



NELIKOLU CHARITABLE TRUST

Regd. No : 2509/2007

Kekkatty Village, Yellanalli Post, The Nilgiris, Tamilnadu 643215

DATE : 28 Jul 2020

Place : Ooty

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Exp Appraisal Com for River Valley Projects,
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Respected EAC Chairman and Members,

Reg: Sillahalla Pumped Hydro-Electric Storage Project TOR Clearance

We understand the above project is to come before the EAC for TOR clearance at the EAC meeting on July 29, 2020. We hope the MoEF in future will give at least ten days' notice before the meeting. We would urge you to look into the following issues and not approve TOR clearance to the proposal.

People and Nature of the Kundah Watershed

The Kundah watershed region in the Nilgiris is the birthplace of the Bhavani – Cauvery River. It also supports important last remaining shola-grassland mosaic vegetation, which is one of the most endangered vegetation types in India. This region has crucial amounts of green cover in terms of forested tracts (plantations) which have to say now been naturalised and serve as important habitat and corridors for endangered populations of wildlife; such as—Nilgiri tahr, Nilgiri marten, Nilgiri langur, Nilgiri laughing thrush, Nilgiri pipit, horse-shoe pit-viper, Nilgiri salea, rusty spotted cat, leopard cat, mouse deer, barking deer, dholes, leopards, tigers and hundreds of other species. Two of the particularly vulnerable tribal groups Toda's in the Nilgiris and the Irulas in the Pillur valley are inhabitants of the forest grassland mosaics in the upstream-downstream catchments.

The Kundah watershed region is also the lifeline for thousands of indigenous people, and local farmers who live and cultivate in this region. Apart from this, thousands of indigenous people's communities and local farmers downstream depend on a healthy, unimpeded flow of water in these rivers, downstream. The southern slopes of the Nilgiri plateau, where the various tributaries of the Bhavani River flow downstream, is a relatively dry and rain-shadowed region. This region supports unique lower elevation grasslands, evergreen hills forests, moist deciduous forests and dry deciduous forests. This region is also an important elephant and tiger corridor between Silent Valley National Park, Attapaadi Forest Division, Nilgiris Forest Division, Mukurthi

National Park, and Coimbatore Forest Division. The entire Kundah-Bhavani river complex is crucial in sustaining all this diversity of life in this region.

Two Pumped Hydro-Electric Pumped Storage Projects

The Kundah-Bhavani watershed already has 10 large dams and several kilometers of underground tunnels. It is one of the largest Hydro-Electric Power Scheme in Tamil Nadu-with, with a capacity of 585 MW. Now, this watershed is getting/proposed to get two more sets of pumped storage hydro-electric projects (PSHEP). The first one is the Kundah PSHEP, which involves the construction of nearly 5.5 km long tunnels and shafts that will be bored through the hills between the Porthimundh and Avalanche-Emerald reservoirs. Involving the construction of various other large concrete structures, such as powerhouse, caverns, penstock, and docks, the overall cost of this project is estimated to be around 1900 crores, with a claim of generating an 500 MW of electricity for peak load. The Tamil Nadu state approval,

Forest clearance from MOEF/ Govt. of India, and Environmental clearance from MOEF/ Govt. of India were all attained in the years 2007-2008 and subsequently for all the phases of the project.

The now proposed Sillahalla PSHEP envisages the construction of an upper reservoir measuring more than 260 feet in height in Bembatti village along the Sillahalla stream, a tributary of the Kundah River. A lower reservoir, which will be more than 350 feet in height, will be built further downstream, past the existing Kundah Palam dam. The two dams would be connected by a tunnel and water from the lower dam will be pumped to the upper dam, and used to generate electricity. According to officials, the project will submerge 170 hectares and have an entire land footprint of over 315 hectares, which includes forest, private and government lands. With an estimated cost of around 5000 crores, the claim is that this project can generate 1000 MW of electricity during peak load.

Drastic Negative Impacts – Social, Geological and Ecological

- 1) An estimated 10,000 people will be directly affected with the new dams being constructed for Sillahalla PSHEP and with the submergence of more than 315 hectares of forest, private, and government lands. They will lose their land and be displaced of all forms of their livelihood.
 - a) The Nilgiris have already seen several layers of social unrest and injustice due to forced evictions, improper, and failed compensations for resettlements.
 - b) The Nilgiris is a hotbed for violations in the forests rights act and rights to the livelihood of several indigenous peoples groups; and it can't become further subject to this scale of massive eviction.
 - c) These PSHEPs (Kundah and Sillahalla) are being pushed through without the mandatory environmental assessment and public hearings, which is illegal.



Image 1 showing villages that will be affected by SPSHEP



Image 2 showing villages that will be affected by SPSHEP

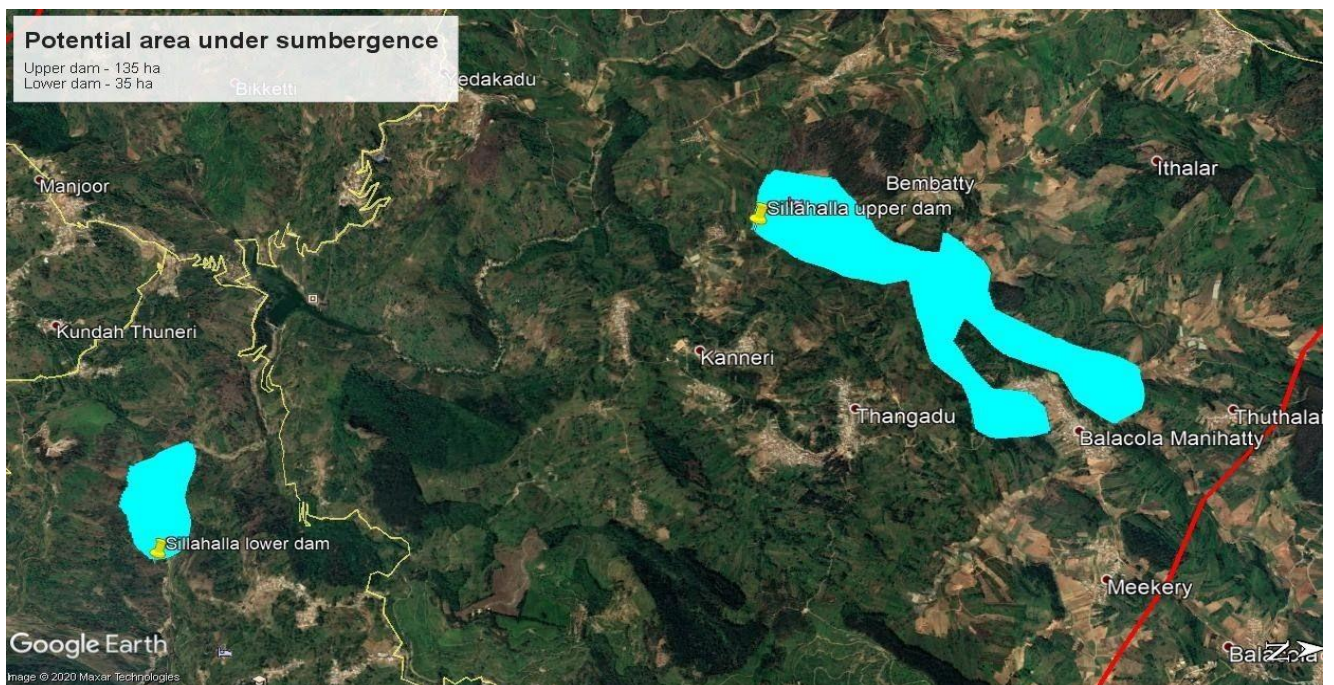


Image 3 showing potential area under submergence due to SPSHEP

2) The Kundah River already has a limited flow of water due to the existing Kundah Dam during the summer season. With the construction of two additional dams along the Sillahalla stream, which drains into the Kundah River, there will be a further reduction of water entering the river, meaning communities and wildlife further downstream, as far as Pillur, will be affected.

- a) With lesser availability of water, elephants and other wildlife will start moving further up the slopes to the areas surrounding Manjoor, exacerbating human-animal conflict.
- b) The areas surrounding Geddai were already prone to droughts, and that another hydroelectric project could have significant ramifications for wildlife and ecology in the Pillur Valley.
- c) Villages like Mulli and Maanaar inhabiting Irula tribes in the Pillur valley who are directly dependent on this river for their agricultural needs will be highly affected.

3) The entire Sillahalla and Kundah watersheds have already significantly been affected by plant ecological and land-use level changes to hydrology, which have resulted in lessened water flow. Diverting water from catchments that still receive high rainfall, and changing the course of water flow, will escalate the ecological and hydrological impacts that are already present.

- a) The moist deciduous and evergreen forest tracts that numbers in 1000s of hectares will be affected with reduced water flow, due to diversion.
- b) Electricity demand will peak during the summers, which is also when the Nilgiris is faced with water shortages. Reduced and altered water flow in the various connected streams will lead to increased drought stress and forest fire incidences in the 1000s of hectares of forests directly downstream.



Image 4: Showing a large landslide in a mountain containing shola-grassland vegetation. The landslide abuts a new road construction that services the Kundah PHSEP. Hundreds of these landslides occurred in the monsoon of 2019, in this region.

4) Extreme weather events, like the floods in the Nilgiris in 2019, have led to hundreds of more landslides in the Kundah watershed region evacuating and rehabilitating thousands of people. This region received over 2400 mm of rainfall in 4 days (Aug 8th – 11th -2019). The number of vulnerable locations in the Nilgiris has gone up from 101 in 2001 to over 300 vulnerable locations in 2019 as per GSI report.

- a) Large landslides have been recorded near the Cable-cum Ventilation Tunnels for the Kundah PSHEP near Kaducuppai, where large service roads are being constructed in hills that have shola-grassland ecology.
- b) All types of construction – tunnels, dams, flukes, bays and penstocks and power stations endanger the very integrity of the hills, especially since the tunnels and structures traverse deep within the base of these hills.
- c) With climate change increasing in intensity, extreme weather events will also increase in frequency and it is imperative that large infrastructure projects are not taken up in this watershed.

5) Wetlands are one of the most threatened types of ecologies in the world. In the Nilgiris more than 80 percent of the wetlands have been lost to submergence due to reservoirs. Wetlands are crucial in storing water when there is excess rainfall and releasing it slowly across the year. The loss of wetlands is the reason why the hydrology of the Nilgiris has also been affected to this extent. Wetlands also harbour the most number of endemic flora. There are nearly 25 endemic plant species to the wetlands of the Nilgiris. For instance, one of the species, *Eriochrysis rangacharii*, is a sacred grass that the Toda Indigenous people need for thatching the roof of their temples. Their entire sacred dairy culture has been endangered because of the loss of wetlands. The construction of these dams and reservoirs will submerge more of the last remaining wetlands of the Nilgiri plateau.

6) The Sillahalla stream is already extremely polluted due to the water from more than 10 carrot-cleaning machines, as well as sewage from Udhamandalam town and several villages being let into the stream. The entire drainage and grey water of the Ooty municipality, neighbouring villages and institutions like public schools, resorts and encroachments outside the town flow into the stream which is to be dammed. Ooty already attracts over 30 lakh visitors every year. This is likely to increase to 50 lakh in the next five years. The wastewater generated by this huge floating population has already created serious pollution problems. If the water in the Sillahalla stream is dammed and left stagnant for the most of the year it is bound to become a major health hazard.

Further Arguments against the Need for PSHEP

There are several other measures of dealing with peak hour electricity demands:

- To reduce the peak electricity demand, consumers of electricity can be given shifts to spread out electricity consumption during the day. This strategy is being used effectively in several developed countries across the world. No such attempt has been made.
- Differential tariffs can be used to get industries, commercial units, farmers, and domestic consumers to reduce the use of electricity during peak hours or free electricity schemes can be scheduled for farmers only during lean hour consumption. No attempt has been made to manage peak load demand.
- There can be more decentralised storage of power within existing distribution networks, by using the latest technology battery back-up. The costs of setting this up will be lower than the over Rs 7000 cores being spent for PSHEPs in the Nilgiris. The electricity storage costs are expected to keep reducing over the next decade.
- Pumped storage hydro-electric projects require at least 20 percent more electricity than it generates. In other words, the 500 MW and 1000 MW generated from KPHEP and SPSHEP respectively

during peak hours would result in the consumption of over 1800 MW that will be spent to pump back the water. Thus, the project would be a net consumer of power. This makes it imperative that peak load management is taken up to address the issue of variable power availability and shortages. Industries have to understand that the electricity they are already consuming comes at great ecological and social costs, and the least they can do is to adhere to a power management scheme.

- Tamil Nadu already has pump storage projects like Kadamparai HEP (400 MW) among others, which are not being operated optimally in pump storage mode. There is thus no case for new pump storage projects.

As part of the members of the civil society of the Nilgiris district, stakeholders in the district, citizens, and organizations working for maintaining ecological security and fair development in the district and from all across India, we request you to seriously consider the objections posed. We appeal that a very short period of notice time was provided for responding to this Expert Appraisal Committee meeting (6 days), and it is difficult for us to organize and voice the views of all the citizens and groups concerned. Kindly reject TOR clearance application for the proposed Sillahalla Pumped Storage Hydro-Electric Project. We also urge you to order a review of the social and environmental impacts of existing and under-construction projects in the river basin, particularly in view of changing climate.

We find that no documents related to the project are available on the Parivesh site, which is another reason for not considering the project for clearance.

Thanking you,

Yours sincerely,



(R Sivakumar)
Secretary
Nelikolu Charitable Trust