

# Challenges in Managing Hydropower Development Projects and Livelihoods Relations in the Lower Mekong Basin

: Results of case studies in Cambodia,  
Lao PDR and Vietnam

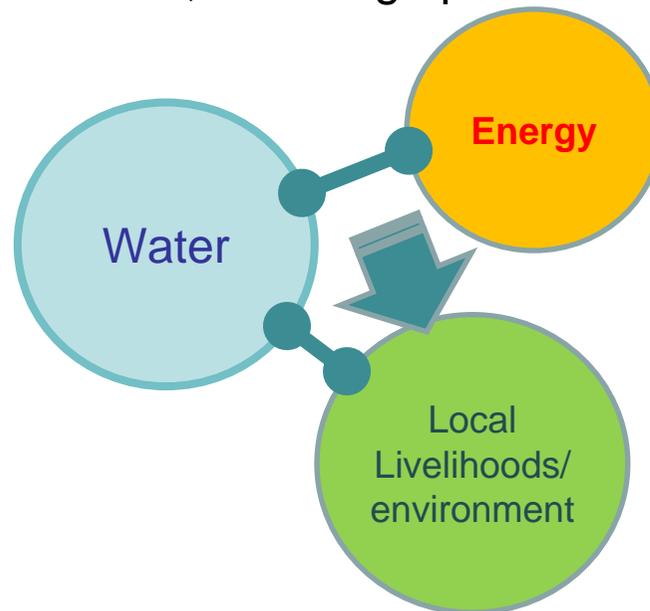
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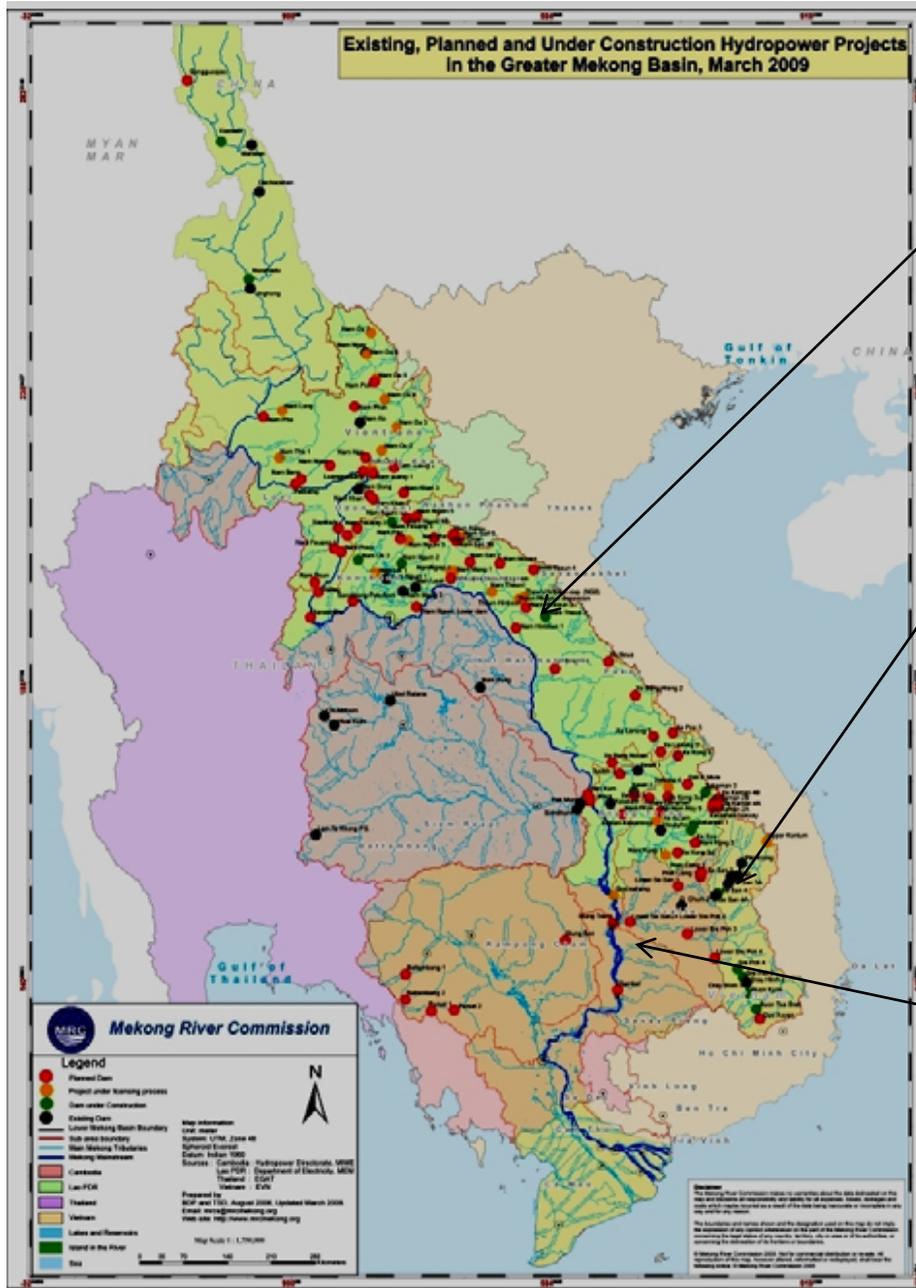
# I. Background

- The Mekong River Basin faces massive development investment over the decade.
- Much of it focuses on WSI for hydroelectric power generation.
- Little attention given to how WSI can be constructed and operated in ways that optimize benefits for all water users, including riparian communities and the environment.



- CPWF Program in the Mekong: “To reduce poverty and foster development by optimizing the use of water in reservoirs”

# Sites: CPWF Mekong Project are focusing on



• Theun-Hinboun Expansion, Lao PDR



• Yali, Vietnam



• Lower Se San 2, Cambodia



## II. Benefits/Costs of Hydropower and the Local Livelihoods

### Taking an example of Yali

- Generates 3,680 million kWh annually.
- Water from reservoir for irrigation.
- Generates revenue from sale of electricity and parts of the revenue are paid for natural resource tax, value added tax and forestry tax.

- 3,500 Ha of forest land lost.
- 1,900 Ha of fertile agricultural land lost.
- 1,149 HHs (5,384 people) relocated. 59% are ethnic groups. Majority involves in agricultural activities, rice and upland crops grown in valleys along streams and perennial crops grown in hill slope.

Hydropower projects induce changes to local livelihoods

How the benefits are shared and how costs are compensated to them?

# Sharing of Benefits to Local Communities

Outcomes	Case study projects/ Countries		
	Yali, Vietnam	THXP, Lao PDR	LS2, Cambodia
1. Sharing of project services			
Electricity	✓ national power grid	✓ national power grid	✓ national power grid
Water supply	✓ Free supply resettles	✓ supply resettles	x
2. Sharing of non-monetary benefits			
Resources entitlements	x	x	x
Priority in hiring	x	✓ during dam construction	✓ during dam construction
3. Sharing of monetary benefits			
Development funds	x	✓ provided & managed by Project	✓ provided by Project/ managed by Gov.
Taxes	✓ to provincial gov.	✓ to national government	✓ to national government
Revenue sharing	x	x	x
Sharing of ownership	x	x	x

- Electricity supplied to national power grid and claimed to benefit also the locals.
- Non-monetary benefits relating to enhancement of livelihood options have not much been explored.
- Monetary benefits often provided in forms of development funds and taxes to local authorities. Need mechanisms to ensure that the revenue used specifically for local development. More direct sharing schemes have not been widely used.

# Compensation of Costs to Local Communities

Outcomes	Case study projects/ Countries		
	Yali, Vietnam	THXP, Lao PDR	LS2, Cambodia
1. Compensation to resettles			
Houses	✓ new houses built	✓ new houses built	Details are not available. But it is expected that compensation package in terms of cash and lost assets will be provided.
Agricultural land	✓ land sizes of each HH surveyed and allocated accordingly	✓ average land size is determined and allocated across all HHs.	
Crops	✓ monetary calculation	✓ monetary calculation	
Public utilities	✓ road/electricity/ water	✓ road/electricity/ water	
Health/ education	✓ health centers/ schools	✓ health centers/ schools	
Other supports	✓ agricultural extension	✓ supply food till income target reached	
2. Compensation to other affected areas	✓ made to Cambodians after the incidences.	x	x
3. Compensation to loss of ecosystem	✓ Forestry tax provided to provincial governments	✓ Budget provided/managed by the Project to restore impacts	✓ Budget provided to restore impacts

- Impacts areas recognized are often areas flooded → resettles are provided with compensation packages BUT other affected areas are not eligible. Noted that within the eligible group, there are often subsequent issues after compensation.
- Impacts on ecosystem and biodiversity is also another area needed attention. Need clear plan on what impacts to be addressed, how to implement and how to monitor the restoration works under the funds.

# III. Testing Livelihood Improvement

## Yali Project

- HH survey of 250 HHs in 4 communes (included ethnic minorities).
- Survey indicated main challenges for local people in improving agriculture production are **limitation of cultivated land** and

**water scarcity.**

- **Possible solution:** utilizing semi-flood land area for cropping systems suitable to variation in water level regulated by the reservoir
- MK1 is providing cassava and rice varieties with short duration to farmers for testing



## Lower Se San 2

- HH survey of 308 HHs in 6 communes.
- Survey indicated that **diversification of livelihood activities, including crops, fisheries, non-timber forest products & livestock** is required.

## THXP

- HH survey of 100 HH in the Upstream (Keosengkham Resettlement Site)  
**Vegetable cultivation in draw down area of reservoir** likely to be possible between November and May based on rainfall patterns. MK1 GIS experts provide technical support on potential land uses based on relevant GIS data
- HH survey of 100 HH in the Downstream Relocation Site

During rainy season, **shifting from 'Rice – fallow' system to 'Rice – fish' system**: modification of paddy plot dikes to harvest flood water and closing the outlet of paddy plots once flood starts to recede so that paddy plot serves as ponds.



# IV. Example of Project's Responses

## : A Case of Theun-Hinboun Power Company

### Project's Strategies

- 1. Support PAPs during transition period**
  - Food support during resettlement process
  - Initial livelihood support-orientation, training, provide basic materials for start up agriculture activities
- 2. Ensure outcomes are better than pre-project conditions**
  - Infrastructure development (road, electric, school, health centre, irrigation)
  - Social and Community development
- 3. Ensure PAPs have access to resources which are sufficient and sustainable**
  - Develop and allocate agriculture land
  - Develop basic infrastructure to support agriculture activities i.e. irrigation
- 4. Support all livelihood activities (material and technical support) until PAPs reach income target (17.5 mil kip/HH)**

*Note: income target -- value of commodities produced and consumed plus the cash income from all activities*

# **Coordination between the Project and Local Authorities in Addressing Livelihood Issues in THPC**

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## **Complies requirements and targets set out**

- Develop a suitable livelihood improvement plan and supporting policies for PAPs
- Develop implementation framework understood by all counterparts
- Arrange and provide sufficient agriculture land for PAPs to ensure food security and income generation

## **Project and local authorities coordination**

- Consultation on plan
- Report and address issues
- Coordination regarding PAPs participation in livelihood activities
- Coordination on Grievance

## **Monitoring and Assessment**

- Join monitoring and assessment on livelihood activities through social-economic survey to ensure the activities are benefit all PAPs

**Resettlement site**



**Household Garden**



**Relocation site**





Project livelihood activities



# V. Key Issues and Challenges

IN OVERVIEW, Need to consider the projects as multiple use systems that can contribute to local livelihoods in addition to generating hydropower → ensuring that local people gain benefits from the projects.

## **Key Challenges**

- Need coordination among concerned line agencies, the dam operators and local people to plan local livelihood issues in hydropower projects.
- Need careful analysis of different impacts and concerns of different social groups and localities.
- Need to ensure that livelihood opportunities are socially and economically suitable and take into consideration local contexts.
- Encourage villagers in direct participation in the planning and management processes (need enable mechanisms for this).

Thank you.

For more information, please visit:

<http://mekong.waterandfood.org/>

<http://www.thpclaos.com>