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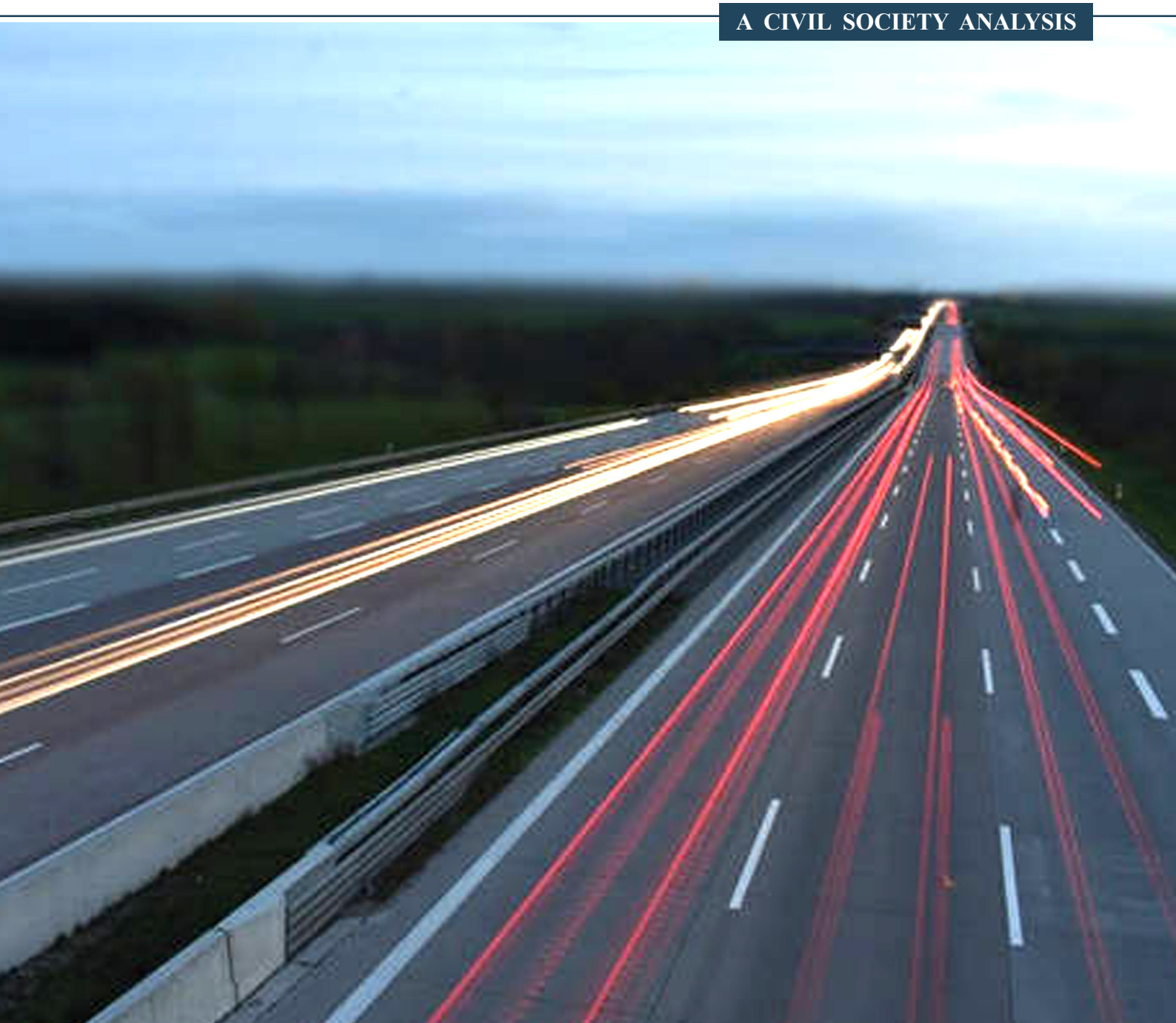
INDIA'S INFRASTRUCTURE PROJECTS IN GLOBAL SOUTH

A CIVIL SOCIETY ANALYSIS



PREFACE

India's role in global south is steadily increasing because of its growing economic stature and proactiveness displayed in Asian geopolitics. As a front runner and champion of global south cooperation it has stood firmly entrenched with principled stances that give huge importance to dignity, sovereignty, and value-based partnerships ever since the non-alignment movement, post 1990 neoliberalism and 2009 geo-polity. Moreover, India's multilateral and bilateral MoU's and communique's have always underlined the need for development-oriented growth patterns in projects, financing, and cooperation. Importantly, Indian governments have been welcoming civil society to play the role of a policy-developer in its international relations which have helped in formation of various development cooperation platforms and forums. This has signaled a policy shift towards more openness and transparency and willingness for partnership. Yet there are gaps which can be easily rectified if civil society organizations are accorded a definite space to provide policy inputs and suggestions for improving cooperation patterns. India's development cooperation is built on three legs-LOC, Grants-In-Aid and ITEC. However many of the projects are bilateral MOUs. Many mega infrastructure projects are being developed as part of its commercial, security and diplomatic objectives. These projects are large scale which are definite to carry environmental, social and economical ramifications where they are based. Evidence's from around the globe are available to attest that large scale infrastructure has a direct correlation in disturbing land, water, air of a region. It is on this note, that as civil society organizations, we want our government to create infrastructure, which is environmentally compatible, ecologically sensitive and economically viable. The idea is to generate methods and processes that are built within our systems so that the positives accruing from projects provide maximum assistance to people and the planet. We are also suggesting our government to make us a partner in its various development cooperation which will effectively lead to socially impactful projects. This will not only aid in the quality of infrastructure creation but aid in developing and maturing our development cooperation objectives. Importantly, they will set a benchmark of India's principles in development cooperation and will be an exemplar for other countries to follow. Therefore, the study is tuned to provide a constructive suggestion to the government and not a critical analysis. For the writing of this report, I thank Arjun Phillips, Program Manager and HBS for financially supporting it. We are optimistic that suggestions from the report will be actively up the government and motivate civil society working on various development strands to be part of India's development cooperation projects through their interaction in established platforms.

Thank you,

Harsh Jaitli,
CEO,VANI

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Objective of the Study

The objective of this study is to conduct civil society analysis of various infrastructure projects of **Indian government** *supported* under Lines of Credit (LOC), Grants-In-Aids and bilateral MOU's in global south countries. A total of 5 case studies will be used in this report.

Defining Infrastructure

For the purposes of this research infrastructure is the primary area of investigation upon which challenges will be documented, remedies proposed, and conclusions inferred. Infrastructure **referred** above *includes* physical public goods essential to enable, sustain, or enhance societal living conditions" and maintain the surrounding environment. The study will investigate and review the project cycle of mega-infrastructure which will come to include- roads, highways, dams, hydro-electric power stations, water supplies, energy supply systems, solar plants, food processing units developed by India in these countries.

Purpose of the research

Almost all infrastructure creation has resulted in population displacement, changing topographies, affecting local livelihoods and altered climate conditions. An ever-increasing concern being advanced by civil society organizations and environmentalists are the negative spillovers that dovetail infrastructure development in specific geographies due to ineffective measures and safeguards in containing them through substantive policy actions. Many infrastructure projects, while establish protocols for projects appraisal, preliminary assessments and EIA procedures fail to rigorously follow them. Secondly, the absence of impact assessment and engagement with civil society organizations in inputting grievances and concerns in project development stages and involvement during and at the end of project completion convey that primary objective of this infrastructure development, which is providing multiplier economic advantage, socio-development upliftment in terms of access to services such as health, water facilities, education and electricity are not rigorously followed up. To ensure that objectives of India's infrastructure development cooperation, do not remain vacuous and perfunctory which consequentially lead to more damage than good-the research is an attempt to consolidate challenges and provide a socio-development appraisal which evaluates earmarked projects To enhance the value of the research, the focus will also be on appraisal of already established development projects, those which are under construction phases and those whose MOU's have been bilaterally entered into force but are yet to initiate.

Methodology

The research follows secondary literature review from project countries such as media reports, research papers etc. The research uses existing indicators of UN, OECD, QII Parameters, South-South Cooperation principles and other agencies via literature exploration. It seeks to conduct a brief micro. Meso and Macro analysis of projects which will be helpful for understanding the direct impacts of the projects.

Overview of India's infrastructure projects in its development cooperation

India's Development Cooperation

India's development cooperation can be characterized by its human-centric approach which is based on Respect, Diversity, Care for the future, and Sustainable development. For India, its foremost principle in cooperation is respecting development, fulfilling their development priorities and plug supply gaps[1]. Indian model of developmental cooperation is comprehensive and involves multiple instruments including grant-in-aid, line of credit and capacity building and technical assistance. Depending on the priorities of partner countries, India's development cooperation ranges from commerce to culture, energy to engineering, health to housing, IT to infrastructure, sports to science, disaster relief and humanitarian assistance to restoration and preservation of cultural and heritage assets[2].India's diversification of its development cooperation is provided as the following

India's total concessional development finance reached USD 1.8 billion in 2015, compared to ,USD 1.4 billion in 2014 (OECD estimates based on Government of India, 2015a, 2015b). India channelled USD 106 million (6% of its concessional development finance) through multilateral organisations in 2015, compared to USD 141 million in 2014.The DPA within the Ministry of External Affairs co-ordinates India's bilateral development co-operation. It manages grants and the Indian Technical & Economic Cooperation Programme. The Ministry of Finance manages multilateral assistance and exercises administrative oversight over the concessional loans and lines of credit provided by the Exim Bank.

India's priority partner countries are its neighbours in South Asia. Between 2009 and 2015, Bhutan received 61% of India's bilateral development co-operation, followed by Afghanistan (9%), Sri Lanka (7%), Nepal (5%), Bangladesh (3%), Myanmar (2%) and the Maldives (2%). Recently, co-operation with Africa has increased. The main sectors of India's development co-operation are health, education, energy (hydropower) and information technology[3].The country's overseas development assistance increased substantially in the 1990s and significant changes came in 2004 when India launched the second phase of line of credit (LOC) programme to extend concessional loans to partner countries in Asia and Africa through the Export Import Bank of India (EXIM). The LOCs are provided to developing countries on the recommendations of the Ministry of External Affairs (MEA), with over 300 LOCs worth US$ 30.66 billion extended to 64 countries until 2020. About half this amount, US$ 15.90 billion, has been extended to Asian countries, with the largest value going to India's neighbours — Bangladesh, Sri Lanka, Nepal, Mauritius, Maldives, Myanmar and Seychelles. The funds cover critical infrastructure sectors — transport connectivity through railways, roads and ports; power generation and distribution; agriculture and irrigation; manufacturing industries, healthcare, education and capacity building[4].

Indian Technical and Economic Cooperation

Inaugurated in 1964, the Indian Technical and Economic Cooperation Programme, together with the Special Commonwealth African Assistance Programme and the Technical Cooperation Scheme under the Colombo Plan, covers 161 countries across Asia, Africa, Latin America, Europe and Oceania. Technical and economic cooperation and loans and advances to foreign governments are directed largely to Asia. All eight country recipients identified are in Asia; they received US$529 million in 2011. Of these, Bhutan is by far the largest, receiving US$387 million in 2011, 59% of total technical and economic cooperation from India, followed by Afghanistan (US$59 million) and the Maldives (US$40 million). African countries (for which only regional data is available) received US$26 million, and countries in other regions received US$59 million. The largest recipients are countries where the number and rates of people living on less than $1.25 a day are low, though Nepal (7.4 million and 25%) and Bangladesh (64.3 million and 43%) are exceptions. Poverty data is not available for Afghanistan, Mongolia and Myanmar[5].

1 FIDC Policy Brief Indian Development Cooperation: A Theoretical and Institutional Frameowkr.pdf (ris.org.in)
2 Overview of India's Development Partnership (mea.gov.in)
3 India's Development Co-operation - OECD
4 Institutional architecture for India's development cooperation: A 2030 vision | ORF (orfonline.org)
5 Investments-to-End-Poverty-Chapter-9-India.pdf (devinit.org)

India's Grant- In Aid

India has traditionally been perceived, both domestically and globally, as an important aid receiver. But it has also had a foreign aid programme of its own which can be traced to the 1950s and 1960s. India's aid programme was small, focused on building local capacities and viewed as benign. In the past few years, there have been marked shifts in the size, focus and strategic thinking behind India's foreign aid programme[6]. According to India's budget in 2021-22, it's direct overseas aid stood at ₹ 18,154 crore (US$2.5 billion)[7]. India has spent USD 1 billion on foreign aid in 2012-13. Since 2009, the foreign aid had increased around 3.2 times annually[8].India is also heavily active in humanitarian efforts and disaster relief, frequently giving out loans, medical supplies and other types of assistance. The Brookings Institute has even called the nation "The Neighborhood First Responder," helping with disaster relief in Sri Lanka, Afghanistan and Myanmar. Humanitarian aid has gone to nations like Fiji after Cyclone Winston hit the nation in 2016. Recently, India has helped combat the COVID-19 pandemic through monetary aid, donating food and distributing vaccines. Brazil, which faces a vaccine shortage, received 2 million doses from the Indian government[9].

India's budget in 2021-22
DIRECT OVERSEAS AID
₹ 18,154 crore (US$2.5 billion)

India Spent in 2012-13
ON FOREIGN AID
USD 1 billion

Lines of Credit[10]

Development assistance in the form of concessional Lines of Credit (LOCs) is extended by the Government of India under the Indian Development and Economic Assistance Scheme (IDEAS) through the Exim Bank of India. More than 300 LOCs worth US$ 30.66 billion have been extended to 64 countries. The projects under the LOCs cover critical infrastructure sectors such as transport connectivity through railways, roads and ports; power generation and distribution; agriculture and irrigation; manufacturing industries, healthcare, education and capacity building. So far about 300 LoC projects have been completed while more than 260 projects are under implementation.

Out of the total LOCs of US$ 30.66 billion, US$ 15.90 billion have been extended to Asian countries, with the largest value of commitments having been made in India's immediate neighbourhood. LOCs worth US$ 7.862 billion have been extended to Bangladesh, US$ 2.02 billion to Sri Lanka, US$ 1.65 billion to Nepal, US$ 964.80 to Mauritius, US$ 840 million to Maldives, US$ 538.90 million to Myanmar and US$ 128 million to Seychelles.

There is a special focus on regional connectivity initiatives in the neighbourhood under GoI LOCs as these can act as force multipliers to accelerate regional growth & development, promote people-to-people contact and encourage trade and commerce.

6 Chanana, Dweep. "India as an Emerging Donor." Economic and Political Weekly, vol. 44, no. 12, 2009, pp. 11–14.
7 Budget 2021: Over Rs 18,000 Crore Allocated For External Affairs Ministry, Rs 7,149 Crore For Foreign Aid (ndtv.com)
8 Despite tempered outlook, BRIC countries stay the course on foreign aid | Devex
9 India's Development Partnership | The Borgen Project
10 Lines of Credit for Development Projects (mea.gov.in)

Classification of LOCSs[11]

The Indian government has come out with a classification criteria for processing LOCs under the Indian Development Economic Assistance Scheme (IDEAS)-Low and Lower Middle Income (L& LMI) countries with a minimum binding concessional requirement, Low and Lower Middle Income (L& LMI) with no minimum binding concessional requirement, and other developing countries.

Benefits of LOCs

The LOCs enable the recipient countries to set up developmental projects in a variety of sectors e.g. agricultural mechanization, rural electrification, power generation, power distribution, sugar, cement, mini hydro-plants, transportation-rail and road, infrastructure. The recipient countries can acquire Indian equipment and technology, which are found to be appropriate, adaptive and affordable in developing countries. LOC contributes to capacitybuilding in countries where the projects are carried out, opens new market opportunities for Indian companies and generates goodwill for India[12]. Especially LOCs to the African countries are demand driven and many African countries are given a choice option to select a particular projects suited for their needs[13].

Trajectory of Indian Development Cooperation

Among all the instruments being deployed as part of India's development assistance scheme, LoC occupy a huge share of India's total assistance to other countries[14]. It has majorly evolved its features and provides for development assistance thatworks at five different levels, namely trade and investment, technology, skills upgrade, lines of credit (LOC) and, finally, grants. The engagement of emerging economies with other Southern countries has provided a major pull factor for a wider engagement across these five elements, which emphasizes the comprehensive support for economic development[15]. Moreover, Indian development cooperationshuns any conditions on recipient countries[16]. However, Indian development cooperation has turned out to be political tool in furthering strategic objectives in the region[17]. However,

Infrastructure development in India's development cooperation

Infrastructure has been central to the development debate since its inception. In the very early days of foreign aid, donors were heavily focused on infrastructure as most of the finance for infrastructure could only come from foreign aid. While large developing countries had more domestic revenue with which to finance post-independence infrastructure investment[18]. As such modern development aid began with the Marshall Plan, through which the United States provided economic and technical assistance to European countries whose economies had suffered during World War II.

Today, development aid takes many forms. One country might supply development aid to another in the form of a direct monetary contribution, or it might provide technical expertise to help build the infrastructure to supply water to more citizens. It might also help teach the skills necessary to maintain and construct infrastructure[19].

India's Infrastructure projects in Global South

India has come forward to develop many hydro-electric power plants in Nepal like Pardi, Trishuli and Devighat[20]. As of 2014, under foreign direct investment, India plans to fund two hydel projects[21]. In Afghanistan, the Salma

11 Exim_LoC.pdf (dea.gov.in)
12 Exim Bank Lines of Credit Guidelines (eximbankindia.in)
13 The changing nature of India's Lines Of Credit to Africa | ORF (orfonline.org)
14 India's development partnership: key policy shifts and institutional evolution (ris.org.in)
15 Chaturvedi S. The Development Compact: A Theoretical Construct for South–South Cooperation*. International Studies. 2016;53(1):15-43. doi:10.1177/0020881717705927
16 India's development cooperation does not come with any conditions: PM Modi | India News - Times of India (indiatimes.com)
17 India's development cooperation – are we getting it right? | ORF (orfonline.org)
18 Addison, T. & Anand, P.Bhayankara (2012) Aid and Infrastructure Financing: Emerging Challenges with a Focus on Africa. WIDER Working Paper 2012/056. Helsinki: UNU-WIDER.
19 What is Development Aid - Foreign Aid & Development | Anera
20 Agreement regarding Hydro-electric Power Project (mea.gov.in)
21 Gangol, Pradeep (January 2014). "Foreign Direct Investment in Nepal's Hydropower Development". Hydro Nepal. 20 May 2019.

Dam (now called Afghan-India Friendship Dam) was inaugurated in 2016 amounting to USD 290-300 million. In 2011, $5bn was promised to African countries, following an injection of $5.4bn in 2008 for infrastructure development. Among the infrastructure projects, Sri Lanka received US$492 million for a railway project, Belarus received US$60 million for a power plant while Mongolia received US$20 million for establishment of IT training centres and livestock vaccination programmes[22].India's commitment to African infrastructure projects more than doubled to US$ 1.2 billion in 2016 from US$ 524 million in 2015. The largest portion of Indian commitments went to transport (US$ 513 million), followed by energy (US$ 422 million) and water (US$ 262 million) projects[23].

Indicators for assessing Infrastructure projects

As India's development partnership with global south countries for infrastructure usually contains mega and large infrastructure[24] for the purposes of assessment we are making use of internationally set indicators which will help determine the productivity of these projects. Mega-infrastructure creation has direct impact on human, social and political rights of people[25].

The following are the direct impacts caused by mega infrastructure

1. Land Acquisition

One of the major consequences of Mega project operations is the displacement of people from their lands. Acquiring land from local communities for setting up of industries, energy plants and roads has been singularly responsible for loss of homes and livelihoods of people[26].

2. Loss of Livelihoods and Way of Life

Mega-infrastructure development consists of the loss is not just of a piece of land but of community ties, the commons, cultural roots. Many mega-infrastructure projects are developed in the global south in areas where the local populace is struggling in coping with socio-economic development[27].

3. Degradation of Flora, Fauna and aquatic life

Mega-infrastructure creation results is huge-scale degradation of flora and fauna and has spillovers in adjoining areas of the project site. Water supplies flowing away industrial effluents contaminate connected water bodies.

4. Resettlement and Rehabilitation

Mega-infrastructure projects are known for loss of lands acquired through governmental approvals but fail to effectively resettle and rehabilitate people[28]. The loss of way of life hugely affects the livelihood of the people in other areas and results in growing numbers of unemployed[29].

22 India's development partnership: key policy shifts and institutional evolution (ris.org.in)
23 Connecting Africa: Role of transport infrastructure - tralac trade law centre
24 Mega projects include bridges, tunnels, highways, railways, airports, seaports, power plants, dams, wastewater projects, Special Economic Zones(SEZ), oil and natural gas extraction projects, public buildings, information technology systems, aerospace projects, etc.,
25 OHCHR | Human rights trampled in push to build infrastructure
26 Desai Mihir, "Land Acquisition Law and the Proposed Changes", EPW, Vol. XLVI Nos. 26 & 27, June 25 2011, p. 95
27 Tyagi A. C., "Resettlement and rehabilitation in River Valley Projects" in, Environmental Management in Hydropower and River Valley Projects- Techniques of Management Policy Issues, Case Studies and Application of Scientific Tools, Radhey Shyam Goel, (Ed.), (New Delhi, Oxford & IBH Publishing Co. Pvt. Ltd, 2000), p. 175.
28 Hari Mohan Mathur and David Marsden, Development Projects and Impoverishment Risks Resettling Project-Afftected People in India, (New Delhi, Oxford University Press, 2000), p.30.
29 Fernandes and Vijay Paranjpye (eds.) (1997) 'Rehavilitation Policy and Law in India: A Right to Livelihood', Indian Social Institute, New Dehli quoted in Murickan, Jose (2003), 'Development-Induced Displacement: Case of Kerala', Rawat Publications, Jaipur.

5. Water contamination and Salinity

Water contamination and salinity are a major cause of concern emanating from the creation of large-scale infrastructure. The increase chemical compositions of water which is then used for irrigation purposes jeopardizes the health and safety of people.

6. Compensation

Acquisition of land involves providing the right amount of compensation. Many a times, this compensation is not provided adequately to affected communities and groups which lead them to face unsurmountable challenges in rehabilitation[3031].

Impact of Mega-Infrastructure on Human Rights

A three-tier classification of mega-infrastructure on human rights is provided as follows-

a. *At the micro-level-* The most serious problems often originate from acquisition of or access to land, rights of way and resources, resulting in denial of land and resource tenure, relocation, forced eviction and loss of adequate standard of living and livelihoods. Impacts on land may also cause biodiversity loss. Physical impacts such as during construction and level off during operation, health, safety and security problems can persist for workers and communities, along with threats to biodiversity, natural resources and the climate. Sexual violence, intimidation of and reprisals against human rights defenders, and violence by security forces are among the other common human rights impacts. Decommissioning of projects may also generate serious negative human rights impacts if not properly planned with adequate financial provisioning.

b. *At the meso-level*-access to and affordability of certain social services, including water, are explicitly protected by human rights law. Frequent or exorbitant rate increases or denial of service due to inability to pay may violate human rights law. Generally, the private sector lacks incentives to enhance affordability of services, and regulatory reforms to enable private sector participation can cut off vulnerable individuals and communities from informal services.

c. *At the macro-level*-the actions and omissions of States and other duty-bearers can affect taxpayers and the general population in various negative ways. Examples include poor design, process and planning decisions, the failure to carry out environmental and human rights impact assessment at the project, cumulative, transboundary and strategic levels, as well as fiscal and financial mismanagement, which may waste public resources and lead to fiscal burdens, over-indebtednessausterity and withdrawal of public services. Procurement decisions may also trigger significant human rights and environmental concerns in the supply chain[3233].

The general indicator used for measuring socio-economic productivity of infrastructure is available in SDG 9

"Build resilient infrastructure, promote sustainable industrialization and foster innovation"

- Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

- Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries

30 Hari Mohan Mathur and David Marsden, Development Projects and Impoverishment Risks Resettling Project-Afftected People in India, (New Delhi, Oxford University Press, 2000), p.30.
31 Burrows, P. (1991). Compensation for Compulsory Acquisition. Land Economics, 67(1), 49-63. doi:10.2307/3146485
32 HBS-OHCR, The Other Infrastructure Gap SR_OHCHR-Kurzfassung-en_Futura_Web.indd
33 Microsoft Word - OHCHR Baseline Study Revised Oct 22 2017

- Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets
- By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities[34].

Available Standards for measuring Infrastructure impact on human rights-

- *Ise-Shima Principles for Promoting Quality Infrastructure Investment*[35]

Principle 1: Ensuring effective governance, reliable operation and economic efficiency in view of life-cycle cost as well as safety and resilience against natural disaster, terrorism and cyber-attack risks

Principle 2: Ensuring job creation, capacity building and transfer of expertise and know-how for local communities

Principle 3: Addressing social and environmental impacts

Principle 4: Ensuring alignment with economic and development strategies including aspect of climate change and environment at the national and regional levels

Principle 5: Enhancing effective resource mobilization including through PPPs

- *World Bank/IFC Performance Standards/MDB Safeguard Policies*[36]

The new Environmental and Social Framework (ESF) of the World Bank will apply to new investment loans to the public sector starting in 2018. Although support for the realization of human rights expressed in the Universal Declaration of Human Rights is part of the World Bank's vision of sustainable development, and respect for Indigenous Peoples' human rights is a stated objective, the commitment in the Bank's existing safeguards.

- *EHS General Guidelines*[37]

The private sector applies the World Bank Group's EHS Guidelines as the de facto international industry standards. The General Guidelines cover air and water quality issues, occupational health and safety, community health and safety, and decommissioning activities generally applicable to all sectors. In addition, the following infrastructure sectors are specifically covered: Airlines; Airports; Crude Oil and Petroleum Product Terminals; Gas Distribution Systems; Health Care Facilities; Ports, Harbors and Terminals; Power (Electric Power Transmission and Distribution; Geothermal Power Generation; Thermal Power; and Wind Energy); Railways; Retail Petroleum Networks; Shipping'; Telecommunications; Toll Roads; Tourism and Hospitality Development; Waste Management Facilities; and Water and Sanitation. However, there is no guideline on hydropower projects, and coal power projects are not prohibited under these guidelines

- *The OECD Guidelines on Multinational Enterprises (MNE Guidelines) and Common Approaches*:

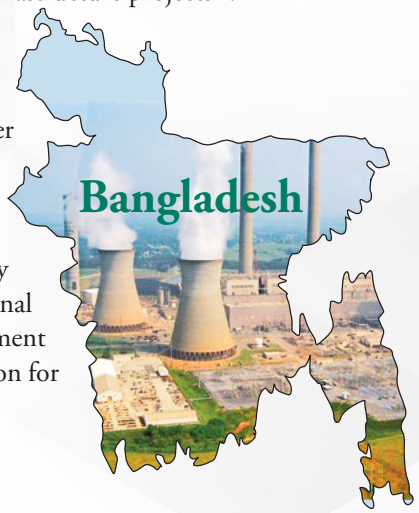
Although not specific to infrastructure, the MNE Guidelines contain one of the more comprehensive sets of requirements for the responsible conduct of business, and include chapters on disclosure, human rights, employment and industrial relations, environment, combating bribery, and consumer interests, among others. The human rights chapter is explicitly aligned with the UNGP[38]s.

34 https://sdgs.un.org/goals/goal9
35 G7 Ise-Shima Principles for Promoting Quality Infrastructure Investment (mofa.go.jp)
36 https://documents1.worldbank.org/curated/en/380311492423734099/pdf/The-World-Bank-Environmental-and-Social-Framework.pdf
37 Environmental, Health, and Safety Guidelines (ifc.org)
38 Guidelines for MNEs - Organisation for Economic Co-operation and Development (oecd.org)

- *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security*

These voluntary guidelines, initiated by the Food and Agricultural Organization of the United Nations (FAO), enjoy the support of many international organizations and CSOs. The voluntary guidelines are intended to promote secure tenure rights and equitable access to land, fisheries and forests as a means of eradicating hunger and poverty, thereby supporting sustainable development and enhancing environmental protection. They provide helpful guidance in relation to the acquisition of and access to land in connection with infrastructure projects[39].

Bangladesh-India Rampal Power Station



The Rampal Power Station is a 1320 megawatt coal-fired power station currently under construction at Rampal Upazila of Bagerhat District in Khulna, Bangladesh.The power plant is being constructed on an area of over 1834 acres of land, is situated 14 kilometres north of the world's largest mangrove forest Sundarbans which is a UNESCO world heritage site. It is being setup by Bangladesh India Friendship Power Company Limited[4041](BIFPCL) which is 50:50 joint venture between India's state owned National Thermal Power Corporation (NTPC) and Bangladesh's Bangladesh Power Development Board (BPDB). BIFCPL awarded an EPC contract to BHEL valued at over US$1.49 billion for setting up of Maitree Super Thermal Power Project (2X660MW)[42].

Project Details

The costs for the coal power plant in Rampal are USD 2 billion. According to IJGlobal, the project has a debt-equity ratio of 80:20. The two companies BPDB and NTCP have equal share of ownership of the BIFPCL commercial joint venture, and equally provide 20% equity for this project (together USD 400 million). The remaining debt of 80% is provided by Indian Export-Import Bank: the Indian Export Credit Agency finances the project with USD 1.6 billion. The Bangladeshi government issued a sovereign guarantee amounting to 70% of the project cost.

In order to assure returned investment to overseas lending groups. Additionally, the joint venture company will enjoy a 15-year tax holiday. The World Bank and Asian Development Bank declined to finance the project, so BIFPCL has decided to take Export Credit Agency (ECA) loans which involve high interest rates. Previously, three French banks, Crédit Agricole, BNP Paribas and Société Générale, said they would not invest in the plant, after it was found that the proposed project failed to meet minimum environmental and social standards[43].

Economic Potential

According to a 2016 report by the Institute for Energy Economics and Financial Analysis, the Rampal power station will produce electricity that will cost 32% more than the average electricity costs in Bangladesh, despite multiple subsidies from Bangladesh and India. The financial think tank argues the project amounts to US$3 billion in public subsidies: "First, a below-market-rate loan by Indian EXIM Bank represents a US$988m subsidy effectively paid by Indian taxpayers to Bangladeshi consumers. Second, the Bangladesh government is proposing a 15-year income tax exemption for the plant, an exemption worth US$936m. Third, Bangladesh would be granting an effective annual US$26m subsidy by conducting maintenance dredging to assure coal delivery to the plant[44].

Concerns from civil society

This project violates the environmental impact assessment guidelines for coal-based thermal power plants[45]. The location of the plant, 14 kilometres from the Sundarbans, violates one of the basic preconditions which says

39 Voluntary Guidelines on Tenure | Governance of Tenure | Food and Agriculture Organization of the United Nations (fao.org)
40 Bangladesh, India sign Rampal power plant construction agreement | bdnews24.com
41 BIFPCL
42 Bhel bags NTPC's Bangladesh project - The Economic Times (indiatimes.com)
43 pdf (banktrack.org)
44 Risky-and-Over-Subsidised-A-Financial-Analysis-of-the-Rampal-Power-Plant-_June-2016.pdf (ieefa.org)
45 Bangladesh Power Plant Struggle Calls for International Solidarity | HuffPost

such projects must be outside a 25-kilometer radius from the outer periphery of an ecologically sensitive area[46]. Environmental activists contend that the proposed location of the Rampal Station would violate provisions of the Ramsar Convention. The Ramsar Convention, to which Bangladesh is a signatory, is an international environmental treaty for the conservation of wetlands. The Sundarbans are on Ramsar's list of wetlands of international importance[47].

The emission from the power plant in the Sundarbans area will drastically change the climate characteristics of the ecology. Likewise, the water discharge from the power plant will increase the temperature of the river water (South Asians for Human Rights, 2015). It goes without saying; there will be huge sound pollution during construction and even when the plant goes to electricity production[48].The predictions made by environment and ecology experts are that the plant will release toxic gases such as carbon monoxide, oxides of nitrogen and sulphur dioxide, thereby putting the surrounding areas and, most importantly, Sundarban at grave risk[49].

Support from Indian Civil Society

Prominent people's movements and other civil society organisations from India today extended their support and solidarity to the struggle against the India supported Rampal power project in Bangladesh, coinciding the Global Day of Protest called by the National Committee to Protect Oil-Gas-Mineral Resources Power and Port, which spearhead the struggle.Urging the Government of India to withdraw from the project, the statement said, "With India's NTPC jointly owning the project, BHEL supplying equipment and Indian Exim Bank providing finances, India's footprint in this project is too large which has the potential to perpetuate discontent between the two neighbouring countries[50].

Impact of Rampal Power Station

Micro Level Impact[1]	Meso Level Impact[2]	Macro Level Impact
Land acquired forcefully from communities living in sundarbans	Causal factor for respiratory illnesses	Non-transparency in project design and planning[3]
Affect on biodiversity of peripheral areas of sundrabans	Threatens livelihood of local communities dependent on sundarbans[4]	No debt issues are reported as of now

Bhutan-India Hydroelectric Projects

Hydroelectric Projects: Development Assistance and Cooperation

Indo-Bhutan hydropower cooperation began in 1961 with the signing of the Jaldhaka agreement. The Jaldhaka project is situated on the Indian side of Indo-Bhutan border in West Bengal. The major part of power produced at Jaldhaka hydropower plant was exported to southern Bhutan. A landmark development in the history of Indo-Bhutan hydro-relations took place in 1987 with the commissioning of the 336 MW Chukha Hydropower Project (CHP).

Bhutan's first mega power project, CHP was fully funded by the Government of India with 60 percent grant and 40 percent loan at the interest rate of 5 percent payable over a period of 15 years after commissioning. The success of one project has made way for other projects based on confidence, economic viability and shared benefits. The 1,020 MW Tala Hydroelectric Project, one of the biggest joint projects between India and Bhutan, was also fully financed by the Government of India, with 60 per cent grant and 40 per cent loan.The two countries have also signed the Agreement on Cooperation in the Field of Hydroelectric Power (HEP) in July 2006, which outlines the framework for cooperation in the field of Hydropower.[5152]

46 Save The Sundarban: Rampal Power Station (Proposed)
47 A new power plant could devastate the world's largest mangrove forest - The Washington Post
48 Why are People Opposing Ramp (isdesr.org)
49 More reasons to stop Rampal power plant (archive.org)
50 Prominent Indian Groups Support Struggle against Rampal Project – Centre for Financial Accountability (cenfa.org)
51 Bhutan-India Hydropower Relations – Royal Bhutanese Embassy New Delhi (mfa.gov.bt)
52 MEA | India and Neighbours | Bhutan

Project Details of India-Bhutan HEPs

The Chukha Hydropower Project, or Chukha Hydel, was Bhutan's first mega power project. Construction started in the 1970s with commissioning in 1986 and the government assuming full control in 1991. During the summer, the plant generates 336 MW from four turbines off the flow of the Wangchhu river in central Chukha District, between Thimphu and Phuentsholing. The project cost Nu2.46 billion, wholly funded by the Government of India, 60 percent under grants and 40 percent under a fifteen-year loan at 5 percent interest[53].Between 2005 and 2006, Chukha alone contributed over 30 percent to Bhutan's total revenue[54].

Tala hydroelectric project is the biggest joint project between India and Bhutan so far, generating 4865 million kWh/yr. Tala is located in Chukha Dzongkhag in western Bhutan, a small kingdom in the Himalayas. The run-of-the-river project is being managed by Tala Hydroelectric Project Authority (THPA). It is located on the Wangchu River and, at 860m, is the region's largest high-head project[55].

Punatsangchhu-I is a 1200 MW run-of-the river project located on the left bank of Punatsangchhu river in Wangdue Phodrang Dzongkhag(District) in Western Bhutan. Its estimated capacity is 5700 million units of electricity in an average year. Construction of Punatsangchhu-I HEP was commenced in November 2008 at a project cost of Rs 3514.8 crore. In July 2016, the Union Cabinet approved the Revised Cost Estimate of Rs. 9375.58 crore for the project. Physical progress of the project, is 85.10 % as of 31st December 2018. So far, GoI has released Rs. 7629.3 crore to the Project Authority.

The project was scheduled to be completed by November 2016. However, due to the sliding of the right bank at dam site which happened in July 2013, the commissioning of the project is getting delayed. Stabilisation measures have been undertaken by the PHPA management and as per the current projection of the project authorities the project is expected to be completed in first quarter of 2022[56].

Punatsangchhu-II is a 1020 MW run-of-the river project located on Punatsangchhu river in Wangdue Phodrang Dzongkhag in Western Bhutan. Its estimated capacity is 4357 million units of electricity in an average year. Construction of Punatsangchu-II HEP was commenced in December 2010 at a project cost of Rs. 3777.8 crore. So far, GoI has released Rs.5668.723 crore to the Project Authority. The project is scheduled to be completed by December 2017[57].

Mangdechhu is a 720 MW, run-of-the river scheme located on river Mangdechhu in Trongsa Dzongkhag (District) in Central Bhutan. Annual energy generation from the Project with 95% machine availability would be 2925.25 million units. The bilateral agreement to execute the Mangdechhu Hydroelectric Project was signed between Government of India and Royal Government of Bhutan on 30th April 2010 .On September 2017, the GoI approved the Second Revised Cost Estimate (RCE) of the project of Rs. 4672.38 crore (at March 2016 Price Level)[58].

Other HEPs in pre-construction phases[59]

- Bunakha Hydroelectric Plant 180 MW, located near Bunakha village in Chukha district of Bhutan, 3,25 kilometers upstream of existing Chukha Financed by a debt equity ratio of 70:30. The equity is shared equally between THDC Ltd, an Indian public-sector enterprise and DGPC, a Bhutanese publicsector enterprise. DGPC's share Pre-construction stage 14 dam of equity in the project is financed by GoI as a grant
- Wangchu Hydroelectric Plant 570 MW, run of river scheme on the river Wangchu in Chukha district of Bhutan Financed by a debt equity ratio of 70:30. The equity is shared equally between SJVN Ltd, an Indian public-sector enterprise and DGPC, a Bhutanese publicsector enterprise. DGPC's share of equity in the project is financed by GoI as a grant.

53 Agreement on Chukha Hydro-Electric Project (mea.gov.in)
54 Issue Brief Medha 7 Oct 2011.pmd (idsa.in)
55 Tala Hydroelectric Project - Power Technology | Energy News and Market Analysis (power-technology.com)
56 Embassy of India Thimphu, Bhutan (indembthimphu.gov.in)
57 Ibid
58 Ibid
59 Working_Paper_384.pdf (icrier.org)

- Chamkarchu Hydroelectric Plant 770 MW, run of river scheme on the river Chamkarchu Financed by a debt equity ratio of 70:30. The equity is shared equally between NHPC Ltd, an Indian public-sector enterprise and DGPC, a Bhutanese publicsector enterprise. DGPC's share of equity in the project is financed by GoI as a grant.

- Dagachhu Hydropower Project 126 MW, run-of-the river project, located in Dagana district of Bhutan, first cross border CDM project in the world, first PPP venture in the hydropower sector of Bhutan Financed by a debt equity ratio of 60:40. Partnership among DGPC (59%), Tata Power Company (26%) and NPPF of Bhutan (15%). Loans provided by ADB and RZB, Austria.

Concerns raised on HEPs assisted by India

Despite Bhutan's strong environmental and biodiversity protection regime, there have been irregularities regarding environmental impact assessments conducted by Indian agencies, resulting in decisions that are not always environmentally sound. For example, the construction of the Punatsangchhu-I (1200MW) and II (1020MW) power projects has allegedly jeopardized the habitat of the endangered white-bellied heron. While efforts are being made to create artificial habitats for these birds, the fact remains that their natural habitat is being destroyed, and mechanisms to ensure accountability remain weak.Furthermore, not all power projects have benefited the local Bhutanese economy. Anecdotal evidence suggests that it is primarily Indian companies that are subcontracted to conduct project work, often relying on Indian labor[60].

Cheap Electricity Supply

Firstly, the Bhutanese complain that India buys cheap electricity from the hydroelectric projects in Bhutan. For example, in 2017, the tariff rate on the import of hydroelectricity from the Tala hydroelectric project by India was 1.80 Bhutanese Ngultrum (BTN) [S$ 0.03] per unit. This was much below the domestic market price in India which was around 7 to 8 (around 15 to 16 Singapore cents) per unit.[61] In July 2017, Bhutan proposed a tariff hike from the Chukha hydropower project. The last hike was made in 2014 when the tariff rate was raised from BTN 2 per unit (S$0.04) to BTN 2.25 (S$0.045) per unit[62].

Increasing debt for HEPs

There are concerns in Bhutan on the delay in the completion of the hydropower projects. The loan granted by India to Bhutan increases by 10 per cent every year which adds to the debt for the country[6364]. The Annual Report of the Royal Monetary Authority of Bhutan, the report stated, "As of June 2014, Indian Rupee debt constituted 64 per cent of Bhutan's total debt and hydropower loans accounted for 83.4 per cent of the total Rupee loan. The actual interest payments on Rupee-denominated hydropower debt amounted to 1.4 billion (S$28 million) in 2014 and accrued interest on the three ongoing hydropower projects (Punatsangchhu-I, Punatsangchhu-II and Mangdechhu) amounted to almost 3.6 billion (S$70 million).[65]

Lack of EIA for HEPs

In Bhutan, the Department of Forest and Park Services looks after the ecology of the country. As a norm, any hydropower project has to clear the Environmental Impact Assessment (EIA) test before construction works can start. In Bhutan, the EIA was not carried out for projects whose construction began before 2000. Therefore, the

60 India's Hydropower Investments in Bhutan: Environmental Impacts and the Role of Civil Society | Center for the Advanced Study of India (CASI) (upenn.edu)
61 "More than Doklam Issue, Bhutan is worried about hydropower deficits", The Indian Express, 26 July 2018
62 "Bhutan to supply hydropower to Bangladesh via India", Outlook, 2 July 2017. https://www.outlook india.com/news-scroll/bhutan-to-supply-hydropower-to-bangladesh-via-india/1090541
63 Hydropower debt, Delays biggest challenge in ties with India, say Bhutan officials', Suhasini Haider, 6 September 2017, The Hindu, http://www.thehindu.com/news/national/hydropower-debt-delays-biggestchallenge-in-ties-with-india-say-bhutan-officials/article19630701
64 Vasudha Foundation, 'A Study of the India-Bhutan Energy Cooperation Agreements and the Implementation of Hydropower Projects in Bhutan',
65 "Royal Monetary Authority of Bhutan, Government of Bhutan, Annual Report 2016-17" https://www.rma. org.bt/RMA%20Publication/Annual%20Report/annual%20report%20%202016-2017.pdf.

environmental impact on such hydropower projects as Chhukha, Kurichhu and Tala was not conducted. The project authorities for Punatsangchhu-I, Punatsangchhu-II and Mangdechhu conducted the EIA but the report has not been made public[66].

Micro Level Impact	Meso Level Impact	Macro Level Impact
No issues of forced acquisition reported	Health issues not reported	Increased debt issues
Effect on biodiversity[5]	No significant increase in employment[6]	Effect on trans-boundary environment and ecology[7]

Myanmar-India Kaladan Multi Modal Transport Project

The Kaladan Multi-Modal Transit Transport (KMTT) Project was born of this collaboration between the Government of India and the Government of Myanmar. The project will connect Kolkata to Myanmar, and Myanmar to Mizoram through a multi-modal network of ports, inland waterways and highways. It will not only open a second point of entry into the northeastern states of India, but also improve economic ties between India and Myanmar by linking Myanmar to major Indian ports. With the required infrastructure in place, cargo will take about 3-4 days lesser to reach Mizoram from Kolkata and will save more than 950Kms of travel[67].

Ministry of External Affairs (MEA), Govt. of India entered into a Framework Agreement with the Govt. of Myanmar in April 2008 to facilitate implementation of the project. The Framework Agreement is based on a Detailed Project Report (DPR) for development of the Multimodal Transit Transport system to the North Eastern states through Myanmar prepared by Indian Consultant M/s RITES during 2003. The transit route envisaged between Kolkata (nearest Indian port / commercial hub) and Mizoram as per the current implementation programme (after revision of the DPR for Port & Inland Water Transport components by Inland Waterways Authority of India in 2009) comprises of following segments.[68]

Stretch	Mode	Distance
Kolkata to Sittwe port in Myanmar	Shipping	539 km
Sittwe to Paletwa (River Kaladan)	Inland Water Transport (IWT)	158 km
Paletwa to Indo-Myanmar Border (in Myanmar)	Road	110 km
Border to NH.54 (Lawngtlai) (in India)	Road	100 km

Principal Project Components

- Port & IWT components
- Construction of an integrated Port & Inland Water Transport (IWT) terminal at Sittwe including Dredging.
- Development of navigational channel along river Kaladan from Sittwe to Paletwa (158 km).
- Construction of an IWT - Highway transhipment terminal at Paletwa.
- Construction of 6 IWT barges (300 Ton capacity) for transportation of cargo between Sittwe and Paletwa.
- Highway component

66 Working-Paper-No.-309-India-Bhutan-Hydropower-Projects.pdf (nus.edu.sg)
67 Kaladan Project: Looking East for Economic Development - Essar
68 Ministry of Development of North Eastern Region, North East India (mdoner.gov.in)

Construction of a highway from Paletwa to India-Myanmar border for 110 kms. [Agency (M/s. IRCON) to execute Road component being arranged by MEA]

Implementation Framework

- MEA is the nodal agency on Indian side
- Ministry of Foreign Affairs (MFA) is the nodal agency on the Myanmar side.
- Framework Agreement and two protocols (Protocol on Transit Transport and Protocol on maintenance) signed by the two sides on 2nd April 2008.
- Inland Waterways Authority of India (IWAI) has been appointed as the PDC vide agreement dated 19.3.2009 between MEA and IWAI. The responsibility of IWAI as PDC is at present for implementation of the Port & IWT components[69].

Project Details

As of May 2018, India has awarded all the contract for 100 km (62 mi) 4-lane Aizawl-Zorinpui highway within India and 2 km (1.2 mi) Zorinpui-Kaletwa 2-lane highway within Myanmar, which will be completed by the 2019[70]. However, the Sittwe port has been operationalized despite a few logical challenges flagged by India. According to External Affairs Minister S. Jaishankar the project is in final stages and will not be impacted by the political instability in Myanmar[71].

Advantages

This multi-modal project is multifaceted. Involvement of both waterways and roadways will reduce the distance & the cost of transportation, and expand India's trade with other countries. The biggest potential of the project lies in developing the NE, where the goods from North-East India can be directlytransported through sea instead of taking it through roadways from other ports in India.As a part of this project, The Indian government is rebuilding Myanmar's Sittwe port to make it capable of handling large cargo ships. The port which currently handles 2000-3000 ton vessels is being developed to handle a capacity of 20000-ton vessels. Investing around US$ 134 million for the project, India is handing over the port in December 2018 and eventually the inland waterway terminal[72].

Other than enhanced connectivity, the Kaladan multi-modal project can potentially result in other benefits including the betterment of internal as well as cross-border security through local economic development[73].

The Kaladan Project has the potential to provide a number of benefits for local people, such as:

- improved transportation infrastructure
- increased trade opportunities for local farmers and producers
- lower food prices and improved access to food
- employment opportunities on project construction and maintenance
- economic development for local small and medium sized enterprises[74]

Concerns emerging from the project

The Kaladan movement, an umbrella group of civil society organizations and environmental groups, for instance, has criticized India for opacity in the implementation of the project. Local communities were apparently not consulted or informed about the project's impact. They are not being included in the project's benefits and are

69 Ibid
70 India ramps up Myanmar ties to gain foothold in ASEAN | The Myanmar Times (mmtimes.com)
71 India-Myanmar Kaladan project in final stages: Jaishankar - The Hindu
72 From Look East to Act East: A review of Kaladan Multi-Modal Transport Project - Centre for Public Policy Research (CPPR)
73 India to provide debt service relief to Myanmar under the G20 initiative - The Economic Times (indiatimes.com)
74 Inside_Kaladan Movement Briefer_English [2].indd (burmariversnetwork.org)

being discriminated against with regard to wages. Activists are also drawing attention to the Kaladan project's destructive impact on the environment and impacts on local livelihoods[75].The Kaladan Project also has the potential to bring a number of negative impacts to local communities, such as:

- the use of forced labour during project construction
- land confiscation and forced eviction
- disruption of and loss of livelihoods
- increased presence of Burma Army troops
- restrictions on freedom of movement and access to transportation
- illegal taxation and extortion
- pollution and environmental degradation
- violations of indigenous peoples' rights[76]

However, there have been instances where India has tried to address the concerns of local protestors and ensured equal representation with communities affected by the project[77].

Impact Analysis of Kaladan MMT Project

Micro Level Impact	Meso Level Impact	Macro Level Impact
Land acquired from local communities for developing the project[89]	Health issues not reported. However violence by insurgent groups has increased[10].	Delay in project implementation[11]
Effect on biodiversity, ecology of the Rakhine and Arakan region[12]	Loss of livelihoods reported[1314]	No reported effect on trans-boundary ecology and biodiversity

Rwanda-India Nyaborongo Power Plant

Nyabarongo I Hydroelectric Power Station is a 28 megawatts (38,000 hp) hydroelectric power station in Rwanda which has been commissioned by Bharat Heavy Electricals Limited (BHEL) and Angelique International Ltd. as part of India's Line of Credit. The hydro power station is believed to increase Rwanda's installed generation capacity to 24% from 114 MW to 147 MW[78] and will be the biggest hydro electric station in the country[79].The project involves a dam, with run of river design, across the River Mwogo, one of the tributaries of Nyabarongo River.

The power station is located across the Nyabarongo River, near the settlement of Mushishiro, Muhanga District, in Rwanda's Southern Province. This location lies approximately 75 kilometres (47 mi), by road, southwest of Kigali, the capital and largest city in Rwanda[80].

The project was completed after India offered the two firms a credit of $91M through Export-Import Bank of India, while Rwanda contributed the remaining US$17.7M[81]. Earlier Two LOCs aggregating US$ 80 mn were extended to the Government of Rwanda[82]. Rwanda government has enthusiastically responded to the power station and has applauded India's efforts in providing technical expertise and LOC for constructing such a mega infrastructure[83]. The project is also seen to have marginally reduced petroleum imports for the country and is steering its dependency from fossil fuels to clean energy[13].

75 chin-human-rights-organisation-project-kaladan-movement-external-evaluation-report.pdf (norad.no)
76 Inside_Kaladan Movement Briefer_English [2].indd (burmariversnetwork.org)
77 The Trouble With India's Projects in Myanmar – The Diplomat
78 BHEL commissions hydro power plant in Rwanda, Africa - The Economic Times (indiatimes.com)
79 Exim Bank of India's LOCs: Boosting India's international trade (indiainfoline.com)
80 Distance between Kigali (Kigali) and Mushishiro (Gitarama) (Rwanda) (globefeed.com)
81 India and Rwanda Seal Nyabarongo II Power Deal – KT PRESS
82 Slide 1 (ris.org.in)
83 India, Rwanda become strategic partners | Business Standard News (business-standard.com)

Mwogo Tributary

The dam is built on Mwogo River, which is a tributary of Nyaborongo river it is one of the 3 tributaries composing Nyabarongo River –upstream in Nile river basin. This is an elongated catchment area sloping down from south to north with three main tributaries and the upper Nyabarongo River itself, among them is the Mwogo river which originates in the south-eastern corner of the catchment and becomes the Nyabarongo at its confluence with the Mbirurume River.

The Mwogo river has a settled community which is largely involved in agricultural livelihoods[84]. The Mwogo river wetland is under heavy pollution as a result of the mining activity using the stream Nyanza for cleaning minerals.[85][86]

Impact Analysis of Nyaborongo Power Project

There is limited evidence that Nyaborongo I supported by Indian LOC has contributed to any human rights, financial distress and ecological and environmental degradation. However, there were always environmental concerns that dominated Mwogo upper catchment's geological change. This is mainly due to existing mining activities that have contributed to sedimentation[87] which are not directly seen to be a cause by the power project developed by India.

Micro Level Impact	Meso Level Impact	Macro Level Impact
No issues of forced acquisition reported	No health issues reported	EIA report not available for public access
No substantial effect on biodiversity of Mwogo Upper catchment area	Little evidence of increased employment and threat to livelihoods	No debt issues reported

India-Rwanda Development Projects

Solar electrification of 35 schools in Rural Rwanda was completed in 2014 under a grant of Rs. 2.59 Crore from Government of India. - Rwanda has been one of prominent beneficiaries of India's developmental LoCs.

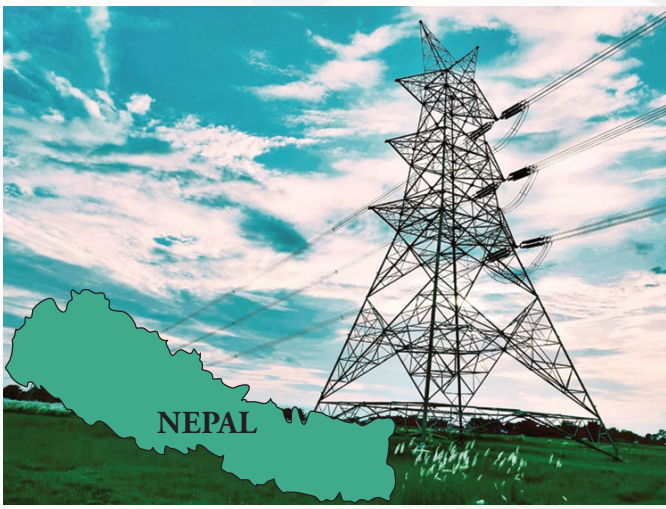
- India has extended in 2013 LoCs totalling US $ 120 million for the development of Export Targeted Irrigated Agriculture Project and its expansion
- An MoU for LOCs worth US $ 81 million for establishment of 10 vocational training centres and 4 business incubation centres was signed between the EXIM Bank of India and Government of Rwanda on 24 May 2017.
- LOC worth US $ 66.6 mn for upgradation of Base-Butaro-Kideho road was signed between EXIM Bank of India and Govt. of Rwanda on 14 May 2018.
- The total volume of LoCs extended to Rwanda so far till date (including two LoCs announced by Hon'ble PM Modi during visit to Rwanda in July, 2018) are USD547 million.
- In February 2017, India and Rwanda also signed Bilateral Air Services Agreement (Rwandair has already started commercial operations to Mumbai) and an agreement for the exemption of visa for diplomatic and official passport holders.

Source: Ministry of External Affairs, Government of India

84 PD NYAMAGABE Revised version.pdf (fonerwa.org)
85 GLOWS_techpub_cover_sans_line (rwb.rw)
86 Nyabarongo upstream watershed rehabilitation plan (rwb.rw)
87 Ibid

Nepal-India Koshi Corridor Transmission Line

Government of Nepal (GoN) signed a Dollar Credit Line Agreement with Export-Import Bank of India for Construction of Koshi Corridor 220 KV Transmission line project and Nepal Electricity Authority (NEA) is beneficiary for this project. Indian contractor Larsen and Turbo has been building three substations at Basantapur, Baneshwar and Tumlingtar under the second component of the corridor project at a cost of $25.29 million. The electricity authority began works on the substation in June 2016 and has set a completion deadline of February 2020[88].



The transmission line will help in evacuating power form selected hydropower projects in the Koshi & Mechi Zone of Nepal that are to be operated in near future.The Koshi corridor transmission line will evacuate the powers generated by the hydropower projects under-construction in Bhojpur, Sankhuwasabha, Teharathum and Tapelejung of province 1. This line will act as a link to national Transmission line[8990].

Project Details

This project comprises of following four components:

1. Construction of 110 KM long double circuit 220 KV Transmission Line from Inaruwa (Sunsari District) to Basantapur (Terhathum District) to Khandbari (sankhuwasabha District);
2. Construction of 220/132/33/11 KV substations at Khandbari, baneshwar & Basantapur;
3. Construction of 30 Km double circuit 220 KV Transmission Line form Basantapur (Terhathum District) to Hangpang (Taplejung District);
4. Construction of 220/132/33/11 KV substations at Hangpang of Taplejung district[91].

Concerns emanating from the project

The Koshi transmission line faced a classic case of delay owing to protests by local communities on various counts of causing deforestation, environmental degradation, averting tourism etc[92].

- Local forest officials have been impeding progress of the project and barred project officers from extracting construction materials from local rivers for the construction of substations.[93]The project is also causing environmental damage as attested by locals.
- The second package of the Koshi Corridor project, which includes the construction of the aforementioned substations, has faced criticism as its contract has been awarded to the second lowest bidder which is against the Public Procurement Act. The act states that the contract must be awarded to the lowest bidder[94].
- The transmission line corridor from Inaruwa to Taplejung — is facing problems in construction works due to issues related to cutting down of trees that lie along the path of the corridor.The project will have to cut down approximately 9,000 trees along the corridor[95]. To solve this imbroglio task force has been formed to

88 english_enc_-605thissue(18-24_may_2019).pdf (ippan.org.np)
89 NEA Resumes The Construction of 220 kV Kosi Corridor Transmission Line | New Spotlight Magazine (spotlightnepal.com)
90 Final-ESMF-for-PSRSHDP.pdf (nea.org.np)
91 Koshi Corridor 220 KV Transmission line: Total Management Services (tms.com.np)
92 Construction of Koshi Corridor faces delay - The Himalayan Times - Nepal's No.1 English Daily Newspaper | Nepal News, Latest Politics, Business, World, Sports, Entertainment, Travel, Life Style News
93 Koshi corridor power line project faces new setback, likely to miss deadline by 10 months (kathmandupost.com)
94 Construction of Koshi Corridor faces delay – Bolchha Nepal
95 Construction of Koshi Corridor faces delay - The Himalayan Times - Nepal's No.1 English Daily Newspaper | Nepal News, Latest Politics, Business, World, Sports, Entertainment, Travel, Life Style News

solve the problems facing the Koshi corridor transmission line project in Dharan area.According to Nepal Electricity Authority (NEA), a task force has been formed under the coordination of Chief District Officer of Sunsari[96].

As of 2019, Work on Koshi Corridor Transmission Line has resumed after the Nepal Electricity Authority (NEA) has resolved differences with the locals of Dharan Sub-Metropolitan City. According to officials of the power utility, the local unit now has no objection over building transmission line on the route finalized by the NEA[97].

Impact Analysis

Micro Level Impact	Meso Level Impact	Macro Level Impact
Protests by local community, forest officers against the project	No health issues reported	Issues have been reported of non-transparency in selection of bidders
9000 trees cut down	Concern raised about negative effect on tourism activities in the region	No debt issues reported

Stalling of Solu Transmission Corridor Line

On similar lines of halting the progress of Koshi Power Station, now Solu Transmission Corridor which has been financed by EXIM Bank through a $29 million soft loan is facing similar challenges. The project work was obstructed by consumers of Maruwa Harit Community Forest of Katari Municipality-4 of Udaypur district, following demanded compensation for land, route of transmission line and demanded that transmission line tower be shifted elsewhere[98].However, with issues now resolved, the transmission corridor will soon resume which had been inordinately delayed due to COVID-19[99].

Other infrastructure projects supported by India across global south

There are many other countries which are availing the benefits of Indian financing in crucial sectors which have helped global south countries in mitigating socio-economic challenges to a level[100]. Many of these projects are part of Indian LOC's and have been provided at concessional rates[101] and deepen development partnerships between India and global south.

- *Financing Togo's Solar Energy*: Exim Bank of India is providing USD 40 million to the Togolese government for the electrification of 350 localities via solar photovoltaic energy. This project should improve access to electricity in Togo. The funds allocated will go towards the electrification of 350 localities through the installation of off-grid solar systems in 500 schools. The Togolese government will use the new funds to install 12,000 solar street lights in the affected localities. The agriculture sector will benefit from this clean energy project, as it will also allow the acquisition of 2,000 solar-powered irrigation systems. In the area of drinking water, the Togolese government and its partner plan to equip 500 drinking water supply systems (AEP) with solar-powered pumping systems[102].

- *Strengthening Water Supply in Tanzania*: Export-Import Bank of India (Exim Bank) has extended a credit facility of USD 500 million (about Rs 3,542 crore) to Tanzania for water supply projects in the African

96 Taskforce formed to solve problems facing Koshi corridor transmission line | NepalEnergyForum
97 Work resumes in Koshi Corridor - myRepublica - The New York Times Partner, Latest news of Nepal in English, Latest News Articles (nagariknetwork.com)
98 Solu Corridor transmission line project to resume work | NepalEnergyForum
99 Solu corridor transmission line project deadline extended for the fourth time (kathmandupost.com)
100 India's Lines of Credit to Africa in Health: Opportunity to Build a Key Pillar to the Economy | ORF (orfonline.org)
101 India-Africa relations: Partnership, COVID-19 setback and the way forward | ORF (orfonline.org)
102 TOGO: Exim Bank of India Finances the Electrification of 350 Localities Via Solar - World-Energy

country.Exim Bank signed an agreement on May 10, 2018, with the Tanzania government for making available to the latter a Government of India-supported line of credit of USD 500 million for the purpose of financing water supply schemes[103].

- *Scaling Infrastructure in Afghanistan*: India has been helping[104] Afghanistan in its various infrastructure development projects. efforts have included the construction of the Zaranj-Delaram highway, the construction of the Pul-e-Khumri transmission line, construction of the Salma dam, restoration of the telecommunication infrastructure in 11 provinces, construction of the Afghan parliament and the expansion of the television network across the country[105].

- *Developing energy needs of Mongolia:*The Mongol refinery project is the largest project undertaken by the government of India under its Lines of Credit (LoC) programme and is expected to cut some of Mongolia's fuel import dependence. The petrochemical refinery to be built at an approximate cost of $1.25 billion utilising the $1.236 billion line of credit from India[106]. India has also provided LOC for infrastructure development and has stressed for a strategic partnership with the land-locked central Asian nation[107].

- *Upgrading Power Supply in Zimbabwe:*Export-Import Bank of India (Exim Bank) has entered into an agreement dated April 04, 2019 with the Republic of Zimbabwe for making available to the latter a Government of India supported Line of Credit (LoC) of USD 23 million (USD Twenty Three Million only) for the purpose of financing renovation/upgradation of Bulawayo Thermal Power Plant at the revalidated/escalated project cost, in the Republic of Zimbabwe[108].

- *Safeguarding Caribbean nations from climate change:* In order to battle the adverse effect of climate change India extended a grant of USD 150 million as Line of Credit to the member states of the Caribbean Community and Common Market (CARICOM) for climate conservation projects[109]. The Caribbean nations are mostly composed of small islands and are the first to be affected by climate change and global warming[110].

- *Developing infrastructural capacities for connectivity in Maldives*: Export-Import Bank of India (Exim Bank) has entered into an agreement dated October 12, 2020 with the Government of the Republic of Maldives, for making available Line of Credit (LoC) of USD 400 for the purpose of undertaking the Greater Male Connectivity – (Male' to Thilafushi Link) project in the Republic of Maldives[111]. The Greater Male Connectivity Project (GMCP) will be the largest civilian infrastructure project in Maldives, connecting Male with three neighbouring islands- - Villingili, Gulhifalhu and Thilafushi[112]. Apart from this, India is also investing in creating sports infrastructure in the neighboring island nation[113].

- *Financing solar energy in Sri Lanka*: India extended a USD 100 million Line of Credit (LOC) to Sri Lanka for various solar energy projects. This financial help will aid the Lankan government to boost their solar energy sector by ensuring the country's 70 percent power requirements are fulfilled by renewable energy sources by 2030[114]. India on numerous occasions has provided LOC grants to Sri Lanka for various infrastructure development projects[115].

103 Exim Bank extends USD 500 mn loan to Tanzania for water projects | Business Standard News (business-standard.com)
104 In his remarks at the Shanghai Cooperation Organization, Defence Minister Rajnath Singh highlighted that India was involved in 500 development projects in Afghanistan. Rajnath Singh highlights Afghan crisis at SCO, talks about 500 development projects by India | India News (timesnownews.com)
105 India's Development Aid to Afghanistan: Does Afghanistan Need What India Gives? – The Diplomat
106 India helps Mongolia for its first petrochemical refinery (livemint.com)
107 PM Narendra Modi announces $1 billion line of credit for Mongolia | India News - Times of India (indiatimes.com)
108 Reserve Bank of India - Notifications (rbi.org.in)
109 India extends $150 million line of credit to CARICOM nations for climate conservation projects | Business Standard News (business-standard.com)
110 A Caribbean strategy to cope with climate change | United Nations Educational, Scientific and Cultural Organization (unesco.org)
111 Reserve Bank of India - Notifications (rbi.org.in)
112 India to provide $500 million assistance for connectivity project in Maldives - Projects & Tenders - Construction Week Online India
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115 India announces $400 million line of credit for infrastructure in Sri Lanka - The Hindu BusinessLine

Recommendations and Conclusion

India needs to ensure a balanced approach in its development cooperation policies pertaining to infrastructure. With the available data, it can be construed that many projects are facing certain homegrown challenges which need to be tackled through affirmative actions and consensus building with local communities and stakeholders. Many of India's Lines of Credit are not carrying any damages to rights, environment and geographies and thus have proved the government's noble intention to support development projects in the global south. However, bilateral investments by India in infrastructure need to be careful and should involveregulatory oversight under Ministry of External Affairs. However, lack of data confirms that there is very little information available on positives reaped by infrastructure projects. Secondary literature and anecdotal evidence do point to instances, but these are not enough to provide a holistic positive outlay of infrastructure projects in line with extant infrastructure development pushed by United Nations, G7, G20 and BRICS. Possible incorporation measures can be undertaken vis-à-vis utilizing international indicators made available in this report and developing master indicators for LOC, bilateral ad GIA projects.Environment Impact Assessments and various social frameworks need to be in-built into MOU's and project proposals along with them making public. It was observed that many EIA's were not available for scrutiny and reference which made it difficult to ascertain the environmental sensitivity accorded by the project and its managers. Clearly, gender analysis of these projects needs to be conducted and one of the ways can be by including it as an indicator in project proposal developed by beneficiary countries.There is also the lack of transparency, and an instance was available where project was conducted by anti-corruption agency on low bidding processes that involved an Indian firm. These can effectively dealt by using a transparent, digital systems followed around the world which will allow public accessibility right from the project design, construction to operation and management.Similarly, it was felt that certain vested groups were deliberately undertaking stalling measures which hampered bilateral relations. These need to be effectively dealt via strong diplomatic channels since many of the resentments hold sway over public opinion and cause huge losses to India's security, commercial and economic interests.Similarly, compensation measures should be built into development cooperation MoUs and agreements which will insulate against local resentment against the projects. While the research did not point to any livelihood destruction possible effort can be taken up by the government in publicly stating the positive advantages an infrastructure project can provide through India's LOC, bilateral investment etc. A positive development seen from the report is that India is investing in developing clean energy infrastructure but it should not be at the cost of affecting local biodiversity and ecology of the region. Efforts should be made to strengthen collaboration under International Solar Alliance (ISA) and Coalition for Disaster Resilient Infrastructure (CDRI). Finally, there should be a default space for civil society of both countries to be allowed in positive critiquing of projects. Absence of civil society organizations in policy design can counteract bilateral efforts. Already civil society is an active stakeholder in developing infrastructure policies in global governance forums, partnering in bilateral engagement will be helpful in India's development cooperation program. Above all, it is clear India's development cooperation needs to actively support sustainable infrastructure to global south countries in order to position its leadership in the geo-political space.

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(Footnotes)

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