

Who Pays the Price? The Human and Ecological Cost of Arunachal's Mega Dams



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Keshoba Krishna Chatradhara 14 March 2025 7662 views

We are the people living in one of the most vulnerable regions of our country. Our land is rich in natural resources, including minerals and vast forests. Additionally, we are blessed with abundant water resources. However, this abundance often turns into a curse, as flooding and erosion pose serious threats to our communities. While we have developed adaptive capacities to cope with natural flooding, the increasing frequency of unnatural floods and severe erosion—primarily driven by aggressive developmental projects—has left us struggling to adapt. This situation is exacerbated by the lack of awareness and understanding among local leaders regarding the consequences of such developments.

The Issue of Development Projects

Many infrastructural projects are being undertaken with insufficient or half-baked feasibility studies. One major example is the Lower Subansiri Hydropower Project, a 2000 MW initiative that was launched in 2005 and is set to be commissioned soon—possibly even before the upcoming monsoon. The project has failed to conduct a comprehensive downstream impact analysis, which is critical for understanding its environmental and socio-economic consequences. On October 27th, the abrupt and unplanned drying up of the Subansiri River resulted in significant ecological damage downstream, causing long-term risks to local livelihoods. Despite the severity of the event, no damage assessment has been commissioned. My attempts to report the issue to local authorities have been ignored, highlighting a broader pattern of negligence.

We strongly believe that similar oversights and mismanagement led to the recent catastrophe in Sikkim, where four hydropower dams—constructed by NHPC—were destroyed by sudden flooding. This raises concerns about the structural integrity and risk assessment of such projects in vulnerable areas.

The Growing Threat of Large Dams in Arunachal Pradesh

Currently, nearly 108 Memorandums of Understanding (MoUs) have been signed for the construction of large dams across Arunachal Pradesh, primarily in the upstream regions of the Brahmaputra's north bank. While hydropower projects are often justified on the grounds of economic growth and energy security, the long-term costs of such developments are rarely considered. The key issues associated with these dams include:

- **Increased Flooding and Erosion:** The construction of dams disrupts natural water flow, leading to unpredictable flooding patterns and severe erosion along riverbanks.
- **Loss of Livelihoods:** Many communities rely on traditional river-based occupations, such as fishing, quarry mining, wood collection, and dairy farming. Projects like the Ranganadi (405 MW) and those in Bhutan (Kurishu) and Kapali have already demonstrated how hydropower initiatives can devastate local economies.
- **Environmental Degradation:** Dams disrupt aquatic ecosystems by altering sediment transport and water temperature. The October 27th drying of the Subansiri River resulted in thousands of fish deaths, highlighting the dangers of erratic water releases. Similar cases have been observed in the Siang River, where hydropeaking effects from Chinese dam projects upstream have caused drastic fluctuations in water flow.

- **Threat to Endangered Species:** The reduction in water levels has adversely impacted the habitat of the endangered Gangetic dolphin, which is recognised as India's national aquatic animal.
- **Seismic Risks and Structural Failures:** The region is seismically active, and inadequate geological assessments raise concerns about dam safety. If a dam were to burst, the consequences would be catastrophic, as witnessed in the 1950 earthquake-induced floods in the Brahmaputra valley.
- **Lack of Compensation and Impact Studies:** Compensation mechanisms for affected downstream communities are entirely ignored. The only downstream impact study conducted so far—on the Subansiri Project—remains incomplete and lacks critical assessments.

The Need for Responsible Development: Urgent Policy Reforms Required

As a community, we are not inherently opposed to developmental projects that contribute to national progress. However, the fundamental question remains: at what cost? With climate change already presenting a significant challenge in the region, the push for numerous large-scale projects needs careful reconsideration.

We are particularly concerned about the large-scale impact of projects such as Subansiri, Siang, Dibang, and Lohit. To address these concerns, the following actions must be taken:

1. Mandatory and Comprehensive Downstream Impact Studies:

Every new project must undergo holistic Comprehensive Downstream Impact Studies, environmental and socio-economic assessments, including long-term climate change implications.

2. **Cumulative Impact Analysis:** Instead of assessing projects in isolation, authorities must appraise their collective effects on the region, including seismic activity risks and ecological damage.
3. **Improved Early Warning Systems:** The lack of effective flood warnings and disaster response mechanisms has already resulted in avoidable losses. Strengthening early warning systems is crucial for safeguarding lives and livelihoods.
4. **Transparent Public Consultation:** The voices of local communities must be prioritised in decision-making processes. Project reports should be made available in local languages to ensure accessibility and accountability.
5. **Stricter Regulation and Oversight:** Given the past mismanagement and negligence, regulatory bodies must enforce stricter compliance measures for construction companies and government agencies.
6. **Re-evaluation of Large Projects:** Instead of over-relying on large hydropower projects, investment in smaller, decentralised renewable energy sources (such as solar and wind) could offer sustainable solutions with lower ecological risks.

As responsible citizens, we urge authorities to prioritise sustainable development, ensuring that the voices of affected communities are heard and addressed. Large hydropower projects must not proceed at the cost of ecological destruction and human suffering. The government must enforce strict environmental clearances, conduct unbiased feasibility studies, and incorporate climate change perspectives into all future infrastructure projects. If such measures are not taken, our vulnerable communities will continue to bear the brunt of unplanned and unsustainable development.

We call for urgent action—before it is too late.

(This article is written to mark the International Day of Action for Rivers 2025.)

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