

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

Integration of spatial technology and citizen participation for nature-based remediation of river Hooghly.

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Course Discipline: M. Tech Environmental Engineering



BACKGROUND



- River Hooghly – Major source of potable water
- Transportation, tourism and religious purposes
- Degrading quality of water, affecting benthic communities.
- Need for re-establishing citizen and river connect

Dakhineswar Temple Ghat

- 50000 devotees approx. visit daily and 1.4crore people annually
- Babughat
- 2 lakh people daily

- There are about 45 boats in all [running between Kolkata and Howrah]

Princep ghat

- Comparatively cleaner ghat

ANALYSIS AND KEY ISSUES

AIMS AND OBJECTIVES-

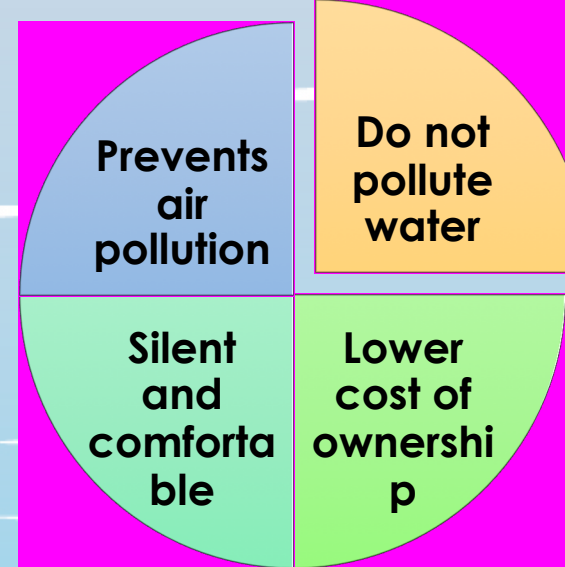
- ❖ POLLUTION QUANTIFICATION AND FRAMEWORK PROPOSAL
- ❖ FEASIBILITY STUDIES OF FERRY SERVICE, AND SOLAR POWERED BOATS
- ❖ DEVELOP SPATIAL TECHNOLOGY SUPPORTED APP-BASED SOLUTION

SOLAR POWERED FERRY SERVICE

Initial cost is more than diesel powered boats

Yearly energy cost Rs 65000 (Diesel costs around Rs. 22,20,000 approx)

Solar Ferry-274.4 lakhs, Diesel Ferry-914.7 lakhs in a 20-year lifecycle



APP FOR CITIZEN PARTICIPATION

Specific for river

Connecting people and enabling them - remediation of river and its bank

Assisting WBPCB

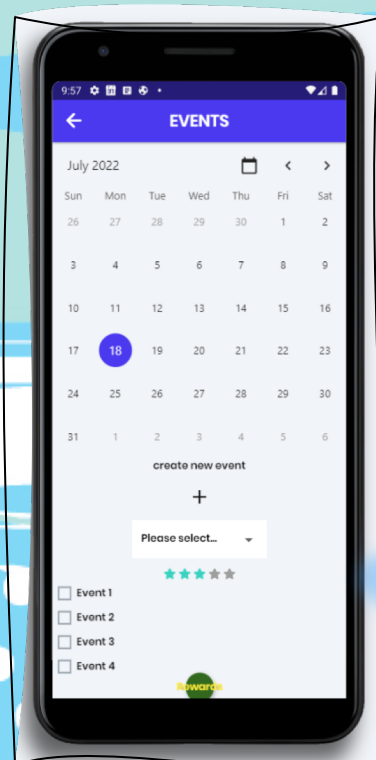
Promote usage of solar boats-incentive based system for citizen

Option for citizen volunteering for NBS

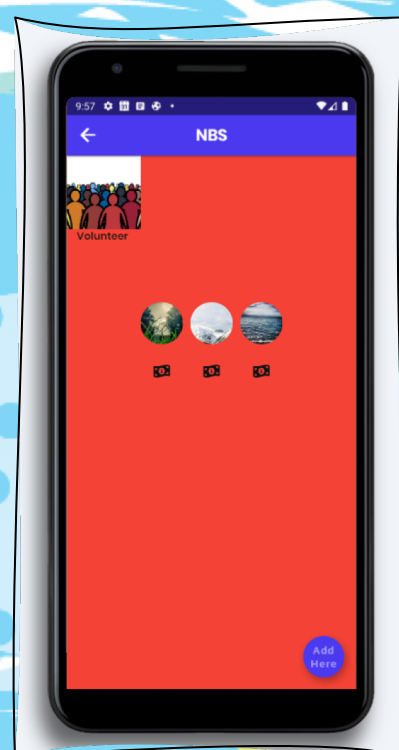
Create event

PROPOSAL

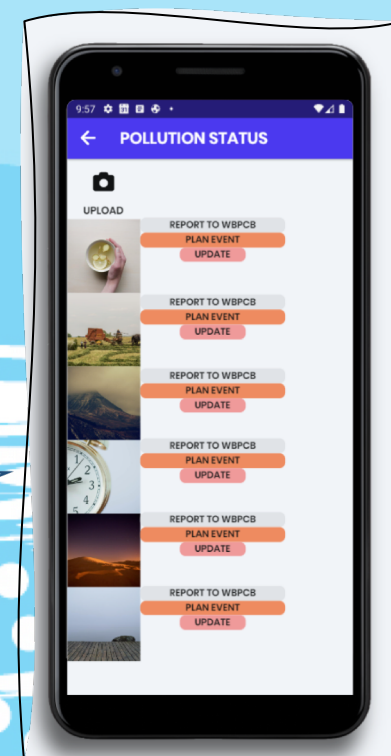
- Enables user to create events
- Select an event get details and rate it
- Checklist for created events to track status



- Volunteering for NBS
- Option to choose from NBS
- Donate for desired NBS to be carried out
- Including citizen in remediation processes
- Educational and direct involvement of citizen



- Upload pollution status
- Helping report pollution to WBPCB
- Plan an event based on the status of polluted location



- The page gives info on carbon footprint and other statistics related to the solar powered ferry service
- Fare chart
- Ticket booking system
- Reward on using app to book ticket for solar powered ferry

