

Small and medium hydropower: Great impact on environment but less supervision of Environmental Impact Assessment - Some findings in Vietnam

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Background

Vietnam is a fast growing economy in the region of ASEAN. According to the National Power Development Plan which is completed and released in 2007, the electricity consumption is projected to increase 14% during 2010-2020, which is double the expected growth rate of GDP.

In Vietnam, the national electricity gridline has covered 100% of the communal towns, but many villages in the remote areas still far from reach of electricity. Vietnam still have to import electricity from neighboring countries to provide to some Northern and Central provinces. In order to meet the increasing energy demand of the country and to solve the problem of blackout in many remote and rural areas, Vietnam government encourages investment in medium and small hydropower (MSH) constructions.

Investment in MSH is a good business to many investors as it has good return on investment and they can easily access the bank's loans. The number of MSH projects has increased sharply during 2006-2010 and potentially keeps expanding in the near future.

To attract more investment from private sectors, the power to consider and approve major of the hydropower projects has been decentralized from the central government to provincial People Committees. The Ministry of Industry and Trade only manages big hydropower projects on mainstream rivers and or projects of high importance. All the normal MSH are considered and decided by provincial level. The decentralization of authority on one hand helps to simplify administration procedures to push the growth of small hydropower sector, but on the other hand it is made corrupt use and contributes to negative impacts due to weaknesses in management. Practical experience reveals that MSH construction can easily cause a lot of severely negative impacts on natural and social environment when they are poorly implemented or supervised.

Since 2007, People and Nature Reconciliation (PanNature) has raised the concerns on MSH development in Vietnam. During 2007 - 2009, it organized three journal investigations to MSH hotspot provinces in the country and released some serial journalistic reports. It also made a pilot study on assessing community awareness, capacity and opportunity in response to social and environmental impacts of MSH Projects in Ha Tinh province. In mid 2010, it initiated another study on impacts of MSH projects on the system of special-use forests.

In its studies and investigations, PanNature focus on assessment of the EIA implementation and supervision of hydropower projects, which is supposed to be a big gap. This reports recognized some findings from our previous studies and investigations.

Some findings

1. The number of MSH projects beyond control

Three quarters of Vietnam's territory is made up of mountainous and hilly regions. The country has potentiality to develop hydropower in 10 major river basins which are concentrated in Northern, Central and Central Highland areas. According to the Ministry of Industry and Trade' s report, Vietnam has 1,021 hydropower projects approved by plans of 36 provinces and cities by March 2010, among which MSH projects account for 25% of the total hydropower capacity and 86% of the projects in number. *(There are additional MSH projects which existed out of plan, however, we do not have the data of them at the moment.)*

The case study of Gia Lai province

Gia Lai is the watershed of three big river systems Srepok, Sesan and Ba, which flows into the central coastal provinces and lower Mekong. Experts on energy consider Gia Lai as an advantage area for hydropower development. In addition to 12 big projects locating on the mainstream of the three rivers, Gia Lai planned to have 113 more MSH projects by 2015, the capacity for each project was about 5MW on average. It has been ranked in the top list of having most MSH in the country.

By November 2009 when we made the journalistic investigation, only 21 MSH projects had been completed and ready for operation, while more than 80% of the projects were under-construction or had not even started its construction. Experts have warned the threats of overload capacity of the river and lack of water for their operation during 6 months of the dry season.

Pre- and Post-approval examinations of EIA were ignored

According to Vietnam's regulations, every hydropower project having resevoir' s capacity of more than 300,000 cubic metres must do the EIA report together with feasibility assessment report. The others of less than 300,000 cubic metre in capacity will have to sign in commitments of environment protection.

The report of provincial Department of Natural Resources and Environment said that by November 2009, there still have 47 MSH projects being approved and constructed without EIA reports or environmental protection commitments. Even those having the EIA reports, it could hardly confirm about the quality of such reports. The head of this Department who takes the major responsibility for the supervision of EIA and environmental commitments, admitted that they rarely monitored or supervised the implementation of the EIA reports of projects. There were many given reasons like the lack of human resources, financial source and facilities.

Not only in Gia Lai, the story happens in almost all provinces which has hydropower in Vietnam. In a journalistic interview in the parliament's lobby in 2009, the Minister of Natural Resources and Environment had to recognize the open situation of the monitoring and supervision of hydropower projects and promised to put more control.

In late 2009, the Minister of Industry and Trade sent a legal document to whole 36 provinces having hydropower projects, requiring the provincial People's Committees to report on current status of hydropower development in their province. As a result of the reviewing process, the Minister recommended to eliminate at least 38 MSH projects from provincial plan and adjust the capacity of 35 other projects. One of the reasons was that they would impose seriously impacts on society and environment.

2. Forest loss and the warning of serious natural disasters

Forested mountainous areas are basic condition for hydropower development. At the same time they have the essential functions of watershed and protective forestry. While resettlement and social issues are more concerned in large hydropower projects, the loss of forest and its ecosystem services are major threats caused by MSH construction.

It was said in the most recent report of the Ministry of Industry and Trade that conversion areas from forest to the hydropower account for only 0.5% to 1.5% forestry area of the local provinces, and that most of them are low quality wood or bare land. This statement commonly appears in EIA reports of MSH projects and the statements of the government authorities.

However, the results from our field investigations were much different. Many areas used for MSH construction are natural or even primary forest, some MSH projects are located in the core zone (strictly protected areas) of nature reserves.



Major investors and many relevant authorities say that MSH only occupied bare land or poor forest

Among 73 projects to be cancelled or adjusted as the recommendation of Minister of Industry and Trade, 21 MSH projects situated either inside or in the bufferzone of at least six national parks and protected areas. The number of protected areas affected are much more in fact.

Hoang Lien and Cat Tien were not listed as the parks threatened by hydropower plans in the Ministry's reports, however, they would be seriously threatened in the assessments of scientists and journalists. Hoang Lien National Park which was acknowledged the ASEAN Heritage, is planned to carry 3 small hydropower projects inside while Cat Tien Biosphere Reserve would be surrounded and invaded by about 20 hydropower projects (including large and small projects).

It is not easy to draw the link between the MSH development - forest loss - the frequency and seriousness of natural disasters in the locality as we have no scientific research or following-up statistics in the long term on this. However, it is obvious to say that the three regions of hydropower - concentrated Northern, Central and Central Highland are the centres of storm and flash flood bearing of Vietnam. Many MSH projects are based on steep and difficult of access topography which used to be heavily damaged by flash flood and soil erosion. This can be also recognized in the case study of MSH projects in Ha Tinh province which is analyzed hereafter.

3. No information - No supervision

Keeping local communities informed and consulted about SMH projects are lawful requirements for investors to go along with EIA preparation. However, many investors has ignored these requirements, or blind local communities due to their inadequate awareness to MSH impacts, or even some tries to violate or take advantage from gaps in EIA regulations to marginalise community consultation.

In principle, local communities can only provide critical responses and consultation to a SMH project when they know and understand clearly environmentally and socially potential impacts of SMH construction, and when they have opportunity to voice up their concerns over the project and its impacts. To address those concerns, PanNature conducted a pilot study to assess community awareness, capacity and opportunity in response to social and environmental impacts of medium and small hydropower projects in 2008, with technical and financial support of EPLC Leadership Programme. The study were implemented at Son Kim 1 commune of Huong Son district, Ha Tinh province in Vietnam.

Son Kim 1 is a mountainous commune, bordered with Laos PDR, and covering a large area of 22.950 ha. Son Kim 1's land is dominated by primary ever-green tropical forest, that is home to many globally endangered wildlife species and landscapes. This commune is situated in the centre of Vietnam's biodiversity hotspot Northern Annamitte Range, ranging as a forest corridor between two national parks Vu Quang and Pu Mat. Also, its forest ecosystems maintain functional watershed for two main river systems of Ha Tinh province - Ngan Truoi and Ngan Pho. As the communal deputy president' saying "The river here is very upstream river, the forest is protective forest".

According to Son Kim 1 People Committee's report 2007, there are about 4.592 people of 1.087 households that are living in this commune. Their major livelihood are forestry and agriculture, but almost live in poverty, as they do not have enough material for production. Only 2% (450ha) of the area is farming land. Most of the wealthy land for cultivation which are riparian was destroyed and became wasteland after the history flash flood in 2002.

Son Kim 1 has 98% of the land area for forestry. However, not much stewardship on the forest land is transferred to the households. Lacking land for agriculture and forestry cultivation, and having little chance to join service sectors are the explanations for why illegal logging becomes the major local livelihood.

Son Kim 1 was known as the most damaged by huge flood in Vietnam in Spring 2002. This deathly flood swept out many houses, and killed 13 people. Forest destruction was supposed to be main reason for that tragedy.

In 2002, Huong Son Hydropower Plant (33 MW) started construction and became the first hydropower in the commune. The location of the project is about 20 km deep into the forest so almost of the local people do not know much about it and its potential impacts.

Huong Son project is an example of violation on EIA regulations. The EIA report of the project ignored the high value of biodiversity and ecosystem services of the area. In the response of local authority, more than three hundreds hectares of primary forests have been cleared up for this plant's construction (by 2007) instead of 105 hectares as demanded by the investors in the project profile (2004). The drought became much worse in dry season, which affected much local livelihood was not properly recognized in the EIA report.

According to both of the Huong Son's EIAs, the electricity produced would be supplied to the district. The capacity was 30MW in the first EIA and regulated to 33 MW in the second EIA, but the noteworthy saying was that they requested for double forest area for such small change. They asked for 216 ha of forest area instead of 105 ha in the first EIA, howev6(e)3.4400 [(c)7.17535,

The EIA report said that they would create many jobs and develop services sector for the local area. However, those statements were over expectation. Almost no service was improved. Only few local labour were hired for some short-term manual work and the payment were not completed by the time we do the survey. Besides, the report was made and approved without consulting the community. At least 83% of the community confirmed that they had not been informed about the projects before it started and 91.67% had never given any comments or private opinion to the local leaders or the project investor.

Huong Son is one of the MSH projects that have the longest period of construction in Vietnam. It has gone through 8 years by far and is expected to be completed for power generation in September 2010 after many delays.

There were not much difference between our pre-study assumptions and the results. Local community have very little awareness about the potential opportunities and environmental and social impacts of MSH projects. They have never heard of EIA and its importance to them. Local community's capacity for giving feedbacks or consultation for MSH project is low. They do not have or do not have enough opportunities to participate in community consultation process required for any EIA activity of MSH projects.

In 2007, investors were about to build another two MSH plants in the commune with the approval by provincial leaders, but they had to postpone due to the opposing ideas of communal and district authorities.

4. Paradox of MSH management

There is a visible paradox in the MSH investment and the management system of electricity in Vietnam. Government policy encourages private sector's investment in MSH projects while the national transmission line system is solely taken by the Electricity of Vietnam (EVN). The MSH projects has grown quickly but the transmission system could not meet the need. This leads to the situation that many MSH projects were completed and ready for operations but they could not sell their product. EVN is the major electricity producer and the sole buyer at the same time. They tend to buy electricity in dry season when their plants can not meet the high demand. However, it is the difficult period for any hydropower plants in general, especially the MSH.

Despite that fact, the number of proposed MSH projects keeps increasing. There is an assumption that this paradox may link to the speculation and the project extension of MSH investors.

Conclusions

The development of MSH in Vietnam reveals some discussable questions on planning and the management. The permission of authority to too many MSH projects not only put strong pressure on environment (including water resource, forest and natural disasters) but also become a burden to the their management.

The reviewing of Ministry of Industry and Trade and the provincial People's Committees in 36 provinces having hydropower is considered great efforts to eliminate the unnecessary projects and control the booming of MSH projects.

Lack of supervision and management on EIA is one of the major weaknesses. To many investors, EIA report is just an administration requirement that fulfil their profile, but not their duty and responsibility to the environment and society. The local people do not have enough information and opportunities to participate and supervise the project.

In addition to individual projects, it is necessary for managers to address the inter-project, inter-region, inter-sector nature in the planning and management process. Like the recommendation of Gia Lai Department of Natural Resource and Environment, they need a strategic environmental assessment for the whole river basin so as to make the adjustment in their management and issuing permissions.

Besides that, provincial authorities need to release regulations on inter-reservoir operations to ensure the sharing of the benefit and responsibilities among investors and between investors and the community in lower region.

Hydropower, and MSH in particular, is an important content in the management of water resource and river basins, which has been discussed for a long time. It is expected that there will be a clear answer for the issues when the Adjusted Law on Water Resources is released in the coming time.

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