

Lake/Waterfront Development, PPP & Concession Agreements

By

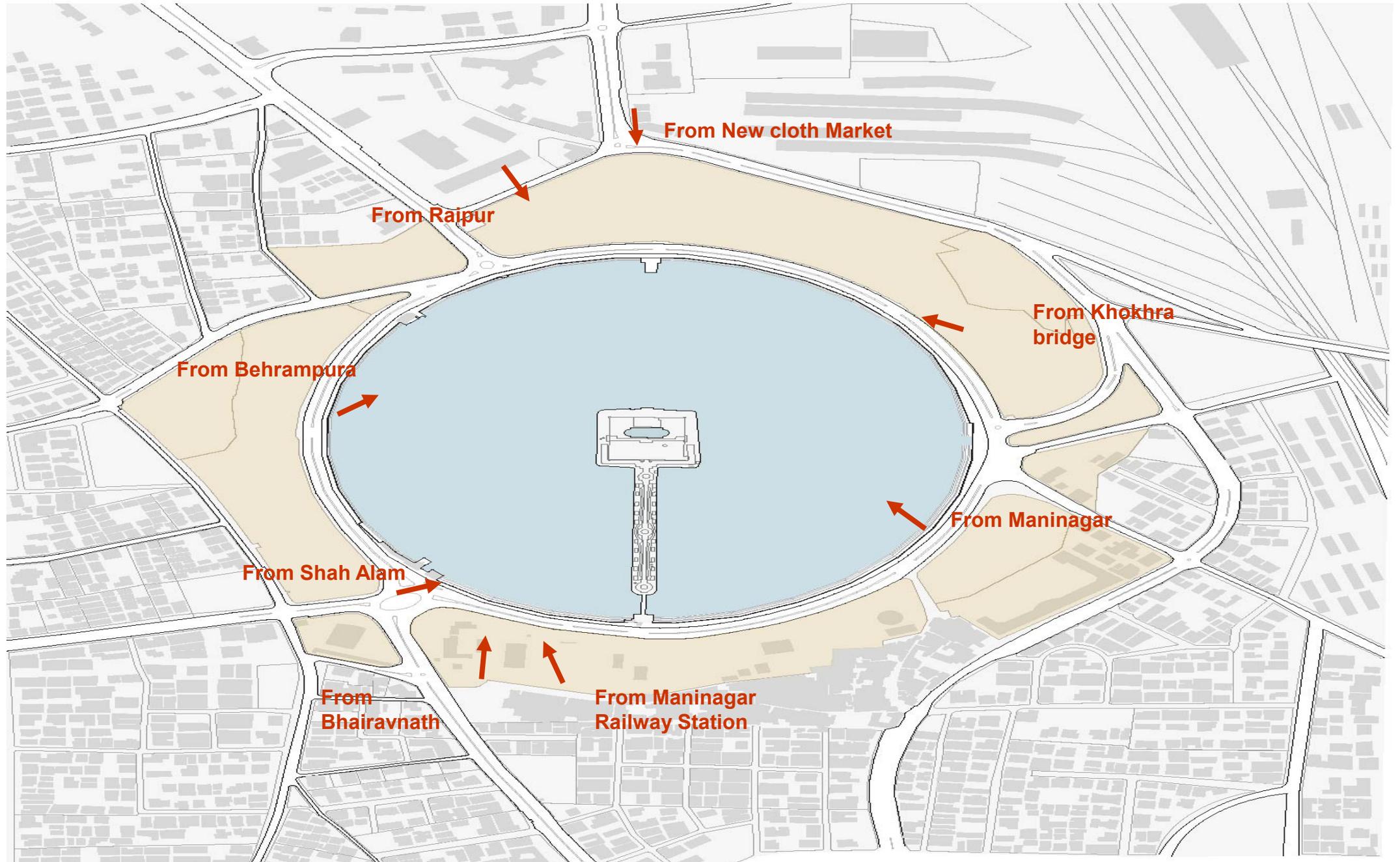
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Chairman Sabarmati Riverfront Co. & Mahatma Gandhi Ashram Sabarmati, Ahmedabad

Scheme of Presentation on Lake & Waterfront Development in Ahmedabad

1. Kankaria Lakefront Development 2006-08 & facilities added in the coming years too:
 - Overview
 - Methodology
 - PPP arrangements & further Management
2. Other Lakefront dev., like Naroda, Ghodasar, Asharwa, Vastrapur & Sarkhej Roja
3. Sabarmati Lakefront Development Project, Phases 1 of 11.5 Kms & Phase 2 of 6km :
 - Overview
 - Methodology
 - PPP arrangements & further Management
 - SRF Development of Phase 3 to Phase 6 (22.5km, Indira Bridge to Gandhinagar)
4. Contract Agreements/ Concessions Agreement for BOT
5. Auditor's concerned once a breach of Contract or otherwise

Historic Kankaria Lake, Used as a Traffic Circle till 2006: Before Development



Balloon Safari in Kankaria Lake Front 2009-10

- Passenger-carrying tethered helium balloon normally flies to 500 feet high. Show a 360-degree view of the city
- Carry 30 passengers for 10-15 minutes
- First in India, on a PPP (Revenue Sharing model) by a UK-based operator



Aerial Photography from 350 feet of height



Aquarium, Baal Vatika, Open Air Theatre, Zoo



Kids City of Kankaria Lake: A Unique Project of Its Kind



 AMDAVAD
MUNICIPAL
CORPORATION



A dream world for
the little ones
For the Children, of the children,
by the Children

+91 79 3245 3344
www.kidscityamdavad.com

Mini Trains (2.2 km Rail-Line): Atal /Swarnim Jayanti Express Mini Trains



Phase-wise Implementation of Various Recreational Activities & Projects on PPP

2009:

- Atal Express Train – O&M on PPP mode

2010:

- Helium Tethered Balloon – on PPP mode
- Swarnim Jayanti Express Train – O&M on PPP mode
- Kids City – Many units & full O&M on PPP mode

2011: (Implemented- on PPP mode)

- Desert Safari, Bungy Ejection & Trampoline
- Obstacle Courses & Artificial Rock Climbing
- Baby Cars & Moon Walkers

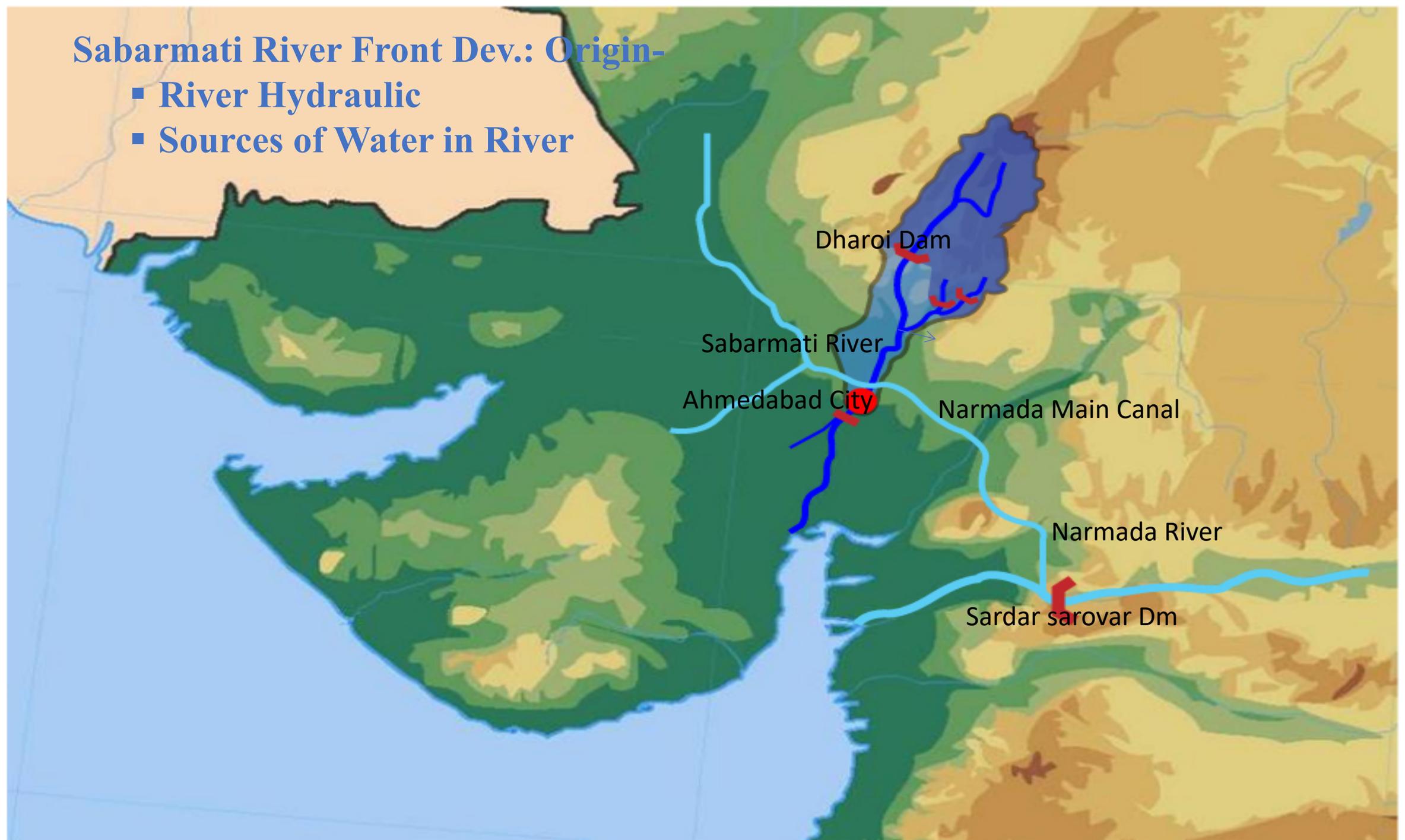
2012: Implemented- on PPP mode)

Miniature Golf Course with tree walk, Aqua Cart, Archery Adventure, Segway Safari, Mirror Maze, Discovery, Black Flash/Maverick, Vertical Swing, Ring of fire, Carousel, Mega Disc' O, Tower Ride, Roller Coaster, Sky Fly, Kid's zone, Paint Ball

**SABARMATI RIVERFRONT PROJECT
2005 ONWAWRDS**

Sabarmati River Front Dev.: Origin-

- River Hydraulic
- Sources of Water in River

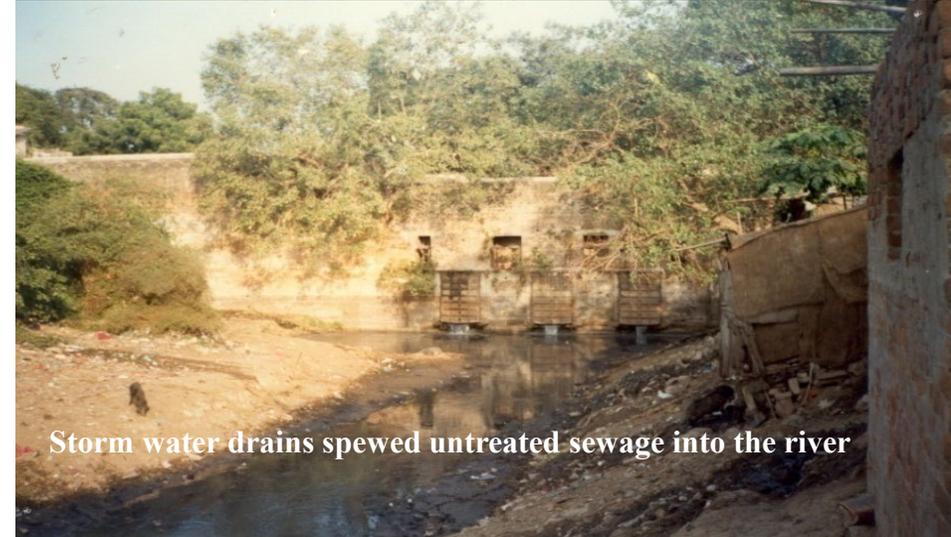


River was abused for many years!

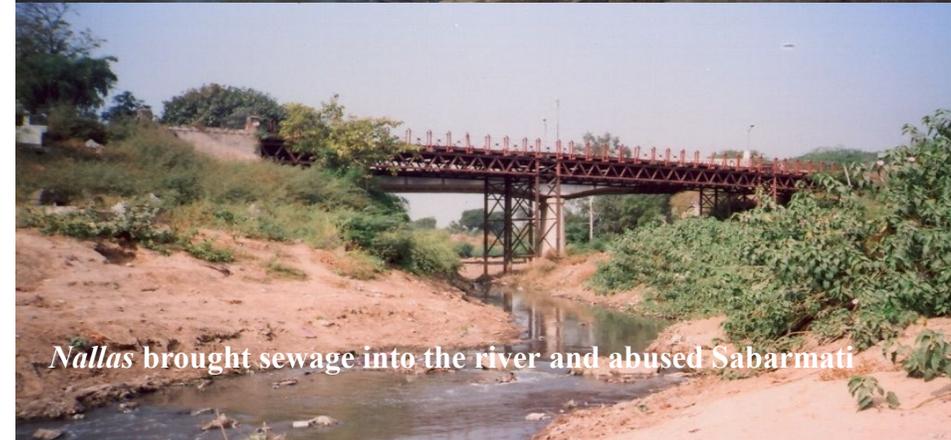
- Due to increased pressures, the carrying capacity of the existing sewage system was falling short, and was being diverted into storm water system, which was being released into the River without Treatment.
- Illegal sewage connections in the stormwater drains made the river-water unusable and became dark grey
- Open defecation from the nearby human settlements spreads over the entire length of 8-9 kms.
- Discharge of industrial effluent through some SWDs and open Nalas was carrying Domestic & chemical effluent in the river without treatment
- Migration to Urban, illegal encroachments in the riverbed have given shelter to thousands of slum dwellers, which reduced the carrying capacity of River.



Sabarmati became a place to dump garbage



Storm water drains spewed untreated sewage into the river

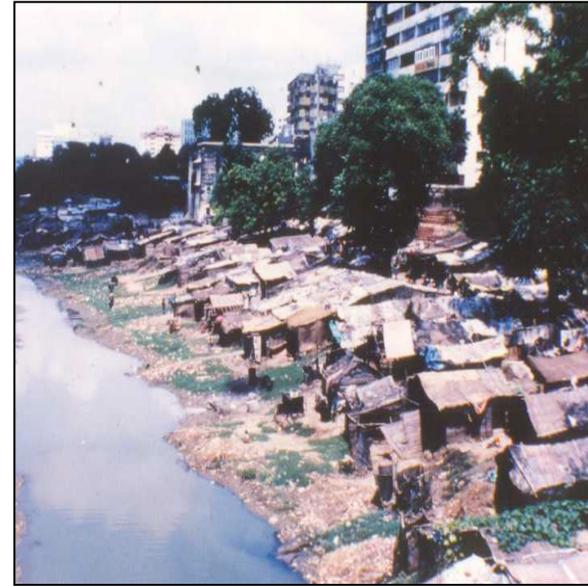


Nallas brought sewage into the river and abused Sabarmati

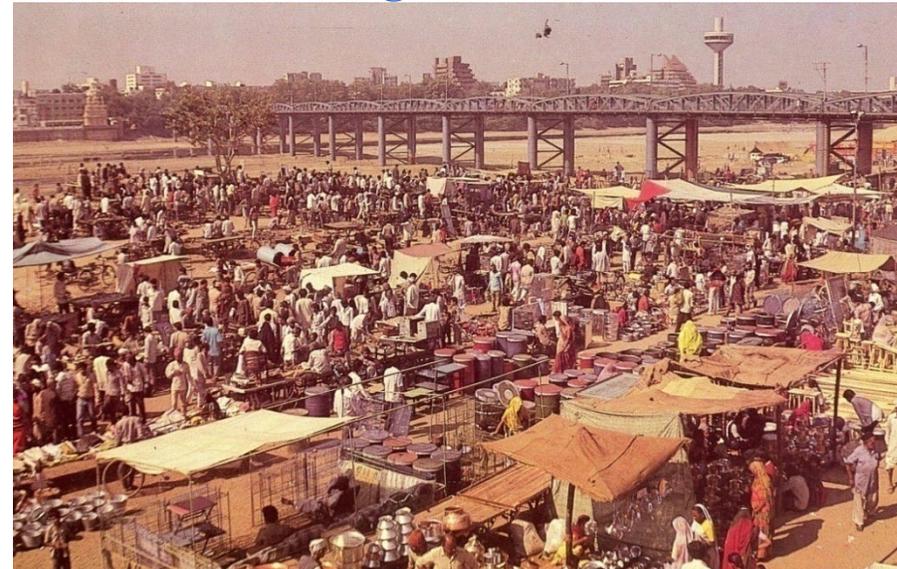
More than 11000 huts were in the riverbed before 2010 Which resettled in 2011-12



Places for washing and drying clothes



Places for holding the traditional Market



The Main Challenges of a Riverfront Development

- **Drainage Shifting:** Thoroughly polluted and contaminated Sabarmati through 40 stormwater outlets and 48 drainage lines. Shifting of these lines into a new network & with Treatment facilities downstream (*done 2005-09 for First Phase*)
- **Hydrological Study:** To decide the carrying capacity of the River and the design of the Riverfront & other structures in the riverbed (*Done by Dr CC Patel, former Secy GoI, MOWR 2002-3*).
- **Environment Study:** To study the impact on the environment & water/river behavior after the construction of the Riverfront (*done by CEPT University 2003*).
- **Maintaining the Flow of the River:** How to maintain the water level on the front throughout the year is the biggest challenge (*Barrage, Check Dams, or other ways to maintain the water level*), difficult for seasonal rivers.
- **Religious Processions/Rituals:** The river is being used for emersions various idols and rituals invite standing threats to the riverfront if the Community doesn't support it.
- **Sustainability:** Riverfront needs funds for maintenance & operational expenditure, which needs to be worked out before the start of a new one.
- Land boundaries/disputes in the River with Private, Cantonments, Railways, and other authorities need to be resolved in advance.

Community Support for the Lake/River Front Development

- To develop any waterfront project, community participation is necessary for success.
- Stopping idol emissions in Lake & River with the help of the community since 2006.
- More use of Electric/CNG crematoriums and reducing uses of wood-based rituals.
- Connecting religious structures to the river for users to respect their sentiment.
- Creating & maintaining a vibrant neighborhood with common facilities in reclaimed land of 130 hectares
- More than 12000 families (*slum dwellers*) got a decent house of 2 Rooms under Project rehabilitation.
- A weekly Hat-Gurjari Bazaar, a 100-year-old bazaar (*in the Sabarmati riverbed*), very popular among the lower middle & middle class, was given adequate space in reclaimed land with proper facilities.
- Dhobi Ghat (*old washing space*) for city was relocated with a water & treatment facility in the same area.
- New Road network, both sides with parking & recreational facilities for all age groups on reclaimed land.
- All these waterfronts have improved Environment & created public space for people to a large extent.



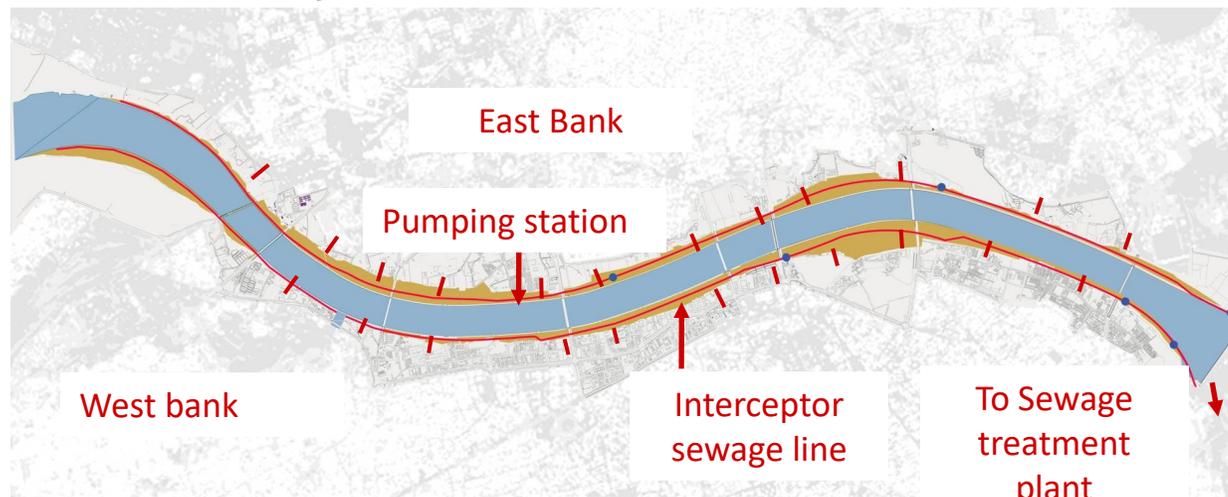
Sewerage Network & Treatments

To stop flow of sewage and to keep the river clean

- Diversion (Interceptor) of Sewage
 - East Bank: 15 Km
 - West Bank: 12.3 Km

Total work of First Phase of 11.5 kms:

- RCC pipe (1.2 m to 2.2 m Dia) 17800 Rmt
- RCC Box drains (1.7 m x 1.8 m to 2.25 m x 1.8 m twin box) 3200 Rmt
- Rising main: 5000 Rmt and GRP pipeline : 1300 Rmt.
- Total drains: 48 Nos (28 on West & 20 on East)
- Junction chambers: Total 41 Nos. (23 on West and 18 on East)

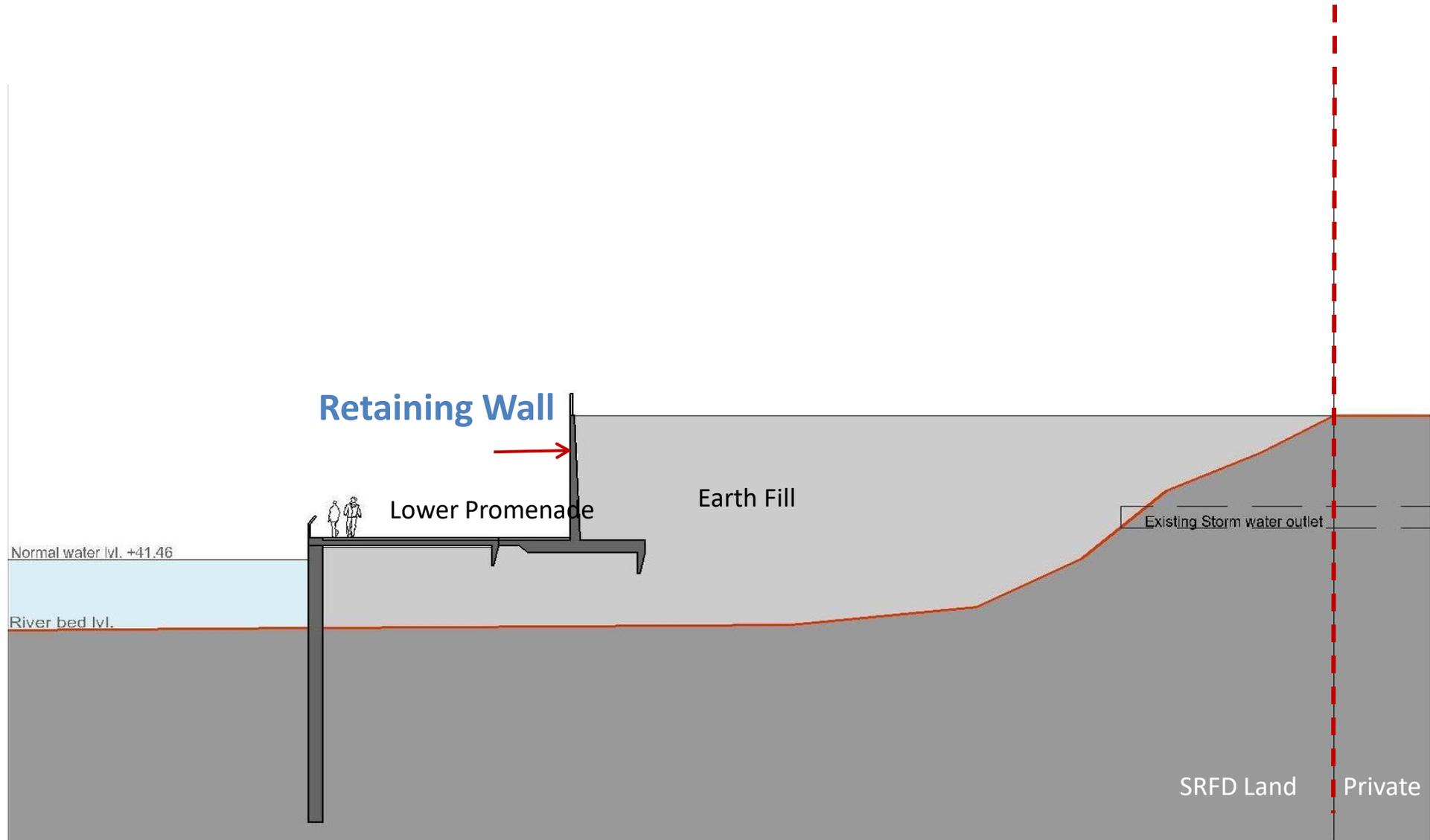


Phase 2 : General Earth Filling, Interceptor Drainage-Network work in progress



Construction Process: Diaphragm Wall & Retaining Wall

- Retaining Walls, Earth Fill & Road network



Dredging: Unique Method Used for earth, filling on both sides.



Construction of Retaining Walls both the Sides



RCC retaining wall :

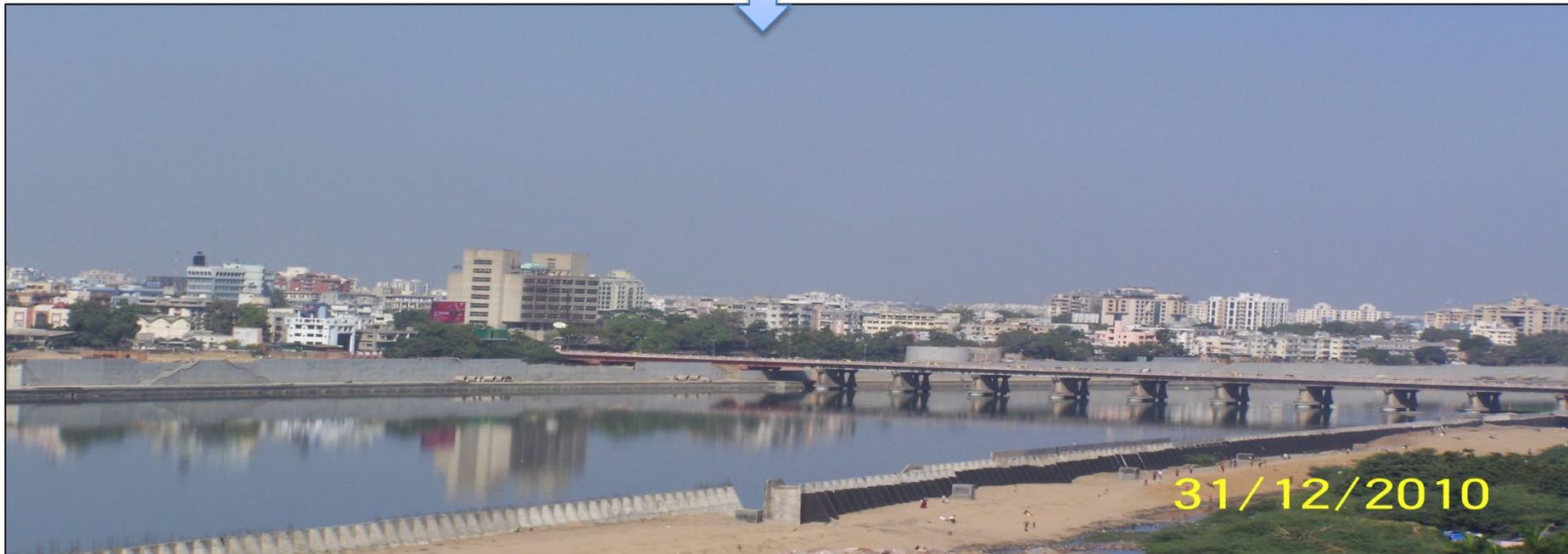
- To retain earth filling and protection up to the high flood level.
- Height: 9.0 m to 4.5 m

13/02/2008

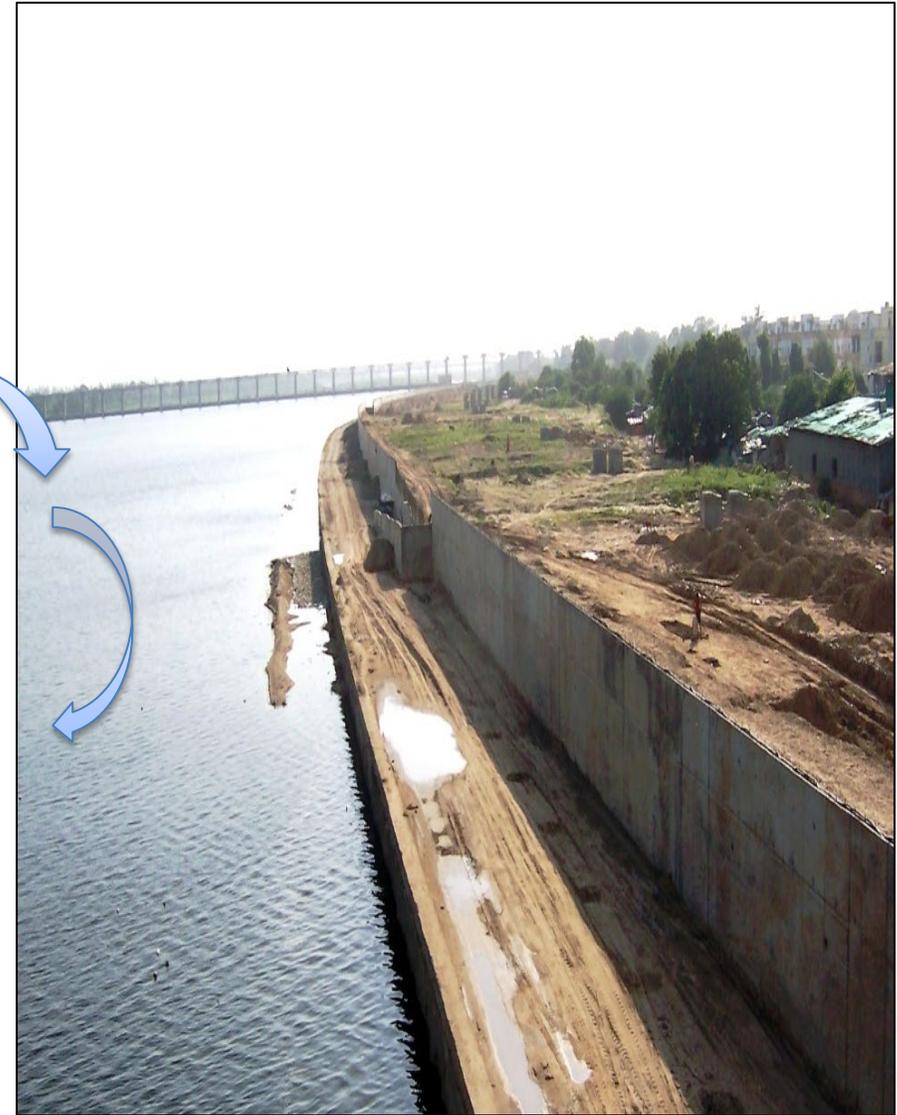
General Earth Fill For Parks/Gardens & Roads



Before - After: near Gandhi Bridge



Before - After: Near Dr Ambedkar Bridge



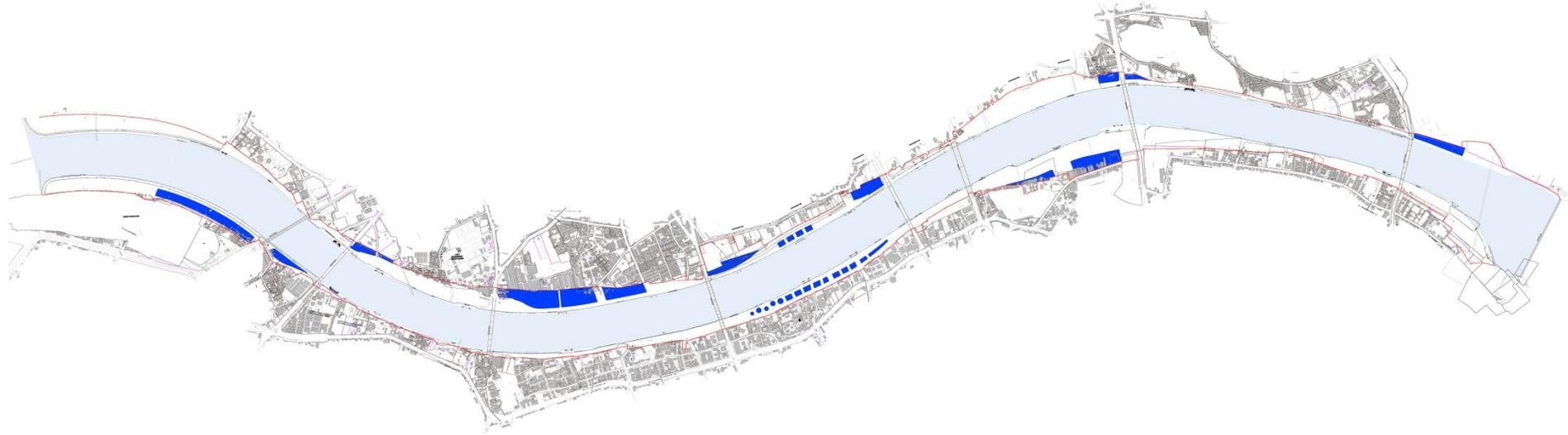
Sabarmati became accessible: During construction



-Aerial View: Shalish Raval

Source: 26th February 2011, I

Proposed Revenue Generation for Project Financing Phase 1



- Total reclaimed Land 202 Hectors in Phase 1 (11.5km) given by the Govt.
- 130 hector land used for public open space/ Park/ Garden
- 18% used for the construction of roads on both banks.
- 14% of reclaimed land assigned for Multi-Use proposed for Financing the Project phase 1 &2 of 17.5 Kms from Barrage to Indira Bridge under AMC.
- Phase 2 is nearly on completion, and now Phase 3 to 6 of 22.5 km connecting the capital city of Gandhinagar is under implementation.
- AMC has given Rs. 240 Cr as Equity & Rs. 2100 Cr As Bridge-Loan to SRFDC

Riverfront View with a Road-Network in 2012-13



Creating network of public spaces

Bio diversity
Park Near Vasna
Barrage on West
Bank : Area 15 Ha.



- Flower Garden
Bh. V.S. Hospital
(W), 4.6 Ha
- Khanpur (E) 2.0
Ha (Proposed)

Recreational Activities Ongoing (Inaugural Photo of 2012)



Boating Facility at three different locations:

- Vallabh Sadan,
- Sardar Bridge and
- Dadhichi Bridge



Phase 2: With a changed design of walkway: at 3 levels



Phase 2: Retaining wall, Earth Filling, & Road as of July 2025



Creation of Public Facilities under the PPP Mode

- Parks, Gardens, Sports Complexes and Public spaces Management of Riverfront.
- River-Cruise on PP mode with a restaurant facility and also with a Jetty.
- To promote eco-friendly transportation, a My-Byk project was launched in PP mode, which is very popular among youths on the riverfront.
- Imagicaa Mumbai is opening one branch on more than 20,000 sq. meter land near Atal bridge on Revenue sharing Basis on a PP mode.
- A huge area is assigned for Industrial/ Commercial & Educational Exhibitions on Riverfront reclaimed land for a longer period with adequate Parking Facilities.
- Large areas are also reserved as an Event Centre for Cultural, educational, and other events, including entertainment on a rental basis (online bookings available).
- Many Sports, entertainment, Cultural and educational activities are under planning stage or under process for Phase 2 and also for phases 3 to 6.

A Cruise on PPP mode





Atal Bridge: iconic foot over bridge

Concession/ Contract Agreements by Govt: BOT/DBO

- Probably construction of the Suez Canal System was the First BOT Project of its kind. The concession was granted by the Egyptian Government to the Concessioner of the Suez Canal during 1849-69 on long term basis.
- In Recent time The World Bank & other International Financing Agencies, Introduced User Charges concepts for financing large Road networks, expressways, long bridges/ Flyovers, and other large infrastructures on a BOT basis and complex Concession/ contract agreements formats were also introduced to safeguard the interests of the Parties.
- E-Portal/Small/Services, Medium, Large and Construction, and long-term service contracts/ Facilities etc
- ROB, RUB, Flyovers, Elevated Corridors, Ports, Jetties, roadways, Road-Transport, Railways, Metrorail, Airports, Waterways, and many entertainment facilities are also on BOT.
- Basic need for BOT is Land/Road/Asset or Right has to be with the Govt/ Org.

BOT Project for Infrastructure Development: A Common Approach

- Due to financial constraints, the Governments reduced their recruitment process under various economy-measures and the capacity to deliver is minimized to a larger extent.
- Where the Government/Organisations could not implement certain projects due to Financial constraints, and the pressure for building the facilities is unavoidable, BOT is one of the options to create such facilities for people.
- Where huge Investment is required to develop certain infrastructure with very slow or low return, or the gestation period is too long. The Government may consider using this route and utilise the savings in other priority sectors like health, education, or social infrastructure.
- Where the government may not have the machinery/ Physical capacity to supervise or implement, and the private sector can recover its investment in the given time frame, the expected Revenue stream or Govt can pay in long-term instalments without putting undue pressure on the Exchequer, BOT/DBO became an easier route to implement/ Built such large infrastructure projects like Airports, Ports, Express Highways et.

Public Accountability in PPP Mode and Auditor's Concern

- Under PP mode, concession agreements are signed on a long-term basis, generally audited in beginning when Contracts are signed between the parties. Many conditions changed during the implementation/maintenance, probably not getting proper scrutiny.
- Designed, Built & Operate (*BOO*) contracts are very common in PPP modes nowadays, but in the absence of departmental capacity for interventions, leads to a poor quality of workmanship if the Independent Engineers/ PMC or TPIs are not competent to handle or otherwise.
- Audit interventions (*Pre-Audit*) must be made a precondition in the contract agreement: If any major concessions are given or basic conditions are changed or compromised, to that extent an Audit must be made compulsory before making such changes by the authorities.
- During the prolonged period of operation/maintenance, Private Partners keep writing to the authorities (*Employers*), but replies/resolution of such correspondence are generally ignored/overlooked by the officials, which opens a Flood-Gate of Arbitrations and generates post-retirement employment opportunities to retired Judges, engineers and bureaucrats. This system needs proper scrutiny to avoid huge financial responsibility on the Exchequer.
- To get long-term benefit, departmental capacity needs to be enhanced/built for keeping checks & balance on large contracts, a time-tested method of Governance.



Thank You