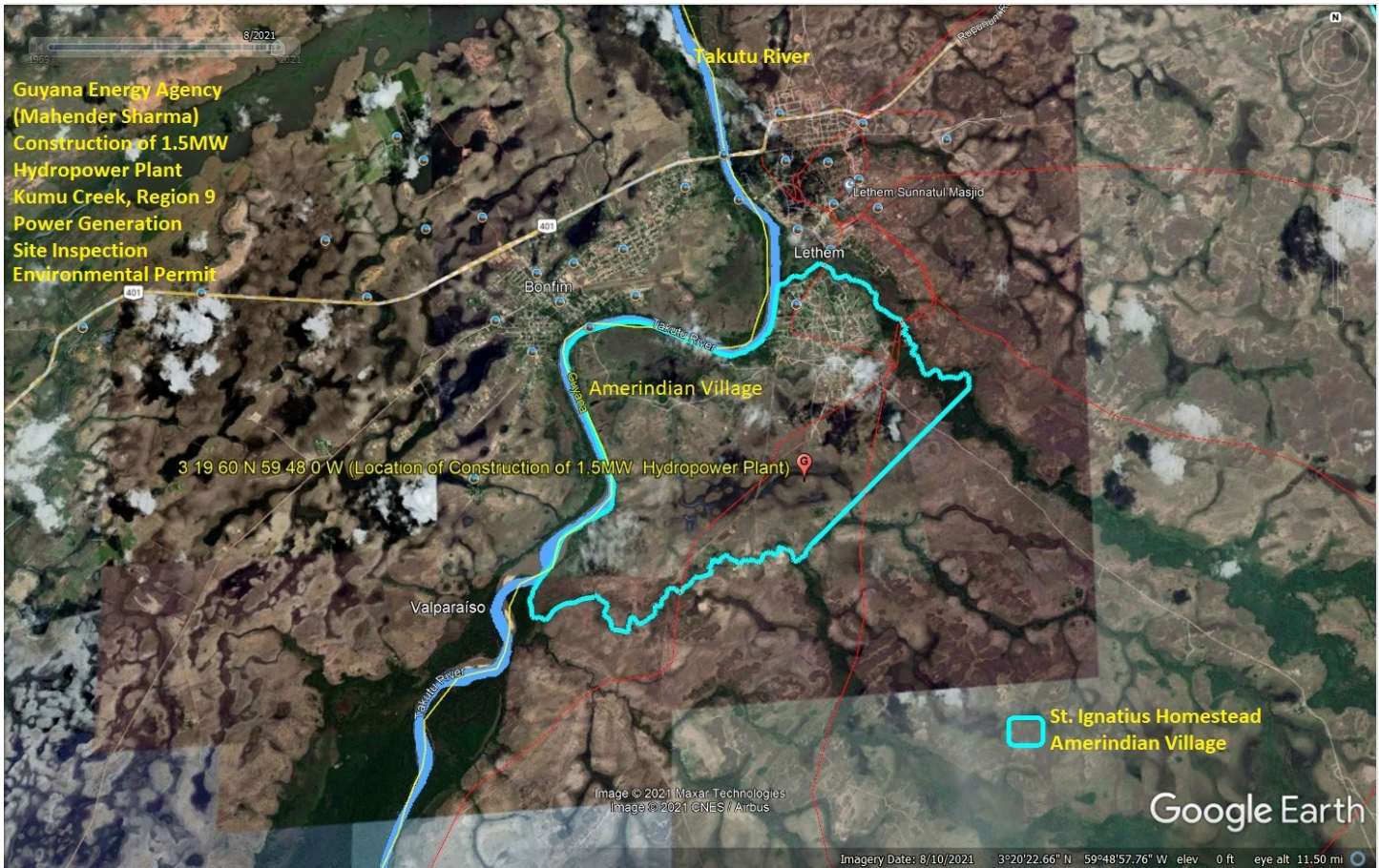


Environmental Impacts Screening Decision
Construction of 1.5MW Hydropower Plant (Kumu)

Project Location and Components



The GEA and the Hinterland Electrification Company Inc. (HECI) is proposing to develop the Kumu Hydropower Site. The project will be located on the Kumu River on the Kanuku Mountains at approximately 15 km from the Town of Lethem in Region 9 (Upper Takutu – Upper Essequibo) and 500 km from the Capital City of Guyana (Georgetown) at coordinates 3°19'60"N, 59°48'0"E.

The Kumu Hydropower project is a run-of-the-river plant which is technically and economically feasible. It will comprise an installed capacity of 1.5 MW, which will generate approximately 9,700 MWh of energy on an annual basis. The hydraulic infrastructure proposed will also comprise a 3m high and 20m wide weir. The reservoir created by the weir will cover approximately 1 km² which is currently forested. A 500 mm headrace will be installed along the hillside on the right bank of the river which will extend 500 m from the weir to the forebay. From the forebay, water will flow 1750 m through a 300 mm penstock/pipe that will be fixed along the right bank of the river down to the power house which is 545 m lower than the reservoir. After passing through two turbines to generate electricity, the water will be returned to the Kumu River through the tailrace channel. In addition, a transformer station and a 14 km transmission line to carry 13.8 kv will connect the powerhouse to the Lethem power grid. The exist road network will be used to transport construction materials to site. However, concrete walkway will be required along penstock as in the case of Moco Moco.

Environmental Impact Screening

The EPA's screening concludes that the impacts arising from the construction and operational phases of the project are minor, localized, and acceptable, with the only identifiable significant environmental impact being Water Quality during the construction phase. An EMP was submitted providing measures to avoid, prevent and mitigate impacts during the construction and operation.

- The project is the construction of 1.5MW Hydropower Plant which will generate approximately 9,700 MWh of energy on an annual basis. This upgrade will have a positive impact since it will ensure a reliable supply of electricity in the Town of Lethem and surrounding villages.
- Noise impacts will be low to moderate, short-term, and localized throughout the construction of the main (dams, powerhouse, diversion tunnel) and associated (transmission line) project facilities. The project is located downwind of the Kumu Community.
- Impacts from dust pollution will be low to moderate and primarily during construction and short term and localized. Because the community/residents are so far away from the project site, they will be unaffected.
- The proposed project is not in close vicinity of any protected areas. However, impacts on fish species composition and numbers, impacts on terrestrial fauna and sensitive habitats will be affected. Project activities will have low to moderate effects on the existing ecological or biological (flora or fauna) biodiversity of the river at the project area during construction. These impacts are anticipated to be short term. Additionally, pre-construction ecological surveys and associated assessments of the project footprints to establish a robust baseline will be conducted. Impacts on the environment associated with the physical dredging of the area and subsequent increased short-lived sedimentation will have a neutral to low impact on the River fauna and flora due to the area is subjected to fluctuation in sedimentation due to wet and dry seasons.
- Impacts of the project on the magnitude and mitigation of floods, landslides and other potential emergencies will be low to moderate and is likely to happen intermittently overtime, however, appropriate emergency plans and maintenance of a high level of staff preparedness for emergencies will be implemented.
- A requirement is the preparation of a pre-construction, construction and operational EMP to manage environmental impacts arising from the project along with a corresponding schedule and monitoring of mitigation measures to ensure potential impacts are maintained at insignificant levels. It will include the institutional arrangements for implementing the EMP to ensure its effectiveness.

Conclusion and recommendations

To manage the project's environmental impacts, the EMP will be reviewed to assess whether the plan is achieving its objectives, review the effectiveness of the implementation and provide assurance that developers make suitable provisions for counteracting negative impacts that occur through project implementation and operation.

The EPA concludes that there are no significant impacts nor is the project deemed environmentally sensitive. Impacts arising from the construction and operational phases of the project are minor, localized, and acceptable.

The planned project will provide a reliable supply of electricity from a renewable energy source to the town of Lethem and surrounding villages. In the perspective of sustainable energy development, the Hydro-Power Plant (HPP) will also boost the share of renewable energy sources in the country's electrical generation system.