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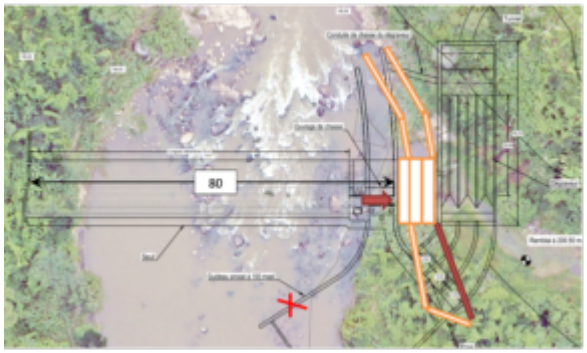
Support for the evaluation and revision of hydropower studies under the PERER (Electrification Programme through Renewables) in Madagascar

Madagascar’s New Energy Policy (adopted in Sept 2016) intends to increase the rural electrification rate from today < 5% to 75% in 2030 and this mainly through renewables (mainly hydro and PV). GIZ in the context of the “Electrification Project through Renewables PERER” supports local stakeholders (ministry, regulator, agency for rural electrification and private sector etc.) through Technical Assistance. Skat was mandated to analyse and revise feasibility and detailed design studies as well as hydrological studies for selected sites in Sava region.



Country:

Madagascar, Sava region

Project Period:

Sept ’18 – June ‘19

Services Provided:

Critical analysis of hydropower studies with regard to technical, hydrological and economic aspects

Name of Staff involved and functions performed:

Dr. Hedi Feibel as project leader and hydrologist, Peter Eichenberger as civil and hydraulic engineer, Martin Bölli as electrical engineer, Daniel Figi as geologist

Name of Client:

GIZ, Deutsche Gesellschaft für Internationale Zusammenarbeit

Description of the Project:

Objective: Improve the reliability, quality and pertinence of the hydropower studies required as a sound basis for the “call for projects” to private sector developers expected to invest in such projects.

Services provided by Skat: revision and evaluation of technical studies (feasibility studies, detailed design, tender documents) with regard to hydrology, sediment load, topography and geology, hydraulic structures, electro- and hydro mechanical equipment, transmission and distribution networks etc. Among others feasibility studies of Belaoko site with 6.5 MW (phase II 13 MW) of potential capacity and Andriamanjavona with 1.3 MW are analysed.

Activities: check sources and reliability of input data for the design (e.g. runoff, rainfall, consumption and load figures, geological information etc.), analyse the proposed design with regard to its feasibility, sustainability (e.g. generation cost per kWh, ease of O&M) and profitability (including option to feed surplus production into the JIRAMA network).

Results: Summary on each study examined with details on deficiencies, possible inconsistencies, etc. as well as specific suggestions for follow-up and improvement. Provision of a premise to call for specific improvements of the studies to finally achieve the required quality level for a “call for projects”. Thus, a better quality level is ensured which prevents project developers from futile investments and creates an improved basis for sustainable rural electrification.