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Social impacts of large-scale hydropower project in Myanmar: a social life cycle assessment of Shweli hydropower dam 1

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Abstract

Purpose: Hydropower is currently the primary renewable energy source for Myanmar. However, hydropower projects can cause direct and indirect detrimental impacts on the livelihoods of populations. Social impacts of planned hydropower projects should therefore be assessed. In this paper, we report on the application of a Social Life Cycle Assessment (S-LCA) for evaluating social and human rights impacts of hydropower construction, operation and maintenance, and transportation of materials. Material and method: S-LCA is capable of assessing multiple social stressors and tracking different impact categories within potentially disturbed communities. Both

direct and indirect interaction between stakeholders and social impacts at every stage of a project can be evaluated. An existing large - scale hydropower dam in the Ayeyarwady River, Shweli hydropower dam 1 , is used in this paper as an example for analysis. Results: Results indicate the magnitude and intensity of social and human right impacts caused by the Shweli hydropower dam 1 in Myanmar . The dam gives rise to a series of negative impacts while offering little to no tangible benefits to local people and society. Overall, the most commonly held view expressed by stakeholders was that the dam did not offer the promised social and economic benefits. The weakest social performance was observed in the governance and socio-economic repercussion categories. Conclusion: A number of important socio-economic impacts are identified, offering useful insights to energy, ecosystem services, and land use policy makers. The results offer opportunities to examine potential impacts of forthcoming hydropower projects in the region and create long-term socio-economic benefits. © 202 1 , The Author(s), under exclusive licence to Springer-Verlag GmbH, DE part of Springer Nature.

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Ayeyarwady; Hydropower ; MCDA; Myanmar ; S-LCA; Shweli

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