CITY OF 1000 TANKS

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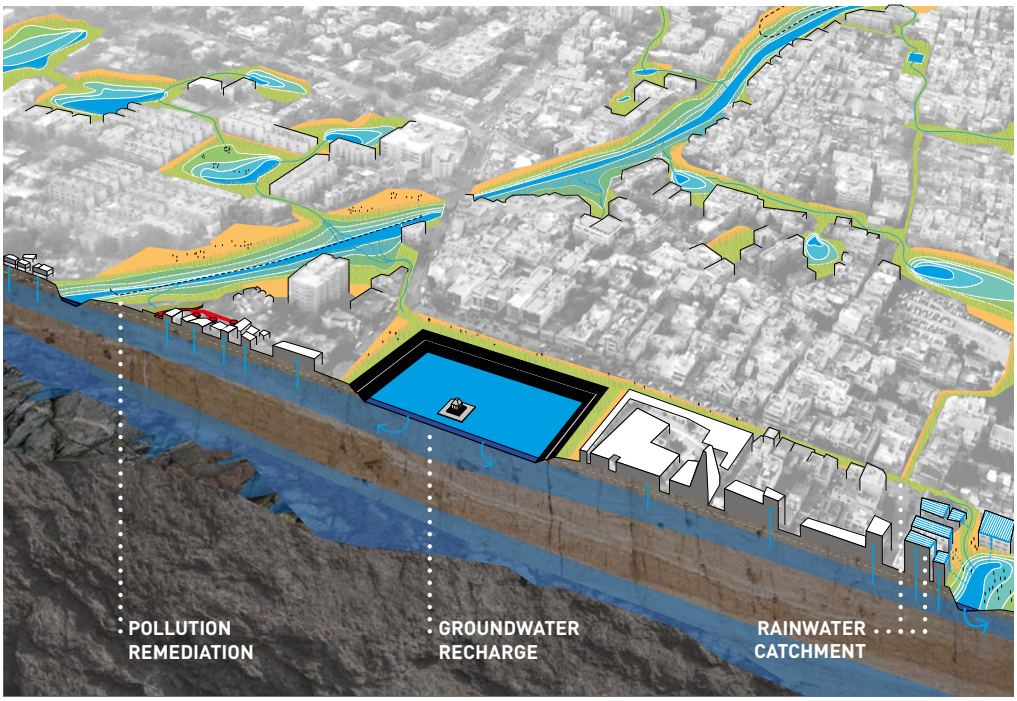

SUMMARY

The project City of 1,000 Tanks identifies the interrelationships between the underlying causes of **floods, water scarcity and pollution** in Chennai and offers a holistic solution to these three problems. Recognizing that 20th century flood protection measures have deprived the city of its available water, we propose to **collect and clean water** by means of a **blue-green infrastructure of tanks and cleansing channels**, rather than drains. To **recharge aquifers** during the yearly monsoon and release reservoirs over long stretches of time, the city must transform into a **dynamic seasonal landscape**. Building upon interconnected art and pilot projects, we introduce an **incremental approach** to realize this strategy. We consider spatial, technical, organisational, cultural and economic challenges in a staged and adaptive reform of the current water management system to achieve a better use of Chennai's abundant water provision.

APPROACH

PREVENTING FLOODS AND DROUGHTS WITH A NEW DECENTRALIZED URBAN WATER SYSTEM- Existing temple tanks, new tanks and ponds, bio-swales and constructed wetlands for local wastewater and rainwater run-off purification will form together a new holistic urban water system. City of 1,000 Tanks catalyses collection, cleaning, recharge and recycling functions into the urban space rather than keeping them far away outside and under the city.

ANTICIPATING FLOODS AND DROUGHTS WITH INTRODUCTION OF SMART BUILDING TECHNOLOGY- The form of the built environment is both an important consumer and producer of water. Therefore, any future development of the hydrological system will also influence the design of buildings themselves. New innovative design types combining architecture, urban space and water technology as well as applicable measures for existing buildings will be proposed.

DEALING WITH FLOODS AND DROUGHTS BY REVIVING LOCAL GOVERNANCE- Historically, the maintenance of water bodies, such as desilting and cleaning, was performed by locals. Today this system is centralised with the Greater Chennai Corporation engaged in all functionalities. This leads to a tendency towards large scale, inflexible systems with slower metabolism than urban growth. The project will create an active relationship between water management and the community at this scale. Empowering local communities using social and cultural engagement strategies and reviving ward-level management helps create water capacity and the possibility to manage flood events locally.

FOCUS AREAS

1.NEW CMA- 'TOWARDS A REGIONAL URBAN LANDSCAPE STRUCTURE'

The construction of a sustainable and adaptive water system in the city and metropolitan area of Chennai requires an approach concerning a new balance of water, landscape and urban patterns at the regional scale. This project consists of a regional vision and masterplan for the New Chennai Metropolitan Area spanning 8,878 km2. This overarching structure links the four other projects to a macro-scale vision.

2.MYLAPORE TANK AREA - 'MYLAPORE TRAIL'

A historic site consisting of the famous Kapaleeshwar Temple Tank in close proximity to the Buckingham Canal. It consists of mainly residential developments and small-scale commercial establishments. Tanks historically acted as ground-water barometers that linked water management to the urban realm in a visual and understandable way, but this connection has been lost and tanks no longer perform the role of water management. Pilot projects will be designed to enhance ground water collection, recharge, treatment and overflow connections, integrated in the visible space of the neighbourhood.

3.CHITRA NAGAR AREA - 'BEST CASE FLOOD RESILIENT COMMUNITY'

Residential settlement consisting of diverse low-income housing establishments situated on the banks of the Adyar River. Housing nearly 9,000 inhabitants, the settlement is highly prone to flooding during normal rain events and was severely affected during the 2015 monsoon. Poor sanitation and lack of solid waste management further aggravate water issues and need to be addressed to present a 'best case' model for similar low income neighbourhoods across Chennai, creating resilience through flood and drought protection measures.

4.MAMBALAM CANAL AND SURROUNDINGS - 'MAMBALAM ARMS'

This is the last remaining trace of the former Long Tank reservoir and today it is highly polluted with sewage and solid waste. The 5.6 kilometre-long canal is lined with residential, commercial and government buildings as well as informal settlements and slums, the principle drain for a 12km^2 watershed that is the commercial heart of the city. As the area floods chronically, pilots across the whole area to increase recharge are to be explored in conjunction with the restoration and public space development of the canal itself.

5.KOYAMBEDU MARKET AND SEWAGE TREATMENT PLANT AREA - 'GREEN HEART KOYAMBEDU'

Koyambedu area is a major transit hub for Chennai, containing the city's largest perishable goods market, the Chennai Mofussil Bus Terminus (CMBT), the Koyambedu Metro Depot and a newly installed sewage treatment plant adjacent to a marshland and the side-arm of the Cooum river. At risk of flooding, the vulnerability of the site is a major risk for the city at large. Pilot projects that enhance ground infiltration, waste water treatment and recharge and sanitation are to be explored in this area to ensure critical services are safeguarded even at the time of any disaster.