



TRACING THE ORIGINS OF GATI SHAKTI MISSIONS

A BRIEFING PAPER

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Introduction

This briefing paper looks at large linear projects being implemented in India and the influence which international financial institutions are seemingly able to exert on the governments to follow their recommendations through their various research reports, studies, data analytics, country ratings and rankings, etc. This aspect is nothing new or startling, along with financing of the varied projects, IFIs like the World Bank and others have also been extending policy advice to the governments on various sectoral issues from the past several decades, from water and electricity to health and infrastructure. The industrial corridors planned in India such as the Delhi Mumbai Industrial Corridor (DMIC) as well as the newly launched Gati Shakti plan appear to be following similar set of such recommendations from the bank and its allied institutions. The link between the two might not seem obvious to some, but it appears that some of the research and studies that the bank has done on this kind of infrastructure projects could have been an inspiration in the least. The article looks critically at the Web of Corridors report published by the World Bank, and in the context of the above mentioned report and the approach that it propagates attempts to analyse the newly launched National Gati Shakti Master plan.

The Government of India has been making huge allocations for infrastructure projects in its budget in the previous years. In FY (2019 – 20) allocating Rs 4.56 lakh crore (US\$ 63.20 billion) for the sector. Similarly for FY (2021-22) the budget allocations for infrastructure sector have been raised to Rs 7.5 lakh crore. The IFIs have also estimated and analysed the amounts of investments required for infrastructure sector in the country in the next decade or so.

International Finance Corporation (IFC), the private lending arm of the World Bank (WB), estimates that 2018 to 2030 India needs USD 2.2 trillion. A 2019 report by AIIB on infrastructure finance states that AIIB's priority is to mobilise private capital into infrastructure. AIIB's strategy on mobilising private capital for infrastructure (2018) spells out its vision as a bank that will help develop emerging market infrastructure as an asset class.

ADB's report titled Meeting Asia's Infrastructure Needs estimates that as per the baseline estimates the cost to address India's infrastructure deficit is around USD 230 billion per year. However, as non-performing infrastructure assets of previous PPPs proliferated, the private sector's participation in infrastructure dropped from over USD 55 billion (2010) to USD 5 billion (2015). This is associated with the lower viability of many PPP projects due to implementation delays, lower-than-expected revenues, and other risks that had to be borne by investors.

The WB notes that the Government of India estimates that under the 12th Five-Year Plan USD 1 trillion will be needed to bridge India's infrastructure gap. The World Bank has also argued that the "Transport corridors can generate wider economic benefits and costs through their effects on a potentially diverse set of development outcomes, such as economic growth, poverty, jobs, equity, environmental quality, and economic resilience." A paper published in 2018 titled 'Transport Corridors and Their Wider Economic Benefits: A Critical Review of the Literature' by the Bank augmented this argument further.

The paper undertook a quantitative review of the literature that estimates the economic benefits of large transport infrastructure projects and conducted a meta-analysis of 234 estimated impacts found in 78 studies. The paper focused on roads, rails, and waterways because transport corridors based on these modes have clearer potential for economic spillovers. Significantly it showed that, estimated impacts of corridor interventions on economic welfare and equity tend to be beneficial, while they are often detrimental for environmental quality, and possibly also for social inclusion.¹

¹ <https://openknowledge.worldbank.org/bitstream/handle/10986/29212/WPS8302.pdf?sequence=5&isAllowed=y>

The Web of Transport Corridors

On similar lines, in 2018, the World Bank brought out a voluminous report named 'The Web of Transport Corridors in South Asia'. Within the context of the report WEB also is inferred as Wider Economic Benefits. The report discusses the development of large transport infrastructure projects or corridors which are increasingly seen as a way to stimulate regional integration and economic growth. It says that investments in these corridors are made in the hope of creating large economic surpluses that can spread throughout the economy and society. But if the corridors do not generate the expected surpluses, they can become wasteful white elephants²

The report was prepared by a team that included personnel from the World Bank, Japan International Cooperation

Agency (JICA), Department for International Development (DFID) and Asian Development Bank (ADB), and the financial support for the report was received from the Department of Foreign Affairs and Trade, Australia.



What does the Report Say?

To begin with the report highlights that as per a 2013 estimate, from 2014 to 2020 South Asia needs to invest at least US\$1.7 trillion in infrastructure and because of the huge resource cost and the high stakes the national and international agencies need to prioritise proposals for corridor investments, selecting the promising ones, focusing on economic analysis.

The conceptual framework given in the report extends beyond the immediate effects of transport corridors like reducing vehicle operating costs and focuses on the ultimate goals of having a positive impact on socio-economic outcomes like local economic activity, jobs, gender equality, and poverty

² <https://openknowledge.worldbank.org/handle/10986/28882>

reduction. It brings forward the negative impacts such as traffic congestion, regressive redistribution, social exclusion, environmental degradation, and other risks.

The framework in the report considers different markets and their functioning around these corridors such as capital, labor, land, and product markets. The report studies the conditions under which large-scale investments in transport infrastructure can generate positive spillovers on local household income, jobs, equity, and poverty reduction. It further studies potential trade-offs and discusses how to manage them, such as increasing income at the expense of deteriorating environmental quality.

The report focuses on South Asia—not just as one of the world’s most populous and poorest regions—but prominently as a hinge between East Asia, Central Asia, the Middle East, and Europe. This focus derives from a grander vision for South Asia that also presents a challenge to transform the region into an engine of global growth

Definition of Transport Corridors

In this report, roads, rail, or inland waterways are considered as transport corridor investments and are distinct geographically with clearer economic spillovers along their stretches. The report classifies an investment as a transport corridor investment if:

- “The transport investment is being made on a route that is creating, upgrading, or rehabilitating at least 100 linear kilometers, or
- The value of the project at appraisal is greater than US\$50 million and the investment is financing a critical link in the corridor (such as a new bridge or tunnel) that connects at least two economic centers.”

Proposed Framework

The framework proposed by the report builds on elements - Flow, Intervention, Typology and Deed summarised as “FIT-2-Deeds” referring to the Flow of expected results, the Intervention design, and the Typology of impacts and two complementary public interventions which are financing and implementing the corridor. The report defines these as follows -

Flow of expected results - the framework considers five categories of economic benefits: economic welfare, social inclusion, equity, environmental quality, and economic resilience.

Intervention design - interventions need to account for the constraints imposed by initial conditions, including geography, population density, market imperfections, and inequality of opportunity.

Typology of impacts - economic impacts may be beneficial, but environmental impacts may be detrimental. More educated and skilled population groups could benefit more from economic restructuring, take better jobs, and see their incomes grow faster, but others could face harder times.

Better transport connectivity could lead to simultaneous job creation and destruction. This transformation could require massive shifts in occupations.

Financing Strategy

According to the report developing a financing strategy starts by assessing how much of the expected returns from the corridor investment could be monetised and how much could be in the form of social returns of a nonmonetary nature. The monetised portion can be recovered directly, through fees, or indirectly, through taxes. The cost of corridor investments is borne by taxpayers and by fee-paying users of the new infrastructure, but also on who actually benefits from the corridor intervention. This results in the financing strategy to fill the gaps between costs and returns over time.

The report suggests that a financing strategy can consider the following options:

- Increasing tax revenues or reallocating public spending
- Increasing sovereign borrowing from international financial institutions
- Increasing sovereign borrowing from private financial institutions, or through capital markets
- Leveraging public capital to mobilise private equity and debt at the project level, or through special purpose vehicle

Several of these options could include public guarantees and other liabilities including within public private partnerships (PPPs). However, PPPs must be devised and managed realistically and carefully. They require adequate capacity in the public sector usually at the level of the union government to assess which risks can be passed onto the private sector, which ones need to be retained, and how the retained and passed risks are interconnected.

When risk management capacity is low, contingent liabilities from shifted risks may ultimately shrink fiscal space. As a result, countries may be left with incomplete transport infrastructure projects, a large stock of bad loans in the domestic banking system, and additional contingent liabilities resulting from the need to recapitalise troubled systemically important or state-owned banks. Increasing the ability of the government to transfer risk using complex legal and corporate entities can be an integral part of the corridor intervention package, or be treated as a stand-alone governance reform.

Implementation of the Program

The report says that the expertise that needs to be mobilised for project design and implementation extends beyond transport infrastructure and its financing. Mobilising such expertise and effectively

integrating it could be a challenge for both the country governments and the international organisations that support corridor projects at their different stages. Governments and international organisations may want to build on the experience of other institutions that need to quickly mobilise and integrate diverse expertise.

Private Sector Engagement

The report says that engaging the private sector in delivering commercially viable parts of complex corridor projects can help achieve wider economic benefits. However, successfully engaging the private sector during implementation requires strong governance arrangements, sufficient administration capacity, and clear knowledge of private sector preferences. For the private sector to engage, a regular dialogue with the business community at all levels must be established. Without these foundations, the private sector could hold back its investments until uncertainty dissipates.

The success of a transport corridor intervention could depend on how well the private sector and civil society organisations are integrated into project design and implementation. The involvement of industry associations, strategic firms, private financiers, and grassroots organisations can increase the effectiveness of the public resources deployed. It can also pave the way for private investment. Thus it is needed to ensure that the private sector understands the corridor program, takes ownership, and is not overwhelmed by the risks.

Private investment can happen at the level of trunk infrastructure - the main arteries of road, rail, or waterway transport systems. It can also be as feeder roads and rails, irrigation systems for agriculture, and industrial zones. However, to maximise the WEB of economic corridors, private investments at the level of individual firms are as important as direct participation in corridor-related investments. Private investment can help increase the financial viability of corridor projects and the sustainability of public finances. More importantly, private sector confidence is vital to spur economic activity along the corridors and generate the intended positive spillovers.

What are the Concerns?

The report discusses, in detail, the framework which talks about the expected results, the intervention design and the type of impacts in the context of transport corridors. It talks about the viable financing strategy and implementation program while integrating expertise from various sectors and engaging the private sector for delivery of projects. At the same time, it cautions and gives a number of concerns that can have negative impacts while implementing these large infrastructure projects.

The report says that when corridors are expected to generate economic surpluses, it needs to be questioned if there is a fair distribution of benefits across the population and if they are not, corridors risk becoming inequitable investments. It further notes that the end-nodes of a transport corridor may benefit more than the transit regions. It adds that along the corridor, people with different skill endowments may benefit differently, and farming households along the corridor may be at a disadvantage if their land tenure is not secure. Furthermore, some of the proposed corridors could become either white elephant investments or inequitable public investments that benefit narrow groups at the expense of national taxpayers.

The report highlights that not all impacts of transport corridors and their spillovers may be beneficial while improving one development outcome (such as income), these investments could worsen another one (such as environmental quality). The report shares evidence from the Golden Quadrilateral highway system in India where the impact was different across districts depending on the educational level of the population. More educated districts connected to the transport corridor enjoyed both higher income growth and a lower level of air pollution.

The report says that even on a single development outcome (such as jobs), some households and places could win, and others could lose. More educated and skilled people can migrate to obtain better jobs in growing urban areas, while unskilled workers may be left behind in depopulated rural areas. For example, farmers along the Delhi-Mumbai corridor have voiced unhappiness about the change from agriculture to manufacturing and services. It has been argued that this transformation has put them at a disadvantage. This group can benefit where agribusiness is more developed, and farmers can connect to value added chains and diversify their produce.

A corridor intervention can directly affect the final outcomes given other complementary factors such as local product markets, degree of business competition, operation of markets for land, labor, and capital, land use restrictions, the availability of skilled labor, and access to credit.

According to the report, corridors are extremely costly not only in terms of their direct outlays, but in terms of other forgotten development opportunities, such as greater investments in education, or in water and sanitation. Because they require large funding up front, with often commensurately large borrowing, corridor investments can jeopardise fiscal sustainability and macroeconomic stability. Risks are especially high when economic benefits from corridors are highly uncertain and their potential liabilities are badly managed. Therefore, prudence is advisable to make the most from the significant public spending on transport corridor development, and to avoid the risk of white elephant investments.

The report says that corridor investments can lead to trade-offs. The analysis reveals that the most likely trade-offs arising is between income growth and environmental degradation, as well as between rising incomes and worsening social inclusion especially of women.

Gati Shakti Master Plan

The ambitious ‘PM Gati Shakti National Master Plan’ was launched on October 13, 2021 by the Prime Minister of India for multimodal connectivity. It appears to have taken a few hints from the Web of Corridors approach and the proposed model of corridor development. Gati Shakti master plan is supposed to provide a boost to India's infrastructure sector, with an investment of Rs 100 lakh crore. It is a digital platform that will bring together 16 different government institutions and ministries, including Bharatmala, Sagarmala, inland waterways, dry/land ports, UDAN, and others under one platform for integrated planning and coordinated implementation of infrastructure connectivity projects. It is stated that for a balanced and synchronised approach, each ministry and government department will have access to information regarding current and upcoming initiatives. It will bring together several government ministries such as railways, roads and highways, and others under one umbrella.³



It is also claimed that after the national infrastructure pipeline and the national monetisation pipeline, the Gati Shakti Master Plan is the third major step and a huge reform in the direction of infrastructure development in India.

³ <https://www.india.gov.in/spotlight/pm-gati-shakti-national-master-plan-multi-modal-connectivity>

The Union budget of FY 2022 - 23 also put a special emphasis on the PM Gati Shakti National Master Plan as a transformative approach to boost economic growth and sustainable development driven by its seven engines. This includes - Mass Transport, Waterways, Railways, Roads, Airports, Ports, and Logistics Infrastructure. Gati Shakti Plan includes contracts for 4 multimodal logistics parks, 100 cargo terminals and allocation of Rs 1 lakh crore to states. The strategy also covers the National Master Plan aimed at world class modern infrastructure and logistics synergy.

Infrastructure under Gati Shakti

The Rs 100 lakh crore Gati Shakti National Master Plan fixes targets up to 2024-25 for all infrastructure ministries and presently has following targets to be completed by 2024-25:

- By 2024-25, the plan includes 11 industrial corridors, a turnover of Rs 1.7 lakh crore in defence production, 38 electronics manufacturing clusters and 109 pharmaceutical clusters.
- The goal of the Road Transport and Highways Ministry is to build 2 lakh km of national highways, complete 5,590 km of four or six-lane national highways along coastal areas, and connect all state capitals in the northeast with four-lane national highways or two two-lane national highways
- The goal for the railways is to handle 1,600 million tonnes of goods per year by 2024-25, up from 1,210 million tonnes in 2020. It also aims to decongest 51% of the railway network by building additional lines and putting in place two dedicated freight corridors (DFCs)
- By 2024-25, the country's gas pipeline network is expected to be doubled to 34,500 km, with an additional 17,000 km trunk pipeline connecting significant demand and supply centres for industry
- In terms of electricity lines, the overall transmission network is predicted to reach 4.52 lakh circuit km by 2024-25, with renewable energy capacity expected to rise to 225 GW from 87.7 GW currently.



Six Pillars of Gati Shakti Master Plan

Comprehensiveness: A single centralised platform will include all present and planned projects from multiple ministries and departments. Each department will have visibility into the actions of the others, providing important data for project planning and execution.

Prioritisation: Through this, different departments will be able to prioritise their projects through cross-sectoral interactions.

Optimisation: The National Master Plan will assist different ministries in planning for projects after identification of critical gaps. For the transportation of the goods from one place to another, the plan will help in selecting the most optimum route in terms of time and cost.

Synchronisation: Individual ministries and departments often work in silos. There is lack of coordination in planning and implementation of the project resulting in delays. PM Gati Shakti will ensure that the activities of each department, as well as the various layers of governance, are synchronised in a holistic manner by ensuring work coordination between them.

Analytical: The plan will bring all of the data together at one place, using GIS-based spatial planning and analytical tools with 200+ levels to give the executing agency more visibility.

Dynamic: All ministries and departments will be able to visualise, review and monitor the progress of cross-sectoral projects, through the GIS platform, as the satellite imagery will give on-ground progress

periodically and progress of the projects will be updated on a regular basis on the portal. It will help in identifying the vital interventions for enhancing and updating the master plan⁴.

How will Gati Shakti Work?

To carry out Gati Shakti, an integrated multimodal Network Planning Group (NPG) will be entrusted with unified planning and integration of ideas as well as connectivity projects that are not currently included in the master plan and are expected to cost more than Rs 500 crore.

Experts or officials from various stakeholder departments will make up the National Networking Group. The nodal agency will be the Department of Promotion of Industry and Internal Trade.

The group will be responsible for sharing their specific Action Plans for 2020-21 to 2024-25 with each other in order to facilitate network integration, improve optimisation through network modification/expansion/new network creation to avoid duplication of works for holistic development of any region, and reduce logistics costs through micro-plan detailing.⁵

The development of economic zones to boost the ease of doing business in India is one of the key components of the master plan. Some sectors where economic zones proposed are as follows: textile clusters/ mega textile parks, electronic manufacturing clusters, defence corridors, mega food parks and agro-processing centres, fishing clusters/fishing harbors and major fishing landing centers.⁶

A closer look at the sector-wise take outs are as follows:

Sl.No.	Sector	New Capacity Addition
1	Telecommunications (Optical Fibre Network)	35,00,000 km
2	New and Renewable Energy	225 Gigawatt
3	Power Transmission Network	29,300 circuit km
4	Petroleum and Natural Gas (Trunk Pipeline)	17,000 km
5	Shipping (Cargo Capacity)	518 MMTPA
6	Civil Aviation (New Airports)	220

⁴ <https://www.india.gov.in/spotlight/pm-gati-shakti-national-master-plan-multi-modal-connectivity>

⁵ <https://www.indiatimes.com/explainers/news/what-is-gati-shakti-national-master-plan-552002.html>

⁶ <https://static.pib.gov.in/WriteReadData/specificdocs/documents/2021/oct/doc2021102511.pdf>

7	Highways	2,00,000 km
8	Railways (Cargo)	1600 MT

In Summary

As seen in the context of not just the Web of Corridors report from the World Bank but also due to its larger sphere of financing and policy influence, there appears to be a few elements that have been incorporated into the corridor projects like Gati Shakti plan. The Gati Shakti plan talks about prioritisation, optimisation and synchronisation which appear to have taken a cue from the integration of expertise from different sectors concept of the Web of Corridors report. It emphasises that the departments will prioritise their projects through cross-sectoral interactions, and the National Master Plan will assist different ministries in planning for projects and will help in selecting the most optimum route in terms of time and cost.

Adding one more layer of bringing all of the data together at one place, using GIS-based spatial planning and analytical tools. The plan also discusses effective collaboration between state and central government for synchronised implementation of the projects on the ground. This has led to experts and officials from different ministries and departments forming a networking group.

The projects as indicated in the Web of Corridors report are part of a set of road, rail, or waterway routes connecting two nodes. Similar kinds of linear infrastructure projects have been proposed under the Gati Shakti Plan. Hundreds of linear projects have been planned under the Gati Shakti Plan that include railways, highways, power lines, pipelines, ports, etc.

As part of the continued approach from the government, private sector is expected to play an important role in implementing and delivering commercially viable parts of the corridor projects. Private investments are envisaged in roads and highways, railways, waterways, industrial and logistics clusters. However, the conceptualisation and planning of the overall scheme comes from the top and the bottom levels are then expected to implement it. In this regard the role of local governments, government agencies and institutions, local community organisations is reduced to minimal.

Although, the report discusses in detail the framework, implementation and financing strategies for large scale linear infrastructure projects. It also documents a number of concerns that arise due to implementation of these projects on the ground. The report raises concerns about the fair distribution of benefits through these projects and if these are inequitable investments.

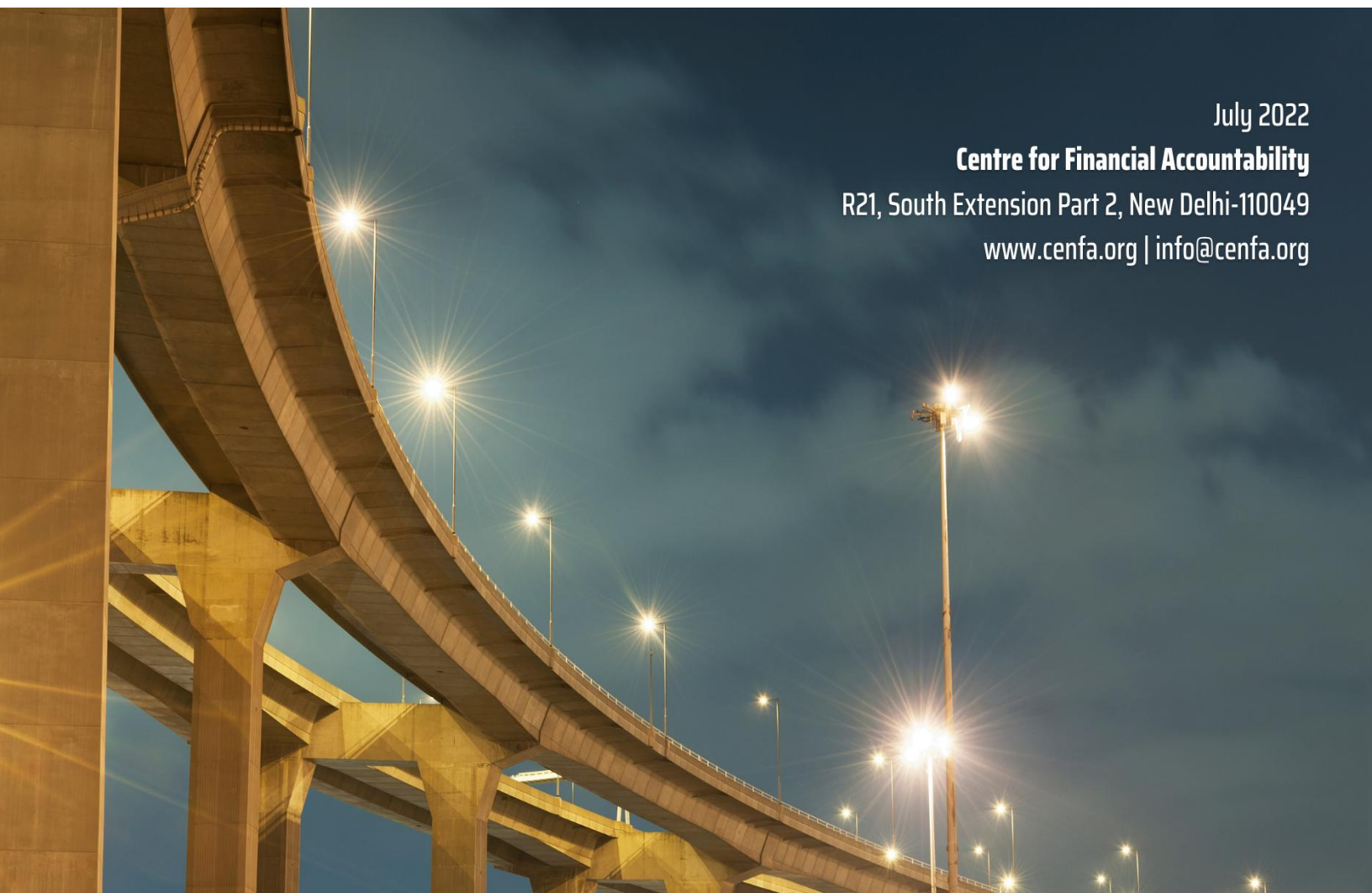
It says that such investments are disadvantageous towards farming households and uneducated sections of the community. These investments might increase incomes of certain educated and skilled workers but could lead to poorer levels of environment quality. However, in the discussion around Gati Shakti Plan the deliberations around these concerns appear to be missing.

The domestic experiences in the recent past related to such development of industrial corridors and special economic zones have not been encouraging, to say the least. These have been faced with varied problems in implementation from land acquisition, dispossession, loss of agricultural land, environment clearances, degradation, deteriorating water availability, financing, etc.

In India's largest industrial corridor, Delhi Mumbai Industrial Corridor these concerns have been raised consistently. On the other hand there have been little public debates on these mega projects and their implications on ecology and local communities.⁷

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⁷ <https://in.boell.org/en/2020/03/19/mega-industrial-infrastructure-projects-and-their-impact-people>



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