

Experiences from India: The 1200 MW Teesta III Hydroelectric Project in Sikkim

Author: IBON International

Co-author: Centre for Research and Advocacy Manipur (CRA-Manipur)

Background: The rush for hydropower PPPs

In India, the national government has been promoting the increased role of the private sector in development processes through Public Private Partnerships (PPPs).¹ Regulations, such as the PPP Policy of 2011, were instituted to attract private

¹ The World Bank Group, "India National Public Private Partnership Policy," Public-Private Partnership Legal Resource Centre, March 8, 2022, <https://ppp.worldbank.org/public-private-partnership/library/india-national-public-private-partnership-policy>

investors and harness their supposed operational efficiencies in the provision of services. The government of India recognizes several types of PPPs, including the user fee—based Build, Operate and Transfer (BOT) model, performance-based management and modified design-build contracts, among others. Several provincial governments, such as in Sikkim State of India's northeast region, where various PPP projects are pursued in the infrastructure and energy sectors, followed suit.

At least 30 large hydroelectric dam projects are planned over the rivers of Sikkim, including the Rangit River, Ryongyong Chhu River, Rangpo River and the Teesta River. The government of Sikkim has been looking to PPP mega-dams to generate revenue. In 2004, it set a target to produce 3,000 megawatts (MW) of additional power by the end of the 11th Five-Year Plan of India, from 2007 until 2012. A 2005 cabinet note by the Sikkim government proposed to allot 13 hydropower projects to private actors as PPP projects, which was followed by implementation agreements for hydropower projects based on a BOT model.² Hydroelectric PPPs in Sikkim include the 120 MW Rangit Stage IV Hydroelectric Project (HEP), the 520 MW Teesta VI HEP and the 96 MW Jorethang Loop HEP, among others.

In February 2005, the Sikkim government took up the 1,200 MW Teesta III Hydroelectric Project (Teesta III HEP), one of India's largest hydroelectric PPPs.

The Teesta III: characteristics and contestations

The Teesta III HEP, a run-of-the-river³ project in North Sikkim district, consists of a 60-metre high concrete-faced rockfill dam, with two tunnel spillways and a reservoir flushing tunnel. Electricity is generated through an 800-metre drop between the villages of Chungthang and Sankalan. The rock dam cuts across Teesta River at about 400 metres downstream of the confluence of the Rivers Lachen Chu and Lachung Chu, near Chungthang village (see Figure 1).

Per the implementation agreement, 12% of the total generated power will be supplied to Sikkim, which is connected to India's Eastern Region Grid, as royalties. Eighty-eight percent will be fed to the provinces and states in the Northern Region Grid. The original 12% would count as royalties for the first 12 years. It would increase to 18% of the generated energy for 12 to 30 years, and 30% beyond 30 years.⁴

Large dams, including the Teesta III HEP, are promoted as renewable, clean energy sources. They can supposedly offset greenhouse gas emissions and therefore provide potential mitigation solutions. The project developer attempted to register

² Right to Information India, "RTI reveals stalled hydropower projects in Sikkim," RTI Foundation of India, September 5, 2012, <http://www.rtifoundationofindia.com/rti-reveals-stalled-hydropower-projects-sikkim-2225#.YVsI9H3hVPY>

³ Run-of-the-river hydroelectric systems generate energy from flowing water, and typically uses a smaller dam and reservoir than conventional hydropower projects.

⁴ The World Bank Group, "PPI Update Note 85: Snapshot: Sponsors from Singapore and Infrastructure Projects with Private Participation (1990-2011)," 2013.

the hydroelectric dam under the Clean Development Mechanism (CDM) of the United Nations Framework Convention on Climate Change (UNFCCC) in 2008, in an attempt to seek additional resources through earning emission reduction credits. The Teesta Stage III HEP project design outlined that it would reduce annual carbon dioxide emissions by a total 4,333,658 tonnes over the envisaged crediting period of 2011 to 2021.⁵



Figure 1. The Teesta III (Source: CRA-Manipur)

Teesta Urja Limited (TUL), originally a special purpose vehicle of Athena India, was formed as a consortium that serves as project developer and owner. TUL played a central role in the long history of the project, and was once comprised of a 74% stake held by the private sector and a 26% stake by the Sikkim government. It was awarded a 35-year contract for the 1,200 MW Teesta III HEP project by the Sikkim government on a Build, Operate, Own and Transfer (BOOT) basis. After this, the Sikkim Energy and Power Department entered into a Deed of Agreement with TUL in July 2005.

In August 2007, a different entity, the Singapore-based Athena Projects Private Limited, acquired around 70% of the equity stake in TUL. In the following years, the Sikkim government owned 51% of the shares in the project, with Asian Genco owning around 37%. In March 2010, private equity firms led by US-based companies General Atlantic, Goldman Sachs, Morgan Stanley, Norwest Partners and Everstone Capital, together with Indian public firm Larsen & Toubro Ltd, invested

⁵ "PDD of Teesta Stage – III, Run-of-The-River, Hydro Electric Project (Teesta Stage – III, RoR, HEP)," United Nations Framework Convention on Climate Change, August 11, 2017, <https://cdm.unfccc.int/Projects/Validation/DB/4NUB299IQ53P6M05UQYZDMM57L6JA4/view.html>

USD 425 million (EUR 380 million) in Asian Genco Private Limited to acquire a 44% majority stake in the Singapore-based company.⁶

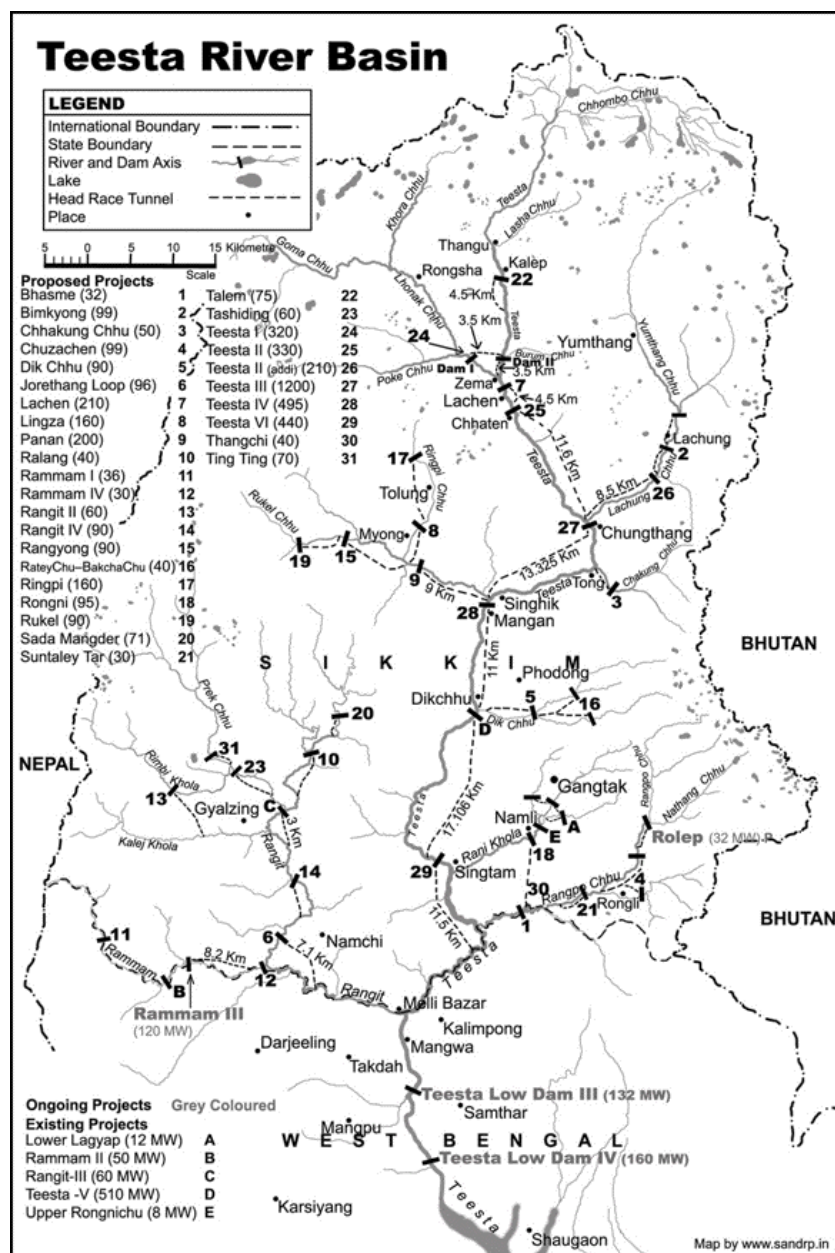


Figure 2. Teesta River Basin, highlighting the Teesta III Dam site at Chungthang (Source: ACT, Sikkim)

In January 2020, 40% of the Asian Genco stakes in TUL were bought by Greenko, an India-based private energy corporation, backed by Singapore's GIC Private Limited and the Abu Dhabi Investment Authority, for USD 200 million (EUR 180 million) to

⁶ "What ails Sikkim's Teesta hydropower project?" *India Together*, September 7, 2015, <http://indiatgether.org/sikkim-teesta-iii-hydropower-project-irregularities-economy>

USD 250 million (EUR 220 million). As a result, Greenko acquired 40% of TUL stakes and the government of Sikkim held the 60% majority stake.^{7 8}

Some public firms, namely the Power Trading Corporation (PTC) of India, Infrastructure Leasing & Financial Services, Andhra Pradesh Power Generation Corporation and the Investment Corporation of India Securities, also have stakes in the project.⁹ In April 2015, the Ministry of Power recommended that the National Hydroelectric Power Corporation (NHPC) purchase private equity shares to complete Teesta III.¹⁰

In 2006, the Indian public company Rural Electrification Corporation (REC) borrowed Japanese yen (JPY) 21 million (USD 173,000/EUR 155,000) from the Japan International Cooperation Agency (JICA). There was also an Indian rupee (INR) 4,560 crore¹¹ (USD 600 million/EUR 540 million) loan from Japanese and German financial institutions to the REC and TUL in August 2007. The same REC invested INR 3,000 crore (USD 400 million/EUR 360 million) and sanctioned an additional INR 1,000 crore (USD 130 million/EUR 116 million) in 2014 under a cost overrun proposal approved by the company board.¹² REC also borrowed EUR 70 million (USD 80 million) from the German development bank *Kreditanstalt für Wiederaufbau (KfW)*.¹³

The International Financial Corporation (IFC) of the World Bank Group indirectly funds the project through financing private actors involved in the project, including the aforementioned financial intermediary, the Industrial Credit and Investment Corporation of India (ICICI), construction companies such as the NHPC and Larsen and Turbo Ltd, and private equity funds Goldman Sachs, Morgan Stanley, Everstone and Norwest Partners.

Amid delays, the filling of the dam reservoir was completed in September 2016. The project was finally commissioned, and hence began operations and power generation in February 2017.¹⁴

7 Arijit Barman, "Greenko set to buy into US\$1.5 bn Teesta Project in Sikkim," *The Economic Times*, January 10, 2020.

8 Utpal Bhaskar, "Orix and Teesta Urja deal completed Greenko reaches 7.3 GW operating capacity," *Mint*, March 2, 2021, <https://www.livemint.com/industry/energy/orix-and-teesta-urja-deal-completed-greenko-reaches-7-3-gw-operating-capacity-11614670466425.html>

9 HydroVision International, "Construction to continue at 1,200-MW Teesta-III hydroelectric project," *Hydro Review*, September 14, 2015, <https://www.hydroreview.com/business-finance/construction-to-continue-at-1-200-mw-teesta-iii-hydroelectric-project/>

10 Gregory Poindexter, "Indian government backs US\$1.48 billion 1,200-MW Teesta Stage-III hydroelectric project," *Hydro Review*, August 15, 2015.

11 INR 1 crore is equivalent to INR 10 million.

12 Dilip Kumar Jha, "Teesta-III hydropower project to go on stream from early 2015," *The Business Standard*, June 30, 2014.

13 India Infoline, "REC Share Price REC Ltd.," *India Infoline Finance Limited*, 2018, <https://www.indiaonline.com/company/rural-electrification-corporation-ltd/summary/18075>.

14 Elizabeth Ingram, "India commissions 1,200-MW Teesta Stage III hydropower project in Sikkim," *Hydro Review*, February 20, 2017, <https://www.hydroworld.com/articles/2017/02/india-commissions-1-200-mw-teesta-stage-iii-hydropower-project-in-sikkim.html#gref>

Financing and process issues of the Teesta III HEP

In its long history, the project was marked by contestation among stakeholders with regard to the multiple transactions described above. A Sikkim government note in October 2004 showed that the project implementer was a consortium led by a company called Cosmos Electric Supply, together with Australian company Leighton Engineers and German company Muller and Associates. Later, a 2005 cabinet note proposed to assign 13 hydropower projects to private actors without any competitive bidding. Strangely, the Teesta III project was then entrusted to the Athena India Consortium, made up of Athena India and corporations Andhra Pradesh Generating Company, Larsen & Toubro, PTC India, Infrastructure Leasing & Financial Services Group and other investors. Competitive bidding did not occur, and the state was opaque when it came to changes in private partners.

When TUL entered into an INR 4,560 crore (USD 600 million/EUR 540 million) loan with the Rural Electrification Corporation and other lenders in August 2007, the REC engaged German company M/s. Lahmeyer International as the lenders' independent engineer, despite being a company considered ineligible by the World Bank due to issues of corrupt practices in another project.¹⁵

Gaps in impact assessments

The most concerning process issues regarding Teesta III HEP were related to project impact assessments. A holistic assessment has been lacking; the completed Environmental Impact Assessment failed to address key contextual issues relating to the impacts on ecology, wildlife, flora and fauna. There were no analyses of risks, such as dam breaks, seismic impacts and threats of reduced river flow across the four seasons, in both the upstream and downstream portions of Teesta River.

The environmental clearance for Teesta III, granted to the project in August 2006, is in violation of the environment ministry's own additional stipulations when it approved the 510 MW Teesta Stage V hydroelectric project in 1999. The ministry then declared that no other project in Sikkim would be approved until the carrying capacity study of the Teesta River basin was completed. However, the environment ministry went against its own decision and granted an environmental clearance to Teesta III one year before such a study was completed.

In any case, the resulting 2007 report by the University of Delhi's Centre for Inter-Disciplinary Studies of Mountain & Hill Environment (CISMHE) categorised Sikkim into four different zones. The CISMHE report found that Chungthang village, where Teesta III has been built, with its temperate broadleaf forests, was

¹⁵ Economic Sector Public Sector Undertaking, Comptroller and Auditor General Report No 3 of 2016, "CAG India, 2016, https://cag.gov.in/cag_old/sites/default/files/audit_report_files/Chapter_3_Economic_Sector_PsUs_Sikkim_Report_No_3_of_2016.pdf

actually an area of oversensitive biodiversity. A mega-project such as the Teesta III would unleash irreversible damage, including to the exclusive and endangered species in the area.

But TUL also released its own impact assessment and a management plan in 2007, contradicting the CISMHE report. The TUL-initiated report wrongly claimed that there was no wildlife in the project area and hence that no adverse impact on terrestrial fauna was anticipated. This environmental impact assessment for Teesta III was glaringly inadequate, as, for instance, it did not contain mandatory studies covering all four seasons (especially the winter and monsoon periods).

In December 2008, the national Central Electricity Authority observed that TUL had made serious deviations from the approved project plan. Concerns were raised by civil society organisations to the national Ministry of Environment, Forests, and Climate Change (MoEFCC), which noted that changes adopted by TUL contravened the environmental clearance. Supposedly, any changes to the scope and plan required a fresh project appraisal, which was not sought or conducted by TUL.

Public-private parting

The Teesta III HEP suffered massive cost overruns, with project costs amounting to INR 14,000 crore (USD 1.9 billion/EUR 1.7 billion) by 2017, far beyond initial estimates (see Box 1). The Sikkim earthquake of 2011, which came with flash floods and landslides, destroyed major infrastructure linked to the project. The disaster also delayed the project's implementation.

But the private partners' aversion to profit risks caused a major deadlock in the PPP. In May 2014, TUL called on all stakeholders involved in the project to infuse an additional equity of INR 615 crore (USD 81 million/EUR 72 million), which was generally met with reluctance given the initial project delay and cost escalation. Private actors, who had by then invested nearly USD 425 million (EUR 380 million) through Asian Genco, reconsidered their investment altogether. They initiated arbitration proceedings in Singaporean courts for management control and to recover their funds invested in Asian Genco.¹⁶ Further delays on account of private partners' refusal to subscribe to their committed portion of TUL's equity led to a domino effect in project financing and execution gaps, with construction stalled in July 2014.

The Sikkim government was forced to make a statement that, in the event of a private capital exit, it will buy off 100% equity in the project, despite the fact that Sikkim state was in no position to do so. It had already borrowed heavily beyond the initial INR 800 crore (USD 105 million/EUR 94 million) it had borrowed from

¹⁶ Dev Chatterjee, "Fight over soured deal in Asian Genco," *The Business Standard*, May 22, 2014.

the Power Finance Corporation (PFC) to meet its own capital commitment.¹⁷ Sikkim was eventually forced to raise its capital stake in TUL to 51%, by acquiring private shares. It bought formerly private-held shares without its own valuation of the assets, rather basing the price on the assessment by TUL through a private accounting firm, which resulted in a loss for the Sikkim government (see Box 1).¹⁸ It had to rely on more loans to complete the project.^{19 20} On the other hand, sensing no prospects, Asian Genco and its big American finance backers eventually withdrew from the project.

In 2016, a report by the national state auditor of India summarised the failures of both the private sector and the Sikkim government, which were violations of their own Teesta III deed of agreement. The private sector failed to adhere to their capital commitments to the TUL and the project. On the other hand, the Sikkim government failed in ensuring private sector adherence to their agreement, in assigning the project to a consortium of private developers *without* verifying experience and financial capacity, and in not constituting committees to monitor and address arising issues.²¹ Ultimately, project implementation “suffered”, India’s state auditor admitted (see Box 1).

The Sikkim government’s legal battle for shares in the PPP project

Even before the Sikkim government’s share purchases, the Teesta III PPP had already undermined the local government’s shares in another way. The government had to resort to legal measures against TUL,²² then-led by Athena Consortium, alleging that it had failed to allocate the government share from its 26% stakes in the company.

The project also involved violation of Indian laws on contractual agreements. Under Indian laws, the TUL could be accorded environmental clearances and financing *only if* it is a joint venture company, where state actors have a minimum equity stake of 51%. Below this percentage, a joint venture company cannot

17 Soumik Dutta, “What ails Sikkim’s Teesta hydropower project?” *India Together*, January 7, 2015, <https://indiatogether.org/sikkim-teesta-iii-hydropower-project-irregularities-economy>

18 “Economic Sector Public Sector Undertaking, Comptroller and Auditor General Report No 3 of 2016,” Supreme Audit Institution of India, 2016.

19 Shri Pujari, Dr. M.K. Iyer, and Shri Jha, “Order of the CENTRAL ELECTRICITY REGULATORY COMMISSION, NEW DELHI on Petition No. 249/GT/2016,” Central Electricity Regulatory Commission, March 25, 2019, <https://cercind.gov.in/2019/orders/249-GT-2016.pdf>

20 “Sikkim- 1200 MW Teesta hydropower plant Commissioned,” *Arunachal 24*, February 19, 2017, <https://arunachal24.in/sikkim-1200-mw-teesta-hydropower-plant-commissioned/>

21 “Economic Sector Public Sector Undertaking, Comptroller and Auditor General Report No 3 of 2016,” Supreme Audit Institution of India, 2016.

22 Soumik Dutta, “Sikkim Government Not to Sell Stake in Teesta Urja Ltd,” *The Asian Chronicle*, January 25, 2020, <https://theasianchronicle.com/sikkim-government-not-to-sell-stake-in-teesta-urja-ltd/>

be awarded a Memorandum of Understanding for a hydropower project above 100 MW.²³

The Teesta III PPP case clearly contradicted such national regulations. The decisive turn happened in a court of law. In 2012, the Sikkim capital's district judge claimed that the Sikkim government does not own even a single share in TUL regarding the Teesta III Project²⁴. The order cited that the private actors of TUL have "refused to execute the Equity Share Agreement" through which the Sikkim government would be given its legal stake, with TUL wanting to deprive the latter of its "vested rights". This represents a case of private corporations embarking on measures to undermine the interest of public entities in PPP projects.

Box 1. Teesta III: a failed PPP project?

The Teesta III project suffered from several deficiencies, such as (1) the inability to address the social and environmental impacts of the project, (2) massive cost overruns and losses, (3) gaps in infrastructure for transmission lines, (4) the failure of states to purchase power per agreed Power Purchasing Agreements (PPA), and (5) the resulting indebtedness of Sikkim.

The Teesta III project was scheduled to be commissioned by September 2012 at an estimated project cost of INR 5,700 crore (USD 750 million/EUR 670 million) at 2005 prices. As of 2016, the initial project costs had gone over budget by an additional INR 8,300 crore (USD 1 billion/EUR 900 million). By then, the project had already been delayed by four years. At least USD 1.4 billion (EUR 1.3 billion) has been invested by financiers, including Asian Genco and private equity funds.²⁵

Aside from the 2011 Sikkim earthquake, which was a major cause of project delays, further delays had multiple other causes, including TUL's financial constraints, escalation in project costs and the private sector actors' failure to subscribe to their committed portion of capital, specifically for the second overrun of project costs. As a result, the TUL faced financial constraints and further delays. The failure of private sector and state actors defeated the primary objective of executing the project through a PPP mode. Ultimately, the Sikkim government had to take over the project by infusing more equity. It acquired TUL equity shares at a more expensive rate of INR 10 (USD 0.13/EUR 0.12) per share, previously held by the private consortium at INR 9 (USD 0.12/EUR 0.11).

23 Asif Syed and Soumik Dutta, "Rs 20,000 crore Hydropower Scam in Sikkim; State Govt in Cahoots with Pvt Players," *The Current News*, May 10, 2012, <https://currentnews.in/20000-crore-hydropower-scam-in-sikkim-state-govt-complicit>

24 Asif Syed and Soumik Dutta, "Rs 20,000 crore Hydropower Scam in Sikkim; State Govt in Cahoots with Pvt Players," *The Current News*, May 10, 2012, <https://currentnews.in/20000-crore-hydropower-scam-in-sikkim-state-govt-complicit>

25 Rajesh Kumar Singh, Anindya Upadhyay, and Debjit Chakraborty, "Govt clears Rs 9,000 crore Teesta hydropower project in green energy push," *Live Mint*, 2015.

With rising project expense came more prohibitive costs of power, leading to some Indian states being averse to buying the generated power. The All India Power Engineers Federation deems the Teesta III project a failed PPP, noting that TUL was forced to sell power at half the price in its own PPA. It eventually sold electricity below INR 3 per unit in the open market after Punjab, Haryana, Rajasthan and Uttar Pradesh states refused to buy electricity at the PPA-contracted rate of INR 6 (USD 0.08/EUR 0.07).²⁶

The project underperformed in its supposed energy generation objectives. Reports by the Ministry of Power and Central Electricity Authority India indicated that the project had suffered an energy loss of over 1.4 billion units from June to September 2017. The Sikkim government failed to commission 400 kV transmission lines from the Teesta III to the substation at Kishanganj in Bihar state, causing severe transmission bottlenecks in Sikkim, with the loss of over 500 MW of power and INR 6 crore (USD 790,000/EUR 706,000) per day, as of July 2018.²⁷ The power evacuation system for the project, a 215-kilometre transmission line²⁸ from Teesta III HEP to Kishanganj Pooling Station in Bihar state, was implemented by Teesta Valley Power Transmission Limited. It is a joint venture that includes the TUL, with a majority 74% share, and the Power Grid Corporation of India Limited (PGCIL), which is partly funded by the World Bank, with a 26% share. The delays in the construction of the transmission line also affected the evacuation of the power generated from the Teesta III project.

Under national regulations, the project has to pass a performance test, with the power station as a whole having to prove its declared capacity of 1,200 MW for 12 hours. However, because of the transmission line gaps, the Teesta III station failed the full capacity test of 1,200 MW, as admitted by the TUL in June 2017. In August 2017, the High Court of Sikkim directed the head of the project to defend, in court, the reasons for not closing the project amid gaps in compliance to safety guidelines.²⁹

The Teesta III project is being operated at a loss, with a history of high costs and delays, the repayment of borrowing, and more debts. In the financial year 2018, the TUL reported a net loss of INR 700 crore (USD 92 million/EUR 82 million) on an operating income of INR 1,300 crore (USD 172 million/EUR 154 million), even greater than its 2017 net loss of INR 58 crore (USD 11 million/EUR 9.8 million) on an income of INR 45 crore (USD 8.7 million/EUR 7.8 million).³⁰

26 The Economic Times, "Teesta III – A failed PPP Project, Alleges AIPEF," *The Economic Times Industry*, June 25, 2017.

27 The Economic Times, "Delay in Teesta III line causes Rs 6 cr loss per day: AIPEF," *The Economic Times Industry*, June 19, 2018.

28 "Power Evacuation System," Government of Sikkim, <https://sikkim.gov.in/departments/energy-and-power-department/power-evacuation-system>

29 Sikkim Express, "High Court directs Teesta-III HEP to explain why the project be not closed for failing to comply with public safety guidelines," Facebook, August 23, 2017, <https://www.facebook.com/sikkimexpress/posts/high-court-directs-teesta-iii-hep-to-explain-why-the-project-be-not-closed-for-f/1242746375871372/>

30 "Teesta Urja Limited," International Credit Rating Agency, 2019, <https://www.icra.in/Rationale/ShowRationaleReport/?Id=76493>

Sikkim: sinking in debt

The government of Sikkim has also been indebted due to the Teesta III project. The total project cost of INR 14,000 crore (USD 1.8 billion/EUR 1.6 billion) is more than double the annual budget of Sikkim for 2016–2017, which stood at INR 5,800 crore (USD 765 million/EUR 685 million),³¹ and is still over the Sikkim budget for 2021–2022, which is INR 10,000 crore (USD 1.3 billion/EUR 1.2 billion).

The government was compelled to borrow substantial amounts to ensure the functioning of the project, with Sikkim's outstanding debts worth INR 16,200 crore (USD 2 Billion/EUR 1.8 billion) as of the end of March 2019. The ratio of Sikkim's interest payments to both revenue expenditures and receipts has been gradually increasing in the periods 2014–2015 and 2016–2017, reflecting the increases in debt servicing due to the project.³²

With the local government's debts, each resident owes INR 2.45 lakh³³ (USD 3,200/EUR 2,900) to Sikkim's lenders.³⁴ In October 2021, the Sikkim government resorted to austerity measures to reverse the worsening economic situation for the financial year 2021–2022, such as a mandatory 50% cut in all expenditures, except salaries, pensions, interest payments, debt repayments and purchases for centrally sponsored initiatives.³⁵

The Teesta PPP and “the public”: people's rights, the ecology and community responses

Aside from the issues with regard to financing, project processes and even realising its supposed energy objectives, the Teesta III HEP had a number of multifaceted impacts on the indigenous Lepcha people of Sikkim, and also on the biodiversity of Teesta riverine ecosystem. Communities faced misinformation, incomplete or absent impact assessments, or the disregard of these studies' findings, as well as a denial of information and rights violations.

Violation of free, prior and informed consent

Indigenous peoples' rights to self-determination over their land and resources have been violated in various ways. The construction of the Teesta III PPP has

31 “Speech of Chief Minister/Finance Minister on Budget 2016–2017,” Government of Sikkim, 2016.

32 Department of Commerce, “Report on State Finances of Sikkim Submitted to the 15th Finance Commission,” Sikkim University, 2019.

33 A lakh is equivalent to one hundred thousand.

34 Press Trust of India, “Sikkim has outstanding loan of over Rs 16,207 crore,” *The Business Standard*, July 30, 2019.

35 “Sikkim: Finance dept issues austerity measures to address economic fallout for financial year 2021–22,” *InsideNE*, October 1, 2021, <https://www.insidene.com/sikkim-finance-dept-issues-austerity-measures/>

violated the Indian Constitution's Article 371F on Sikkim state, which supposedly provides special protection and rights to the Lepcha people over their ancestral land (called 'Dzongu'). This includes the right to be consulted regarding matters that affect their communities.

The indigenous Lepcha people were denied the right to participate in project decision-making. A violation of their right to free, prior and informed consent (FPIC) on all development activities prevented them from being able to exercise sovereignty over their land, rivers, resources and future. Undemocratic processes include the public hearing conducted by the Sikkim Pollution Control Board on Teesta III at Chungtang village, which was marked by a denial of information³⁶ and procedural issues ranging from failures to issue notices for hearings to false assurances and even threats, intimidations and trumped-up charges against affected communities; furthermore, there was also a failure to conduct holistic and participatory impact assessments.

Affected citizens raised the issues arising from the superficial impact assessments. They issued a legal notice challenging the Sikkim Pollution Control Board public hearings and sought to declare the hearings null and void.³⁷ But the project's proponents continue to deny previous studies on impacts and insist on spreading misinformation that the project will not cause displacement³⁸ or negatively affect Chungtang. In addition, the impact of the rising level of waters in Lachen Chu and Lachung Chu has not been thoroughly studied. Even without the dam reservoir, flooding is not new in Chungtang village due to glacial lake outbursts. Neither the public hearing nor the report of the public hearing mentions the attempts of the project proponents to seek carbon credits from the CDM of the UNFCCC.

Dam(ned) community

Sikkim, along with India's northeast, is one of the country's regions most vulnerable to earthquakes.³⁹ The national Ministry of Power cleared the project in 2006, despite high seismic risks. Interestingly, the project only refers to seismicity with respect to the dam structure, but not of geological hazards from hydroelectric projects. Professor Jeta Sankrityayan, a former member of West Bengal's State

36 Jiten Yumnam, "Controversies of 1200 MW Teesta III HEP in Sikkim," *Centre for Financial Accountability*, November 9, 2019, <https://www.cenfa.org/controversies-of-1200-mw-teesta-iii-hep-in-sikkim/>

37 Affected Citizens of Teesta (ACT), "Environment Impact Assessment," ACT Sikkim, <http://www.actsikkim.com/eia.html>

38 Purkayastha Subrata, "Hydro Power Development and the Lepchas: A case study of the Dzongu in Sikkim, India," *International Research Journal of Social Sciences* 2 (8), <http://www.isca.in/IJSS/Archive/v2/i8/4.ISCA-IRJSS-2013-111.pdf>

39 Ankur Kumar, "Criteria for earthquake resistant design of structures: General provisions and buildings," Bureau of Indian Standards (BIS), IS 1893:2002 (Part I), 2002.

Planning Board, has opined that the presence of multiple dams on the river Teesta and its tributaries could worsen earthquake impacts.⁴⁰



Figure 3. Landslides in Chungthang (Source: CRA-Manipur)

Prior to the 2011 Sikkim earthquake, tunnel and road construction had been creating cracks and landslides in fragile land, drying up water sources, harming agriculture, and causing deforestation. Road construction resulted in swathes of trees being cut down to connect the tunnels. Villagers faced similar situations in Chungthang, Pegong and Shipgyer, among others.

Chungthang village, the site of Teesta III HEP, has been at the centre of seismic dangers. It suffered immense destruction during the 2011 Sikkim earthquake. Several workers lost their lives, and many were injured, as several tunnels collapsed.⁴¹ The disaster substantiated communities' concerns about the irrationality of building large dams in zones of high seismic activity.

⁴⁰ Hindustan Times Correspondent, "Sikkim quake may have been induced by dams across Teesta," *Hindustan Times*, September 21, 2011, <https://www.hindustantimes.com/india/sikkim-quake-may-have-been-induced-by-dams-across-teesta/story-AJmqnbW8tiYruM8VmxHzOJ.html>

⁴¹ "Workers at Sikkim power unit killed by quake landslides," *BBC News*, September 21, 2011, <https://www.bbc.com/news/world-south-asia-15000735>

In 2010, a year before the Sikkim earthquake, India's Mines and Geology Department already cited signs of an unstable project site.⁴² It attributed blasting activity, with its use of explosives, as the cause of the damages to houses in Chungthang. In the same year, the North Sikkim district collector directed TUL to pay INR 32 lakh (USD 40,000/EUR 36,000) for damages to 183 houses and structures. But the promise of compensation remains unfulfilled, and is an issue appearing in cases filed by local leaders at the Sikkim High Court as late as 2017.⁴³

Even after dam construction, Chungthang residents are still alarmed by tremors that crack their walls and weaken the foundations of their homes, such as when the Teesta dam reservoir periodically releases water to dispose sediment. Due to their fears, many Chungthang residents have tried to migrate from their village. While the rich can afford relocating themselves, poor families are forced to stay.

Without addressing the risks of outbursts in the Teesta river basin's 313 glacial lakes, the destructive risks of possible downstream flooding are shoved under the rug.⁴⁴ In the case of a glacial lake outburst, flooding can overflow the reservoir in Chungthang Village, causing massive damage to the downstream areas and communities around the dam.⁴⁵ For instance, the incidence of heavy rains in the upper reaches of the Teesta River in June 2019 forced the Teesta III project management to release 600 cubic metres of water per second from the dam site. The water washed away the NHPC Guest House, as well as a stretch of road along the Teesta River. Landslides struck the operational 500 MW Teesta V dam site. The Mantam foot suspension bridge in Upper Dzongu collapsed, cutting off villages.⁴⁶

In addition, residents of Chungthang have experienced water seepage from the dam reservoir, along the Lachung and Lachen River, into their village, which erodes the soil on their farms. Waste and sewage in the dam reservoir have also become a health hazard. Villagers cite improper maintenance to outright failure to treat the reservoir rim around the banks in Chungthang as the major causes of the seepage, which have left the reservoir rim broken and crumbling in many locations. Locals claim that contracted companies were not committed to protect Chungthang in the long run, and have included the grievance in their complaint filed to the Sikkim High Court in 2017.⁴⁷

42 Kanchi Kohli, "Inducing Vulnerabilities in a Fragile Landscape," *Economic and Political Weekly*, December 2011, http://www.actsikkim.com/docs/Kohli_Inducing_Vulnerabilities.pdf

43 Bijoy Gurung, "Teesta-III project PIL disposed of after compensation and other grievances addressed," *The Sikkim Express*, September 9, 2021, <http://sikkimexpress.com/news-details/teesta-iii-project-pil-disposed-of-after-compensation-and-other-grievances-addressed>

44 The Free Library, "Testing times for the Teesta," *SyndiGate Media Inc.*, 2004, <https://www.thefreelibrary.com/Testing+times+for+Teesta.-a0424043162>

45 Tom Clement, "Chungthang, Sikkim: A New Dam's Potential Impact," *The Pulitzer Center*, September 3, 2014, <https://pulitzercenter.org/stories/chungthang-sikkim-new-dams-potential-impact>

46 Ongmu Dichen, "Sikkim cloudburst: Teesta water levels recede, but alert still on," *The East Mojo*, June 18, 2019, <https://www.eastmojo.com/sikkim/2019/06/18/sikkim-cloudburst-teesta-water-levels-recede-but-alert-still-on/>

47 Tseten Lepcha, "Public Interest Litigation to the High Court of Sikkim field," WP(PIL) No.16 of 2017.

Taking away the land and the river: impacts on economic rights

The Teesta III HEP undermined the livelihoods and resources of the indigenous people in Sikkim. Before the dam, communities engaged heavily in agriculture and horticulture, where cultivating cardamom was a major economic source. But the dam acquired and damaged more than 100 hectares of land, including forest areas, in Chungthang and Theng villages.

Once people lost their land, the cultivation of cardamom was significantly affected. Women, who were primarily responsible for cultivation, and who also collected seasonable vegetables and herbs from the forests, lost access to these resources. Road construction and tunnelling also release dust, which harms crop growth. Production has been reduced to almost nothing for most residents, in contrast to previous earnings of around INR 3 lakhs (USD 4,500/EUR 4,000) annually. Land acquisition for dam-related infrastructure, such as for roads and camps for security forces protecting company assets, has led to additional pressures on the resources in Chungthang and the neighbouring areas. Ongoing plans to widen roads will intensify the loss of land for the villagers.



Figure 4. A warning sign near the Teesta III site (Source: CRA-Manipur)

From the Lachung, Lachen, and Teesta Rivers, villagers also previously fished, collected sand and stone to be sold, and found firewood for their own needs. Communities have relied on the Teesta River for generations. It has been particularly significant as a source of diverse fish species, many of which are migratory, for consumption and for Lepcha indigenous ceremonies. The riverbanks were also a site for Lepcha cultural practices, such as ceremonies to seek blessings from ancestral deities in the rivers and mountains.

With the hydropower PPP, the project implementer TUL prohibited local people from accessing the dam reservoir, the downstream areas of the Teesta River and adjacent forests. The Teesta III project blocked fish migration, leading to a loss of access to these resources.

The dam has severed the relationship of the people with the Teesta River (see Box 2), and imposed restrictions have eroded the previous roles of Lepcha women in economic life. Dangers such as flash floods are potential hazards for people who venture into the river, as the reservoir periodically releases water to meet peak power demands.

Box 2. People's voices: on losing access to the Teesta River

Lhendup Lepcha, formerly an official of the local government unit in Chungthang, lamented that the commissioning of the dam and the companies' imposition of a myriad of restrictions severed the affected people's physical and cultural interdependence with their land, rivers, forests and resources. The TUL installed cameras, floodlights and observer posts along the river. By barring access to their river, he said, the companies wrested control of Chungthang and the community's life, preventing people from taking care of their land.

Outside the areas already prohibited by the TUL, locals explain that all land covering 27 feet of the Teesta riverbank were either already taken or earmarked for acquisition.

Mayalmit Lepcha, of the Sikkim Indigenous Peoples Association, shared a similar concern to Lhendup's. She said that the Teesta III and several other dams treat indigenous peoples' land, rivers and forests only as means for the ends of the project. In Lepcha culture, rivers and forests are significant as dwellings of ancestral deities; these sites, therefore, are key to their collective life and customs. Disturbing the flow of the rivers through dams, for shaman Tsering Lepcha, anger their ancestral deities and are associated with disaster.

The Teesta III environmental impact assessment falsely claimed that "no monuments of cultural, religious, historical [or] archaeological importance" were reported in the project area.

Community members also explain that the TUL failed to fulfil its commitment to provide employment and free power for affected communities. Few of the affected indigenous people were employed in relation to the dam, and those who were worked in low-paying jobs. In contrast, key decision-making posts for the project are all manned by officials from outside the community. Free power has been absent for the locals, with the community even experiencing occasional blackouts.

The private companies involved, together with the Sikkim government, have remained unaccountable for the rights violations involving the Lepcha people and the destruction of the fragile environment. Both the Sikkim government and national government of India facilitated the conditions for, and the implementation of, the Teesta III project, despite the environmental and social risks. There are concerns that the Sikkim government has collaborated with private parties to pursue unsustainable projects. In mid-2012, the Sikkim High Court recognised that the government had bent rules for private actors, and committed “acts of omission, commission and collusion” with vested corporate interests to grant the project to TUL.⁴⁸

Other socio-cultural impacts to indigenous life

The Teesta III HEP has changed the indigenous peoples’ culture in other ways, aside from those related to the essential place of rivers in their way of life. Social division, even within families, has resulted from divergences between those who once “favoured” the project due to the claimed benefits, and those who “rejected” it outright. The refusal by both Sikkim and national government, along with the TUL, to acknowledge the social and environmental concerns raised by affected communities, coupled with misinformation on impacts, has accentuated the social tensions.

Once communities lost their land, rivers and resources, they shifted to a more monetary-oriented and consumerist lifestyle. Some received more than INR 2 crore (USD 260,000/EUR 233,000) to supposedly compensate for the lost land, while others from INR 5 to 10 lakhs (USD 7,500/EUR 6,700 to USD 14,500/EUR 13,000). Locals explain that only around 10% of those who received compensation can establish new livelihoods. Moreover, the villagers who subsequently relied on new businesses that fed and supplied goods to the construction workers were later left behind after the dam had been built.

⁴⁸ Soumik Dutta, “Sikkim High Court takes suo moto cognizance of Current report,” *Current News*, June 12, 2012, https://archive.internationalrivers.org/sites/default/files/attached-files/sikkim_corruptioninhydropower_62012.pdf

Community responses

The indigenous Lepcha people have been staging a series of protests to protect their livelihoods and the biodiversity of the region. The Affected Citizens of Teesta (ACT) have also been sustaining campaigns, which have included the filing of cases in the Indian Supreme Court, to protect the people and their environment from the harmful effects of the construction of such large power projects in the region. ACT also issued a legal notice challenging undemocratic government public hearings, seeking to declare these null and void. In the public hearings, indigenous people from the area strongly protested against the construction of the project and also submitted written concerns.

Amid the significant socio-economic and environmental impacts of dams on the Lepcha people of Sikkim, most of whom reside in the Dzongu Reserve area, the communities voiced concerns during the Teesta III public hearings that the dam developer did not reveal to the communities the intention to seek carbon credits through emissions reduction claims.

Dicky Lepcha, of Chungthang Village, said that the Teesta III project caused recurring tremors and water seepage from the dam reservoir, resulting in fear among residents. The project authorities should fulfil their promise to provide employment and free power, she said.

On the other hand, Tseten Lepcha, also from Chungthang Village, recounted that the blasting done to construct tunnels and roads led to cracks and weakened foundations of the houses in Chungthang and neighbouring villages. Complaints were filed at the Sikkim High Court against the poor quality of reservoir rim treatment and the accumulation of waste.

Gyatso Lepcha, Secretary of Affected Citizens of Teesta (ACT), explained that the Teesta III project has added to the fragility of the already fragile Himalayas. The project, he said, has intensified landslides, curtailed the free flow of the Teesta River and further disturbed the ecology in the region.

Currently, the Sikkim government is acquiring more land for another dam in the region, the Teesta IV, and is said to be pressuring communities to accept the project. Ugen Palzor, of Hee Gyathang Village, says that it is important for the communities to assert their voices. Article 371 of the Constitution of India accords special provision for the Lepcha people, he said, but this rule has been undermined by plans to build dams and related infrastructure in Dzongu.

Nothing can be done without consulting us and gaining our consent. The plan to build Teesta IV is illegal, he asserted, amid companies' push to disregard such provisions. The majority of the Lepcha opposes the project, but the government has been trying to divide the communities, he concluded.

Conclusions and recommendations

The Sikkim government has pursued several PPP projects in the energy sector, primarily in dam building. However, most of these energy PPP projects bring adverse social and environment impacts to communities, besides being unable to deliver their planned energy outcomes. As one of the most controversial PPP projects in Sikkim and across northeastern India, the Teesta III project has been an eye-opener with regard to understanding the logic, intention, modus operandi and fallacies, as well as the negative socio-economic, cultural and ecological consequences, of India's renewed hydropower push.

Box 3. Overall impacts of the “Teestas”

The impacts of the Teesta III are not isolated. There is an ongoing process to build another Teesta River dam, the 520 MW Teesta IV hydroelectric project, by utilising the waters of Teesta III. There are major concerns among the Lepcha people that the construction of Teesta IV will further destroy the fragile biodiversity of Dzongu and worsen the violations of the Lepcha peoples' rights over their land and resources. Lepcha community organizations have been resisting the construction of Teesta IV due to the violations, including arbitrary land acquisition actions by project authorities and their possible impacts.

The Teesta IV Hydroelectric Project would affect at least 16 villages, with most being part of the agricultural production belt of North Sikkim. The dam would occupy Hee Gyathang Village, and two tunnels are to be constructed under the villages of Hee Gyathang and Shandong in Dzongu, to take water towards the power station. Another village, Lingdong, suffered a huge landslide in 2021, showing the fragility of the land that will be made increasingly unstable by the Teesta IV HEP. In addition, the proposed construction of the siltation tunnel will pass under a lake that the Lepcha consider of sacred heritage, the Tung Kyong Dho. The lake is also a area of biodiversity.

The cumulative impact of the existing Teesta III and V dams, and the proposed Teesta IV and VI dams, will be colossal for the affected indigenous people and on the biodiversity of the Dzongu, the sacred land of the Lepcha people. Flash floods and landslides due to Teesta III could also render the Teesta IV unviable.

Dubbed a failed public-private partnership, Teesta III resulted in delays, cost over-run, extensive social and environment impacts, and a failure to meet its objectives.

As a PPP initiative, the Teesta III project involved a complex financing process of private equity funds and discreet financing by the international finance institutions (IFIs). Due to failures in covering project cost overruns through the PPP agreement, the Sikkim government was compelled to borrow substantial amounts of

resources from banks and international financial institutions. Debt burdens later led to austerity measures, showing that Teesta III is actually creating liabilities and narrowing fiscal spaces.

The profit motive and the lack of accountability of big private sector actors were evident in the willingness to invest for high returns and shirk from responsibility when risks arose, exerting pressure on the state instead to recover losses, including through arbitration. The “partnership” essentially broke down. The drive of private capital prevailed when it abandoned initial investment amid dire profit prospects. Losses and risks were borne and guaranteed by state actors to cover for the troubles left by the private parties.

The Teesta III case also raises the concern over mega-PPP projects’ supposed benefits to the people. The colossal investment for a single project, totalling up to almost USD 2 billion (EUR 1.8 billion), could have been better utilised to promote local livelihoods, employment and public services. Cost overruns from earthquakes and the ecological impacts question the overall viability of dams, especially with regard to fragile lands and ecosystems such as those in the Himalayas. The green energy narrative for carbon credits was a clear example of a false projection made in the name of profits, but at the cost of sustainability. At its worst, the PPP project was merely a pretext to grab resources for the benefit of corporate actors.

Rivers were turned into engines for economic growth, to the detriment of communities relying on them for economic and cultural survival. Sikkim’s rivers and land appear to have been bought and sold repeatedly without due consideration of the affected indigenous people whose lives are intertwined with the local ecosystems. By building multiple dams, state actors and their private partners are destroying the Teesta River and the biodiverse zone of Dzongu, the latter being a part of the Kanchenjunga Biosphere Reserve, a world heritage site.

Teesta III implementation also indicates the lack of regulatory and accountability mechanisms and monitoring. It raises many questions, especially regarding the challenges associated with selecting private partners, and in ensuring accountability of the commercial banks, construction companies, private equity funds and IFIs in the project and its impacts.

Instead, state actors should ensure that any infrastructure project has clear and genuine processes to recognise the rights of indigenous people, especially their rights to self-determination over their land and resources, and their rights to seek free, prior and informed consent over their land as their sources of livelihood, culture and tradition. A rights-based approach remains fundamental. Development actors — especially states, private actors and IFIs — need to conform with effective development cooperation principles of democratic ownership, inclusive partnerships, a focus on results, transparency and accountability.

In any investment and infrastructure policy, there has to be a clear process and mechanism to hold the private financiers and the corporations involved

accountable, with the aim of bringing back stronger public regulation. The state should have clear provisions to ensure that local authorities are not overburdened with debt. In the current context of ballooning debt in the global South, international lenders should consider cancelling debts, including those arising from PPPs, to ease fiscal space.









At the national level, the special provisions accorded for the Lepcha indigenous people in Sikkim, under Article 371 (F) of the Constitution of India, should be fully respected and upheld to avoid further damage to their land, livelihoods and cultural practices. A cumulative impact assessment of the existing and planned Teesta dams is critical in order to move towards protecting the Teesta River, instead of blindly pursuing additional unsustainable projects. Heeding the communities' call to "let the rivers flow free for all generations" means to rethink the construction of large dams, such as through PPPs, in India's northeast.

Sikkim state is already a power surplus state, even without the Teesta III project. Five operating mega-dams produce close to 2,000 MW, which is more than ample for the peak power demand of less than 200 MW in 2020. The state hosts various micro- and mini-hydroelectric projects, and it could potentially sustain its power needs only through such smaller energy sources that substantially minimise impacts on people and the environment. Adding another colossal project, such as Teesta III and Teesta IV, that puts additional pressure on the land and the people could simply be avoided.

India's PPP policy of 2011, and other policies promoting these arrangements, should also be re-examined in terms of the extent to which it could integrate the dimension of community rights and corporate accountability. Furthermore, development processes need larger shifts towards democratic decision-making, where community organisations play significant roles in shaping the trajectories of infrastructure priorities, social services and public investment. ■

OVERVIEW SUMMARY PAPER AND REGIONAL REPORTS

For access to the summary paper and regional reports please scan the QR codes.

Summary paper		PPPs in energy Infrastructure: Regional experiences in light of the global energy crisis	
1	Cameroon	Experiences from Cameroon: The Kribi Power Station	
2	Ghana	Experiences from Ghana: The Sankofa Gas Project	
4	Indonesia	Experiences from Indonesia: The Central Java Power Plant	
5	Kenya	Experiences from Kenya: The Kipeto Wind Power Project	
6	Peru	Experiences from Peru: The Moyobamba-Iquitos Transmission Line Project and Associated Substations in the Peruvian Amazon	
7	The Philippines	Experiences from The Philippines: The Malampaya Deep Water Gas-to-Power Project	
8	Zimbabwe	Experiences from Zimbabwe: The Kariba South Expansion Project	

Author information

This report was produced by IBON International and The Centre for Research and Advocacy Manipur.

IBON International is a Southern-based organisation working with social movements and civil society organisations, to develop peoples' knowledge and capacities. It promotes capacity development for peoples and their organisations to exercise their civil, political, economic, social, and cultural rights, and meaningfully engage with other actors for the realisation of a people-powered democracy.

The Centre for Research and Advocacy Manipur is a human rights-based Indigenous Peoples' organisation, established in 2004, to promote the sustainable development and Indigenous Peoples rights in North East India, primarily in Manipur State. The Centre provides quality and informed support to grassroots and community-based organizations, valuing the roles of women and the youth. The Centre promotes Indigenous Peoples' self-determination over their land, resources, territories, and development, and strengthens the solidarity of Indigenous and tribal peoples against all forms of colonisation and State repression.

Disclaimer

This report represents the opinions and views of the authors, and is the product of their research. They do not necessarily reflect the official policy or position of the publishers.