

Sponsored Thesis Project Competition on "Re-imagining Urban Rivers"

Planning for Yamuna to mitigate wastewater flow effects on the river

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UNDERSTANDING THE NEED & ISSUES

CASE OF DELHI, YAMUNA

The Yamuna flows through Delhi for only **22 kilometers** (or less than **1.6%** of its total length). However, the wastes and toxins dumped into that narrow swath account for roughly **80%** of all pollution in the 1,376-kilometre-long river.

THIS IS AS A RESULT OF

- 31%** UAC have sewer laid only
- 20%** wastewater discharged directly
- 70%** STPs don't discharge treated water as per standards
- 69%** CETPs don't discharge treated water as per standards

WAY-FORWARD

A combination of measures to tackle rising concerns on wastewater pollution.

Structural at Site Level



Soft at Floodplain Level

At **Site Level** to overcome the issue of connecting areas to centralised treatment plant

- Proposing DWWM

At **Flood Plain** to overcome the issue of changing floodplain Land-Use & agricultural run-off through

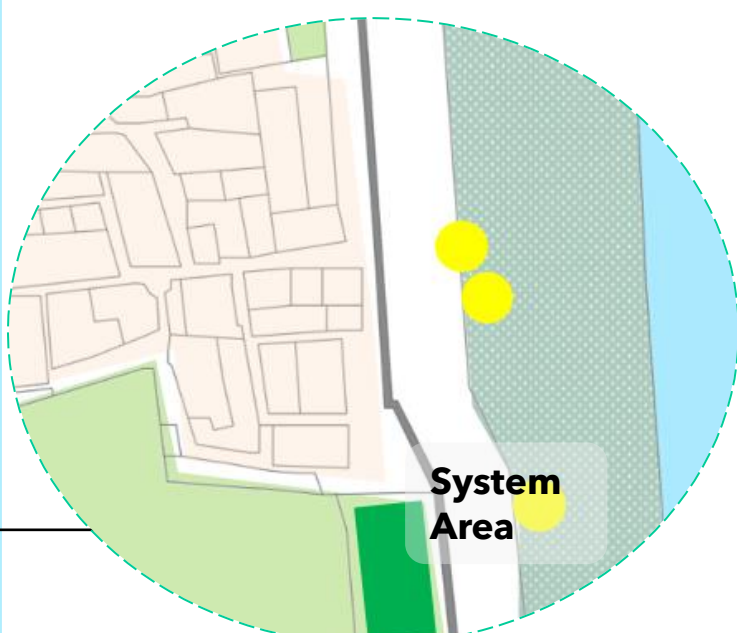
- **Nature Based Agriculture**
- **Reuse of treated wastewater from DWWM**

Demonstrating DWWT at New Aruna Nagar Colony through Camus-SBT

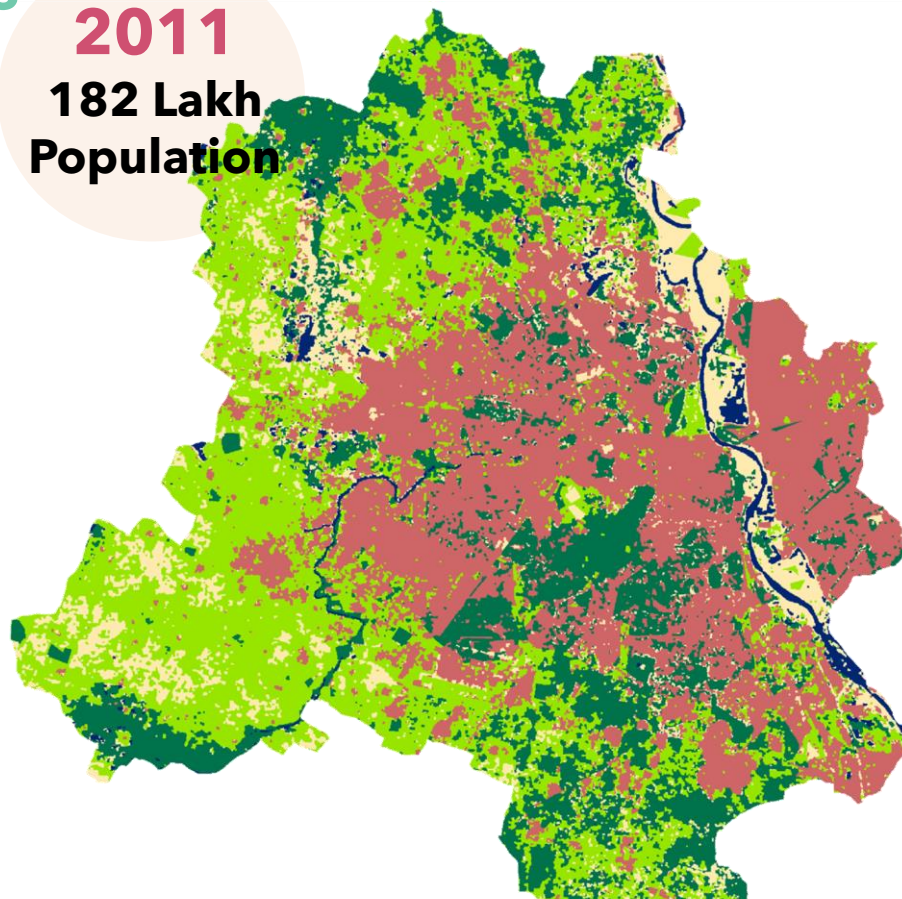


Selection Criteria

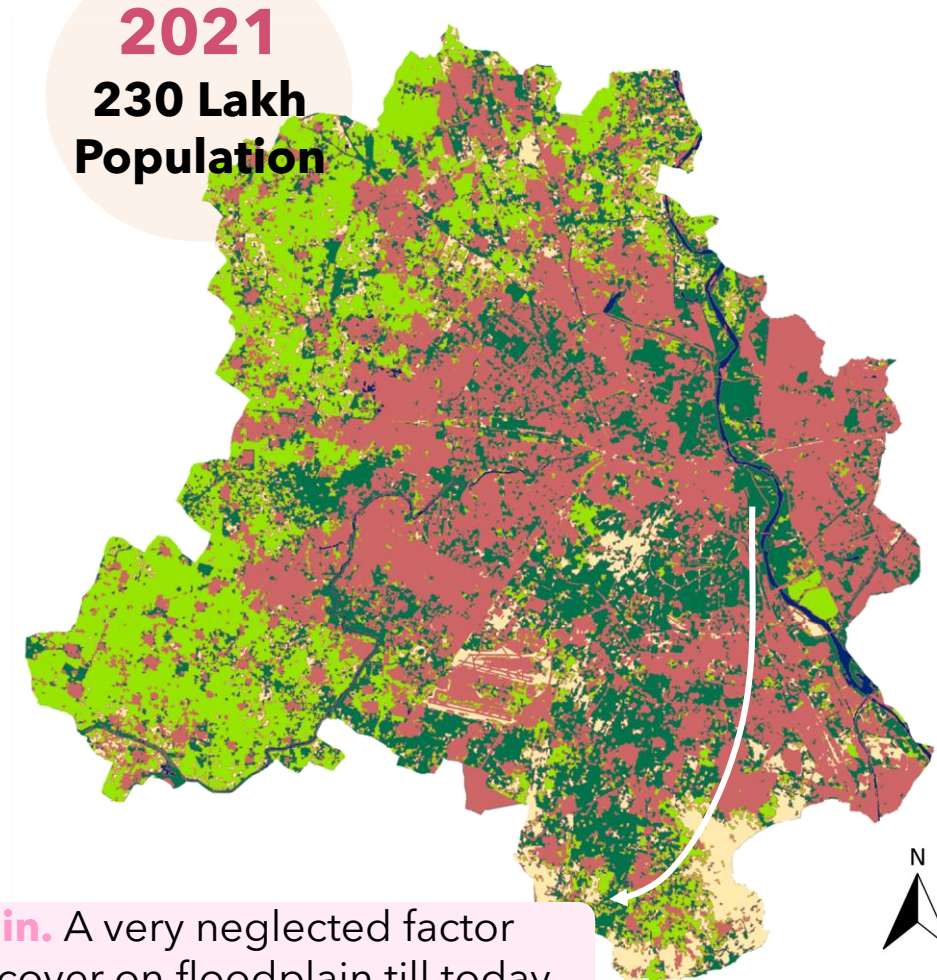
Capital Cost
O&M Cost
Land Required



2011
182 Lakh Population



2021
230 Lakh Population



3,300 ha - Under farming on floodplain. A very neglected factor behind presence of whatever left green cover on floodplain till today

LULC ANALYSIS

44%, major negative change observed in terms of area of Yamuna Ignoring the **river-flood-plain interactions** which play significant roles in the ecology of a river, most of the floodplain has been encroached by constructing high levees.

Vision for Zone 'O'

Making recognized long-standing ground realities i.e. agriculture on floodplain sustainable that will contribute to better water quality. Integrating Nature-based farming with proposed parks creating a strong **visual & physical** connection b/w water, park & the city and contributing to urban image.



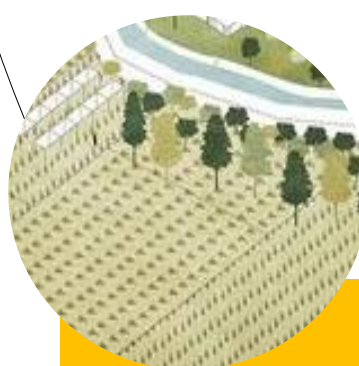
ENVIRONMENTAL

Ecological restoration of the river and its surroundings, filtering runoff and fostering biodiversity richness



SOCIAL

Community engagement and river-people connect through integrated walkways within farmlands



ECONOMIC

Economy generated from riverine farming and supporting sustainable livelihood through green jobs

