Run-of-river hydro, Indonesia

This hydro project is a grid-connected, run-of-river hydro plant that generates electricity without the need of a retaining dam. Using a natural height difference, it generates clean energy for the island of Sumatra.

Location

The project is located in the southern part of Sumatra (Indonesia's largest island), 500 km south of the equator and about 30 km from the province's capital, Bengkulu, a port city on the Indian Ocean. The local economy in this rural region is dominated by farming and traditional artisan work.

Project

Sumatra is covered by dense tropical forests that provide rich habitats for numerous species. In order to save this unique landscape and generate clean energy to meet the country's growing demand for energy, a run-of-river hydro plant has been built at the upper reaches of the Musi River. To maintain agricultural and ecological balance, the water intakes were built in a way that has no negative impact on irrigation schemes. The project owner set up a reforestation program in the catchment area in an effort to minimize any harm to the environment.

The plant uses a natural height difference of about 400 meters to generate sustainable hydropower, thus avoiding the need for a retaining dam. Given that the regulatory pond is very small for a power plant of this magnitude (the power density is 184 W/m2), it has only a minimal impact on the surrounding natural environment.

The project is mitigating global warming in an environmentally sound manner and bringing benefits to the local population. Quality jobs, for example, have been created in- and outside the hydro plant. In addition, the project owner is supporting regional infrastructure projects such as the building of bridges and a local market. Finally, people's living conditions have improved because an orphanage and a Mosque received funding from the project owner.

In order to maintain steady communication between the project owners and stakeholders, annual stakeholder meetings have taken place, attended by members of all surrounding communities, several NGOs (among them Nature Lovers) and farmers groups. With its strong approach to sustainable development in a remote region, the project has gained the Social Carbon certification.

Project achievements

Socio-economic impact:

- To date, the project has hired 32 permanent employees and contracted out 45 more jobs. Many temporary jobs were created for the local population during the construction phase.
- The project owner constructed new roads and bridges, giving local farmers better access to their paddy fields.
- The project owner established and funded a traditional local market, built a motorcycle taxi station and supported the building of a Mosque.
- The project owner funded the construction of trash basins in the sub-district of Ujan Mas. Nine local communities have benefited from the construction of these trash basins.
- The project owner donated one computer to the Lurah (Head of Village office) in Ujan Mas and provided financial assistance/support to the Dzikir (Islamic praying/recitation group).The project owner regularly donates to the Orphanage in Talang Ulu Village.
- The project is providing free composting training (teaching locals how to convert organic material from the water intakes into organic fertilizer) to members of local communities.

Environmental impact:

- The power plant has implemented a program to remove an invasive water plant (Eichornia crassipes) that harms water quality. The program converts captured organic material into organic fertilizer and distributes it to farmers. In addition, the program is releasing grass carp fish to fight the water plant.
- To ensure a healthy forest, the project owner has set up a reforestation project in the catchment area.

Checklist Project 300 358

SOCIALCARBON® VCS VERIFIED CARBON STANDARD A Global Benchmark for Carbon

✓ Additionality and permanence:	according to the rules of the VCS and Social Carbon Standard
✓ 3rd party verified:	by RINA
✓ Transparency:	provided by Markit Environmental Registry
✓ Annual CO_2 reduction:	500,000 tCO_2e
✓ Social and environmental benefits:	as documented in our database
✓ Marketing material:	high resolution pictures and videos available

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