

RFQ-cum-RFP Document
for
Preparation of Functional Plan



National Capital Region Planning Board
Ministry of Housing and Urban Affairs
New Delhi

Core 4-B, First Floor, India Habitat Centre,
Lodhi Road, New Delhi -110003
Website: <http://ncrpb.nic.in>

INDEX

| Contents | |
|--|-----------------|
| | Page No. |
| (i) Text of Advertisement | 3 |
| (ii) Notice Inviting Tender (NIT) | 4 |
| Section-1: Background of National Capital Region | 6 |
| Section-2: Aims and Objectives | 7 |
| Section-3: Information to Bidding Entities | 10 |
| Section-4: Terms of Reference | 25 |
| Section 5. Qualification - Standard Forms | 41 |
| Section 6: Technical Proposal - Standard Forms | 43 |
| Section 7: Financial Proposal Standard Form | 49 |



NATIONAL CAPITAL REGION PLANNING BOARD

(A Statutory Body under Ministry of Housing & Urban Affairs, Govt. of India)
1st Floor, Core-4B, India Habitat Centre, Lodhi Road, New Delhi-110003

Notice Inviting Tender (NIT) for Preparation of Functional Plan

National Capital Region Planning Board (NCRPB), New Delhi invites sealed bids from National and International Consulting Entities / Organizations/ Joint Ventures/ Consortiums etc. for undertaking works relating to preparation of Functional Plan on 'Water Management and Waste Management' as per Regional Plan 2041 proposals for National Capital Region Area.

The RFQ-cum-RFP document containing the Terms of Reference (ToR), Details of Qualification and Evaluation Criteria etc. can be downloaded along with the draft Contract Agreement from the website of NCRPB i.e. <http://ncrpb.nic.in/tenders>.

Hardcopy of the RFQ-cum-RFP document may also be obtained from the office of NCRPB, Core 4-B, First Floor, India Habitat Centre, Lodhi Road, New Delhi- 110003. Last date of submission of completed bid is 16th January 2025.

Sd/-

Member Secretary



राष्ट्रीय राजधानी क्षेत्र योजना बोर्ड

(आवासन और शहरी कार्य मंत्रालय, भारत सरकार के तहत एक सांविधिक निकाय)

पहली मंजिल, कोर-4 बी, इंडिया हैबिटेड सेंटर, लोधी रोड, नई दिल्ली-110003

कार्यात्मक योजनाओं की तैयारी के लिए निविदा आमंत्रण सूचना (एनआईटी)

राष्ट्रीय राजधानी क्षेत्र योजना बोर्ड (एनसीआरपीबी), नई दिल्ली राष्ट्रीय राजधानी क्षेत्र के लिए क्षेत्रीय योजना -2041 प्रस्तावों के अनुसार 'जल प्रबंधन और अपशिष्ट प्रबंधन' पर कार्यात्मक योजना(ओं) की तैयारी से संबंधित कार्य करने के लिए राष्ट्रीय और अंतरराष्ट्रीय परामर्श संस्थाओं/संगठनों/संयुक्त उद्यमों/ संघों आदि से मुहरबंद निविदाएं आमंत्रित करता है। संदर्भ की शर्तों (टीओआर), योग्यता और मूल्यांकन मानदंड आदि का आरएफक्यू-सह-आरएफपी दस्तावेज़ एनसीआरपीबी की वेबसाइट यानी <http://ncrpb.nic.in/tenders> से ड्राफ्ट अनुबंध समझौते के साथ डाउनलोड किया जा सकता है। आरएफक्यू-सह-आरएफपी दस्तावेज़ की हार्डकॉपी एनसीआरपीबी के कार्यालय, प्रथम तल, कोर 4-बी, इंडिया हैबिटेड सेंटर, लोधी रोड, नई दिल्ली- 110003 से भी प्राप्त की जा सकती है। निविदाएं जमा करने की अंतिम तिथि 16th January 2025 है।

ह/-

सदस्य सचिव

National Capital Region Planning Board
(Ministry of Housing and Urban Affairs, Govt. of India)
Core 4-B, First Floor, India Habitat Centre,
Lodhi Road, New Delhi-110003

NOTICE INVITING TENDER

National Capital Region Planning Board (NCRPB), New Delhi invites sealed bids from national and international consulting firms/ organizations/ joint ventures/ consortiums etc. for undertaking works relating to preparation of Functional Plan as per Draft/ Final Regional Plan-2041 for NCR for **Preparation of the Functional Plan for Water Management and Waste Management in the NCR- 2047**

2. The Bid document containing the Terms of Reference (ToR), Details of Qualification and Evaluation Criteria, List of documents to be submitted etc. is enclosed. The same can also be downloaded from the website of NCRPB (<http://ncrpb.nic.in/tenders>)

3. The tender Schedule is given below:-

| S.No. | Name of Activity | Date & Time |
|-------|--|---|
| i) | Advertisement Publishing Date | 04 th December 2024 |
| ii) | Issue of Document (Document download start date) | 07 th December 2024 |
| iii) | Queries, Clarification, Comments/Suggestions. if any through e-mail (only in MS Word format) | 16 th December 2024 |
| iv) | Pre-Bid Conference Time & Venue | 17 th December 2024 The venue and schedule with date and time to be specified on NCRPB website. May refer NCRPB website for update. |
| v) | Last date & time of submission of Bid | 16 th January 2025 : 05.00 PM |
| vi) | Date & Time of Opening of Technical Bid | 22 nd January 2025 : 11.00 AM. The venue to be specified on NCRPB website. May refer NCRPB website for update. |
| vii) | Date, Time & Venue of presentations | Date, Time and Venue to be specified on NCRPB website. |
| viii) | Date & Time of Opening of Financial Bid | Date, Time and Venue to be specified on NCRPB website. May refer NCRPB website for update. |
| ix) | Validity of Bid | 180 days from the last date of submission of Bid |

4. Earned Money Deposit : Rs. 3,00,000/- (Rs. Three lakh) for Preparation of the Functional Plan for Water Management and Waste Management in the NCR- 2047.
5. Micro and Small Enterprises registered with any body specified by the Ministry of Micro, Small and Medium Enterprises are exempted from submitting the Earned Money Deposit (EMD). However, the exemption and relaxation in EMD is subject to validity of their registration on the date of submission of their bid.
6. The prospective Bidding Entities are required to submit the following documents alongwith the bid:-
 - (i) Proof of profit making - Board approved Audited Account Statement duly signed by CMD/ MD/CA/ Authorized signatory
 - (ii) Proof of Earnest Money Deposit (EMD), as applicable
 - (iii) Copy of the Letter of Award w.r.t Consultancy/ Assignments
 - (iv) Letter of Priority, if applying for multiple Functional Plans
 - (v) Brief Note/ Proposal including, Comments & Suggestions on ToR, Suggested Methodology, Overview of proposed Work Plan
 - (vi) Technical Proposal with Standard Forms at Section-5 and Section-6
 - (vii) Financial Proposal with Standard Forms at Section-7

Supporting Documents:

- (i) Copy of Certificate of incorporation/ partnership Deed of the Bidder Entity(ies)
 - (ii) Agreement of Consortium, as applicable
 - (iii) Copy of PAN No./ Service Tax Registration/GST Registration Certificate
7. The interested Bidding Entities may submit their bids in three separate sealed envelopes, namely, Qualification documents (Proof of Profit Making & EMD), Technical Bid and Financial Bids in the prescribed format along with all requisite documents to the officer below latest by 16.01.2025 (1700 hrs.).

Director (A&F),
NCR Planning Board,
Core 4-B, First Floor, India Habitat Centre,
Lodhi Road, New Delhi-110003.

8. Queries, if any, may be referred in writing to Director (A&F), NCRPB at the above mentioned address or Telephone No. 011-24603138 or at E-mail-ncrpb-dr@nic.in.

Section-1: Background of National Capital Region

1.1 Introduction

- i) National Capital Region Planning Board (NCRPB) Act was enacted in 1985 by the Parliament of India with the concurrence of the constituent States to provide for the constitution of a Planning Board for the preparation of a plan for the development of the National Capital Region (NCR) and for coordinating and monitoring the implementation of such plan and for evolving harmonised policies for the control of land uses and development of infrastructure in the NCR so as to avoid any haphazard development of the Region.
- ii) The mandate of the NCRPB is to systematically develop India's NCR. The present NCR covers 55,083 Sq. Km. spanning 24 districts in three states (Haryana, Rajasthan, and Uttar Pradesh) and the National Capital Territory (NCT)-Delhi. The NCR's population was 58.16 million in 2011, as per the Census of India. The constituent areas of NCR are briefly described in **Attachment 1**.

NCT-Delhi and the three NCR states are of considerable importance to India's economy. According to the Oxford Economics data, 2016, Delhi Extended Urban Agglomeration (EUA)-comprising Delhi, Gurugram, Faridabad, Noida and Ghaziabad contributes 370 Billion USD GDP and has accordingly been recognized as the economic capital of India, overtaking Mumbai-EUA. Delhi-EUA, as the largest sub-economy in India contributes about 8% to National economy and attracts a large number of people from across the country. Therefore, contribution of the entire NCR to the national economy, would obviously be much higher. NCR is also one of the most vibrant global economic regions. Delhi NCR had attracted 20% of Foreign Direct Investment (FDI) in the country amounting to Rs. 2,49,023 Cr (USD 49,410 million) during 2010-15. This further increased to about 25% of FDI received by the country during April-December 2018-19. **1.2 Legal Framework for preparation of Functional Plans**

Section 16 of NCRPB Act, 1985:

“After the Regional Plan has come into operation the Board may prepare, with the assistance of the Committee, as many Functional Plans as may be necessary for proper guidance of the participating States and of the Union Territory.”

Accordingly, for guidance of the NCR participating States and Union Territory, NCR Planning Board has earlier prepared five functional plans² to elaborate one or more elements of the NCR Regional Plan 2021 (NCR RP 2021), notified in 2005.

Section-2: Aims & Objectives

2.1 Intention

- (i) NCR Planning Board intends to prepare Functional Plan for NCR for the perspective year 2047 with respect to various aspects as per the requirement of its Draft/ Final Regional Plan-2041 proposals. The details are as given in the list below. Accordingly, the Office of NCR Planning Board, Core 4-B, First Floor, India Habitat Centre, Lodhi Road, New Delhi-110003 invites RFQ-cum-RFP document for Comprehensive Consultancy regarding preparation of preparation of the Functional Plan for Water Management and Waste Management in the NCR- 2047.
- (ii) **Letter of Award (LoA) for work will be limited to maximum two Functional Plans for a single bidding entity for the Functional Plans being prepared by NCRPB under the provision of NCR-DRP/ RP 2041.** As per the priorities indicated in the submissions by the applicant/ bidding entity. Bidders, who have been considered for two Functional Plan proposals will not be considered for final selection for rest of the Functional Plan works, even if their bid is H1, as per criteria.

2.2 Need for Preparation of Functional Plan

- (i) As per the provisions under Section 7 (a) of the NCRPB Act, 1985, NCRPB has to prepare the Regional Plan (RP) and Functional Plans for NCR. The Board had prepared the RP-2001 and RP-2021 with the active participation of NCR constituent States of Haryana, Rajasthan, Uttar Pradesh and NCT-Delhi; concerned Central Ministries and experts, for promoting sustainable development in the region to improve the quality of life. Further, certain Functional Plans were also prepared for the guidance of the NCR participating States.
- (ii) NCRPB is in the process of finalising Regional Plan for horizon year 2041. The vision of the NCR Draft/ Final Regional Plan 2041 is – *“To provide a long term plan for development of the technology driven, future-ready National Capital Region of New Vibrant India, with citizen-centric infrastructure for building an economically prosperous region aligned with sustainable development goals.”* The draft Regional Plan-2041 is available on the website of NCRPB.
- (iii) NCR is expected to be the world’s most populous capital region by 2030–2031. There is a unique opportunity to undertake coordinated planning and informed investments in the NCR. The region faces threats in terms of water security, drought, land degradation, a high carbon footprint, loss of vegetation and biodiversity, and severe air and water pollution; these arise from both human and natural factors. NCR also faces significant development challenges related to urbanization; transport; water and waste management; logistics; economic corridors; infrastructure (for housing, education,

health, safety, disaster management and sports) that meets future need, climate change impacts, etc.

- (iv) The priority areas for the draft NCR RP-2041 are urban regeneration; future-ready infrastructure; multimodal transport and logistics; industries; micro, small, and medium-sized enterprises; economic corridors; tourism; MICE and leisure; farm incomes and traditional economy; skill development and employment; smart and digital NCR; and business climate improvement. RP-2041 proposals including transit oriented development (TOD); high floor area ratios (i.e., dense development); transferable development rights (TDR); vertical and brownfield redevelopment; mixed land use; and affordable rental housing, are transformative in nature, and will help meet the challenges that accompany rapid urbanization.
- (v) In addition to earlier Functional Plans (e.g., Transport, Ground Water Recharge, Drainage, Economic Development, and Micro and Household Enterprises) prepared as per RP-2021, it is now equally important to prepare Functional Plans for various aspects of the RP-2041. **It is expected that the Functional Plans will provide strategies, approaches, guiding principles, list of identified infrastructure projects with cost estimates, location specific proposals/ details, etc. in line with the overall policies and proposals of the DRP/ RP-2041.** It is expected that there will be a demonstration effect that leads to replication of development strategies in other urban areas in India, as well as potential downstream investment in socio-economic infrastructure in the NCR.
- (vi) Further, to catalyse growth, each of the Functional Plan must be inclusive and citizen centric. It is also important to address implementation of the Functional Plan, including inter-governmental collaboration and effective governance systems, as well as technological and smart-digital interventions.

2.3 Objectives

- (i) The objective of consulting assignment is to prepare Functional Plan for NCR. Functional Plan would be elaborations of different aspects of the RP-2041 that can then be implemented through projectization. The indicative guidance note on functional plan to be referred for overall assignment is in **Attachment 2**.
- (ii) The Functional Plan preparation exercise would include studies, collection of primary and secondary data for required sector, data analyses and interpolation, formulation of strategies, proposed interventions and identification of projects at regional, sub-regional and local level, as deemed fit, within the coverage and overall framework of NCR RP-2041. The Counter Magnet Areas (CMAs) may also be touched upon in the identified Functional Plan. The Functional Plan will include the identification of associated infrastructure and other investment projects for the NCR.
- (iii) The assistance that shall be required, broadly covers providing consulting services support by a reputed bidding entity, having it's registered office in India, for:
 - a) Preparation and finalization of Functional Plan including related studies.
 - b) Exposure to national/ international good practices and global experiences.
 - c) Identifying investment requirements based on recommendations of Functional Plan.
 - d) Compilation of features of the Functional Plan as knowledge products.

2.4 Selection

A consulting bidding entity will be selected as per the procedure described in the tender document which includes the following:

Section 1 - Background of National Capital Region

Section 2 - Aims & Objectives

Section 3 – Information to Bidding Entity

Section 4 - Terms of Reference (Sector/Functional Plan wise) - - Scope/HR

Section 5 - Qualification - Standard Forms Section

6- Technical Proposal - Standard Forms Section

7 - Financial Proposal - Standard Forms Section 8

- Standard Form of Contract

Section-3: Information to Bidding Entities

3.1 Introduction

- (i) NCR Planning Board henceforth referred as 'Client' will award the assignment(s) in accordance with the method of selection indicated in **para 3.6**, for carrying out the assignment(s) for preparation of each of the Functional Plan, as listed above in **para 2.1 (i)**.
- (ii) The bidding entities are required to submit Qualification documents (Proof of Profit Making & EMD), Technical Bid and Financial Bid in separate sealed covers for Consulting Services required for the Assignment(s) named in **para 2.1(i)**. The proposal will form basis for evaluation and ultimately for a signed contract with the selected bidding entity.
- (iii) The Bidding entities should be profit making at least in 03 years of last 05 consecutive financial years ending FY 2023-24. Bidding entities should submit appropriate proof in this regard, failing which the proposal/bid could be treated as non-responsive and summarily rejected without opening Technical and Financial bids.
- (iv) The Bidding entities are required to submit their proposals written in English. Each page of the proposal should be signed and stamped.
- (v) The bidding entities should submit their bids **separately for each Functional Plan proposal**, in the prescribed format, in 03 separate sealed envelopes with regard to following:
 - a) Qualification documents (Proof of Profit Making & EMD)
 - b) Technical Proposal
 - c) Financial Proposal
- (vi) In case, a bidding entity is applying for more than one Functional Plan preparation Assignment, a clear mention of its priority amongst the proposals be mentioned as one bidding entity shall not be awarded more than two works (FPs) being prepared by NCRPB under the provision of NCR-DRP/ RP 2041.
- (vii) Bidding entities meeting the qualification criteria shall be invited for presentation of proposal as decided by NCRPB.
- (viii) Assignment(s) shall be implemented in accordance with the phases indicated in **para 3.2**. The performance of the contract under each phase must be to the client's satisfaction before work begins on the next phase.
- (ix) The bidding entities must familiarise themselves with local conditions, National and International best practices and take them into account in preparing their proposals.
- (x) Separate pre-bid conferences will be held for each functional plan assignment will be held as specified in the **para 3.8**. Bidding entities are encouraged to attend the conference before submitting their proposals.
- (xi) The Client will provide the data/ reports available with NCRPB. Collecting any other information relevant to the assignment will be the responsibility of the successful bidding entity. Client will provide the necessary introductory letter to get the information from other concerned agencies / departments, wherever applicable.
- (xii) The costs of preparing the proposal and of negotiating the Contract, including visit to the Client, etc. are not reimbursable and the Client will not accept any of the proposals submitted.

- (xiii) Client policy requires that the successful bidding entity provides professional, objective and impartial advice and at all times hold the Client's interests paramount, without any consideration for future work, and strictly avoid conflicts with other assignments or their own corporate interests. The successful bidding entity shall not be hired for any assignments that would be in conflict with their prior or current obligations to other clients, or that may place them in a position of not being able to carry out assignments in the best interests of the Client.
- (xiv) Any previous or ongoing participation in relation to the assignments by the bidding entity, its key professionals, staff, or its affiliates or associates under a contract with the Client may result in rejection of the proposal. The bidding entity should clarify their situation in that respect with the Client while preparing the proposal.
- (xv) Bidding entity shall not have been declared in-eligible for corrupt and fraudulent practices. Bidding entity shall be aware of the provisions of fraud and corruptions stated in the standard contract.
- (xvi) In JV/Consortium, the Indian Partner should be as a Lead Partner and it should have Registered Office in India. Such Lead Indian Partner should have at least 51% share in JV/Consortium.
- (xvii) Exiting from JV/Consortium may be allowed by client in only genuine, compelling reasons subject to prior written approval of client. The replacement with equal strength partner entity will be allowed, with the prior written approval of Client, failing which *Force Majeure* / termination will be applicable, as per the Contract.
- (xviii) No changes shall be made in the Key Personnel. In case it becomes incumbent to change any one of key personnel, the Consultants may do so only after providing as a replacement a person of equivalent or better qualifications with prior written approval of the replacement personnel by the MS-NCRPB.
- (xix) The successful bidding entity has to submit the Acceptance Letter within 07 days from the Letter of Award (LoA), else it could be deemed as rejection.
- (xx) The Contract has to be signed by the successful bidding entity within 07 days from the acceptance of the Assignment.
- (xxi) Performance guarantee @ 05% of contract value valid for period of 18 months beyond the approval of final report and six months beyond end of contract (including extended contract) which ever is later shall be submitted by successful bidding entity within 07 days of LoA acceptance or before contract signing, whichever is earlier, but in any case before signing of contract. In any case, performance guarantee has to be duly submitted before release of first stage of payment. The EMD of successful entity will thereafter be released by the client.
- (xxii) The successful entity will also be required to take out an insurance within 07 days of LOA acceptance or before contract signing whichever is earlier. This shall be in form of a Professional Liability Insurance, with a minimum coverage equal to total contract value for this consultancy and valid for 24 months after final approval of Report by Client. This shall be ensured in any case before release of first payment.

3.2 Deliverables and Time/ Payment Schedule

The time-schedule for completion of various stages and payment schedule shall be as per the following:-

Deliverables, Completion Time for Various Stages and Payment Schedule

| S.No. | Stage Report/Deliverables | No. of copies | Schedule | Cumulative Time Period* (from date of LoA acceptance by the selected consultant) | Payment Schedule (% of total approved Cost) |
|-------|--|----------------|---------------------|--|--|
| 1 | Inception Report | 15+ soft copy | 03 weeks | 03 weeks | 10% will be released only after duly verifying the quality, usefulness, implementability and acceptance & approval of inception Report by NCRPB |
| 2 | Interim Report | 15+ soft copy | 12 weeks | 15 weeks | 15% will be released only after duly verifying the quality, usefulness, implementability and acceptance & approval of interim Report by NCRPB |
| 3 | Draft Final Report (including observations and suggestions) | 15+ soft copy | 11 weeks | 26 weeks | 20% will be released only after duly verifying the quality, usefulness, implementability and acceptance & approval of Draft Final Report by NCRPB |
| 4 | Final Report | 30+ soft copy | 08 weeks | 34 weeks | 25% will be released only after duly verifying the quality, usefulness, implementability and submission of Final Report |
| 5 | Approval of Report / Functional Plan | 30 + soft copy | Subject to approval | Subject to approval | 20% will be released only after duly verifying the quality, usefulness, implementability and acceptance & approval of Final Functional Plan. |
| 6 | Handholding Support for one year after approval of Functional Plan for onboarding the states for FP implementation | | | | 10% (2% each at the end of 1st, 2nd & 3rd quarter and remaining 4% at the end of 4th quarter) will be released as Final payment on satisfactory completion of handling support for one year" |

Note:

- i) No advance payment for any purpose will be made to the successful bidding entity.
- ii) The successful bidding entity will be required to make one or multiple presentations (minimum up to 05 such presentations) before NCRPB and/or Planning Committee/ Project Sanctioning and Monitoring Group (PSMG)/ Board/ MoHUA/ NCR participating States/ any other relevant Ministry/ Department/ Agency, etc. within a week of submission or later of each of the above reports/ stage. The observations and suggestions conveyed by NCRPB will be incorporated by the successful bidding entity and revised Report to be submitted to NCRPB.
- iii) The payment will become due on approval of the stage report and on raising of bills/invoice by the successful bidding entity after the approval of the stage report. The processing time of the payment will be 90 days for final payment and 45 days for all other payments.
- iv) The successful bidding entity is also required to present the progress of work in the review meetings convened by the NCRPB and shall comply with the decisions taken in these meetings regarding the assignment.
- v) The successful bidding entity is also required to present the progress of work to the NCRPB, CRC, and/or Planning Committee/ PSMG/ Board and/or MoHUA as and when required and shall comply with the instructions regarding this assignment.
- vi) The successful bidding entity shall provide post submission services/support at no additional cost to NCRPB till the final approval of the Functional Plan by the NCRPB Board.
- vii) The successful bidding entity will work in close coordination with the designated personnel of NCRPB and its State representatives/ partner agencies; other Central Ministries/ Departments/ institutions such as, NITI Aayog, Town and Country Planning Organisation (TCPO), CPHEEO, CWC, TERI, Ministry of Jal Shakti, Upper Yamuna River Board, CGWB, IWAI, any other relevant bodies/organisations/departments/ministries etc.; and other stakeholders such as, non-government organization, resident welfare association, planning and infrastructure think-tanks, etc.; towards understanding the planning/ implementation/ management requirements and will make necessary efforts to bridge any data gaps, so as to ensure that quality outputs are produced that not only facilitate effective implementation of functional plan but also serve as an appropriate guidance for further planning (master plans/ development plans/ area specific or local area development plans, etc.) and downstream investment projects with costs estimated based on lifecycle cost approach.
- viii) Success fee for completion within stipulated time - 02% over and above the fee if completed to the acceptance of NCRPB, in 32 weeks instead of 34 weeks for the preparation of Functional Plan.
- ix) Payments will be made to the account of the successful bidder according to the payment schedule as stated above. First payment shall be released as per the stages, but only after execution of performance guarantee by the successful bidder. Subsequent payments shall be made in accordance with the prescribed conditions on submission of bills by the successful bidder.

3.3 Support by Successful Bidding Entity after approval of Functional Plan

After approval of respective Functional Plan, the successful bidding entity will provide support and handholding for one year from the date of approval of respective Functional Plan for taking the plan further for on boarding the states and facilitating them for implementation of the Functional Plan which could be through Roadshows, workshops, discussions and making presentations to various agencies/ departments,

MoHUA, NCR participating States, etc., as and when required by the Client. The successful bidder can reduce its full time experts as per its comfort level in this period, subject to maintain quality of services to the client.

3.4 Procedure for Monitoring & Review of the Assignment

- (i) The successful bidding entity work will be monitored and reviewed by NCRPB and/or its Committee.
- (ii) The successful bidding entity shall submit each of the above-mentioned deliverables as per the schedule mentioned above. This will be followed by a presentation to NCRPB within week of submission or later as required, wherein, NCRPB shall give its comments and suggestions in the form of feedback. Subsequently, the Consultant will incorporate all such comments and suggestions and submit the revised stage report with indexed Action Report (ATR) on comments of NCRPB.
- (iii) In case of delay in submission of the above mentioned deliverables as per given schedule, a penalty of 0.5% per week of delay subject to maximum of 10% of the payment due in this regard shall be levied.
- (iv) If the report submitted by the successful bidding entity is found deficient in the requisite quality, the approving authority of NCRPB can accept the report while considering other factors with a penalty of up to 10% of the payment due in this regard to the successful bidding entity. This shall be independent to penalty referred to in point 3.4 (iii) above.

3.5 RFQ-cum-RFP document

- (i) The RFQ-cum-RFP document shall be downloaded from website of NCRPB/ CPPP/ GeM, free of cost. "Corrigendum, if any, would appear only on the above website and not to be published in any News Paper".
- (ii) The RFQ-cum-RFP document is not transferable to any other bidding entity.
- (iii) The intending bidding entities are advised to read the terms and conditions carefully. The bidder should only submit his tender if he considers himself eligible and he is in possession of all the original documents required.
- (iv) Information and Instructions for bidding entity, available on Website(s) shall form part of Tender Document.

3.6 Method of Selection

- 3.6.1 For the proposed Functional Plan assignment(s), qualified and experienced reputed consulting entity is to be engaged on **Quality-and Cost-Based Selection (QCBS) method with quality-cost ratio of 90:10**. All bidding entities (leading partner in case of JV/Consortiums) need to submit the proof of being profit making in three of the last continuous five financial years (2019-20 to 2023-24) and the necessary EMDs as applicable need to be submitted along with the respective Functional Plan proposals, failing which the bidding entity will be considered rejected.
- 3.6.2 Technical Proposal will be evaluated for those bidding entities who submitted the proof of being profit making in three of the last successive five financial years (2019-20 to 2023-24) and the necessary EMDs as applicable along with the respective Functional Plan proposals. Financial bids will be opened only for those bidding entities who qualify technically i.e. for those who secure the **minimum Qualifying Marks 50% in the Technical Proposal**.
- 3.6.3 QCBS will be done separately for each of the Functional Plan/Assignment for Technically Qualified Proposals, based on Proposal Evaluation (para 3.14).
- 3.6.4 Bidding entity must submit all documents of Qualification, and Technical Proposal in pdf format [refer list of the documents given in the Notice Inviting Tender (NIT)].

3.6.6 Earnest Money Deposit (EMD)

Bidding entity (except Micro and Small Enterprise (MSE) as defined in MSE procurement policy by MSME, Registration Certificate of which needs to be enclosed with the Bid) shall submit Earnest Money Deposit (EMD) of Rs. 3,00,000/- (Rs. Three lakh) for Functional Plan for Water Management and Waste Management in the NCR-2047, through RTGS/NEFT/DD. The Bank Account detail are as under:

Beneficiary Name: National Capital Region Planning Board

Name of Bank & Branch Address: State Bank of India, M-Block, Cannought Circus, New Delhi

Bank Account Number: 53048557394

IFSC Code: SBIN0030203

3.6.7 Refund/Adjustment of Earnest Money:

- a) Earnest money of the successful bidding entity shall be refunded on receipt of Performance Guarantee/Security.
- b) Earnest money of the unsuccessful bidding entities shall be refunded within 30 days from the receipt of acceptance of Letter of Award (LoA) by the successful bidding entity.
- c) No interest shall be paid on Earnest Money.
- d) Earnest Money shall stand forfeited -
 - If the bid is withdrawn at any time before the validity period, or
 - If the successful bidding entity fails to execute the contract and/or does not execute performance guarantee within the stipulated period.
 - During the bidding process or even after execution of agreement or till the completion of this assignment, if any information is found wrong/ manipulated/ hidden in the bid, the decision of NCRPB regarding forfeiture of the EMD and rejection of bid or termination of contract, shall be final and shall not be called upon question under any circumstances.

3.6.8 Proposals must be submitted not later than the following date and time:

Date: 16th January 2025 Time : 1700 Hours. (any changes in the Draft Document or the schedule will be notified through NCRPB website).

3.7 Validity of proposal

- 3.7.1 Proposals must remain valid **180** days after the due date of submission until validity extended by the bidding entity. During this period, the bidding entity is expected to keep available the key professionals, staff proposed for the Assignment. The Client will make the best effort to complete the tendering process within this period. If the Client wishes to extend the validity period of the proposals, the bidding entity may do so and those who do not agree have the right not to extend the validity of their proposals.

3.8 Pre-Bid Conference

- 3.8.1 The bidding entity shall submit the pre-bid queries to NCRPB office on or before the date mentioned in RFQ-cum-RFP Document. Bidding entity requiring specific points of clarification may communicate with NCRPB office before the date of pre-bid meeting using the following format:

| Sr. No | RFQ-cum-RFP Document Reference (s) (section number page) | Content of RFQ-cum-RFP | Points of clarification |
|--------|--|------------------------|-------------------------|
| | | | |

3.8.2 Clarifications of the RFP may be requested by the bidding entity in writing only, by email mentioned below on or before the deadline mentioned in the RFQ-cum-RFP document. Telephone calls will not be accepted for clarifying the queries. The address for requesting clarifications is:

Address: Director (A&F), NCRPB, Core 4-B, First Floor, India Habitat Centre, Lodhi Road, New Delhi- 110003, Phone:- 011-24603138, Email: ncrpb-dr@nic.in

- a) The bidding entity or its official representative will be invited to attend the pre-bid meeting.
- b) The purpose of the meeting will be to provide bidding entities with information regarding the RFP/RFQ and the project requirements, and to provide each bidding entity with an opportunity to seek clarifications regarding all aspect of the RFQ-cum-RFP document and the Assignment.
- c) Pre-bid queries received after due date & time shall not be accepted under any circumstances.

3.8.3 Separate pre-bid conferences will be held for each functional plan assignment as per the venue and schedule with date and time, as shall be mentioned/ updated on NCRPB website or online virtually. Bidding entities are encouraged to attend the conference before submitting their proposals.

3.8.4 At any time before the submission of Proposals, the Client may, for any reason, whether at its own initiative or in response to a clarification requested by an invited consulting bidding entity, modify the RFQ-cum-RFP documents by amendment. All the amendments made in the RFQ-cum-RFP document would be published on the NCRPB web-site as corrigendum.

3.8.5 The bidding entities are advised to regularly check the NCRPB web-site for updates. The Client may at its discretion extend the deadline for the submission of Proposals.

4.8.6 The costs of preparing the proposal, including visit to the Client, etc., are to be borne by the bidding entity.

3.8.7 Awarding the assignment(s) will be in accordance with policies of Government of India, including policies on corrupt and fraudulent practices.

3.9 Preparation of Proposal

3.9.1 Bidding entities should be profit making in at least 03 years of last 05 consecutive financial years. Bidding entities should submit appropriate proof in this regard, failing which the proposal/bid will be rejected without opening Technical and Financial bids. Only those consultants whose responses are found satisfactory will be considered for evaluation of Technical Proposal.

3.9.2 Technical Proposal

Interested bidding entities shall submit information in the prescribed Qualification forms provided in **Section-5** of this document.

- a) In preparing the Technical Proposal, bidding entities are expected to examine the documents comprising this RFQ-cum-RFP in detail. Material deficiencies in providing the information requested may result in rejection of a Proposal.
- b) The Technical Proposal should be submitted in Standard Forms provided in

Section-6 of this RFQ-cum-RFP document.

- c) The Technical Proposal should provide information using the Standard forms provided in **Section-6** of this document only, failing which the proposal may be summarily rejected.
- d) The Technical Proposal shall not include any financial information

3.9.3 Financial Proposal

- a) The Financial Proposal should be submitted in Standard Forms provided in **Section-7** of this document only.
- b) The proposal should be complete, i.e., it should list all costs associated with the Assignment.
- c) The Financial Proposal should clearly identify, as a separate subset of total quoted amount, the applicable taxes (including GST, social security, etc.), duties, fees, levies, and other charges imposed under the applicable law. This shall be inclusive in the financial proposal.
- d) The values in financial proposal should be in Indian Rupees.

3.10. Submission, Receipt and Opening of Proposals

3.10.1 Any corrections made on the original Proposal must be initialed by the person or persons who sign(s) the Proposals.

3.10.2 An authorized representative of the bidding entity shall initials all pages of the proposal. The representative's authorization is confirmed by a written power of attorney accompanying the Proposal.

3.10.3 Bid Offer can be submitted from the date of publication of NIT:

- a) The bidding entities are required to submit copies of all the documents mentioned in the RFQ-cum-RFP document.
- b) The bidding entities can submit documents in the form of PDF format.
- c) The bidding entities are required to quote strictly as per terms and conditions specifications, standards given in this RFQ-cum-RFP document and not to stipulate any deviations.
- d) After submission of the bid, the interested bidding entity can re-submit revised bid any number of times but before last time and date of submission of bid as notified.
- e) If the bidding entity is not found eligible after opening of tenders due to any reason, its tender shall become invalid.

3.11 Late Bids/ Tenders

Bid Offers received after the due date and the specified time (including the extended period, if any) for any reason whatsoever, shall not be entertained.

3.12 Mode of Submission

The Qualification details, Technical Proposal and Financial Proposal shall be submitted separately in print form, along with pdf version of Qualification details, and Technical Proposal in CD/DVD.

3.13 Proposal Format

3.13.1 The bidding entity is expected to examine all the instructions, guidelines terms and conditions and formats in the RFQ-cum-RFP document. Failure to furnish all the necessary information as required by the RFQ-cum-RFP document on

submission of a proposal not substantially responsive to all the aspects of the bid offer shall be at bidders' own risk and may be liable for rejection. The Format of various pre-requisites are given in this RFQ-cum-RFP document.

3.13.2 The Bid Offers should be submitted separately on prescribed Formats containing the following **three parts**:

a) Part-A (Section-5)

(i) The interested bidding entity shall submit Board approved Profit and Loss Account Statement duly signed by CMD/MD/CA/Authorized signatory, regarding statement of profit making in at least 03 years of last five consecutive financial years. **Failing this the proposal/bid could be treated as non-responsive and summarily rejected without opening Technical and Financial bids**

(ii) The interested bidding entity (except Micro and Small Enterprise (MSE) as defined in MSE procurement policy by MSME, Registration Certificate of which needs to be enclosed with the Bid) shall submit copy of RTGS/ NEFT or DD for Earnest Money Deposit (EMD) of Rs. 3,00,000/- (Rs. Three lakh) for Functional Plan for Water Management and Waste Management in the NCR-2047.

b) Part-B (Technical Bid)

The bidding entity shall submit Technical Bid containing the Technical Eligibility Details (as mentioned in **Section-6** RFQ-cum-RFP document).

c) Part-C (Financial Bid)

The bidding entity shall submit Financial Bid containing the Financial offers/Financial bid on the prescribed format given at **Section-7** quoting the price both in words and figures. In case of conflict between the figures and words the latter shall prevail.

3.13.3 After the deadline for submission of proposals the Qualification documents shall be opened immediately by the Bid Opening Committee as decided by the Competent Authority of NCRPB. The short-listed bidding entity may be called for power point presentation. The information will be evaluated. The Technical Proposal of only the qualifying Consultants will be opened after evaluation process.

3.13.4 The Financial Proposal shall remain sealed until technical capability statement of all submitted proposals is prepared and bidding entity short-listed. The bidding entity representative may opt to be present during the financial bid opening. The date will be conveyed to the bidding entity by the Client in advance.

3.14 Proposal Evaluation

3.14.1 General

(i) Technical and Financial Bids shall be considered for evaluation for only those bidding entities which are profit making in at least 03 years of last five consecutive financial years. Bidding entities should submit appropriate proof in this regard (Board approved Profit and Loss Account Statement duly signed by CMD/ MD/CA/ Authorized

signatory), failing which the **proposal/bid will be rejected without opening Technical and Financial bids.**

- (ii) From the time the bids are opened to the time the contract is awarded, if any bidding entity wishes to contact the Client on any matter related to its proposal, it should do so in writing at the address indicated. Any effort by the bidding entity to influence the Client in the Client's proposal evaluation, proposal comparison or contract award decisions may result in the rejection of the bidding entity's proposal.

3.14.2 Bid Opening

- a) A Bid Opening Committee as decided by the Competent Authority of NCRPB, will open the bids.
- b) NCRPB reserves the rights at all times to postpone or cancel a scheduled bid opening, which will be duly informed through NCRPB website.
- c) The selection of the bidding entity shall be made on **QCBS basis (90% Technical, 10% Financial weightage)**
- d) The bids shall be opened in three parts.
- **Part-A: Qualification documents** - Board approved Profit and Loss Account Statement duly signed by CMD/ MD/CA/ Authorized signatory, regarding statement of profit making in at least 03 years of last five consecutive financial years and Earnest Money Deposit (EMD)
 - **Part-B: Technical Bid**
 - **Part-C: Financial Bid**
- e) The bidding entity or his authorized representatives who is present shall sign a register evidencing their attendance. In the event of the specified date of bid opening being declared a holiday, the Bids shall be opened at the same time and location on the next working day. However, if there is no representative of the bidder, NCRPB shall go ahead and open the bids.
- f) During bid opening preliminary scrutiny of the bid documents shall be made to determine whether they are complete whether required bid security has been furnished, whether the documents have been properly signed and whether the bids are generally in order. Bids not conforming to such preliminary requirements will be prima facie rejected.

3.14.3 Evaluation of Technical Proposals

- (i) The Bid Opening Committee to be constituted by NCRPB will evaluate the bids on the basis of their Average Audited Turnover statements, Similar Assignments / Studies, Qualifications and competence of the key professional staff for the assignment, Brief Note/ Proposal, and Technical Presentation of Proposal of the Bidding Entity before the appropriate forum/ Committee (date of which will be intimated/updated on NCRPB website).
- (ii) Each proposal will be given a technical score. A proposal shall be rejected at this stage if it does not achieve the minimum technical score of 50%.
- (iii) **Evaluation Criteria for Technical Proposals is as under:**

| Sl. No. | Qualifying Criteria | Documentary Proof | Maximum Marks |
|---------|--|--|---------------|
| 1 | Average Audited Turnover of the Bidding Entity / Consortium Lead of at-least 03 of last five consecutive financial years should be minimum Rs. 10.00 Crore per year. | Board approved audited account statement duly signed by CMD/ MD/CA/ Authorized signatory | 10 |
| 2 | Similar Assignments / Studies | Copy of the Letter of Award (LoA) | |
| | (a1) 03 marks per Study/consultancy work related to integrated water and drainage in last ten years for cities with population above 05 lakhs as per 2011 Census | | 09 |
| | (a2) 02 marks per Study/Consultancy work related to sanitation and/or liquid waste management in last ten years for cities with population above 05 lakhs as per 2011 Census | | 06 |
| | (a3) 02 marks per Study /consultancy work related to solid waste and/or legacy waste management in last ten years for cities with population above 05 lakhs as per 2011 Census | | 06 |
| | (a4) 03 Plan formulation for cities based on GIS above 10 lakhs of population as per 2011 Census (upto maximum 05 marks) | | 09 |
| | (b) Value of Consultancy Assignments (Maximum 05 consultancy | | 10 |
| | <ul style="list-style-type: none"> Below Rs. 25 lakh – (01 marks per Assignment) | | |
| | <ul style="list-style-type: none"> More than Rs. 25 lakh upto Rs. 50 lakh – (1.5 marks per Assignment) | | |
| | <ul style="list-style-type: none"> Above Rs. 50 lakh – (02 marks per Assignment) | | |
| 3 | Qualifications and competence of the key professional staff for the assignment currently on the pay rolls of Company/JV partner (individual or combined roles) of the bidding entity [refer Core Team Composition, qualification and weightage for key professionals of respective sector under Section-3 para 3.1 (b)] | | 25* |
| 4 | Technical Presentation of Proposal of the Bidding Entity | | 25 |
| | Total Score | | 100 |

**Break up for respective sector provided in Section-3 for each Assignment.*

Note:

- (i) The qualifying marks will be 50%. The bidding entities scoring 50% marks in Technical evaluation will be considered for QCBS.
- (ii) If Consultancy Assignments in similar sectors is done or if any Plan prepared in such sector for a State or geographical area comparable to NCR, preference or higher weightage (as bonus marks mentioned above) will be given for such bidding entities.
- (iii) The selected bidding entity has to ensure the deployment of proposed Key Professionals mentioned above for the completion of allocated assignment under this tender till the approval of final stage of this assignment.
- (iv) The proposed Key Professionals shall be in regular contact with NCRPB.
- (v) Any change in the proposed Key Professionals will require a written permission from the client.
- (vi) Failure to comply with above conditions may lead to penalty on selected bidding entity as mentioned in the "General Conditions of Contract" of this document.

3.14.4 Public Opening and Evaluation of Financial Proposals

- (i) After the evaluation of Technical Proposal is completed for the respective assignment, the Client shall inform and notify the date and time for opening of financial proposals to only those bidding entities, whose proposals have been short-listed for the same. The qualified bidder shall be termed as "**Technically Qualified bidder**".
- (ii) The Financial Proposals of Technically Qualified bidder shall be opened by NCRPB, in the presence of the representatives of bidding entities who choose to attend. The name of the bidding entity and the proposed amount shall be read aloud and recorded when the Financial Proposals are opened. The Client shall prepare minutes of the public opening.
- (iii) NCRPB will determine whether the Financial Proposals are complete, (i.e., whether they have costed all items of the corresponding Technical Proposals, if not the client will cost them and add their cost to the initial price), correct any computational errors, etc.
- (iv) The bidding entity who emerges H-1 (Highest Combined Score), based on QCBS for a particular assignment will be invited for signing a Contract Agreement for respective Functional Plan work, taking into consideration the priority submitted by the bidding entity and the condition prescribed in this RFQ-cum-RFP document in this regard.

3.15 Award of Contract

- 3.15.1 As NCR Delineation is in progress, in case of any change in the NCR area, the bid/payment of/to successful bidder will be revised proportionately/on pro-rata basis to the revised NCR area.
- 3.15.2 Some changes/modifications are also expected in the draft Regional Plan 2041 as published on NCRPB website. These changes, if available before finalising the bid, will be considered and communicated to the successful bidder during the exercise of preparation of Functional Plan.
- 3.15.3 The final approval on Draft Functional Plan prepared by the successful bidder will be accorded only after notification/publication of the final Regional Plan 2041 for NCR.
- 3.15.4 The contract will be awarded after the tendering process is complete. The Client will promptly notify other bidding entities that they were unsuccessful.
- 3.15.5 On award of the consultancy assignment(s), the successful bidding entities should be required to enter into an agreement with Client for the successful completion of the Consultancy as per the Terms and Reference, scope and any other condition set forth in this document including corrigendum if any.
- 3.15.6 The successful bidding entity shall begin carrying out the Services immediately on issuance of Letter of Award (LOA) by Client and acceptance of the same by the Consultant or on signing of this agreement by both the parties, whichever is earlier.
- 3.15.7 The Contract period including handholding period shall be One year from the date of the approval of the final report unless extended by the parties mutually.
- 3.15.8 Termination of the Contract will be in accordance with provisions of the Paras of **General/Special Conditions of Contract**. In case of dispute the matter will be referred to an arbitrator as specified by the Client. Place of arbitration will be Delhi in any case.
- 3.15.9 The Client will provide the relevant data/reports available with client. Collecting any other data relevant to the assignment will be the responsibility of the successful bidding entity. The Client will provide the necessary introductory letter to get information from other concerned agencies/departments, wherever applicable.
- 3.15.10 For a period of two years after the expiration of this Contract, the successful bidder shall not engage, and shall cause their Personnel as well as their Sub-consultants and their Personnel not to engage, in the activity of a purchaser (directly or indirectly) of the assets on which they advised the Client under this Contract, nor shall they engage in the activity of an adviser (directly or indirectly) of potential purchasers of such assets. The successful bidder also agree that their affiliates shall be disqualified for the same period of time from engaging in the said activities.
- 3.15.11 The Functional Plan must align with and complement the overall policies and proposals of the NCR Draft Regional Plan 2041. The final output of the Functional Plan, prepared by the selected consultant, should be updated, modified, and finalized in accordance with the published/notified Regional Plan 2041.
- 3.15.12 Non- Disclosure Agreement has to be signed by the selected consultant before signing the contract agreement including a mandatory two year cooling off period post the completion of the project, if consultant is intended to join foreign Missions/ firms/ think tanks.
- 3.15.13 The consultant should have a furnished office in Delhi/ NCR for the assignment duration for the consultant to carry-out assignment duties/ tasks/ activities and depute two experienced team members with atleast 7 years at NCRPB office throughout the agreement period to have frequent interactions to understand assignment requirements.
- 3.15.14 The consultant in consultation with the NCRPB shall also coordinate and collect data from participating state / relevant departments/ agencies, to meet necessary data

inputs for undertaking tasks under the scope of services of proposed consulting services package.

- 3.15.15 All project documentation will be in the English language, with translation Hindi languages if required.
- 3.15.16 The information/ data that is available with the NCRPB, will be provided to the consultant. The consultant will have to verify such information/ data, update, analyse, identify and fill gaps, if any. Apart from providing available information, the NCRPB Nodal Team will facilitate in the collection of information by corresponding with the relevant agencies and by convening meetings when necessary for the active collection of information.
- 3.15.17 undertake SWOT (strengths, weaknesses, opportunities, and threats) analysis for all sub-sectors of drinking water, wastewater, stormwater, sanitation and solid waste management system covering infrastructure, institutional capacity and future growth needs;
- 3.15.18 rationalize, streamline, and prioritize the investment projects for cost saving and improved synergy among them, and prepare investment plans, and implementation/ action plans with specific targets/ timelines;
- 3.15.19 identify potential financial sources, financial mechanisms for accessing resources, including public-private investments and development of proposals of international agencies financing;
- 3.15.20 conduct public consultation with key stakeholders including women groups, public representatives, resident welfare associations, if any, for the development of the integrated Functional Plan. Conduct at least two stakeholder workshops and several dialogues and record proceedings and develop recommendations and action points. All consultations will ensure proportional representation from disadvantaged and vulnerable sections, especially representation from slums.
- 3.15.21 any other relevant consulting services and studies required.

3.16 Confidentiality

Information relating to evaluation of proposals and recommendations concerning awards shall not be disclosed to the bidding entities who submitted the proposals or to other persons not officially concerned with the process.

3.17 Other conditions of payment

- 3.17.1 No separate TA/DA would be payable in addition to Consultancy fee.
- 3.17.2 The TDS and other taxes as applicable under the law would be deducted by the Client from the amount payable as Consultancy fee.
- 3.17.3 In case of delay in the conduct of consultancy services within the time fixed or in the event of repudiation of the contract, the Client reserves the right to recover liquidated damages, including administrative expenses, for breach of contract, a sum equivalent to 0.5% (half percent) of total contractual value, which the bidding entity has failed to deliver within the period fixed for delivery for each week or part thereof during which delivery is delayed, subject to an overall ceiling of 10% of the total contract price.
- 3.17.4 The successful bidder will have to provide a Performance Guarantee for 05% of the project value as per the following details:
 - a) The performance guarantee shall be valid for a period of 18 months beyond the approval of final report and six months beyond end of contract (including extended contract) whichever be later.
 - b) This shall have to be furnished by the successful bidding entity within 07 days of issue of LoA by client or within 07 days from the date of issue of a letter accepting the offer of the assignment whichever is earlier but in any case before signing of contract.

- c) The performance guarantee by successful bidding entity shall be submitted in the prescribed form Annexed herewith, from any scheduled commercial bank appearing in the second schedule of RBI incorporated in India.
- d) The Performance Guarantee Bond and/or any amendment thereto shall be executed on a stamped paper of requisite money value in accordance with Indian laws (format provided in contract).
- e) No other form of guarantee shall be acceptable.

Section-4: Terms of Reference

1. INTRODUCTION

- 1.1. The Scope of Work discussed in the following sections pertains to the **Preparation of the Functional Plan for Water Management and Waste Management in the NCR-2047**.
- 1.2. The selected consultant/ firm will support in the preparation and finalization of the above-mentioned Functional Plan ensuring alignment with the provisions of the NCRP-DRP/NCR-RP-2041.
- 1.3. The vision of the NCR- Draft Regional Plan (DRP)-2041 is *“To provide a long term plan for development of the technology driven, future-ready National Capital Region of New Vibrant India, with citizen-centric infrastructure for building an economically prosperous region aligned with sustainable development goals”*.
- 1.4. The preparation of the Functional Plan for Water Management and Waste Management for NCR aims to envision the region as a Clean and Water Secure NCR

2. SCOPE OF THE WORK

- 2.1 The consultant must ensure the incorporation of provisions outlined in Chapter 7 (Water, Drainage, and Sanitation) and other relevant provisions of all chapters of the NCRP-DRP/RP-2041 into the Functional Plan (FP) appropriately.
- 2.2 In addition to above, the major focus areas of Functional Plan for Water Management and Waste Management are as follows:
 - Water Management
 - Ground Water
 - Drainage
 - Cleaning of rivers, drains, canals waterways etc.
 - Rejuvenation and restoration of waterbodies
 - Urban Flooding
 - Liquid Waste Management
 - Solid Waste Management
 - Legacy Waste Management
 - Extended Producer Responsibility and Circular Economy
 - Use of Technology including for citizen friendly utilities and efficiency of monitoring.
- 2.3 The Scope of Work will broadly cover advisory support for (i) preparing and finalizing the Functional Plan; (ii) providing exposure to national and global best practices, as appropriate, innovative solutions using high-level technologies, and global experiences; (iii) identifying further investment requirements based on recommendations in regional and subregional plans; and (iv) onboarding the participating states at each stage of the Functional Plan (FP) and handholding support for one year following the final approval of the FP.
- 2.4 **Output 1:** Preparation of Functional Plan for Water Management and Waste Management. The selected firm/ consultant will (i) prepare the Functional Plan for NCR to ensure enhanced quality of life and world-class citizen-centric facilities and services ; and (ii) the identification of additional infrastructure and other investment projects for the NCR. The consultant will take a participatory approach in both planning and endorsement processes.

To understand the major components of the above-mentioned Functional Plan, the assessment can be divided into two Functional Sub-Plans (FSPs), i.e., **Part A-** FSP on Water Supply, Drainage and Sanitation, also includes but not limited to major focus areas such as Water Management; Ground Water; Drainage; Cleaning of water bodies such as rivers; drains, canals waterways etc.; Rejuvenation and restoration of waterbodies; Urban Flooding; Liquid Waste Management and Use of Technology. **Part B-** FSP on Solid Waste Management services also includes major focus areas but not limited to such as Solid Waste Management; Legacy Waste Management; Extended Producer Responsibility and Circular Economy and Use of Technology.

- 2.5 **Output 2:** Handholding Support for one year after approval of Functional Plan for onboarding the states for implementation of FP. The scope of services of the consulting firm under output 2 includes support and handholding for one year from the date of approval of Functional Plan for taking the plan further for onboarding the states and facilitating them for implementation of the Functional Plan which could be through roadshows, workshops, discussions and making presentations to various agencies/ departments, MoHUA, NCR participating States, etc., and or any other form of assistance as may be thought fit by client as and when required by the NCRPB. The Consultant can reduce its full-time experts as per its comfort level in this period, subject to maintaining quality of services.

3. DETAILED TASK

3.1 Part A- Functional Sub-Plan on Water Supply, Drainage and Sanitation

- i. review and assess current situation of water resources (surface water, groundwater, rainwater, treated wastewater), drainage and allied infrastructure including planning and governance gaps and any associated primary and secondary study required.
- ii. assess current scenarios in respect of sanitation, wastewater management with respect to planning and governance gaps related to:
 - a. sanitation and wastewater management—universal access to sanitation, sewerage collection, recycling, reuse and safe disposal; and
 - b. recommendations and activities on sewage treatment facilities;
 - c. strategic plan to re-cycle and re-use the waste water
- iii. Review existing national and state policies/ programmes and guidelines on sector specific.
- iv. review existing water sharing pattern and agreement amongst different sub-regions/ states and recommend to ensure sustainable water supply in NCR with suggestions for additional water source development at region and sub-region basis.
- v. water supply infrastructure coverage, access, and service quality; energy efficiency; and non-revenue water;
- vi. review existing and planned water quality monitoring and surveillance system (WQM&S) and suggest regional as well sub-regional appropriate state-of-the-art WQM&S system to ensure water safety and sustainable supply of potable water across NCR;
- vii. assess alternative water sources, including reuse of treated wastewater, beneficial use of flood water/harvested rain water and conjunctive management of ground-water and surface water;
- viii. provide recommendations and activities on upgrading and expanding stormwater drainage in the region and mechanisms for rain water recharge, lake rejuvenation, to encourage a unified system of water disposal;
- ix. Waste management strategies (e.g., recycled water, waste segregation, recycling, DSTP, waste-to-energy systems) and strategies to increase reuse of recycled water with online monitoring at consumer unit level with alert/ warning system.

- x. Water management strategies (e.g., rainwater harvesting, efficient irrigation, wastewater reuse, plugging unaccounted water, dual piping/ multiple piping, water convergence or canal links etc.).
- xi. strategies on improving efficiency in irrigation
- xii. Assess urban flooding situation in NCR and strategies on leverage advanced technologies like IoT-based flood sensors, AI-driven predictive analytics, and GIS mapping to monitor, forecast, and manage urban flooding in real-time.
- xiii. Examine water quality situation of varied water bodies in NCR and to ensure efficient and sustainable cleaning and water quality monitoring of water bodies.
- xiv. Strategies to ensure rejuvenation and restoration of waterbodies in NCR
- xv. review and assess the additional needs for interlinking rivers projects such as, Sharda-Yamuna through Sharda-Yamuna River linking project and other similar projects, and suggest/ recommend suitable measures/ projects to support the sustainable raw water requirement and drainage facilities;
- xvi. review the existing and planned projects of different dams such as, Renuka dam, Lakhwar dam, Kishau dam and also the revival and rejuvenation of different basins namely Yamuna, Hindon and Ganga in the stretches affecting/ supporting the water supply, stormwater drainage and suggest/ recommend suitable measures/ projects for excess flood water utilization, integrated rain water harvesting and artificial recharging; and
- xvii. review of existing and proposed sanitation facilities in respect of ODF+ and ODF++ as per various national /state sanitation programme, including Swachh Bharat Mission (SBM) and suggest/ recommend the projects including the projects for faecal sludge treatment and septage management with prioritization to achieve their goal and objectives in phased manner;
- xviii. recommend sectoral/ institutional reforms required, governance performance requirements, institutional strengthening/ capacity building requirements etc.

3.2 Part B-Functional Sub-Plan on Solid Waste Management

- i. assess current scenarios in respect of solid waste management investment needs for various policy zones as per policies and proposals related to integrated solid waste management facilities, and duly considering remediation of legacy waste landfills; and any associated primary and secondary study required.
- ii. review planning and governance gaps for a seamless transition to effective implementation of improved centralized/ decentralized SWM systems (including any issues and concerns on cross sectoral spatial projects considering current mandates and international good practices;
- iii. review existing and planned solid waste management systems across the NCR, in respect of collection, transfer, transportation, treatment, recycle/ reuse and disposal;
- iv. Review existing national and state policies/ programmes and guidelines on sector specific.
- v. suggest improved waste infrastructure projects, focusing on waste as a resource (with/ without waste-to-energy) legacy waste management and reduction of greenhouse gas emissions;
- vi. suggest options for shared use of resources, use of innovative technologies, adopting (IoT) low-impact development/ green infrastructure principles (that also contribute to green jobs), cost-recovery mechanisms and tariff-/ user fee-structure along with any incentives/ subsidies/ concessions, aspects of EPR and circular economy etc.; and
- vii. recommend sectoral/ institutional reforms required, governance performance requirements, institutional strengthening/ capacity building requirements etc.

4. FUNCTIONAL PLAN DEVELOPMENT STAGES

The Functional Plan on Water Management and Waste Management will be developed in four main stages while ensuring all activities outlined in the Detailed Task section and in compliance with the provisions outlined in Chapter 7 (Water, Drainage, and Sanitation) and other relevant provisions of all chapters of the NCRP-DRP/RP-2041 into the Functional Plan (FP) appropriately.

4.1 **Stage 1:** Inception. The aim of the inception phase is to provide an opportunity for NCRPB and the consultant to discuss the scope and plan activities. It will comprise of the following activities:

- i. Kick-off meeting to discuss methodology, assessment framework, existing data assessment, timeline and deliverables.
- ii. Current situation assessment.
- iii. Preliminary identification of key challenges and opportunities.
- iv. Any other relevant assessment and reporting.
- v. CRC meeting and its approval on Inception report.

Deliverable: Inception report including the the assessment/ study framework for Functional Plan.

4.2 **Stage 2:** Interim Report. This stage will involve substantial contextual research and analysis to develop a comprehensive understanding of the water, sanitation and solid waste management, to gather qualitative or quantitative data to support the assessment and to identify gaps in availability of necessary information/ data.

The analysis will include, but will not be limited to the following:

- i. In-depth study of current water and waste management systems, gaps, including infrastructure, governance, and resource availability.
- ii. Infrastructure mapping, understanding zoning and land use and its impact in the context of water and waste management systems .
- iii. Understanding the wider institutional context (institutional processes, legal frameworks, governance, infrastructure financing, etc.)
- iv. Identification of gaps, resource requirements, and capacity-building needs.
- v. National and global best practices and global standards, as required and appropriate.
- vi. Summary of feedback from stakeholder consultation workshop conducted during this stage.
- vii. Draft strategies for water conservation, waste reduction, and improved system efficiency in water supply, drainage, sanitation and solid waste management.
- viii. Any other relevant assessment and reporting.
- ix. CRC meeting and its approval on Interim report.

Deliverable: Preliminary Vision and Structure of Functional Plan which provides an overview of the above and identifies areas of detailed investigation.

4.3 **Stage 3:** Draft Final Functional Plan. Validate and elaborate on findings from Stage 2 and identify gaps in existing data requiring further research. The analysis will include, but will not be limited to the following:

- i. Key Informant Interviews or KIIs.
- ii. Focus Group Discussions or FGDs with key stakeholders.
- iii. develop a comprehensive water use and allocation plan under various system conditions, including water resources model; demand models; flood/ drought model; sub-catchment area analysis etc.
- iv. Implementation framework with planning strategies, and action plans.
- v. To prepare capacity building framework for civic bodies, plans for training, awareness programs, and technical skill enhancement etc.
- vi. Current capacity of infrastructure systems to provide critical functionality for a range of shocks and stresses identified in the previous phases.
- vii. Mapping critical infrastructure system (service provision and geographic) interdependencies.
- viii. Current consideration of institutional processes, governance, infrastructure plans (including investment plans, and implementation/ action plans with specific targets/ timelines).
- ix. Identification of gaps in the urban environment systems across operational, organisational and institutional levels as well as gaps in knowledge and practice.
- x. Priority areas for improvement, level of effort required and key stakeholders responsible.

- xi. Specific regulatory and governance changes needed for successful implementation.
- xii. Identification of projects, block-cost estimation and phasing.
- xiii. Summary of feedback from consultations conducted during this stage.
- xiv. Identification of projects, block-cost estimation and phasing.
- xv. Executive Summary and appropriate number of Policy Briefs on subjects as finalised during Interim stage.
- xvi. Any other relevant assessment and reporting remains in Interim Stage and during discussion on draft final stage.
- xvii. All data, data analytics, findings , proposals etc on all the elements in above sections and as given in the sections in Detailed Tasks
- xviii. CRC meeting and its approval on Draft Final Report.

Deliverable: Draft Functional Plan, which summarizes the analysis, updates response to comments received; findings of the KIIs, FGDs, Implementation framework with planning strategies etc.

4.4 Stage 4: Final Functional Plan. Apart from the deliverables at previous stage, this stage of work will draw together data collected during earlier work activities, addressing the summative direction, required institutional structure, and necessary framework for capacity building and Implementation framework with planning strategies, and action plans. The analysis will include, but will not be limited to the following:

- i. Any other relevant assessment and reporting.
- ii. CRC meeting and its approval on Final Report.

Deliverable: Final Report on Functional Plan will encapsulate the entire work done, with specific attention to an executive summary and key action items to be assimilated into the planning process in general, and specifically the downstream investment projects, policies, and recommendations for inclusion in city level development plans, local area plans, etc.

Note: The Consultant shall ensure that the references made to all the relevant national standards/ codes/ manuals/ guidelines and international standards/ codes/ manuals/ guidelines, etc., where applicable, is made to their latest application versions (i.e., as amended from time to time).

5. DELIVERABLES

1. The assignment duration for consulting services is a total of 34 weeks.
2. The consulting firm will report to NCRPB Technical Team for coordination, submission and review of deliverables meeting the desired technical quality assurance requirements, and progress monitoring of deliverables, to the satisfaction of the NCRPB, and the outputs must be accepted by the NCRPB. Towards this purpose, apart from the monitoring by NCRPB, the Consultant’s work will be monitored and reviewed by the Consultancy Review Committee (CRC). The composition of the Committee will be shared after the signing of the contract agreement with the selected consultant.
3. The Team Leader/ Deputy Team Leader is responsible for delivery of all the Functional Planning outputs and corresponding reports and documentation. The consultant is required to submit all the above data, data analysis , findings, proposals etc as part of the following reports/ documentations to the NCRPB. All reports/ documentations should be submitted as required below (Table 1), in an electronic and hard copy format to NCRPB:

Table 1: Details of Milestones/ Deliverables: Reports/ Timing

| S. No. | Stage Report/ Deliverables | No. of copies | Schedule | Cumulative Time Period* (from date of LoA acceptance by the selected consultant) | Payment Schedule (% of total approved Cost) |
|--------|--|----------------------|---------------------|--|--|
| 1 | Inception Report | 15+ soft copy | 03 weeks | 03 weeks | 10% will be released only after duly verifying the quality, usefulness, implementability and acceptance & approval of inception Report by NCRPB |
| 2 | Interim Report | 15+ soft copy | 12 weeks | 15 weeks | 15% will be payable on approval of Interim Report by NCRPB 15% will be payable on approval of Interim Report by NCRPB |
| 3 | Draft Final Report (including observations and suggestions) | 15+ soft copy | 11 weeks | 26 weeks | 20% will be released only after duly verifying the quality, usefulness, implementability and acceptance & approval of Draft Final Report by NCRPB |
| 4 | Final Report | 30+ soft copy | 08 weeks | 34 weeks | 25% will be released only after duly verifying the quality, usefulness, implementability and submission of Final Report |
| 5 | Approval of Report / Functional Plan | 30 + soft copy | Subject to approval | Subject to approval | 20% will be released only after duly verifying the quality, usefulness, implementability and acceptance & approval of Final Functional Plan. |
| 6 | Handholding Support for one year after approval of Functional Plan for onboarding the states for FP implementation | | | | 10% (2% each at the end of 1st, 2nd & 3rd quarter and remaining 4% at the end of 4th quarter) will be released as Final payment on satisfactory completion of handling support for one year" |

Note:

- i. No advance payment for any purpose will be made to the selected consultant.
- ii. The selected consultant will be required to make one or multiple presentations (minimum of 05 such presentations) before NCRPB and/or Planning Committee/ Project Sanctioning and Monitoring Group (PSMG)/ Board/ MoHUA/ NCR participating States/ any other relevant Ministry/ Department/ Agency, etc. Within a week of submission or later of each of the above reports/ stages. The observations and suggestions conveyed by NCRPB will be incorporated by the selected consultant and revised Report to be submitted to NCRPB.
- iii. The payment will become due on approval of the stage report and on raising of bills/invoice by the selected consultant after the approval of the stage report. The processing time of the payment will be 90 days for final payment and 45 days for all other payments.
- iv. The selected consultant is also required to present the progress of work in the review meetings convened by the NCRPB and shall comply with the decisions taken in these meetings regarding the assignment.
- v. The selected consultant is also required to present the progress of work to the NCRPB and/or Planning Committee/ PSMG/ Board and/or MoHUA as and when required and shall comply with the instructions regarding this assignment.
- vi. The selected consultant shall provide post submission services/support at no additional cost to NCRPB till the final approval of the Functional Plan by the NCRPB Board.
- vii. The selected consultant will work in close coordination with the designated personnel of NCRPB and its State representatives/ partner agencies; other Central Ministries/ Departments/ institutions such as, NITI Aayog, Town and Country Planning Organisation (TCPO), TERI, CPHEEO, CGWB, Ministry of Jal Shakti, CWC and other relevant departments/ organisations/ Ministries etc.; and other stakeholders such as, non-government organization, resident welfare association, planning and infrastructure think-tanks, etc.; towards understanding the planning/ implementation/ management requirements and will make necessary efforts to bridge any data gaps, so as to ensure that quality outputs are produced that not only facilitate effective implementation of Functional Plan but also serve as an appropriate guidance for further planning (master plans/ development plans/ area specific or local area development plans, etc.) and downstream investment projects with costs estimated based on lifecycle cost approach.
- viii. Success fee for completion within stipulated time - 02% over and above the fee if completed to the acceptance of NCRPB, in 32 weeks instead of 34 weeks.
- ix. Payments will be made to the account of the selected consultant according to the payment schedule as stated above. First payment shall be released as per the stages, but only after execution of performance guarantee by the selected consultant. Subsequent payments shall be made in accordance with the prescribed conditions on submission of bills by the selected consultant.

6. TEAM REQUIRED

For the preparation of the Functional Plan, a minimum of 12 personnel will need to be mobilized by the consulting firm as part of the contract. The team composition, including key experts and support staff along with their input requirements, is detailed in Table 2.

Table 2: Team Composition for Consulting Firm

| S. No. | Expertise | Input Requirements | % Weightage of Marks | Marks |
|--------|--|--------------------|----------------------|-------|
| 1 | Urban/ Regional Planner (Team Leader) | Full-time | 20 | 5 |
| 2 | Water Sector Expert (Deputy Team Leader) | Full-time | 15 | 4 |

| S. No. | Expertise | Input Requirements | % Weightage of Marks | Marks |
|--------------|---|--------------------|----------------------|------------|
| 3 | Sanitation and Wastewater Management Expert | Full-time | 8 | 2 |
| 4 | Drainage/ Flood Management Expert | Full-time | 7 | 2 |
| 5 | Hydrology/ Groundwater Expert | Full-time | 7 | 2 |
| 6 | Solid Waste Management Expert | Full-time | 8 | 2 |
| 7 | GIS Expert | Full-time | 8 | 2 |
| 8 | Legacy Waste Remediation Expert | Full-time | 7 | 2 |
| 9 | Water Supply Engineer | Full-time | 5 | 1 |
| 10 | Sanitation and Wastewater Engineer | Full-time | 5 | 1 |
| 11 | Drainage Engineer | Full-time | 5 | 1 |
| 12 | Solid Waste Engineer | Full-time | 5 | 1 |
| TOTAL | | | 100 | 25* |

Note: In reference to Sl. No. 03 at para 3.14.3 for Technical Evaluation (total Marks 25). No change of experts will be allowed without prior approval of MS- NCRPB. The experts may be on permanent rolls of the consultant specific to the assignment.

Table 3: Qualifications and Responsibilities of Key Experts

| S. No. | National Key Experts | Expertise (Qualifications and Experience) | Responsibilities/ Tasks |
|--------|---------------------------------------|--|---|
| 1 | Urban/ Regional Planner (Team Leader) | Post graduate in urban and regional planning/ urban planning/ town and country planning or equivalent; and with 15 years of general experience and 10 years of specific experience in regional planning / urban planning/ water assessment/ sanitation/ solid waste management development projects. | Lead the consulting team and support in: (a) overall management of consulting team towards the preparation of the Functional Plan; (b) coordination/ liaison with NCRPB/ Nodal Team and its State representatives and partner agencies (as required), and provide overall guidance on preparation of Functional Plan; (c) leadership of the studies for water, drainage, sanitation, liquid waste, solid waste management, legacy waste management, etc.); (d) review of NCR-RP-2001/NCR-RP-2021/ NCR-DRP-2041 as well as existing Functional Plans/ sub-regional plans (as per applicable context), and review of planning gaps identified earlier for a seamless transition to facilitate effective futuristic implementation, including shared use of resources in the regional context of the NCR; (e) provision of recommendations on any sectoral/ institutional reforms required, institutional strengthening and capacity building requirements, indicators for measuring performance of the region, etc.; (f) incorporation of strategies for accelerating the achievement of substantiable development goals (SDGs) and Millennium Development Goals (MDGs) in NCR; (g) incorporation of national and/or international good practices, including the use of innovative technologies in the preparation of the Functional Plan; |

| S. No. | National Key Experts | Expertise (Qualifications and Experience) | Responsibilities/ Tasks |
|--------|--|---|---|
| | | | <ul style="list-style-type: none"> (h) guide the use of geospatial information systems and earth observation datasets to facilitate integrated spatial/ physical planning; (i) based on various urban service level benchmarks, etc., incorporate elements to improve the performance indicators of local bodies; (j) determination of a list of identified infrastructure projects and resultant downstream investment project proposals with preliminary/ block-cost estimates; and (k) any other relevant tasks assigned. |
| 2 | Water Sector Expert (Deputy Team Leader) | <p>Master's degree in water resources/ environmental engineering or equivalent over a Bachelor's degree in civil engineering or equivalent; and with 12 years of general work experience as a senior expert in the appraisal, planning and design and implementation of urban water supply systems and utility performance management, and 8 years of specific experience in non-revenue water (NRW), water quality monitoring and surveillance, management, sector policy dialogue and development and water utility management, are supplementary assets. The expert will be experienced with the analysis and optimization of water supply network systems, pumping stations, reservoir capacity, and non-revenue water management. Demonstrated</p> | <p>Lead the task of Functional Plan on "Water Management and Waste Management" in addition to the following tasks:</p> <ul style="list-style-type: none"> (a) work as the deputy team leader and have overall responsibility for the effective and timely implementation of the Functional Plan; (b) guide and coordinate with the consulting team for completing their tasks, ensuring that all consultant will work closely with each other and that all individual inputs are well integrated and complement each other. (c) liaise with all relevant government agencies (d) prepare activity flow charts and personal assignment schedules; ensure the quality and timely delivery of the required deliverables, workshops, and other outputs as set in the activity charts; (e) ensure that standards and procedures adopted in the Functional Plan conform with national norms and international standards as required; (f) conceptualize, prepare and present the work outputs to various stakeholders on institutional reviews, institutional strengthening/ capacity building requirements [including any recommended institutional or governance reforms/ municipal or governance performance requirements/ value capture financing, etc., resulting in a Governance/ Institutional Framework developed with protocols and schedules for consequent implementation of cross sectoral/ cross jurisdictional-spatial proposals]; and (g) participate in meetings, conduct field visits, and draft or revise sector-related reports as required; and (h) any other relevant tasks assigned. |

| S. No. | National Key Experts | Expertise (Qualifications and Experience) | Responsibilities/ Tasks |
|--------|---|--|--|
| | | <p>knowledge of, and ideally experience in water resource issues in Asia and India is preferred, including rain water harvesting and artificial recharge methodologies. Experience in cost estimate of urban water supply systems is required.</p> | |
| 3 | Sanitation and Wastewater Management Expert | <p>Master's degree in environmental engineering/ water resources engineering/ public health engineering/ sanitation engineering or equivalent over a Bachelor's degree in civil engineering/ physical planning or equivalent; and with 10 years of general experience and 07 years of specific experience in planning, design and implementation of Sewerage and Sewage Treatment Plants and sanitation projects and utility performance management. The expert will be experienced with the analysis and optimization of sewage pumping stations, and sewerage networks and planning and implementation of sewage treatment plant and faecal sludge and septage management system. Experience in cost estimate of</p> | <p>The expert will support in:</p> <ul style="list-style-type: none"> (a) review planning gaps identified earlier for a seamless transition to facilitate effective futuristic implementation, and recommend centralized/ decentralized (on-site treatment systems) adopting national and/or international good practices, including shared use of resources, use of innovative technologies, low-impact development/ green infrastructure principles (that also contribute to green jobs), cost-recovery mechanisms and tariff-/ user fee-structure based on aspects of volumetric pricing and circular economy, etc., to act as a guidance for consequent master/ development plans at city level in constituent States; (b) recommendations on any sectoral/ institutional reforms required, governance performance requirements, institutional strengthening/ capacity building requirements, etc.; (c) determination of a list of identified infrastructure projects and resultant downstream investment project proposals with preliminary/ block-cost estimates; and (d) any other relevant tasks assigned. |

| S. No. | National Key Experts | Expertise (Qualifications and Experience) | Responsibilities/ Tasks |
|--------|------------------------------------|---|---|
| | | urban wastewater systems is required. | |
| 4 | Drainage / Flood Management Expert | Master's degree in water resources/ disaster management field or equivalent over a Bachelor's degree in civil engineering or equivalent; and with 10 years of general experience and 7 years of specific experience in flood and drought management, disaster management, urban drainage and flooding with demonstrated knowledge and experience in flood management in India. Knowledge of drainage modelling and design, including experience in designing and using green infrastructure, ground water recharge, and water body redevelopment is required. | The expert will support to: (a) analyse and propose regional drainage strategy for maximizing natural systems, drainage corridor management, water body restoration and management; (b) using GIS/ RS data analysis to define protection, restoration, and development actions; (c) recommend multi-scalar action for integrated water resource management–IWRM; and (d) any other relevant tasks assigned. |
| 5 | Hydrology/ Groundwater Expert | Master's degree in hydrology/ water resources/ geo-hydrology or equivalent over a Bachelor's degree in civil engineering or equivalent; and with 10 years of general experience and 07 years of specific experience in assessment of ground water resources, exploration, quantification and | The expert will support in: (a) document and review all available reports/ data on water resource assessments in the region, including verification of whether a rain-gauge network has sufficient spatial coverage that all groundwater monitoring stations are adequately covered in NCR; (b) identify the data gaps, collect additional data and carry out hydrological studies/ investigations/ data synthesis and analyses for assessing river flows and other water body or groundwater levels for seasonal variability in NCR, including to protect economic functions from flooding/ drought, to maintain ecologically-sound water system, and in part to support water use functions for core downstream investment subprojects; |

| S. No. | National Key Experts | Expertise (Qualifications and Experience) | Responsibilities/ Tasks |
|--------|-------------------------------|--|---|
| | | estimation of ground water potential and usage. | <ul style="list-style-type: none"> (c) carry out rainfall and river flow analysis required to forecast extreme climate events for incorporating climate change mitigation and/or adaptation measures to be adopted in the region (to be followed consequently in the planning and design of subprojects for coping with the floods and droughts); (d) review or propose strategy/ mechanism to carry out river flow-based reservoir operations in order to manage water supply allocations for urban services and regional uses, especially during drought; (e) provide support in any hydrological design guidance for structures to be adopted for consequent downstream projects, including support in determination of a list of identified infrastructure projects and resultant downstream investment project proposals with preliminary/ block-cost estimates; and (f) any other relevant tasks assigned. |
| 6 | Solid Waste Management Expert | Master's degree in environmental or civil engineering or equivalent over a Bachelor's degree in civil engineering or equivalent; and with 10 years of general experience and 07 years of specific experience in urban infrastructure and a strong background in municipal solid waste management. Prior experience with advisory and technical support to urban local bodies in the planning and design of solid waste management systems throughout the value chain (collection, transfer/ transport, recycling, treatment and disposal), and demonstrated excellent knowledge of state and national relevant regulations | <p>The expert will support in:</p> <ul style="list-style-type: none"> (a) review planning gaps identified earlier for a seamless transition to facilitate effective futuristic implementation, and recommend centralized/ decentralized SWM systems, considering review of current mandates/ practices followed [status of waste management hierarchy being adopted; and complete from collection (source segregated/ door-to-door/ community level), compaction and safe transfer/ storage, transportation, treatment/ scientific-disposal facilities (including remediating legacy dumpsites or landfills)/ safe containment, residual reuse/ disposal, etc., with/ without waste-to-energy recovery systems related infrastructure requirements, specifically focused on addressing the most pressing environmental and social challenges in comprehensive solid waste management in regional settings or integrated urban/ regional/ transport/ tourism/ industrial development sectors], including shared use of resources, use of innovative technologies, adopting low-impact development/ green infrastructure principles (that also contribute to green jobs), cost-recovery mechanisms and tariff-/ user fee-structure along with any incentives/ subsidies/ concessions, aspects of EPR and circular economy, etc., to act as a guidance for consequent master/ development plans at city level in constituent States; (b) recommendations on any sectoral/ institutional reforms required, governance performance requirements, institutional strengthening/ capacity building requirements, etc.; (c) determination of a list of identified infrastructure projects and resultant downstream investment |

| S. No. | National Key Experts | Expertise (Qualifications and Experience) | Responsibilities/ Tasks |
|--------|--|--|---|
| | | as well as international best practices is required. | project proposals with preliminary/ block-cost estimates; and (d) any other relevant tasks assigned. |
| 7 | Geographic Information System (GIS) Expert | Master's degree in GIS & Remote Sensing/ geography/ geology/ geophysics/ geoinformatics or equivalent is preferred, or a Bachelor's degree in geography/ civil engineering or equivalent field, which has included GIS in the curriculum/ training program or training certificate in GIS/ Remote Sensing; and with 10 years of general experience and 7 years of specific experience in the use of GIS programs and remote sensing, including digitizing mapping and data, preferably in water management or equivalent infrastructure field; night-time light data imagery analysis, land use suitability potential analysis, existing and proposed land use maps, digital terrain/ elevation modelling (DTM/ DEM), etc.; and habitat analysis and remote sensing expertise, including time series and spectral analysis for vegetation and water resource assessment. | The expert will support in: (a) analysis of past and present situation for regional landscapes, water resources, hydro-geomorphology, flood prone areas, drainage pathways and water bodies (past and present); (b) Data collection and assessment including spatial and non-spatial; (c) modelling and sub-catchment area analysis; (d) providing geospatial support for policy interventions and proposals; and any other relevant tasks assigned. |

| S. No. | National Key Experts | Expertise (Qualifications and Experience) | Responsibilities/ Tasks |
|---------------|---------------------------------|---|---|
| 8 | Legacy Waste Remediation Expert | Post Graduate degree in environmental science, civil engineering, environmental engineering, or a related field. Atleast 07 years of specific experience in municipal solid waste management and remediation of legacy waste in landfill sites. | Hands-on experience in waste management, remediation projects, or environmental consulting. Having knowledge of latest technologies, regulations, and best practices at national and international level. |

Table 4: Support Staff Positions–Qualifications and Experience Requirements

| S. No. | National Support Staff | Qualification Requirements | Experience Requirements |
|---------------|------------------------------------|---|---|
| 1 | Water Supply Engineer | Atleast Bachelor's degree from a recognized University in civil engineering, water resources engineering, environmental science or engineering, or equivalent | 5 years of work experience in the appraisal, planning and design and implementation of urban water supply systems and utility performance management. Specific experience in non-revenue water (NRW), water quality monitoring and surveillance, management, sector policy dialogue and development and water utility management, are supplementary assets. Demonstrated experience with the analysis and optimization of water supply network systems, pumping stations, reservoir capacity, and NRW management. Experience in cost estimate of urban water supply systems is required. |
| 2 | Sanitation and Wastewater Engineer | Atleast Bachelor's degree from a recognized University in civil engineering, environmental science or | 5 years of work experience in planning, design and implementation of |

| S. No. | National Support Staff | Qualification Requirements | Experience Requirements |
|--------|------------------------|--|---|
| | | engineering, water resources engineering or equivalent | <p>sewerage systems and sewage treatment plants and sanitation projects.</p> <p>Demonstrated experience with the analysis and optimization of sewage pumping stations, and sewerage networks and planning, and implementation of sewage treatment plant. and faecal sludge and septage management system.</p> <p>Experience in cost estimate of urban wastewater systems is required.</p> |
| 3 | Drainage Engineer | Atleast Bachelor's degree from a recognized University in civil engineering, environmental science or engineering, water resources engineering or equivalent | 5 years of experience in planning, design and cost estimation of stormwater drainage, pumping stations, lake management and flood management in urban/ rural drainage. |
| 4 | Solid Waste Engineer | Atleast Bachelor's degree from a recognized University in civil engineering, environmental science or engineering, or equivalent | <p>5 years of experience in urban infrastructure with strong background in municipal solid waste management, with prior experience in advisory and technical support to urban local bodies in planning, design, implementation, operation and maintenance/ asset management of solid waste management systems, throughout the value chain (collection, transfer/ transport, recycling, treatment and disposal).</p> <p>Demonstrated excellent knowledge of state and national relevant regulations as well as international good practices.</p> <p>Previous work experience in externally-aided/ MDB projects is desirable.</p> |

Section 5. QUALIFICATION - STANDARD FORMS

[Letterhead of Consultant]

To
Member Secretary
National Capital Region Planning Board
(Ministry of Housing and Urban Affairs)
Core 4-B, First Floor, India Habitat Centre, Lodhi Road,
New Delhi
Tel.No.-..... E-mail:,
website: ncrpb.nic.in

Sub: Consultancy Services for "PREPARATION OF FUNCTIONAL PLAN FOR FOR NATIONAL CAPITAL REGION"

I/We, the undersigned, offer to provide the consulting services for the above assignment in accordance with your Request for Proposal vide advertisement dated 2022. We are hereby submitting our Proposal for the preparation of Functional Plan forfor National Capital Region.

2. The Proposal contains the following documents:

- Qualification Documents
- Technical Proposal
- Financial Proposal

3. I/We have gone through the RFQ-cum-RFP documents and understand the terms and conditions. We understand that you are not bound to accept any proposal you receive.

4. We also understand and accept that application along with annexure and formats not completed in all respects is liable to rejection.

5. We undertake, if our bid is accepted, to commence work as per the schedule and to achieve the effectiveness of the contract within the respective times stated in the Bidding Documents.

6. We have read the provisions of RFQ-cum-RFP document and confirm that these are acceptable to us.

7. We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India.

Yours sincerely,

Authorized Signature
Name and title of Signatory
Name of Firm
Address

Encl:

1. Qualification Documents
2. Technical Proposal & Financial Proposal
3. Copy of RTGS/NEFT receipt or DD of Rs. 3,00,000/- (Rs. Three lakh) for Functional Plan for Water Management and Waste Management in the NCR- 2047.

QUALIFICATION - STANDARD FORMS

5A. General

Name of the bidding entity/consulting firm

1. In case of consortium, name of other partners of the consortium
2. In case the bidding entity is a subsidiary of a larger organization, please write the name of the parent organization
3. Bidding entity registered address in India
4. Bidding entity address for correspondence regarding this project, including phone numbers (mention city code), fax numbers and email addresses
5. Details of the authorized signatory of the Bidding entity for communication regarding this project
 - Name
 - Designation
 - Contact details of the authorized signatory
 - Office Phone (Direct Line/ Extension) Number
 - Fax Number
 - Mobile Phone Number
 - Email Id
6. Please mention the audited turnover of the Bidding entity/ Consortium Lead in the preceding five financial years (Rs.Crores)
FY 2019-20:Cr. INR
FY 2020-21:Cr. INR
FY 2021-22:Cr.. INR
FY 2022-23:Cr.. INR
FY 2023-24:Cr.. INR
7. Please indicate if bidder is applying for other Functional Plan works, mentioned in RFQ cum RFP document. **Yes/no**
7.a) In case 'Yes', please mention priority for each such Functional Plan proposal, through a separate letter addressed to NCRPB, but along with the proposal.

5B Experience of the Bidding entity

1. Total Experience since the inception of Bidding entity (in years)
2. Main line business
3. Experience in consultancy (in years)
4. Experience in consultancy in relevant field (in years)

5C. Five major studies/ assignments executed

| SI. no. | Name of studies/ assignments | Client | Type of studies/ assignments | Location of studies/ assignments | Value of the studies/ assignments (in Rs.) | Stage of studies/ assignments execution | |
|---------|------------------------------|--------|------------------------------|----------------------------------|--|---|--------------------|
| | | | | | | (completed/ under progress) as on date | Year of completion |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |

5D. Relevant project experience of the Consulting Firm

| SI. No | Title of the project | Client name | Whether participated as individual consulting firm/ member of consortium | Project cost in Rs. | Stage of project execution (completed/ under progress) as on date |
|--------|----------------------|-------------|--|---------------------|---|
| | | | (if member of consortium, mention the consortium lead) | | |
| | | | | | |

5E. Qualification and Experience of Key Professionals

| SI. No. | Field of Expertise | Qualifications | | | Experience | | | |
|---------|----------------------------|----------------|----|----------|------------|----------------------|--------------------------------|------------------------------------|
| | | PhD | PG | Graduate | Total | In relevant projects | Names of corresponding project | National/ International Experience |
| 1 | Team Leader/ Urban Planner | | | | | | | |
| 2 | Expert 1 | | | | | | | |
| 3 | Expert 2 | | | | | | | |
| 4 | Expert 3 | | | | | | | |

Illustrative relevant fields to be used for above:

- Formulation of Functional Plans or similar Plans/Assignments of geographical area comparable to NCR or a State using GIS database
- Planning and implementation using GIS of urban sector projects
- Formulation of Regional Plan for a region/ sub-region

Note: Only those firms should apply who have not less than 10 years' experience in the relevant field. For Consortium all firms must conform to this criterion.

4F. Write-up on the topic “Functional Plan and its relevance in overall Regional Planning and development of NCR” in about 1000 words.

Section 6. TECHNICAL PROPOSAL - STANDAR FORMS

6 A. Technical Proposal Submission Form

To
Member Secretary
National Capital Region Planning Board
(Ministry of Housing and Urban Affairs)
Core 4-B, First Floor, India Habitat Centre, Lodhi Road,
New Delhi
Tel.No.-..... E-mail:,
website: ncrpb.nic.in

Sub: Consultancy Services for "PREPARATION OF FUNCTIONAL PLAN FOR FOR NATIONAL CAPITAL REGION" - Submission of Technical Proposal

Sir/Mam,

I/We the undersigned, offer to provide the consulting services for the above assignment in accordance with your Request for Proposal vide advertisement dated 2022. We are hereby submitting our Proposal for the preparation of Functional Plan for.....for National Capital Region.

2. I/We are hereby submitting our Technical Proposal on prescribed formats.

6B Firm's References

6B i) Relevant services carried out in the last five years that best illustrate qualifications

6B ii) Particulars and Experience of firm(s)

6B iii) Experience of the Consulting Firm

6C Comments & Suggestions of Consultants on the Terms of Reference and on Data, Services & Facilities to be provided by the Client

6D Description of the Methodology & Work Plan for Performing the Assignment

6E Team Composition & Task Assignments

6F Format of Curriculum Vitae (CV) for Proposed Key Professional / Staff

Yours sincerely,

Authorized Signature
Name and title of Signatory
Name of Firm Address

Encl. As above

6B. Firm's References

Using the format below, provide information on each reference assignment for which your firm, either individually as a corporate entity or as one of the major companies within an association, was legally contracted.

6B(i) Relevant services carried out in the last five years that best illustrate qualifications

Firm's Name:

| | | |
|--|----------------------------------|---|
| Assignment Name: | | Country: |
| Location within Country: | | Key professional staff provided by your Firm/ (profiles): |
| Name of Client: | | No. of Staff: |
| Address: | | No. of Staff-months: Duration of assignment: |
| Start Date (Month/Year): | Completion Date (Month/Year): | Approx. Value of Services (in Rs.): |
| Name of Associated Consultants, if any: | | No. of months of key professional staff provided by Associated Consultants: |
| Name of Senior Staff (Project Director/Coordinator, Team Leader) involved and functions performed: | | |
| Narrative Description of Project: | | |
| Description of Actual Services Provided by Your Staff: | | |

6B (ii). Particulars and Experience of firm(s)

Relevant services carried out in the five projects* similar to the assignment, considered to best illustrate experience and capabilities of the consulting firm/ Consortium since the inception of the Consultant firm in the format given below.

| S. No. | Field of Specialisation | Name of consulting firm | Assignment Name | Name of Client | Whether participated as individual consulting firm/ member of consortium, if mention the consortium lead | Project Cost in Rs. | Stage of Project execution or ground (initiated/ in progress/ completed) | Any other relevant information |
|--------|-------------------------|-------------------------|-----------------|----------------|--|---------------------|--|--------------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |

*Note: If the proposal is being submitted by a consortium, mention the best five relevant projects carried out by consortium or constituent firms.

Illustrative fields of specialization to be used in column 2 above:

- Formulation of Functional Plans or similar Plans/Assignments of geographical area comparable to NCR or a State using GIS database
- Planning and implementation using GIS of urban sector projects
- Formulation of Regional Plan for a region/ sub-region

6B(iii). Experience of the Consulting Firm

| Sl. No. | Name of consulting firm/ consortium | Total Experience since the inception of firm (in years) | Experience in Relevant Field (Years) |
|---------|-------------------------------------|---|--------------------------------------|
| | | | |

6C. Comments & Suggestions of Consultants on the Terms of Reference and on Data Services & Facilities to be provided by the Client

On the Terms of Reference:

- 1.
- 2.
- 3.
- 4.
- 5.

On the data, services, and facilities to be provided by the Client

- 1.
- 2.
- 3.
- 4.
- 5.

6D. Description of the Methodology & Work Plan for Performing the Assignment

6E. Team Composition & Task Assignments

1. Core Team [refer Core Team Composition, qualification and weightage for key professionals of respective sector under Section-3 para 3.1 (b)]

| Sl. No. | Name | Proposed Position | Total experience (years) | Relevant experience in years |
|---------|------|-------------------|--------------------------|------------------------------|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| .. | | | | |
| - | | | | |

2. Support Staff

| Sl. No. | Name | Proposed Position | Total experience (years) | Tasks to be performed |
|---------|------|-------------------|--------------------------|-----------------------|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| - | | | | |
| .. | | | | |

6F. Format of Curriculum Vitae (CV) for Proposed Key Professional Staff

Proposed Position.....
Name of Firm.....
Name of Expert.....
Profession.....
Date of Birth.....
Years with Firm/Entity
Nationality.....
Membership in Professional Societies.....
Detailed tasks Assigned.....
Key Qualification.....

[Give an outline of expert member's experience and training most pertinent to tasks on assignment. Describe degree of responsibility held by expert member on relevant previous assignments and give dates and locations. Use about half a page.]

Education
[Summarize college/university and other specialized education of expert member, giving names of schools, dates attended, and degrees obtained. Use about one quarter of a page.]

Employment Record.....
Starting with present position, list in reverse order every employment held. List all positions held by expert member since graduation, giving dates, names of employing organizations, titles of positions held, and locations of assignments. For experience in last ten years, also give types of activities performed and client references, where appropriate. Use about two pages.]

Languages
[For each language indicate proficiency: excellent, good, fair, or poor; in speaking, reading, and writing]

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience. If awarded the Contract, I undertake to work with this Firm only on this assignment.

(Signature of expert member)

(Signature of authorized representative of Firm)

Date: Day/Month/Year

Full Name of expert _____

Full name of authorized representative _____

Section 7 FINANCIAL PROPOSAL STANDARD FORM

(Letter head of consultant)

(Location, Date)

To

Member Secretary

National Capital Region Planning Board

(Ministry of Housing and Urban Affairs)

Core 4-B, First Floor, India Habitat Centre, Lodhi Road,

New Delhi

Tel.No-..... E-mail:

Website: ncrpb.nic.in

Sub: Consultancy Services for "PREPARATION OF FUNCTIONAL PLAN FOR FOR NATIONAL CAPITAL REGION" - Submission of Financial Proposal

I/We, the undersigned, offer to provide the consulting services for the above assignment in accordance with your Request for Proposal vide advertisement dated 2022. We are hereby submitting our Proposal for the preparation of Functional Plan forfor National Capital Region.

2. I/We are hereby submitting our Financial Proposal for the sum of [Amount in words and figures]. This amount is inclusive of all taxes, levies and other expenses. Break up of financial proposal amount is given hereunder:

| Sr. No. | Particulars | Amount (INR) |
|---------|-----------------|--------------|
| 1. | Consultancy Fee | |
| 2. | GST | |
| | Total | |

3. Our financial proposal shall be binding upon us subject to the modifications resulting from discussions, up to expiration of the validity period of 180 days from the date of opening of the bid (bid submission date).

4. I/We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988".

5. I/We have gone through the RFP documents and understand the terms and conditions. I/We hereby agree to all terms and conditions set out in the RFP Document. We understand that you are not bound to accept any proposal you receive.

Signature of Witness

Name: & Title of Signatory:

Address:

E-mail _____

Mobile No. _____

Tel. No. _____

Signature of Authorized Signatory

Name & Title of Signatory:

Name of the Firm

Address:

E-mail _____

Mobile No. _____

Tel No. _____

Attachment 1

BRIEF DESCRIPTION OF CONSTITUENT AREAS OF NCR

1. The constituent areas of the National Capital Region (NCR) as notified covers the whole area of National Capital Territory (NCT)-Delhi and 24 districts of Haryana, Uttar Pradesh and Rajasthan. The NCR constitutes 230 urban settlements of various sizes and 11,774 villages with a total area of 55,083 square kilometers (km²) as shown in the Figure 1 below.



Figure 1: Constituent Areas of NCR

2. The sub-region wise details are as under:

- a) NCT-Delhi with area of 1,483 km² accounting to 2.7% of the total NCR area.
- b) Haryana sub-region comprising of fourteen [14] districts (Faridabad, Gurgaon, Rohtak, Sonapat, Rewari, Jhajjar, Mewat, Palwal, Bhiwani, Charkhi Dadri, Mahendragarh, Jind, Karnal and Panipat districts) with an area of 25,327 km² accounts for 46% of the NCR area.
- c) Rajasthan sub-region comprises of two [2] districts (Alwar and Bharatpur) with an area of 13,447 km² accounting to 24.4% of the total NCR area.
- d) Uttar Pradesh sub-region comprising of eight [8] districts (Meerut, Ghaziabad, Gautam Buddha Nagar, Bulandshahr, Hapur, Muzaffarnagar, Shamli and Baghpat) with an area of 14,826 km² accounting to 26.9 % of the NCR area.

3. The population of the NCR as per Census of India, 2011 was 58.16 million comprising of 16.79 million (29%) in NCT Delhi, 16.43 million (28%) in Haryana sub-region, 18.72 million (32%) in Uttar Pradesh sub-region and 6.22 million (11%) in Rajasthan sub-region. The total Urban Population of NCR was about 31.7 million as per Census, 2011.

The population of NCR is projected to be 71.82 million (urban population of 42.59 million) by 2021, 89.59 million (urban population of 57.00 million) by 2031, and 113 million (urban population of 76.65 million) by 2041. As per 2011 Census, the slum population of NCR was 4.32 million constituting 7.4% of total population.

4. An exercise for delineation/ revision of NCR area/boundary is currently underway. In case there is a change in the current NCR area/boundary due to such delineation, this Regional Plan-2041 shall stand ipso facto modified and shall be applicable *mutatis mutandis* immediately from the date of notification of the relevant addendum to this Regional Plan.

FUNCTIONAL PLANS

A. Definition and Purpose

1. A functional plan (commonly referred to as sectoral plan) is prepared to elaborate one or more elements of the regional plan.¹⁹ Functional plans are usually domain-centric technical plans that address status; identify issues; and formulate long-term sectoral vision, goals, and objectives, as well as indicators and targets consistent with the vision and framework of the regional plan.

2. In essence, regional plans determine what to achieve, while functional plans detail when and how to achieve the same. Thus, regional plans define policies, while functional plans convert them to implementable actions with locations and projects. It is imperative for a functional plan of one sector to have convergence with objectives that relate to functional plans of other sectors and the overall regional plan.

3. In the National Capital Region (NCR) context, functional plans provide proper guidance for participating states and the union territory after the regional plan has become operational.

B. Scope and Time Frame

4. Functional plans often focus on interregional proposals, while working within the sectoral framework. The significance of traditional functional plans (such as for transport, water, and the economy) cannot be overstated, but equal importance must be given to development of plans related to areas such as education and health, resilience, safety, tourism, industry, and logistics, while capturing synergies and convergences.

5. Functional plans are to address a 20-year timeframe. Actions should be phased, realistic, and achievable in the proposed duration of the plan, with budgets that are appropriately arranged and allocated for the action programs.

6. Functional plans differ from detailed project reports (DPRs). Following the preparation of a functional plan and identification of a project (with pre-feasibility studies where necessary), DPRs are prepared for the identified projects by the respective project implementing agencies.

C. Studies, Process and Analyses

7. Functional plans require intensive domain-appropriate studies to form recommendations, including through (i) data gathering via (a) user surveys, (b) gaining access to information from the government (e.g., statistics and maps) and other authoritative sources, and (c) onsite observations and readings; (ii) review of current policies, regulations, laws, and guidelines (including gender equality and social inclusion considerations); (iii) assessment of the status of past proposals and plans (as delineated in previous regional, subregional and functional plans); and (iv) inputs from experts and key stakeholders (through panels and interviews) to identify gaps in previous plans.

8. Studies must rest on a strong foundation of data gathering and analysis. Relevant departments in the constituent states have to be included in the process from the early stages to obtain their support. The engagement of citizen groups and civil society organizations with domain expertise (e.g., transport and gender) is equally important to ensure a consultative and inclusive process. In addition, gender equality and social inclusion should be an important crosscutting principle in all relevant diagnostics.

9. Depending upon the sector, specific analyses need to be carried out to arrive at appropriate and implementable solutions (at a functional plan level as well as for specific projects outlined within them, as appropriate). Such analyses include (i) an analysis of strengths, weaknesses, opportunities, and threats; (ii) statistical analyses; (iii) simulations; (iv) scenario building (to include climate risk and adaptation assessment); (v) business case development; (vi) impact

assessments (e.g., social, environmental, climate, and disasters); and (vii) review with respect to internal, national, or international benchmarks and precedents.

10. As functional plans are developed, effort should be made to ensure they are agile, user-focused, smart, and integrated.

- **Agile.** Test scenarios and different ways to address priorities. This is particularly pertinent with fast-changing technologies as well as climate vulnerabilities and pandemics such as the coronavirus disease.

- **User-focused.** Plans should reflect user inputs (from people and local organizations) and improve the lives of ordinary people.

- **Smart.** Plans should harness the private sector and existing organizational structures wherever possible; use smart policy and regulation to change behavior where possible; leverage the power of digital technologies and information and communication technology.

- **Integrated.** Plans should connect across sector-specific functional plans to espouse an integrated urban development approach.

D. Results, Recommendations, and Solutions

11. The studies and analyses help identify the current conditions and gaps to be addressed to achieve the desired end-state, as well as identifying actual projects and programs, and project implementing agencies that would be responsible for executing the projects. Functional plans enable this through by (i) identifying actions, including proposed changes, if any, in policies, programs, acts, regulations, rules, and government orders; and (ii) identifying relevant and viable projects through pre-feasibility studies.

12. The following activities will be undertaken subsequent to preparation of the functional plans:

- (i) implement the identified actions (including changes, if any, in policies, programs, acts, regulations, rules, and government orders); and
- (ii) implement the identified projects (including preparation of DPRs, engineering estimates and project costs, financing plans and financial closure, and institutional structures, followed by actual implementation).

E. Analyses of the Current Functional Plans

13. The framework for NCR planning is robust and technically driven. The hierarchy and framework for plans—the umbrella regional plan, subregional plans to provide geographical focus, and the functional plans to address key cross-sectoral issues—are comprehensive.

14. Among the NCRRP 2021-related functional plans, the functional plan for transport is a good example of a comprehensive approach (even while business case development and scenario testing are not detailed comprehensively), wherein a current-state analysis of the sector is provided; stakeholder surveys are conducted (e.g., bus surveys); sector priorities are established; economic and social costs and impacts are stated; and a staged program of actions is provided, supported by proposed institutional arrangements and financing methods. However, some development areas require attention:

- (i) The length of time needed to prepare and approve functional plans after completion of the regional plan exceeds 5 years in many cases, which leads to challenges for interdependent projects that simultaneously affect multiple sectors such as transport, economic development, drainage, and groundwater.

- (ii) Important analyses—such as alternative growth scenarios for urban regions, and the impacts and mitigation of climate change and pollution—require increased engagement. This should be reflected in the sector functional plans (para. 9).

- (iii) Projects are often not financially viable, both in terms of capital investment and operation and maintenance expenses. Addressing this may require changes in standards of services and/or the scale of projects, both of which could be politically challenging. Private sector investment options, such as transit-oriented development, land value capture-based financing, and public–private partnerships need to be considered.