Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 01-Mar-2024 | Report No: PID277

BASIC INFORMATION

A. Basic Project Data

Project Beneficiary(ies)	Operation ID	Operation Name	
India	P502499	Surat Resilience Enhancement Project	
Region	Estimated Appraisal Date	Estimated Approval Date	Practice Area (Lead)
SOUTH ASIA	17-Jun-2024	08-Aug-2024	Urban, Resilience and Land
Financing Instrument	Borrower(s)	Implementing Agency	
Investment Project Financing (IPF)	Department of Economic Affairs	Tapi River Front Development Corporation Limited, Surat Municipal Corporation	

Proposed Development Objective(s)

To enhance urban flood resilience along the Tapi River in Surat and strengthen the institutional and financial capacity of Surat Municipal Corporation.

PROJECT FINANCING DATA (US$, Millions)

Maximizing Finance for Development

Is this an MFD-Enabling Project (MFD-EP)?	No
Is this project Private Capital Enabling (PCE)?	Yes

SUMMARY

Total Operation Cost	**280.10**
Total Financing	**280.10**
of which IBRD/IDA	**196.00**
Financing Gap	**0.00**

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	196.00

Non-World Bank Group Financing

Counterpart Funding	84.10
Borrowing Agency	42.05
Borrower/Recipient	42.05

Environmental and Social Risk Classification	Concept Review Decision
High	The review did authorize the preparation to continue

B. Introduction and Context

Country Context

1. **India's urban transition is unprecedented in scale, with opportunities for resilient and low carbon development.** By 2040, India's urban population will grow by an estimated 270 million people, while its rural population is expected to fall by 40 million.[1] India is expected to reach 50 percent urbanization by 2051,[2] and if managed well, it can contribute effectively to India's future growth trajectory and contribute to national climate targets. Cities in India, especially coastal and riverine cities, are highly exposed to flood risks, climate variability and drought. Consequently, India has an opportunity to shape its future urban growth and opt for a more resilient and lower-carbon urban future. Three areas need special attention: planning for and managing the emerging urban footprint ensuring climate and disaster risk-informed compact urbanization; infrastructure and service delivery approaches need a quantum shift to ensure inclusive coverage, reliability, efficiency, and sustainability; and institutional systems and financial performance need to be strengthened at the local level to ensure that Urban Local Bodies (ULBs) are well-equipped to undertake necessary actions for pivoting towards resilient, green, and sustainable urban development.

Sectoral and Institutional Context

2. **Gujarat is one of the most urbanized states in India with a total population of approximately 71 million, of whom nearly half live in urban areas**. Gujarat is one India's economically most progressive and prosperous states, accounting for roughly 8.25 percent of the country's GDP. The Government of Gujarat (GoG) identifies ongoing rapid urbanization as a key driver for economic growth[3] in the coming decades. The state has also prioritized infrastructure investments and urban reforms for accelerated development in the four largest cities - Ahmedabad, Surat, Vadodara, and Rajkot - which cover over half of the total urban population of the state. The goal is to develop infrastructure in these major economic centers and position them competitively for attracting foreign trade and investments for regional growth in the state.

3. **Located in the western coast of India on the mouth of the Tapi River, Surat is the second largest city in Gujarat and the eighth largest in India, with a population of nearly five million.**[4] It is among the fastest-growing Indian cities, with a ten-fold population growth in the past four decades, which pressured the city to expand its urban footprint and

[1] International Energy Agency (IEA), India Energy Outlook, 2021.
[2] Revi et al., 2015, as cited in IIHS 2020.
[3] State government committee report on economic revival measures post COVID19 pandemic.
[4] Census 2011.

administrative boundaries by almost ten-fold. Due to its unique geographic location, where the Tapi River cuts across the city and flows into the Arabian sea, Surat has been exposed to serious climate risks of extreme heat, erratic rainfall, and sea level rise, as well as major fluvial and pluvial urban flooding. Most notably, as the city continues to grow, the Tapi River (which is the lifeline of Surat) has also become a threat to the living conditions of residents due to periodic flooding and increasing water pollution from the discharge of untreated wastewater. In the last four decades, five major floods in 1979, 1990, 1994, 1998 and 2006 have devastated the city. The 2006 floods inundated 75 per cent of the city, with a very high cost to the population, the city economy and the municipal corporation. Around 150 people were officially estimated to have lost their lives; unofficial estimates suggest that the death toll may have been more than 500.[5] As climate change is expected to increase the frequency of these floods and associated water shortages, there is an urgent need for integrating climate change-related risk management in Surat's urban development agenda.

4. **In response to these climate resilience challenges, Surat has taken proactive action to enhance its capacities for climate risk management, resilience planning, climate action, and financial sustainability.** Surat has developed robust resilience strategies including City Resilience Strategy, Sustainable Energy and Climate Action Plan, Heat Action Plan, and Disaster Management Plan, amongst others. However, the city lacks institutionalized solutions for translating plans into infrastructure and services that match climate risks and population growth. Recent efforts are also fragmented across departments. To address this, Surat Municipal Corporation (SMC) has proposed an integrated, multi-sectoral Tapi Riverfront Redevelopment Project (TRRP) that manages flooding, enhances livability and economic activity along the riverbanks within the city limit. SMC established a Special Purpose Vehicle, Tapi River Front Development Corporation Limited (TRFDCL), to execute the restoration and beautification project in two phases. By increasing resilience and unlocking the amenity value of the riverfront, Surat expects to boost climate preparedness and financial sustainability of its riverfront project. SMC's overall financial performance has been better than most large Indian cities, and in FY23 the city reached a major milestone in its revenue mobilization efforts when its property tax collection efficiency touched 99 percent and overall own source collection efficiency increased to 94 percent against a past average of 88.5 percent.[6] Preliminary assessments of land value capture potential of Surat was recently estimated at US$400 million[7] indicating that with adequate capacity augmentation support, SMC could partially finance TRRP by leveraging its own resources.

5. **To seize this opportunity of transformation and to ensure that the objectives of TRRP can be realized as envisaged, the SMC has requested assistance from the World Bank.** The SMC has sought support for better managing resilient urban growth, including to: (i) enhance its resilience planning strategies, approaches and capacities in an era of increasing climate change risks; (ii) strengthen capacities for designing and implementing climate resilient investments, especially riverfront development; and (iii) bridge gaps in financing major capital investments in a sustainable way.

Relationship to CPF

6. **The proposed project is consistent with the World Bank Group India Country Partnership Strategy (CPS) FY18-22, discussed by the Board on September 20, 2018 (Report No. 126667-IN) and extended to FY25 vide the Performance & Learning Review October 2023.** Pillars I and III of the Systematic Country Diagnostic (SCD) for India recognize the role of efficient cities as a direct contributor to a resource-efficient growth path. The SCD also identifies policies and actions to make cities more productive and livable, including the reduction of environmental impacts, strengthening of city finances, and strengthening the public sector. Pillar I of the CPS – "promoting resource efficient growth" – focuses on creating urban systems that are green, livable, and capable of addressing the sustainability goals of improving disaster risk management and resilience to climate change. Through complementary interventions to deliver resilient infrastructure and institutional strengthening for the SMC, the proposed project is expected to improve the livability of the residents of Surat, enhance economic development and municipal finance, while increasing the city's ability to mitigate climate risks, all in alignment with the CPS.

[5] Bhat, G. K. et al. 2013. Addressing flooding of in the City of Surat beyond its city boundaries. Environment and Urbanization. Vol 25(2):429-441.
[6] World Bank task team assessment undertaken in Nov 2023, based on data provided by SMC for Apr 2015-Oct 2023.
[7] CRISIL Advisor, 2023, preliminary assessment of Surat Municipal Corporation's land value capture potential commissioned by the World Bank.

C. Proposed Development Objective(s)

To enhance urban flood resilience along the Tapi River in Surat and strengthen the institutional and financial capacity of Surat Municipal Corporation.

Key Results (From PCN)

7. The suggested key results indicators are listed below. The Results Framework of the project will include appropriate indicators for climate change, gender and citizen engagement.

(i) People with enhanced resilience to climate risks through TRRP infrastructure provision disaggregated by gender and youth (number)
(ii) Terrestrial and aquatic areas under enhanced conservation and management in the TRRP boundary (Ha.)
(iii) Beneficiaries of job-focused interventions in public spaces through enhanced amenities for social, cultural, recreational and economic activities in the TRRP disaggregated by gender and youth (number)
(iv) Total private capital mobilized through land monetization in Surat (number)
(v) People benefiting from strengthened capacity to detect and respond to health emergencies through integrated multi-hazard early warning and emergency response system set-up by SMC disaggregated by gender and youth (number)

D. Concept Description

8. **The proposed Surat Resilience Enhancement Project (SREP) is an opportunity for demonstrating transformative impacts in resilient urbanization through an innovative approach using riverfront development as a catalyst**. The proposed SREP will support SMC and TRFDCL in implementing the TRRP, integrating nature-based and green infrastructure solutions into the riverfront development, within the broader context of mainstreaming resilience in municipal operations. The proposed Project will also seek to leverage own-source revenues including through land value capture mechanisms, and achieve economic rejuvenation of the riverfront area by leveragaing TRRP to promote cultural tourism in the city.

9. **SMC is updating its draft concept master plan for the TRRP within this context.** The TRRP master plan is spread along 33.6 km on each side of Tapi river between the Kathore Bridge to a proposed barrage downstream of Singanpore weir. TRRP is expected to construct new embankments where required, as well as inspect and strengthen existing embankments and dykes on the riverfront while making space available for increased economic, recreational and cultural activities. Embankment tops and river edges will be treated to maximize green and brown developerment as part of the “room for the river” approach. These activities are proposed to be implemented in two phases: Phase I, an up to10 km river stretch along both banks between the proposed barrage (connecting Rundh and Bhata) and the Singanpore weir; and Phase II, the remaining 23.6 km river stretch along both banks upstream from the Singanpore weir to the Kathore bridge. Through these interventions, the SMC expects to reduce the city’s flooding risks and beautify the cityscape to induce recreational, tourism and commercial activities, as well as prevent saltwater intrusion through the construction of the proposed Barrage (to be financed by SMC separately, i.e. non-World Bank financing).

10. **The SREP is seeking to bend the curve by integrating ecological and social considerations into TRRP design based on international good practices in urban riverfront development**. This includes: (i) interventions needed to make “room for the river” through increasing the carrying capacity of the river and strengthening the ecological health of the river, while ensuring the livelihood of residents; (ii) incorporating shared spaces along the riverbanks for the river and for people, guided by ecological thinking to ensure enhanced conservation, sustainable use and management; (iii) an inclusive development approach with proactive and continuous stakeholder engagement to define the multiple uses of spaces; as well as (iv) a sustainable financial and operational model to help the SMC, including through TRFDCL, manage its

infrastructure assets and sustain effective and efficient service delivery in the long run. Public spaces along the river will be treated as a city public good and will have site and community specific programming derived through participatory design processes. The output of the investments will not only enhance the flood risk management capacity of the city and improve the living conditions of the residents, but also enhance economic development opportunities for both the public and the private sectors.

11. **The SREP suggests interventions under three complementary pillars.** The *resilience pillar* focuses on building flood resilience, catalyzing economic development, and improving the quality of life of residents through planning and execution of selected prioritized investments under the TRRP. The *institutions pillar* focuses on strengthening the policy and institutional framework to mainstream resilience planning, financing and implementation of resilient investments at the SMC advancing its ambition of becoming the first 'Green Municipal Corporation' of India. The *finance pillar* focuses on devising sustainable financing models through optimizing the management and monetization of SMC's real estate portfolio and improving revenue yields through supporting reforms in property tax and other land based revenue sources. To this end, the project comprises the following components:

Component 1: Resilient Urban Infrastructure Investments

12. Component 1.1: Investments proposed in Phase I of TRRP, including: (i) flood risk control and resilience enhancement expected to benefit over 1 million persons through a combination of green infrastructure (nature-based solutions) and grey infrastructure (engineered solutions and embankments) to arrive at a solution that achieves a harmonious balance between interventions on flood protection, urban ecology and urban riverfront amenity provision; (ii) public space enhancement and land redevelopment to increase the amenities and economic opportunities for the residents and business owners along the riverfront; and (iii) enhancement of cultural heritage assets and infrastructure along the riverfront that promote cultural tourism and benefit the residents of Surat.

13. Component 1.2: Select supplementary resilient infrastructure investments, including a drainage interceptor subproject to rehabilitate the drainage outfall system along Tapi river, and small additional essential investments not proposed under TRRP such as access roads/mobility, etc.

Component 2: Institutional Strengthening on Resilience Planning

14. Component 2.1: Institutionalizing climate resilience actions including assigning one of the existing special implementation units called 'Cells' in SMC as the 'Climate Action Unit' (CAU) for quality assurance of all large investment projects and sectoral strategies and coordinating all climate resilience related matters. The CAU will undertake (i) preparation of a costed Climate Action Plan (CAP) drawing from the existing second-generation city climate strategy, (ii) mainstreaming disaster and climate resilience in all large projects of SMC through a quality assurance system, (iii) initiating green budgeting, (iv) setting up green accounting codes, (v) fostering inter- and intra-departmental coordination, (vi) capacity building of SMC staff, and (vii) developing a one-city one-map approach that ensures coordination on resilience outcomes between all developmental projects of SMC, among others.

15. Component 2.2: Design and operationalize an integrated multi-hazard Early Warning System (EWS) and Emergency Response System (ERS) including (i) modernization of the Hydromet monitoring network, (ii) development of a Concept of Operation (CONOPS) for key stakeholders, (iii) modernization in current EWS and ERS towards feeding into development of a multi-hazard EWS and ERS defining the development of a hydrological-hydraulic model for the forecasting, guidance and dissemination on flood warning in Surat as well as other hazards such as urban heat, vector borne pandemics, etc., (iv) integration with SMC's Integrated Command and Control Center (ICCC) set-up under Smart Cities Mission towards potential hosting of the integrated EWS and ERS, (v) strengthen early warning dissemination systems, and (vi) undertake capacity building of SMC for disaster preparedness and response, among others.

Component 3: Municipal Finance Improvement

16. Component 3.1: Build SMC capacity of SMC for strategic management of their real estate portfolio including (i)

upgrading existing asset management information system (MIS) through software enhancement, by deployment of specialized software for improved and real-time management of their real estate portfolio, organization of geo-referenced real estate data, introduction of a data management framework, and validation of existing real estate asset data/information, (ii) upgrading procedures for disposition of monetizable real estate assets including developing guidelines, protocols and procedures for ongoing strategic decision-making regarding the SMC's real estate portfolio, developing and implementing an approach to real estate (including raw land) dispositions allowing more flexibility in monetization of 'monetizable' real estate asset that don't put SMC at disadvantage relative to open market transactions, (iii) supporting SMC in undertaking pilot land monetization transactions especially focusing on land parcels falling within the TRRP, (iv) strengthening systems and procedures for management of unused and underused real estate, and (v) building SMC's technical capacity to manage the new system.

17. Component 3.2: study potential of real estate-based fees and policies for land value capture through robust analytics that would help SMC understand the potential for leveraging different own revenues sources.

18. Component 3.3: Undertaking analytics to strengthen property tax policies. The property tax is the single largest own source revenue stream for the SMC budget amounting to around 71 percent of total tax revenue and around 16 percent of total revenue. Revenue yields from property tax in Surat are low compared to peer cities both in India and globally, and thus there appears to be significant room for improvement. The SMC would like to undertake a study to analyse existing property tax policies and consider options for to help improve the property tax yield for SMC.

19. Component 3.4: Exploring green financing through (i) structuring and issue of green municipal bonds towards financing of renewable energy infrastructure that can support SMC achieve net zero carbon development in line with India's Nationally Determined Contribution (NDC) target, and (ii) identifying, structuring and implementation of potential public private participation (PPPs) on green infrastructure development. These areas will be explored further during project preparation.

Component 4: Project Management and Operation

20. This component will include operational costs for implementing project activities, development, and implementation of E&S instruments, project reporting, monitoring and evaluation, as well as a project management consultancy.

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Area OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts

Environmental risks are evaluated as "High," and all ESS1 to ESS10 are identified as relevant at this stage. The project is categorized as high risk based on anticipated direct and indirect environmental impacts which entail potential for long-term, irreversible alterations to the biophysical environment, particularly concerning land use and profile, stemming from large-scale embankment construction. Adverse effects on designated Coastal Regulation Zones along the river, alterations

to riparian zones due to engineered embankments, and the implementation of green interventions for flood resilience further contribute to the heightened risk profile. Moreover, concerns arise regarding biodiversity, as well as potential issues with siltation, accretion, and pollution resulting from newly induced activities and the cumulative impacts of ongoing and proposed initiatives within the project's footprint and immediate vicinity. These encompass activities such as sewage treatment plant operations, wastewater and industrial effluents discharge, construction of rail and road bridges, barrage construction, and riverbed desilting. Furthermore, both the construction and operational phases of the project are anticipated to introduce additional environmental risks and impacts. The social risk of the project is classified as “High” based on the following expected risks and impacts: a) land acquisition; b) temporary and permanent involuntary resettlement and livelihoods-related impacts on street vendors operating along the river bank, vendors at large weekly/ Saturday markets on Tapi banks as well as impacts on fishermen, prawn farmers, agriculture farmers, cattle rearers, washer-folks and residents of informal settlements located near or accessing the river in their daily life; c) large influx of non-local labor at the construction sites, especially concentration of labor at the construction sites and their impacts on neighboring communities including the risks of GBV and SEA/SH; d) adverse impacts on community health and safety during the construction phase; c) potential impacts on downstream communities; e) physical and cultural impacts on tangible and intangible assets of the city, including religious structures, heritage buildings, burial or cremation grounds located in the corridor of impact; f) potential adverse impacts on the Scheduled tribes including residents falling under Schedule V; and g) weak borrower capacities concerning E&S management including handling resettlement impacts, citizens engagement, and handling GBV/SEA/SH related risks. SEA/SH risks are anticipated to be “Low” for this project based on the risk assessment tool for major civil works. However, risks can be largely managed or mitigated through the adoption of proper design and mitigation measures following the mitigation hierarchy. Detailed assessments will be undertaken during the course of project preparation to analyse the potential impacts and appropriate mitigation and management plans will be developed.

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APPROVAL

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