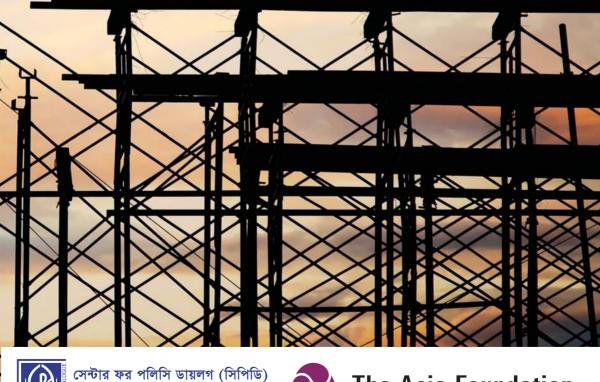
ENSURING GOOD GOVERNANCE IN IMPLEMENTATION OF PUBLIC INFRASTRUCTURE PROJECTS (PIPS)

Mustafizur Rahman Muhammad Nafis Shahriar Farabi





সেন্টার ফর পলিসি ডায়লগ (সিপিডি) Centre for Policy Dialogue (CPD)



The Asia Foundation

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Acronyms

8FYP	8th Five Year Plan
AADT	Average Annual Daily Traffic
ACC	Anti-Corruption Commission
ADP	Annual Development Programme
AIIB	Asian Infrastructure Investment Bank
APA	Annual Performance Agreement
BBA	Bangladesh Bridges Authority
BBIN-MVA	Bangladesh-Bhutan-India-Nepal Motor Vehicles Agreement
BCPCL	Bangladesh-China Power Company Limited
BDN	Blue Dot Network
BIGD	BRAC Institute of Governance and Development
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and
	Economic Cooperation
BPDB	Bangladesh Power Development Board
BUET	Bangladesh University of Engineering and Technology
CBA	Cost-Benefit Analysis
CPTU	Central Procurement Technical Unit
DPP	Development Project Proposal/Proforma
ECNEC	Executive Committee of National Economic Council
e-GP	Electronic Government Procurement
ERR	Economic Rate of Return
GCR	Global Competitiveness Report
GDP	Gross Domestic Product
GED	General Economics Division
GoB	Government of Bangladesh
IFC	International Finance Corporation
IMED	Implementation Monitoring and Evaluation Division
IMF	International Monetary Fund
IRR	Internal Rate of Return
JAICA	Japan International Cooperation Agency
KPIs	Key Performance Indicators
LDC	Least Developed Countries
LGED	Local Government Engineering Department

LGIs	Local Government Institutions
LIC	Local dovernment institutions
LMIC	Lower Middle Income Country
M&E	Monitoring and Evaluation
MDA	-
MoDMR	Ministries, Divisions, and Agencies
	Ministry of Disaster Management and Relief
MoF	Ministry of Finance
MPI MRT	Multidimensional Poverty Index Mass Rapid Transit
MTBF	
	Medium-Term Budgetary Framework
NGOs	Non-Governmental Organizations
NPV	Net Present Value
OCAG	Office of the Comptroller and Auditor General
OECD	Organisation for Economic Co-operation and Development
PBI	Police Bureau of Investigation
PCR	Project Completion Report
PD	Project Director
PDEU	Population Development and Evaluation Unit
PEC	Project Evaluation Committee
PFM	Public Financial Management
PGCB	Power Grid Company of Bangladesh
PIM	Public Investment Management
PIP	Public Infrastructure Project
PMB	Polymer Modified Bitumen
PPA	Public-Private Partnership Authority
PPP	Public Private Partnership
PPR	Public Procurement Rules
PPS	Project Processing, Appraisal and Management System
PSC	Project Scrutiny Committee
RBM&E	Result-Based Monitoring and Evaluation
RHD	Roads and Highways Department
RMF	Road Maintenance Fund
RMS	Research Management System
RNPP	Rooppur Nuclear Power Plant
RPG	Regional Plan for Goa
RTI	Right to Information
RTIPs	Rural Transport Improvement Projects
SASEC	South Asia Subregional Economic Cooperation
SDG	Sustainable Development Goal
SLC	State Level Committee
SSPs	Sector Strategy Papers
ТІ	Transparency International

- TIB Transparency International Bangladesh
- ULBs Urban Local Bodies
- UMIC Upper Middle-Income Country
- UN United Nations
- VPs Village Panchayats
- WB World Bank

Introduction

Economic and social infrastructure is one of the key foundations that drive the development of any country. Broadly speaking, infrastructure is defined as the basic systems and structures and facilities and services which are required for smooth operation of an economy, at various levels. It will not be an exaggeration to state that an economy's growth and sustainability of growth hinge critically on the state of its infrastructure (Ziara & Ayyub, 1996). Indeed, infrastructure system that include basic facilities such as energy and power, telecommunications networks, transportation facilities, water supplies and logistics and social services including health and education is the fulcrum and supporting framework on which the development structure of an economy is founded. However, as will be appreciated, building of the needed infrastructure calls for a significant amount of resources for planning, implementation and maintenance. Accordingly, issues of good value for money in infrastructure-related investment are of critical importance for any country, more particularly for resource-constrained developing countries such as Bangladesh.

One distinctive feature concerning investing in infrastructure is that it involves a high possibility of market failure since many of these are of public goods type by nature and private sector may not necessarily come forward to invest in those i.e., investment in infrastructure will be lower than the optimal level if it is left to market forces alone. The pay-off period for many infrastructure projects tends to be rather long, and also the returns from investment can be uncertain. The public good nature of infrastructure often necessitates governments to come forward to invest in infrastructure, either singly or in partnership with the private sector or with aid money. In varying degrees, in almost all countries, the public sector is significantly involved in investing in infrastructure projects, on its own or as a key partner.

In view of the above, ensuring good governance in the implementation of public infrastructure projects (PIPs) has emerged as a key concern in developing countries such as Bangladesh. And, in this backdrop, there is a need for a suitable framework which would enable concerned stakeholders to assess and monitor the state of good governance in PIP implementation.

This paper is divided into three parts: Chapter 1 is titled Ensuring Good Governance in PIP Implementation in Bangladesh: An Emergent Demand, Chapter 2 is titled A Framework for Good Governance in PIP Implementation in Bangladesh and Chapter 3 is title Recommendations and Final Remarks.

Chapter 1 elaborates on why good governance has emerged as a critically important factor in the context of ensuring good value for money in PIP implementation in Bangladesh. Chapter 2 establishes the need for a suitable framework to assess and monitor state of good governance in Bangladesh by taking the Organisation for Economic Co-operation and Development (OECD) good governance framework as the point of reference. The discussion here elaborates on the ten pillars and 47 indicators in the OECD framework, juxtaposes those in view of state of infrastructure investment in Bangladesh and identifies way and means of adjusting those in the Bangladesh context. Chapter 3 puts forward a set of measures to improve state of governance in PIP implementation in light of the preceding discussions.

CHAPTER 1

Ensuring Good Governance in PIP Implementation In Bangladesh: An Emergent Demand

1.1 The Growing Role of Infrastructure

As was noted, infrastructure is a key driver of development, irrespective of the level of development of an economy. However, for developing economies, particularly low and lower-middle income countries (Bangladesh being an example), absence and presence of adequate infrastructure could mean the difference between remaining underdeveloped and getting the economy ready for the takeoff to the path of sustainable development (Popov, 2019). Ensuring access to both physical and social services is crucial for these countries in moving forward. (Khatiwada, 2009) found that, on average, the need for infrastructure, as a share of GDP, was three times higher in emerging and developing economies than was the case for developed economies. This finding is consistent with the assertion that the less developed a country is, the more it is in need of higher levels of investment in infrastructure.

That infrastructure has a critically important role in economic development of developing countries has been substantiated by many studies. Infrastructure facilitates higher and cost-effective access to goods and services, contributes to raising total factor productivity and serves as an essential input for various development processes. Research works carried out to discern the relationship between infrastructure and economic growth bear this out very strongly and quite explicitly (Mu nnell, 1992). Using panel data for selected countries over the period 1950-1992, Canning & Pedroni (2004) found that infrastructure promotes the cause of long-run economic growth for majority of the studied countries. Other studies (Straub, 2008; Agenor & Moreno-Dodson, 2006; Imran & Niazi, 2011) also found similar results. ADB (2012) found that efficient infrastructure services led to sustained economic growth by creating economic opportunities of various types. Investment in infrastructure projects leads to enhanced productivity, reduced transportation costs, and greater integration with global markets (Jaimurzina & Sanchez, 2017). Indeed, presence of needed infrastructure has emerged as an important component of competitiveness of countries and firms.

For balanced growth, physical and social infrastructure is equally important in developing country contexts. Investment in such infrastructures as health and education has many positive externalities that go beyond the generation of immediate benefits. Investment in ICT infrastructure, for example, generates high "network externality" which induces downstream benefits which may not be immediately captured.¹ Because of public goods nature of many infrastructure, the public sector has to come forward to address the demands in this connection. Indeed, public sector investment in infrastructure in developing country contexts play a crucial role in crowding - in private sector investment.

It should be noted that good quality infrastructure not only leads to higher economic growth, but also ensures inclusive growth when implemented with transparency, accountability and good

¹For instance, a mobile phone will be more valuable to its owner if the number of people owning a mobile phone keeps rising. This type of infrastructure generates relatively higher returns through the network effect (Pradhan et al., 2018).

governance. In its turn, inclusive growth in an economy creates equal opportunities for citizens, leading to poverty alleviation and reduction in income inequality (Ayesha J., n.d.). Mutiria et al. (2020) examined the relationship between infrastructure and inclusive growth in sub-Saharan African countries and found that there is a high positive relationship between these two variables. The study further revealed that infrastructure provides relatively poorer people more benefits than the rich, which implies that infrastructure plays a crucial role in reducing inequality. Seetanah et al., (2009) has studied the impact of infrastructure on poverty alleviation in developing countries by using panel data from 20 developing countries. The authors found a strong relationship between transport and communication infrastructure and poverty alleviation. The reverse causation was also found to hold: increased poverty results in lower funds going for infrastructure development which in turn leads to higher levels of poverty. The criticality of investment for development partners and bilateral donors in the development of infrastructure sector in many low and lower middle income countries.

In LICs and LMICs there is significant infrastructure deficits as manifested in lack of access to good road networks, energy and internet. Infrastructure deficiency and poor quality of infrastructure are reckoned to be among the major reasons for underdevelopment of many developing countries. The 2020 Multidimensional Poverty Index (MPI) data reveals that between 2008 and 2019 about 1.3 billion people across 107 developing countries lived in multidimensional poverty (UNDP, n.d.). According to World Bank (WB) estimates, globally, the COVID 19 pandemic has pushed an additional 97 million people into extreme poverty in 2020; a significant share of these are new poors who are from developing countries (Mahler et al., 2021). Thus, from the perspective of both economic development and 'building back better from the ongoing pandemic', the task of addressing infrastructure deficits has assumed greater importance in the current context.

As will be associated, services and support originating from infrastructure enables societies and economies function efficiently. Not surprisingly, infrastructure lies at the core of efforts to attain the Sustainable Development Goals (SDGs). Indeed, infrastructure has direct and indirect implications for attainment of all the SDGs, starting from poverty alleviation and reducing inequality to education and health services for all to access to clean water, sanitation, and energy. As is known, there is a dedicated Goal that focuses particularly on infrastructure, SDG 9. The overall focus of Goal 9 is to build resilient infrastructure, promote inclusive and sustainable industrialisation, and foster innovation. Targets 9.1, 9.4, and 9.a of SDG 9 emphasise the importance of infrastructure at more micro level. Indeed, infrastructure is related, to varying degrees, to 72 per cent of all the 169 SDG targets (Thacker et al., 2019). Goal 9 has close relation to SDG targets and indicators

			(in billion USD)
Country	Infrastructure investment estimates in 2020	Infrastructure investment required (including Investment to meet SDGs)	Infrastructure Investment Gap
Bangladesh	13.0	21.0	8.0
India	125.0	193.0	68.0
Pakistan	11.0	25.0	14.0
Philippines	14.0	20.0	6.0
Vietnam	16.0	20.0	4.0

Source: Global Infrastructure Outlook (n.d.).

concerning sustainable livelihoods, employment creation, improved health, technology and skills development, food security, climate change and green technologies.

Financing of infrastructure remains a major challenge for the developing countries and infrastructure financing gap in these countries continues are quite significant (Global Infrastructure Outlook, n.d., UNDP, 2018, Woetzel et al., 2017). According to the WB estimates, developing economies need to invest about 4.5 per cent of their GDP to achieve the SDGs associated with infrastructure. Table 1.1 illustrates the significant financing gaps in view of the infrastructure investment needs in the context of developing countries.

1.2 Infrastructure as a Key Driver of Bangladesh's Development

As may be recalled, Bangladesh's development vision over the medium term has been articulated in its Perspective Plan (2021-2041), the Vision 2041 document. The plan specifically aims to eliminate extreme poverty and sets the target for Bangladesh to achieve upper middle-income country (UMIC) status by 2031 and developed country status by 2041. Bangladesh also seeks to achieve a GDP growth rate of 9.9 per cent towards the end of the Vision period and maintain an average GDP growth rate of about more than 9.0 per cent over the next two decades (General Economics Division, GED, 2020b). The perspective plan considers infrastructure as a key driver of the country's sustainable growth and underpins the need for building the required communication and transport infrastructure to achieve the envisaged high rates of GDP growth and poverty reduction and attain the development targets set out in the plan (GED, 2020b).

According to the Global Infrastructure Outlook, in 2025, Bangladesh will need about USD 25.0 billion worth of investment in infrastructure including investment in building the infrastructure to meet the SDGs. There is a gap of USD 10.0 billion when compared to available resource in this regard. Currently, the gap in infrastructure investment is estimated to be about USD 8.0 billion, as presented in Table 1.1. According to the study titled "SDGs Financing Strategy: Bangladesh Perspective" (GED, 2017), between FY2017 and FY2030, Bangladesh was estimated to be needing an additional USD 928.48 billion to implement all the SDGs (USD 798.69 billion for FY2021-FY2030 period). The highest amount of resources was to be needed for implementation of SDG 7, 8 and 9. An additional amount of USD 535.64 billion was estimated to be required to implement the three SDGs during FY2017-FY2030. Bangladesh will need an additional USD 250.2 billion between FY2017 and FY2030, to implement SDG 9; this is about 26.9 per cent of the overall additional funds required to implement all the SDGs (GED, 2017).

Bangladesh's 8th Five Year Plan (8FYP) sets out the target to raise the overall investment rate to 37 per cent of the GDP in FY2025 in view of the projected GDP growth rate of 9.0 per cent. To achieve this, public investment will have to play a defining role. The 8FYP objectives, in alignment with the Vision 2041, puts emphasis on building the 3R (Rail, Road and River) inter-modal connectivity to link the hinterland with the country's ports and for construction of sea ports to connect with international maritime transport corridors. The plan intends to put in place robust inter-district connectivity and deepen inter-regional connectivity with neighbouring countries (GED, 2020a). Port and air traffic capacities are projected to grow at a higher pace to service the needs of the projected high economic growth. The plan also mentions about improving the quality of transport infrastructure. Additionally, the 8 FYP focuses on digital transformation which is expected to contribute to improved quality of life and well-being of citizens. Currently, international bandwidth usage per user in Bangladesh is only 15 kbps while the world average is 76.6 kbps. The plan states that by 2025, Bangladesh will have a highly efficient international connectivity. For this, the government will need to enhance the

transmission capacity to meet the demand for high-speed connectivity and ensure that these are 5G compliant. The 8 FYP further aims to implement the first phase of the Bangladesh Delta Plan (BDP 2100). The overall additional Delta Plan-related investment proposed in the 8FYP amounts to BDT 1940.0 billion in FY2021 prices (GED, 2020a).

The Bangladesh government has allocated BDT 225,324 crore (US\$ 26.5 billion) for the annual development programme (ADP) in the national budget for FY2022. A significant share of the ADP allocation will be disbursed for implementing infrastructure projects including the ten megaprojects which have been prioritised by the government. These megaprojects include Rooppur Nuclear Power Plant (RNPP), Matarbari ultra super critical coal-fired power plant, Dhaka Mass Rapid Transit Development Project (Line 6), Padma Bridge, Padma Bridge Rail Link, Bangabandhu Sheikh Mujib Railway Bridge, Dhaka-Ashulia Elevated Expressway, Expansion and Strengthening of Power System Network under the DPDC area (Planning Commission, 2021)

In the context of Bangladesh, there is no doubt that infrastructure adds significant value to the economy. For instance, The Padma Bridge, which will connect 21 south-western districts of Bangladesh with the capital city Dhaka, is expected to add 1-2 per cent to the country's GDP. People of the 21 south-western districts will have greater access to education, healthcare, and other services. The bridge will be integrated with the Bangladesh-Bhutan-India-Nepal Motor Vehicles Agreement (BBIN-MVA), Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) and South Asia Subregional Economic Cooperation (SASEC) transport network plans. The Mongla seaport is being developed to serve as a regional maritime transport hub. A third sea port at Payra is being built. All these hopefully will deepen regional transport connectivity which will stimulate intraregional trade and investment. Large scale employment and income opportunities are expected to be created thanks to these which will have a positive impact on guality of life and result in significant poverty alleviation. These plans, if properly implemented, will establish a network of multi-modal connectivities including roads, rail and water linkages, complemented by investment in logistics and trade facilitation. All these will contribute to Bangladesh's economic development, and the country's regional integration from a position of strength. Thus, investment in infrastructure is one of the potential drivers of Bangladesh's accelerated and inclusive economic growth.

It is from this vantage point that good governance in implementing the infrastructure projects in general, and PIPs in particular, has assumed such heightened importance at this critical juncture of the Bangladesh's journey in the twenty-first century. Sustainability of Bangladesh's dual graduation - from Low Income Country (LIC) to Lower Middle Income Country (LMIC) (in 2015) and from Least Developed Countries (LDC) to (non-LDC) developing country (scheduled for 2026) – will hinge critically on how successfully Bangladesh is able to address its infrastructure development agenda.

1.3 Ensuring Good governance in PIP implementation: An emergent concern

Good governance in PIP implementation has emerged as a key concern in view of the large number of infrastructure projects that are being implemented in Bangladesh at present. As is well-understood, while good governance has many direct and positive externalities in the form of benefits, lack of it also has equally high cost. Absence of good governance in PIP implementation undermines the efficacy of infrastructure and impacts negatively on potential results and returns on investment. The quality services to be delivered by the concerned infrastructure project suffers as a result. Concerns as regards lack of good governance include weak selection and design of PIPs, cost and time overrun, corruption, lack of proper management, procurement anomalies, questionable

tendering and contracting process, absence of independent monitoring, lack of proper oversight by concerned authorities, and weak transparency and accountability in PIP implementation.

According to National Budget Analysis for FY2021-22 carried out by the CPD (CPD, 2021), the average age of 1,308 investment projects was found to be 3.5 years. Because of repeated extension of the project deadline, average age of 163 projects implemented with considerable delay was found to be more than six years. 31 projects were aged between 10-15 years, on average. A significant share of the ADP allocations were earmarked for carryover projects which were scheduled to be completed earlier. Number of such carryover projects was 622 which accounted for 25.4 per cent of the total ADP allocation; this share was the highest since FY2013, indicating that the number of such projects has been on the rise. Earlier, CPD also conducted a study to find out cost escalation in ADP projects faced a cumulative cost overrun of BDT 56.4 billion which was equivalent to more than 13 per cent of the total cost of all the finished projects in FY2016 (CPD, 2018b). High financial progress in the backdrop of low physical progress is also common and is indicative of lack of good governance in implementing PIPs in Bangladesh.

It needs to be noted that, policymakers in Bangladesh, particularly the Honorable Prime Minister have, from time to time, asked the concerned institutions, authorities and government officials to raise the quality of PIP implementation and deliver the project on time. Box 1 presents some of these statements.

Box 1.1: Selected Quotes (as reported in media)

- "Identify those whose negligence resulted in flawed designs of projects, wasting our time and money. Take legal action against them and apprise me of what action has been taken," Prime Minister was quoted as saying by Planning Minister MA Mannan.
- Expressing dissatisfaction over the inclusion of new components in projects during revisions, the PM said, "It's a dangerous thing. A Project Director (PD) takes up the responsibilities of several projects and stays in Dhaka."
- "It's often seen that a few items [components] get included during revisions of a project," the planning
 minister quoted the PM as saying. "She then asked: 'didn't you [PDs] visit the project sites and see
 these things? Why these things were not raised earlier?'," Mannan said quoting the PM.
- The Planning Minister said at a media briefing, "The prime minister has expressed dissatisfaction over the slow pace in development work, and has asked all concerned to expedite it."
- Planning Minister said the lack of coordination has come to Prime Minister's notice. "She repeatedly asked different departments to strengthen coordination."
- "Once these (mega) projects are implemented, the face of our economy will change. We're taking loans from domestic and foreign sources. However, we have a careful eye so that they do not become a burden," Prime Minister said in an address to the nation on the eve of Pohela Boishakh, the Bangla New Year's Day.

Source: Collected from various newspapers

The Implementation Monitoring and Evaluation Division (IMED) of the Bangladesh Planning Commission is mandated to monitor the implementation and progress, and assess quality of implementation of the PIPs. In its various reports, the IMED has identified a number of challenges facing PIP implementation which speaks of the widely prevalent poor state of management and implementation of PIPs in Bangladesh. The reports testify to lack of good governance in the various

stages of PIP implementation in the country. This is having adverse impact on the quality and timeliness of project implementation and undermining resource efficiency, delivery of expected services and project outcomes and impacts.² Some of the key challenges and deficits mentioned in IMED reports have been presented in Box 1.2.

Box 1.2: Implementation challenges reported in successive IMED documents

Project preparation and approval phase

- · Not taking into account stakeholders' preferences and priorities when projects are selected
- · Not following a comprehensive work plan when projects are implemented
- Weak quality of feasibility study
- Not taking primary approval for land acquisition from concerned District administration prior to selecting the project
- · Not following financial ceiling stated in the
- Medium-Term Budgetary Framework (MTBF) while selecting projects
- Not storing baseline data in connection with the concerned project
- · Not enacting the exit plan of the project properly

Project implementation phase

- Not implementing project according to the work and procurement plan mentioned in the Development Project Proposal (DPP)
- · Coordination failure involving project implementation agencies at the field level
- Absence of transparency and accountability in project implementation
- Lack of regularity in holding PIC and Steering committee meetings
- Awarding contracts to contracting agencies beyond implementation capacity which leads to time overrun of projects
- · Frequent request on the part of concerned contracting agencies to extend project completion timeline
- Frequent change of PDs
- · PDs vested with the responsibility of overseeing multiple projects
- Post implementation phase of the project
- Not submitting Project Completion Report (PCR) to the IMED within the stipulated three months of project completion
- Lack of adequate budgetary allocation for maintenance of the project after the project has been completed
- Lack of proper preservation and supervision of the infrastructure and related equipments used in a project
- Absence of the required skilled human resources for managing PIP implementation which leads to signing of long term service agreements with foreign contractors

Source: Based on IMED (2021)

²Transparency International (TI), in January 2021, stated that according to the Global Corruption Perception Index 2020, Bangladesh was ranked 146th among 180 countries. Indeed, there was no improvement in Bangladesh's ranking for the last three years, with the score also remaining unchanged (Transparency International, 2021).

Top Three Countries					
Country	Score (out of 100)	Rank (out of 141 countries)			
Singapore	95.4	1			
Netherlands	94.3	2			
Hong Kong SAR	94.0	3			
South Asian Countries					
Country	Score (out of 100)	Rank (out of 141 countries)			
Sri Lanka	69.2	61			
India	68.1	70			
Pakistan	55.6	105			
Nepal	51.8	112			
Bangladesh	51.1	114			

Table 1.2: Stylised Data on (Quality of Infrastructure
-------------------------------	---------------------------

Source: Global Competitiveness Report (GCR) 2019, World Economic Forum

Note: The Infrastructure pillar of the Global Competitiveness Index 4.0 assesses the quality of transport infrastructure (road, rail, water and air) and utility infrastructure (electricity and water).

Bangladesh's global ranking as stated in Table 1.2 reflects the poor quality of infrastructure in the country and the widely prevalent weak state and practice of good governance in PIP implementation. As is known, the Global Competitiveness Index (GCI) considers infrastructure as a key pillar of assessment as regards the competitiveness scenario prevailing in a country. The infrastructure pillar takes into account the state of transport as also utility infrastructure of a country. According to the GCI 2019 report, Bangladesh ranks at the bottom even among the South Asian countries, with a score of 51.1 out of 100; it was ranked 114th out of 141 countries globally. As Table 1.3 indicates, the top 3 countries as per the infrastructure pillar are Singapore, Netherlands and Hong Kong. Among the South Asian countries Sri Lanka received the highest score for this pillar.

		Тс	op 3 Countries				
Country		Score (out of 7)			Rank		
	2019	2015-16	2010-11	2019 (out of 141 countries)	2015-16 (out of 140 countries)	2010-11 (out of 139 countries)	
Singapore	6.5	6.2	6.6	1	3	1	
Netherlands	6.4	6.2	5.4	2	2	27	
Hong Kong SAR	6.3	6.2	6.5	3	5	4	
		South	n Asian Count	ries			
Country		Score (out of 7)		Rank		
	2019	2015-16	2010-11	2019 (out of 141 countries)	2015-16 (out of 140 countries)	2010-11 (out of 139 countries)	
India	4.5	4.1	3.3	48	61	90	
Pakistan	4.0	3.8	3.8	67	77	72	
Sri Lanka	3.9	5.2	4.2	76	27	55	
Bangladesh	3.2	2.9	3.0	108	113	100	
Nepal	2.9	2.8	2.3	120	117	130	

 Table 1.3: Stylised Data on Quality of Road Infrastructure

Source: GCR (2019, 2015-16, 2010-11), World Economic Forum

Quality of road infrastructure is one of the sub-indicators of the infrastructure indicator. According to GCR 2019, Bangladesh ranked 108th out of 141 countries globally according to this indicator, the lowest is South Asia barring Nepal. Indeed, Bangladesh's score has been hovering around 3 (out of 7) over the last ten years which also speaks of lack of any visible improvement over the past years.

It goes without saying, in the backdrop of the above-mentioned scenario, that good governance in PIP implementation ought to be given the highest priority by Bangladesh's policymakers. This is crucially important to ensure good value for the significant resources being spent at present on infrastructure.

1.4 Good governance in PIP implementation and the OECD framework

Infrastructure governance has the objective to ensure that right projects are implemented in a costefficient and timely manner, generates the expected outcomes and impacts, and implemented in a way that is trusted by citizens, users and beneficiaries (OECD, 2015a). It concerns accountability, transparency and efficiency of government agencies and involved institutions (CEF, 2019). At both national and sub-national levels, the quality of public governance is found to be highly correlated with quality of public investment and delivery (OECD, 2013). Managing public infrastructure efficiently, throughout its life cycle, is expected to generate substantial benefits, both upstream and downstream. Good governance has the potential to drive projects in the right direction even when there are uncertainties, and implementation could be impacted by unexpected events (Miller et al., 2001). Strengthening PIP implementation by taking advantage of human resources developed at well-equipped public investment management institutions is found to lead to higher productivity and better outcomes (IMF, 2015). Improvements in infrastructure implementation management generate substantial savings and significantly enhance infrastructure productivity (OECD, 2013; IMF, 2015).

The Infrastructure Transparency Initiative also known as "CoST"³ works to improve accountability and transparency in implementing public infrastructure. Case studies conducted in several countries as part of this initiative found that ensuring accountability and transparency leads to better outcomes as was evidenced from other case studies as well. The CoST study (2015) found that, in Ukraine, up to half of the budget in the road transport sector was lost due to unethical financial management. In contrast, by following better management practices, the cost of building road infrastructure could be brought down significantly (World Bank, 2020b). A study conducted in Colombia, in 2017, by Colombian Society of Engineers (SCI), revealed that at the regional level, 56 per cent of the total government contracts were awarded to the sole bidder which was indicative of widespread corruption. On the other hand, higher competition in bidding led to significant costsaving by governments (World Bank, 2020b).

As can be seen from Table 1.4, per -kilometer cost of construction of four-lane urban arterial road (including traffic-controlled intersections) is the highest in Bangladesh when compared to some of the other developing countries: it is 4.4 times that of India, 3.7 times that of Turkey, 1.6 times that of China and 2.1 times that of Pakistan. The high cost of road construction in Bangladesh is also corroborated by research findings of BUET. According to BUET estimates, per kilometer expenditure for 4 lane highway in Bangladesh should be between BDT 12-15 crore (USD 1.41-1.76 million). However, the actual expenditure is way above this. Per kilometer cost of upgrading DHK-

³CoST is the leading global initiative which aims to improve accountability and transparency in public infrastructure implementation. It works with governments, civil societies and industries to encourage validation, disclosure and interpretation of data originating from implementation of public infrastructure projects (World Bank, n.d.).

Country	Estimated road construction cost per km (in million USD)			
Bangladesh	6.35			
China	3.90			
India	1.45			
Pakistan	2.95			
Indonesia	2.15			
Philippines	1.15			
Turkey	1.70			

Table 1.4: Construction Costs of Per-Kilometer Four-Lane Urban Arterial Road

Source: Asian Infrastructure Investment Bank (AIIB) (2019)

Note: Costs include those related to traffic-controlled intersections

CTG highway to a 4 lane turned out to be BDT 21 crore (USD 2.47 million). Same was the case for Joydebpur-Mymensingh 4 lane highway. Per kilometer cost of construction of Rangpur-Hatkumrul 4 lane was BDT 55 crore (USD 6.47 million). Per kilometer cost of the DHK-Sylhet highway, which is currently under construction, has been estimated to be BDT 60 crore (USD 7.06 million) (Rahman, A. 2020).

Better governance will generate good dividends in the form of better quality of PIPs, higher economic and financial returns on investment, and relatively low price of services to be provided.

In view of the myriads of challenges that afflict PIP implementation, and keeping in the perspective the potential significant benefits that could accrue from addressing and mitigating the attendant concerns, OECD has developed an infrastructure governance framework towards better and cost-effective economic management. The framework draws on the experience of implementing development projects in a wide range of cross-country settings.

The OECD framework has ten pillars. The pillars focus on how governments should plan, interrogate, prioritise, budget, deliver, manage, and assess in view of investing in infrastructure. The framework is an excellent tool which can be customised and adjusted to assess the quality of a country's infrastructure governance. The framework also provides insights on how to improve the various concerned measures towards better governance in PIP implementation in concrete country settings. It is proposed in view of the preceding discussion that the OECD framework could serve as an excellent reference point from the perspective of ensuring good governance in PIP implementation in Bangladesh.

The ten pillars of the OECD framework are:

- $\sqrt{}$ Develop a strategic vision for infrastructure
- $\sqrt{}$ Manage threats to integrity
- \checkmark Choose how to deliver infrastructure
- $\sqrt{}$ Ensure good regulatory design
- $\sqrt{}$ Integrate a consultation process
- $\sqrt{}$ Co-ordinate infrastructure policy across levels of govt.
- $\sqrt{}$ Guard affordability and value for money
- $\sqrt{}$ Generate, analyse and disclose useful data

- $\sqrt{}$ Make sure the asset performs throughout its life
- $\sqrt{}$ Public infrastructure needs to be resilient

Each of the ten pillars has three elements. These are: (i) why the pillar is important; (ii) what are the key policy questions; and (iii) what are indicators to assess the state of the pillar. Thus, the framework presents justification for the pillars, policy questions associated with the pillar and indictors to assess quality of implementation and monitoring of progress in connection with the investment.

Indeed, there are also other frameworks to certify infrastructure projects. For example, the Blue Dot Network (BDN) is a multi-stakeholder initiative launched by the US, Japan, and Australia to assess and certify infrastructure development projects around the world covering such areas as financial transparency, environmental sustainability, and economic development impact, with the goal of attracting private capital to invest overseas. The network introduced a global infrastructure certification framework. The framework includes issues such as: Maximizing the positive impact of infrastructure to achieve sustainable growth and development; Integrating Environmental Considerations in Infrastructure Investments; Integrating Social Considerations in Infrastructure Investment; Building Resilience against Natural Disasters and Other Risks; Strengthening Infrastructure Governance. This framework can also be used in tandem with the OECD framework to assess the state of PIP implementation in Bangladesh.

However, a survey of such frameworks shows that in the OECD framework is the most comprehensive one that allows assessment of state of governance in PIP implementation in both developed and developing country contexts.

CHAPTER 2

A Framework for Good Governance in PIP Implementation in Bangladesh

2.1 State of Governance in PIP Implementation in Bangladesh: A critical reflection

The OECD Framework for Infrastructure Governance has 10 pillars with each pillar posing three important policy questions and a metrics for assessing progress in reference to a number of benchmark indicators (OECD, 2017). These pillars and the associated indicators together are powerful tools to monitor and assess the quality of implementation of infrastructure from various perspectives and dimensions. By using the OECD framework as a point of reference, an attempt has been made in this section to assess the state of governance in the context of PIP implementation in Bangladesh. The objective is to draw useful insights and propose how the OECD framework can be made to work for better governance in PIP implementation in the particular context of Bangladesh. Thus, the section elaborates on the pillars and indicators, assesses the scenario in Bangladesh in view of this, documents the various measures taken by concerned authorities in Bangladesh towards improvement in this connection, and comes up with suggestions as regards what more should be done to improve the state of governance in PIP implementation in Bangladesh.

Pillar 1: Develop a strategic vision for infrastructure

Pillar 1 relates to the importance of appropriate strategic planning as a necessary pre-condition towards successful implementation of projects. This is critically important for generating good value for money invested in various projects and from the perspective of delivering the expected outputs, outcomes and impacts. The pillar emphasises the need for a long-term strategic vision as part of which the concerned infrastructure has been designed. The pillar mentions about justification of the investment to be made, identification of the essential components of the project, state of coordination among relevant authorities, involved tradeoffs, and how the activities will be prioritised (OECD, 2017). Phasing and sequencing are the key considerations here. The pillar's focus is crucially important since large scale infrastructure projects ought to be seen as part of the broader strategic vision as regards development of a country. Thus, looking at particular infrastructure project from the lens of overall medium to long term framework of the development vision is the focus of Pillar 1 (OECD, 2015a, OECD, 2017).

Indicator 1.1 of the OECD framework asks whether there is a long-term strategic plan regarding development of the country's infrastructure and whether it aligns well with long term development vision of the country. In this backdrop, it may be noted that the Bangladesh Government does have a long- term development vision which has been articulated in the "Perspective Plan 2021-2041".⁴ The plan outlines the vision of transitioning Bangladesh into a high income country by 2041. The document considers infrastructure as a key driver of accelerated and sustainable growth of Bangladesh to attain this vision (GED, 2020b). The strategy has put emphasis on the development of an efficient and low-cost transport network to achieve the targets of accelerated growth and poverty reduction. Improvement of inter-modal transport balance in the country and introduction of

⁴The Bangladesh Delta Plan 2100 provides a longer-term development vision for the country.

electrical Urban Mass Transit/Metro Rail Network have been mentioned in this context. The vision was elaborated further in some detail in the Eighth Five Year Plan (8th FYP: FY2021-FY2025) of Bangladesh and the subsequent ADPs. The Vision 2041 document and the 8th FYP both mention consolidation and upgradation of the National Highway Networks as an important component of overall development strategy. In view of this, the Roads and Highways Department (RHD) was asked to prepare a mega plan to construct eight national expressways by 2041. The network was also expected to consolidate regional transport connectivity; work on this has already been initiated. To recall, the idea of expressway networks was conceptualised earlier by the RHD, in 2018, with support of the Public-Private Partnership Authority (PPA). However, the detailed mega plan is yet to be drawn up (Sultana, 2020). An integrated planning needs to be put in place in alignment with the medium to long term strategic vision. While regional highways are being built at a higher pace, construction of country's national highways is falling behind significantly. Without proper sequencing of national and regional highways, the benefits of the latter however, will remain limited. There are also no ring roads to maximise the benefits of transport linkages, this leads to traffic jams and delays (Hoque, S., 2022). There are also incidences of structural design failures in case of PIPs. Mayor Hanif Flyover is a case in point. A long tailback is a common scenario as far as this flyover is concerned- the road on both sides of the flyover is a multi-lane one, while the flyover itself has only one and half lane (the other half lane is dedicated for motor cycles). As would be expected, the flyover creates a bottleneck as vehicles approach from both the sides. Structural design failure is also evident for majority of the U-loops which have been constructed in the country.

The need for more effective coordination⁵ in implementing the PIPs as part of the broader development vision is emerging as a priority particularly in view of the increasing number of PIPs which is being implemented by the Government of Bangladesh (GoB) at present. These include several mega projects which by nature are highly complex and challenging from the point of view of implementation. Timely implementation of these PIPs is important since, to a large extent, private sector investment decisions are contingent on implementation of these projects.

Coordination is crucially important in the context of PIP implementation. To recall, the GoB has allocated BDT 51,321 crore for 14 mega projects, about 22.8 per cent of the total allocation for the ongoing ADP FY2021-22. While 8 out of 14 megaprojects were scheduled to be completed in FY2022, the budgetary allocations for some of these were found to be insufficient to successfully complete the projects within the projected timeframe (CPD, 2021). IMED reported that the financial ceiling set out in the MTBF was not followed in case of some of the projects (IMED, 2021a). Regrettably, the trend of including unapproved projects in the ADP, which were often included without carrying out any feasibility study, has continued to remain persistent. As it stands, even a large number of approved projects in the ADP are also not backed by appropriate feasibility studies.⁶ One of the main reasons why the feasibility studies fail to pass the mark is that these are carried out hurriedly and benefits and returns are inflated to ensure speedy approval at the meetings of the Executive Committee of National Economic Council (ECNEC). This often results in sub-optimal allocation of resources, poor implementation, high final costs,⁷ and time overrun (Rahman, 2021). The Public Financial Management (PFM) Action Plan (2018-23) concedes that

⁵The different ministries propose their own projects, however, integration of all projects, their phasing and sequencing, is often missing. Indeed, this task is the responsibility of the Planning Commission.

⁶The feasibility study conducted by Japan International Cooperation Agency (JAICA) for the Mass Rapid Transit (MRT) Line 6 has been criticised on the ground that it has failed to properly take into account in the design the required structure and associated facilities that will be needed for the metro rail stations. The feasibility study titled "Dhaka Urban Transport Network Development Study" was carried out way back in 2011 (Rahman, 2022)

⁷The initial cost of the Mayor Hanif Flyover project was about BDT 350 crore which escalated to BDT 2,300 crore when it was finally inaugurated in 2013.

the link and coordination between the five year plans and projects proposed in ADPs are rather weak. The plan asks that the strategic linkages between the ADP, FYP and the MTBF needs to be strengthened⁸ (MoF, 2018).

Coordination and sequencing of the PIPs in view of the emerging demands of the economy is important since lack of this raises costs and have negative implications in terms of results. The energy projects are a case in point. A lack of proper demand forecasting has resulted in excess capacity in the energy sector and the government is paying a large amount of money for maintenance of a number of power plants supply from which can not be optimally used at present. For example, the Bangladesh Power Development Board (BPDB) has been paying BDT 100 crore as capacity charge every month to the "Bangladesh-China Power Company Limited (BCPCL)" for Bangladesh's largest power plant "Payra 1320 MW Thermal Power Plant". However, the plant remains partially idle. The reason is absence of proper, forward-looking planning and lack of sequencing (Rahman, 2021). The port sector of the country could also face similar type of problem. There are six ongoing and planned container handling capacity building projects which are to be commissioned soon. According to the International Finance Corporation (IFC), there will be a surplus in the country's container handling capacity after 2026. According to the IFC, annual container handling capacity is projected to increase to 9.0 million TEUs by 2030, whereas the demand for container handling will be about 7.0 million TEUs. This would mean that there will soon be a surplus of 25 percent in the container handling capacity against the forecasted demand at the point (Rahman, S. 2021a). The other case relates to the railway sector. For example, the Bangladesh Railway converted the Laksham-Chinki and Tongi-Bhairab rail links to double line from single line with a total cost of about BDT 4,000 crore. The conversion work of the former line was finished in 2015 while the Tongi-Bhairab railway conversion work was completed in 2018. Within a short span of time, following the completion of the work, the Rail Ministry decided to scrap the meter gauge line and took the decision to construct dual gauge rail line. Of these, the meter gauge railway of Laksam-Chinki alone will cost more than BDT 15,000 crore. (Rahman, S. 2021b).

The practice of spending a high amount of budget in the last quarter of the fiscal year is widely prevalent in Bangladesh; indeed budget execution tends to remain very low in the first three quarters of a fiscal year. This raises concerns as regards the quality of spending and is indicative of lack of proper planning. For instance, during FY 2006-15, on average 39.3 per cent of the total ADP expenditure was made in the fourth quarter (April- June) of the fiscal year (CPD, 2016). A total of BDT 69,000 crore (about one-third of the total ADP) was spent in the last two months of FY2021.

A well-developed strategic framework for public investment is absent which undermines sequence of implementation of the PIPs. This has implications for meeting the requirements of indicator 1.2⁹ of the OECD framework.

Indicator 1.4 concerns the presence of dedicated processes and units devoted to monitoring, implementation and assessing quality of delivery of outputs of projects. In Bangladesh, the IMED is mandated to monitor the implementation of ADP projects, evaluate completed projects, and ensure accountability, transparency, and efficiency of the government's procurement process. The IMED publishes monthly, quarterly, annual progress reports on implementation of the ADP projects. It also publishes impact evaluation reports of different projects on a regular basis (IMED, n.d.). IMED

⁸The Action Plan mentions that the Sector Strategy Papers (SSPs) will work as a "bridge" between national level plans and plans of Ministries, Divisions, and Agencies (MDA) (MoF, 2018).

⁹OECD Framework indicator 1.2: Strategic frameworks for public investment implementation.

undertakes review of select set of projects on their own and also hires independent organisations and consultants to review some of the other projects. While involvement of outside professionals is necessary given the complexities of projects involved, strengthening of IMED's own institutional capacity to undertake project audit of reliable quality should not be overlooked. Indeed, IMED lacks the needed human resources and logistics capacities to monitor and evaluate the large number of projects included in the ADP (IMED, 2020a). While there are 338 posts in the IMED, as many as 123 of these were vacant in FY 2020-21 (IMED, 2021b). The PFM Action plan 2018-23 also points out the need for strengthening monitoring skills and data analytics capacity of the unit (MoF, 2018). Outsourced organisations and consultants often come up with reports of poor quality. Fund constraints and lack of enough time for completing the consultancy work are also cited as reasons. The monitoring and evaluation unit of the IMED at present sends the project materials (for example, asphalt, gravel, raw minerals etc.) to different labs in the country for testing purpose. Oftentimes, these labs don't provide reports on time and there are concerns as regards the quality of the reports prepared. Establishing an international standard inspection lab at the IMED itself for inspection of project materials will accelerate the evaluation process and help with quality assurance. The IMED is currently thinking along this link.

IMED is need of a technical wing. The officials of the IMED often lack the needed project-specific knowledge and skills. Concerned IMED officials need indepth training on an ongoing basis in view of the emergent demands of the PIP implementation plans of the Ministries. Expertise to implement large scale development projects must also be developed in concerned Ministries.

IMED has recently taken an initiative that obligates all PDs to prepare an implementation matrix when they ask for any time extension. This will hopefully enhance accountability on the part of PDs and will make them responsible to follow the implementation plan as per the specific matrix. As of now, this is an initiative taken by the IMED on a voluntary basis. This should be brought within the mandate of the IMED through an official order.

Currently, all activities associated with the monitoring and evaluation (M&E) process are highly centralised and carried out by the IMED office at the Planning ministry. The IMED has no office at the Divisional level which impedes the M&E process significantly. Establishment of IMED offices at each division will facilitate frequent inspection of development projects and ensure more detailed and informed evaluation reports. To promote the cause of transparency and accountability and also to facilitate dissemination of, and access to information, IMED may also think of setting up a media wing. In addition to the aforesaid steps, the M&E division should also take an initiative to establish a full-fledged training institution on Project Management.

The PFM Action Plan (2018-23) aims to digitise project implementation monitoring of the IMED; at present monitoring¹⁰ and evaluation work is conducted manually (MoF, 2018). Digitisation of the IMED work should be completed as expeditiously as possible which is critically important to raising its institutional efficiency.

As may be noted in this connection, in view of the very low levels of ADP implementation in FY2021-22, the Finance division of the Ministry of Finance has circulated a letter to all Ministries and Divisions asking that they submit a report on their respective plans for implementing the allocated

¹⁰The Ministry of Planning has recently launched two software programmes under the 'Strengthening Digital Processing of Projects (SDPP)' to improve monitoring of project implementation. These are: Project Processing, Appraisal and Management System (PPS), and Research Management System (RMS). These softwares are geared to monitoring and evaluating PIP implementation related activities through online management.

project budget by September 15 of each year. The letter also asked that a progress report be submitted every three months which then could be used to provide inputs for the Quarterly Report that the Finance Minister is required to place before the Parliament. However, it may be noted that while such letters are issued every year by the Finance Division on a regular basis, most of the ministries tend to ignore those. Although there is mention of awards for those Ministries which comply with what the IMED asks for, nothing is said about sanctions of concerned officials who fail to do so (Prothom Alo, 2021a).

IMED also issues letters to the ministries asking them to address the issues of slow implementation of projects. IMED asks ministries to address land acquisition¹¹ related aspects of a project before preparing any project implementation plan. This is also often ignored. This results in time and cost overrun. It is also mandatory to receive clearance from the Department of Environment before a project is approved; however, this is not always followed (Prothom Alo, 2022). There should a land use master plan in place which will help implementing agencies to plan properly for PIP implementation.¹²

A culture of project revision has become ingrained in Bangladesh. Even the Prime Minister has repeatedly expressed her discontent at frequent revision of projects and the attendant cost escalation.

Absence of detailed strategic framework for PIP implementation, lax coordination between implementing and monitoring agencies and lack of needed human resources are key concerns in view of the needs of meeting Pillar1 requirements. These deficits need to be addressed properly in light of the requirements stated in Pillar 1. India may serve as a good case study for long term strategic plan for PIP implementation, with emphasis on high level coordination among concerned agencies and integration with long term development strategy of the country. India has developed a Master Plan called "Gati Shakti" which envisages an investment of about Rs 100 lakh crore (US\$1.3 billion). The master plan aims to offer multi-modal connectivity with over 1,200 industrial clusters in India. The plan focuses on optimising infrastructure to improve efficiency and competitiveness of the economy. Existing flagship schemes of different ministries such as Bharatmala, Sagarmala and Uddan will be included in an integrated manner within the ambit of the master plan (Dash, 2021). The 8FYP of Bangladesh also envisages to set up 3R (Rail, Road and Riverine) intermodal connectivity in order to support linkage with hinterland. All ports of Bangladesh are to be connected as part of this plan. However, this integrated approach is yet to be materialised.

Pillar 1 thus draws attention to timely and coordinated implementation of PIPs, an area which is highly wanting in Bangladesh as was noted in Section A. Mismatch between building of roads and bridges, and road networks and establishment of industrial hubs and zones are relevant examples that may be cited in this connection. Bangladesh's regional integration and connectivity with the Asian transport corridors will suffer if integration of infrastructure initiatives is not addressed. Addressing this is also necessary. This is to attain the aspirations set out in the Vision 2041 document.

¹¹A key concern regarding land acquisition relate to the PIPs such as roads not being built keeping in mind the future needs of extension. As land is not acquired beforehand, the costs associated with expansion increases significantly when decision is taken in this regard. Indeed, the existence of the road itself leads to cost escalation at the time of subsequent extension. In many instances, the non-title holders of an acquired land, even after getting compensated, return and try to settle in the acquired land. Eviction often is a time-consuming process. This often delays project implementation.

¹²A total of 28 projects have been revised in FY2021-22, which accounts for BDT 25,436 crore. An additional 3 projects have been also tabled for revision, the additional cost will rise to BDT 29,471 crore if these projects get approved. This cost hike could make another Padma bridge which has an estimated cost of BDT 30,192 crore (Byron and Habib, 2022).

Pillar 2: Manage threats to integrity

Infrastructure projects tend to be highly vulnerable to corruption due the significantly large amount of resources involved, scale and complexity of the projects, interest of vested groups, political pressure and discretionary power of concerned officials who make investment related decisions (OECD, 2017). Pillar 2 of the OECD framework focuses on managing threats to integrity in implementing projects. The pillar highlights the importance of mitigating the likelihood of rent seeking, at various stages of PIP implementation and puts emphasis on putting in place adequate measures to forestall likelihood of corrupt practices.

Maintaining integrity in PIP implementation is of high relevance to Bangladesh particularly because of the amount of resources involved and the frequent allegations of misuse of resources and corruption raised by concerned stakeholders. The anomalies which was reported in the media in view of the expenditures in the RNPP is a widely known case in this regard (The Daily Star, 2020). The Anti-Corruption Commission (ACC) has recently unearthed an incidence of corruption allegation amounting to BDT 78 crore involving three development projects.¹³ A syndicate was involved in these cases which included 44 land related officials, police personnel and local ruling party people.

Indicator 2.2 asks if there are systems of internal controls and financial reporting to monitor and identify irregularities. It needs to be mentioned that the Bangladesh government did adopt a number of laws to deal with various forms of corruption. These include the followings: Anti-Corruption Commission Act, 2004; Public Procurement Rules 2008; Public Finance and Budget Management Act, 2009; Prevention of Money Laundering Act, 2012; Competition Act, 2012, the Right to Information Act, 2009, and the Whistleblower Protection Act 2011.

The Right to Information Act, 2009 was enacted by the Bangladesh government in 2009 to ensure transparency, accountability and establish good governance in the workings of the public sector. Except for information regarding national security, the government is committed to provide any information sought by the citizens under this act. However, according to the WB's "Bangladesh Right to Information (RTI) Survey 2019", journalists requesting for information were often denied the same on grounds of "national security". When the information was provided, this took a lot of time (World Bank, 2020c; Hossain, 2020). In many cases, whether a certain information will be shared, hinged on the attitude of the concerned official. To recall, CPD had requested for information from the IMED under the RTI Act as regards DPP of the project, financial progress, physical progress, cost overrun and time overrun concerning the "Joydebpur-Mymensingh Road Improvement Project". The required information was provided within the stipulated time frame stated in the act. However, the DPP of the project was not shared. Since the DPPs contain many important information including the value for money analysis, year-wise allocation of funds, item-wise cost estimate etc., this information can't be accessed by the interested party when DPPs are not shared.

There should be adequate capacity building of media professionals and journalists so that they are able to make the best use of the RTI Act. Often, because of their lack of proper knowledge as regards ways of taking full advantage of the Act,¹⁴ they are not able to access the needed information.

¹³These are Police Bureau of Investigation (PBI) administrative office, Surface Water Treatment Plant in Cox's Bazar Municipality, and Single Point Mooring for the Eastern Refinery.

¹⁴Indeed, the RTI Act of Bangladesh has an extensive remit which was expected to enable prospective information seekers to get access to a wide-ranging set of information on particular issues (excepting those that concern national security).

On a welcome note, in 2011 the government passed the Whistleblower Protection Act, also known as the Public Interest Information Disclosure Act (Provide Protection) 2011. This is an important initiative which is geared to safeguard people who were willing to take the risk of exposing unlawful activities taking place in an organisation. Regrettably, only very few people know about the existence of this act and how the act is to be taken advantages of to ensure accountability, transparency, and good governance in the public sector (Sourav, 2021). As may be recalled, the ACC was established in 2004. The agency was to act as an independent oversight organisation to ensure good governance. However, much more needs to be done in order for the ACC to work independently and professionally and without political pressure. The ACC should have the mandate to look closely at planning, designing, and budgeting of the PIPs (Iftekharuzzaman, 2019). Despite the presence of the Competition law, bid-rigging and unethical bidding practices continue to undermine the PIP implementation in Bangladesh. As may be noted in this context, institution in place is a necessary condition; allowing it to function independently and with a degree of autonomy and professionalism, is the sufficient condition. Both these conditions are important to ensure good governance.

About 45 per cent of the national budget and 85 per cent of the ADP in Bangladesh are used for public procurement. This indicates the significance of ensuring good governance in the procurement process particularly involving the PIPs (The Financial Express, 2021). The Central Procurement Technical Unit (CPTU) was set up in 2002 within the IMED structure with the objective of putting in place a fair and efficient procurement system involving the public domain. The CPTU developed the e-GP¹⁵ system with the support of the WB to enhance efficiency, transparency and accountability in the public procurement process¹⁶ (e-GP, n.d.). The WB extended support in setting up the online platform to facilitate e-procurement. The Digitising Implementation Monitoring and Public Procurement Project (DIMAPP) project was launched in 2017 in order to accelerate the use of e-GP.¹⁷

However, inspite of the various laudable initiatives on the part of the GoB, allegations of malfeasance and corruption at different levels of PIP implementation remain endemic. According to the Transparency International Bangladesh (TIB) report, although public procurement process has been simplified by the presence of the e-GP system, the level of corruption has not declined in any tangible way. Political influence continues to play an important role in obtaining contracts. The use of e-GP system is limited to work order only, it is not being used by the concerned procuring entities in connections with the other types of procurement. Quality of work is also impeded by the widespread practice of onward sub-contractors provide fake documents to win contracts. The PFM Action Plan 2018-23 states that the structure and autonomy of the CPTU to function efficiently as a regulator has been found to be inadequate. The PFM Action plan further urges CPTU to be restructured into an authority to facilitate a more effective and sustainable functioning of the e-GP system (MoF, 2018). Concrete measures to ensure the integrity in procurement contracting process have been emphasised in indicator 2.3 of the OECD framework.¹⁹

¹⁵The e-GP system was integrated with the Public Procurement Act 2008 in order to mitigate corruption at the procurement stage (CPTU, 2008). This was formally introduced in 2012.

¹⁶1362 out of 1365 procuring agencies have registered themselves in this system, and the number of tenders invited through this platform has exceeded 0.5 million as of August 1, 2021 (The Financial Express, 2021).

¹⁷The World Bank provided USD 40.0 million financing assistance to support extension and strengthening of the e-GP system (World Bank, 2021b).

¹⁸The report stated that in certain cases the procurement agencies were found to have shared important and confidential tenderrelated information with the contractors.

¹⁹OECD Framework indicator 2.3: Measures in place to control the integrity of firms wishing to contract with public bodies.

IMED does prepare audit reports concerning implementation of the PIPs but this is actually the case only for a limited number of projects. Due to lack of adequate human and financial resources, a significant number of projects remains outside of IMED evaluation. On the other hand, IMED's evaluation process and the quality of some of the reports have also been questioned (TIB, 2020). There is also lack of a proper system to register complaints concerning allegations of corruption in PIP implementation, an area that has been given importance in the OECD framework.²⁰

Bangladesh struggles to manage threats to integrity in general, more specifically in PIP implementation, particularly given the significantly large amount of resources involved. System of internal independent audit must be put in place for all the PIPs; financial reporting must be made on a regular basis and irregularities must be dealt with immediately, if needed by referring the case to the ACC. E-procurement should be taken advantage of at all stages of procurement, not merely in connection with the bidding process. ACC must have access to DPPs and real time data. The Whistleblower Act must be widely disseminated and a system should be put in place towards its effective use on the ground.

Pillar 3: Choose how to deliver the infrastructure

There should be a clear criteria to guide the choice of mode of delivery of concerned infrastructure. The OECD framework emphasises that the government, while identifying a project for implementation, should consider political, sectoral, economic and strategic aspects of the concerned projects. Decision about project selection should be taken from a comprehensive perspective, by considering all dimensions. This is of particular importance in case of mega-PIPs. Decision should be guided by affordability, outcomes and impacts, risk allocation and value for money (OECD, 2017).

The OECD framework's indicator 3.1 asks whether there is a formal set of criteria to determine project prioritisation, approval and funding in the country. A checklist has been developed by the OECD in view of relevant delivery modes. The checklist includes project size and profile, revenue and usage, uncertainty and risks which should be considered in making decisions on selecting delivery mode of an infrastructure project.

There is a PPP Screening framework in Bangladesh, developed by the Public Private Partnership Office (at the PMO). The framework provides ten conditions and nineteen criteria which the concerned line ministry and implementing authority must consider while identifying a PPP project (Public Private Partnership Office, 2013). In general, several projects are earmarked in the ADP for implementation under the PPP arrangements. However, such projects tend to be often selected and prioritised not on the value for money. Rather, decisions are made at higher levels on political considerations; these are then passed on to lower levels for implementation. In case of PIP projects, DPP is formulated by the implementing agencies while a concession agreement is formulated in case of PPP projects. There is a lack of required number of competent lawyers to handle the PPP agreements, both at the design stage and at the implementation stage (should any dispute arise with private partners).

Indicator 3.2 of the OECD framework emphasises the need for having a formal process or policy document to ensure good value for money. For this, proper exercise should be carried out with due rigour. In Bangladesh, estimation of Cost-Benefit Analysis (CBA) is the most widely used method for estimating whether a project is good value for money (GED, 2014). However, since projects

²⁰OECD Framework indicator 2.4: Mechanisms to report wrongdoing related to infrastructure projects.

in Bangladesh tend to be implemented with considerable delay, the CBA exercise carried out at the initial period of a project's life often becomes redundant. Also, because of cost escalation, potential benefits and returns end up being lower than what was initially estimated. This is true for all mega-projects including the Padma Multipurpose Bridge project. Cost overrun not only makes CBA estimate lose its value, it also results in higher service charges (tolls) and more time to recover investment. The increase in the cost of construction of the Padma bridge, from about BDT 10 thousand crore to BDT 30 thousand crore led to undertaking fresh CBA exercise and reestimation of the rates of returns. This in the end result in higher tolls for the various services that are to be rendered.

Vehicle Type	Rates (Rise in cost to users	
	Ferry (charge)	Bridge (toll)	
Motor Bike	70	100	42.9%
Private car, normal jeep	500	750	50.0%
Pick up, luxury jeep	800	1200	50.0%
Micro Bus	860	1300	51.2%
Medium Bus	1350	2000	48.2%
Bus	1580	2400	51.9%
Truck (up to 5 tonnes)	1080	1600	48.2%

Table 2.1: Pa	dma Bridge 1	Tolls for Differen	t Types of Vehicles
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Source: Bangladesh Bridges Authority (2022).

For example, it turns out that compared to the current ferry charges the tolls for the Padma Bridge will be significantly higher, as is evident from Table 2.1.²¹ However, in terms of time and avoidance of hassles, users should make significant gains when the bridge becomes operational. On the other hand, there is no denying that the internal rate of returns and financial and economic returns would have been much higher if time and cost overrun could be kept low for such mega projects.

indirect cost²² such as people's sufferings and business losses on account of PIP implementation should also be incorporated when cost-benefit analysis is conducted. It is the practice in a number of countries to estimate the costs of detours and include the related expenditure in the project cost. However, this is not the case in Bangladesh.

The OECD framework indicator 3.3 asks about the presence of procedures to ensure competitive tender process. According to the Public Procurement Act 2006 of Bangladesh, the concerned entity needs to ensure fair play and competition in procurement on the basis of impartiality and on objective terms²³ (IMED, 2006). Earlier, the manual tender process that was in place was exposed to high risks of corruption. In a welcome development, the CPTU, with support of the WB, has digitalised the tender process, as was noted earlier. However, in many instances, political influence, corruption in offices involved in procurement and collusive behaviour involving the bidders are found to undermine the integrity of the e-GP process. Although there is a provision of not disclosing the identity of the contractors before the tender is opened, this is not always followed

²¹The Prime Minister's Office has approved these toll rates for the Padma Bridge (The Business Standard, 2022).

²²For example, in recent times, electrical cables worth BDT 65 crore were stolen from two cranes of the RNPP in Pabna. These also add to the costs when a PIP is implemented.(The Dhaka Tribune, 2022).

²³The criteria for qualifications assessment and evaluation need to be mentioned clearly in the proposal document and the tender.

and information is leaked out (TIB, 2020). There is also a requirement to hold pre-tender meetings to share relevant information regarding the tender but in many instances this is not followed. The tenders are evaluated manually by a large number of procuring entities whereas they are supposed to use electronic devise to evaluate the tenders.

The OECD framework indicator 3.4 asks whether there is a dedicated procedure for identifying and allocating risks between public and private parties in a transparent manner. According to the PPP Screening framework of Bangladesh, a PPP proposal must include a tentative risk allocation matrix; this should be in compliance with globally acknowledged risk allocation schemes. If the infrastructure projects are to be delivered under the PPP mode, potential risks will need to be shared with the private parties. However, it is not always followed. This ends up with the government taking higher share of the risk. Indeed, when some projects are selected for the PPP modality, project risks are not appropriately considered which lead to higher costs and also creates problems for the bidding and negotiation processes (Islam, 2021). For PPP projects, the government is expected to take high share of the attendant risks at the initial stage. As private sector matures, the partners should start to share more of the attendant risks. In Bangladesh, excepting for the power sector, very few projects have been implemented in other sectors under PPP arrangements. Lack of transparency and clarity and ambiguity about risk-sharing afflict the PPP process in Bangladesh.

Bangladesh will need to ensure that value for money analysis is carried out properly, the tender process is competitive and risks are clearly identified and allocated between public and private parties (in case of PPPs). A set of comprehensive criteria needs to be developed and strictly followed in this regard.

One area in the delivery of PIPs which is important in the Bangladesh context, but is not mentioned in the OECD framework, relates to management efficiency to deliver the project on time and by ensuring the needed quality. Appointment of the right persons as PDs of the PIPs is crucially important in this backdrop. This is often not the case. In case of the Local Government Engineering Department (LGED), there is a good practice that the PD should be an executive engineer who has at the least 12 years of service before retirement. But in projects implemented by other agencies, this is not the case. The culture of appointing a senior staff as the PD of a project, even if s/he is to retire soon creates problems in the course of project implementation in Bangladesh. Even when the consultants and project officials hired from abroad have the required expertise, they are often not familiar with the local socio-economic scenario. PDs need to be empowered with adequate authority to take decision for successful completion of the projects. Also, frequent changes in PDs speak of lack of proper planning which adversely affect quality of project outputs. This was pointed out in the IMED report on the implementation progress of the ADP for FY 2019-20. Absence of a system of sanctions and rewards, based on assessment of the work of the concerned PDs, creates an environment of lack of accountability and transparency which in the end leads to various inefficiencies and delays in the completion of projects (IMED, 2021a). To cite an example, the Bangladesh Railway Reform project had 18 different PDs at different points in time while PDs were changed 12 times in case of both the Dhaka-Chittagong 4 lane highway and the Joydebpur-Mymensingh 4 Lane Highway Projects. According to the instructions issued by the Prime Minister's Office, a PD was supposed to handle only one project at a time. This was intended to facilitate smooth, efficient and timely implementation of the projects (Saif, 2020). However, the practice of PDs dealing with more than one project has continued. This has been repeatedly raised in successive IMED reports (IMED,2021a).

Pillar 4: Ensure good regulatory design

A good regulatory design secures sustainability and affordability of an infrastructure and has significant positive implications for infrastructure investment and development, maintenance, upgrading and decommissioning of concerned projects. Regulation sets the "rules of the game" and reduces uncertainties in this context. A stable institutional and regulatory framework also addresses uncertainties concerning sources of funding and revenue flows associated with an infrastructure project (OECD, 2017). The Global Infrastructure Hub (GI Hub) in the "InfraCompass 2020" report mentions that Bangladesh has a weak regulatory framework²⁴ relating to the infrastructure sector. The country scored 44.4 out of 100, ranking 70th out of 76 countries (GI Hub, 2020).

The OECD framework indicator 4.1 asks whether evidence-based tools such as impact assessment and ex-post evaluation are used for making regulatory decisions. The ex-post evaluations are conducted to assess the long-term impact and sustainability of a project following its implementation. Generally, this evaluation is conducted after a specified period following completion of the project. The IMED undertakes ex-post evaluation for a small number of selected projects. This is indeed being done since 1983-84. It is, however, constrained by lack of adequate number of professionals to carry out such exercise on a more regular basis and with the expected quality. IMED is trying to scale up its ex-post evaluation activities by taking support from the Population Development and Evaluation Unit (PDEU). However, scaling up continues to remain a problem (IMED, 2019c). The Line Ministries also often do not follow the recommendations of the IMED as per the PFM Action Plan 2018-23. On the other hand, if the IMED recommendations are not followed, quality of work performed by line ministries can hardly be raised (MoF, 2018).

The OECD framework's indicator 4.2 states that regulators of infrastructure projects should be independent, but accountable and have adequate scope of action. In Bangladesh, the implementing agencies are the regulators of infrastructure projects and they set the rules and regulations for the projects. Implementing agencies formulate the draft rules and regulations which then is sent to the respective ministry, then to the ministry of law for vetting and finally to the parliament. Implementing agencies have the authority to revise the plan, rules and regulations as required. DPPs are also prepared by the regulatory agencies. After getting approval, development project work is expected to proceed based on the work plan stated in the DPP. However, work and procurement plans stated in the DPP are often not followed in the course of implementing the projects (IMED, 2021a). The initial plan is revised frequently, and this results in time and cost overrun.

For example, the Bangladesh Bridges Authority (BBA) is the statutory body within the Bridges Division under the Ministry of Road Transport & Bridges with the mandate "to undertake technical research, feasibility study, development planning, detailed design, activities associated with project implementation (including Public-Private Partnership projects), monitoring, evaluation, operation and maintenance of roads, over bridges, tunnels, elevated expressways and flyovers, cause ways and ring roads". The concerned authority also has the responsibility of setting toll rates and toll booths for completed bridges (BBA, n.d.). Lack of adequate number of staff and weak state of digitisation make the tasks difficult to carry out. There is also allegations of irregularities and corruption in toll collection.²⁵ BBA is also in charge of setting rules and regulations regarding maintenance of bridges and monitoring. One concern relating to the weight limit which have been set by the regulatory

²⁴Regulatory framework is defined as the extent to which regulation, competition frameworks, and openness to investment support infrastructure delivery.

²⁵As a newspaper report pointed out, BDT 170 crore was embezzled over a two years period (from November 2018 to November 2020) from the toll booths of the Dhaleswari Bridge (The New Nation, 2020).

authority is that these are way higher than the standard weight limits recommended by experts. For instance, the weight limit set for two-axle vehicles is 22 tonnes whereas the standard for such vehicles is 15 tonnes (Adhikary, 2019). Oftentimes, the overloaded vehicles cross bridges by paying bribes.²⁶ All these are indicative of lack of accountability and monitoring on the part of regulatory authorities and also speaks of lack of coordination between involved agencies and Ministries. Regulators should be allowed to work independently,²⁷ should have enforcement power and be accountable, that is the menage of Pillar 4.

Pillar 5: Integrate a consultation process

The OECD framework advocates integration of a consultative process, particularly for projects of high significance to the economy. The process should require that public interest and views of relevant stakeholders are taken into cognisance in implementing such projects. The consultation process should encourage dialogue and ensure public access to information. The process can create a sense of shared ownership and enhance the legitimacy of the infrastructure project among the stakeholders (OECD, 2017).

The OECD framework's indicator 5.1 asks whether there is a national open government strategy or guidelines to this effect (either designed specifically for infrastructure investments or which could be applied to those). In Bangladesh, the Open Government Data Strategy was developed by the GoB in 2016 with the vision of "Data for all". The mission of this strategy includes establishing good governance by ensuring accountability and transparency through active participation of the citizens. A data portal has been launched to serve this purpose (Ministry of Planning, n.d.). However, the portal is not regularly updated and often recent data and information are not shared publicly by relevant agencies. Agencies tend to look for direction from top government leadership before releasing any data. Inconsistency in the data published by different agencies is also widespread (World Bank, 2020a).

Indicator 5.2 of the pillar asks if mapping of stakeholders is carried out in view of implementing infrastructure projects. The "Managing Infrastructure Assets for Sustainable Development" handbook by the United Nations (UN) states that it is essential to figure out each stakeholder's influence and interest in the asset. It helps the PDs to develop a comprehensive strategy for managing stakeholders' interests and generating better outcomes (UN, 2021). The DPP manual, which the implementing agencies follow, puts emphasis on engaging stakeholders in the consultation process but doesn't talk of how mapping of stakeholders is to take place (GED, 2014). As a result, mapping is left to the PDs who often don't take it with due seriousness.

Indicator 5.3 of the pillar asks if there is any stakeholder consultation fora or participatory budgeting programmes. In Bangladesh, consultations do take place concerning large infrastructure projects but in most other cases this is absent. The state of participatory budgeting process is poor in Bangladesh. This is revealed by the International Budget Partnership's Open Budget Survey²⁸ 2019. Bangladesh scored 36 out of 100 in 2019 while the score was 56 and 41 in 2015 and 2017, respectively. In terms of public participation in budget decision-making, Bangladesh's score was only 13 (IBP, 2020). Lessons from the Indian experience could be useful for Bangladesh in this connection. In

²⁶Some times the load is offloaded and reloaded (on either side) if maximum weightage is strictly followed in crossing a bridge. However, this happens only in case of bridges of strategic importance. And the roads get damaged any way.

²⁷Establishing a separate engineering division for the regulators i.e. the implementing agencies could help them to work independently.

²⁸The survey includes transparency, public participation, and oversight as three pillars to assess countries.

the Kerala state of India, for example, the state government gave authority to the Urban Local Bodies (ULBs) to spend 30 per cent of state annual plan funds. A state-wide participatory budgeting programme was launched which is also known as "People's Plan Campaign". Community members contributed to selection of projects and participated in drafting, implementation and monitoring of the development projects. The Kerala government placed beneficiary communities and ULBs at the core of these processes to make sure that development spending aligns with the local needs and good value for money is ensured (World Bank, 2005).

In many instances, the implementing agencies of the PIPs need to hire consultancy firms towards better implementation and supervision of the PIP. However, oftentimes such hiring proposals are not approved by the non-technical members in the project approval committees. This weakens the cause of supervision and implementation of the project.

The OECD framework's indicator 5.4 asks if there are any websites or other outreach tools to provide public information on infrastructure projects. The CPTU of the IMED has launched a 'citizen portal' that allows citizens to access public procurement data, with a view to ensure accountability and transparency in the public procurement processes (IMED, 2020a). The portal provides an overview of all the steps involving public procurement, starting from needs assessment to contract management. However, effectiveness of the portal in terms of engaging citizens remains weak. For instance, the portal's procurement observatory section provides district-wise information related to complaints as regards tender processes from 2012 till date. It shows that only one complaint has been filed, on average, per district, since the launch of the portal (CPTU, n.d.). This indeed raises question as regards whether people are at all aware of the online complaint mechanism. Some of the mega-projects have their own websites and provide information regarding the projects. However, information is often dated and not detailed enough. Websites are not updated on a regular basis, and sometimes it is very difficult to access some of the websites.

The Bangladesh Government took an initiative under the Public Procurement Reform Project (PPR)-II to engage citizens in the monitoring process of the PIPs. BRAC Institute of Governance and Development (BIGD) and the WB have extended support to this the initiative. BIGD has provided technical assistance in this project particularly in areas of developing the design and application of citizen engagement tools for the purpose of monitoring local development work. The initiative involved four upazilas of Sirajganj and Rangpur districts. Information was collected from Citizen Committee members, engineers, bidders, and field officers. Citizen Committee members included people from diversified background and occupations. Findings of the initiative reveal that close coordination among citizen committee members and engineers does lead to greater accountability and transparency in the process of project implementation. The initiative generated much interest among the local citizens. However, it is found that bidders were not enthusiastic about such initiative. Some thought that involvement of citizens would result in higher informal transaction costs. The study reported deficit of social capital and trust as a major challenge in implementing this type of transparency exercise (BIGD, 2016). BIGD has continued to provide support to the government in implementing this programme. The CPTU has in recent times initiated citizen monitoring programmes in collaboration with the 12 Upazillas in an unorganised manner and in 36 Upazillas in an organised way (CPTU, n.d.).

But, clear and transparent instructions on how to volunteer for such activities is still lacking. Information as to what extent such monitoring exercises have been effective in ensuring accountability and transparency in PIPs implementation is also lacking.

On the other hand, experience of initiatives taken by the BIGD and its partners, with support from the GoB, shows that local stakeholders have a keen interest in getting involved in monitoring PIP implementation in their specific localities. The pilot exercise carried out by the BIGD bears out that out of such activities local leadership is born and these leaders are willing to take charge of the monitoring work with very low transaction costs. Women tend to take a close interest in monitoring activities particularly when these concern their direct interests (construction of health complex, schools etc.). As would be expected, contractors and a section of government officials are not keen in promoting this type of monitoring activities. There is also a need to assess how effective such citizens' monitoring activism has been and how to improve on these, in order to design a more comprehensive and scaled-up programme. No doubt, as a tool to promote transparency and accountability in PIP implementation, such citizens' initiatives ought to be encouraged and expanded.

Inclusion of parliamentary standing committee members in the monitoring process could potentially enhance the quality of the development projects. Recently, in one of the meetings, members of the parliamentary standing committee on the Ministry of Railways have expressed interest in being involved with supervision of development works of the Ministry in their respective constituencies (Bonik Barta, 2021c). In this connection, mention may be made of the Regional Plan for Goa (RPG) 2021 which has successfully incorporated public participation and consultative process in project implementation. A public notice was published in the local media to get to know about the expectations of the general public regarding the RPG 2021. More than 20 Non-Governmental Organizations (NGOs) were invited to present their expectations and concerns regarding the plan. This stakeholder consultation was conducted at multiple levels and in an inclusive manner. The Draft Plan was sent to Village Panchayats (VPs). It was open to citizens who expressed their opinion, objections and recommendations as regards the proposed draft plan. The State Level Committee (SLC) carried out the task of integrating the comments received from citizens and the VPs before the RPG 2021 was finalised (Kumar, 2021).

Bangladesh's record in integrating consultation process in PIP implementation has been rather poor. There is a need to focus on stakeholder mapping, properly execute the national open government strategy and ensure participatory budgeting and auditing programmes for better integration of the consultation process in PIP implementation.

Pillar 6: Coordinate infrastructure policy across levels of government

The sixth pillar of the OECD framework emphasises the importance of coordination of infrastructure policies within and across various levels of government. This is geared to reducing any contradiction between policy objectives and rules and regulations related to infrastructure implementation (OECD, 2017).

Indicator 6.1 of the framework asks whether there are formal bodies/mechanisms for coordination of public investment across the various levels of government. In Bangladesh, it is the Planning Commission which is in charge of coordinating projects and investment across sectors and levels of government. The commission's programming division is entasked to coordinate multi-sectoral projects²⁹ (Zannat, 2016). The commission sets objectives, goals and strategies of short and medium-term plans under long-term national plans and formulates policy measures to achieve the goals (GED, 2014). However, coordination between the ministries and local level governments continues to remain weak. The 8th FYP reports that weak coordination and inadequate communications with

²⁹OECD framework indicator 6.2: Co-ordination mechanisms to have a multi-sector approach.

district and national level administration create difficulties for Local Government Institutions (LGIs) in implementing the PIPs. This undermines the cause of generating the expected outcomes which has been mentioned in indicator 6.3 of the OECD framework.³⁰ The Finance Division coordinates budgetary issues in connection with the PIP implementation. However, coordination between the Finance Division and other ministries and divisions remains wanting. For instance, in the early months of the fiscal year, the Finance Division asks for a budget implementation plan from all ministries and divisions to deal with the problem of slow implementation of the ADP. The purpose is also to strengthen coordination with the ministries and divisions. However, despite repeated calls, and the promise of award, compliance has continued to remain weak over the past years (Prothom Alo, 2021b).

Poor coordination among government bodies in PIP implementation remains a challenge particularly in view of implementation of mega projects.³¹ For example, the Power Grid Company of Bangladesh (PGCB) is in charge of the installation of grid infrastructures for the RNPP project. In February 2023, fuel loading of the nuclear power plant's first unit will be completed. The grid system should be ready at least two to three months prior to fuel loading, according to international standards. Thus, a grid system suitable for the plant must be installed by December 2022. IMED report of 2021 found that the PGCB was lagging behind the schedule of work. It was supposed to finish installing the required grid infrastructure before power generation began. Another IMED report of 2020 expressed concern that the project's timely implementation within the specified time would be jeopardised if the supply of back feed power and grid infrastructure could not be ensured in a timely manner. According to these IMED reports, construction of transmission lines, telecommunication infrastructure and other miscellaneous work has not progressed in tandem with the construction of the plant's two units. PGCB, Bangladesh Telecommunications Company Limited, Bangladesh Inland Water Transport Authority, Public Works Department, Northern Electricity Supply Company Limited, and BR are the concerned authorities carrying out the aforesaid works. Coordination among these agencies will be crucial to timely construction of transmission lines, telecommunication infrastructure and other relevant works (Islam, J., 2020; Saif, S. and Sajid, E., 2021).

Lack of good coordination among government bodies is also observed in road construction projects. Utility structures (e.g., electricity poles, gas lines etc.) often impede road construction and maintenance works. When the RHD requests the concerned authorities to shift these structures, often the onus is put on the RHD to undertake the tasks. This delays work and adds to RHD's operational expenditure. There is a need for better inter-ministerial coordination and more comprehensive integrated planning to avoid this type of delays. Shifting of illegal road-side markets is also a major problem in the construction of roads.

According to the IMED's Monitoring and Evaluation policy document, monitoring process should involve assessment of whether the infrastructure projects are well-aligned with the national-level goals and commitments (IMED, 2019b). However, in some cases development projects can not be properly scrutinized by the Planning Commission because these are selected on political consideration, undermining alignment with the national level plans (Hossain, 2021). The 8FYP of the government also concedes that there is a lack of coordination between public development projects and sectoral plans (GED, 2020a). The planning commission needs to ensure that the

³⁰OECD framework indicator 6.3: Co-ordination mechanisms are frequently used and produce clear outputs/outcomes.

³¹The government is having to pay BDT 100 crore as capacity charge every month to the BCPCL for Payra 1320 MW Thermal Power Plant. Although, it was not buying any electricity from the BCPCL The reason is that the other works (installation of transmission lines etc.) were not completed on time. The power generated from the plant was officially linked to the national grid on March 21, 2022.

projects implemented by the line ministries align with the national and sectoral goals, and that the cohesion among different ministries is strengthened.

Indicator 6.4³² of the OECD framework asks if co-financing arrangements for infrastructure investment are present in the country. Most of the local government funding comes from the government's budgetary allocation. 85 per cent of the development expenditures of the local government is funded by the GoB (equivalent to about 1.0 per cent of the GDP). Local governments generate only an insignificant part of the required funds on their own (World Bank, 2016). This, however, is associated with the broader issue of decentralisation in Bangladesh and whether local government institutions will be vested with the power to raise resources a part of which then could be earmarked for co-financing of local projects.

Pillar 7: Guard affordability and value for money

The government must ensure that the infrastructure projects are affordable and the overall investment envelope is sustainable in view of the country's fiscal space. An Infrastructure project is affordable and sustainable when the government is able to underwrite the expenditure and contingent liabilities associated with the project within current and future government expenditure and commitments and revenue and aid flows. PIPs should ensure proper value for money. In absolute cost-benefit terms, the value for money considers whether benefits exceed the costs, and in relative terms it evaluates whether one form of delivery is more cost-effective than the other (OECD, 2017).

As regards value for money and affordability, Sri Lanka is a stark reminder as to how Bangladesh should look into justification, affordability, and value for money when selecting and prioritising projects.

The PFM Action Plan (2018-23) of Bangladesh puts emphasis on enhancing monitoring and improvement of the quality of investment portfolio. The plan points out that the current investment portfolio includes several projects which are implemented with delay, are underperforming, incomplete and will not serve the intended purpose. Gaps in Public Investment Management (PIM) adversely affect portfolio performance and impede the process of ensuring good value for money in development projects (MoF, 2018).

The OECD framework's indicator 7.1 asks about the role of the Central Budget Authority in greenlighting infrastructure projects. The executing agency prepares the DPP and sends it to the line ministry. The DPP is examined by the planning wing of the line ministry and placed before the Project Scrutiny Committee (PSC) headed by the concerned secretary. The DPP is then sent to the planning commission. The concerned sector or division of the planning commission undertakes the appraisal and places the DPP at the Project Evaluation Committee (PEC) meeting, headed by a member of the concerned division of the planning commission, for approval. The committee examines the financial, economic and technical viability of projects. After the approval of the PEC, the project is finally sent to the ECNEC or the planning minister for approval (depending on the value of the project). The process of project approval doesn't directly include the Finance Division. Only a representative of the Finance Division is included in the PEC which is responsible for project approval indicating the limited role of the Division in the approval process. The Division doesn't also set any criteria which need to be met for the project's approval. Indeed, the projects are often handed to the planning

³²OECD Framework indicator 6.4: Co-financing arrangements for infrastructure investment.

commission without substantive inputs from the PSC. Sometimes the members of the committee lack the needed knowledge and expertise to evaluate the concerned DPP.

Indicator 7.2 emphasises the presence of an overarching audit institution. Comptroller and Auditor General of Bangladesh is the highest audit institution in the country. The organisation maintains accounts of the government and audits all receipts and expenditures to ensure good value for the taxpayers' money spent (Office of the Comptroller and Auditor General(OCAG), 2021). CAG prepares audit reports and presents the report to the president. However, the CAG doesn't use any IRR or ERR to examine whether good value for money has been ensured in the project. Concerned officials only go through vouchers and reports to check whether compliance has been ensured in spending the money and whether there were any irregularities.³³ A major weakness of the CAG's work is that it is not being able to publish the annual reports in a timely manner. The latest performance audit report is available only for FY 2017-18 (OCAG, n.d.). Moreover, none of the audit reports published on its website was on major infrastructure projects.

The OCAG needs more professional cadres to perform value for money analysis. Experts in forensic investigation and auditing are needed to assess development projects which are becoming increasingly large and complex. Performance auditing of development projects is also not carried out by the OCAG. This results in instances where financial progress may be 100 per cent but physical progress is not, and the project is not delivering expected outcomes and impacts. For instance, a bridge without any approach road will record 100 per cent physical progress, but it will not ensure good value for money if the road is not there. The PFM Action Plan 2018-23 refers to these problems afflicting the works of the OCAG and urged for improvements in the timeliness and disclosure of audit reports, strengthening of citizen engagements and enhancing organisational and professional capacity of the OCAG (MoF, 2018). Timely publication of audit reports of development projects including, infrastructure projects, will help the work of government agencies such as the Anti-Corruption Commission which will then be able to take appropriate steps to deal with anomalies in PIP implementation in a timely manner.

Indicator 7.4 of the OECD framework asks whether there are tests and controls in place to assess maturity of the organisation responsible for delivering the project. As is known, concerned implementing agencies work as regulators of infrastructure projects and determine the eligibility criteria for organisations interested to deliver the project. However, eligibility criteria set by the authority in some instances are found to be questionable and not impartial. Sometimes genuine and eligible contracting agencies can not participate in the tender process because rules are set in a way that they fail to meet the stipulated criteria.³⁴ There are reports where contractors have not been chosen based on their quality and past performance, but on the basis of political influence, corruption and nepotism (Prothom Alo, 2019). Cases have been also recorded where a single contractor was awarded several working packages while it was stated in the project document that each of the working packages should be awarded to different contractors.³⁵ Oftentimes, the

³³For instance, the annual audit report of 2011-2012 revealed that without creating any of the five culverts, BDT 42.14 lakh was swindled from a project related to establishing aquaculture infrastructure in the floodplains of Cumilla district (OCAG, 2016).

³⁴The third terminal of the Hazrat Shahjalal International Airport is being funded by JAICA. There has been complaint against certain foreign agencies for regulating the bidding parameters to facilitate unhealthy and closed door competition. Also, the fact of a limited number of contractors being awarded contracts for implementation of a large share of PIPs has been exclusively reported in the media.

³⁵The SASEC-2 project has 8 working packages. 2 of the packages were awarded to a single contractor. ADB had opposed this and asked for re-tendering. However, the concerned committee gave decision in favor of the contractor. When under pressure from ADB, it was re-tendered, the same contractor was given the job as it was the lowest bidder. Precious time was lost in the process.

contracting agency is awarded more contracts than it actually has the capacity to deliver. These contractors often fail to complete the assigned works and request for extension of the deadline to complete the packages included in the project, often several times in the course of the implementation cycle. Consequently, projects get delayed and lead to cost overrun (IMED, 2021a). Kushtia Medical College project is a relevant example. It was alleged that the contractor changed the initial design and used low quality materials for construction. It was also found that contractors didn't follow any work programme in implementing the assigned tasks (IMED, 2020b). Sometimes the principal contractor sub-contracts the work to others who do not have the requisite capacity to deliver the outputs. However, in some instances, due to following older rate schedules by the implementing agencies, project cost increases and contractors don't have fault in this escalation of cost. Often, there is delay because the contractor and project authorities fail to come to a consensus as regards prevailing prices of construction materials.

Indicator 7.5 asks whether there is a formal requirement to account for contingent liabilities and running costs. Implementing agencies in Bangladesh are required to include these in the DPPs. However, since the DPPs are not shared publicly, questions remain as to what extent these are being complied with.

Indicator 7.6 asks if there are formal requirements for ensuring good value for money. In Bangladesh, for any development project, the executing agency needs to prepare a DPP which then is scrutinised by the concerned Ministry. The DPP Manual of the GED does mention three methods of financial and economic analysis for purposes of project appraisal. These are: Net Present Value (NPV), Internal Rate of Return (IRR) and Benefit-cost analysis (BCA) to ensure that there is good value for money.³⁶ Financial and economic analyses are obligatory even when a feasibility study has not been undertaken (GED, 2014). Although the NPV, IRR and BCA are carried out for infrastructure projects, projects sometimes get implemented even when these lack any economic rationale.³⁷ An example is the "Bhanga-Jessore-Benapole Highway Expansion Project". The Benefit-Cost Ratio (BCR) and IRR of the project were found to be "zero" for the project.³⁸

There are also concerns as regards lack of required data for carrying out cost-benefit analysis precisely. This undermines the reliability of such estimates.

There is a need to take appropriate steps to address the anomalies mentioned above, ranging from compliance assurance as regards the DPP, reliable estimation of project returns, and ensuring that the contractor is responsible for quality of implementation and delivery of the expected outputs. The metrics that should guide implementation is an assurance that the project is good value for money.

Pillar 8: Generate, analyse and disclose useful data

The OECD framework emphasises the importance of information and data to service the needs of monitoring, evaluation, and improvement of infrastructure projects. The framework also highlights the need for the data to be publicly disclosed in an accessible format and in a timely manner (OECD, 2017).

³⁶The calculation needs to be done considering 15 per cent discount rate and the calculation sheet was to be attached with the proposal. However, this type of high discount rate is justified in case of short-term projects not for the long-term ones.

³⁷The DPP of the project was finalised by the Roads and Highways Department. The NPV of the project was BDT (-) 670.86 crore. This means, if the earnings generated by the project over its lifespan after completion is converted to present value, then the earnings will be BDT 670.86 crore less compared to the invested amount.

³⁸The closer the BCR and IRR to 1, the more the project will be suitable for investment (Ali, 2021).

The framework's indicator 8.1 asks whether there is a central unit for collection, disclosure and analysis of data. As was stated earlier, IMED collects, analyses and discloses data for infrastructure projects in Bangladesh. The agency collects and compiles project-wise data and prepares quarterly, annual, and periodic progress reports; the reports are disclosed publicly on the IMED website.³⁹ However, there is no dedicated website where data is disclosed in an open format. The unit lacks human and financial resources to undertake this task on an ongoing manner. This impedes systematic dissemination of information. Also, many important information related to projects is not shared publicly. These relate to estimated cost of projects, mode of financing, year-wise allocation of the funds including that of the GoB fund, local and foreign aid component, location-wise cost breakdown, component-wise estimated cost summary, year-wise financial and physical target plan, financial and economic analysis etc. Since these are not shared publicly, it creates opportunities for non-transparent dealings and raises the possibility of corruption. A single data portal for all public investment projects, particularly the PIPs, should be set up to facilitate open access to relevant data and information.

Lack of systematic data collection impedes the process of proper selection of infrastructure projects and their delivery. Adequate data is often not available at the inception stage of the project to undertake proper feasibility study and formulate the DPP appropriately. This results in repeated revisions of the DPPs. There is also shortage of adequate data to compare various forms of infrastructure delivery models. Thus, in many instances, decisions regarding infrastructure projects are not data-driven.⁴⁰ The PPP screening framework of the Public Private Partnership Office states that the Line Ministry/Implementing Agency must provide the required data to screen delivery modality of the development projects (Public Private Partnership Office, 2013). However, oftentimes the required data is not made available by the line ministries; this creates problems in choosing appropriate delivery modality for the concerned infrastructure project. In the end, this undermines efficiency of implementation of the projects in 2018 and found that for majority of these projects financial and physical progress was not satisfactory and that this was likely to result in significant time and cost overrun as far as these projects were concerned (CPD, 2018a).

Indicator 8.3 of the framework puts emphasis on Key Performance Indicators (KPIs) to assess infrastructure performance. The GoB introduced the Annual Performance Agreement (APA) in July 2015 which envisages an agreement between the Cabinet Division as the first party and all other ministries/divisions as the second parties. The APA includes KPIs to measure progress as regards the targets which are set for the ministry/division (Cabinet Division, n.d.). For example, the Road Transport and Highways Division has defined four indicators as KPIs. These are: Repair and maintenance of road networks; Rate of reduction of road accidents; Receiving of Motor Vehicle Fitness Certificate on time; and Improvement of Road Corridor under Regional Connectivity. Various targets were set under these indicators (MoF, n.d.). Although, KPIs are geared to measure the progress of achieving targets by implementing agencies, these are not directly used to evaluate performance of the infrastructure projects under the agency. In many instances concerned ministries/divisions tend to set their performance target in a rather flexible manner so that they would be recognised as top performers in the performance assessment process.

Indicators 8.5 and 8.6 talk about the importance of infrastructure investment flow and stock data (sectorial breakdown). Sector-wise infrastructure flow and stock data in Bangladesh do get

³⁹OECD framework indicator 8.4 asks if the data is disclosed in an open format on a dedicated website.

⁴⁰OECD Framework Indicator 8.2: Choice of delivery modality and projects are based on data

collected, for administrative purposes, but this information is not publicly shared. This undermines the cause of transparency.

According to the OECD infrastructure governance framework, there is a need to focus on systematic and timely collection of data on infrastructure sector. This helps make the choice of projects and their delivery data-driven. Bangladesh is expected to gain significantly from introduction of KPIs to assess infrastructure performance, and the results should be disclosed in a timely manner.

Pillar 9: Make sure the assets perform throughout life

The OECD framework requires that appropriate monitoring systems and institutions should be put in place to ensure that assets perform throughout life. Monitoring is defined as regular observation and recording of the asset performance (OECD, 2017).

The OECD framework's indicator 9.1 asks whether there is any policy as regards assessment of performance of the concerned asset. There is no such policy document in Bangladesh. The 8th FYP of Bangladesh has drawn attention to the poor state of infrastructure performance in Bangladesh, particularly concerning road and rail services. The plan has put emphasis on regular monitoring of the assets (GED, 2020a). In Bangladesh, PIPs are designed without taking into account the maintenance costs. Even if this is done, which is the case for some projects, the costs are not estimated properly. Financing strategy as regards maintenance costs should be articulated at the very beginning of the project; indeed these should be integral to the DPPs. While implementing agencies hire contractors, these are hardly held accountable for the project outputs once the work is completed.⁴¹ They are not held responsible for performance of infrastructure projects throughout the project life. Allocating maintenance budget for infrastructure projects may not also be justified in all cases. PPP arrangements could be an alternative in view of this. For example, in case of the M25 motorway project near Heathrow airport, United Kingdom, the entire payment milestones were scheduled in a way that the contractors were to recover a base price or base cost immediately after completion, the rest was to be paid over 7-8 years depending on the performance of the road. This type of arrangement was geared to not only saving money but also to ensure that contractors shared the burden of performance of the project.

Development partners also no more engaged in this process once the infrastructure has already been built. Financing entities are in general not actively engaged in the operational phase of the projects. However, the WB has introduced conditional funding in some of the projects which requires assurance about asset performance. The conditionality is that contractors will be involved for five years after the completion of the project and will be responsible for the performance of the infrastructure. They were to be provided with a certain amount of fees for maintenance purposes. This is expected to make the contractors more careful about the quality of the deliverables. Rural Transport Improvement Projects (RTIPs) of the LGED funded by the WB, includes this type of conditional funding.

PIPs often go through multiple revisions as far as the stipulated budget amount is concerned. When cost of implementing the project goes up, identifying new funding sources becomes a challenge. Under such circumstances, resources are hardly available for maintenance of the project. A major concern for the projects of the RHD and the LGED is that the allocation for routine and periodic

⁴¹According to the Public Procurement Rules (PPR) 2008, the defect liability period should be 1 year. This has been further extended to 3 years in the RHD contracts. 50 per cent of the security money is paid 1 year after completion of the project while the remaining 50 per cent is paid to the s after the completion of the stipulated period.

maintenance of the project is not adequate. This in turn leads to reduced asset performance. According to the World Economic Forum's GCR 2017-18, Bangladesh's roads were of the lowest quality in Asia. The country ranked 105th among 137 countries globally (WEF, n.d.). RHD is now using Polymer Modified Bitumen⁴² (PMB) on a pilot basis which is an improved construction material. However, there is no lab facilities in Bangladesh to test PMB. Such facilities should be set up so that the pilot scheme can be scaled up. The government has set up the Road Maintenance Fund (RMF) by enacting 'Road Maintenance Fund Board Act', in July 2013 to facilitate maintenance, repair, and renovation work of more than 22,000 km roads under the RHD. The RMF could not be made functional in the last eight years due to the absence of necessary rules and regulations. This work should be expedited.

The latest survey undertaken by the RHD, conducted from November 2020 to March 2021, also illustrates the aforesaid picture. The survey found that of the 18,500 kilometre roads in the country about 3,647 kilometre are in a bad shape (about a -fifth).⁴³ When concerned authorities assign concrete responsibility for routine and periodic maintenance of the roads, this contributes to better results (Rahman, S., 2021c). There should be an assigned body which was to be mandated to monitor whether the maintenance works are being carried out properly. Frequent maintenance works prove to be costly for both road operators and passengers.⁴⁴ Also, exit plan needs to be included in all infrastructure projects as this includes concrete actions as regards the required maintenance work and steps to enhance resilience and sustainability of the infrastructure. However, in many cases, DPPs of the infrastructure projects in Bangladesh do not include exit plans. For instance, Joydebpur-Mymensingh 4 Lane Highway Project and Sheikh Kamal, Sheikh Jamal and Sheikh Russel bridge construction projects on Patuakhali-Kuakata road had no exit plans in their respective DPPs (IMED, 2020c, IMED, 2021c). The absence of an exit plan often leads to poor asset performance.

Many of the road infrastructure projects do not have any measure in place to control movement of overloaded vehicles; this leads to poor infrastructure performance. This has been pointed out in successive IMED reports as well. The M&E institution of the GoB suggested establishing axle load control stations on approach roads to bridges to control for the overloading (IMED, 2021c). Overloading causes significant damage to roads, and reduces their lifespan and also contributes to higher maintenance and repair costs. The Dhaka-Chittagong four lane highway project is a case in point. When the initial DPP was prepared, the weight limit for a two axle six-wheeler truck was fixed at 15 tonnes; this was subsequently increased to 22 tonnes in 2017. However, surprisingly, the highway was designed considering the weight limit of 10.2 tonnes. Average Annual Daily Traffic (AADT) was also not forecasted properly. The traffic growth rate was estimated to be 6.0 per cent while the growth rate turned out to be 10.0 per cent in 2019. Such inaccurate forecasting resulted in severe damage to the highway within a short period after the expansion work was completed (IMED, 2019a).

⁴²This type of bitumen has high elasticity compared to other bitumen used in the construction of roads in Bangladesh. The cost of this type of bitumen is, however, very high. On the other hand, using this will increase the service life of the road and has proven to be cost-effective over the medium to long term.

⁴³Khagrachari in Chittagong had the poorest roads in the country, with 35.77 per cent of the roads in bad condition. However, there are exceptions. Faridpur had the highest percentage (96.06 per cent) of roads in good condition.

⁴⁴In early January 2022, road operators issued an ultimatum that they would not operate buses and trucks on Dhaka-Mymensingh route if the maintenance work, causing havoc to operators and users and resulting in huge traffic jam, is not completed expeditiously and road conditions are not improved in two weeks' time.

To address the problem of overloading other modes of transport will also play an important role. For example, the Bangladesh Railway needs to focus on container trains. Currently, BR has only 7 per cent share of container handling from Chattogram to Dhaka; the rest is transported by road transport. This lowers the service life of roads and highways. The government should take steps to raise the contribution of freight trains by at least 50-60 per cent (Hoque, S., 2022). Also, more resources should be allocated for development of riverine transport.

Implementing agencies of infrastructure projects in Bangladesh have monitoring and evaluation wing to develop, monitor and assess infrastructure performance. This aligns with requirements of indicator 9.2 of the OECD framework.⁴⁵ They prepare reports on findings and suggest various corrective measures. However, these reports are not published and are not publicly available so that it is not known to what extent the measures are actually being implemented.

Ex-post evaluation of value for money in project implementation relates to indicator 9.4 of Pillar 9 of the OECD framework. IMED's Monitoring & Evaluation Policy document mentions that the unit should carry out an ex-post evaluation for assessing sustainability of the projects and using the lessons learned to improve project outcomes (IMED, 2019b). However, as stated earlier, the unit carries out ex-post-evaluation exercise only and that also only on a limited scale and for a small number of projects. Lack of the needed professionally-equipped officials remain a concern in this context (IMED, 2019c).

There should be a system to ensure that ex-post evaluations are carried out by the IMED for all projects over a certain size. Third party ex-post evaluation exercises should also be carried out to validate⁴⁶ the expected benefits stated in the DPP. Maintenance work should be carried out on a regular basis and concerned measures should be enforced to ensure that good quality is maintained throughout the road's life cycle. Ex-post assessments should be made in a transparent manner and the reports should be publicly available. All these steps will ensure high quality asset performance throughout the project life.

Pillar 10: Public infrastructure needs to be resilient

The tenth pillar of the OECD framework states that the infrastructure systems should be adaptive and resistant to disasters. Expected socio-economic benefits to be accrued from infrastructure projects tend to be disrupted and significantly undermined by various shock events. This is important since large infrastructure projects have multiple linkages to the economy. For instance, damage to electricity transmission lines could result in downstream disruptions involving several sectors including production related activities, healthcare and education (OECD, 2017). As a highly climate and natural disaster-prone country, ensuring that infrastructure projects are disaster-resilient is of crucial importance in the Bangladesh context.

The OECD framework's indicator 10.1 relates to the presence of disaster risk assessment plan. In Bangladesh, the DPP prepared by the implementing agencies of the infrastructure projects is required to undertake risk analysis and specify mitigation measures in anticipation of disasters. However, as was noted, DPPs can not be accessed publicly in Bangladesh in view of which whether the proposed measures are effective or not remain largely unknown.

⁴⁵OECD Framework Indicator 9.2: Clear remit of the sectorial ministries and authorities to develop, assess and monitor infrastructure policy and performance.

⁴⁶When ex-post evaluations are not part of project design and are not carried out, interested parties get away with lofty promises to justify the concerned project.

The Bangladesh Ministry of Disaster Management and Relief (MoDMR) is responsible for the coordination of national disaster management efforts across all agencies.⁴⁷ The National Plan for Disaster Management (2021-2025) emphasises the importance of investing in resilient infrastructure. The National Plan mentions that MoDMR is to offer technical support to different ministries and their executive agencies so that they can include Disaster Impact Assessment (DIA) in preparing development plans (MoDMR, 2020). However, this support is limited only to a few ministries and their executive agencies. Many implementing agencies dealing with key infrastructure projects do not coordinate their work with the MoDMR; DIA is not always included in the process of preparing project plan. Also, there is no proper guideline in this regard, particularly concerning disaster risk assessment plan for infrastructure projects. To make an infrastructure project disaster-resilient, there needs to be a regulatory framework that works on reducing the risk of service delivery failure. However, the National Plan for Disaster Management mentions no such regulatory framework (MoDMR, 2020). Towards better delivery of outputs for PIP implementation, such a regulatory framework could serve a useful purpose.

Climate change modelling should thus be incorporated while designing the PIPs. Sustainability of infrastructures could be undermined and also maintenance costs would go up if climate change modeling is not incorporated in the design of the PIPs.

As was noted, the IMED has developed a Monitoring and Evaluation framework which has the objective of ensuring accountability of agencies involved in public service sectors, to help generate the expected results from investments in development projects, and improve the efficacy of policies, strategies and programmes by drawing on past experience. The framework defines "monitoring" as the process of keeping progress records in a timely manner to examine whether the resources meant for the implementation of policies, plans, programmes and projects are being used appropriately. "Evaluation" is defined as a "systematic and purposeful undertaking carried out by internal or external evaluators to appraise the relevance, efficiency, effectiveness as also impacts and sustainability generated by the plans, policies, programmes and projects under implementation" (IMED, 2019b). Evaluation could also serve as a learning tool to assess strengths and weaknesses in project implementation which then could be deployed in designing and implementing future projects. It may be recalled here that all recent Plan documents have emphasised the importance of reforming the M&E system of the IMED. In this connection, Result-Based Monitoring and Evaluation (RBM&E) has been mentioned as crucial to ensuring efficient delivery of project outputs. RBM&E strategy is geared to strengthening the internal capacity of the government to effectively implement development programmes, augmenting efficacy of foreign aid and ensuring accountability, good governance, and transparency in project implementation. IMED has been working to introduce RBM&E since 2010, but the agency has not been successful in getting this off the ground in an effective way (IMED, 2019b). This was also mentioned in successive Budget speeches by Finance Ministers. It is high time to introduce governance in PIP implementation in Bangladesh.

2.2 Case Studies

We have considered three PIPs in Bangladesh as case studies from the perspective of assessing state of governance by taking the OECD framework as the point of reference. These projects are afflicted with many of the problems and challenges which the OECD framework attempts to address and mitigate. The selected projects include two physical infrastructure and one social infrastructure project.

⁴⁷OECD framework's indicator 10.2: Presence of designated authorities responsible for tackling disasters.

Box 2.1: Dhaka Chittagong 4 Lane Highway Project: An example of Poor Planning and Implementation

Dhaka-Chittagong highway is the most important transport artery in Bangladesh and is considered to be the lifeline of the national economy. The Dhaka Chittagong 4 Lane Highway Project was taken up to upgrade the existing road that linked the capital city with the country's commercial hub, the port city of Chittagong. Since Dhaka and its adjoining areas constitute the industrial heart land and export centre of the country, the Dhaka-Chittagong highway services the needs of 90 per cent of the almost \$100 billion worth of international trade carried out in Bangladesh. The Dhaka-Chittagong 4 lane highway project was undertaken as a mega PIP with the objective to ensure faster and safer road communication between the two cities. The project was approved by the ECNEC in 2008. Physical work of the project was launched in 2010 and the work was expected to be completed by June 2012 (IMED, 2019a). However, the work was finally completed only in June 2017, with a delay of five years. Alongside the time overrun, the project also experienced significant cost escalation; there was a 58.6 per cent rise in project expenditure. The initial estimated cost of the project was BDT 2,161.38 crore when it was first designed in 2006. The project expenditure finally ended up being BDT 3439.20 crore (IMED, 2019a). The cost of construction turned out to be USD 2.5 million per kilometer (The Daily Star, 2017). As may be recalled, cost of construction of per kilometer four-lane urban arterial road, including costs associated with traffic-controlled intersections, is significantly higher in Bangladesh than that of India, Pakistan and China (Asian Infrastructure Investment Bank, 2019).

IMED reports have observed that planning for the project was not carried out in a proper way. Feasibility study of the project was found to be wanting in quality. The highway lacks a separate lane for slowmoving vehicles; there is no proper underpass or foot bridge for road crossings. Consequently, the risks of accidents have risen significantly. The IMED report has pointed out that design and plan presented in the DPP were not up to the mark. This made it necessary to amend the project subsequently, which in turn led to significant time and cost overrun. The initial design of the project, carried out in 2006, did not anticipate substantial maintenance work for the first ten years (IMED, 2019a). However, soon after its completion, the Road Transport and Highways Division (RTHD) proposed a BDT 739 crore project for repair and maintenance of the project (Islam, 2019). The damage to the road was, in part, because of inaccurate forecasting of the expected traffic. Also, the bitumen which was used in the construction of the road was not of right specification. Initially, traffic growth was projected to rise at six per cent, whereas by 2019 this was growing at more than ten per cent per annum (IMED, 2019a). Authorities had estimated in 2006 that 16,485 vehicles would ply on this road per day; however, by 2018 about 32,000 vehicles were using the highway daily, almost a 100 per cent rise. Government had set a limit of 15 tonnes as the maximum load for six wheelers while the surface of the highway was constructed considering 10.2 tonnes as maximum load for this type of vehicle. Indeed, as is the case, six, ten, and fourteen wheelers in Bangladesh tend to carry up to 22.0, 30.0, and 44.0 tonnes of load respectively. To note, global standard for these are 15.5, 22.0 and 32.0 tonnes respectively. In August 2016, the Road and Highways Department took an initiative to impose fines for overloading. However, subsequently the government was compelled to raise the maximum weight limit under pressure exerted by the country's transport lobby (IMED, 2019a).

Frequent change of PD was a common feature in the course of implementing the project. PDs were changed 12 times during the implementation of the project. As a new PD requires a fair amount of time to get a good grasp of the details of a mega project such as this, the frequent changes had a detrimental affect on the quality of implementation of this PIP. Cost and time overrun, frequent changes in various components of the project as also lack of proper quality control could be attributed, at least in part, to the frequent change of PDs. Undertaking of on time corrective measures also suffered because of lack of proper monitoring of implementation of the project. Implementation of the project also revealed dearth of expert managerial capacity and needed human resources in the public sector in general for implementing such mega projects. There were also allegations of attempted corruption - a high-level government official accused one of the contractors that he had offered him bribe.

(Box 2	2.1 со	ntd.)

Pillar 1	Pillar 2	Pillar 5	Pillar 8	Pillar 9
Developing a long-term strategic vision for infrastructure	Manage threats to integrity	Integrate a consultation process	Generate, analyse and disclose useful data	Make sure the asset performs throughout its life
 Absence of feasibility study of required quality Frequent changes in PDs Frequent changes in DPP due to modifications in planning and designing of the project. Absence of service lane Traffic forecasting was way off the mark 	 Corruption allegations Low quality bitumen in road construction 	 Absence of any consultation strategy Absence of formal mechanism to involve the public in monitoring and implementation of the project 	 DPP not shared publicly Absence of a process dedicated to sharing data in an open format on a dedicated website 	Overloaded vehicles

Box 2.2: Construction of Joydebpur-Mymensingh 4 Lane Highway Project

The Joydebpur-Mymensingh 4 lane project was taken up to establish better connectivity between Dhaka and Mymensingh, a very busy transport corridor linking the capital city with northern districts of the country. The project faced a host of difficulties in the course of implementation. It was approved by the ECNEC in 2010 and the deadline for completion was set for 30 June 2013. This was subsequently revised to 30 June 2017, with a delay of four years. The implementation deadline was extended twice. The cost for the project was initially estimated at BDT 902.22 crore. However, the final project cost escalated to BDT 1815.12 crore, more than double the projected amount (IMED, 2020c). The estimated construction cost for the highway was USD 2.5 million per kilometer (The Daily Star, 2017). This amount, as stated earlier, was significantly higher than that of other countries in the region (AIIB, 2019).

The project was to be completed in four packages. Package 1 and 2 were implemented by the Bangladesh Army's Special Works Organisation (west). Package 3 and 4 were to be carried out by local contractors. Due to financial and other problems encountered by the contractor of package 3, this also was subsequently handed over to the Bangladesh Army (IMED, 2020c). PDs were frequently changed - over the 7 years period of the project 12 PDs had worked on this project. This hampered smooth implementation and continuity of work of the project's implementation cycle. The initial DPP was not properly designed, which resulted in frequent changes in the document. No service lane for the slow-moving vehicles was included in the project, raising risks of accidents. Foot over bridges and underpasses were not put in place at important junctions. There was no system to control overloading of vehicles plying on the road; there was no axle load control station along the highway. IMED also

(Box 2.2 contd.)

reported on the poor quality of the maintenance work. There is no mention of any exit plan⁴⁸ as regards the project in the DPP (IMED, 2020c).

Relevance of OECD pillars with Good governance failure in "Joydebpur-Mymensingh 4 Lane Highway" project

Pillar 1	Pillar 2	Pillar 5	Pillar 8	Pillar 9
Developing a long-term strategic vision for infrastructure	Manage threats to integrity	Integrate a consultation process	Generate, analyse and disclose useful data	Make sure the asset performs throughout its life
 Frequent change in PDs Frequent changes in the DPP due to modification in planning and designing of the project. Absence of service lane 	Corruption allegations	 Absence of any consultation strategy Absence of a formal mechanism to involve the public in the monitoring and implementation of the project 	 DPP not shared publicly Absence of any process dedicated to sharing data in an open format on a dedicated website 	 Overloaded vehicles Weak maintenance No mention of an exit plan in the DPP

Box 2.3: Construction of Kushtia Medical College and Hospital Project

The GoB has devised a plan to construct medical colleges and hospitals in every district of the country to provide healthcare services to the people in a decentralised manner. As part of this plan, the government took an initiative in 2012 to build the Kushtia Medical College and Hospital in Kushtia. The project implementation period was set from January 2012 to December 2014, with an initial project cost estimated at BDT 275.43 crore. The deadline for the completion of the project was extended to 2019 in three phases. The cost increased to BDT 611.08 crore when the first amendment was made in 2018. The project's physical progress was only 34 per cent over 8 years, from January 2012 to December 2019 (IMED, 2020b). The second amendment of the project proposed extending the completion timeline to 2023 with the project cost further raised to BDT 682.0 crore (The Business Standard, 2021a).

No proper feasibility study was carried out in implementing the project because of which Formation Ground Level (FGL) could not be set properly for the hospital buildings. The original DPP didn't include any procurement plan from the public works department. The DPP was formulated with the provision of 14 packages for all procurements, but later the Health Directorate had split those into 84 packages when the revised DPP was formulated. In many cases the authorities followed Direct Procurement Method (DPM) or Limited Tendering Method (LTM) when contracts were offered. Reputed and established contractors didn't show interest in bidding for small packages. As a result, small time, less qualified contractors were awarded the various contracts. These contractors were not well-equipped to undertake the assigned tasks. Also, the contractors hired unskilled workers for the project. IMED recommended merging the packages into larger lots to get better outcomes (IMED, 2020b). The IMED report also recommended taking actions against those officials who were responsible for splitting the packages in the revised DPP. Surprisingly, contractors had completed the finishing work of the building

(Box 2.3 contd.)

⁴⁸OECD framework's indicator 10.2: Presence of designated authorities responsible for tackling disasters.

(Box 2.3 contd.)

before completion of the structural work of the building itself! In the end this resulted in damage of tiles, window grills, window sheds, plaster works, doors, etc. The Critical Path Method (CPM) was not prepared for the project which is important for smooth implementation of a project within a specified time frame. The project also didn't include any exit plan. As of now, three PDs have worked on this project. The IMED report revealed that all the PDs were doctors, including the current one. When asked about the project, the current PD stated that he had no experience in implementing and monitoring construction work as he was a doctor by profession. Frequent changes of executive engineers was also a problem that afflicted the project. From 2012 to 2019, 8 executive engineers were appointed for the project. The project was approved without securing the needed land, which also delayed the construction of the project. Due to land acquisition problems, construction work is still pending on part of the designated land. The project authorities were not able to issue tenders for 5 out of 18 buildings to be constructed as part of the project. There were also reports in the media of using wood and bamboo in place of steel to construct one of the buildings! One worker had died, and ten workers were injured as one part of the building had collapsed when the construction work was being carried out (IMED, 2020b). Due to allegations of large-scale irregularities and corruption, the PMO has asked for an investigation of the project.

Pillar 1 Developing a long-term strategic vision for infrastructure	Pillar 2 Manage threats to integrity	Pillar 5 Integrate a consultation process	Pillar 8 Generate, analyse and disclose useful data	Pillar 9 Make sure the asset performs throughout its life
 Absence of feasibility study Absence of procurement plan by the public works department in the original DPP Frequent changes in executive engineers 	 Corruption allegations Use of poor- quality materials for construction 	 Absence of any consultation strategy Absence of a formal mechanism to involve public in the monitoring and implementation of the project 	 DPP was not shared publicly Absence of dedicated process to share data in an open format on a dedicated website 	Absence of an exit plan

Relevance of OECD pillars with Good governance failure in "Kushtia Medical College and Hospital" project

CHAPTER 3

Recommendations and Final Remarks

3.1 Adjusting the OECD Framework in Bangladesh Context

Insights drawn from the OECD framework and juxtaposition of this framework to ground realities in the Bangladesh context suggest that Bangladesh will stand to benefit significantly from a comprehensive PIP implementation framework. Such a framework will enhance transparency, strengthen accountability and improve the state of good governance in PIP implementation in Bangladesh. Preceding analysis from the vantage point of the OECD framework reveals four key insights: (a) In the recent past, Bangladesh has indeed been taking many measures and putting in place various regulatory initiatives and institutional arrangements towards better governance in implementation of infrastructure; (b) Inspite of measures to improve state of infrastructure governance, there are significant deficits which in the end results in cost overrun, time overrun, quality depletion and undermining of the objective of good value for money in PIP implementation; (c) OECD framework could serve as a good reference point to develop a comprehensive framework for ensuring good governance in Bangladesh, particularly in the PIP implementation, and (d) The OECD framework will, however, need to be contexualised in view of Bangladesh's local circumstances and the specificities of particular projects.

The 10 pillars and 47 indicators which inform the OECD framework provides a generic frame for putting in place an appropriate good governance structure in PIP implementation. At the same time, in addition to measures of adjustment, there are some other elements that merits serious considerations to further strengthen the framework in the Bangladesh context.

In the preceding sections, suggestions have been put forward as regards adjustments to the OECD framework by drawing on Bangladesh's experiences. The discussion has identified attendant deficits and also noted how some of the good initiatives and measures that were put in place by the concerned agencies could be further improved and strengthened. The discussion also draws attention to a number of initiatives that may be added to the OECD framework to better cater to the specific needs of Bangladesh.

3.2 Ensure Adequate Legal Support

The GoB doesn't have any dedicated law cadre in the Ministries to deal with various court cases when an infrastructure project's implementation is contested by an 'aggrieved party' on various legal grounds including those that concern ownership, acquisition, relocation, compensation and others. Project implementation is delayed for long periods when cases are lodged and stay orders are issued by the lower courts. Legal experts sent from the pool of law Ministry to the various Ministries and government entities are frequently transferred and the concerned officials also lack motivation. Capacity should be built within important Ministries to deal with court cases.

Although Deputy Commissioners have the legal authority as regards land acquisition, IMED reports mention that often concerned project implementation authorities do not seek approval for land acquisition from the District administration before selecting a project; many of the legal complexities originate from this (IMED, 2021a). To deal with the cumbersome court cases involving particularly large PIPs, a dedicated law cadre may be developed, to be deployed at the disposal of

PIP implementing authorities. Indeed, Ministries which are engaged in implementing large PIPs can develop their own in-house legal capacity. This requirement may be added to the OECD framework.

Land acquisition procedures and regulations involving implementation of the PIPs ought to be standardised. Also, adequate human resources in key ministries will need to be developed to enforce those.

Indicators to "Ensure Adequate Legal Support" may include:

- (a) Presence of a dedicated and permanent law cadre to deal with legal issues involving PIP implementation;
- (b) Transparent and data-driven compensation mechanisms for land acquisition and
- (c) Development of a legal document articulating how land acquisition related transactions should be carried out in a way that reduces to the minimum lodging of legal cases.

3.3 Take APAs to Field Delivery Levels

The Annual Performance Agreement (APA) introduced by the GoB is an excellent initiative towards good governance and accountability. This can be further strengthened by ensuring vertical accountability, i.e.; taking it beyond macro-level Ministries, Divisions and agencies to more micro-level, to the level of, for example, PDs of important projects. Till now APA has worked primarily on the basis of rewards but without any sanctions. The proposed framework could include both.

Indicators of the proposed Pillar "Introduce Annual Performance Agreements (APAs) at the micro level" may include:

- (a) KPIs to assess performance of PDs
- (b) Presence of an independent body to monitor the assessment process of implementing agencies to ensure better accountability
- (c) Reward and sanctions based on performance of PDs of nationally important PIPs

Indeed, the above two suggested pillars could also be subsumed under the existing pillars of the OECD framework and put as indicators of performance of PIPs under the specific Pillar.

3.4 Implement IMED recommendations

IMED in successive reports have drawn attention to recurring problems impeding PIP implementation. It has also made a number of suggestions to address the attendant problems. These include filling up vacant posts, training of human resources, setting up of a dedicated project implementation institution, setting up a specialised lab to help carry out the monitoring and assessment work.

Concerned authorities should take urgent steps to implement these suggestions made towards better governance in PIP implementation in Bangladesh.

Indicators for that could be:

- (a) A plan to implement IMED recommendations
- (b) Progress made in view of the aforesaid plan
- (c) Assess improvements in view of implementing the plan

3.5 Strengthen Monitoring and Evaluation

As was noted, in Bangladesh, the task of monitoring and evaluating implementation of development projects has been vested with the IMED. However, IMED faces various constraints in carrying out its mandated activities which needs to be properly addressed. On the other hand, as was also mentioned earlier, citizens' monitoring initiatives could be a powerful ally in the work of the IMED. There is a need to strengthen both the formal (IMED) and informal (citizens' initiatives) forms of monitoring towards better governance in PIP implementation.

The OECD framework has a dedicated pillar and indicators that concern strengthening monitoring and evaluation of PIP implementation which, in the particular context of Bangladesh, could be addressed and further strengthened through the followings: (a) Enhance IMED's human resources (as it is, 123 out of 338 posts in the IMED remained vacant as of FY 2020-21); (b) Take concrete initiatives to raise IMED's M&E capacity by setting up a dedicated professional development institute; (c) Decentralise IMED work through Divisional level offices; (d) Put in place a dedicated laboratory at the IMED for testing quality of construction works; (e) Set up a media wing towards greater transparency and accountability in the work of the IMED; (f) There is a need for capacity building of non-state actors in areas of monitoring PIP implementation in their localities.

The pilot exercise that has been initiated by the BIGD, in agreement with the GoB, should be strengthened and promoted further. Lessons learned from the pilot initiative should be carefully assessed for its wider dissemination and scaling up. Such an exercise will advance the cause of accountability in PIP implementation in Bangladesh. This will also strengthen pillar 5 of the framework (Integrate a consultation process).

Indeed, these involve cross-cutting areas which would improve PIP implementation across all the Pillars.

3.6 Concluding Remarks

The Working Paper has highlighted a number of points for raising the efficacy of PIP implementation in Bangladesh. Given the significant amount of resources being spent on PIPs and in the backdrop of substantive resources that are planned to be deployed in this area over the coming years, good governance in PIP implementation has emerged as a task needing urgent attention on the part of Bangladesh's policymakers. This paper has taken the OECD framework as a reference point towards ensuring good governance in PIP implementation in Bangladesh. The paper has documented various initiatives undertaken by the GoB to raise the quality of PIP implementation and identified the gaps therein when juxtaposed to the pillars and indicators of the OECD framework. However, the paper mentions that the specific context and concrete needs of Bangladesh have to be factored into consideration while developing a PIP implementation framework for the country. In this connection the paper has identified a number of considerations that merit inclusion in the specific context of Bangladesh. These were identified based on insights drawn from field level visits and discussion with relevant experts. It is hoped that findings of the study will contribute to ensuring good value for money and delivering the expected results from investment in PIPs. This in turn will hopefully improve the state of good governance in PIP implementation in Bangladesh and raise the quality of outputs and impacts to be accrued from investing in Bangladesh's infrastructure.

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ANNEXES

Annex 1

Governance Dimension	Key Policy Questions	Indicators
Develop a strategic vision for infrastructure	 Is there a whole of government vision for infrastructure investment in the medium to long term? Is there an established process for generating, monitoring and adjusting a national strategic infrastructure vision? Is there a dedicated unit or institution responsible for monitoring, generating, assessing, costing and creating debate around infrastructure policy? Are there appropriate tools and processes that link the allocation of public resources to the strategic infrastructure vision? Are strategic infrastructure plans aligned with existing spatial and land-use plans? Is strategic infrastructure planning integrated into the spatial planning process or does it rely on independent processes? 	 Presence of a long term strategic plan Strategic frameworks for public investment implementation Budget allocation to projects in plan Dedicated processes and units Inter-departmental or ministerial committees and platforms to design infrastructure strategies
Manage threats to integrity	 Are there specific measures in place in order to prevent corruption and capture from happening in infrastructure governance, such as measures to Do audit functions have adequate capacity and resources to provide timely and reliable audits, as well as to remain insulated from manipulation of audit processes 	 Adequate conflict of interest policies for public officials (prohibitions of exercising certain activities or holding certain interests; postemployment measures; disclosure; advisory services); System of internal controls and financial reporting to monitor and identify irregularities Measures in place to control the integrity of firms wishing to contract with public bodies; Mechanisms to report wrongdoing related to infrastructure projects; Sufficient technical resources within the organisation responsible for organising public tenders;

Annex Table 1: Overview of infrastructure governance dimensions

(Annex Table 1 contd.)

⁽Annex Table 1 contd.)

Governance Dimension	Key Policy Questions	Indicators
		 Political contribution limits and spending limits in relation with election campaigns at national, regional and municipal levels; Standards regulating lobbying activities and ensuring they are conducted in a transparent manner.
Choose how to deliver infrastructure	 What are the prioritised sectoral policy objectives? What is the extent of market failures? How politically sensitive is the sector? What characterises the enabling public, private and legal environment? What is the size and financing profile of the investment? What is the level of control government want to retain? What is the potential for cost recovery? What is the level of uncertainty? Is it possible to identify, assess and allocate risk appropriately? 	 Formal process or policy document to ensure value for money, for example by: o Cost-benefit analysis o Cash flow estimates over the project cycle o Business case methodology Policy document and processes to ensure competitive tender process Dedicated procedure for identifying and allocating clearly risks between public and private parties
Ensure good regulatory design	 Is the overall regulatory framework for infrastructure sectors conducive to good governance of infrastructure, Are there multiple layers of regulatory requirements perceived as overly burdensome? Is there appropriate coordination between various regulatory bodies, as well as mechanisms for co-operation between regulators across borders? Are the functions, powers and capacities of regulators aligned with the role of regulators in the broader infrastructure permitting and approval process? What key data and information, including on costs of capital, asset depreciation and infrastructure consumer base, are available to inform tariff setting? Does the overall governance of regulators facilitate confidence and trust in the infrastructure investment regime 	 Use of evidence-based tools for regulatory decisions o Impact assessment o Ex-post evaluation Regulators o Independence o Accountability o Sufficient scope of action

(Annex Table 1 contd.)

Governance Dimension	Key Policy Questions	Indicators
Consultation	 Is there an open government or consultation strategy? Are specific stakeholder groups consulted throughout infrastructure projects phases? Are structured dialogue mechanisms in place to ensure systematic public consultation? Are there formal mechanisms to involve the public in the monitoring and implementation of infrastructure investments during the construction phase and upon completion? Is there a forum, process or procedure for determining the balance between stakeholder interests and the public good 	 National open government strategy or guidelines (either designed for infrastructure investments or that could be applied to them) Mapping of stakeholders Stakeholder consultation fora or participatory budgeting programmes Websites or other outreach tools to provide public information on infrastructure projects Participatory auditing procedures
Co-ordination across levels of	• Are the competencies related to infrastructure development allocated clearly and coherently across levels of government?	• Formal mechanisms/bodies for co-ordination of public investment across levels of
government	 Do financing needs match the mandates granted to subnational governments for infrastructure development? 	government Co-ordination bodies/ mechanisms have a multi-sector approach
	 What are the main co-ordination challenges for infrastructure policy across levels of government? 	 (across multiple ministries/ departments) Co-ordination mechanisms
	What are the fiscal and policy co-ordination instruments across levels of government?	are frequently used and produce clear outputs/
	• What are the governance instruments or fiscal incentives to enhance co-ordination across jurisdictions for infrastructure investment? Do they work properly?	 outcomes Co-financing arrangements for infrastructure investment Higher levels of government provide incentives for cross- jurisdictional co-ordination
Affordability and Value for Money	 Is the infrastructure procurement process integrated into the ordinary budget process? Is the full cost of the asset budgeted upfront regardless of how it is implemented? Is there a long term infrastructure strategy and is it linked to long term fiscal projections? Is there a process for prioritisation across sectors and within sectors? Is a cost- benefit analysis carried out? Are various delivery modalities analysed so as to ensure value for money? 	 Central Budget Authority role in green-lighting infrastructure projects Supreme Audit Institution PPP or Infrastructure Unit or a procurement unit in charge of infrastructures Tests and controls to assess the maturity of the organisation responsible for delivering the project

(Annex Table 1 contd.)

(Annex Table 1 contd.))
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Governance Dimension	Key Policy Questions	Indicators
	 Is an affordability analysis carried out for the public budget and/or the users? Are there dedicated units and capacities available to decisionmakers with respect to infrastructure strategy, delivery and performance monitoring and ensuring value for money in contracting? Are cost-benefit analyses evaluated by an institution different from the project 	 Formal requirement to account for contingent liabilities and running costs Formal requirement for ensuring absolute value for money Accounting
Generation, Analysis and Disclosure of Data	 Is there a mandatory system to ensure systematic collection of relevant financial and non- Is there a mandatory system to ensure systematic collection of relevant financial and nonfinancial data during the project development? Is there a mandatory system to ensure collection of relevant financial and non-financial data about the performance of infrastructure? Is there sufficient data that makes is possible to compare various forms of infrastructure delivery models? Are they compared based on data? Is financial and non-financial data about the project (ex ante and performance) disclosed to the public? 	 Central unit (Central Infrastructure Unit, Central Budget Authority) for the collection, disclosure and analysis of data. Choice of delivery modality and projects is based on data. Key Performance Indicators to assess infrastructure performance Disclosure of data in an open format on a dedicated website Infrastructure investment flow data (in sectorial breakdown) Infrastructure investment stock data (in sectorial breakdown)
Performance throughout the life-cycle	 Is there a strategy for how performance of the asset throughout the life of the asset is to be ensured? Do relevant line ministry or agency conduct performance assessment and monitoring of each project? Are there programmes in place for training and capacitating relevant institutions? Do PPP/concession/procurement contracts state the required output and performance? Is there a strategy in case of renegotiations? 	 Policy document for ensuring performance from assets regulated by agency (sector regulator) or by contract with line department or similar. Clear remit of the sectorial ministries and authorities to develop, assess and monitor infrastructure policy and performance Strategy for re-negotiations. Ex-post evaluation of value for money

(Annex Table 1 contd.)

(Annex Table 1 contd.	.)	
Governance Dimension	Key Policy Questions	Indicators
Public infrastructure needs to be resilient	 Are there policies in place to ensure that key infrastructure assets are resilient if disasters hit? Are key structures designing to sustain a foreseeable shock or are substitute or redundant systems available. Is there management capacity to identify options, prioritising actions, and communicate decisions to the people who will implement them? Are there tools in place to learn from past events? 	 The presence of a disaster risk assessment plan The presence of designated authorities responsible for tackling disasters

Annex Figure 1: Insignificant number of complaints regarding the tender process in the Citizen Portal



Source: CPTU (2021).

Project Name	Initial Budget (in BDT Crore)	Final Budget (in BDT Crore)	Cost Overrun	Cost Overrun (in %)	Initial Timeline	Final Timeline	Time Overrun	Time Overrun (in %)
Padma Multipurpose Bridge	10161.75	30193.39	20031.64	197.13	1/1/2008- 30/6/2015	1/1/2009- 30/6/23	8 years	114.3
Padma Bridge Rail Link	34702.74	39246.80	4544.06	13.09	1/1/2016- 30/6/2022	1/1/2016- 30/6/2024	2 years	33.33
MRT-6	21985.07	23490.07	1505.0	6.85	July 2012- June 2024	1/7/2012- 30/6/2024		1
Chattogram- Cox's Bazar Rail Line	18034.48	18034.48	1		1/7/2010- 30/6/2022	1/7/2010- 30/6/2022	1	1
Rooppur nuclear power plant	113092.91	113092.91	1		1/7/2016- 30/12/2025	1/7/2016- 30/12/2025	1	1
Matarbari coal- fired power plant	35984.45	35984.45	1		1/7/2014- 30/6//2023	1/7/2014- 30/6/2023	1	

Annex Table 2: Stylized Data on Fast-track Projects

Source: Planning Commission (n.d.).

Annex 2: Case Study on Dhaka-Chattogram Highway Project

Prepared by Dr A K Enamul Haque, Professor of Economics, East West University

The Task and Methodology

To study the state of good governance in PIP implementation in Bangladesh, we have taken the Dhaka-Chattogram Highway Project as a Case Study. Following methods were used for purposes of the study:

- a. Review of project documents and IMED evaluation reports
- b. Use of OECD Framework as a reference to assess the state of governance in the implementation of the Dhaka-Chattogram highway project
- c. Interviews with desk officials at the Ministry of Planning and the Department of Roads and Highways
- d. Field visits to project offices

The objective of the present exercise was to look at, and evaluate, the state of governance in the implementation of the aforesaid project work on which was carried out between 2006-17 period. For this purpose, as was noted, the OECD Framework was used as a measure of state of governance in the implementation of this particular PIP. The idea was to assess the quality of governance by using the pillars and indicators of the OECD framework as assessment measure, and also to propose whether any adjustment to this was needed.

As was noted, for the purpose of this assessment, we have taken the Dhaka-Chattogram Highway project, considered as a major infrastructure project in Bangladesh and the economic lifeline of the country, as a case study. Not only does the highway connect the capital with the major commercial hub of the country, but it is also an important artery that connects Dhaka and Chattogram to adjoining districts with increasingly high economic activities. More than 90.0 per cent of Bangladesh's trade takes place through the Chattogram port. The highway is also a key human corridor and a major component of the Dhaka-Chattogram-Cox's Bazar tourism corridor.

The Project

Work on constructing the 4 lane Dhaka-Chattogram Highway was first initiated in January 2006. The DPP was revised three times and the work was completed in June, 2017. In the end, the construction period increased by about 76.9 per cent and project costs turned out to be 58.6 per cent higher. The project was finally completed with a total cost of 3816.94 crore taka while its original estimated cost was 2168.38 crore taka.

As may be recalled, the project was undertaken to upgrade the Dhaka-Chattogram National Highway (N1), from the then prevailing two-lane to a four-lane one. More specifically, the work involved upgradation of the road segment (190.48 km) between Daudkandi and Chattogram. As may be noted, the Dhaka-Daudkandi segment was completed in 2005 (prior to the inception of this project).

Project works related to the Dhaka-Chattogram highway included the following elements and components:

- a. Land acquisition of 39.7739 acres
- b. Construction of road embankment (land filling) of 123.43 lakh cubic meters

- c. Construction of 14 bypasses that was equivalent to 32.15 km
- d. Construction of new pavement of 174.31km
- e. Construction of concrete pavement of 15.66 km
- f. Construction of 61 bus stops
- g. Construction of 34 footover bridges
- h. Construction of 2 under pass
- i. Construction of 23 bridges and
- j. Construction of 242 culverts

The work of the project was completed using 13 procurement packages, over a period of 11 years. The project was revised 3 times – the first revision was made to raise the earlier estimated cost of the project; the second and third revisions were made to increase the time and also raise the project budget.

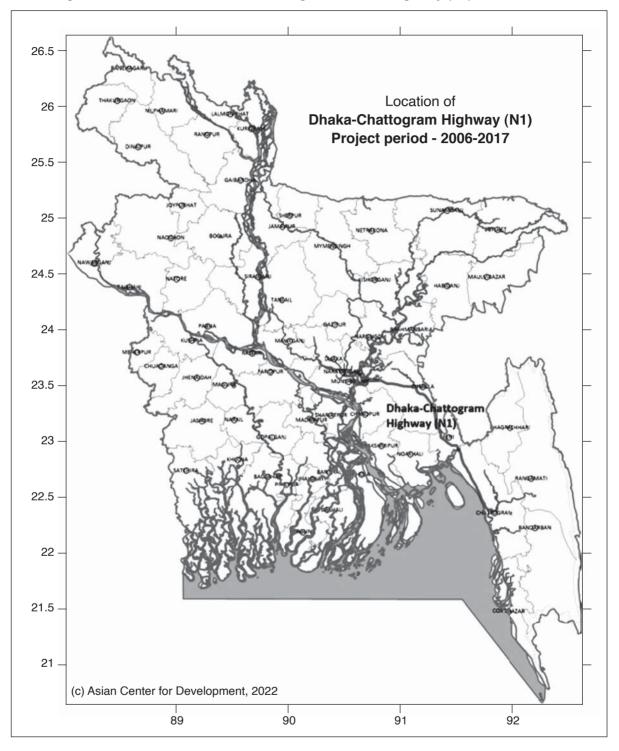
Observations in the PCR

The Project Completion Report (PCR) was submitted in 2018. The report presents a number of reasons why there were delays in project completion, and why the various changes were made in the course of project implementation. These can be summarized as follows:

- a. Land acquisitions had to be carried out with the help of the Office of the Deputy Commissioners of several districts. This was a complex undertaking by any reckoning. Land acquisition was also required for construction of side roads and bridges on the highway.
- b. Significant land filling was needed for construction of the highway. This was estimated to be 136.45 lakh cubic meter according to the last revision (original estimate was 123.43 lakh cubic meter). However, the actual land filling turned out to be 132.43 lakh cubic meter.
- c. According to the report, all activities of the project was completed as per the requirements of the revised project documents.
- d. The highway is now functional. It is expected to contribute significantly towards socio-economic development of the country.
- e. Following its completion, the project was transferred to the revenue budget to ensure that allocations are duly made for the project's future maintenance work.

Additional observations

The report also mentioned that the financial expenditures of the project were audited by internal audit of the Department of Roads and Highways as also by the Audit wing of the Ministry. Furthermore, it was noted that the highway remained functional during the construction period, implying that in the course of construction of the highway the transportation link between Dhaka and Chattogram was not disrupted (the highway was kept functional). While the average annual daily traffic on the highway was projected to be around 17 thousand per day, the report found that in reality the actual figure turned out to be about 32 thousand in 2018 – a significant rise. The report observed that many vehicles were operating with higher axle-load compared to what was permissible as per the design of the road. This was undermining the quality and longevity of the highway. This also resulted in higher cost for maintenance of the highway.



Annex Figure 1: Construction of Dhaka-Chattogram National Highway (N1)

Field Observations

The study team visited project offices of the Roads and Highways Division of the Ministry of Road Transportation and Bridges as also the Infrastructure Division of the Ministry of Planning. The team collected field level data and information pertaining to implementation of this key PIP. The idea was to have a deeper understanding as regards management and governance of the project.

Based on review of documents and discussions with relevant officials, our observations may be summarized in the following ways:

Weakness in project planning

One of the major weaknesses in managing roads and highway projects, in general, concerns the activities undertaken at the initial, conceptual-planning stage. Important national projects such as the Dhaka-Chattogram highway ought to be conceived keeping in view its alignment with the National Road Master Plan. However, relevant officials are often asked to prepare Development Project Proposals (DPPs) without adequate lead time that would allow for a more informed and detailed work on proposals. Because of this, as far as large projects are concerned, the various estimates and projections as regards costs, time required, procurements needed etc. tend to be rather tentative. This has a chain effect on subsequent implementation and the quality of the overall state of project governance. Oftentimes, initial estimates have to be revised and the volume of physical works also need to be revised. These lead to time delays and consequently to cost escalation. The revisions are also often not done in a professional way requiring further revisions. As a result, estimates for project expenditures and project. This also was the case for the Dhaka-Chattogram highway project where the project had to be revised several times, with consequent time and cost escalation.

Coordination with the Land Ministry and the Ministry of Public Administration

Land acquisition in Bangladesh is a highly challenging task. The Ministry of Land and the office of the Deputy Commissioner (under the Ministry of Public Administration) are responsible for this. Acquisition of land for purposes of construction of any infrastructure such as roads and highways is exclusively dependent on these institutions. Since land records in Bangladesh are yet to be fully digitized, acquisition of land remains highly problematic. Also, many illegal occupiers and encroachers live and/or carry out various activities on public (Khas) land. As a result, any land acquisition is prone to litigation by interested parties. This delays initiation of project works and raises project costs. The Dhaka-Chattogram highway was no exception in this regard. One of the major reasons for the delay in implementing this key PIP was related to settling land-related issues.

Free Vehicular Movement

With socio-economic development experienced by Bangladesh over the past years, expectations of people have also undergone significant changes. Citizens now demand more and better services from the public service providers. In view of this, the overall design standard of the highways also needs to be modernised to cater to demands of the economy. In Bangladesh, one finds hundreds of local markets on both sides of any major highway. Highways are used for parking as well as for loading and unloading of goods. These create obstructions on the highways and impede smooth vehicular movement. Both businesses and people suffer because of this. Design of roads and highways often need to be modified in the course of construction which also causes delays. This in turn creates

uncertainties in preparing the procurement packages. For example, many local market communities now want flyovers to be constructed at market points to ensure that the markets are not adversely affected when highways are built. This increases procurement costs requiring revision of the project. Frequent revisions undermine the cause of good governance in the implementation of the project. All these had adverse implications for the construction of the Dhaka-Chattogram highway as well which led to delays in the implementation of the project and in the end project costs went up. These in turn had adverse implications for returns on investment.

PPR and Rate Schedule

Procurement packages for infrastructure projects are prepared on the basis of standardized prices set by the 'standard procurement rate schedules' of the Ministry. However, these schedules are not revised on a regular basis (e.g. annually) by taking into cognisance the changes in the market prices of the various items including construction materials. Because of this, cost estimates for public procurement often do not reflect the true cost of the packages. This also happened in case of Dhaka-Chattogram highway. This also creates room for 'out of pocket' solutions to meet project needs which undermine the cause of good governance.

Coordination between land acquisition and procurement packages

As was mentioned above, the process for land acquisition is coordinated by the Office of the Deputy Commission; at the same time, the tender document for procurement of services for the project is carried out by the Project Office. In many cases, due to litigations concerning land ownership, procurement is delayed and this leads to uncertainties as regards initiation of the project. Procurement is delayed and costs escalate. This in the end undermines the quality of governance and sometimes also leads to corruption in project activities. The Dhaka-Chattogram highway project was delayed because of this, and the projected costs had to be revised upward a number of times.

Public Utilities on R&H owned land

In order to provide services to the public, many public utility agencies, such as telephone, electricity, water, drainage and gas service providers, use land owned by the Roads and Highways division. When repair and maintenance work, expansion of roads, modification of designs, etc. are undertaken by R&H division, these service providers are asked to shift their infrastructure. The expenses have to be borne from the project budget. This results in project cost escalation. There is a need to develop a long term plan to coordinate installations of these agencies so that PIPs can be implemented on time and within the stipulated expenditure.

OECD Framework, Governance Dimensions, and Infrastructure Projects

There are 10 pillars and 47 indicators in the OECD framework of good governance for implementing PIPs. Based on experiences from field visits, review of project documents and discussions with relevant people, following observations may be made with respect to the case study by using the OECD framework as a reference.

Dimension 1: Strategic Vision of the Infrastructure

The Dhaka-Chattogram highway was part of the strategic vision as regards infrastructure development of Bangladesh, given its national importance. However, rapid changes in the nature of demand in the

economy meant that by the time the project was completed, with significant delays, new demands had emerged. The Dhaka-Chattogram highway should have been an expressway rather than just a highway, with service roads, access facilitation and other features of a modern expressway. There is a Transport Sector Master Plan in Bangladesh and policy documents mention about implementing the Plan. However, the country lacks adequate resources to finance the Plan. Getting maximum benefits from mega-projects such as the Dhaka-Chattogram highway hinges critically on implementation of other associated and connected projects. When those do not get done, large part of the potential benefits remain unrealised. This also makes performance assessment of particular projects difficult because other elements of the Master Plan have not been implemented. Efficiency of Dhaka-Chattogram highway depend, to a large part, on completion of feeder roads and flyovers and crossings, development of the Chittagong port, completion of the Dhaka Eastern Bypass etc. When these were not implemented in a timely manner, returns on investment, as far as this particular project is concerned, was adversely affected.

Dimension 2: Managing Threats to Integrity

In Bangladesh, there are specific rules to be followed for procurements to be made for projects; certain design standards are also to be maintained. There are rate schedules in place for public procurement. Internal and external process of auditing are in place that involves the Ministries and the Auditor General's office. Thus, systems are there for check and balance to ensure integrity of project management. However, uncertainties as regards packages, actual procurement needs and coordination failure (mentioned above) often threaten the overall integrity of project management. Dedicated units of the Government should remain responsible for a) assessing procurement standards, b) estimating the cost of procuring efficiently and c) ensuring the integrity of project, costs rose by about 56.0 per cent. This is indicative of weaknesses in preparatory work and project management which in turn undermines the integrity of public expenditure incurred in implementing the PIPs.

Dimension 3: Delivery of Infrastructure

Investment projects are required to undertake cost-benefit analysis before it is approved by the Executive Committee of the National Economic Council (ECNEC). For foreign-funded projects, this is mandatory. However, in case of some PIPs the exercise is not carried out with the needed rigour. Sometimes the investment costs are underestimated in order to ensure that the project is approved speedily. There is a need to ensure integrity of project feasibility studies. This should include: a) risk analysis of project, and b) sensitivity analysis of parameters identified in the feasibility study. GoB has recently modified its project approval process and has made Cost Benefit Analysis (CBA) exercise mandatory in case of all projects. Number of project documents has been capped to ensure smooth implementation. These are geared to improving the quality of delivery of the projects. In case of the Dhaka-Chattogram highway the cost estimates presented in the initial feasibility report had to be revised a number of time.

Dimension 4: Regulatory Design

To make the project deliver the expected outcomes and impacts, there is a need to improve the regulatory framework associated with PIP implementation. Projects, once completed, are audited by the concerned Ministry and by the Auditor General's office. The IMED does the regular monitoring

of the project implementation and also carries out the ex-post assessment. However, ex-post assessment is often of low quality and the assessment process is not independent and guided by appropriate regulations. When this is done by independent consultants, there are issues as regards the quality of the work. Setting appropriate guidelines is a precondition for improving the quality of assessment process. Financial evaluation of project expenditure is assessed independently by the Office of the Auditor General in most cases, as was noted. However, the work is carried out with significant delays. There is a need to strengthen the regulatory tools guiding project implementation from the perspective of a) improving the process, b) ensuring better quality impact assessment and c) towards greater transparency.

Dimension 5: Public Consultation

To ensure that projects deliver the expected outputs, there is a need to formalise the public consultation process. This should be done at the stage of project formulation through mapping of beneficiaries. Project managers do conduct prior public consultation as this is a requirement for large scale projects. However, once the work on the project is initiated, this is not continued. Lack of consultation with potential beneficiaries undermines transparency, raises the scope for corruption and leads to delays. Project planners should be guided by the long term development vision, and should design projects in a way that these are tuned to the actual needs of beneficiaries. It has been found that public consultations significantly improve the state of governance of PIP implementation. However, this was not followed up with due seriousness in implementing this particular project.

Dimension 6: Coordination across levels of government

This is an important precondition to improve the state of governance in PIP implementation since implementation of particularly mega-PIPs involve several government agencies. This was found to be weak in case of the project under review. As a result, the work was delayed and there was cost-overrun, which undermined the cause of good governance.

Dimension 7: Affordability and Good Value for Money

One of the major obstacles to improving the quality of governance was concerned with prudent financial management of the project. In the course of project revisions, it is often the case that the budget for the project goes up without justified reasons. Due scrutiny of cost estimates is not undertaken. Sometimes the main contractor sub-contracts the works to parties which do not have the required performance track record. In order to manage the finances earmarked for projects, there is a rate schedule in place which is followed by the Roads and Highways Division. There is also a separate rate schedule for the Public Works Division and Local Government Engineering Division. Because cost of materials tends to change over time, the project needs to undergo multiple revisions over the respective lifetime. The Dhaka-Chattogram highway project suffered from various anomalies noted above. Appreciating the diversity of works involved in PIP implementation and the need to differentiate the rate schedules of these agencies, the Ministry of Finance has taken steps to design a comprehensive budgeting guideline. However, progress in this regard over the past three years has not been encouraging. A decision should be taken for speedy implementation of this decision. Concerned authorities should be mandated to review and revise the rate schedules annually in order to ensure that cost estimates are reliable. This will ensure that projects are delivered on time and good value for money in PIP implementation is ensured.

Dimension 8: Generation, Analysis and Disclosure of Data

Ensuring transparency in public expenditure is important. The Access to Information Act is a key tool in this connection. However, there is no public disclosure rules for ensuring accountability of service providers to their respective service recipients. Detailed information as regards PIPs are often not readily available. Key performance indicators are disclosed only on demand, that also often by resorting to the RTI. A large part of the data and information as regards financing of the PIPs are not made public; for example, the DPP is not posted on the website. The DPP should be made available, at least when these are asked for under the RTI. Ex-post evaluation reports should also be made available to all interested parties for the sake of transparency and accountability and to facilitate lessons and learnings.

Dimension 9: Performance throughout the life-cycle

PIPs involve long-term investment. However, often design of the project and its planning and monitoring are not geared to ensuring performance of the project over its stipulated lifetime. For example, when estimates about capacity of a highway is not assessed properly, and the project has to perform over its stipulated capacity, wear and tear increases, and, along with it, the maintenance costs. This happened with the Dhaka-Chattogram highway where projections about vehicular movement could not be forecasted appropriately (number of vehicles plying the highway turned out to be much higher than was earlier estimated). Over-loading is also a major problem as far as transport-related PIPs are concerned. Monitoring stations are often dysfunctional. This significantly reduces project life and undermines the returns from the project. Also, there should be independent mechanisms to monitor the project during its life-cycle. It is often difficult to establish whether the quality of works during the project construction was weak or the project has failed to perform as per the stipulated performance indicators because of overload and over-use. The default period that relates to responsibility of the contractor following completion of a project should be raised in order to ensure that contractors remain responsible for their works for a reasonable period.

Dimension 10: Systematic Risks

Projects are expected to address systemic risks by complying with the stipulated design standards. For example, large infrastructure projects are designed to withstand floods and cyclones and provide the expected services over the years (depending on the nature of the particular projects). Close coordination with Department of Environment (DoE) and Ministry of Disaster Management and Relief (MoDMR) is required at the design stage of the project to ensure that large PIPs have the needed resilience to service the expected deliverables over the life cycle of the project. As a major highway, the design of the Dhaka-Chattogram road had to be vetted by various concerned organisations. However, stakeholders felt that the environmental audit should have been carried out in a more rigorous manner.

Concluding Observations

The review of the experience of implementing the Dhaka-Chattogram highway presented above bears out that implementation of PIPs in Bangladesh call for improvements in a number of areas. More so, if the experience is juxtaposed to the requirements of the OECD framework. Based on the preceding discussions, some of the possible measures towards good governance in PIP implementation are conceived to be as follows:

- a) Reduce uncertainties as regards cost estimates by undertaking a systematic review of projects implemented earlier and by carrying out assessments based on ground realities. Weakly designed projects are difficult to monitor since monitoring 'goal posts' tend to change frequently. This calls for significant improvements in the project design.
- b) Better and more effective coordination is needed among the concerned agencies which are involved with implementation of a particular infrastructure. Regulations guiding the use of public land should be streamlined.
- c) A robust land record system is an important first step to streamline coordination between land acquisition and land development activities.
- d) There should be a mechanism to review procurement schedules. This should be done periodically in view of emergent demands.
- e) Projects must be independently monitored in order to ensure that they deliver good value for money over the life-cycle. Details of expenditure of completed projects should be placed in the public domain. An independent monitoring system should be put in place.
- f) Stakeholder consultation and involvement of stakeholders in monitoring should be the norm for all major PIPs, at pre-implementation, implementation and post-implementation stages of the PIP life cycle. This will help the cause of maintaining the expected quality of PIPs and ensure good value for money.



Bangladesh is at present implementing a large number of Public Infrastructure Projects (PIPs) including several mega projects. The issue of good governance in PIP implementation has emerged as a major concern in Bangladesh.

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Attainment of almost three-fourths of all targets of the SDGs is concerned with infrastructure development. This is also critically important from the perspective of Bangladesh's successful and sustainable dual graduation-LDC graduation and middle-income graduation.

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The OECD Infrastructure Governance Framework, with its 10 pillars and 47 indicators, could serve as an important reference point for assessing the quality of implementation fo public infrastructure projects in Bangladesh.

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In view of cost and time overrun that afflicts majority of projects in Bangladesh, time has come to put in place a structured framework to monitor good value for money and the quality of project implementation in Bangladesh, so that the expected returns on investment can be ensured.



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