National Capital Region Planning Board

Strategic Business Plan

"Transforming NCRPB in the emerging regional development paradigm"

ASIAN DEVELOPMENT BANK

TA 7055-IND: Capacity Development of National Capital Region Planning Board (NCRPB), Package 1 (Components A and C)

Submitted By:

Infrastructure Professionals Enterprises (P) Ltd, India

In association with

Tamil Nadu Urban Infrastructure Financial Services Ltd, India

Foreward

The business plan delineates the transformation of NCRPB from a planning and advisory body to an entity which plays a key role in driving economic growth in the region through promoting investments in iconic projects.

NCRPB currently plays an important role in building infrastructure and bridging financing gaps by driving reforms and the increased focus now is on efficaciously mainstreaming the dual functions of planning and financing by developing effective projects to maximize efficiency in outputs. This report on 'Business Plan for NCRPB' has been developed in the context of the changing landscape for infrastructure planning, development and financing in the NCR region. This report draws from the Diagnostic Study submitted as part of the Inception Report as well as the Human Resource Plan and the Financing Plan submitted to Asian Development Bank under this TA. This Business Plan addresses issues related to resource raising as well as implementation issues particularly those relating to organizational structure and human resources. It aims to provide a reasonably clear understanding of where NCRPB is headed in the future and also outlines parameters and structure of systems that would be required for operating effectively and efficiently – especially, at the scale proposed and also for the kind of financial products and processes envisaged.

The Business Plan alludes to strengthening the capacity for (i) project development, and (ii) Monitoring of Project Implementation. It also suggests putting in place GIS and ERP systems. NCRPB therefore must have the ability to sustain these systems over the years. Business Plan also suggests measures for strengthening capacity of NCRPB staff and its implementing agencies especially for monitoring of project preparation, project appraisal and structuring. Capacity development is required also in planning and financing wings of the NCRPB

This report has been structured following a highly disciplined approach and a series of intensive consultations, detailed analysis and refinement and describes all critical internal and external aspects and strategies to guide NCRPB in all its endevours. It is envisaged to be an effective decision making tool that objectively develops and evaluates NCRPB's tactical and strategic plans. It is also recommended that the readers refer to the Financial Management Manual; Human Resource Gap Analysis and Management Plan, Project Appraisal Manual, PPP Toolkits, Treasury Manual and Financing Plan among others to gain an in depth understanding of the organisation. This Business Plan should not be viewed as a project information memorandum for lenders, but a strategic document to shape the vision of NCRPB and an essential guide for the management to communicate the values, structure, objectives and future plans of NCRPB.

This report is the outcome of effort put in by a number of individuals. We wish to record our special thanks to Dr Noor Mohammad, Member Secretary, NCRPB for sharing his vision. We would also like to thank Rabindra Kumar Karna, Project Director, ADB TA and Director (Administration and Finance); and Rajeev Malhotra, Chief Regional Planner for their cooperation and advisory support. We further express our gratitude to the entire NCRPB staff for their patience and information sharing.

We would also like to thank Mr. Sekhar Bonu, Senior Urban Development Specialist, ADB under whose support and guidance this ADB Technical Assistance could achieve its logical conclusion.

ACRONYMS

ADB	:	Asian Development Bank
AMC	:	Asset Management Company
BOT	:	Build Operate Transfer
CPHEEO	:	Central Public Health and Environment Engineering Organisation
CWSRF	:	Clean Water State Revolving Funds
C&AG	:	Comptroller & Auditor General of India
CBS	:	Core Banking Solution
DDA	:	Delhi Development Authority
DMRC	:	Delhi Metro Rail Corporation
DFID	:	Department for International Development
DPR	:	Detailed Project Report
DWSRF	:	Drinking Water State Revolving fund
ERP	:	Enterprise Resource Planning
ETF	:	Extended Term Financing
FAO	:	Finance and Accounts Officer
FIRR	:	Financial internal rate of return
FNPV	:	Financial net present value
FEICOM	:	Fonds Spécial d'Equipement et d'Intervention Intercommunale
GIS	:	Geographical Information System
GOD	:	Government of Delhi
GOI	:	Government of India
HUDCO	:	Housing and Urban Development Corporation
HDFC	:	Housing Development Finance Corporation
HR	:	Human Resource
IUIML	:	IL&FS Urban Infrastructure Managers Limited
IUIML	:	IL&FS Urban Infrastructure Managers Limited
IAs	:	Implementing Agencies
IIFCL	:	India Infrastructure Finance Company Ltd
IFFCO	:	Indian Farmers Fertiliser Co-operative Limited
IOC	:	Indian Oil Corporation
IDFC	:	Infrastructure Development Finance Company
IL&FS	:	Infrastructure Leasing and Financial Services Ltd
ICRA	:	Investment Information and Credit Rating Agency of India Limited
JBIC	:	Japan Bank for International Cooperation
JNNURM	:	Jawaharlal Nehru National Urban Renewal Mission
KfW	:	Kreditanstalt für Wiederaufbau
KRIBHCO	:	Krishak Bharati Cooperative Limited
LPCD	:	Litres Per Capita Daily
LGIDF	:	Local Government Infrastructure Development Fund
LGUGC	:	Local Government Unit Guarantee Corporation
MIS	:	Management Information System
MW	:	Mega Watt

MOU	:	Memorandum of Understanding
MCD	:	Municipal Corporation Of Delhi
MDF	:	Municipal Development Fund
MUFIS	:	Municipal Finance Company of the Czech Republic
MIA	:	Municipal Infrastructure Agency
NABARD	:	National Bank for Agriculture and Rural Development
NBCC	:	National Buildings Construction Corporation Ltd
NCR	:	National Capital Region
NCRPB	:	National Capital Region Planning Board
NRSC	:	National Remote Sensing Centre,
NUIS	:	National Urban Information System
NCRPCC	:	NCR Planning and Coordination Cells
NPA	:	Non Performing Assets
NGO	:	Non-Government Organisation
O&M	:	Operation and Maintenance
PFC	:	Power Finance Corporation Ltd.
PDF	:	Project Development Facility
PMC	:	Project Management and Coordination
PMIS	:	Project Management Information System
PMU	:	Project Management Unit
PSMG	:	Project Sanctioning and Monitoring Group
PPP	:	Public Private Partnership
RP2021	:	Regional Plan 2021
RDBMS	:	Relational Database Management System
REC	:	Rural Electrification Corporation
SDWA	:	Safe Drinking Water Act
SWM	:	Solid Waste Management
SPV	:	Special Purpose Vehicle
SRF	:	State Revolving Funds
TNUDF	:	Tamil Nadu Urban Development Fund
TA	:	Technical Assistance
UFW	:	Unaccounted for Water
UNIX	:	UNiplexed Information Computing System
UIDSSMT	:	Urban Infrastructure Development Scheme for Small and Medium Towns
ULB	:	Urban Local Bodies
WB	:	World Bank

Table of Contents

Executive Summary

The National Capital Region Board (NCRPB) was set up with the view to decongest Delhi and reduce the existing pressures on the capital's critical infrastructure. NCRPB was envisaged to play a vital role in developing essential civic amenities and also act as a nodal agency to plan for and direct various state governments and agencies to ensure a homogeneous regional development in the NCR, for a more sustainable development of the capital city. The underlying objective was to develop Delhi and surrounding counter magnet areas, i.e. the identified National Capital Region that would have the potential to absorb and cater to the growing population.

Over the years, NCRPB has intervened across a wide spectrum of economic activity and infrastructure in the region and has played a vital role in building critical infrastructure such as Roads, Solid Waste Management, Water and Sanitation, Drainage and Power. NCRPB has the mandate to foster economic growth in the National Capital Region through development of industrial, social and economic infrastructure. In addition, NCRPB is also entrusted with the mandate to ensure rural development in the region through interventions in areas of micro-entrepreneurship, allied agro-economic activities, vocational skill up-gradation and provision of urban amenities in rural areas.

In line with the changing macro economic situations and present business opportunities, NCRPB is now looking at further strengthening its role in driving economic growth in the region. Given the strong government support and legal statutes enshrined in the NCRPB Act; committed leadership and a highly competent and professional staff with a strong knowledge base about the NCR, NCRPB is in a position to effectively foster balanced development. Furthermore, with a well-managed and large fund for supporting infrastructure investments, NCRPB has a track record of 23 years in enabling projects to be financed in NCR it is commendable that NCRPB has such a huge loan portfolio with no delinquency. In addition to this, the NCRPB Act enacted by Parliament also provides for immense powers to NCRPB putting it at an extremely strong position not only to undertake the traditional role of planning and financing, but also to leverage its position to make the most of the changing landscapes and huge opportunities in the emerging infrastructure sectors.

Moreover, NCRPB should fully take advantage of the fact that NCRPB is a Central government organisation which provides it with a competitive edge as compared to other financial intermediaries. In addition to this, the NCRPB bonds also enjoy AAA Ratings from Credit Rating Agencies. It should explore alternate ways to attract borrowers and go beyond its traditional scope of work to build and strengthen its position in all emerging and upcoming areas in the developmental sphere.

The organisation is in the process of a total revamp wherein there is a paradigm shift from the traditional practices towards adopting more modernized tools and mechanisms to increase efficiency and effectiveness in its operations. The outdated and traditional methods in day to day operations are now being critically analysed and NCRPB is looking at adopting state-of-art technologies for improved loan management, automation of project monitoring activities, and better e-governance. To facilitate its ability to 'think-and-act' on a fast-tracked basis, NCRPB is also in the process of updating data and information through use of latest modern techniques such as Tally, GIS, MIS, and Remote Sensing and is gradually moving towards adopting ERP systems across the organisation.

This business plan not only identifies potential business opportunities for infrastructure, but also suggests robust and innovative strategies to implement the road map for pioneering interventions. The plan emphasizes on a "thinking out of the box" approach wherein NCRPB would make an everlasting impact on the socio, economic and political canvass of the NCR. The subsequent chapters not only detail the current paradigm of NCRPB, but also provide a reasonably clear understanding of where NCRPB is headed in the future and outline parameters and structure of systems that would be required for operating effectively and efficiently – especially, at the scale proposed and also for the kind of financial products and processes envisaged. They focus on understanding the overall business environment, evaluate the existing business opportunities and suggest corresponding strategies such as diversifying the resource base by borrowing from multilateral and bilateral agencies, commercial banks and accessing the capital markets. It is also recommended that NCRPB expand the product portfolio to include innovative fund and non fund based products. These initiatives along with other recommendations such as undertaking project development activities and appraising projects rigorously from the perspective of economic sustainability and financial viability. The business plan also recommends the use of Public *Private Partnerships (PPP) frameworks* wherever feasible and could also provide the initial seed capital for project development/preparation.

These initiatives would go a long way in facilitating the evolution of NCRPB from a planning body also providing subsidized loans to a few government projects to a major catalyst in the development of the NCR region.

1 National Capital Region Planning Board (NCRPB)- An Overview

1.1 Need for a National Capital Region and the Planning Board

> The total population of Delhi accounts for 1.34% of the All-India Population whereas in area, it is only 0.05% of total area of country.
>
> *(Source: Census of India 2001)*

From being a small town in 1901 with a population of 0.4 million, the Population Census 2001 noted Delhi as the third most populated city in India, after Mumbai and Kolkata. With vibrant trade and commerce along with excellent opportunities of employment in the new paradigm of Globalisation and Liberalisation, the National Capital Territory (NCT), has attracted thousands of people from all over the country in search for better opportunities and standard of living. The Economic Survey of Delhi 2008-09 estimates that of the total increase in population of 4.66 lacs in 2007, migration accounted for more than half at 2.45 lacs. Furthermore, as compared to the all India level population density of 324 persons per sq. km, the population density of Delhi was estimated as 9340 persons per sq. km, the highest among all States/UTs in the country.

This not only has led to increasing congestion and shortages of civic amenities, but also put extreme pressure on the existing essential infrastructure such as water supply and sanitation, sewerage, roads, power, housing etc.

Thus, given the limited resources to cater to needs of the over-bustling population, and the increased population pressures with growing Urbanisation, Government of India introduced the concept of National Capital Region (NCR) covering Delhi and its adjacent areas and set up National Capital Region Planning Board (NCRPB)[1] to ensure a homogeneous regional development in the NCR, including development of counter-magnets to Delhi to allow a more sustainable development of the capital city. The National Capital Region (NCR), covers 33,578 square kilometers spanning the National Capital Territory of Delhi; 8 districts in Haryana namely, Faridabad, Gurgaon, Rohtak, Sonepat, Rewari, Jhajjar, Mewat and Panipat ; Alwar district in Rajasthan, and 5 districts Uttar Pradesh namely Meerut, Ghaziabad, Gautam Buddha Nagar, Bulandshahr and Baghpat.

1.2 National Capital Region Planning Board- Organisational Mandate

> ***Vision***
>
> *Develop the National Capital and its surrounding areas as a region of global excellence with Delhi-centric emphasis to disperse/reduce pressure on the Capital's infrastructure*

Since its inception in 1985, NCRPB has been involved in planning as well as providing financial assistance to State Governments, to State Governments having a counter magnet area and the local authorities, urban development authorities, State Industrial Development Corporations (SIDCs), housing boards, state government departments such as Public Works Department (PWD) or Public Health Engineering Department (PHED) and such other

---

[1] NCRPB was first conceived in accordance with the first Master Plan for Delhi (1961-81), which envisaged development of Delhi in its regional context and recommended creating a statutory National Capital Region Planning Board and preparing a Regional Plan for the NCR. Subsequently, the Parliament enacted the National National Capital Region Planning Board Act, 1985 that provided for constitution of the NCRPB with a mandate to prepare the Regional Plan and perform other functions incidental to the implementation of the Regional Plan to channelise the flow and direction of economic growth along more balanced and spatially oriented paths.

authorities responsible for implementing the sub-Regional Plans and project plans or for developing the counter magnet area for financing infrastructure projects in the NCR towards achievement of the balanced growth vision propagated by the Regional Plan 2021. The Board has already extended funding support to numerous agencies for development works within the National Capital Territory (NCT) of Delhi, Central National Capital Region (CNCR), Counter Magnet Areas (CMAs) and Highway Corridor Zones (HCZ) as part of achievements of its vision. The board has therefore defined its mission as:

To contribute to improvement in urban quality of life in the National Capital Region by facilitating efficient urban infrastructure asset creation and provision of urban services through innovative project development, independent appraisal & sustainable financing.

1.3 NCRPB current role in urban development of NCR

> NCRPB has been largely successful in achieving its vision – development of counter-magnets like Faridabad, Gurgaon, North Okhla Industrial Development Area (NOIDA), Ghaziabad, Alwar were envisioned under the regional plan. These destinations are some of the most attractive economic opportunity destinations for Indian and foreign investors.

Over the years, NCRPB has intervened across a wide spectrum of economic activity and infrastructure in the region and has played a vital role in building critical infrastructure such as Roads, Solid Waste Management, Water and Sanitation, Drainage and Power. NCRPB has the mandate to foster economic growth in the National Capital Region through development of industrial, social and economic infrastructure. This entails facilitating investments in creation of infrastructure in industrial parks/townships, social infrastructure such as health, education, heritage and tourism, housing & shelter, environmental infrastructure. In addition, NCRPB is also entrusted with the mandate to ensure rural development in the region through interventions in areas of micro-entrepreneurship, allied agro-economic activities, vocational skill up-gradation and provision of urban amenities in rural areas.

In line with the changing macro economic situations and present business opportunities, NCRPB is now looking at further strengthening its role in driving economic growth in the region. The NCRPB Act in acted by Parliament also provides for immense powers to NCRPB putting it at an extremely strong position not only to undertake the traditional role of planning and financing, but also to leverage its position to make the most of the changing landscapes and huge opportunities in the emerging infrastructure sectors.

1.4 Strength, Weakness, Opportunities, Threat (SWOT) analysis

> NCRPB is expected to support Rs. 15,000 crore of projects under the Eleventh Five Year Plan ending in 2012.

The SWOT analysis indicates that the full potential of NCRPB still needs to be realized. Converting a hierarchy of plans into programmes, activities and into bankable projects constitutes an extremely complex task. On the financing side, there is limited project origination activity and little leveraging of NCRPBs financial resources. Enhancing the scope and mandate of the revolving fund represents an ongoing challenge. Notwithstanding the current limitations, given the strong and committed management backed by the Government of India; NCRPBs presence as a National Capital Region planning and financing body presents many opportunities.

It is in this context that NCRPB is looking at new and innovative means to increase efficiency and effectiveness in its operations. The outdated and traditional methods in day to day operations are now being critically analysed and NCRPB is looking at adopting state-of-art technologies for improved loan management, automation of activities, and better e-governance. While NCRPB does not face any critical capacity constraints for its present-day operations, given the fast growing pace of NCRPB, there is an envisaged need for building capacity as it looks at further improving its performance. To facilitate its ability to 'think-and-act' on a fast-track basis, NCRPB is also in the process of updating data and information through use of latest modern techniques in GIS, MIS and Remote Sensing and is gradually moving towards adopting the ERP systems.

In addition to the above initiatives in modernisation and internal capacity building, it is also recognised that NCRPB needs to "think out of the box" and develop new and innovative strategies to leverage resources and diversify its product portfolio. NCRPB should fully take advantage of the fact that NCRPB is a central government organisation which provides it with a competitive edge as compared to other financial intermediaries. In addition to this, the NCRPB bonds also enjoy AAA Ratings from Credit Rating Agencies. It should explore alternate ways to attract borrowers and go beyond its traditional scope of work to build and strengthen its position in all emerging and upcoming areas in the developmental sphere. NCRPB is now looking towards raising capital from alternative sources such as commercial banks apart from leveraging bond issues as well as exploring alternate credit enhancement avenues including state/regional guarantee mechanisms, escrow of urban local bodies (ULBs), and other implementing agencies revenues, debt service reserve funds, etc., for future funding requirement.

1.5 NCRPB's Road Map

It is well established that given a strong government support and legal basis; committed leadership and a highly competent and professional staff with a strong knowledge base about the NCR, NCRPB is in a position to effectively foster balanced development. Furthermore, with a well-managed NCRPB Fund (Corpus) for promoting infrastructure development, NCRPB has a track record of 23 years in enabling projects to be developed and financed in NCR along with a huge loan portfolio with no delinquency. The Act of Parliament provides for powers to NCRPB for its regional planning role and there is a gradual move to further "provide teeth" to the agency to direct and monitor corresponding state agencies to effectively implement the regional planning process. Thus, NCRPB is in a extremely strong position not only to undertake the traditional role of planning and financing, but also to leverage its position to make the most of the changing landscapes and huge opportunities in the emerging infrastructure sectors.

The subsequent sections focus on understanding the overall business landscape, evaluate the existing business opportunities and suggest corresponding strategies to facilitate NCRPB evolve from a pure market lender to a catalyst in development of the NCR region. The next chapter details the existing business environment and opportunities in critical infrastructure sectors such as Water Supply and Sanitation, Transportation, and Power.

2 Business Environment Analysis

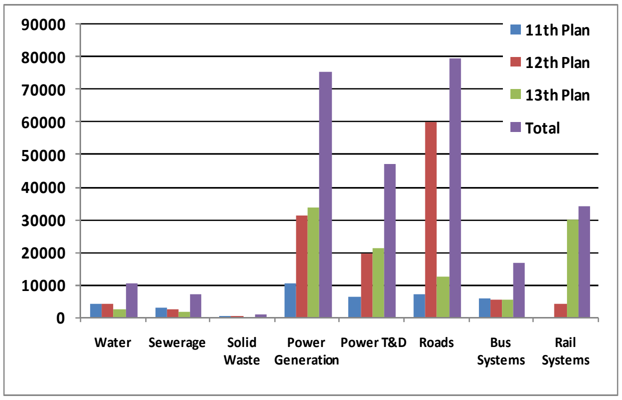


Figure 1: Demand for infrastructure in NCR across five year plans. Source: NCRPB Regional Plan 2021

Creation of world class infrastructure serves as the backbone for any economy and is identified as a pre requisite for a sustained and balanced development. However, the developing economies still grapple with a huge gap in both the quantity and quality of infrastructure services. The Government of India has estimated in its 11th Five Year Plan that Rs. 20,000 billion at 2006-07 prices (equivalent to US $400 billion at Rs. 50 per USD) is required to bridge the infrastructure gap. The infrastructure gap in NCR alone has been estimated at Rs 3,00,000 crore in the Regional Plan upto 2021. NCRPB is expected to support Rs. 15,000 crore of projects under the Eleventh Five Year Plan ending in 2012.

Based on research and diagnostic analysis, NCRPB is envisaged to play a major role in the core infrastructure sectors such as Solid Waste Management, Water Supply, Drainage, Transportation and Power. The following sections discuss NCR investment requirements, opportunities and NCRPB intervention strategies across these core infrastructure sectors.

2.1 Solid Waste Management

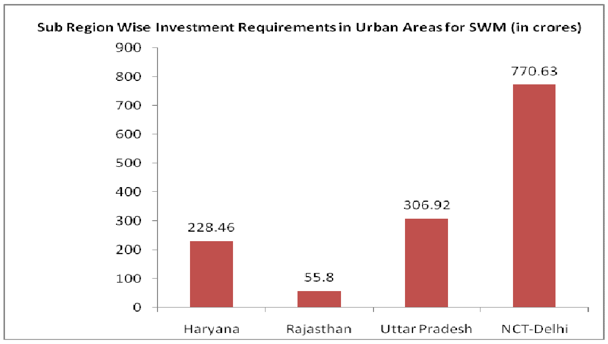


Figure 2: Sub Region Wise Investment Requirements in Urban

NCRPB can not only facilitate setting of regional sanitary landfills through appropriate arrangements but also facilitate appropriate utilization of private sector skill-sets in solid waste management projects by creating appropriate institutional structures such as SPVs for managing regional treatment and disposal facilities with appropriate forms of private sector participation in collection, transportation, treatment and disposal of waste.

Solid waste management (SWM) is the responsibility of local bodies in the region. The nature of services to be provided in this sector commence from primary collection of waste to treatment and scientific disposal of the waste. In practice, few local bodies in the country are providing the entire spectrum of services particularly management of sanitary landfills. The NCRPB Regional Plan 2021 envisages total investment requirement of Rs. 1362 crore for collection, transportation and disposal of solid waste. The investment requirements for SWM are not huge and ULBs do receive some funding support through the central and state finance commissions as well as Government of India schemes such as JNNURM and UIDSSMT. The investment for SWM in the 10th plan is estimated to be Rs. 544.73 crores, for 11th plan Rs. 340.45 crores while for the 12th and 13th plan, the investment requirement is projected to be Rs. 272.36 crores and Rs. 202.27 crores respectively. Figure 2 summarises the sub region wise total investment requirement in urban areas for SWM out of a total investment requirement of 1,361.81 crores:

The main problem in the case of solid waste management is managerial and operational inefficiencies within the local bodies. Furthermore, post Supreme Court judgment regarding Municipal Solid Waste Rules 2000, there is regulatory pressure on all urban local bodies to create scientifically managed sanitary landfill facilities. Many ULBs are unable to address the issue of land procurement and associated initial investments which are beyond their financial capacity. Gujarat, Tamil-Nadu, Kerala, Karnataka and few other states are experimenting with shared regional landfill facilities and PPP models to leverage private resources.

2.2 Sewerage

In the case of sewerage, the coverage varies widely. In Central NCR the coverage is about 80% whereas in some areas of UP and Rajasthan there is no sewerage facility. The estimated investment requirement for sewerage in this region according to the NCRPB Regional Plan is around Rs. 8321 crore till 2021. To meet the estimated 6,935 mld sewage generation, Regional Plan 2021 estimates total investment requirement to be Rs. 3,467.47 crores for laying of sewerage system and Rs. 4,854.46 crores for treatment of waste water. Sub region wise and plan wise fund requirements are summarised in the following graphs:

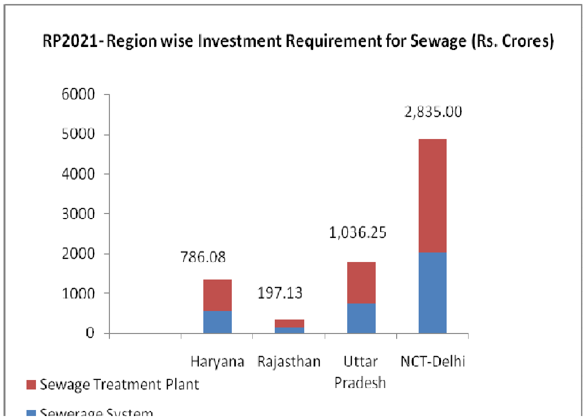


Figure 3: Region Wise Investment Requirement for Sewage

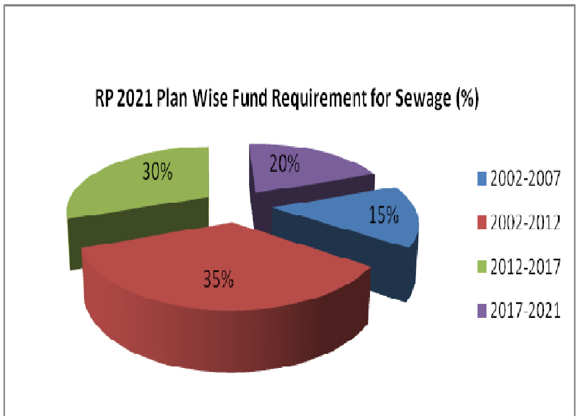


Figure 4: Plan Wise Fund Requirement for Sewage

NCRPB can help the local bodies in developing the treatment facilities by involving technology providers. This approach would support access to the latest technologies and result in sustainable operations and maintenance for the commissioned sewerage treatment plants.

There is a lack of integrated planning in storm water drainage and unrestricted sewage continues to flow in most of the drains in the region and ultimately falls into the rivers Ganga and Yamuna having serious implications. Chocking of drains due to encroachment by slum dwellers, blockage due to dumping of solid waste and resultant flooding due to reduced carrying capacity further underline the need to adopt an integrated regional approach for improvement of internal and regional drainage system.

2.3 Water Sector

The Regional Plan 2021 estimates the total investment requirements to match the estimated demand of 11,984 mld by the year 2021 to be about Rs. 5,992.15 crores for production/augmentation of water and Rs.7,190.57 crores for strengthening/expansion of distribution system/network. The following figures gives the sub region wise funding needs as well as plan wise requirements:

In the case of water supply, Delhi has water supply of 225 LPCD as against the CPHEEO norm of 135 LPCD, whereas in other parts of NCR the supply ranges between 25 LPCD to 145 LPCD. Supply of water in Rajasthan is very poor. It is to be noted that there is huge loss of water in this region. The unaccounted for water (UFW) in this region varies between 30% and 50%.

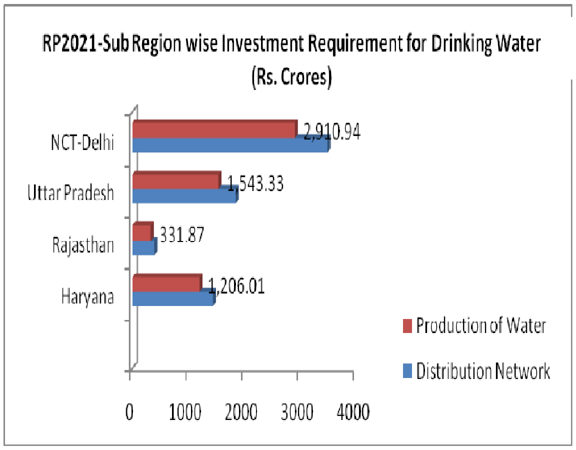


Figure 5: Sub Region Wise Investment Requirement for Drinking Water

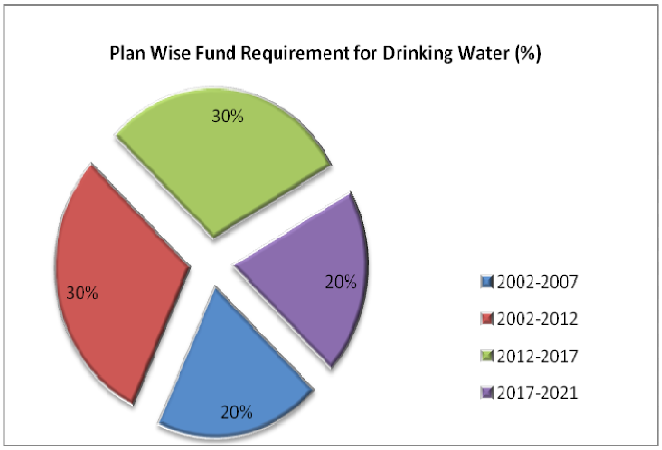


Figure 6: Plan wise fund Requirement for Drinking Water

In order to increase operational efficiencies, NCRPB can support management contracts for achieving reduction in UFW and improvement in operations and maintenance through long-term O&M contracts. NCRPB can also facilitate award of projects on a BOT basis whereby the operator constructs the facility, arranges financing for 20% of capital cost and meets operations and maintenance cost for the defined concession period. NCRPB can look at providing both project development assistance and financial assistance in the form of credit enhancements(take-out financing) to backstop annuities, whereby NRPB agrees to pay the annuities in case the state government/implementing agency is unable to honour financial commitments towards annuity payments under the concession agreement.

2.4 Transportation

Delhi being the hub for the northern part of the country, various measures such as construction of expressways, ring roads, rapid transit systems, widening of district and highway roads and improvement of rail networks are being adopted. In the Regional Plan, NCRPB has proposed the implementation of transport projects in two phases and has estimated investment requirements in the first phase at Rs. 21,830 crore. This excludes the investment requirements for rail networks and national highways. Similarly in Phase II, projects like Ghaziabad – Meerut expressway, and grid-roads are identified. It will be easier for NCRPB to demonstrate success in transport sector since India's ability to roll-out projects

In case of transportation networks, NCRPB has already identified projects for further development under the transport functional plan. It is recommended that NCRPB conduct feasibility studies on various project proposals and short list a shelf of transport projects. For the identified transport projects, NCRPB can provide project development assistance through its project development facility and explore the possibility of implementing these projects under Public Private Partnerships Frameworks. NCRPB can also provide the seed capital for setting up SPV/SPVs to implementing these projects. NCRPB can also appoint transaction advisors and oversee the process of selection of private sector partners for these projects wherever feasible.

has been relatively impressive in transportation sector. A functional plan for transport sector has been prepared by NCRPB and critical projects are in the process of being identified.

2.5 Power

In the case of power, the Regional Plan 2021 estimated that generation capacity would have to be augmented by about 50,000 MW with concomitant investments in transmission and distribution networks. The Regional Plan 2021 estimates power requirements in the region to be 23,345 MW by the year 2021. The total investment requirements estimated in the Regional Plan for power generation is Rs. 93,380 crore and for transmission and distribution is Rs. 58,000 crore. The block year wise fund requirement for the region is captured in the following table:

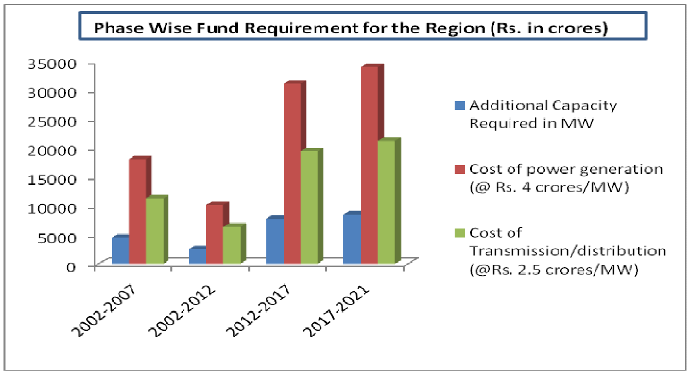


Figure 7: Plan wise fund Requirement for Power

Even after factoring in the proposed investments by central sector utilities like National Thermal Power Corporation and Power Grid Corporation as well as those by state utilities, there is likely to be a significant shortfall in both generation and transmission capacities.

NCRPB can facilitate private sector participation by playing a role similar to that of PFC for Ultra Mega Power Projects; identify a few projects for further development; and explore co-financing of projects. In addition, NCRPB can explore the possibility of facilitating entry of other government/quasi public sector players in the area of power generation for NCR such as IFFCO, KRIBHCO, NBCC, IOC, NCRPB can facilitate project development through the MoU route with these players and provide funding support for project preparation, assistance in land acquisition and limited co-financing for debt during financial closure.

NCRPB can also assume project development risks for smaller power projects including combined captive power projects, whereby it facilitates DPR preparation, seek clearances, fuel linkages and finances land acquisition in a project SPV (owned by respective state government). The fully developed project can then be competitively bid to the private sector, which can assume financing, construction and operations & maintenance risks. NCRPB can explore joint development of combined captive power projects with PTC India Limited, which has raised funds abroad for investments in the power sector, including assets such as purchase of coal blocks internationally.

Conclusion: The demand for investment assistance is huge as is evident from the snapshot presented above. However, there is a significant gap between the investment requirements identified in the Regional Plans and the actual implementation through projects financed and supported by NCRPB. The following chapter outlines the role of NCRPB as a financial intermediary and discuss the current NCRPB portfolio, underlying financials, fund deployment processes, as well as key challenges and proposed remedies.

3 Product and Services Portfolio at NCRPB

The previous chapter identified the present business opportunities in the infrastructure sector as well as the potential areas of intervention by NCRPB. In line with the same, the following sections outline the role of NCRPB as a financial intermediary and discuss the current NCRPB portfolio, underlying financials, fund deployment processes, as well as key challenges and proposed remedies.

As discussed earlier, NCRPB provides assistance to a wide range of developments in the region and complements traditional budgetary sources such as Central and State Governments plans. In addition, public sector agencies such as HUDCO, PFC, REC are other sources for financial assistance for the projects financed by NCRPB in different sectors. The comparative advantage however rests with NCRPB due to its ability of offer cheaper loans (through cross subsidization by grant funds). In addition to this, The NCRPB bonds have been rated AAA by CRISIL (subsidiary of Standard & Poor's) and AAA (SO) by FITCH Ratings. NCRPB has also received LAAA rating from ICRA for its proposed bond issue. However, NCRPB remains a marginal player in the market due to its relatively smaller resource base vis-à-vis these institutions and thus this plan outlines an aggressive business development strategy for NCRPB to fully exploit its advantageous position.

3.1 Financial History and Analysis

Sources of Financing: The Government of India (GoI), through the Ministry of Urban Development, provides grants to NCRPB as Plan funds, to carry out its functions under the NCRPB Act. GoI also provides grants (Non-Plan funds) for salaries and other administrative expenses of the Board. Additionally, Government of NCT of Delhi contributes to the NCRPB Fund. Major internal resources consist of accruals from interest on loans released. NCRPB augments its resources by issuing bonds.

The figure below summarises the financing and fund deployment process at NCRPB:

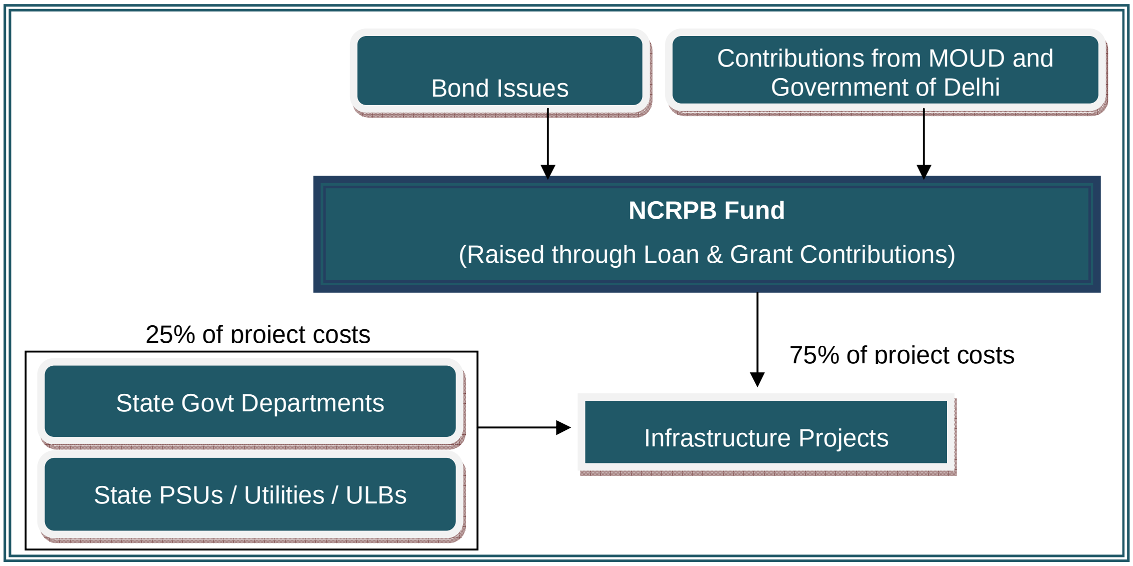


Figure 8: Fund Deployment Process at NCRPB

The overall resource position of NCRPB for the last five fiscal years is summarized in the following table.

Table 1: Resource Position of NCRPB

Sources of Funds	FY04	FY05	FY06	FY07	FY08
Owned Funds	1117.82	1251.63	1400.13	1565.10	1822.90
Market Borrowings	597.70	387.15	387.15	0.00	200.00
Total	**1715.52**	**1638.78**	**1787.28**	**1565.10**	**2022.90**

***Grants by Governments**:* Of the total grants of Rs.1125.37 crore received till March 2008 (excluding those for administrative expenses), 73% (Rs.824.62 crore) were provided by GoI, and 27% (Rs.300.75 crore) by Government of NCT of Delhi.

***Internal Accruals**:* Despite a low rate of interest charged, the Board has added a substantial amount to its owned funds through internal accruals i.e. the interest paid by borrowing States and their agencies. In the last five years, the net internal accruals after tax amounted to Rs.313.48 crore, equivalent to 60% of the grants received.

***Growth of Own Funds**:* Own funds increased by about Rs.838.97 crores – an impressive 85% in last five years with CAGR of 13.1%. The average year-on-year growth in owned funds was 13%.

Table 2: Owned Funds of NCRPB (Rs. In crores)

Fiscal Year	FY04	FY05	FY06	FY07	FY08
Total Own Funds at end of Year	1117.82	1251.63	1400.13	1565.10	1822.90
Increase during the year	133.89	133.81	148.51	164.97	257.80
% Increase over previous year	13.61	11.97	11.87	11.78	16.47

***Borrowings**:* NCRBP started borrowing from the market in 1996-97 with a line of credit from HUDCO for Rs.60 crore. In 1998-99, NCRPB had to raise debt from the market to bridge the resource gap for loan disbursements. The bonds issued till 2001-02 was of 7-year tenure; redeemed after five years. NCRPB had not raised any debt after 2001-02 till February 2008, when Rs.200 crore debt was raised with a coupon rate of 8.98% p.a. (payable half yearly) and tenure of 10 years with a call/put option after 7 years. The instrument was rated AAA/Stable by CRISIL and AAA (ind) (SO) by Fitch Rating Services.

3.2 Asset Quality and Lending Portfolio:

The total number of projects financed by NCRPB is about 214 out of which 111 projects are completed and the balance is under implementation. While the total loans sanctioned by NCRPB till FY 2008 is Rs.5,299 crores, the total loans outstanding in the books of NCRPB stood at Rs.1,062 crores. This has increased to Rs.1, 771 crores by the end of FY 2007-08.

There are about 24 borrowing agencies as on date with NCRPB. About 62% of the loans sanctioned[2] by NCRPB have been disbursed by the Board as on 31st March 2008. The adjacent graph indicates the State-wise amount of sanctions and releases by the Board.

[2] It is to be noticed that loan sanctions are made by the PSMG. The PSMG, however, does not meet periodically. They meet as and when there are adequate project proposals to be placed or based on the cash flow availability of the Board.

Further, the average loan releases for on-going projects are about 55% and that of the completed projects is about 88%.

As evident, the maximum loans have been sanctioned and released to Haryana that has been pro-active in terms of posing project to the board, and thus there is a need to support and encourage other states to address this skew.

NCRPB has being effectively carrying out its proposed functions and there is now a need to further strengthen its position as a financial intermediary. The existing guidelines on eligible sectors, agencies and lending terms and conditions are well documented, but given the new roles and strategies identified in this plan, a new project appraisal manual has been prepared. The NCR cells also need to be strengthened to perform their due diligence function and NCRPB also would also need to look at effective third party monitoring.

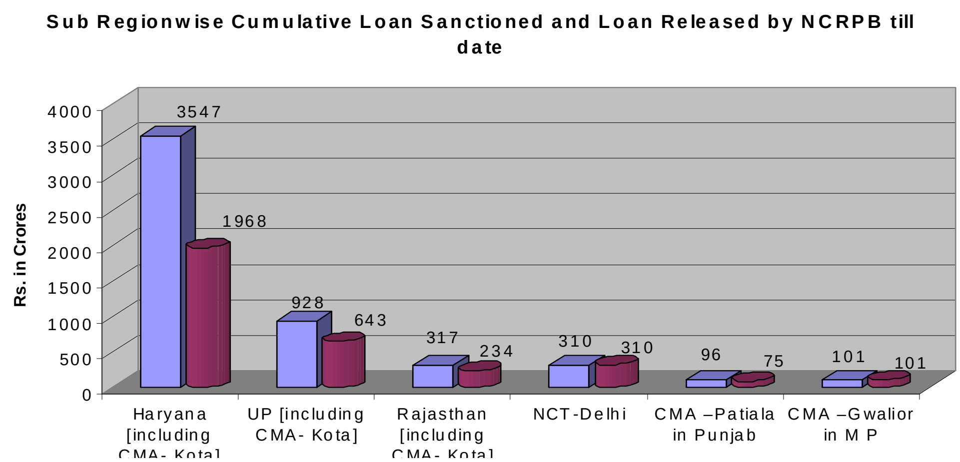


Figure 9: Sub Region Wise Cumulative loan Sanctioned and Loan Released by NCRPB till date

3.3 Issues Impacting Current Operations and Required Counter Interventions

3.3.1 Keeping NCRPB Mission Relevant

The means to achieving the NCRPB mission go beyond formulating Regional Plans and providing loans through a limited fund. In the fast changing macroeconomic environment, NCRPB can promote economic growth by a series of interventions aimed at removing critical infrastructure bottlenecks and enhancing quality of life in the region by improving access to basic civic services to both urban and rural areas.

3.3.2 Lack of Sub Regional Plans

Besides lack of capacity, the absence of any legal requirement for the States to prepare sub regional plans within any prescribed time along with reluctance of the states to produce such plans are viewed as possible reasons for lack of plans. Furthermore, the Board is not in a position to effectively promote and co-ordinate development in the region according to Plan because of involvement of more than one state. As the States are constitutionally autonomous entities, the Board created under an Act of the Parliament is constrained in using its overriding powers. The situation is further exacerbated by the fact that land constitutes a State subject.

Thus, a three-pronged approach would be undertaken with regard to continued planning in the NCR. Firstly, the Ministry of Urban Development would be encouraged to urge the States to fulfill their statutory requirements to produce Sub-Regional and Master Plans for their area. The NCRPB would be prepared to assist in any agreed plan making strategy to the best of their capabilities. Secondly, and in any event, the NCRPB would continue with its preparation of Functional Plans for key sectors i.e. Transportation, Drainage and Water. A Protection Functional Plan is also a major requirement to delineate areas that should not be developed rather than just identifying areas that should be developed. Thirdly, preparation of a Protection Plan would provide an opportunity to commence work on the preparation of an NCR-wide digital spatial database which would also input to an overall National Urban Information System (NUIS).

3.3.3 Need for Long-tenor Funds

There is a need to provide long tenor funds to implement infrastructure projects since such projects are long gestation where stable cash flows are seen 5-7 years after the project award. The financing currently available in the market is often short-term and has frequent interest rate resets. This results in interest rate risk and liquidity risk in case the project promoters are not able to refinance the loans at the same terms. The maximum tenor available in the Indian market is 15 years with 2-3 year resets. Thus, NCRPB could facilitate availability of long tenor funds and emerge as a leader in this segment.

3.3.4 Proactive Approach in Leveraging the Fund

The major problem lies in the mismatch between resource mobilisation and deployment with certain periods where NCRPB has unable to deploy its funds and other periods wherein resources have been a constraint. This would require NCRPB to follow a more proactive approach and also look for alternative and innovative means to deploy its available resources.

One area of concern could be the absence of well structured and bankable projects. Typically, Government agencies do not have the requisite technical and financial resources to prepare detailed project reports. Further, government agencies neither have the capacity nor the resources – financial and managerial, to support project development for capital intensive infrastructure projects. In such a scenario, NCRPB could effectively use a portion of the available grants for undertaking project development activities thereby ensuring a pipeline of projects to be financed.

Furthermore, NCRPB could leverage its funds using innovative strategies as well as flexibility in product offerings by following differentiated project structuring and lending strategies. For instance, for projects with shorter payback periods, products of shorter tenor should be offered vis-à-vis the typical loan product of NCRPB. New products offerings should therefore be made by NCRPB to ensure that flexibility is available in tailoring repayments to the cash-flows of the projects. The following chapter addresses this in detail.

4 Business Strategy

NCRPB needs to go beyond formulating Regional Plans and providing loans through a limited fund. In the fast changing macroeconomic environment, NCRPB can promote economic growth by a series of interventions aimed at removing critical infrastructure bottlenecks and enhancing quality of life in the region by improving access to basic civic services to both urban and rural areas. NCRPB needs to transform itself into an institution which not only has the vision for planned development of NCR but possesses the means to provide the entire spectrum of infrastructure development and financial services to translate the vision into reality.

4.1 Proposed Product Strategy

As discussed in the previous section, it is imperative that NCRPB enhances its existing product portfolio to offer a comprehensive range of products to projects developed in the region. NCRPB should experiment beyond the traditional model where projects are conceived and implemented by Governments and its agencies. As part of this strategy, NCRPB could explore development of projects in ***Public Private Partnership (PPP) frameworks*** wherein NCRPB would provide the initial seed capital for project development/preparation. As these projects move further in the project cycle and access finances from the market, NCRPB should recover these investments from the successful developers by factoring the project development costs into overall project costs, which may then be returned to NCRPB at a small premium. NCRPB can also explore providing assistance to State Governments for meeting their share of investments to these projects.

4.2 Proposed Product Stable

In line with the proposed strategy delineated earlier, NCRPB should expand its product offerings to include:

a. **Fund based products** such as debt, quasi equity such as subordinated debt, whereby NCRPB is. In addition to financing products, assistance in the nature of soft grants or seed capital can be provided for identified projects.

b. **Non-fund based products** such as credit enhancements in form of guarantees.

4.2.1 Fund based products

Loan Product: The loan facility would remain as the mainstay for NCRPB. However, loans should be provided with varying tenors and interest rates linked to underlying project cash-flows. For instance, commercially viable power projects may be financed with relatively shorter loan tenors as compared to sewerage or water supply projects which may require loan tenors of 20-25 years. Long tenor funds may be concessionary in nature depending upon the requirement of such projects.

Variants of Loan Product: In addition to the loan product for varying maturities and interest rates, its variants such as subordinated debt can be provided to projects. Such products can be deployed for allocating higher levels of risk in projects implemented in PPP mode. Typically, NCRPB can provide a subordinated loan to projects in the construction phase, whereby NCRPB agrees to subordinate its rights to those of other lenders, and agrees to get repaid after senior lenders dues are settled. As a subordinate lender, NCRPB would get higher interest rates to compensate it for assuming higher level of risks. These loans can subsequently be refinanced by bank loans as the project enters operational phase and cash flows stabilizes. This would enable the financial markets to price risks appropriately depending upon the stage of project implementation and may facilitate takeout financing by other lenders with wider liability profile. This product should typically be put in practice gradually as NCRPB gains in experience with deployment of loan product with varying tenors and interest rates. For deployment of this product, NCRPB needs to engage in extensive consultations with the lender community and enhance their confidence in the credit quality of projects prepared/supported by NCRPB.

Technical Assistance in the form of Soft Loan/Grants: Technical assistance as a product should be made available by NCRPB. This should be deployed for (i) preparation of sub-regional/functional and city development plans, (ii) preparation of detailed project reports compliant with NCRPB appraisal criteria and those of multilateral lenders such as ADB, (iii) undertaking project monitoring and supervision of projects (iv) any other as may be deemed appropriate by NCRPB.

Equity/Quasi Equity Products: Currently, NCRPB may not be in a position to take equity exposures in projects. To begin with, NCRPB as part of ongoing initiative to prepare transportation functional plan for NCR may identify institutional, implementation and financing mechanisms for critical projects. Some of these initiatives may be domiciled in Special Purpose Vehicles (SPV) in which NCRPB can provide the initial capital for project preparation. This seed capital can then divested in favour of selected private sector developer or Government agency which is identified for implementation.

4.2.2 Non-Fund Based Product

Credit Enhancement Product: NCRPB should provide full and partial guarantees to debt issuances, pooled finance structures (under the Pooled Finance Development Fund scheme of Government of India) as well as project SPVs floated by the borrowers. This would therefore enable more project sponsors and projects to access the capital markets for funding. Credit enhancement can be provided either on the strength of NCRPB's own credit rating of AAA or NCRPB can act as an intermediary through whom the credit enhancement products can be distributed to projects in the region. For instance, Asian Development Bank (ADB) offers partial credit guarantees as a credit enhancement product. NCRPB can explore avenues for availing these enhancements for project developed/supported by NCRPB wherein the credit risk vests with ADB. On the other hand NCRPB can itself provide guarantee as a credit enhancement product for projects supported by borrowers. Such guarantees would be within prudential limits set by the rating agencies without any dilution in its present credit rating.

4.3 Evolving Product Strategy

The product strategy suggested above is indicative and would need to be evolved as NCRPB assumes a prominent facilitating role for supporting projects in the region. New products including hybrid structures (viz. combination of various products) could then be explored based on NCRPB's experience of diversifying its traditional product portfolio.

In line with the product strategy suggested above, there exists a need for preparing an accompanying resource mobilisation strategy. The following section identifies other potential sources of finance to supplement the available grants from government. NCRPB should go beyond the traditional methods and approach various multilateral and bilateral agencies as well as commercial banks to augment its resource base.

5 Financing Plan

In view of the role envisaged for NCRPB, it is imperative that NCRPB diversify its resources base to include other sources of financing to supplement the available grants of government. The proposed plan looks at diversifying sources of financing to include multilateral agencies, bilateral agencies, domestic capital markets and commercial banks.

5.1 Multilateral Sources of Finance

In the current economic situation, it would be prudent to approach multilaterals for long tenor lines of credit which would be priced competitively in comparison to domestic sources of credit. NCRPB should not only approach ADB, but also other multilateral agencies such as the World Bank.

(a) It has been assumed that Asian Development Bank will provide $800 million line of credit to NCRPB with a maturity of 25 years, principal moratorium of 5 years and semi annual repayments. The expected date of effectiveness of the loan as 2010. The pricing for this source of finance has been assumed at all-inclusive 8.00% p.a. Front end-fees and other financing charges have been assumed at 0.20% payable upfront. It has been assumed that Government of India would waive the guarantee fee against the credit line to NCRPB. (b) We suggest that NCRPB also approach the World Bank for a line of credit with an expected effective date of 2011. Terms and conditions for this assistance are expected to be similar to that of Asian Development Bank. In the current economic situation, it would be prudent to approach multilaterals for long tenor lines of credit which would be priced competitively in comparison to domestic sources of credit.

5.2 Bilateral Sources of Finance

It is suggested that NCRPB initiate dialogue with bilateral agencies such as JICA, KfW and DFID. While JICA and KfW can be tapped for accessing credit lines for specific sectors (JICA could be approached for projects in the transportation sectors, KfW could provide assistance for water and sewerage projects) dialogue with DFID should be initiated for seeking grant assistance for supporting/developing projects meeting social objectives such as in-situ slum housing.

5.3 Grant-in-Aid

It is expected that NCRPB would continue to receive annual allocations from Ministry of Urban Development and Government of Delhi. These allocations are assumed to continue at present levels.

5.4 Other Sources of Finance

Domestic sources could be accessed such as commercial banks for seeking short-medium term lines of credit in order to meet temporary liquidity requirements. It is felt that domestic banks particularly those with whom NCRPB has banking relationships could be approached for providing fund based assistance.

Similarly, development authorities with surplus cash such as Delhi Development Authority could be approached to park their surpluses with NCRPB Fund.

While international sources of borrowing seem limited in the present global situation, it would be useful to continue tapping domestic capital markets with bond issues. It is suggested that NCRPB seek umbrella tax exemptions for its annual bond program.

NCRPB may also explore feasibility of floating municipal bonds (under Pooled Finance Scheme) for on-lending to municipal projects.

In addition to exploring alternate sources of financing, NCRPB needs to look at its loan pricing strategy and move from a single rate to multiple rates and tenors depending upon sector and project viability. In addition to this, it is also recommended that NCRPB discontinue the present practice of providing incentives on debt servicing.

5.5 Analysis of Various Borrowing Programs

While the need for leveraging the NCRPB corpus is well recognised, there is a need to make a realistic assessment of the extent of leveraging that is feasible.Scenario Analysis has been undertaken for different borrowing programs. A number of assumptions for various sources of financing have been made such as:

I. It is expected that NCRPB would continue to receive annual allocations from Ministry of Urban Development and Government of Delhi. These allocations are assumed to continue at present levels.

II. It has been assumed that landed costs of borrowings from multilateral sources would be 200-250 basis points lower than domestic financing sources. For base case scenario, the borrowing is largely expected from multilateral institutions for which the cost has been assumed at 8.00%. p.a.

III. The average on-lending rates have been assumed at 9.00% p.a. for new sanctions. The interest rates on historic loan portfolio have been assumed to continue at terms sanctioned earlier.

IV. A technical assistance facility for preparation of master plans and city development plans, detailed project reports, environment and social reviews and project management consultancy has been assumed at 0.50% of new sanctions each year.

V. Manpower costs for both NCRPB as well as NCR cells are assumed to increase by 40% next year in light of pay commission recommendations. Subsequently, an annual growth rate of 5% each year is assumed.

VI. It is also assumed that a large part of borrowing would happen in earlier years.

Based on these assumptions, 2 scenarios of borrowings have been discussed below:

5.5.1 Scenario 1

Borrowing from various other sources in addition to multilateral sources through incremental borrowings (Rs 210000 Lakhs). Such additional borrowings have been assumed for domestic sources of finance – loans and bond (taxable) issues and a KfW credit. The total resources raised from borrowings and grants will be Rs 1130000 lakhs. The income and expenditure trends for this scenario is in adjacent graph.

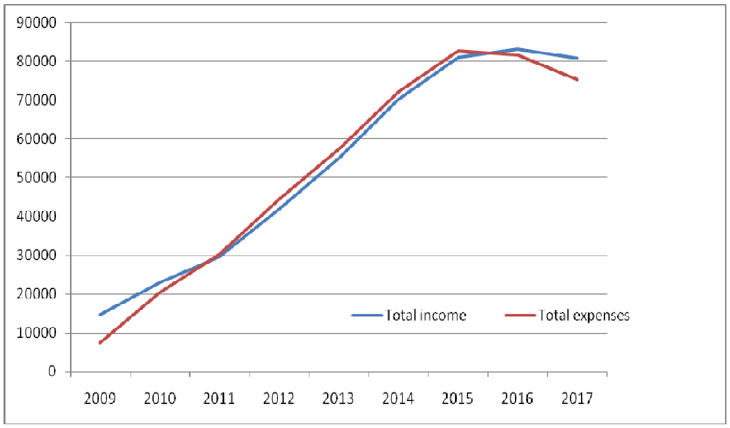


Figure 10: Projected Income and expenditure profile of NCRPB under scenario 1

Cumulative internal accruals

for this scenario are Rs 7988 Lakhs. The above graph indicates that it may be prudent to stagger borrowings so that income earned continues to be in excess of expenditure and cash flow mismatch is avoided.

Any addiitonal borrowings will result in operational losses for NCRPB. This would then necessitate the need for addiitonal grants to lower the costs of overall borrowings for NCRPB.

5.5.2 Scenario 2

Resources raising from debt and grants to an aggregate of Rs 1500000 lakhs. This includes grants and soft loans of Rs 270000 lakhs – an addition of Rs 150000 lakhs incl. Rs 10000 lakhs of soft loans . Borrowings of Rs 1230000 lakhs have been assumed (Rs 100000 lakhs as domestic loans, $ 200 mn from KfW and Rs 230000 lakhs as bonds, apart from the multi-lateral borrowings from ADB and World Bank assumed earlier)

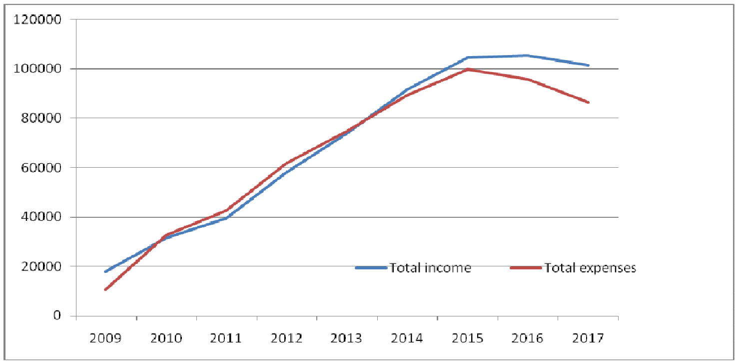


Figure 11: *Projected Income and expenditure profile of NCRPB under scenario 2*

Cumulative internal accruals for this scenario are losses of Rs 48369 Lakhs. Clearly, this level of gearing is not sustainable with assumed levels of grants -Rs 80000 Lakhs from MOUD, Rs 40000 Lakhs from Government of Delhi and a $ 100 million – Rs 50000 Lakhs as grants from DFID or other sources.

This implies that NCRPB ambition of supporting Rs 15000 crores of projects under the Eleventh Five Year Plan with current pattern of providing 75% of project costs in the form of loans is extremely ambitious but not entirely realistic. Clearly, NCRPB's ability to support incremental borrowings on a sustainable basis is linked to quantum of grants and ability to garner low cost sources of finance. This strategy needs to be reworked ensuring higher returns on the loan portfolio and lower levels of non-performing assets in case the objectives set out have to be met. Alternatively, NCRPB can restrict its borrowings to sustainable levels and support additional projects through co-financing and leveraging through Public-Private-Partnership models as discussed earlier in this note.

These scenarios are indicative and the implementation strategy for the financing plan would evolve through consultations with key stakeholders. However, the above scenarios may face a number of risks and hence, the following sections not only reviews these risks, but also suggest mitigation strategies.

5.6 Risk ssessment & Mitigation

Numerous risks have been assumed to be associated with implementing an aggressive financial strategy. Some of these may include:

Demand Risk

The Business Plan assumes that availability of long term funding with appropriate technical assistance would drive investments in NCR region. If the project pipeline is not robust, it may lead to under deployment of the resources available with the fund, with concomitant implications for investments in the region. In order to mitigate this risk, it is important for

NCRPB to identify projects for development in consultation with stakeholders such as State Governments and Line Ministries so that the likelihood of project implementation is high. As part of this strategy, we have recommended that NCRPB support the formulation of City Development Plans for major urban centres in the region so that project investment can be prioritised in consultation with stakeholders.

Credit Risk

In case NCRPB decides to pursue an aggressive investment strategy based on a large scale borrowing program, it is important to ensure credit quality remains at acceptable levels, or NCRPB would be saddled with higher levels of NPAs. Therefore, it is important to put in place a suitable appraisal and credit risk management systems, as envisaged under this Business Plan either through outsourcing or through hiring additional staff. Further, adherence to strict appraisal norms and choice of appropriate credit enhancements will mitigate the risks of non-performing assets.

Interest Rate Risk

Despite best efforts of the NCRPB to keep its pricing competitive, there may be a situation where excess liquidity results in predatory pricing by number of other financial intermediaries. NCRPB should attempt to have a diversified resource base and a low blended cost of resources. There is a need to move away from the present fixed interest rate regime to a more flexible market-responsive on-lending regime.

Government Guarantee as Credit Enhancement

In the past, NCRPB has financed projects based on credit support from the state governments in the form of guarantees. In the present situation, the fiscal constraints faced by state governments would make it increasingly difficult for them to provide guarantees to NCRPBs borrowers. NCRPB needs to alter its current paradigm of lending to infrastructure projects based on credit enhancements from state governments to that of inherent credit fundamentals of borrowers and cash flows of projects.

Varying Financial Risk Appetite across States

In the recent past, implementing agencies from Haryana have been proactive in seeking NCRPB assistance leading to credit concentration in NCRPBs loan portfolio. In this context, NCRPB has already initiated dialogue with other State Governments in the region. NCRPB needs to work closely with State Governments to assess the investment requirements. NCRPB would also have to use innovative loan structures with interest rates and tenures linked to improvement in financial profile of borrowers. The willingness and ability of NCRPB to take calculated risks, invest/support distressed assets and provide continued support for a pragmatic reform program to improve credit fundamentals is what will drive demand for NCRPBs resources

Foreign Exchange Risk

The fund corpus of NCRPB envisages a sizable proportion of corpus as loan from multilaterals and bilateral agencies. Since the loan would be denominated in foreign currencies (United States dollars, Euro, Japanese Yen) the costs associated with managing the foreign exchange volatility may be sizable. NCRPB needs to develop treasury management skills. Therefore it is important to implement the suggestions given in the treasury management manual and hire a Joint Director Finace with necessary expertise in dealing with foreign exchange and treasury management functions. Mitigating foreign exchange risk can be undertaken by entering into 5-10 year rolling hedging options available in the country today.

Asset-Liability Management Risk

While liabilities for the fund are largely long-tenor, their deployment would vary from 5-20 years. In such as scenario, asset-liability management would pose a challenge to NCRPB. The strategy should be to ensure its corpus is fully committed at all times. NCRPB should attempt to match the maturity profile of assets with its liability profile. The current practice is to lend for a tenor of 10 years based in similar tenors of its bond issues. Such practice should be continued for the overall resource pool as well as outlined in the product strategy.

6 Management and Organization

This Business Plan outlines future direction of NCRPB and would therefore impact its functions and hence the human resource needs. This chapter details the minimum required human resource base in line with the anticipated growth in the scale and scope of NCRPB activities for a more pro active and substantial role in the balanced development of the NCR. Furthermore, it addresses the need to strengthen the Project Management and Coordination Unit that functions as the mainspring of NCRPB. The business plan emphasises minimal recruitment which is also in line with the Fiscal Responsibility and Budget Management regime as well as the recommendations of the sixth pay commission. Hiring of additional staff is not encouraged; as a result, the chapter outlines the alternative of outsourcing for essential professional services.

6.1 Existing Organizational Structure

The existing organizational structure at NCRPB is quite simple with two wings viz. the planning wing and the Administration and Finance wing to carry out the various functions. In addition to this, the Project Management and Coordination (PMC) unit headed by the Assistant Director constitutes an important organ of the Board and has to function as the mainspring of NCRPB. The chart below describes the existing organisational structure at NCRPB:

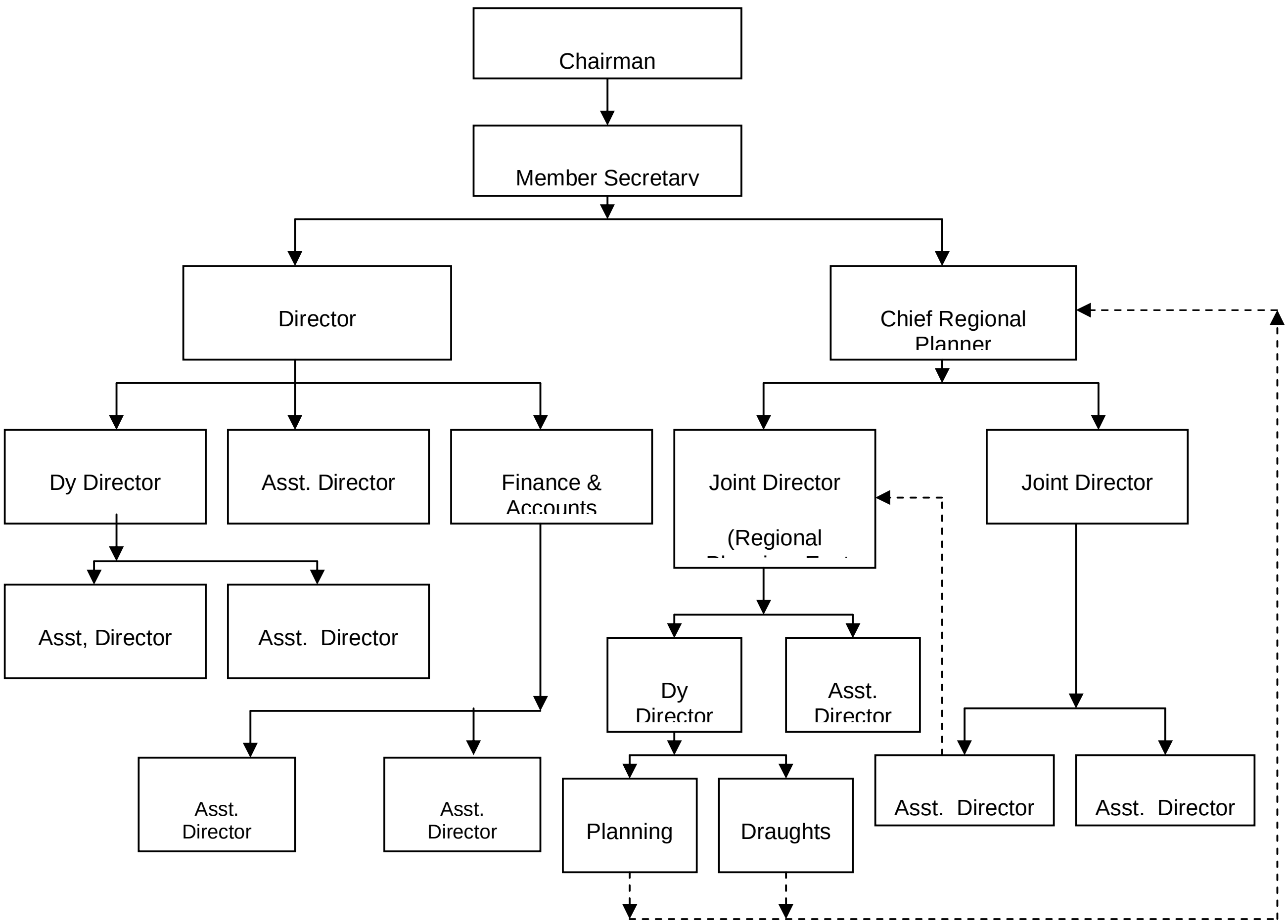


Figure 11: Existing Organisational Structure at NCRPB

6.2 Human Resource Gap

Human resource gap in the NCRPB needs to be analysed also by keeping in view (i) the lags in its existing organisational structure and (ii) the anticipated growth in its activities and lending to the implementing agencies. An in depth analysis of the existing organisational structure, HR processes and procedures and other recommendations is provided in a separate Human Resource Manual. In view of these, NCRPB needs to have an altogether a new organisational structure. The proposed structure is guided by gaps and limitations in the existing structure as also the anticipated expansion in the volume of business of the Board.

6.2.1 Minimal Recruitment

Recruitment of additional staff is advisable for acquiring bare minimal in-house expertise in the specialities that are to be outsourced. An in-house availability of expertise would enable the Board in vetting of the outputs procured through outsourcing. A detailed analysis has been provided separately in the Human Resource Management Plan.

In short, staffing implications entails that NCRPB would need additional 11 staff as mentioned below:

Planning:	• Deputy Director, Water Supply & Sanitation • Deputy Director, Road & Transport • Deputy Director, Power	**PMC:**	• Joint Director Projects • Deputy Director, DPR • Deputy Director, Project Appraisal • Deputy Director, Monitoring & Evaluation
Finance:	• Joint Director, Finance • Deputy Director, Internal Audit	**IT:**	• Assistant Director
Law:	• Law Officer		

In the new scenario, hiring any additional support staff is not encouraged. Re-deployment of existing support staff, skill up-gradation and implementation of some of improvements suggested in terms of IT solutions will obviate the need for recruitment at these levels.

These positions depicted are the minimum number required for NCRPB to embark on an ambitious growth trajectory as suggested in this Business Plan. The choice of recruiting personnel on a permanent basis for a few positions suggested above, hiring employees on a contract basis for some other positions, and outsourcing part of the functions such as internal audit, legal services and the PMU for the project development facility vests with NCRPB management. In addition to the above, a number of initiatives to strengthen the NCR cells have also been recommended (For detailed recommendations, refer Annex-II).

6.2.2 Outsourcing of Professional Skills

In the contemporary concern for right sizing of government and the Fiscal Responsibility and Budget Management (FRBM) regime, creation of new posts at the scale required could be quite complex and even difficult. This report therefore suggests outsourcing of the required expertise and specialities in performance of the required functions, barring the ones that would be critically needed for providing continuity in performance of organisational functions and vetting of inputs to be received through outsourcing. An alternative organisational structure is accordingly suggested with minimal staff many of whom could be outsourced thus leading to enhanced efficiency and effectiveness in plan implementation. This would not only confirm to the FRBM regime, but would also be in line with the recommendations of the Sixth Central Pay Commission for introduction of contractual appointments for selected posts, particularly those requiring high professional skills.

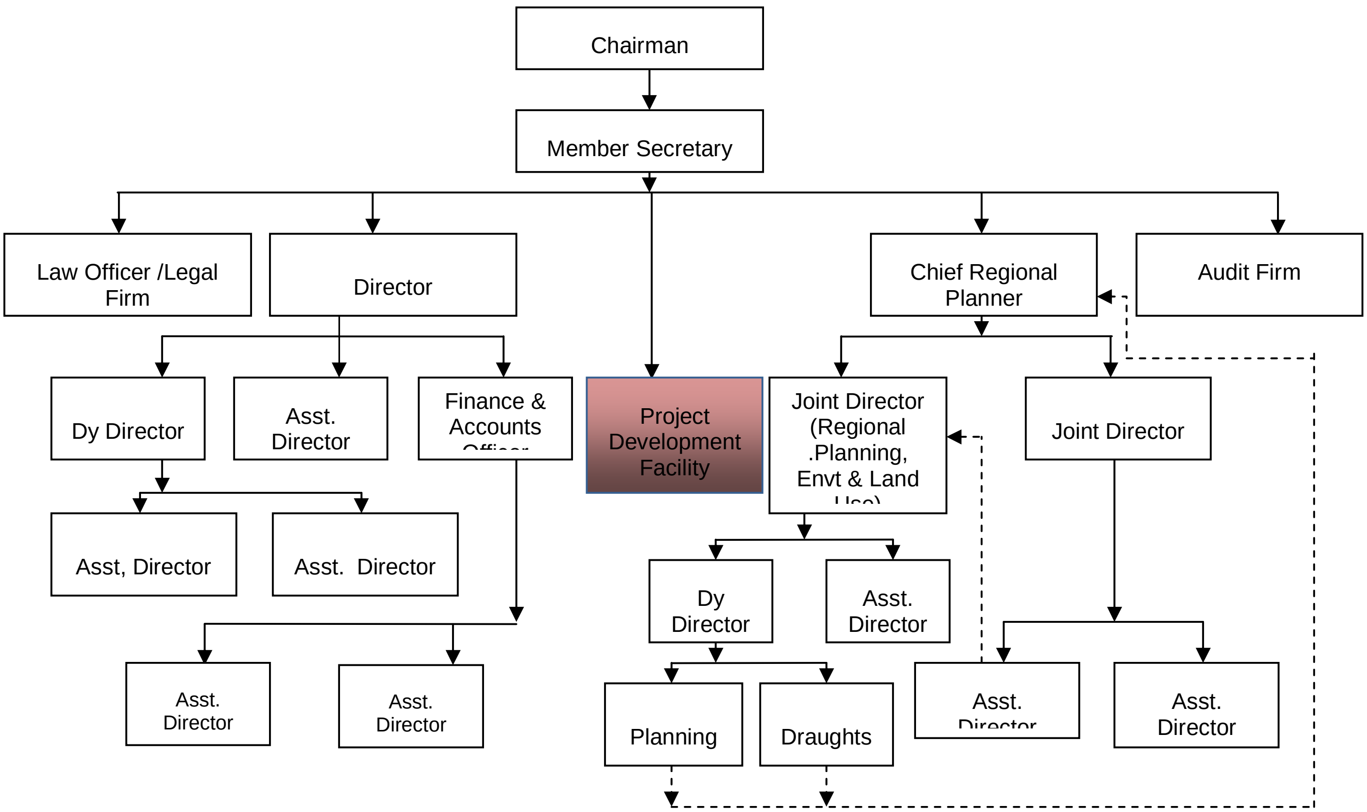


Figure 12: Proposed Organisational structure at NCRPB

6.3 Strengthening the Project Management and Coordination

The implementation process for implementation of a plan entails that the Plan must be disaggregated into Programmes. Programmes must be broken into Activities and finally, the Activities must be converted into Projects. PMC has to play a pivotal role in this chain of activities. Thus, PMC must perform a much more pro-active role in promoting project planning and development. PMC would need to augment the number of projects rather than just receiving them from the constituent states and the NCT of Delhi. Other responsibilities to be discharged by PMC include scrutiny of projects received from the NCR to ascertain if the projects have all the required documents, they are structured in a manner required for making it bankable, and getting projects appraised by the national level institutions that are out sourced by the NCRPB for project appraisal. PMC is also required to monitor progress of projects, compile reports and update the data base, submit periodical reports and project related information as and when required, and organise field visits for the projects. Both in terms of number and the volume of work required to be performed by it, PMC requires substantial strengthening.

6.4 Project Management unit for the Project Development Facility

As discussed earlier, NCRPB would need to strengthen its PMC functions that are the weakest at the moment. In view of the existing resource constraints, it is suggested that the current Project Monitoring and Coordination function be merged with the recommended project development facility. Details of the required staff have been given in the annex. PMU will fill the existing void with regard to PMC.

However, a PMU is not and should not be treated as a substitute for innate organisational strength and a sustainable institutional capacity. Hence the process for creation of the positions suggested above would need to be started by the NCRPB so that by the time the contractual tenure of the PMU functionaries comes to an end, the internal institutional capability would have been procured and put in place. Internal skills in the areas suggested above both in planning section and PMC will internalise the much needed project appraisal process that is outsourced at the moment.

7 Operational Plan

The huge demand for investments in NCR for critical infrastructure as well as product and financial strategy delineated in the earlier chapters would require a well defined roadmap for evolving the NCRPB Fund from a simple revolving fund providing vanilla loans to an intermediary which has the ability to provide the entire gamut of financial product for infrastructure in the region. A detailed analysis of Indian experience as well as International Best Practices in financial intermediation through similar structures is presented in Annex (?)

In order to transform itself, NCRPB needs to prepare a phased roadmap for the next decade. In order to diversify its funding sources and offer longer tenor loans NCRPB has already approached ADB through Department of Economic Affairs for USD 800 million loan, of which the first tranche is likely to be around USD 300 million. The strategy as presented in the figure is detailed in the following paragraphs.

Ongoing Initiatives for MIS and Financial Management Systems at NCRPB

- Adoption of latest guidelines for income recognition, asset classification and provisioning used by banks in the country from April, 2009
- Complete Migration to computerised accounting system using latest "Tally 9 Release 2.14" version of standard accounting software available
- Business process re-engineering (BPR), using best and good practices, to rationalise processes and better integrate/streamline work flow.
- A flexible web based ERP that integrates and automates (re-engineered) processes and systems.
- Implementation of GIS to facilitate regional planning and project identification.

7.1 Short Term Strategy

Till 2010, the ongoing technical assistance from ADB would provide NCRPB with a shelf of projects aggregating to a cost of $ 130 million. Besides, measures for strengthening capacity of NCRPB staff and its implementing agencies on aspects relating to monitoring project preparation, project appraisal and structuring, improving operational efficiencies in its planning and financing departments through Business Process Re-engineering (BPR) and designing specifications for tools such as Enterprise Resource Planning (ERP) and Geographical Information Systems (GIS) will be undertaken in this period.

7.1.1 Operationalizing the Project Development/Technical Assistance Facility (PDF)

As pointed out earlier, the key deterrent to flow of investments is the absence of well structured and bankable projects. In this context, it is recommended that NCRPB set up a Project Development Facility (PDF) to finance project preparation activities[3] for complex yet innovative projects.

The PDF would primarily be used to assist State Governments in the NCR region as well as counter magnet areas, and the local authorities, urban development authorities, housing boards and such other arms of the State Government responsible for implementing the sub-Regional Plans and project plans or for developing the counter magnet area. The focus would be on developing credible infrastructure projects including those that attract private sector financing through PPP models, and particularly capture social priority sectors such as

[3] Typically, an infrastructure project entails 3-5% of project costs towards project preparation and development.

water and sanitation. Processes and Procedures for of setting up and operationalising this PDF as well as the corresponding Terms of Reference have been detailed in Annex-I

Over time, this assistance would facilitate structuring of viable projects by incorporating Public Private Partnership (PPP) frameworks and addressing economic, environment and social concern in such a manner that the projects meet the needs of multilateral agencies as well as regulators.

7.1.2 Diversifying Resource Base

NCRPB should explore raising resources through tax-free bonds to reduce financing costs and lines of credit from commercial banks to tide over temporary mismatches. Other sources such as borrowings from development authorities (Delhi Development Authority) should be explored. This would facilitate in enhancing the resource base of NCRPB prior to availing the long-tenor lines of credit from multilateral and bilateral institutions.

7.2 Medium Term Plan

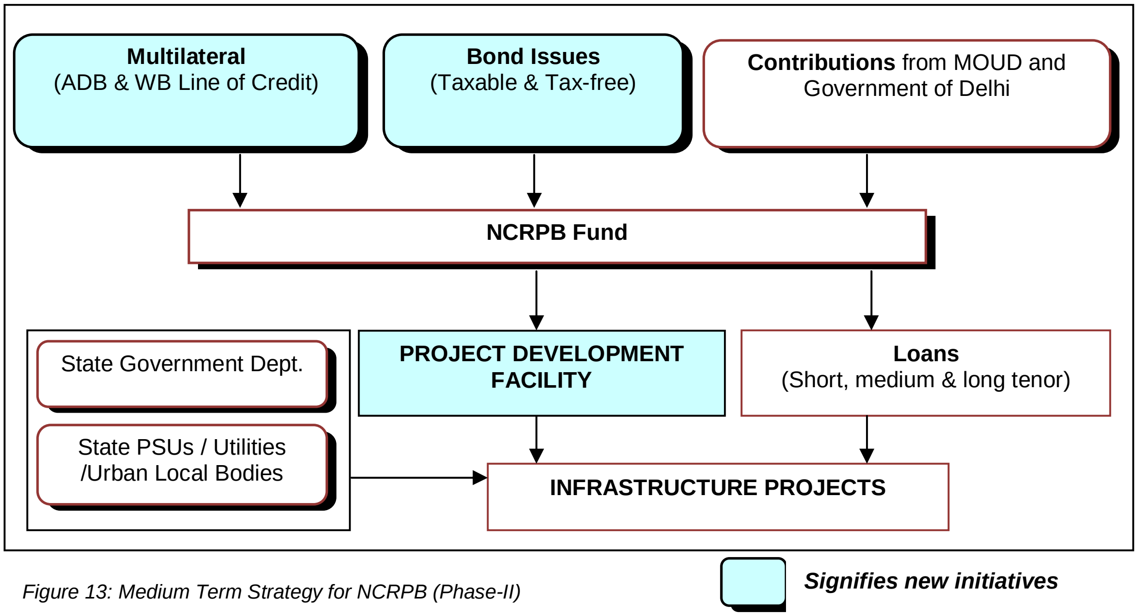


Figure 13: Medium Term Strategy for NCRPB (Phase-II)

From 2010 till 2012, NCRPB would take forward the following engagements from the short term:

7.2.1 Completing on-going initiatives

- Set up the project development facility and sanction assistance for development of a few yet 'iconic' projects in the region
- Implement the ERP and GIS systems designed in the earlier phase
- Sanction assistance to projects appraised under the framework developed under the ADB TA
- Complete loan negotiations with Asian Development Bank for proposed line of credit. Sanction assistance to a few projects under this credit

7.2.2 New initiatives

- Supplement NCRPB resources by sourcing long-tenor funds from other multilaterals such as World Bank.
- Resources from bilateral agencies such as KfW, JBIC and DFID to be tied up.
- Diversify the lending product offerings by providing a range of products identified nder the business plan (short, medium and long term debt).
- Memorandum of Understanding (MOU) with other lenders such as PFC, HUDCO, IDFC, IL&FS and REC for co-financing projects in the region.

NCRPB should provide services towards project supervision post financial closure during the construction phase of projects. Such services may include appointment of an independent ('lenders') engineer and an auditor for ensuring that the project implementation is progressing in accordance with the agreed work-plan. This service may be provided as part of terms & conditions agreed upon at the time of execution of loan documents.

7.3 Long Term Strategy

In the long term say beyond 2012 (co-terminus with commencement of twelfth five year plan), NCRPB would strengthen its position as a catalyst for investments in infrastructure sector in the region. NCRPB would evolve from a pure-play lender to an intermediary which can conceptualise, develop, structure and finance a wide gamut of infrastructure projects in the region.

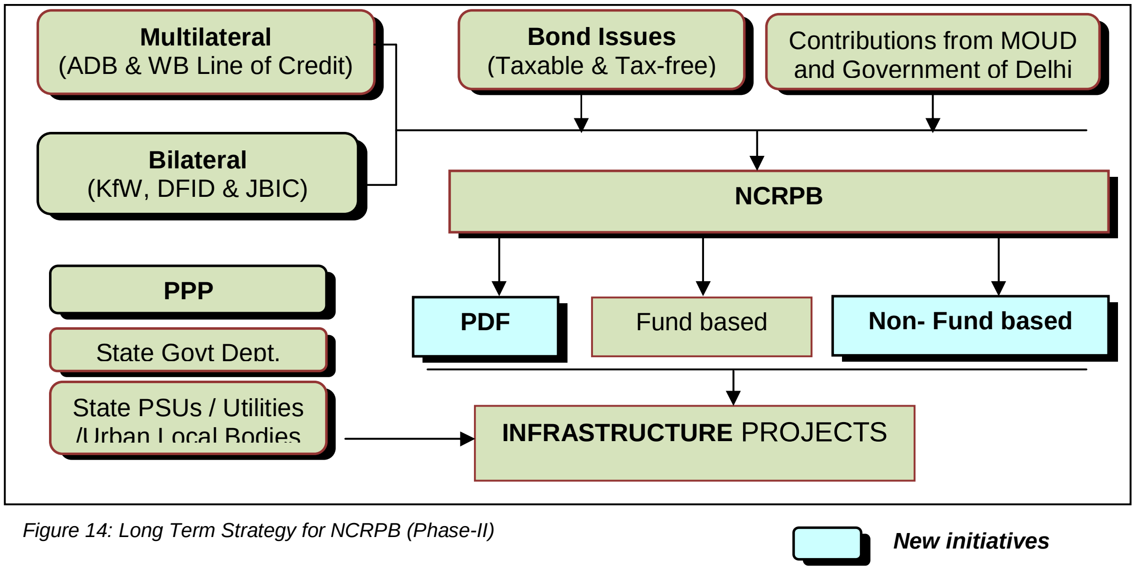


Figure 14: Long Term Strategy for NCRPB (Phase-II)

Completing on-going and new initiatives

a. Commence co-financing with other institutions for projects

b. Provide fund (sub-ordinate debt for PPP projects, credit enhancements through debt service reserve accounts) and non-fund based (Partial / Full Credit Guarantees) products. Non fund based offerings could be made either on the basis of existing credit strength or providing back-to-back guarantees from private sector financing windows of multilateral / bilateral agencies.

7.3.1 'Iconic' Projects

a. In this phase, we expect NCRPB to undertake financial closure for a few iconic projects developed by it in the earlier phase. The development models for such projects could range from PPP frameworks to conventional modes of implementation.

b. Such iconic project would typically be large projects having inter-state jurisdictions where NCRPB's role as a nodal agency would be to set-up dedicated Special Purpose Vehicles (SPV) and arrange seed-capital from key stakeholders. We envisage the role to be akin to Power Finance Corporation (PFC) in the case of Ultra Mega Power Projects where project preparation, land acquisition and clearances were arranged by PFC for a project domiciled in a dedicated SPV. PFC then offered equity stake in the SPV to a competitively procured developer at par for the project.

c. If it is found that the project is not amenable to implementation under a PPP framework, NCRPB could facilitate implementation in the conventional public sector mode. Projects could be implemented in frameworks similar to that of Delhi Metro Rail Corporation (DMRC).

8 Implementing the Road Map

NCRPB is in transition phase wherein it is in the process of transforming itself completely from a mere planning and financing entity to an organisation which plats a catalyst role in the growth and development of the NCR Region. To ensure that NCRPB is able to effectively perform the various demanding and competing roles envisaged for it in this plan, it is essential that NCRPB follow an extremely disciplined and "change driven approach" with extreme flexibility to continuously adapt to rapidly changing business environments and needs. This business plan has not only identified various areas and opportunities wherein NCRPB could possibly intervene, but has also demarked the requisite strategies to facilitate the much needed transformation.

The success of the envisaged role lies in effectively accomplishing the underlying initiatives in a phased manner. The operational plan has detailed the short term (till 2010), medium term (2010-2012) and long term approaches (beyond 2012) after a thorough analysis and detailed consultations and it is vital that the time lines are adhered to.

As pointed our earlier, in view of the gaps in the existing organisational structure as well as the anticipated volume of business of NCRPB, the suggested staff positions need to be filled up on a priority basis. Keeping in mind the of the concern for right sizing of government and Fiscal responsibility and Budget Management Act as well as the recommendations of the Sixth Pay Commission, outsourcing and minimal recruitment are suggested to strengthen the internal institutional capacity and thereby build a strong organisational base.

Furthermore, in a rapidly changing macro economic environment, despite being highly competent and committed, the importance of regular in house training of NCRPB staff can not be over emphasised. It is well established that such regular trainings in the form of seminars, workshops and study tours for human resource development would not only add an additional dimension to the overall functioning to the organisation, but also lead to incorporating national and international best practices for ensuring a growth fostering environment.

NCRPB is already in the process of Business Process Re- Engineering by moving towards adopting a complete modernised structure with state of art technology and techniques for greater efficiency and effectiveness. NCRPB is currently migrating to tools such as the latest version of Tally software, MIS, GIS, and Remote Sensing and it is expected that a flexible web based ERP system across the organisation would soon be in place. These initiatives would be extremely essential to develop an integrated knowledge platform at NCRPB to facilitate quick and effective decision making.

The increased focus now needs to be on "out of the box" thinking and a pro active approach to develop innovative mechanisms to exploit the available spectrum of opportunities. NCRPB should go beyond the traditional sources of finance in the form of government grants and explore alternative financing such as funds from multilateral and bilateral agencies such as the ADB, World Bank, KfW, JBIC and DFID. It could also consider enhanced level of borrowing from the capital market.It could also enter into some sort of MoU with other players such as PFC, HUDCO and IDFC for co- fianancing. The product portfolio needs to be diversified to include a range of fund based products including debt for PPP projects and non fund based products such as credit guarantees. Other options could include providing long tenor funds for infrastructure projects.

In addition to adopting these strategies for resource mobilisation, it is also imperative that NCRPB practice extreme prudence in the present lending practices. The Project Appraisal

Manual has outlined a number of best practices which could be followed for effective financial intermediation. The Financial Management Manual also suggests standard accounting practices and procedures which could be looked into to strengthen the financial management in the organisation. This once again highlights the need for undertaking internal training and capacity building initiatives. Given the extremely committed management and a motivated and change driven staff, this could be easily accomplished.

A unique model suggested in this business plan is conceptualising and operationalizing a revolving project development facility. It is proposed that NCRPB support project preparation activities such as conducting feasibility studies, preparing detailed project reports, and structuring PPP projects to foster demand for financial assistance and thus ensure a pipeline of well structured and bankable projects. The required team for this could be outsourced and mobilised at the earliest and it is recommended that the internal staff be continuously involved in all activities of this facility, not only to guide the direction and monitor the progress, but also to build internal professional capacity, thereby eliminating the need for further external recruitment.

The importance of Public Private Partnerships (PPP) in infrastructure is recognised world over. PPP in India is still at a nascent stage with immense potential and opportunities. ADB is already supporting a number of ministries in developing the capacity to prepare, evaluate and appraise PPP in infrastructure in conformity with international best practices and improving progress monitoring through comprehensive databases. NCRPB should fully explore possibilities of not only financing, but also structuring large PPP projects in the core infrastructure sectors of Water Supply and Sanitation, SWM, and Roads. NCRPB could also consider undertaking financial closure of a few iconic projects having inter-state jurisdictions wherein NCRPB's role as a nodal agency would be to set-up dedicated Special Purpose Vehicles (SPV) and arrange seed-capital from key stakeholders.

Thus, as NCRPB embarks on an aggressive strategy to transform itself, it is vital that it undertake the proposed reforms to create an enabling environment for change. However, the strategies outlined in this plan are a necessary but not a sufficient condition to ensure progression on the stipulated growth path. For NCRPB to achieve its vision, it is equally important that both, the management and staff of the board have a sense of ownership to the organisation and are continuously motivated to ensure effectiveness and success all its endeavours.

APPENDIX

Annex I: Setting up a Project Development Facility

Background

1. As discussed in the previous sections, in order to achieve its mission of promoting growth in the NCR through balanced regional development; NCRPB needs to go beyond its current role of formulating Regional Plans and providing plain vanilla loans. In the rapidly changing macro economic environment, NCRPB can promote economic growth via a series of interventions aimed at removing critical infrastructure bottlenecks and enhancing quality of life in the region by improving access to basic civic services to both urban and rural areas. NCRPB needs to transform itself into an institution which not only has the vision for planned development of NCR but possesses the means to provide the entire spectrum of infrastructure development and financial services to translate the vision into reality.

2. However, the inability of implementing agencies to plan projects has led to a paradoxical situation wherein NCRPB is unable to optimally utilize its funds in a certain period while facing a liquidity crunch in another. Specifically, *significant costs of project preparation and* development *(usually about 3-5% of total project cost) are identified as a major bottleneck for preparation of bankable infrastructure projects* and hence, there is a need for a dedicated fund which would act as a catalyst to close the gap between the available public and private financial resources and vast infrastructure needs that can be translated into viable projects with real potential for achieving financial closure.

Need for a Project Development Facility

3. The key deterrent to the smooth flow of investments is an inadequate shelf of well structured and bankable projects. This is primarily because the government agencies lack the capacity and resources– both technical and financial to support project development for capital intensive infrastructure projects. Land development projects, commercially attractive power generation projects, traditional urban infrastructure projects as well as other complex yet innovative projects requires a differentiated project development and lending strategies.

4. In line with the above, it is imperative that NCRPB go beyond its traditional model and enhance its existing product portfolio to offer a wide and comprehensive range of products including exploring development of projects in the Public Private Partnership (PPP) frameworks. In this respect, it is proposed that NCRPB set up ***a Project Development Facility (PDF)***, primarily to finance project preparation activities for complex yet innovative projects. Activities supported by the PDF include conducting feasibility studies, preparing detailed project reports, and structuring PPP projects by hiring transaction advisors etc. The availability of this technical assistance would prove to be an important driver to foster to demand for loan assistance.

It is envisaged that in the long run, NCRPB would strengthen its position as a catalyst for investments in infrastructure and evolve from a pure-play lender to an intermediary capable of conceptualizing, developing, structuring and financing a wide gamut of infrastructure projects in the region.

Aims and Objectives of the Project Development Facility

5. Many of the projects currently posed to NCRPB lack the desired level of due diligence and detail. They also do not comply with the environmental and social safeguard requirements of multilateral and bilateral agencies.

- The purpose of the fund is to support studies, concept development, demonstration pilots etc. to meet the overall objective of increasing quality and quantity of credible and innovative projects. In addition the PDF can be used to support hiring of resources for project supervision and monitoring.

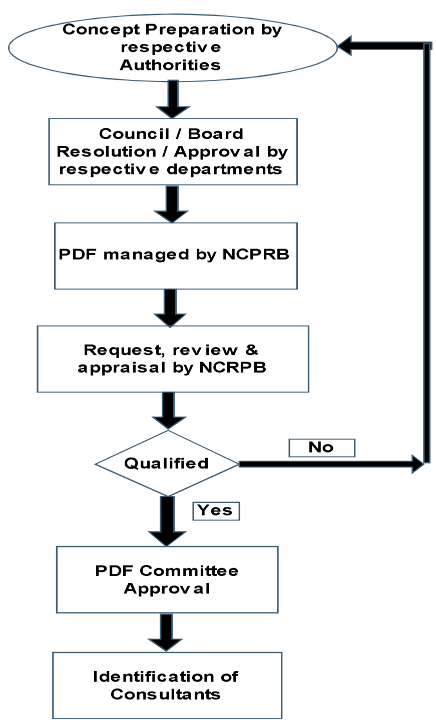
- The PDF would primarily be used to assist State Governments in the NCR region as well as counter magnet areas, and the local authorities, urban development authorities, housing boards and such other arms of the State Government responsible for implementing the sub-Regional Plans and project plans or for developing the counter magnet area. The focus would be on developing credible infrastructure projects including those that attract private sector financing through PPP models, and particularly capture social priority sectors such as water and sanitation.

Structure and Management of the Project Development Facility

Sources of Finance

6. In the short term, efforts would be expended in conceptualizing a PDF to provide technical assistance to NCRPB for achieving the objectives of the Regional Plan 2021. This would be done through providing assistance to states and implementing agencies for preparation of functional and master plans, project development support for projects identified through Regional and Functional Plans and city development plans. It would also support screening of eligible projects for implementation under PPP frameworks before taking up further project preparation. The initial corpus for the facility would be Rs. 50 Crores for which an initial contribution of Rs. 25 crores ($5mn) would be from NCRPB and the balance from donor agencies including ADB.

Figure 1: Procedures for PDF



Overtime the funds can be enhanced by

- Provisions created from the NCRPB Fund partly financed through lapsed incentives offered to borrowers.
- Sourcing technical assistance grants from multilateral and bilateral agencies.
- Replenishment / reimbursement under prevailing Government of India or State Government schemes such as JNNURM, UIDSSMT and India Project Development Fund.

7. The assistance for project development can be factored as part of project costs, which would then get funded at the time of financial closure, which can then be recovered by NCRPB from the borrowers. This would ensure that the limits for providing technical assistance would be available for new projects identified subsequently.

8. Over time, this assistance would facilitate structuring of viable projects by incorporating Public Private Partnership (PPP) frameworks and addressing economic, environment and social concern in such a manner that the projects meet the needs of multilateral agencies as well as regulators.

Activities

9. The funds would be primarily deployed for (i) preparation of detailed project reports compliant with NCRPB appraisal criteria and those of multilateral lenders such as ADB, (ii) undertaking project monitoring and supervision of projects (iii) any other as may be deemed appropriate by NCRPB including preparation of City Development Plans for identification and prioritization of suitable projects.

Process and Procedures

10. The creation of a Project Development Facility will need to be approved by the NCRPB which can delegate oversight of the fund to the existing PSMG I at NCRPB which will approve subproject preparation and monitor the progress of the fund.

11. Figure no. 1 illustrates the procedures to be followed for such a fund.

12. The implementing agency can approach the PDF for technical assistance, and the PDF manager would then prepare an appraisal note for the approval of the committee. The broad parameters which need to be checked are compliance with Regional Plan 2021, project name, cost estimates, background and scope of work to the consultants.

13. After approval, NCRPB shall proceed with identification of consultants in line with ADB's procurement guidelines. Detailed terms of reference shall be provided to the consultant, as part of the tender documents[4].

14. A pre-bid meeting shall be conducted to clarify queries from consultants on various issues in the terms of reference given to them. The consultants shall be selected based on bidding procedures ranging from a least cost selection, quality based selection, and/or, a combination of both[5].

15. In order to ensure that views of the implementing agency on the concepts and designs are being incorporated, constant review at various stages is required. Therefore, a review committee should be constituted consisting of representatives of all stake holders of the sub-project. The committee should consist of:

- Chairman of the Municipal Council / Committee or a Head/CEOs of implementing agencies;
- Representatives of the respective ULB / Departments / Statutory Board;
- Engineers/Planners of the respective ULB / Departments / Statutory Board;
- Technical Sanctioning Authority of the project; and

> It is believed that this PDF would lead to acceleration in Infrastructure development through preparing quality feasibility studies and an open and transparent bidding process for selection of consultants, based on the ADB's procurement guidelines.

[4] Guidelines for PDF, model appraisal note, Sample council resolution, RFP, ToR documents etc have been provided in the Annex of the project appraisal manual)

[5] A Least Cost Selection (LCS) is where consultants are selected on the least financial cost, whereas Quality based Selection (QBS) is the method of selecting consultants purely on quality only without giving any weightage to financial aspects. There is a method which provides weight for both, viz., the Quality and Cost Based Selection (QCBS), which provides weight for both quality of the proposals and financial costs.

- Representative from NCRPB.

16. The role of the NCRPB representative is to ensure that all appraisal requirements are being met at the time of preparation of the sub-project.

Approach and Methodology

17. In the incumbent stage, NCRPB would require initial handholding and capacity building to manage and operate the fund. Over the years the fund would evolve as an independent and integral component in establishing well structured PPP projects in the region.

18. It is proposed that the NCRPB PDF would be managed by a Project Management Unit (PMU). NCRPB needs to decide whether the PMU managing the PDF is attached toi the Finance wing or the Planning wing. Also, the choice between using external consultants and internal resources needs to be made by NCRPB. The desired staff for operationalising the project development facility as well as the detailed terms of reference has been given in the subsequesnt chapters on Human Resource Planning.

Implementation Options for PMU

19. The following options are proposed for implementing the PMU

1. ***Outsourcing Option***: The staff mentioned above could be procured using the savings of this ADB TA for a period of 1 year after which NCRPB can procure another set of consultants on similar lines based on the experience of the 1st year of operations of the PMU. The Consultants from existing TA could prepare the ToR for procuring the next set of consultants for a longer period, say 3 years.
2. ***Inhouse Staff***: In this option it is suggested that the ADB TA is used for providing initial handholding support for setting up the PDF. In the interim, NCRPB may redeploy existing staff or hire additional staff for the positions mentioned above. In this case the operations of the PMU would be completely transferred to the in house staff at the end of the TA.

Key Deliverables and Outcomes

20. It is envisaged that this PDF would lead to acceleration in project pipeline at NCRPB through preparation of quality projects using an open and transparent bidding process for selection of consultants, based on the ADB's procurement guidelines.

21. The expected outcome of this facility would be:

- Operationalising the PDF by putting in place the necessary mechanisms
- Identification of a few iconic projects for further development
- Identification of a panel of technical experts in different areas to support NCRPB
- Development of internal procedures for procurement based on ADB Procurement Manual

22. In line with the stratergies detailed in this business plan including the setting up of a project development facility, the following section discusses the proposed financing plan for diverse and innovative potential sources of financing for infrastructure projects to accelerate the flow of projects to NCRPB for funding and draws up financial projections for NCRPB under different segments.

Detailed Terms of Reference

1. **Team Leader / Head of PMU** (International): This role would be similar to the existing Team Leader of the current TA and in addition to the current responsibilities would also include supervision in overall design and establishment of the PDF.

2. **Project Development and Contract Specialist** (National): S/he would be a Senior Civil Engineer with a basic degree of BE in Civil Engineering and minimum 10 years' experience (preferably in managing civil works) at a managerial level. S/he would primarily be responsible for providing strong leadership in conceiving the projects, augmenting the project pipelines by working closely with partner states and NCR cells manage the Project Development Fund as well as procure consultants. The scope of work includes:
   - Expedite the process of project development and structuring
   - Advice participating states and NCR cells on project development, project structuring and project management
   - Ensure project appraisal (technical, financial, economic, environmental, social and institutional)
   - Present the appraised projects before the project sanctioning group
   - Operate and manage the PDF
   - Procure consultants for project development
   - Monitor the implementation of projects and take corrective action for timely implementation.

3. **Financial Modeling Expert/Project Structuring Expert** (National)
   - Conduct financial analysis of projects using financial tools such as FIRR, FNPV etc.
   - Identifying feasibility and viability of projects based on financial tools
   - Identifying financial costs and benefits
   - Conducting past financial analysis of finances of implementing agencies
   - Calculation of cost of capital
   - Preparation of financial improvement action plan, if required
   - Based on the analysis, identify projects to be implemented through PPP or any other suitable model.
   - Give inputs to the technical advisor/planner on Terms of Reference for financial consultants procured through the PDF
   - Training NCRPB staff and Financial economist in developing financial models for projects
   - Oversee financial structuring of PPP and other projects for which DPRs are prepared through the PDF
   - Review financial assessment of implementing agencies prepared by financial economist
   - Carry out financial appraisal of all projects posed to NCRPB for financial assistance with support from financial economist

In addition to the core team above, there would be **two Management Support Positions:**

4. **Infrastructure Planning Specialist, Technical** (National)

   The expert should be an Engineer/planner with minimum 7 years experience**.** The terms of reference would include, but not be limited to the following tasks:
   - Draft Terms of Reference for consultants to be procured through the PDF in consultation with the project structuring expert;
   - Work with Project Development and Contract Specialist in developing

projects;

- Assist contract specialist in preparing the Terms of Reference for project monitoring and supervision consultants sourced through the PDF

5. Financial Economist- Support (National)

Young and dynamic person with an appropriate qualification in economics or finance i.e. a Masters in Economics/MBA Finance; s/he who is self motivated with an ability to learn quickly. The tasks to be undertaken would include:

- Carry out financial appraisal of projects posed to NCRPB
- Carry out periodic financial assessment of implementing agencies
- Develop financial models for structuring various projects
- Preparation of training materials for training NCRPB staff in project development structuring and appraisal

Annex II: NCR Planning and Coordination

Functions of the NCR Cells: With a view to put in place an organisational mechanism for planning and monitoring of plan implementation, NCRPB has created NCR Planning and Coordination Cells (NCRPCC) in the constituent states and in the NCT of Delhi. NCR Cells are required to discharge the following responsibilities:

- Preparation of Sub-Regional Plan;
- Preparation of Master Plan for urban centres falling in the NCR;
- Assistance to the implementing agencies in preparation of projects and schemes and forwarding them to the NCRPB for financing and monitoring of projects; and
- Feed back to the NCRPB in matters relating to planning, development of projects.

The NCRPB is committed to give financial assistance to the Cells. Even the preparation of Master Plans has not yet made much headway. Even when the Master Plans are prepared in the constituent states, these are neither approved by the NCRPB nor is the Board consulted on this by the constituent states. The Cells have not been paying any role in promoting development of projects that forms part of its responsibilities. Also the NCR Cells are not accountable to the Board in any manner even though. Salaries of the functionaries in the Cells are paid by the NCRPB along with office equipments and office expenses. This constitutes one of the conspicuous gaps in the existing system.

Composition of NCR Cells:

The analysis of composition of the NCRPCCs, their staffing and vacant positions reveals three things as mentioned below:

- Staffing of the NCRPCCs lacks uniformity in the composition of staff as different types of professional, research and administrative staff are presently sanctioned in different Cells;
- Staffing does not have any correlation with the number of districts and the physical areas carved out of the three constituent States and the NCT of Delhi; and
- A very large number of sanctioned positions, some of them key positions in nature, are lying vacant.

The analysis has further revealed that:

- NCR Cells are not playing an active role in planning and development of NCR;
- Even though Regional Plan 2021 was approved in 2005, the NCR Cells have not yet succeeded in preparation of (i) Sub-Regional Plans, (ii) Master Plans, and (iii) Project Plans;
- They do not offer any assistance to the implementing agencies in project development;
- The very nomenclature of these Cells is misplaced as they hardly have any role in monitoring of projects under implementation. In fact their role in project implementation is minimal;
- They hardly give any feedback to the NCR in matters relating to planning and development; staffing of these Cells is quite imbalanced and not uniform;

As the staff belongs to the State Governments concerned that are Constitutionally autonomous levels of Government, the Cells are not at all formally accountable to the

NCRPB. In view of the above, NCRPB would need to devise mechanisms to make them more proactive. The Board should also have some semblance of uniformity in staffing of these Cells.

Transforming the Role of NCR Cells

In order to enable the NCR Cells play a more pro-active role, power of approval would need to be given to these Cells. As these Cells do not have any say in ensuring compliance of the development initiatives in the NCR with the Regional Plan (despite a legal provision that no development shall be made in the region which is inconsistent with the Regional Plan) the Cells have become inactive, helpless spectators and passive. They need to be armed with the power to approve; they should have the authority to approve any development initiative within the NCR on the basis of its conformity with the Regional Plan. This will go a long way in giving much needed teeth to the NCR Cells for playing a pro-active role. Power of approval will also impart prestige and glamour to the positions in the NCR Cells that would be instrumental in attracting the civil servants of high calibre for posting as the head of these Cells. In the present situation, there is reluctance to join the NCR Cells as the head.

Staffing Mix

Every Cell should have a uniform staffing mix. This, in addition to the civil servant mentioned above, should consist of the positions mentioned in the following table:

S.N.	Positions	Rajasthan	Uttar Pradesh	Haryana	Delhi	Total
1	Commissioner	1	1	1	1[a]	4
2	Chief Town Planner	1	1	1	-	3
4	Associate Town Planner	-	1	1	1	3
5	Assistant Town Planner	1	2	2	-	5
6	Junior Engineer	1	1	1	-	3
7	Economic Planner	1	1	1	-	3
8	Planning Assistant	1	1	1	-	3
9	Planning Draughtsman	1	2	2	-	5
10	Research Officer	1	1	1	-	3
11	Research Assistant	1	2	2	-	5
12	Research Investigator	1	3	3	-	7
13	Computer Programmer	1	1	1	-	3

S.N.	Positions	Rajasthan	Uttar Pradesh	Haryana	Delhi	Total
14	Senior Stenographer	1	1	1	1	4
16	Data Entry Operator	1	1	1	-	3
17	Head Clerk Cum Accountant	-	1	1	-	2
18	Assistant	1	1	1	1	4
19	Personal Assistant	1	1	1	-	3
20	Typist	1	1	1	-	3
21	Driver	2	2	2	1	7
22	Ferro Printer	1	1	1	-	3
23	Peon	1	1	1	1	4
24	Total	20 (21)	27(30)	27 (30)	6(5)	80(86)

a: Additional Secretary, Public Works Department, NCT of Delhi

Note: Numbers in parentheses denote the existing sanctioned positions.

The Table shows that the number of staff in the NCR Cells will marginally decrease from the existing 86 sanctioned positions to 80. Simultaneously, with this staffing mix, functions entrusted to the Cells as well will have to be modified as suggested below:

- Approve any development initiative by public, private and any other agency in the NCR part of the state/NCT of Delhi for ensuring its conformity and compliance with the Regional Plan;
- Suggest to the NCRPB for its approval of any change required in the land use in the region;
- Preparation of Sub-Regional Plan;
- Preparation of Master Plan for urban centres falling in the NCR;
- Project Planning and Assistance to the implementing agencies in preparation of projects and schemes;
- Monitor project development by the implementing agencies for augmenting the number of projects;
- Forward the projects developed to the NCRPB for financing of projects;
- Monitor project implementation for ensuring effective and efficient implementation; and
- Give feed back to the NCRPB in matters relating to planning and development of projects.

Streamlining Functioning of NCR Planning and Monitoring Cells

NCRPB would need to streamline the functioning of the NCR Cells by introducing new management systems. This could be done by requiring the NCR Cells to prepare annual work plan in the form of an action plan in the spheres of planning, project planning, and project development by disaggregating the Regional Plan proposals for their respective areas forming part of the NCR. Once this is done, it should form the basis for review of actual performance of the NCR Cells. Deviation from the planned activities could be taken up with the concerned states through periodical review meetings. NCRPB will have to take review meetings with the NCR Cells on a quarterly basis. In order to promote accountability of the NCR Cells, it would be advisable for the NCRPB to have an MoU with the state governments concerned (including the NCT of Delhi). The MoU will specify the activities to be performed by the NCR Cells. It will be advisable also to have a practice of rewarding the NCR Cells on the basis of performance. For this the NCRPB could independently assess the performance on an annual basis against the action plan prepared by them. Award of best performance in a function consisting of all the members of the staff of NCR Cells, besides motivating them, will also promote a collegial relationships amongst them.

Annex III: Best Practices in Financial Intermediation

Indian Experience

In India, there are a host of specialized financial institutions providing a range of products to the infrastructure sector such as IL&FS & IDFC which are structured as private sector intermediaries; IIFCL – backed by Government of India and sectoral public sector financial entities such as HUDCO (urban), REC (rural electrification), PFC (power), NABARD (agriculture and rural development). These are corporate entities established in accordance with the provisions of The Companies Act, 1956 unlike NCRPB which has been established under an Act of Parliament. Some of the intermediaries mentioned above have set-up dedicated debt funds under different implementation models. The successful example of such intervention in the infrastructure sector has been in urban sub-sector with Tamil-Nadu Urban Development Fund (TNUDF).

Tamil Nadu Urban Development Fund

A strategic initiative of the World Bank along with the Government of Tamil Nadu, IL&FS, ICICI and HDFC, this fund has been operational for more than a decade assisting core sectors such as water and waste water treatment, solid waste management, roads as well as revenue generating enterprises, wholesale markets and bus stands.

Pooled Municipal Debt Obligation Facility : A recent initiative (2006) in the urban sector has been pooling of financial resources by 12 leading commercial banks and institutions in India led by IDBI, IL&FS, IIFCL and Canara Bank to provide term loans to projects in the urban sector. These loans are provided for a tenor of 13 years with a three year moratorium. This arrangement is a syndicated consortium credit lending in a Facility-Asset Management Company (AMC) format. The AMC for this Facility is a dedicated manager – IL&FS Urban Infrastructure Managers Limited (IUIML), a subsidiary of Private Equity firm (IL&FS Investment Managers Limited) which has ADB, IFC and Indian Financial Institutions as its investors. This Facility intended for municipal projects and projects developed by private sector are operational and has mobilized $ 700 million of credit lines for on-lending to projects.

International Municipal Development Funds

In various countries, the governments have experimented with catalysing investment flows through Municipal Development Funds (MDFs). The institutional structure of MDFs has evinced a mixed result where funds were on-lent at stricter terms as in the case of Thai MDF. It has worked in the case of Tamil Nadu Urban Development Fund (TNUDF) in India, where TNUDF has been able to perform its intermediation role effectively. The MDFs in Brazil showed impressive loan repayment performance initially, but failed to attract direct private lenders due to a high degree of perceived commercial and political risks. The successful Columbian and the Czech MDFs have led to development of a multi-tier municipal finance systems in these countries.

With support of the European Agency for Reconstruction, the Government of Serbia established the Municipal Infrastructure Agency (MIA), to assist municipalities with preparation of bankable projects and establish a credit market for municipal infrastructure finance. Other municipal development funds include the Fonds Spécial d'Equipement et d'Intervention Intercommunale (FEICOM) in Cameroon, which functions as the key mechanism for generating and allocating revenues among local authorities and assists councils in implementing major projects such as roads, water and electricity with a primary focus on utilities and urban development. The Local Government Infrastructure Development Fund (LGIDF) in the Philippines focused exclusively on activity implementation, but did not address the issue of generating sustainable capital market debt. Similarly, Local Government Unit Guarantee Corporation (LGUGC) in Indonesia is primarily involved in providing insurance to municipal investors; it also determines the creditworthiness of projects besides injecting liquidity in the municipal bond market via cheaper alternatives.

Territorial Financing Institution of Columbia, FINDETER is a market-oriented MDF that

Municipal Finance Company of the Czech Republic (MUFIS)

MUFIS was designed to accelerate commercial bank lending to municipalities wherein it borrows long term funds from the external market which it on- lends at fixed rate terms for a period of 8 to 10 years to commercial banks for municipal lending. The commercial banks undertake individual loan appraisals and collateralize their loans either with municipally owned property or access to municipal deposit accounts. The municipalities develop projects, the commercial banks conduct credit and risk analysis and the MUFIS primarily provides long term funds and thus its limited functions enables it to act rapidly. Overall a two tier market has emerged wherein larger cities raise funds primarily from bond issues and the intermediate sized and small cities meet their financing needs from commercial banks with or without MUFIS support. Also there is a zero interest lending in this market for environmentally sensitive municipal projects from the state environmental fund. *(Source: Using Municipal Development Funds to Build Municipal Credit Markets, George E. Peterson, World Bank, 1996)*

operates as a rediscount facility for commercial bank lending to the municipal sector besides supplementing the banks' project appraisal capacity to improve the technical quality of their lending. It also has a poverty alleviation mandate and gives special attention to institutionally weak and small towns and investments in essential services primarily in water and sanitation. It primarily acts as refinancing facility for municipal loans wherein it assists municipalities on technical specifications, costs and budget analysis and financial feasibility of projects along with identification of a commercial bank willing to finance the project after conducting its own credit and risk analysis.

State Revolving Funds (SRF) in USA:- The key revolving fund programmes include the Clean Water State Revolving Funds (CWSRF) pioneered in 1988 and providing more than $5 billion annually to fund projects in the core areas of water quality protection for wastewater treatment, non point source pollution control, and watershed and estuary management. This joint federal/state funded SRF programme is designed with the objective to meet the goals of the Federal Clean Water Act .The program receives funds primarily from US EPA federal capitalization grants, state bond measures, sale of revenue bonds and repayment of outstanding financial arrangements. It is estimated that while the market rates have averaged 4.6%, the CWSRF rates have averaged 2.2% leading to a 20% savings in project costs. The SRF bond sector is the only sector in the U.S. municipal market to achieve a AAA median rating from a major bond rating agency The SRF finances projects for a maximum of twenty years but can offer financing for a longer term i.e. Extended Term Financing (ETF) in certain cases.

On similar lines, the Drinking Water State Revolving fund (DWSRF) was established via the Safe Drinking Water Act (SDWA), 1996 to finance infrastructure improvements in drinking water systems providing funds to small and disadvantaged communities as well as to programs for pollution prevention to ensure safe drinking water. The Act (SDWA) requires that EPA allots grants to each state based on the state's proportional share of the total needs reported in the most recent 'Drinking Water Infrastructure Needs Survey' with the minimum proportional share being one percent of funds available for allotment to all of the states. The Act also provides funding for Indian Tribes and Alaskan Native Villages, monitoring of unregulated contaminants, and operator certification reimbursements. Loans made under the program usually carry an interest rate varying between 0% and the market rate with a repayment period of upto 20 years.[6]

There is a general consensus that one way to increase private funding to the local

Municipal Development Fund of Georgia, established in 1997, is a sound self sustainable financial institution operating as a revolving fund with the primary objective of strengthening institutional and financial capacity of local governments, improving the primary economic and social services for the local communities, developing renewable energy sources, restoring irrigation and drainage systems, and mobilizing finances from international donor agencies, financial institutions etc to enable the local governments undertake investments in the municipal infrastructure. It is also involved in the management optimization and introduction of international best practices in local self governments which lack access to management expertise and the capital markets. Over the years, the fund has invested in roads, water supply and sanitation, rehabilitation of public facilities, urban transport infrastructure, sanitation and SWM, electricity etc. (Source: Municipal Development Fund of Georgia, Victor Metreveli)

governments is through specialized commercially viable and well capitalized financial intermediaries that are capable of mobilizing long term debt from the capital markets independently for providing adequate finances to the local governments. Such financial intermediaries could evolve through different stages wherein in the first stage they would act as an instrument to channelise budgetary resource transfers in a systematic manner; then move on to the second stage where they would help strengthen the local government's creditworthiness by improved budgeting, auditing and accounting standards for transparent information to the stakeholders and finally enter the third stage, where they would operate along commercial principles and provide lending to only viable and revenue generating investments.

Source: El Daher, S., Specialized Financial Intermediaries for Local Governments: A Market-Based Tool for Local Infrastructure, Washington, DC: World Bank,2000

[6]See *United State's Environmental Protection Agency (US EPA), www.epa.gov*