their products to the markets.

3.3 Negative Effects of Upstream Dam Operation on Local Livelihoods in the 3S Area

The 3S area has experienced several water stress events in the past decades that caused substantial loss to the area. These effects were the results of both natural calamity, such as typhoon, and more importantly, man-made mismanagement of water resources in the upstream that resulted in flash floods.

In September 2009, Typhoon Ketsana crossed the Philippines with heavy rains and winds, leaving around 240 people dead or missing, with nearly 450,000 people forced to flee their homes. The typhoon strengthened to a Category II storm with winds of approximately 177 km/hour as it headed toward central Vietnam with impacts on Cambodia and Laos on 29 September 2009. In Cambodia, there were heavy rains and storms in Ratanakiri, Stung Treng, Kompong Thom and Siem Reap Provinces. As a result, 77 villages in 23 communes in six districts along the Sesan and Srepok Rivers were flooded during late September and early October, 2009. These floods caused huge destruction to houses, crops and livestock, and displaced many people. The government infrastructure in the district towns was also seriously damaged with health centers, schools and administrative buildings flooded in all riverside communities. Subsequently, there was food shortage throughout the province as much of the annual harvest was lost.

It should be noted that although heavy rains were caused by the typhoon, the severe impacts were partly a result of upstream dam water releases. The fast and unexpected water releases occurred quicker than natural floods as recognized by the villagers over many years. Villagers from O'Yadow District, close to the Vietnamese border, received unofficial reports of impending dam releases shortly before these occurred (3SPN, 2009).

The evidence was apparently documented in the case of Yali Dam. In 1993, Vietnam began building the Yali Falls Dam, located 80 kilometers upstream of the point at which this westward-flowing river enters Cambodia. Since then, there have been reports of flash floods in the area from time to time, which the locals suspected were caused by the dam operation. According to Hirsch and Wiatt (2004), 90 indigenous communities along the Sesan River in the two provinces of north-eastern Cambodia have been severely impacted by flooding, and a dramatically altered hydrological regime affecting fishery and other livelihood activities, especially river bank agriculture. Here is a look at some flood records:

- In 2002, the districts of Ondoung Meas, Lum Phat, Veun Say, Ta Veng and O Yadao in Ratanakiri, were swamped as the water level of the Sesan River rose sharply. It was reported that 7,005 families or 31,358 people were affected as 777 houses were submerged, 13 washed away, and 860 families displaced. At least 6,000 hectares of rice fields and farmlands were brought under water (Wyatt and Baird, 2007 and Relief Web, 2011).

- In August 2009, O La Lai, Vuen Sai District located along the Sesan River faced the highest flood levels in its 50-year record. The flood destroyed property and caused loss of livestock, which led to food shortage among the local people (3SPN, 2009).
- September 2009 flooding of the Srepok River rendered many homes in Lumphat and Kon Mom inhabitable and displaced approximately 210 people to higher areas. Floodwaters were recorded at a high of 13.70 m in the period from September 7 to September 14, 2009. A five-year-old boy died in Dey Lor village, Lumphat district, along the Srepok River whilst fishing with his brothers (3SPN, 2009).

As the area has already experienced the negative effects of upstream dam development, local people around the LS2 project site in the Sesan River fear that the planned project will bring similar or worse consequences. The survey of the project in 2012 found that all interviewed households were aware of the proposed LS2 hydropower dam. However, 20 percent of the respondents had learnt about it only recently. There has also been limited information sharing and direct communication from the state government. About 60 percent reported that they were informed by the local authorities (i.e. village heads or commune units) whereas about 30 percent were informed by NGOs, and the rest 10 percent learnt about the dam from other villagers. In general, interviewed households said that though hydropower is important for the nation, it will not bring any benefits to them. They considered themselves as victims of hydropower development as it would lead to their displacement and they would have to start their life afresh. The fact that they have not been informed about the details of the compensation scheme is only adding to the prevailing atmosphere of fear and uncertainty.

3.4 Summary and Discussion: Need for Sustainable Livelihoods of the Local Communities in 3S and the LS2 Project Area

The 3S area in the northeastern Cambodia comprising Stung Treng, Ratanakiri and Mondulkiri provinces has been the least developed region of the country. Basic infrastructure and facilities, such as transportation, water supply and electricity are still inadequate in the region, which is home to a diversity of ethnic groups comprising, among others, Lao, Khmer, Prov and Phnong. The area also has a high incidence of poverty and food shortage remains a perennial problem. The people rely on the nourishing condition of natural resources, such as rain-fed paddy rice, fisheries, collection of NTFPs, livestock and logging for their livelihoods.

Nevertheless, in the past decade, there has been increasing investment by outsiders in large-scale projects. These include mineral exploration, extraction and processing, plantation of industrial crops, especially rubber, and hydropower dam project developments. The region has consequently witnessed a number of large-scale land concessions. In 2009, Stung Treng, for example, approved concession land of around 195,000 hectares for private companies investing in agro-industrial crops. Tourism too is a growing sector in the area. It was reported that in 2009, the region received a total number of 345,000 tourists, which was almost double that of 2004 (CLV, 2010). At the same time, only a limited number of local people have become engaged in non-agricultural sector, particularly services, petty trade and wage work. In the current situation, the locals will need support in the following spheres:

- *Development of irrigation networks, road transportation and markets* in order to strengthen their principle livelihoods in the agricultural sector. Local people need to be able to increase their productivity without acquiring more land, and to be able to transport their products to and from markets to lessen their dependences on the middlemen.
- *Increase the number of skilled workers in the non-agricultural sector* to enhance the capacity of the local people, particularly the youth, to engage in growing industry in their homeland.

This requires an emphasis on vocational training in agro-industrial processing, services, and tourism industry.

- *Enhance capacity among local government officers* so that they can understand and cope up with the increasing change, and be able to provide appropriate policy, programs and measures that enable economic development, while sustaining the natural resources of the area.

Most local people were still uncertain about the consequences of a large-scale hydropower project such as the LS2 dam, and tended to perceive it as a threat rather than a development project that could bring them benefits. Relevant government agencies and the developers, therefore, need to be transparent in information sharing, and emphasize public participation in all development processes and procedures. The planners should also understand the livelihood concerns of the locals through close consultation with them so that the project is planned a way that causes least harm to the affected communities, and instead enhances the livelihood conditions of these local stakeholders.

IV. DESCRIPTION AND ANALYSIS OF OMISSIONS IN THE PLANNING DOCUMENTS IN RELATION TO HPD

As stated in the current National Strategic Development Plan (NSDP), the Government of Cambodia is pursuing a two-pronged approach to address poverty reduction in the country involving short-term and long-term measures. The short-term measures include broadening the scope of social protection and safety net programs to shield the vulnerable and poor people from the effects of economic shocks, while employing fiscal and monetary instruments to stimulate a sluggish economy. In the long-term, it includes improving Cambodia's competitiveness and integration into the regional economy, diversifying and expanding economic base of the country (CMDG, 2010). A part of the long-term strategy is to promote electricity generation as the country is at present critically short of power supply and its electricity tariffs are very high as compared to neighboring countries (EAC, 2009). Hydropower generation is therefore seen as a solution for low-cost electricity production, and is expected to help in meeting the domestic demand besides attracting foreign and local investors.

The Triangle Development Plan of Cambodia, Lao PDR and Vietnam (CLV) also highlighted the hydropower potential of the 3S region with its system of rivers, and claimed that these power projects would enable an environment for economic development and improve the livelihoods of people in the region. In Cambodia, the potential for hydropower generation in the 3S alone is around 40 percent of that of the entire country. LS2 Project, in particular, was noted by key informants in the Ministry of Agriculture, Forestry and Fisheries, to be the most suitable and economically sound project as compared to other hydropower projects planned in the 3S in Cambodia (interviews, December 2012).

The extent to which the LS2 and other projects will actually contribute to the livelihood improvement of the locals is however still unclear. The key concerns are as follows.

- The government intends to develop the 3S area as an emerging regional economic hub of the country through the establishment of large-scale development projects. Enabling measures, such as providing land concessions and improving infrastructure are being taken to encourage investment in commercial crop plantation, mining, and hydropower. However, as this study found, the majority of the locals are still engaging in traditional agricultural sector and continue to depend on natural resources, such as animal raising, NTFP gathering, fishing and hunting for their livelihoods. Under these circumstances, large-scale development projects are likely to render the locals more vulnerable since they still do not possess the skills and experience required to be employed in new livelihood options; and

these jobs probably have limited absorptive capacity for local people. On the other hand, these projects could harm the natural resources required for their current livelihood activities.

- In terms of job opportunities directly provided by the LS2 project, there is only an expectation stated in the EIA report that there will be around 3,000 job placements during the project construction period. Nevertheless, it does not prioritize jobs for the local communities, and it can't be long-term employment.
- Regarding compensation for potentially affected people, the draft compensation law for LS2 has recently been scripted, but not yet presented to the public. There is also no comprehensive law to govern hydropower projects in particular in Cambodia. There are instead a number of laws related to development projects, including legislations on investment, energy and electricity, land, forest, water resources and the environment. Key provisions of the law on land include the protection of private ownership and the stipulation that no one may be deprived of ownership unless it concerns public interest, and that too only after the payment of fair compensation provided in advance (Land Law 2001, Articles 4 and 5). Unfortunately, only 12 percent of the households in the LS2 area have official land titles issued by the local authorities, and therefore this would put the rest in a weak position when their lands fall under a governmental development project.

In overview, it can be seen that the rationale of the government in promoting large-scale projects in the 3S is largely intended to boost macro-economic development. It is an assumption that the wellbeing of the local people in the project development area would automatically be triggered by the ensuing development. The benefits of the projects have also been based principally on the calculation of monetary returns from power generation. The LS2 Project, for instance, is expected to significantly increase the revenue generated by the water sector. The CNMC basin development plan stated that the revenue generated by the LS2 alone was estimated to be USD 97.6 million per year, which is almost ten times compared to the current combined value of fisheries, irrigation and small-scale hydropower plants (CNMC, 2009). Nevertheless, such figures do not factor in direct losses and the consequences of negative impacts caused by the construction of the dam, which would include, among others, loss of household income, livelihood-related assets, public infrastructure, biodiversity and environment. While it is still not clear how the benefits of dam development will be transferred to the locals, the cost which seems to have been overlooked is indeed associated directly with their livelihoods, both at present as well as in the future.

V. CONCLUSION

The construction of water storage infrastructure (WSI) mainly aims to contribute to the overall economic growth of the country. But implicitly, the broader objective covers issues of local/regional importance, such as, to create positive impacts on rural livelihood development. Livelihood is understood as a set of economic activities that in turn also include the means to perform these economic activities better or find more productive alternatives, and foster an enabling environment for all this.

In terms of costs and benefits, the decision-makers feel that the negative impacts on the affected communities are smaller than the expected revenues generated from the hydropower plant. This is due to the fact that the negative impacts of the project are underestimated, e.g. the negative impact on downstream communities is not factored into any calculations. At the same time, the project expects to generate large benefits to develop the macro-economy of the nation. But whether these benefits will flow down or co-benefit the livelihoods of the affected communities and households, and by how much remains unclear. Neither are there any mechanisms in place to ensure that the

benefits percolate down to the locals. Therefore, the affected communities could receive a package of compensation based on provisional schemes of the government, but not based on and responsive to their actual livelihood needs. Thus, the compensation package and environmental restoration and development fund lack adequate clarity. There is no indication of how part of revenue from the hydropower project will be directly used for economic development of the affected area, communities, and households.

The government officials are looking at the macro-aggregate economic data profile of poverty and food insecurity at the national level, while NGOs and CBOs are more mindful about the locals and are investigating specific cases and conditions at the grassroots²⁹. At this level, both NGOs and CBOs have mainly raised issues about the negative impact of the project on local livelihoods and have demanded that the rights of the affected communities and households be protected. On the contrary, government officers, even those entrusted with voicing ground-level concerns, often claim their legitimacy and duty to promote national development. Due to the differences in the scale of anchor perspectives, and understandably differences too on which indicators would matter, NGOs/CBOs and government have conflicting positions on hydropower development³⁰.

The more fundamental question to ask, however, is — to what extent actually do the existing local economic and livelihood conditions in the areas affected by hydropower development influence or matter in decision making of higher-up authorities in hydropower projects, and in drawing up strategies and plans on how these will benefit the present-day livelihoods of the local communities? It would seem from the foregoing discussions that conceptualization and envisioning of what ought to be the strategy to pursue at the local level, and what ought to be the make-up of sustainable livelihoods of people therein are being approached in a top-down manner.

Associated government agendas for supporting and promoting livelihoods of affected areas and communities have not been anchored nor have proceeded from careful studies of actual processes and conditions determining the constraints and opportunities at the local level for improving the economy and diversifying the existing forms of livelihood. Rather, there is an overarching explicit and sometimes tacit assumption that hydropower development is good for energy generation, and this in turn will drive industries to develop, which ultimately will generate jobs for the affected people. Moreover, there is always a tacit assumption that access to electricity resulting from the hydropower project is the most critical ingredient for the improvement of livelihood activities of households, a notion that a number of studies elsewhere have challenged. Thus, the government's set responses and actions supposedly promoting local livelihood are not based on local needs and the dynamics of the local economy. At best, they are specific compensation packages that are intended — albeit in a very insufficient manner — to make up or substitute for the economic losses due to physical dislocations. Medium and longer-term promotional and developmental projects to support sustainable livelihoods of affected areas and households that are need-based and responsive have not been developed into action agenda of the government.

Another important issue that this study addresses is government and civil society interaction and relations on the issues related to the impact of hydropower on livelihoods. 3SPN and CEPA have worked intensively in the 3S region of Cambodia. They have covered largely the geographical areas under the 3S region. They have worked with local affected communities to document and present the negative impacts to the public, particularly to raise their concerns.

In general, the government officials and local authorities tolerate the activities of NGOs (3SPN, CEPA and RCC/NGO Forum) since they raise the concerns of people who are evidently affected. However, the more aggressive work, such as explicitly addressing the dam issue has not been permitted.

29 Letter from Samdech Dechor Hun Sen to Son Chhay, dated: 29 July 2011

30 <http://www.cnv.org.kh/>

Government officials and local authorities consider 3SPN and CEPA as development organizations rather than as policy advocacy organizations. Thus, if they continue to engage in sensitive advocacy issues, local authorities are likely to put a stop to their activities.

On the other hand, government officials and local authorities also utilize the inputs of CEPA and 3SPN to spruce up their claim of reasonable and responsive decision making on dam development. For example, the letter from Samdech Dechor Hun Sen, the Prime Minister of Cambodia, states that the process of decision making for hydropower development in LS2 has substantive consultation with community-based organizations and civil society organizations, such as, CEPA and the NGO Forum.

From the point of view of government officials, the NGO Forum is considered and regarded as the representative of civil society in Cambodia. Government officials from the Ministry of Environment invited only the NGO Forum to provide comments on the EIA report for the dam project, while other NGOs were not consulted. Thus, determination of which among the non-government organizations are to be involved and consulted in participation events rests upon the government. It is necessary that a legal framework and transparent and fair mechanism be established to ensure that all non-government organizations and community-based organizations participate at different levels of decision making, without the government arbitrarily excluding the whole range of non-government organizations and grassroots groups that are legitimate stakeholders in hydropower development and on its livelihood impacts.

Many hydropower dams that have been constructed and are being constructed fall in the 3S region. These hydropower plants have created many negative impacts on people living along the 3S River who are dependent on agriculture, fishing, NTFP collection, etc. Yali dam is one among those dams, located about 80 km from the border of Vietnam and Cambodia, which is understood to be creating large negative impacts on the downstream in Cambodia. Civil Society Organizations have actively advocated for a resolution by the government. Finally the governments of Cambodia and Vietnam have reached an agreement and established a notification system in order to mitigate the impact from water fluctuation due to the upstream dam operations. However, the system seems to have had little positive impact on people downstream in Cambodia since local villagers have not been able to receive timely information about the fluctuation of water levels in the 3S rivers. There are obviously major flaws in the system that need to be remedied and addressed before the negative impacts on livelihoods of people downstream can be effectively mitigated.

References

- CEPA. (2008). Livelihood and Family's profile of people in 15 villages along Sesan River, Stung Treng. Culture and Environment Preservation Association.
- CLV. (2010). Master Plan for Socio-Economic Development in Cambodia-Laos-Vietnam Development Triangle Area.
- CNMC. (2005). Basin Development Plan Programme Sub-Area Analysis and Development: The Se San/Sre Pok/Se Kong Sub-Area SA – 7C. Cambodia National Mekong Committee.
- CNMC. (2009). Draft of Basin Development Plan Programme Sub-Area Analysis and Development: The Se San/Sre Pok/Se Kong Sub-Area SA – 7C, 2009. Cambodia National Mekong Committee.
- Grimsditch, M. (2012). *3S Rivers under Threat*. 3S Rivers Protection Network and International Rivers.
- Hirsch, P. and Wyatt, A. (2004). *Negotiating Local livelihoods: Scales of Conflict in the Se San River Basin*.
- Trandem, A. (2012). The Sesan, Srepok and Sekong Rivers at a Crossroads. Poorly Planned Hydropower Dams Threaten Sustainable Development Efforts. An article, International Rivers. Retrieved on 25 June 2013 from: <http://www.internationalrivers.org/resources/the-sesan-srepok-and-sekong-rivers-at-a-crossroads-7660>
- 3SPN. (2009). Living River. Vol. 1(1), August-November 2009, 3S Rivers Protection Network.
- 3SPN. (2010). About 3S Region. 3S Rivers Protection Network. Retrieved on 26 June 2013 from: <http://www.3spn.org/about-3s-region/>
- MOP. (2010). Achieving Cambodia's Millennium Development Goals Update 2010. Ministry of Planning.
- NIS. (2009). General Population Census of Cambodia 2008. National Institute of Statistics of Cambodia.
- RCC. (2012). Baseline survey on livelihoods of people who will be affected by the Lower Sesan 2 hydropower dam. Rivers Coalition of Cambodia.