How is Sustainable Hydropower Development achieved in Myanmar?

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1. Introduction – Myanmar has huge potential of Hydropower resources, about 108,000 MW according to the studies. But, it is included in the top 20 countries by unutilized Hydropower potential and the current utilization is about 4 per cent. The deployment of Solar PV system in the country is increasing in line with the abundant potential of Solar Energy and the decreasing price of Solar PV Modules. However, it may take the certain times to be more efficient application and also need to develop the specific rules, regulations, and the standardizations. Therefore, increasing the Hydropower generation capacities is one of the appropriate options to uplift the country's electrification rate as well as to meet the rapid demands in the recent years. On the other end, there are a lot of challenges for the implementation of Hydropower plant. Moreover, there are many issues related with the Hydropower development in Myanmar. Hence, this Research work performed due to the following objectives:

- To improve the harnessing of potential
- To define the barriers
- To know what are needed to improve/ apply
- To mitigate the adverse impacts
- To investigate how can be Sustainable

2. Problem-Tree –Image.1 highlights the Problem-Tree of the Sustainable Hydropower Development in Myanmar.

3. Case Study – The focused plant is Lower Yeywa Hydropower Project. Currently, it is the largest hydropower plant of Myanmar that is located on the Myitinge River, approximately 50 km southeast of Mandalay City in the central part of the country.

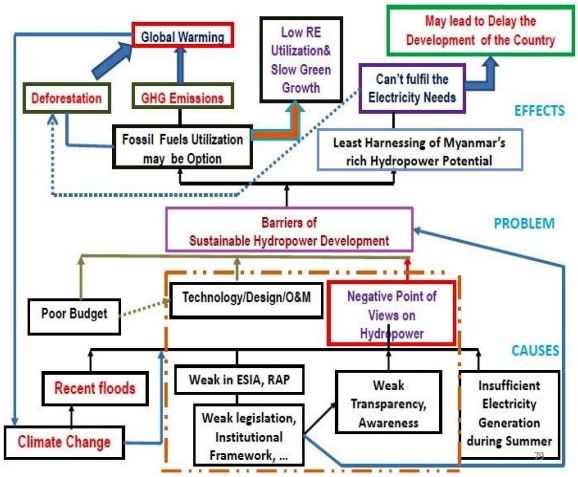

Image 1. *Problem-Tree*

4. Results and Discussion – This work identify the needs to fix the negative causes are as follows:

- Key Actors Dialogue
- Enhancement of the education to promote SHD (Sustainable Hydropower Development)
- Reviewing the Optimization of the power system
- To apply the innovative technologies to maximise the benefits
- Adopt the guidelines and modeling for Grid Optimization
- Enhancement of the power quality of national grid system
- Renovation of the existing Hydropower plants to be efficient operation
- Upgrading the transmission capacity
- To improve the awareness and transparency
- Lessons learned from the other regional countries

5. Conclusions – In Myanmar's Generation Mix, Hydropower shares about 60 per cent. Therefore, it is evident that the Hydropower is the important sector. This study presents the strategic options and the valuable points towards the development of the Sustainable Hydropower in Myanmar.