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THEWATERAGENCY

PROPOSAL

GEORGETOWN WATER RESILIENCE IMPROVEMENT ACTION

RAINWATER HARVESTING SYSTEM

BY OCEANIC UTM

TEAM MEMBERS

Abila Hena Anayet

Teng Zheng Yi

Tan Yi Hao

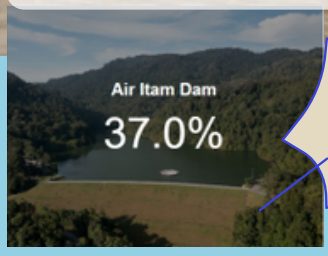
PATRIMONIO MUNDIAL
WORLD HERITAGE
PATRIMOINE MONDIAL

THE BIG IDEA

PROJECT BACKGROUND AND CONTEXT

Georgetown, a bustling urban landscape located north of Penang Island, has proved its urbanisation too unprepared for incoming water disasters. **Local residents** juggle from **floods** due to intense rain to **water scarcity** in drier periods. Sustainable alternatives are crucial for reliable water supply.

Water Scarcity



The effective water capacity at Air Itam Dam is less than 50% during dry season!

Frequent Flooding

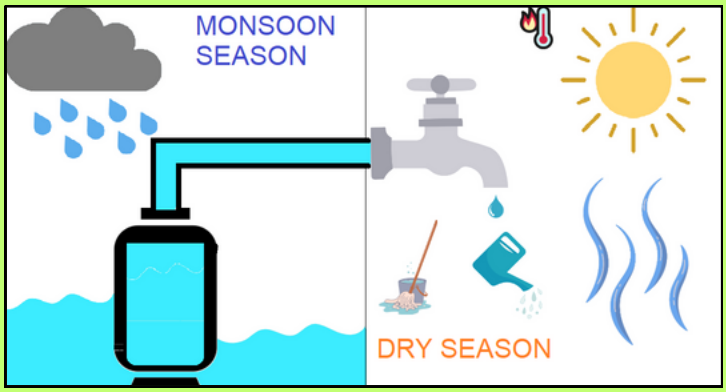
Lack of awareness

Due to the cheap water bill, Penangites have lack of concern on water availability

The truth is, 80% of Penangs raw water is sourced from Kedah's Sungai Muda.

PROJECT APPROACH AND METHOD

THE RAINWATER HARVESTING EFFECT



Rainwater harvesting offers a pivotal solution for Georgetown's water challenges. By **mitigating surface runoff during heavy rainfall, it curtails flood risks**, enhancing the city's resilience to extreme weather. Simultaneously, the system **alleviates water scarcity during drier periods**, providing a sustainable and supplementary water source for the community. This approach significantly **reduces strain on traditional water sources**, fostering their preservation and sustainability.

PROJECT OBJECTIVES

Flood Mitigation

Sustainable Water Use

Community Engagement

Feasibility Demonstration

PROJECT IMPACTS

REDUCTION IN STORMWATER RUNOFF

REDUCTION IN MUNICIPAL WATER CONSUMPTION FOR USERS

WILLINGNESS TO COLLABORATE IN ENVIRONMENTAL MOVEMENT

THE PILOT PROJECT

CONCEPT

Implementing affordable rainwater harvesting system applicable to residents with high water demand to exemplify maximising water usage with low investment.

STAKEHOLDER MAPPING

Residential Communities

- Located in flood-prone area
- Has high water demand
- Uses water for cleaning and gardening purposes

SCOPE

Suitable site for rainwater harvesting installation will be:

Commercial Area

Public Spaces

Strategic Area

PROJECT TIMELINE

WEEK 1-2 — COMMUNITY ENGAGEMENT AND SITE ASSESSMENT

- Engage community leaders and residents.
- Conduct workshops to introduce the project.
- Identify suitable locations for installation

WEEK 2-3 — COLLABORATIVE PLANNING AND DESIGN

- Facilitate participatory design workshops with stakeholders.
- Develop a simple rainwater harvesting design.
- Obtain community feedback and approval.

WEEK 3-4 — MATERIAL PROCUREMENT AND SITE PREPARATION

- Estimate material requirements and costs.
- Procure materials for rainwater harvesting systems, educational signage.

WEEK 4-5 — INSTALLATION AND EDUCATIONAL OUTREACH

- Install rainwater harvesting systems
- Place educational signage in visible locations.
- Conduct community workshops and guided tours.

WEEK 5-6 — MONITORING, EVALUATION, AND FEEDBACK

- Establish monitoring protocols for rainwater harvesting
- Evaluate the performance of the system
- Collect feedback from residents and stakeholders.
- Record the impact of project into report

BUDGET PLAN

Site Visit and Engagement:

Transportation for community engagement: $200
Outreach materials (pamphlets, banners): $150

Build and Implement Pilot Project:

Materials for rainwater harvesting: $300
Labor and installation costs: $200
Educational signage and materials: $100

Contingency (10%):

Miscellaneous and unforeseen expenses: $100

Total Budget: $1,000