

# Student Thesis Competition (STC) Season 5 on “Re-imagining Urban Rivers”

Architecture that heals the river - Incarnation of Manikarnika Ghat for Eco-Spirituality

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## INTRODUCTION TO RESEARCH



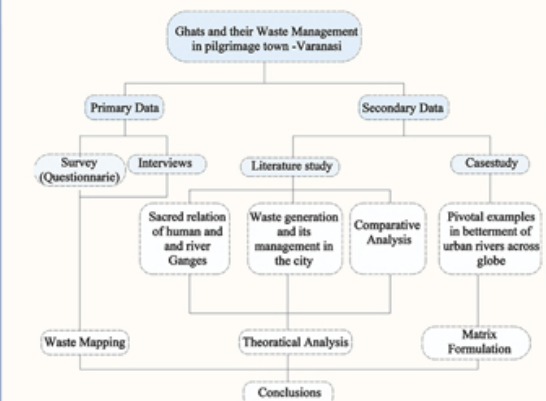
“RELIGION IS THE MANIFESTATION OF THE EXISTENTIAL CRISIS”

India's **cosmic capital**, boasting as one of the world's oldest inhabited urban settlements, features a vast sacred landscape where various religions perform rituals along its Ghats (river-fronts). This city stands as a central figure, illustrating its impact on the environment and the dependence on water for locals, fishermen, and farmers across its delta plains. Varanasi is adorned with a diverse tapestry of culture that resonates with mythical narratives. However, religious practices raise fundamental questions about their relevancy today

## RESEARCH AIM

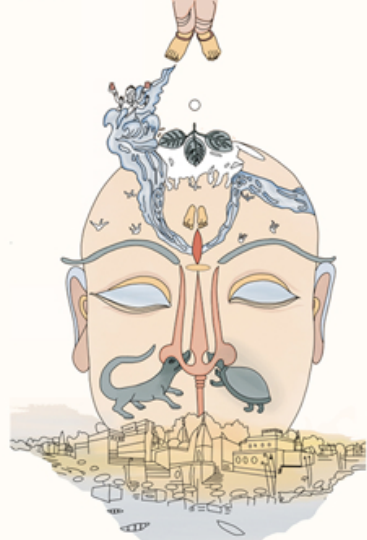
The intent of this research is to **identify the types of waste generated on these Ghats to understand its impact and the strategic ways to manage this waste with different possible methods within current situations and contexts.**

## RESEARCH METHODOLOGY



## OBJECTIVE

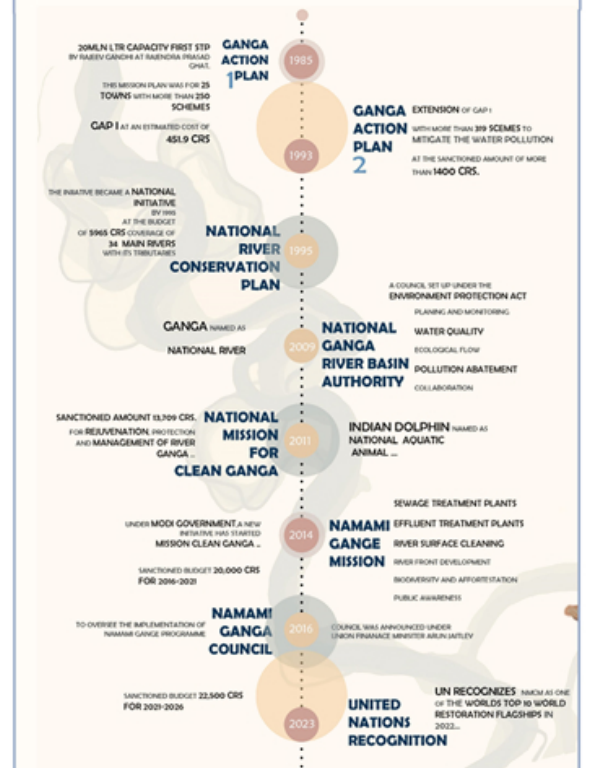
- To study the spectrum of human association with rivers, Ghats, rituals, and their belief practices
- To analyze different types of waste from a comparative study of various Ghats. (most active to least used riverfronts).
- To propose possible solutions for the betterment of river and human settlements within the contextual circle.



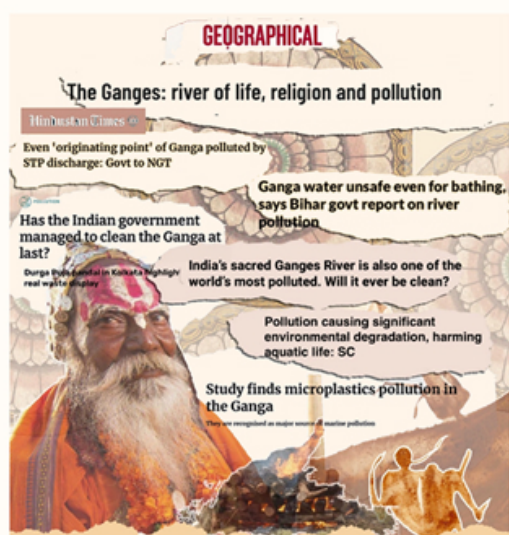
## RESEARCH FRAMEWORK

Sub Objectives	Method	Source of Information
Studying the relationship of rituals with river Ganga.	Primary and secondary	Site visit Articles Research Papers Documentaries
Examining different type of wastes from the ritual activities.	Primary and Secondary	Site visit Articles Research Papers Documentaries
Understanding the susceptibility of river Ganga in the precinct of Varanasi.	Secondary	Namami Ganga annual Reports 2019-2023
Comparative Analysis of different water quality standards within the precinct of Varanasi	Secondary	Namami Ganga annual Reports 2019-2023
Documenting ritual activities and waste generation	Primary	Site visit
Waste mapping exercise across the three ghats	Primary	Site visit
Interviewing people with regard to current scenario and possible solutions to mitigate the ritualistic waste.	Primary	Site visit
Inspecting the current scenario of waste management on the Ghats.	Primary	Site visit
Examining different approaches from pivotal examples of waste management across the globe.	Secondary	Articles Research Papers Documentaries

## TIMELINE OF CLEAN GANGA MISSION



## NEED OF STUDY

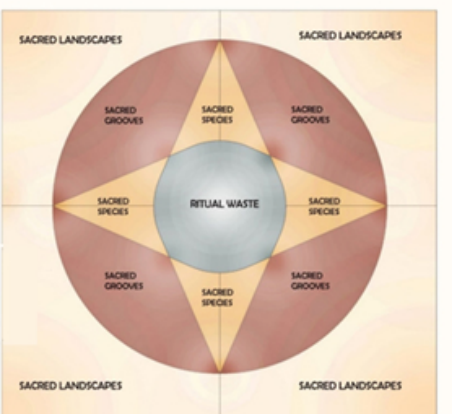


In spite of highly sanctioned initiatives and approaches towards the declination of water pollution, the **water quality standards are tremendously decreasing year by year**. Other than city waste, **Ritual activities and waste generated from this Activities plays a major role in terms of water pollution**. The growing footfall following the rituals or the generations of old tradition beliefs and rituals are a reason to **waste generation**

## RHYTHM OF MYTHOLOGIES



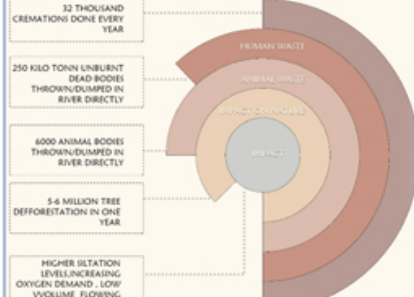
## BITTER TRUTH



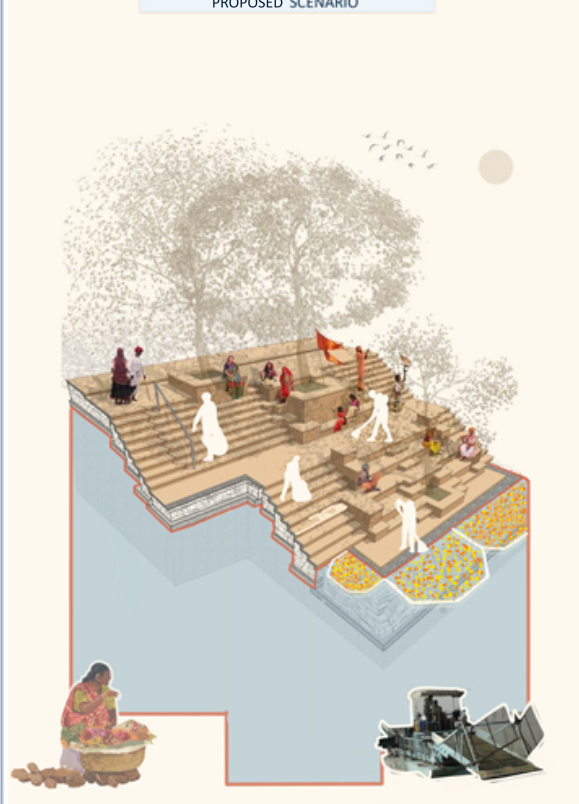
## CURRENT SCENARIO



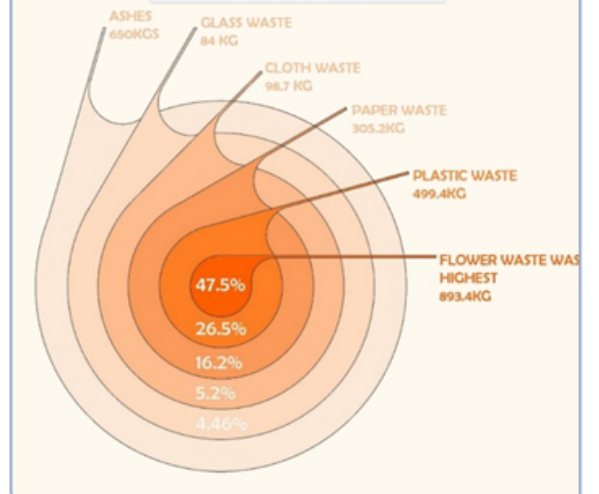
## CURRENT SCENARIO



## PROPOSED SCENARIO



## CURRENT SCENARIO



## SITE STUDY / OBSERVATION



## ASSI GHAT



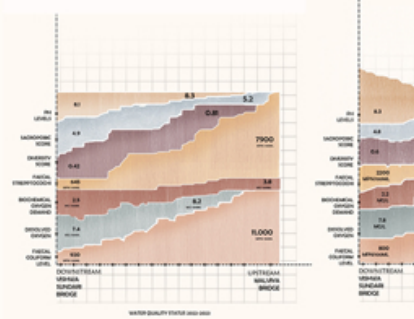
## DASHASHWAMEDH GHAT



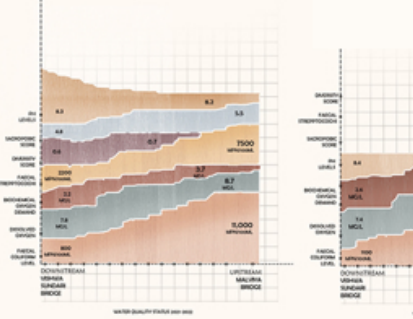
## MANIKARNIKA GHAT



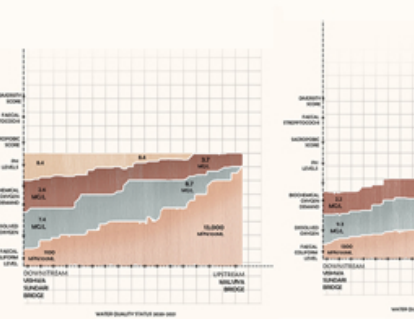
## ANNUAL REPORT 2022-2023



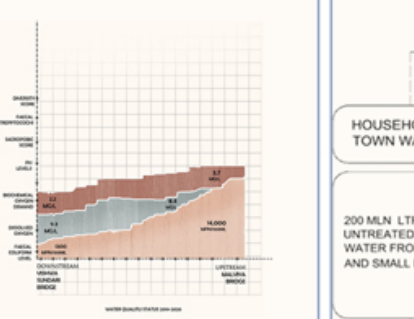
## ANNUAL REPORT 2021-2022



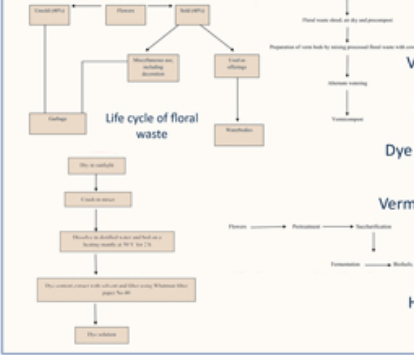
## ANNUAL REPORT 2020-2021



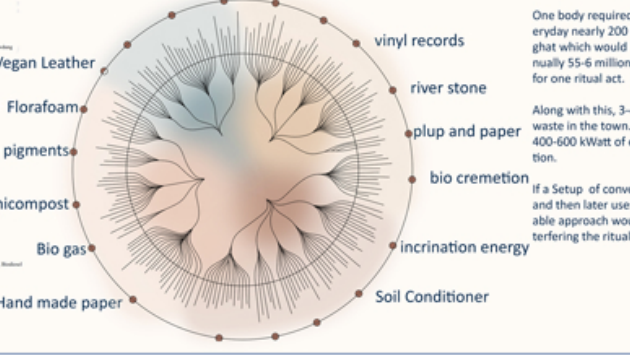
## ANNUAL REPORT 2019-2020



## CASE STUDIES



## VALUE ADDED PRODUCTS FROM WASTE



## WAY FORWARD

One body requires approx. 200-280kg of wood. Every day nearly 200 bodies are getting cremated on the ghats which would require about 4000kg of wood. Annually 55-6 million tons of wood is getting deforested for one ritual act.

Along with this, 3-4 million tons of flower is getting waste in the town. 1 Ton of waste can produce upto 400-600 kWh of electricity by the process of incineration.

If a Setup of converting floral waste into electricity and then later uses it for electric cremation, a sustainable approach would be seen without disturbing or interfering the rituals of people.

## COLIFORM BACTERIAL LEVEL

