Drain The Drama

(Drainage problem)

Team Members

- INCHARA J C
- SHRINITI S M
- SPOORTI K
- DEEPTISINGH R
- MANIKANTH S
- TANU M
- ARADHYA S
- AMRUTESH M
- SHREYA H

FACILITATORS

MR. ABHISHEK P S

AIKYAM MENTOR COACHES

MRS. PADMA SANAMPUDI

MR. DAVID GILSON

WHAT CHALLENGE DOES THIS PROJECT ADDRESS ?

We aim to stop the spread of germs and breeding of mosquitoes caused by stagnant drainage water near homes in our community. We observed that household wastewater was collecting near their homes, and no actions are being taken by the local administrators to solve this major source of health issues.

Unclean open drainage

Engagement with the Local Community

Spreading Awareness

WHY DID THE TEAM SELECT THIS TOPIC ?

- Our team observed that the problem of stagnant wastewater and improper drainage was increasing year to year
- The people living in these localities are facing health issues caused by the unhygienic surroundings and the bad odor
- Stagnant water causes increased mosquito breeding which spread diseases

Trash in the stream

Stagnant Water

Animal waste in the open drain

HOW IS THIS A REAL-WORLD PROBLEM ?

In India, poor people live in communities with inadequate facilities and infrastructure that support healthy, sustainable life. As population increases many are currently living in unhygienic surroundings where they can't lead peaceful and happy life. And they face severe and dangerous health issues. Our team members see infrastructure problems such as poor drainage in nearby villages.

LEARNINGS & DISCOVERY FROM COMMUNITY ENGAGEMENT

- We interviewed several members of the community impacted by this issue
- We came to know about the different diseases the people faced because of stagnant wastewater
- We also came to know about how to keep our surrounding clean and how to avoid dirty, stagnant water from gathering in their surroundings
- Through interviews with experts, engineers, and even residents affected by poor drainage, we learned how vital proper drainage is not just for preventing floods but also for maintaining hygiene and supporting agriculture
- One key discovery was that, beyond the technical aspects, the social and economic impacts of poor drainage are significant. For example, communities without proper drainage face increased health risks from stagnant water, such as the spread of diseases like malaria
- Interviews also revealed that while many areas have outdated drainage infrastructure, simple improvements—like community-driven water management practices or modernizing existing systems—could make a huge difference
- By the interview process we learnt how interconnected the environment, infrastructure, and public health are, inspiring us to think more critically about how we design and maintain drainage systems.

Interview with villager living beside the stream

THE RESEARCH DATA THAT HELPED DETERMINE WHAT CAN BE DONE

We gathered data as this major problem was near where they lived. They see the effects of this problem everyday. We identified drainage problem as a critical issue in their community. These observations helped them to explore potential solutions.

We also looked at:

- **Rainfall and Climate Data:** Understanding the amount and intensity of rainfall over a period can help determine if drainage systems are insufficient to handle storms. For example, historical data on rainfall can show if current systems are outdated or if more frequent flooding events are occurring.

- **Maintenance Records:** Research data on how often drainage systems are maintained or cleaned can help determine if maintenance gaps are contributing to drainage failures. Inadequate maintenance can lead to store the stagnant water which eases severe health issues.

- **Water Quality Data:** Poor drainage often leads to contaminated runoff. Measuring pollutants like sediment, plastic, or chemicals in water runoff can help assess the impact of drainage problems on local water bodies.

THE INFORMATION LEARNED MOTIVATED US TO ACT IN AN IMPACTFUL WAY

- **Encouraging Community Involvement:** Interviewing people gives us a platform to engage our communities directly. When local people feel heard, they may be more likely to support or join efforts to address drainage and environmental concerns.
- **Team Empowerment**: The process of interviewing people and learning more about a community's challenges empowers us to become active citizens who are not just learning in the classroom but also making tangible impacts in the world around them. By being directly involved in solving local problems, we build a sense of purpose and responsibility.

PHOTOS OF TEAM ENGAGING WITH OUR COMMUNITY

Our Team is ready to spread awareness

Team learns about health issues from villager

Municipal does not clean often enough

Villager describes water coming to the house during flood times

OUR PLANS FOR A PERMANENT CHANGE

- We plan to petition local municipal offices to act on easing the problems before they get worse.
- We understand there are many solutions that can be taken up, such as:
  - Build permanent drainage system during construction.
  - Drain covers and grates are placed over openings in surface drainage systems.
  - Cleaning gutters, re-grading the area, installing French drains, and installing a sump pump.
  - Build up Low Spots. Areas that have low spots or sunken areas that hold water and are slow to drain.
  - A drainage plan should look at how rainwater flows in and out of an area. It should include where it flows into the ground, downpipes, or drains.

INTERVIEW QUESTIONS

- Namaste , What is your name?
- What are the biggest challenges you and your community are facing regarding drainage problem ?
- Have you ever addressed this problem to the local municipal corporation?
- For how many days would they come and clean this area?
- Have you undergone any sickness or disease because of the drainage?
- Have you noticed if there is enough awareness of waste disposal to prevent drainage clogs ?
- Any innovative drainage solutions you have observed in other places and would like to be implemented in your place to improve your drainage infrastructure ?
- How do you manage the Drainage problem during rainy season ?

LINKS TO INTERVIEW VIDEOS

Open drainage problem in village

Team interviewing villager about drainage problem

Team interviewing villager about stagnant water in stream

Buffalo in stream, unhygienic

Unclean water from open drain close to homes

Interviewing villagers about the rubbish in the stream

CREATIVE USE OF TECHNOLOGY IN THE PROJECT

MOBILE CAMERA TO TAKE PHOTO AND VIDEOS

Google Photos

GOOGLE PHOTOS FOR UPLOADING PHOTOS AND VIDEOS

zoom

ZOOM APP FOR CONDUCTING MEETINGS WITH MENTORS

Canva

CANVA APP TO PREPARE SLIDES

WHATSAPP FOR THE INFORMATION FROM MENTORS

HOW THE TEAM INFLUENCED OTHERS

We were able to influence others through an awareness campaign by effectively communicating the importance of solving the drainage problem.
During the interview, we influenced others through the following details.

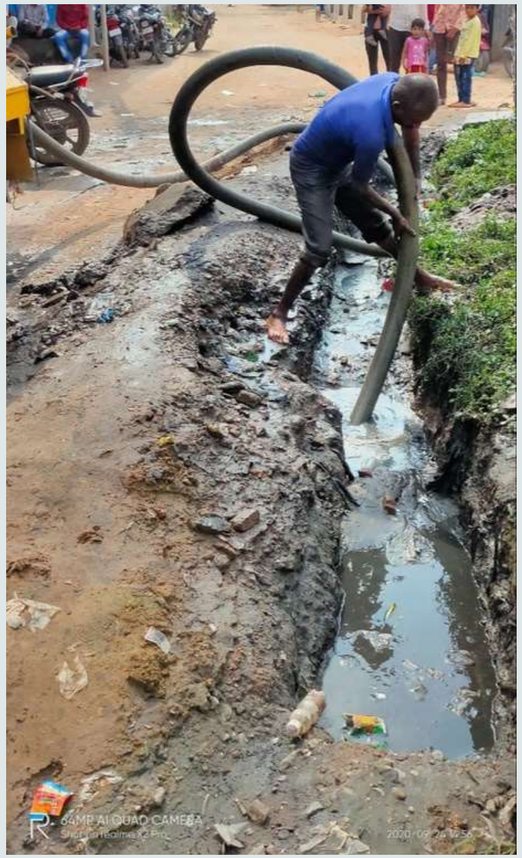
Increased Awareness:
By directly interviewing local residents, we helped raise awareness about the drainage issue. Many people might not have realized the scope of the problem or its impact on the community. Our interaction has highlighted the urgent need for improved drainage systems.

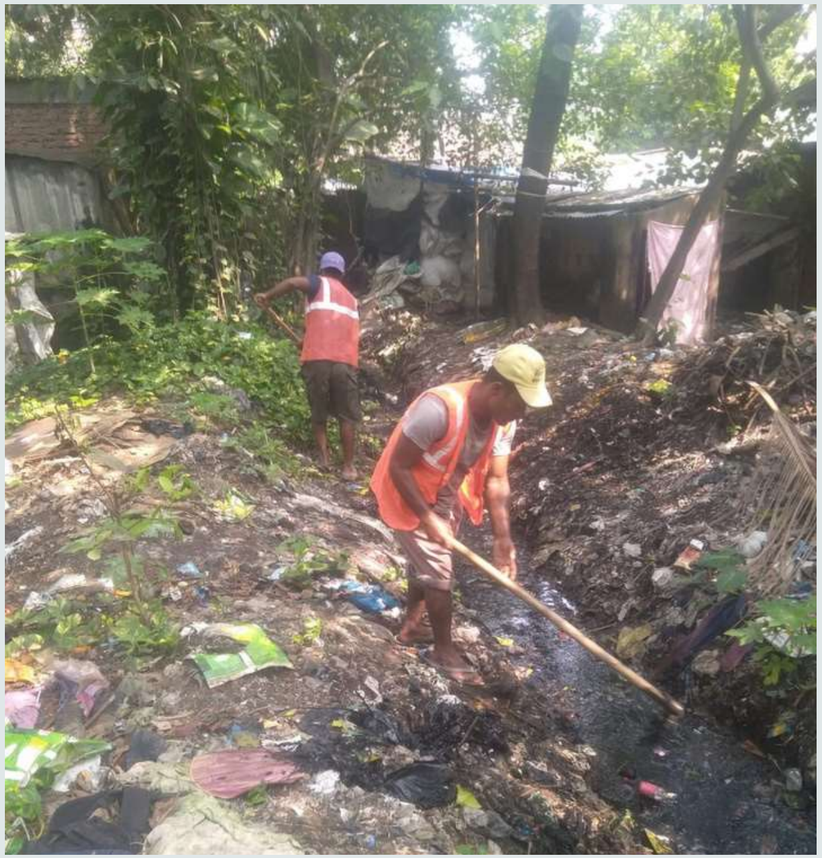
Team member influencing villager’s viewpoints

Engaging the Community:
The act of interviewing people makes the community feel involved. When residents and local workers see students actively asking questions and seeking their information, it creates a sense of empowerment. They might feel more invested in the issue, which can lead to increased support for solutions or initiatives to tackle the problem.

Building Trust with Local Authorities:
We presented our findings in a clear, well-researched manner, to influence local government officials or organizations responsible for infrastructure. The data collected during interviews provides valuable information, making it easier for local authorities to understand the urgency of the issue and consider investing in drainage improvements. We began by thoroughly assessing the drainage issue, using data and observation to pinpoint the root causes of the problem, whether it was poor infrastructure or maintenance issues.

IMPLEMENTATION PHASE





Cleaning the drainage system with help of Town Municipal Corporation workers .