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The Research and Knowledge Transfer and Capacity
Building Programs on Assessment of Water Availability
for hydropower development and effects of climate
change on Hydropower, water footprints of hydropower
generation in the Lower Mekong Basin

REVIEW

FINAL

Findings from Cambodia
A study made by

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1 page summary of key findings

Research on Hydropower and sustainable development in Cambodia

In Cambodia hydropower development depends almost entirely on technical and financial assistance from outside dominated by Chinese firms. There are very few technical university that has some programme related to water resources and focuses mainly on rural infrastructures development for irrigation and drainage and related subjects. Training on water resources has been made abroad under different donor supports in regional institution such as Asian Institute of Technology or in donor countries such as Japan, Australia, China etc. There are very few specialist trained abroad in hydropower in the country.

Researches programme related to water resources are also sponsored by universities abroad and mainly focusing on water resources in general such as hydrological, groundwater and hydraulic modelling.

Sustainable hydropower development is mainly initiated by MRC. The country is facing with severe lack of local capacity in identifying needs, project planning and operation not only in hydropower but also in other related fields such as fishery biodiversity which is expected to be largely affected by hydropower development. Scientific data and information supporting fundamental research are also fragmented and inadequate for well informed decision making.

Related Research:

Related researches were mainly initiated by different MRC programs related to sustainable development in particular related to possible impact of hydropower development on Cambodia vital natural resources of capture fishery by institutions such as Swedish Environment Secretariat for Asia (SENSA), the Finnish Environment Institute (SYKE), the Swedish Academy of Science and a number of other universities from donor countries.

The World Fish Center based on the scenarios studies made by MRC under the Basin Development Programme (BDP) has made comparison of fishery potential of the Mekong with other river basin worldwide and show the importance of the fishery resources in terms of food security, protein supply especially to the poor. What will be the possible impact when each of the sub-basins will be blocked? Impact of the Great Lake flow regime as caused by dam development: flood pulse, decrease in flooded areas, increase in water level during the dry season, impact on the lake ecosystem etc need more understanding and awareness building.

Private sector activities on hydropower:

Some private activities on hydropower development have just been initiated and might need significant time to reach the level of a private company specialised in hydropower development as such.

Some of the hydropower projects under construction and planned such as: Kirirom 3, Kamchay, Se San 2, Atay, Chey Areng etc. are technically and financially executed by foreign firms namely: China, South Korea, Vietnam etc. According to the very few local NGOs reports, problems exists related to the process of public consultations social safeguard as well as environmental protection and transparency which needs more in depth studies for informed decision making process.

Gaps and Needs for research capacity building:

There is significant gap between political will and need for energy and the existing financial and local technical and managerial capacities to achieve sustainable hydropower development in the country. Only a few universities in the country have some programme related to water resources development and management and have developed limited research programmes. Sustainable hydropower development is new area to universities in Cambodia.

Suggestions on improving research and knowledge sharing and inclusion of private sector

MRC and development partners has accumulated significant knowledge and has built a network worldwide for sustainable hydropower development and can meaningfully support large infrastructure development in the basin from learning by doing sharing other experiences. Member countries should continue to support MRC in its Basin governance role and develop their own research capacity by inter-university exchange.