The Golden River Hydro Electric Power Project and its impacts on Downstream

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Abstract: Development must be relevant to need of people. Several Development big dams studies have shown the human’s significant attected the flow of the World’s major river by building drums, at the same time North Eastern Region has been identified as Indians future power house and 168 mega dams to generate 63328 mw hydro electric Power in Brahmaputra river. Now 22 projects having potential of 15191 MV, in the Subansiri tributary along with the 2 GW lower Subansiri projects.

Introduction
The river Subansiri is called the River of gold. In olden days the people of Subansiri Valley used to scan for gold in the sand of the river. Scientists suspects that their might be a ‘gold field , somewhere in the word. In the word the ‘Subansiri’, subarna means gold and siri means flow. In some places the river Subansiri is also known as Swarnashree. Mishing community lives in the valley believe subansiri as their mother and they call the river as Abanari Anne. Subansiri is called Lokong Chu (Tsari Chu) at its source. It is one of the major tributary of the mighty Brahmaputrain the northern bank, which contributes 11 % of its discharge. Subansiri is a trans- Himalayan Glacial river originating in the south of the Po Rom peak western part of Mount Pororu. The river runs down 520 kms from its source till it falls on the Brahmaputra in Jamugurihat. The river bed is composed of black sand mixed with 50% of pebbles and 10% boulders. The mean daily discharge of the Subansiri at Gerukamukh is 138842 m3/sec (Goswarni, 1997).The average annual sediment yield at Chauldhoaghat is 94.83 X 103 m tonnes (W APCOS 1993). The Subansiri River System has a catchments area of 39,000 sq. km at the dam site and of this catchments area about 14,000 sq. km is located in Tibet and the rest in India. The river originates at an elevation of 5591 meters above sea level. Hydrologic regime of the Subansiri River greatly changed during contemporary times after the Great Assam Earthquake (1950) and the aftermath of the floods. That caused severe landslides in the mountains, and the Subansiri River channel was temporarily blocked by rock debris at Sipomukh, about 2.5 km upstream from the foothill regions. The huge naturally created dam obstructed the entire monsoon discharge of the river for nearly three days. Subsequently, sudden outburst of the dam created a catastrophic flood, the greatest ever in the recorded history of the river.

Lower Subansiri HE Project:
The Lower Subansiri is a inter-state hydroelectric project to harness the hydel potential of the lower reaches of the Subansiri River. The left bank of the dam is in Assam and the right bank of the dam, the powerhouse and’ most of submergence is in Arunachal. The dam is located at 2.3 km upstream of Gerukamukh, which is about 470 km from Guwahati, the capital of Assam and 16 km north of Gogamukh on the National Highway connecting North Lakhimpur to Dhemaji. (The scheme envisages construction of 116 m high concrete gravity dam, 8 nos. of circular shaped pressure shafts, 8 nos. horse shoe shaped Head race Tunnels and a surface powerhouse to accommodate 8 units of Francis turbines of 250 MW capacity each with an installed capacity of 2000 MW, for an annualgeneration of7421.59 MU with a storage capacity of about 1,34,500 x 106 m3 (256402 cumecs, about 9,05,000 cusecs) (CWC, 1994) . The

Impact analysis of Lower Subansiri project:
Impact on Biodiversity and ecology of Subansiri Valley:
The construction ofNHPC’s Lower Subansiri project has repeatedly disrupted the wildlife habitation of the area. NHPC started with construction activities in and near a protected forest area without necessary clearance. During the construction phase, NHPC’s activities furthermore led to the disruption and destruction of habitats of endangered species, including elephant, near the dam side.

Socio-economic aspects:
It is known that existing projects like the Gumti (Tripura) and the Loktak (Manipur) have had long term negative impacts on the people of the region. The Kaptai dam built in the Chittagong Hill tracks East Pakistan (now Bangladesh).
submerged the traditional homeland of the Chakma and Hajong communities, and forced them to migrate into Northeast India. This led to conflicts between local communities and the refugees. The impending loss of their home, land; and livelihood has led to opposition to the Pagladiya project in Assam by the Bodos and the Hmar and Nagas to the Tippaimukh project in Manipur.

**Impact on fisheries:**
Dams destroy fisheries by changing water flow and blocking fish from reaching breeding grounds and habitat upstream of the dam. Fish populations usually decline. Some species disappear. As a result, people may lose an important source of proteins and income. Their traditional way of life may also be destroyed.

**Contribution to climate changes:**
It is widely acknowledge that global warming is accelerating more melting of glaciers on the Himalayas and hereby altering the hydrology of the rivers that spring from the mountains. The increased siltation of river and unpredictable fluctuation of waters levels will pose a threat not only to the human and ecological environment, but also to the river infrastructure projects. It is likely that the increased sediment load of the rivers will spread up the sedimentation of ‘reservoirs, thereby reducing the life span and economic viability of hydropower projects.

**Conclusion:**
As the Centre and States push for these hydel projects, large dams are emerging as a major issue of conflict in the region. It clearly shows that unless a prior comprehensive downstream impact studies are carried out to decide the viability of the multiple project planned in Arunachal Pradesh and downstream communities in Assam acknowledged as projected affected person (pAPs), we will see violent conflicts in the Brahmaputra basin over the issue of large dams in the future. “... the poor, vulnerable groups and future generations are likely to bear disproportionate share of the social and environmental costs of large dam projects without gaining a commensurate share of the economic benefit”

**References:**
2. NORTH by NORTH EAST: Chakmas, dams, migration & conflict: SANJOY HAZARIKA
3. The Greater common Good’: Arundhati Roy, 1999
4. Rivers for Life: Rasi Salai, Ilhailand, November 3, 2003, Inspirations and Insights from the 2nd international meeting of Dam-affected People and their Allies
5. Sanctuary Asia, vol. XXX No. 1, feb 2005 page 55-57
7. The downstream impact of lower Subansiri project by Dr. Dinesh K Mishra