

FLOOD PREPAREDNESS TRAINING MODULE

Kampung Kasipillay, Kuala Lumpur

A step by step framework to guide volunteer efforts in community based flood mitigation, preparedness, emergency response, and post-flood recovery

PHASE 1: MITIGATION

Understand flood risks and reduce vulnerabilities before disasters happen.



Identify vulnerable populations and environmental weak points.



Map risk zones, analyze past flood events, and assess critical infrastructure.



Build readiness through training, alerts, and clear action plans.







PHASE 3: RESPONSE

Ensure safe evacuation, calm coordination, and emergency shelter support.



Volunteer roles and specialities

Pre-evacuation

During evacuation

Actions at Relief centres



PHASE 4: RECOVERY

Restore well-being, infrastructure, and daily life after the disaster







Cost



Feeling



Waste



Safety







Flood mitigation application



Registration Form for Volunteers



Local community group WhatsApp

Phase 1

MITIGATION

MACRO SITE

Kampung Kasipillay, located in northerncentral Kuala Lumpur, is a small, semi-urban settlement along Jalan Ipoh in Kuala Lumpur, Malaysia. It is within the Segambut parliamentary constituency. It is a unique pocket of traditional community embedded within metropolitan Kuala Lumpur.

benefits excellent from accessibility via major roads such as Jalan Ipoh, Jalan Kuching and **DUKE Expressway**

Notable landmarks near the area include, KL parliment, Merdaka Square, Sunway Putra Mall, National Library, Petronas Towers, Menara KL and Berjaya Times Square in Bukit Bintang

Legends

- Kasipillay
- Menara KL
- Petronas Putra Mall Towers
- Parliament Square
- Square
- National Library
- Berjaya Times
 - Sungai Keroh

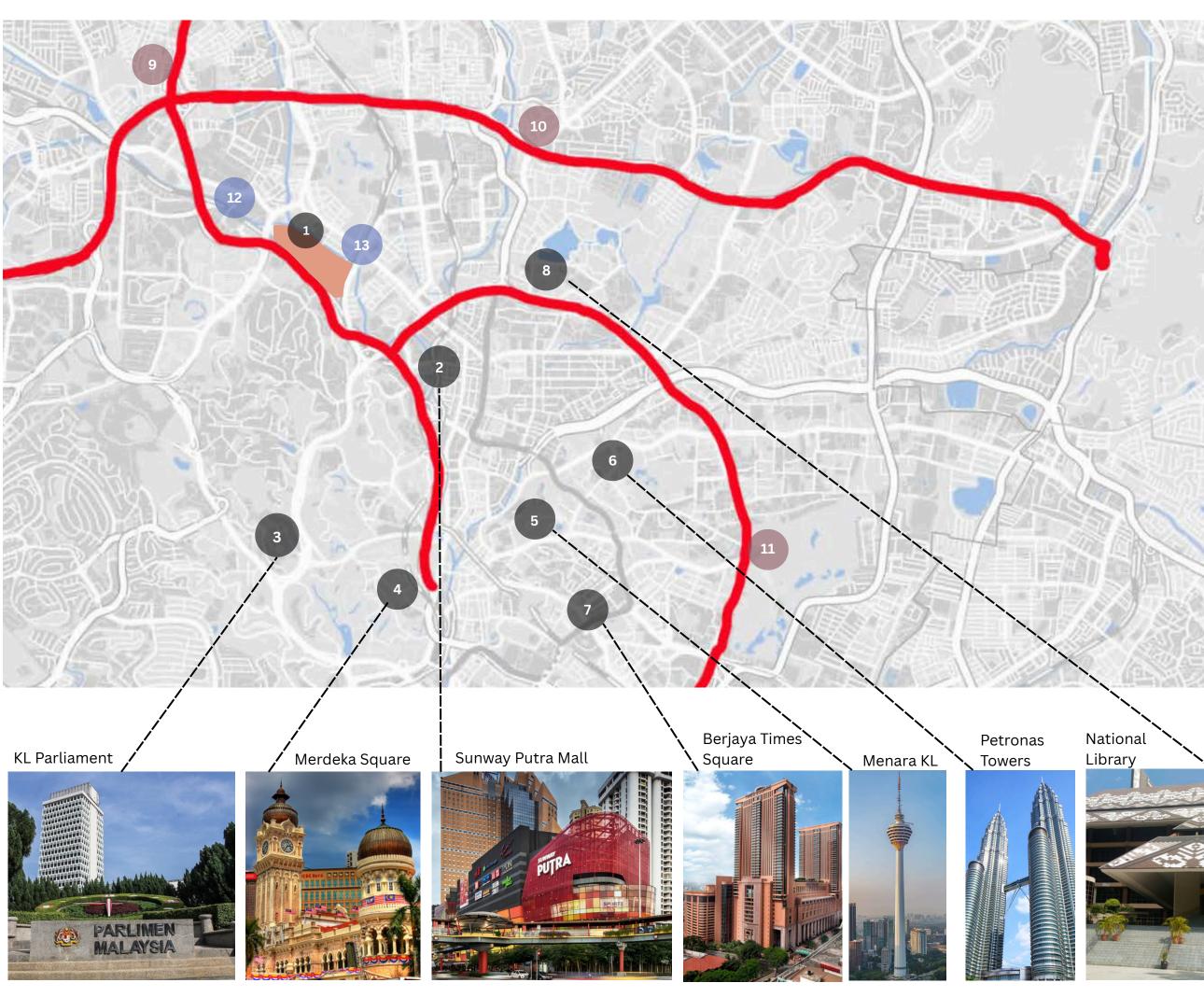
Kuching

Jalan Tun

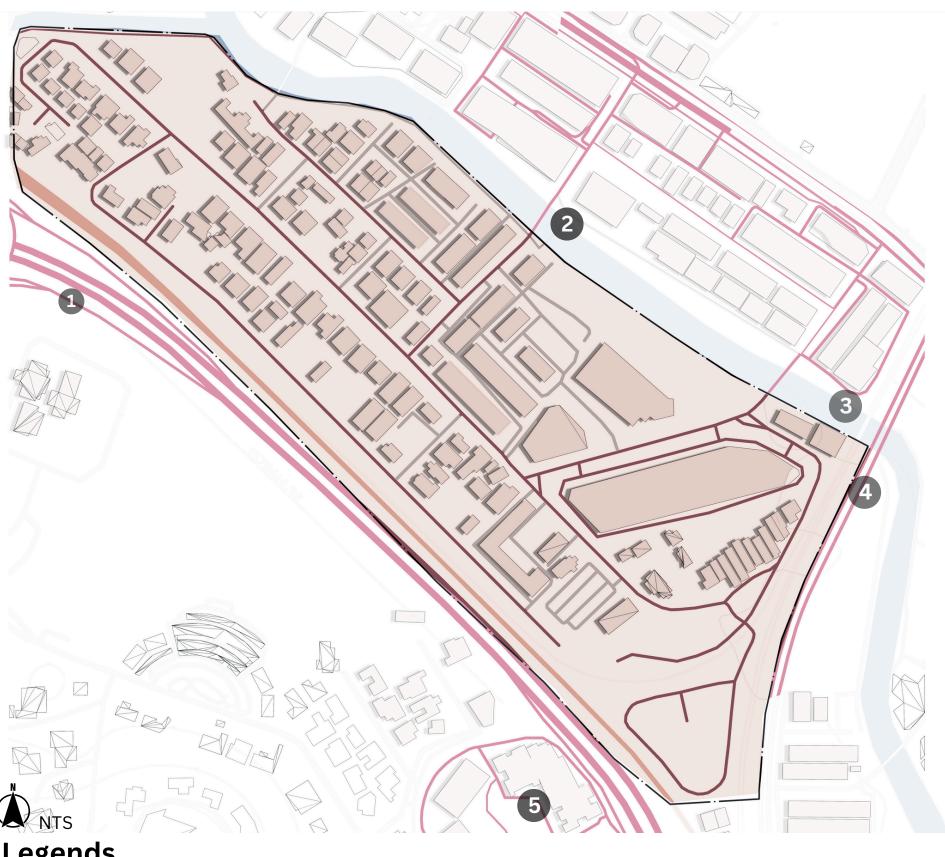
Razak

DUKE



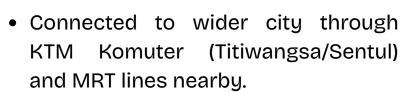


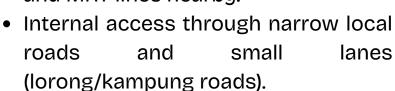
KAMPUNG KASIPILLAY





- Small village area, estimated around 100,000-150,000 sqm
- Compact footprint within a dense urban zone.
- Close to Kampung Kolam Air, Sentul, and commercial zones.







 Moderately high population density, with closely spaced multi-family houses and dwellings.

CURRENT EVACUATION AREA

No Official PPS Within Kasipillay, only a few gathering or public spaces that being used as alternate shelter

Dewan Komuniti Sentul





A multipurpose community hall that supports a variety of events and activities

The facility can support around 500 with stable electricity, people kitchen and canteen areas, basic utilities, and municipal water connections



The hall served as a Temporary Relief Centre (Pusat Pemindahan Sementara, or

Legends

Main circulation

Secondary circulation

Highway Kuching from Segambut

Train railway

Sungai Batu

Selvadurai road From Mrt Sentul Barat to Kg. Kasipillay

Tijani 2 condominium

Perhentian road

to Kg. Kasipillay

From main road Sultan Azlan Shah

SITE HISTORY

1997 - 2005

Recurring Flash Floods. Annual average of 3–5 flash floods per year

2009

In March 2009, a heavy downpour caused 1–2 m of flooding in local roads and homes.

RM3 million JPS-DBKL project constructed floodwalls and a pump station along Sungai Batu

2012

August 21, 2012:

Flash floods impacted
Segambut, with
Kampung Kasipillay included;
approx. 200 families were
affected,
with water reaching ~0.5 m

2021

December 2021: A historic monsoon triggered massive flooding with water depths reaching 2–3 m in parts of KL

2011

December 2011:

DBKL formally included
Kampung Kasipillay among "high-risk
flash flood" areas during the northeast
monsoon

2015

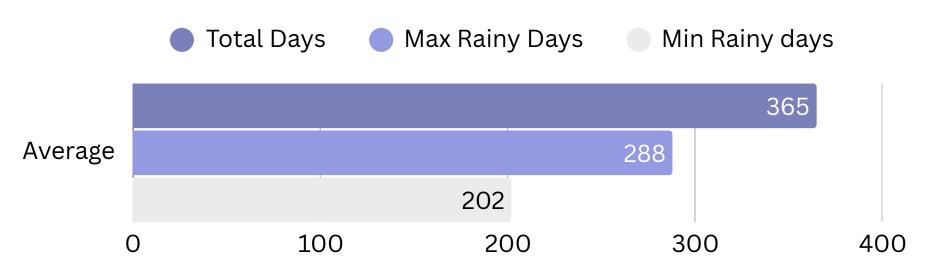
2015–2020: Rising Flood Frequency Klang Valley recorded 48 flash floods from 2015–2020, with frequency rising from 5 in 2017 to 13 in 2020



RAINFALL INTENSITY

- Annual rainfall in Kuala Lumpur ranges from 2,366mm to 2,600 mm
- November-December (northeast monsoon): wettest (~360 mm in November).
- June-August: relatively drier but still rainy (~126 mm in June)





MONSOON AND CLIMATE TRENDS

01

Northeast monsoon (Oct-Mar) is becomming wetter and more intense



02

Regional studies report 50-100% increases in mean and extreme rainfall in Southeast Asia since the late 20th century, correlating with more flashflood occurrences

03

IPCC AR5 notes across Southeast Asia:

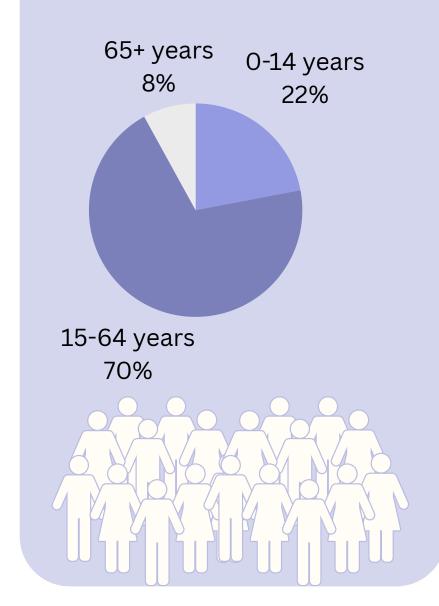
- Wet-day rainfall
 ~22 mm per decade.
- Extreme rainday totals ↑
 ~10 mm per decade

POPULATION

While no official census data is available specifically for Kasipillay, it is part of the Parliamentary constituency of Segambut (P.117), which had 253,715 residents as of the 2020 Census

Population & Age structure

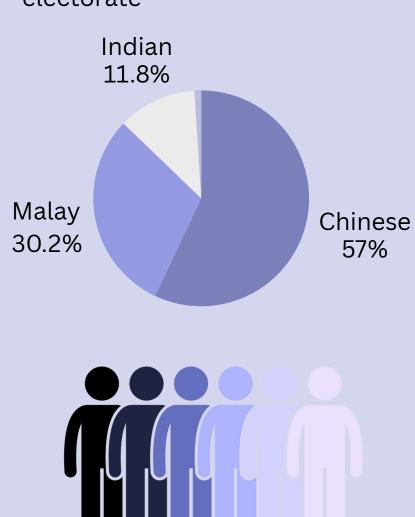
Kampung Kasipillay's population includes significant numbers of children, adults, and a smaller yet growing senior cohort.



Race breakdown

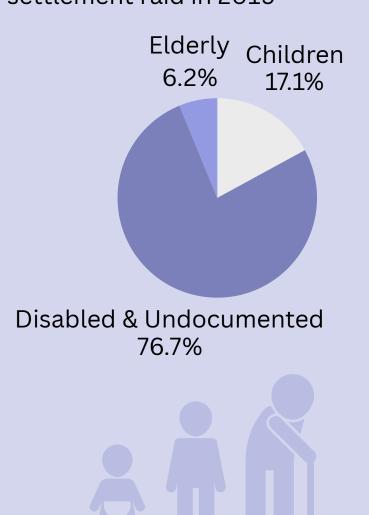
Kampung Kasipillay itself is traditionally multi-ethnic, including Malay, Chinese, Indian, Sabah/Sarawak indigenous groups, Filipinos, Europenas, etc.

Ethnic composition of Segambut electorate



Children, Elderly & Vulnerable Populations

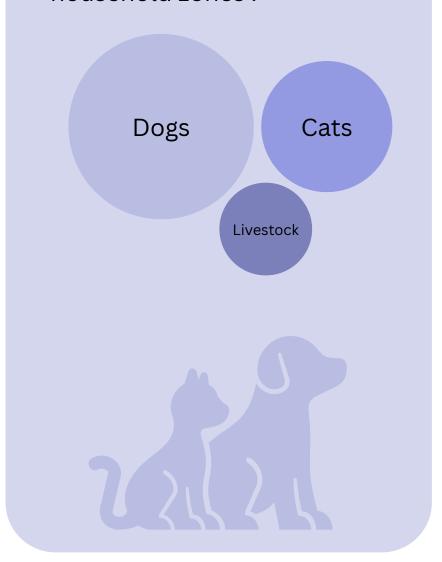
Disabled & undocumented: The area hosts a range of households including undocumented migrants; >100 such settlement inhabitants were reported in a Segambut illegal settlement raid in 2019



Pets

Urban households in Kuala Lumpur, including Kasipillay, commonly keep dogs and cats.

Anecdotal reports suggest small-scale poultry/livestock exist among informal household zones.



TYPOLOGY



COMMERCIAL



HIGH DENSITY RESIDENTIAL



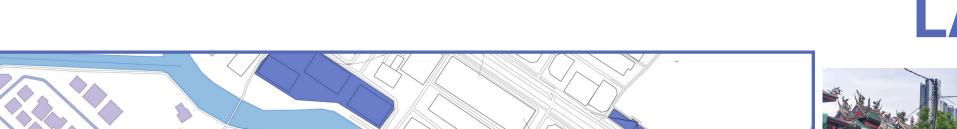
LOW DENSITY RESIDENTIAL

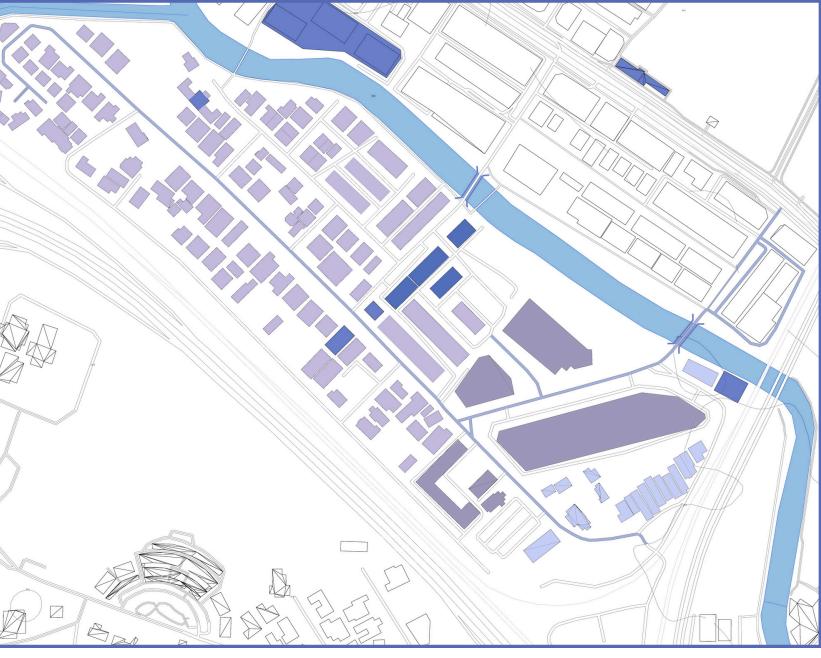


MIXED USE

Legends

- Commercial





Issue

Sentul Barat MRT

Jalan Kasipillay

near Jalan Ipoh

prone to overflow or blockage.

access or evacuation.

Easy meeting point for volunteers;

Main vehicular and pedestrian routes for

Bridge over Sungai Batu,

Important to monitor during flooding;

entry/exit to the neighborhood.



Minimal DBKL Problem: signage or community maps in the area.



Impact: Difficult for volunteers residents (especially elderly or newcomers) to find evacuation routes, help points, or aid distribution areas.

LANDMARK



CHOO SING TONG TEMPLE



KAMPUNG KASIPILLAY **KALIAMMAN TEMPLE**



RIVER CITY BUSINESS PARK



PERTUBUHAN AKHLAK **MAITREYA MALAYSIA**



SENTUL BARAT MRT



KAWASAN RUKUN TETANGGA KAMPUNG KASIPILLAY

- - Low Density Residence
- **High Density Residence**
 - Mixed-Use

BLUE & GREEN INFRASTRUCTURE ANALYSIS

Strengths

1 FLOOD SENSORY CAMERA





Early Warning Mechanism

ELEVATED LAND FOR TWO-STORY HOUSES





Flood Protection and Enhanced Safety

Issues



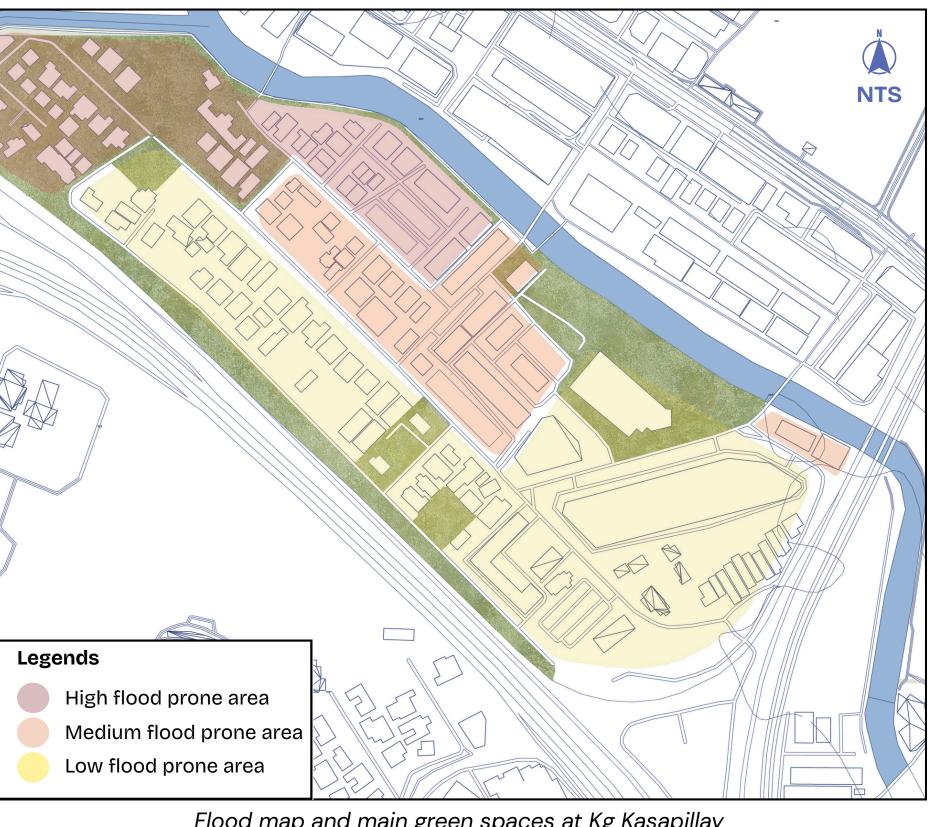
Insufficient River Capacity



Poorly Maintained Drainage Systems



Urban **Encroachment**



Flood map and main green spaces at Kg Kasapillay

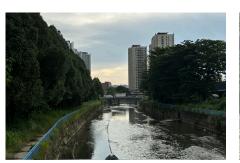
Summary



While features like flood cameras and elevated homes offer some protection, heavy rain still puts the area at high risk.

Strength

VEGETATION ALONG THE RIVER





Shrubs, greenery along the river to absorb rainwater and also is part of River Of Life **Programme**

Issues



Vegetated land converts to impermeable land



Little greenery throughout the site



Lack of planted areas integrated into built-up zones



Minimal green open spaces for water retention

RED & GREY INFRASTRUCTURE ANALYSIS

Policies

River of Life (ROL) Programme



KL City Hall (DBKL) Flood Resilience Efforts



River of Life Public Outreach Programme (ROLPOP) engages local communities (like Kampung Kasipillay) and corporate partners (Maybank, GEC, DBKL) to:

- Raise awareness of river care
- Clean and monitor the Batu/Sungai Batu river
- Beautify improve riverbanks and drainage systems
- Promotes stakeholder



Hazards

Exposed drainage













Low elevated ground floor



Damaged infrastructures



Improper Waste Management





Poor maintainance



Strengths

Clear pathway



Curb drainage



Mitigation Flood Infrastructure



Strategically Placed **Trash Bins**



Smart Elevation Design



Phase 2

PREPARATION

ROLES & RESPONSIBILITIES

AUTHORITIES

NADMA, DBKL, KLCCC, Evacuation Shelter Coordinators, Batu Dam Operators, GIS & Drainage Data Teams, PLANMalaysia



ORGANIZATIONS

Marefat School, Segambut Secondary School, SRK, Bandar Baru Sentul, SJK (C) Chung Kwok, Chiao Nan Primary School

COMMUNITY

Rukun Tetangga Kampung Kasipillay Environmental stewardship, River of Life (ROLPOP)

VOLUNTEERS

Flood Wardens, Volunteer Liaisons, Student Mappers, Youth Ambassadors, Community Reporters, NGO Volunteers.

FLOOD MANAGEMENT INITIATIVES BY AUTHORITIES

ZONING & FLOOD-RESILIENT LAND USE



Dewan
Bandaraya
Kuala
Lumpur
(DBKL)



LEAD AGENCIES

Pejabat
Tanah dan
Galian
Selangor
(PTG)



PLANMalaysia

KEY INSTRUMENTS

In Kampung Kasipillay, land use and development are controlled using **zoning laws** such as:

- NATIONAL LAND CODE 1965
- FEDERAL TERRITORY PLANNING ACT 1982
- **UBBL 1984**
- KL STRUCTURE PLAN 2040

METHOD

GIS-based flood hazard mapping using drainage, slope, and land-use layers



CAPACITY BUILDING & EMERGENCY PREPAREDNESS

Continuous training for local authority personnel includes:



Inter-agency drills with **DBKL**, **Bomba**, **MOH**, **NADMA**



shelters (PPS) and assembly points

Mapping

evacuation

of

Water rescue, boat ops, triage

Applied in Sungai Besi to restrict high-risk development; now used to guide zoning in Kampung Kasipillay

This model supports rapid response and will include Kasipillay residents

FLOOD MANAGEMENT INITIATIVES BY AUTHORITIES

MONITORING, FORECASTING & EARLY WARNING SYSTEMS

44

CCTV/sensor stations on Klang, Gombak & Toba rivers

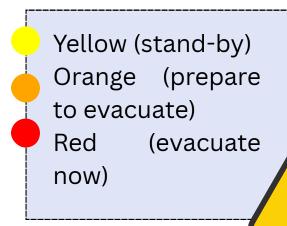


KLCCC
monitoring using
Linear Transfer
Function and Tank
Model forecasting

ALERT PROTOCOL

Public alerts are issued through:

- SIRENS
- SMS (NADMA)
- ED BOARDS (UPDATED 2024)
- INFOBANJIR APP AND COMMUNITY WHATSAPP GROUPS
- LATERST TREND FOR ENGAGEMENT



Enabled early community response in late 2021 flooding; system now active in Kasipillay

INFRASTRUCTURE UPGRADES & MAINTENANCE

Managed by: **DBKL Engineering & Landscape Depts, JPS Wilayah Persekutuan,** and **Jabatan Landskap Negara**

Flood protection in Kasipillay will be strengthened through a combination of grey and green infrastructure.

GREY MEASURES

- Drain and culvert upgrades
- Floodgates for basements (as required since 2003)
- Operation of Batu Dam for flood control

GREEN/BLUE MEASURES

- Riverbank stabilization
- Bioswale installations
- Permeable pavement projects
- DBKL reforestation programs

PROACTIVE

Routine desilting, garbage trap cleaning, and trench clearing —critical actions emphasized during the northeast monsoon (Nov-Feb)

Proven in upstream KL areas; to be implemented in Kasipillay

POTENTIAL INSTITUE PARTNERS IN FLOOD RESPONSE



LIST OF NEARBY SCHOOLS THAT CAN ASSIST IN FLOOD MITIGATION:



Preschool offers both onsite and online classes, with a focus on early childhood education



POTENTIAL INSTITUE PARTNERS IN FLOOD RESPONSE

WAYS TO INVOLVE SCHOOL ORGANIZATIONS:



schools outside boundary line that can still assist



INTEGRATE FLOOD PREPAREDNESS INTO

SCHOOL CURRICULUM

TARGET SCHOOLS:

- 1. Marefat School (flexible curriculum)
- 2. Segambut Secondary School
- 3. SRK Bandar Baru Sentul
- 4. SJK (C) Chung Kwok



2 USE SCHOOLS AS TEMPORARY SHELTERS



Target Schools:

- SRK Bandar Baru Sentul
- Segambut Secondary School
- SJK (C) Chung Kwok

STUDENT-LED CITIZEN SCIENCE PROJECTS

Target Schools:

- Marefat School
- Segambut Secondary School
- Chiao Nan Primary School



HOSPITALS



Klinik Kesihatan Ibu dan Anak Segambut

(7) 4.3/5 (16) · Hospital

1 Lorong Segambut Dalam, Batu · 03-2618 3200



INSURANCE COMPANIES OFFERING FLOOD COVERAGE







- Allianz KampungKu (Allianz): covers kampung houses against fire, flood, and windstorm for building and contents.
- The Pacific Insurance: Home content insurance covers personal belongings, including flood protection.
- FWD Qaseh Bakti Plus: Micro-insurance ranging from RMO.17/day, offers hospital cash, death, and double accidental benefits.

COMMUNITY-BASED SUPPORT & MOBILISATION

SCHOOL ENGAGEMENT & YOUTH LEADERSHIP



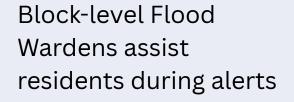
Flood drills and awareness games in local schools (e.g., Marefat, SMK Segambut)

Youth Flood Ambassadors run peer outreach and kits



INNOVATION & TRUST BUILDING







Community-led flood kit workshops (torch, food, ID)



Sandbag stations for localized protection



Based on success in Bayan Baru where student-mapped issues led to drainage redesigns

MERCY Malaysia's model adopted in Hulu Langat and Shah Alam will be localized for Kasipillay

COMMUNITY-BASED SUPPORT & MOBILISATION

COMMUNITY MONITORING & HAZARD REPORTING

Volunteer water-level sensors extend monitoring coverage





Use of MyPublicInfo Banjir and InfoBanjir apps

Residents use apps to report flooding and view live updates on river levels





NADMA
SMS Alerts
Shared via
Community
Networks

Officials alerts are forwarded through Whatsapp grous and community heads

NEIGHBOURHOOD RESPONSE & EMERGENCY KITS



AR-based flood simulations and theatre to explain risk

Augmented reality and community theatre are used to demonstrate flood risks. These tools make preparedness more engaging and easier to understand.



Volunteer
liaisons bridge
communication
with DBKL and
JPS

Trained local volunteers act as a link between the community and DBKL/JPS. They help relay updates, warnings, and feedback during floods.

Proven in upstream KL areas; to be implemented in Kasipillay

Inspired by PetaJakarta citizen-mapping used for real-time alerts; this will support two-way communication in Kasipillay

COMMUNITY ACTIONS FOR FLOOD RESILIENCE



PUBLIC AWARENESS & CLEAN-UP CAMPAIGNS



Spread the Word About Proper Waste Disposal



Form Cleanup Committees in Each Area



Work with Partners for Support



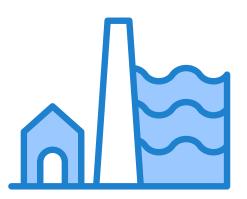
Target the Right Spots



Turn Clean-Ups into Learning Moments

COMMUNITY PROJECTS

Rukun Tetangga Kampung Kasipillay
Local Rukun Tetangga engaged <u>DID and</u>
DBKL to build floodwall and pump house







River-reserve and Water Sensitive Urban
Design proposals

Community lobbying promoted river-reserve walking parks and tree-lined retention areas



COMMUNITY ACTIONS FOR FLOOD RESILIENCE

COMMUNITY EDUCATION AND AWARENESS PROGRAMS



Hold small community sessions

Share flood safety information via various media





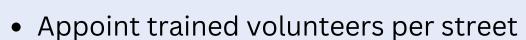
Run mock simulator drills for all family members

INSTALL BASIC PHYSICAL FLOOD DEFENCES



- Store sandbags/barriers at community centers
- Build small check dams with DBKL guidance
- Train residents to deploy sandbags during alerts

APPOINT NEIGHBOURHOOD FLOOD WARDENS



- Teach warning signs & evacuation steps
- Equip with vests, radios & contact lists



PURPOSE

To ensure volunteers are organized, informed, and ready to respond efficiently before flooding occurs

OBJECTIVES

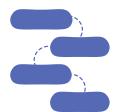




Prevent confusion and delay before flooding



Clearly assign roles, tasks, and timing



Empower community volunteers with stepby-step guidance



Enhance coordination with authorities and community organizations

WHY

Choose Volunteer Standard Operating System (SOP)



Practical

- It works within the existing capacity of the community — no need for large funds or infrastructure construction
- Volunteers are already present in most kampungs

Whether it's 30 households or 300, the

zone-based system allows easy expansion without chaos



People-Centered

Floods affect people first, not buildings. This SOP prioritizes lives — especially vulnerable groups

In early stages of flood, emergency services may take hours to reach. The community becomes the first responder



Scalable

Registration System



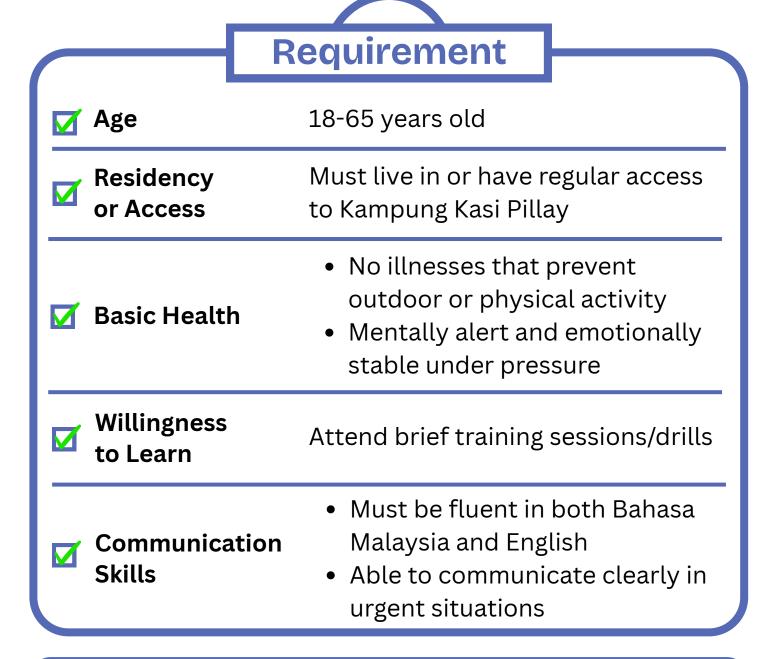
Physical Registration

- 1. Set up at local gathering points like community hall, mosque or school
- 2. Booths available during community events or pre-flood briefings
- 3. Printed forms distributed by KRT(Kawasan Rukun Tetangga) and community leaders



Online Registration

- 1. Simple Google Form or KRT website page
- 2. Includes sections for name, contact, address, availability, preferred role
- 3. Accessible through QR code posters around the village or WhatsApp groups

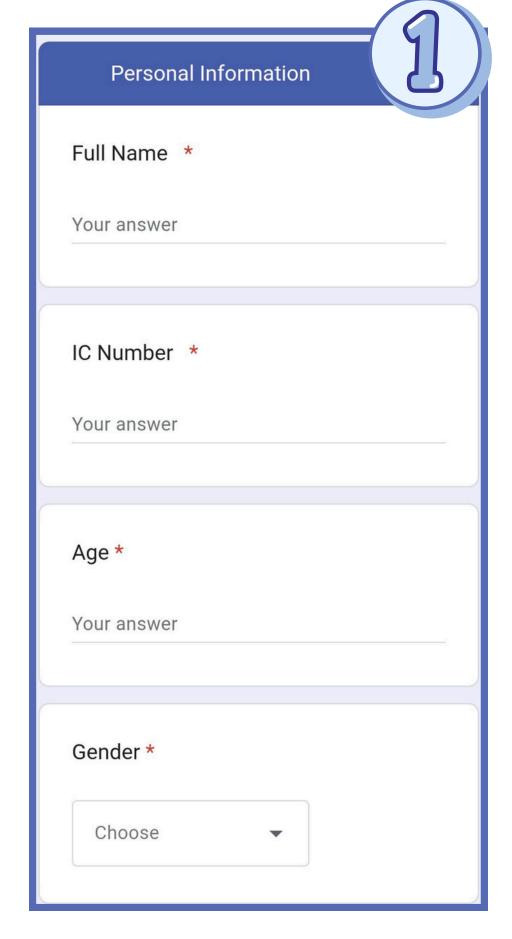


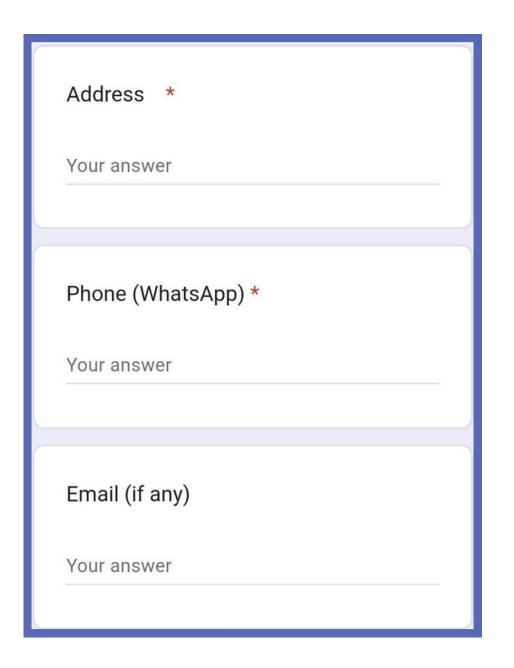
GOOGLE FORM LINK

https://docs.google.com/forms/d/e/1F AlpQLSea8qJeFeJxXy613zoMfUp4uDa 6TbNY-6EPfQwJgdzxY0_Gwg/viewform?

<u>usp=dialog</u>







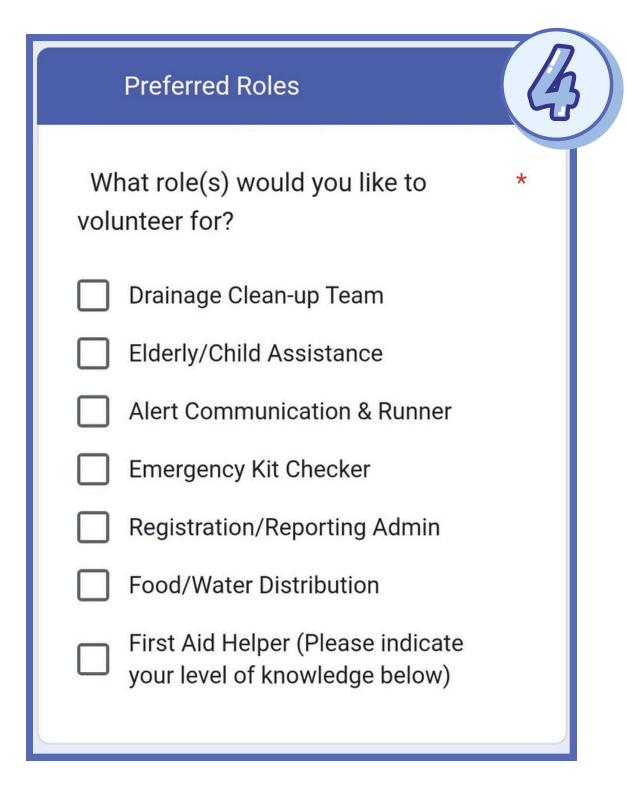
Volunteer Requirements (Statement)

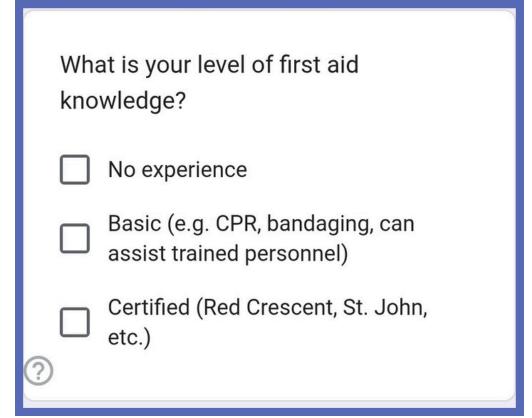


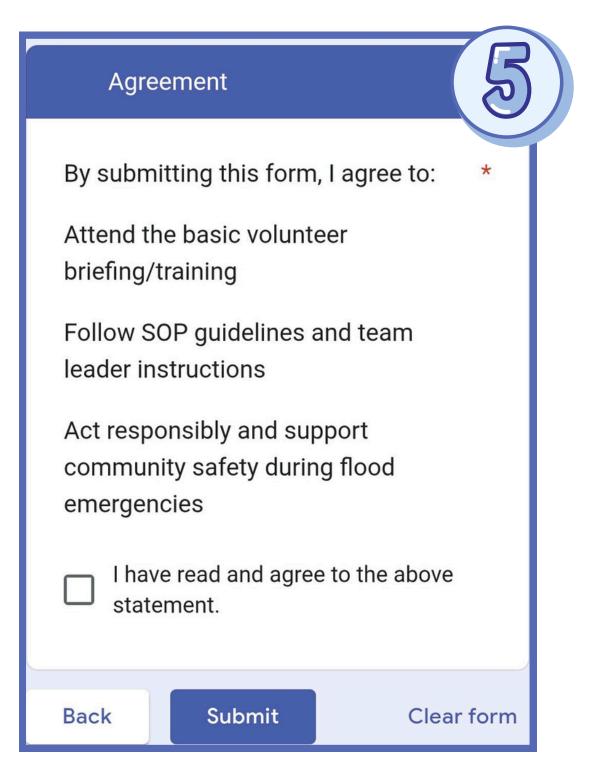
Do you meet the following basic volunteer requirements?

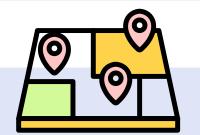
- 18 years old and above
- Physically healthy (can walk, carry light items)
- Mentally and emotionally stable
- Fluent in Bahasa Malaysia and English (spoken)
- Willing to attend training and follow SOP
- Yes, I meet all the requirements
- No, I do not meet the requirements

When are you usually available to * help? Weekdays Weekends Anytime during flood alerts









Zone-Based Volunteer Structure

SOP STRUCTURE



Vulnerable
Group Buddy
System



Pre-Flood
Drain and
Waste
Cleaning





Emergency Kit Stocking





Reduces flooding caused by clogged systems Late evacuation Vulnerable people unassisted Early warning warning Valuerable people unassisted Assign volunteer buddies

BENEFITS
OF THE SOP
SYSTEM

Ensures no one is left behind or in danger





Lack of supplies

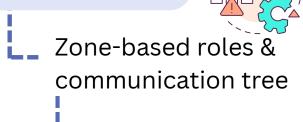
-- Emergency
kit stocking
-- Families are selfsufficient for 1–2 days

allows safe,

evacuation

timely

No coordination



 Makes the system organized

TECH SUPPORTED COORDINATION



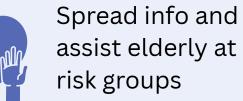
MyBanjir App

Alert System

Sends real-time floor alerts



Volunteers





Clinics/DBKL



Share data, coordinate relief efforts

Phase 3

RESPONSE

DURING: EVACUATION PLAN

STRENGTHS positive factors or resources that aid in a smooth and effective evacuation



WEAKNESSES negative factors or limitations that can hinder or complicate an evacuation





.....

Dead End





drainage around residential areas



Narrow road





electric box





drainage



CHOO SING TONG TEMPLE

DEWAN DR. JAYARAMAM

KAMPUNG KASIPILAY



KAMPUNG KASIPILAY KALIAMMAN TEMPLE



.....

small road



small road



acts as shelter



Narrow road



dead end



SHREE LAKSHMI **NARAYAN MANDIR**

VOLUNTEERS

RED ZONE - Severe flooding, immediate danger to life and property, urgent evacuation needed.

ROLE	TASK	SKILLS	REASON FOR PLACEMENT
Evacuation Team	Help people move to safe spots	Route knowledge, stamina	Critical to assist immediate evacuation
First Aid Team	Treat injuries, support weak individuals	First aid kit, CPR knowledge	High chance of injuries; urgent medical assistance
Flood watch team	Monitor water, send alerts	Phone, WhatsApp, basic training	Continuous monitoring to update risk and alert others
Shelter Team	Manage temporary shelters	Teamwork, cleanliness awareness	Manage safe shelters for evacuees
Drainage Watch	Spot/report clogged drains	Phone camera, walkabout	Prevent worsening flooding by clearing drains early

RED ZONE

High risk of heavy flooding. Evacuate immediately.

Close proximity to river and far from evacuation routes and meeting points



CHOO SING TONG TEMPLE

Characteristics: Spacious temple, suitable for mass coordination and large gatherings.

Emergency & Medical Support First Aid Officer

Set up medical station for emergencies.



Evacuation Tips and Tricks

- Evacuate quickly, floods rise fast.
- Avoid walking in floodwater.
- Move carefully to safe areas.
- Watch for hidden debris.
- Stay on high ground if trapped.
- Turn off electricity and gas.

→ Evacuation route



Area within 5 minutes of gathering point



ORANGE ZONE - Moderate flooding, potential evacuation

ROLE	TASK	SKILLS	REASON FOR PLACEMENT
Supplies Team	Distribute food, water, essentials	Organizing, list management	Support evacuees and residents staying in place
Awareness Team	Educate public on flood safety	Posters, speaking, social media	Prevent panic and inform residents of safety steps
Clean-Up Team	Clear mud, debris after flood	Gloves, shovel, teamwork	Prepare for recovery and reduce hazards
Drainage Watch	Spot/report clogged drains	Phone camera, walkabout	Maintain drainage to reduce flood impact

ORANGE ZONE

Medium risk of moderate flood severity. Flooding poses a risk to residents in this zone, suggested to evacuate in case of increasing flooding

Medium proximity to river, evacuation routes and meeting points



DEWAN DR. JAYARAMAM KAMPUNG KASIPILAY

Characteristics: Community hall-type building, structured indoor space

Information & Communication
Registration Desk Volunteer
Manage intake, ID tagging, o attendance.



Evacuation Tips and Tricks

- Evacuate or go to nearest safe point.
- Avoid floodwater.
- Move carefully.
- Watch for debris.
- Stay high if trapped.
- Turn off power and gas.





Area within 5 minutes of gathering point

VOLUNTEERS

YELLOW ZONE - Minimal flooding, monitoring and preparedness focus

ROLE	TASK	SKILLS	REASON FOR PLACEMENT
Awareness Team	Educate public on flood safety	Posters, speaking, social media	Keep residents informed and prepared
Flood Watch Team	Monitor water levels, send alerts	Phone, WhatsApp, basic training	Early warning to prevent escalation
Supplies Team	Prepare and organize supplies	Organizing, list managemen	Ready resources for potential escalation
Clean-Up Team	Assist in minor debris clearing	Gloves, shovel, teamwork	Maintain cleanliness and safety

YELLOW ZONE

Low risk with low flood severity. Evacuation is not necessary, but it is important to reach a safe area

Far from river, but close to evacuation routes and meeting points



SHREE LAKSHMI NARAYAN MANDIR

Characteristics: Spacious, active community temple; good spiritual and physical gathering point

Evacuation Tips and Tricks

- Evacuate or stay at the highest safe spot.
- Avoid floodwater if safe inside.
- Evacuate with caution.
- Turn off power and gas





KAMPUNG KASIPILAY KALIAMMAN TEMPLE

Characteristics: Local temple, accessible, medium gathering capacity.

→ Evacuation Route



Area within 5 minutes of gathering point

Phase 4

RECOVERY

FEELING

WHAT ARE THE GOALS WE WANT TO ACHIEVE?







Emotional support structures



Safe spaces for emotional processing



Communitydriven recovery initiatives



Accessible mental health services

PHASE I: BEFORE FLOOD

- Anxiety
- Fear of Unknown
- Helplessness

CORE ACTIONS/STRATEGIES:

- Employ empathetic
- Encourage packing personal comfort items
- Vulnerable Support

LOCAL RELEVANCE (KG. **KASIPILLAY/SELANGOR):**

- Utilize community halls
- Community-led support network



PHASE II: DURING EVACUATION

- Panic
- Stress
- Loss of Control
- Separation Anxiety

CORE ACTIONS/STRATEGIES:

- Utilize calm communication
- Emotional support with trained personnel
- Consider child/pet needs

LOCAL RELEVANCE (KG. **KASIPILLAY/SELANGOR):**

- Equip local psychological first aid training.
- Ensure sensitive transport



PHASE III: AFTER FLOOD

- Grief
- Loss
- Frustration
- Shock

CORE ACTIONS/STRATEGIES:

- Empathetic information about aid.
- Safe Sharing Spaces
- Psychological First Aid (PFA)

LOCAL RELEVANCE (KG. **KASIPILLAY/SELANGOR):**

- Mental health support to "Pusat Pemindahan Sementara" (PPS -Temporary Evacuation Centers).
- Local Relief Centers: Designate quiet zones for emotional debriefing.

PHASE IV: LONG-TERM RECOVERY

- Prolonged Stress
- Trauma
- Rebuilding Community Spirit

CORE ACTIONS/STRATEGIES:

- Accessible Mental Health Services
- Community Healing
- Involve residents in recovery planning

LOCAL RELEVANCE (KG. **KASIPILLAY/SELANGOR):**

- State Programs/Klinik Kesihatan (Health Clinics): Link residents to long-term psychosocial support.
- Promote traditional communal efforts for both physical and emotional healing.

FEELING

TYPES OF FEELINGS

AFTER FLOOD

(IMMEDIATE SUPPORT AT PPS/RELIEF CENTERS)



LOSS

GRIEF

or even lives.

Emotional emptiness from the destruction.



FRUSTRATION

Anger over delays, loss, or inadequate aid.



SHOCK

Numbness or disbelief about the situation.



PROLONGED STRESS

Chronic anxiety about future floods or financial strain.



(COMMUNITY REBUILDING AND PSYCHOSOCIAL

TRAUMA

Deep emotional wounds that may last months or years.

LONG-TERM RECOVERY

SUPPORT)

VOLUNTEER AND SUPERVISOR ROLES

VOLUNTEER INVOLVED

- PFA Deployment
- MRCS organisers
- Child & Vulnerable Support
- PPS is Pusat Pemindahan Sementara (Temporary Relief Center) - PFA is Psychological First Aid



- Community-Based PPS
- Access to Pro Services
- Community Healing & Resilience

WHAT THEY DO?



Create comfort points at evacuation centers for immediate emotional and practical support



Create safe sharing spaces and informal group sessions



Child & Vulnerable Support: MRCS creates childfriendly spaces.



Build social events to rebuild community spirit and prepare for future floods.



MRCS offers ongoing emotional support via workshops and "Community Support Circles" for resilience.



MRCS helps link flood victims to professional mental health counseling at health clinics.

AUTHORITY INVOLVED



Primary Supervision (Onsite): MRCS Selangor State Branch Coordinator.



External Oversight & Coordination: The District Disaster Management Committee (JPBD Petaling)



Family and Community Development (KPWKM)



Ministry of **Transport** (MOT).

HEALTH

1 PREVENTING DISEASE OUTBREAKS

Aim

Prevent waterborne and vector-borne disease spread (e.g. dengue, leptospirosis).



Authority involved









Monitor, control, and respond to disease risks through screenings, SOPs, and hygiene support.

What they do?



Disease screening and outbreak control (MOH)



Hygiene aid & emergency relief (MRCS)



Health safety protocols and inter-agency support (NADMA)

Volunteer involved



Support hygiene promotion, cleanup, and awareness in flood-hit areas.

What they do?



health info distribution



Clean and disinfect homes and PPS



hygiene awareness

PROVIDING ACCESS TO MEDICAL CARE 2

Ensure immediate treatment is available to affected residents.



Aim

- Authority involved







Deploy mobile clinics, coordinate medical teams, and provide treatment in PPS.

What they do?



Deploy mobile clinics (MOH)



Coordinate
logistics and
shelter-based
care (NADMA)



Offer emergency medical support (MRCS)

What they do?



Provide medications and health consultations



Treat minor injuries and illnesses



Reduce hospital burdens through field support

Volunteer involved

These groups offer free, fast medical aid when government

are

services

limited.

HEALTH

3 ENSURING CLEAN WATER & SANITATION

Aim

Prevent illness through clean water and safe sanitation.



Authority involved









Maintain sanitation, test water, manage drainage and waste removal.

What they do?



Water quality testing and sanitation (MOH)



Drainage repair and cleanup (DBKL)



Hygiene kit distribution and support (MRCS)

Volunteer involved

- NGO Sanitation Teams
- Youth Volunteer Groups
- Community
 Emergency Response
 Teams
 Clean homes,
 distribute clean
 water, and assist
 sanitation efforts.

What they do?



Clear mud, debris, and stagnant water



Distribute bottled water and soap



Assist with latrine setup and disinfection

CONTROLLING VECTOR BREEDING AFTER FLOODS 4



Aim

Ensure immediate treatment is available to affected residents.





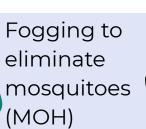




Deploy mobile clinics, coordinate medical teams, and provide treatment in PPS.

What they do?









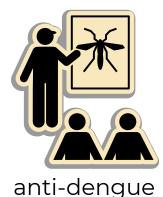
Public notices on environmental cleanliness (MOH)

Volunteer involved

What they do?



Remove debris and standing water



anti-dengue larvawareness drives



Distribute larvicide and educational



Support clean-ups and educate the public.

5 FUNDING EMERGENCY MEDICAL RELIEF

Aim

Cover costs of urgent healthcare services, medication, and logistics during floods.



Authority involved





MOH allocates funds for mobile clinics, medical supplies, and staff. NADMA supports inter-agency health response budgets and logistics.

What they do?



Finance medical posts, ambulance services, vaccines



Disburse operational grants for flood health responses

Volunteer involved



What they do?



Provide free mobile clinics, medicine, and hygiene kits



corporate donations to cover response costs

SUPPORTING SHELTER OPERATION COSTS 6

Fund temporary shelters (PPS) including food, sanitation, power, and safety.



Authority involve







These agencies allocate funds for PPS management, supplies, and utilities.

What they do?



Pay for food, toilets, water, lights, and transport



Fund child- and OKU-friendly shelter infrastructure

Volunteer involved



Help run kitchens and distribute supplies



Monitor safety and welfare at shelter sites



9 DONATION

MONETARY DONATIONS



How to donate-

Donate online or via bank transfer to official accounts of recognized organizations.



Trusted organization







Precautions & Why this matter?

- Cash is fast and flexible used for urgent, on-site needs.
- Verified funds support centralized response efforts, not scattered or uncoordinated actions.
- Only donate to registered, endorsed (ROS/SSM/religious organizations bodies, NADMA, DBKL).
- Centralized donations support organized relief efforts.
- Avoid personal accounts unless clearly verified — helps prevent scams.







IN-KIND DONATIONS



Item needed







Hygiene Kits



Medicine

Trusted organization

Clothing & Bedding

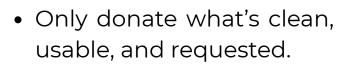






Precautions & Why this matter?

• Helps cover urgent physical needs when supplies are cut off.





 No expired, damaged, or irrelevant items.

• Don't drop items at unofficial or closed locations.



DIGITAL DONATION PLATFORMS



How to donate-

Use secure, verified platforms with real campaigns.



Trusted organization







Precautions & Why this matter?

- Convenient and fast way to help.
- Only verified campaigns ensure aid reaches real victims.
- Use secure payment methods (FPX PayPal).



- Look for platforms with updates, transparency, and partnerships.
- Avoid links from unknown sources (e.g., WhatsApp forwards).



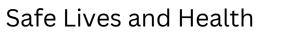














ess Health Risks after Floods

BEFORE







What they do?

- **Key Actions:**
 - -Flood Awareness at the Community Level
 - -Health Preparedness stockpile health PPE community centers.
 - -Advise residents to check electrical wiring, keep emergency kits handy.

Volunteer involved

Youth Taskforce & Health Volunteers.

Local NGOs: Carry out health screening drives drills.

Safety



Strengthen Community Preparedness



Fast Rebuilding of Community Safety

DURING

Authority involved







What they do?



← Key Actions:

- -Controlled Re-entry Teams inspect buildings before residents' return.
- -Provide protective equipment.
- -Evacuation **Assistance** for vulnerable groups

Volunteer involved



Health and Safety Volunteers. MOH officer.

AFTER

Authority involved





What they do?



Key Actions:

Mobile Clinics for: **Sanitation & Waste Disposal:**

-Tetanus vaccinations.



-large bins. -COVID-19 tests.

-Remove waste within 3 days.

-Check skin infections.

-Spray disinfectant.

Health Monitoring + Household Clean-Up Support:

Volunteers clean affected households.

Volunteer involved



-People sharing in health kits distributing, assisting elderly with cleaning, reporting health issues.

Guided by MOH officer

Priority 1

Health & Safety Waste

ACTIONS:

- -Place **marked bins** to dispose of Excess waste at Jalan Kasipillay and Lorong 5.
- -Schedule same-day pickup with **DBKL** for areas at risk of injury from wastes.

Volunteers:



-Health Safety Team:

Identify risky waste



-Youth Cleanup Crew.



-Medical Students: Educate residents on safe handling of medical waste.

WASTE

Priority 2

Bulky Waste

ACTIONS:

- -Label drop zones along Jalan Kolam Air Lama and community hall.
- -Request for **RORO bins** from **KDEB** Waste Management.
- -Schedule days for bulk waste collection coordinated with DBKL.

Volunteers:



-Logistics Volunteers: move large items to drop zones.



-Kampung Youth Team.



-Neighborhood Coordinator: Tracks collection requests and updates DBKL team.

Priority 3

Organic and General

ACTIONS:

- -Provision of bags for **food waste** and any rotten items.
- -Door-to-Door collection for elderly homes.
- -Disinfect and larvicide spraying at clogged gutters and around bins.

Volunteers:



-Environmental health volunteers: Monitor for pests and report any areas used for mosquito breeding.

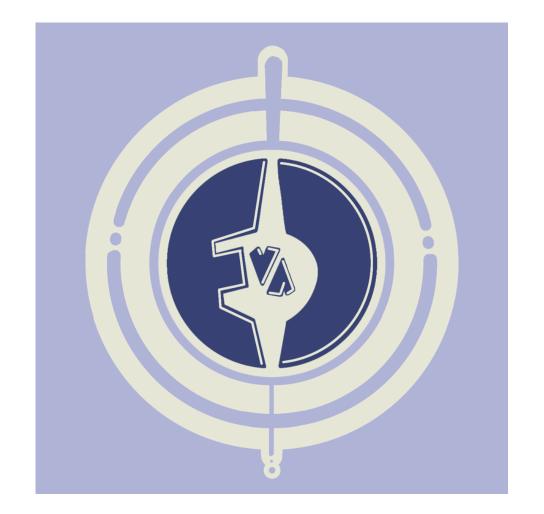


-Local NGO Tea: Distribution of waste bags.



-Sanitation-Squad:

Coordinate with the KDEB team for daily bin pick-up.



MYEVAC-APP

MYEvacuation App

"Stay Safe with MyEvac-App"

scan me to view



MYEvac-App

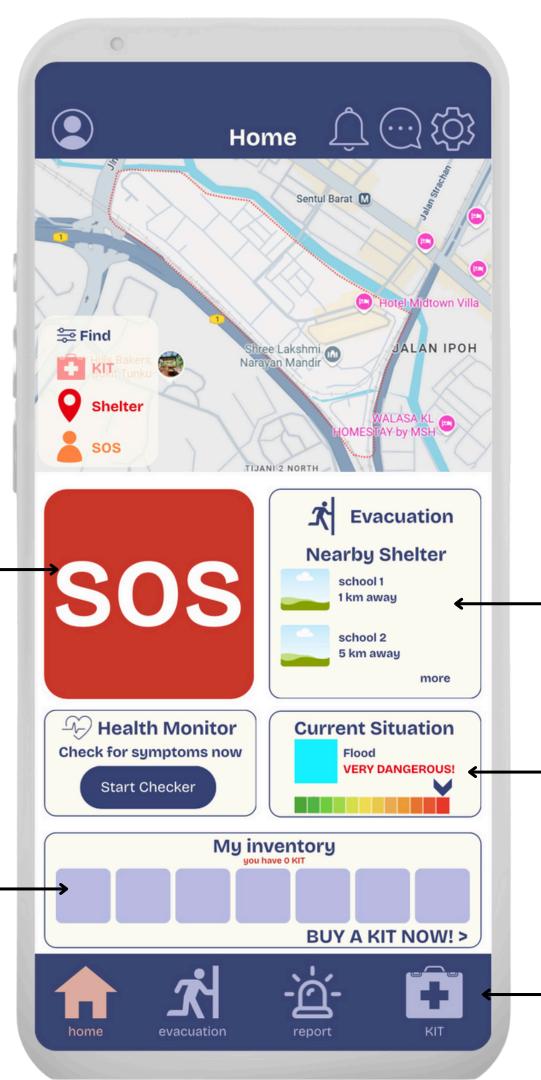
HOMEPAGE:

SOS BUTTON

Triple tap emergency alert for immediate help

My inventory interface

Shows personal stock of emergency kits



Shelter Guide Button

Guides users to the nearest shelter with distance tracking

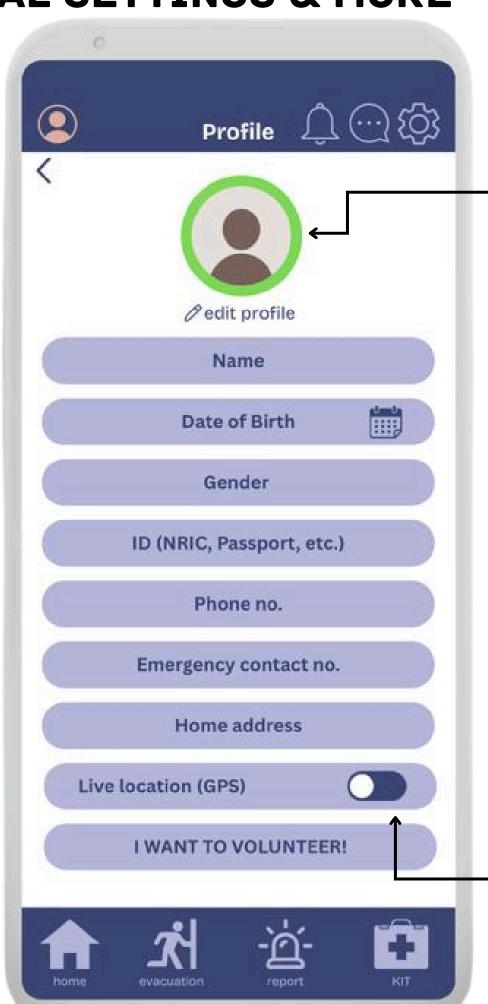
Live situation interface

Shows live danger level with intuitive icon alerts

Dashboard

Easy navigating to all app interfaces

GENERAL SETTINGS & MORE



Colour Visual Indicator

Colored circle outlines indicate user positions.

General User

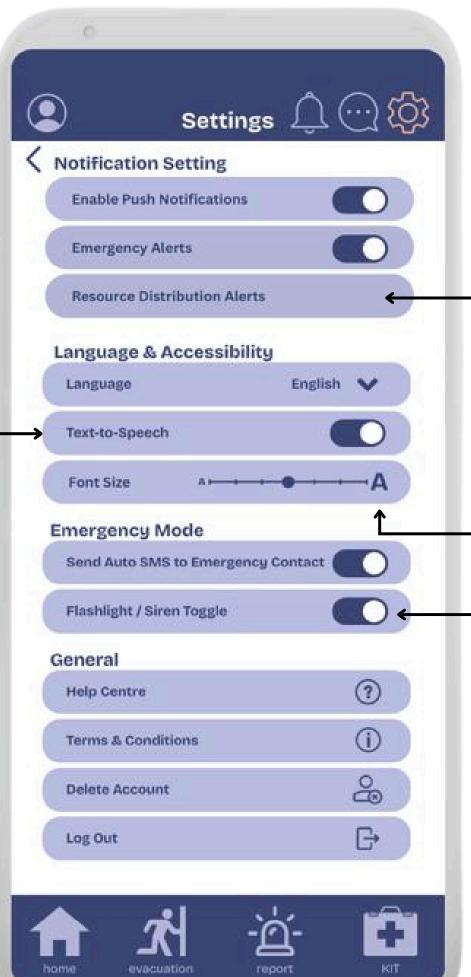
First Responder

Volunteer
NGO/Government
Worker

Allows hand-free use when users are not able to read their phones

Toggle live location

Allow real-time tracking in case of emergencies



Keeps users informed about available resources (eg. KIT)

Font size adjustments

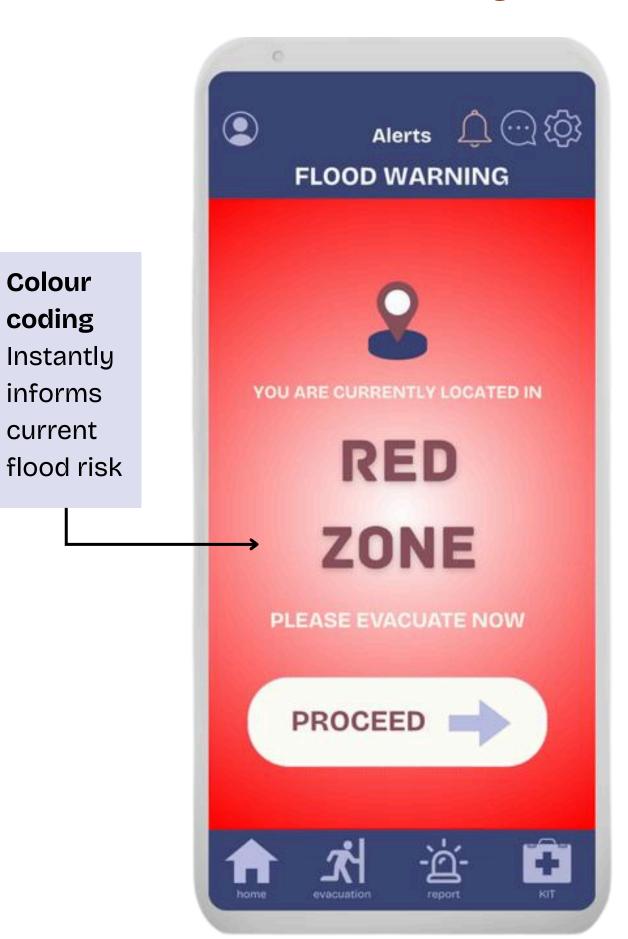
Easy reading for all ages, especially elders can use bigger fonts

Auto triggered flashlight/siren

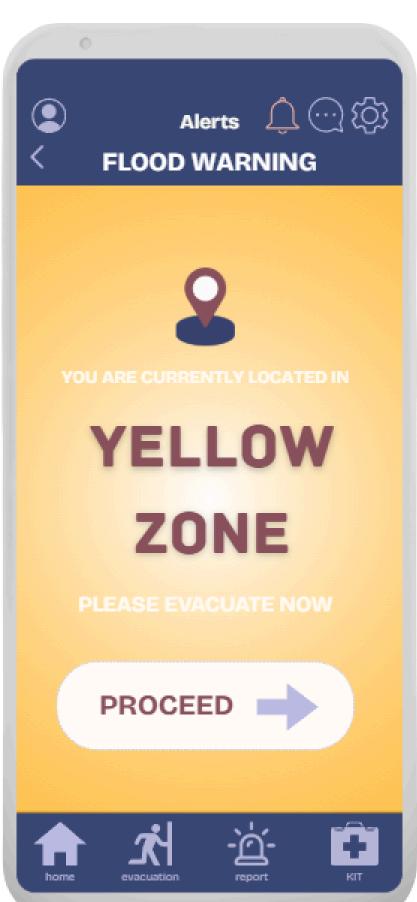
Enables users to signal for help in low-visibility situations

WARNING SYSTEM:

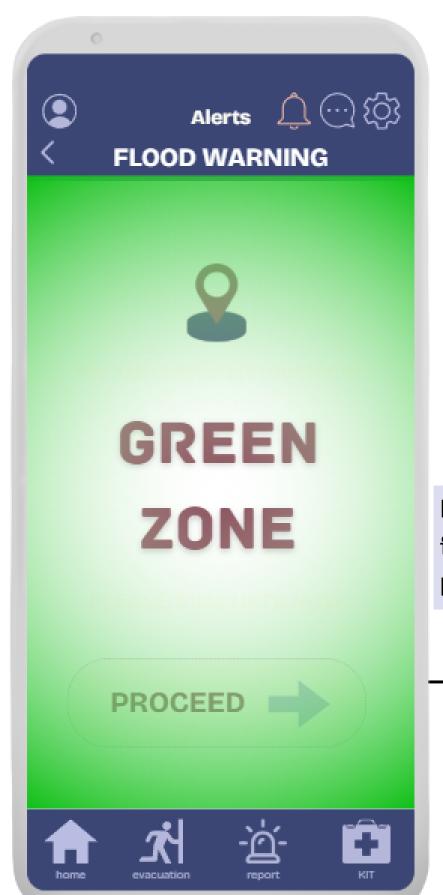
FLOOD WARNING Red Zone – Severe Flooding (Immediate Danger)



Yellow Zone – Moderate
Flooding (Caution and
Restricted Access)







Leads users to flooding zone page

HARZARD NOTIFICATIONS:



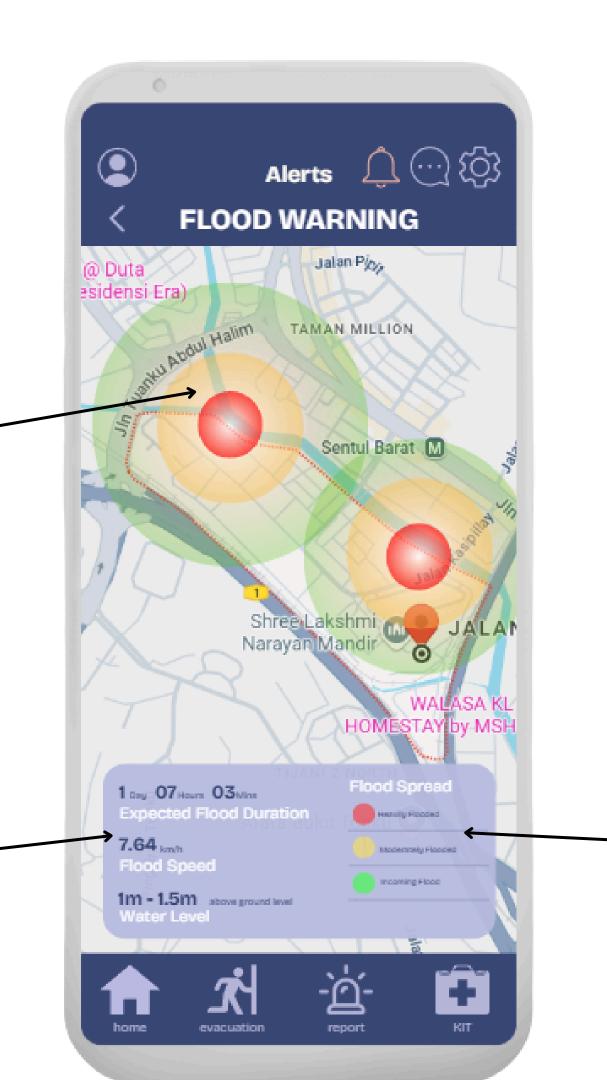
Real-time Flood Spread

Live view of floods to indicate the need for evacuation



Flood Statistics

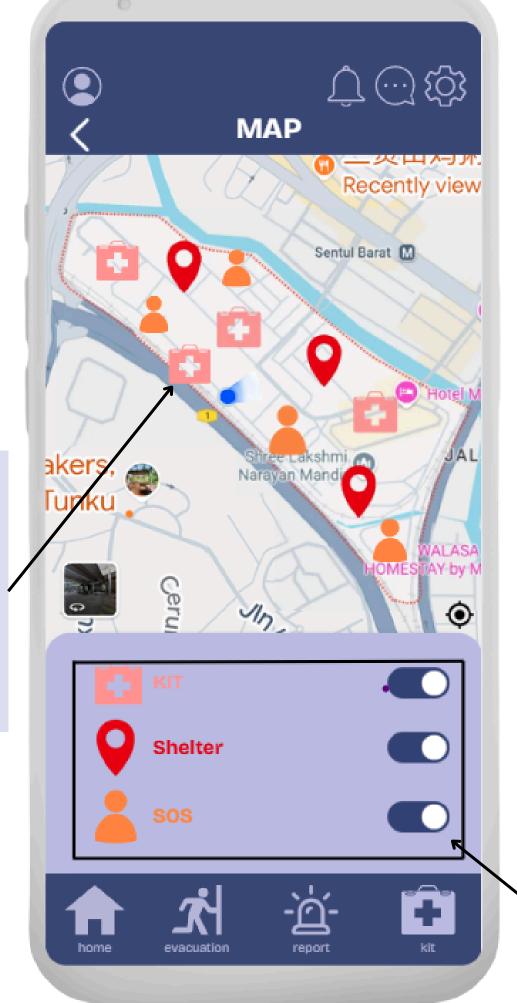
Flood duration, flood speed, and water level





Colours Indicating Flood Severity

The severity of the flooding is divided into three categories.



Clickable

Guide the

user to a

specific

location

Icons

Call and chat button for any enquiries with the evacuation centre

List of evacuation centres filtered by the nearest location

direction

direction

direction

direction

direction

EVACUATION

name of person in charge

building 1

0.1 km away

building 2 0.3 km away

building 3 0.4 km away

building 4

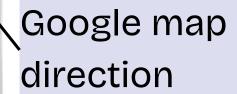
building 5

1 km away

0.7 km away

Filtering Functions

Easier to locate the required information



DURING HAZARD:

SOS ALERT





SOS Notification

After Clicking the SOS
Notifiction, it would run in
the background so that
users can still access the
other parts of the App.

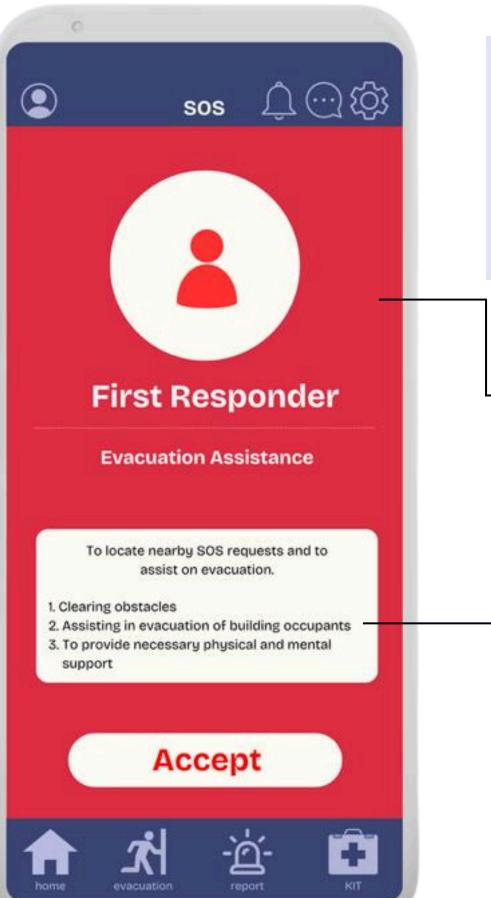


SOS Button

Sends out live location to request for aid.

Volunteered Helpers and rescuers can detect these signals and get to the location

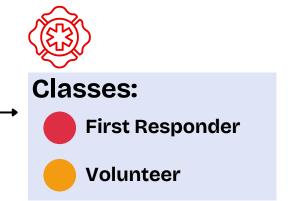
ASSISTANT PAGE





First Responders Alert Notification

Notify helpers of their class. Roles would be assigned that best suit their capabilities in the moment.





Availability Option

The responders get to choose to proceed with their tasks if they're available, if in the case that they're not, they can choose to decline their task.

DURING HAZARD:

NEARBY ASSISTANCE MAP



SOS Requests and Nearby Assistance

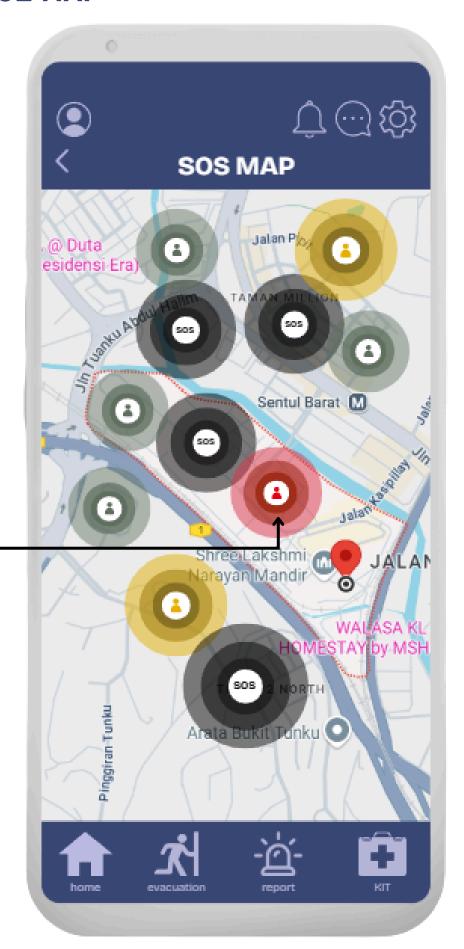
Live view of floods in affected areas to indicate the need for evacuation as well as urgency of evaquation

First Responder

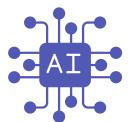
Volunteer

NGO/Government Worker

SOS Requesters



AR NAVIGATION

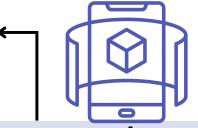


Al-enhanced
mapping that
factors in flood
levels, blocked
roads, and traffic.

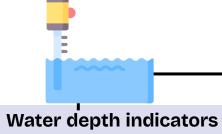
Users point their phone camera, and arrows appear guiding them to the nearest safe exit while avoiding hazards.



Directions to the nearest shelter or high ground.



AR overlays on camera feed to show safe routes away from flooded areas.



Water depth indicators using visual markers on the road.



0.5 M above ground level



Current Flooding Water Depth



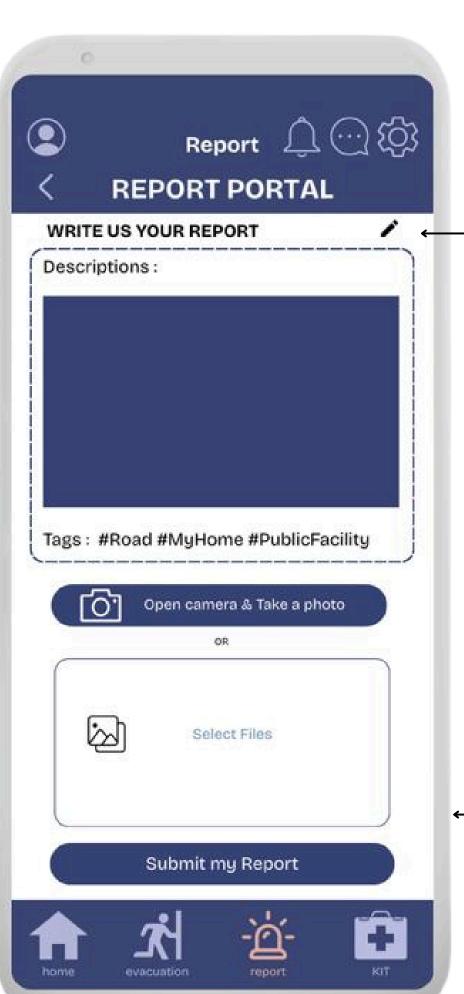


AFTER HAZARD:

DAMAGE REPORT &
COMMUNITY
REBUILDING
PROPOSAL

Photo Upload Options

User can snap a photo or upload one from their gallery.



Live Map Search

This feature lets users search their location or any area on a live city map

Add Description & Tags

User can add a description and tags to the photo.

View Report Details

User can view others' photo reports with images, descriptions, and tags by tapping on them.

Live Report Updates

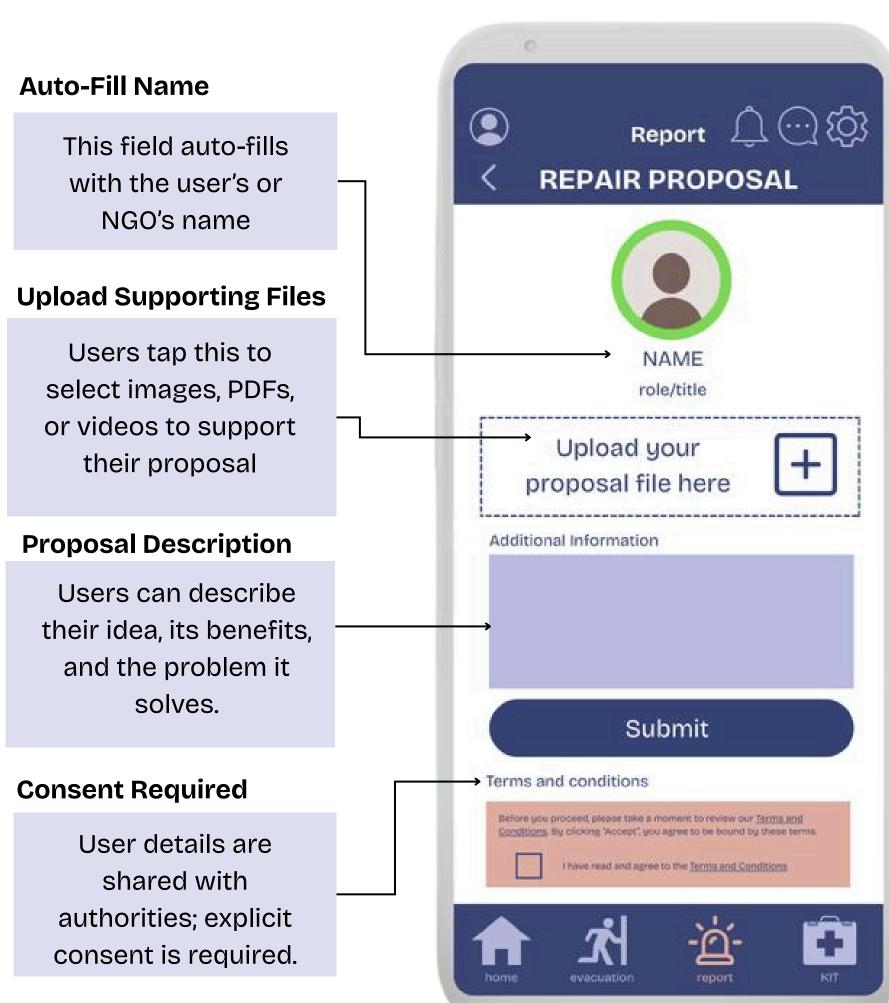
Once submitted, the report appears on the live map to inform others nearby

Submit from Map

Users can submit a photo report by selecting a spot on the map and uploading images.



DAMAGE REPORT & COMMUNITY REBUILDING PROPOSAL View Proposal



Tapping this opens the proposal's details.

Proposal Summary

Displays a brief proposal title or summary.

Proposal Owner

Shows the proposal submitter.

Submit Button

After filling in details and accepting terms, tap this to submit. Disabled until terms are accepted.

Public Support Count

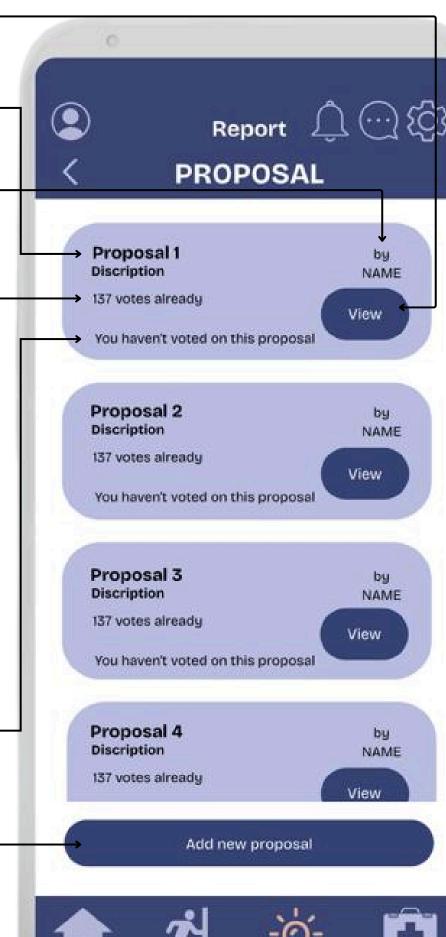
A read-only counter showing current votes as public support.

Status Text

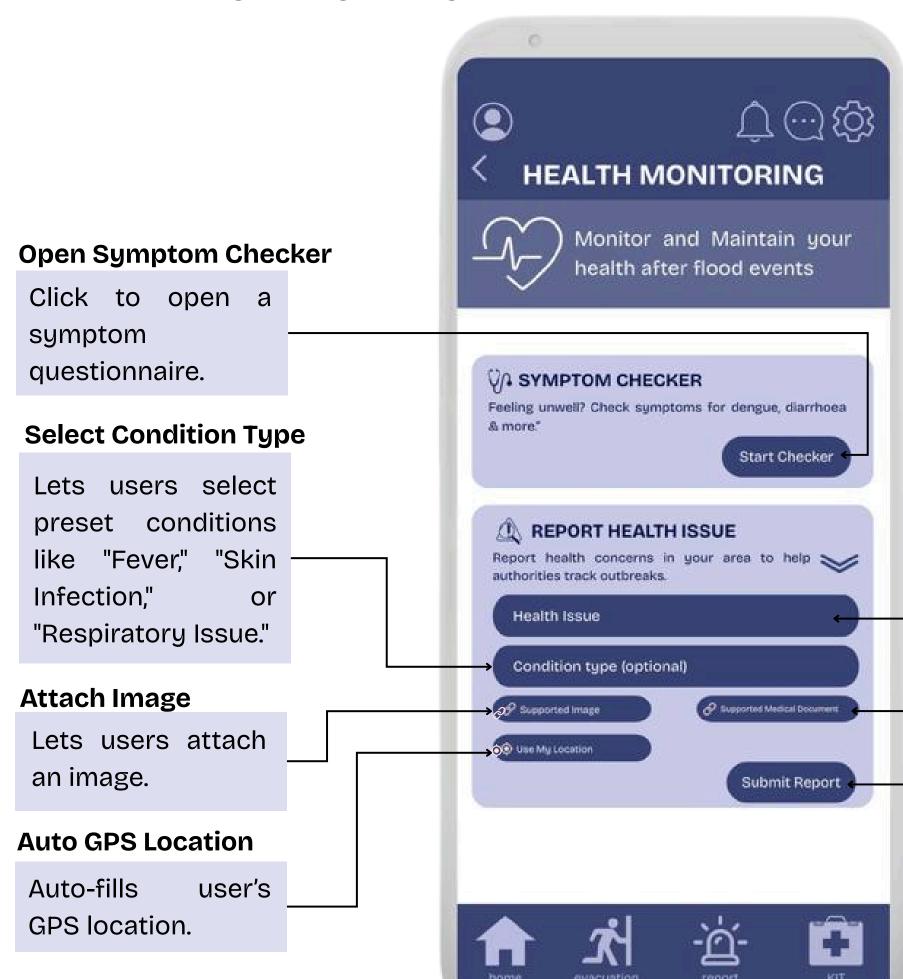
Text updates based on user actions.

Open Submission Form

Tapping this opens a form to submit a personal or NGO proposal.



HEALTH MONITORING:



Lets users assess their health post-flood with a Yes/No checklist for symptoms like dengue, leptospirosis, and skin infections.

Describe Symptoms

Text field to describe current symptoms.

Attach Medical File

Option to attach medical records or prescriptions.

Submit Health Report

Submits the health report to local health authorities.

Health Summary Result

Summarizes Yes/No answers into a basic health status or advice.



PSYCHOLOGICAL SUPPORT & COMMUNITY NETWORKING:



As you enter the Psychological support Page, this is the user interface that will be shown.

Therapist Chat

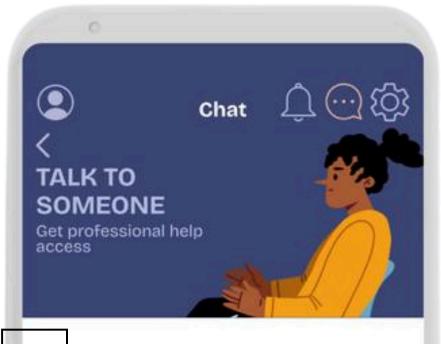
Schedule or chat with certified therapists.

Emergency Help Nearby

Quick access to emergency mental health services.

Therapist Chat

Mental health resources by location.





Crisis Helpline
Schedule or Chat with Certified therapists.

Get help

Mental health resources by location

Find the closest help





Users will be brought into a page like so for further help they require.

Guided Videos

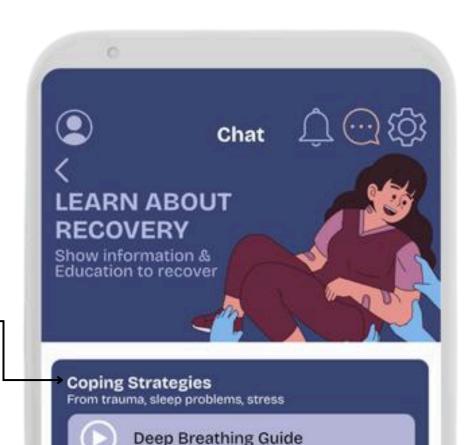
Click on each icon to get a—guided video.

Coping Strategies

Coping strategies for trauma, sleep problems and stress

Survivor Stories

Video testimonials from survivors to promote resilience.





Grounding Exercise









PROTOTYPE



Link:

https://www.canva.com/design/DAGr5M8ILT4/94x Mo1swmfynY4pOU9maVw/view?mode=prototype

MYEvac-App

TASK 3

FLOOD SURVIVAL KIT: PROPOSAL

There is a critical need for proactive, accessible, and adaptive emergency prepardness strategies during the recurring flood events.



Hurdles in last-minute delivery during crisis

Identifying specific household needs

Ensuring equitable access to vital resources

SOLUTION

Intelligent Needs
Assesment



Users input household data

System recommends a tailored emergency kit

household size, age group, income level and specific vulnerabilities considered

Proactive Alerting & Navigation

Provides a critical flood watch and warning alerts during a flooding event



Features:

Real-time flood status

Interactive map pinpointing emergency kit stations (even in offline mode)

Navigational guidance

Dynamic Kit Procurement & Delivery

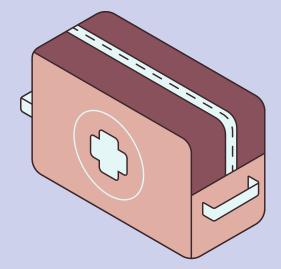
Immediate purchase & V pre-arranged delivery of emergency kits available

Optimized delivery logistic

Based on dwelling type

Ensures the kits reach the intended recipients either via delivery or strategic pickup points Sustainable Kit Management

Provides kit maintancance



/ Users can track expiry dates

Recieve alerts for replenishment needs

Reorder items or access affiliated stores

Modular Kit Design

Seperated modules avaialable for purchase



Allows easy customization and upgrades

Asembled according to household requirements

Easily refilled during pre and post flood events

FLOOD SURVIVAL KIT PROPOSAL

WHAT IS IT

It is a pre-assembled set of essential supplies crucial for surviving an emergency flood that can help survivers atleast upto 72-hours until rescue.



Our main goal of producing these kits are to make it more accessible to everyone by incoporating a module system to let users customize the kits as much as possible to cater to their needs and price.

BASE KITS

The emergency survival kits are split into different levels of kits

BASIC KIT

STANDARD KIT

PREMIUM KIT

ADD ON MODULES

Modules can be added on to the base kits to accomodate a user's need

DISABILITY KIT

INFANT KIT

FOOD & WATER KIT

FIRST-AID KIT

HYGIENE KIT

WHO IS IT FOR

The kit is for anyone who wants to be prepared and self reliant when a flood strikes. But it is crucial for:

Low-income households

Families with young children or infants

Elderly individuals

Individuals with disablities

Families living in high-risk flood zones

Companies in flood prone areas

Schools or Boarding schools

FLOOD SURVIVAL KIT

How does the **emergency preparedness** for the flood section work in the app?

Household structure information.

Stakeholders and **Sponsors**, how they're integrated with the app.

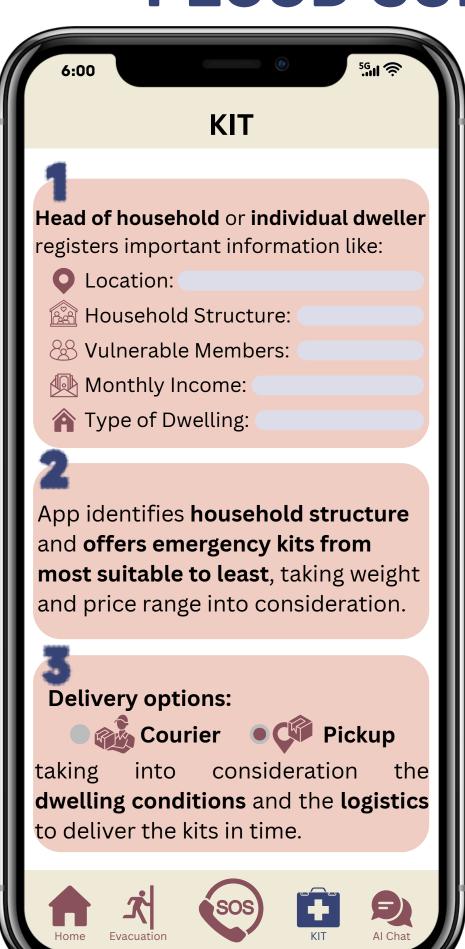
Emergency Kit recommendations

Emergency Kit upgrades.

Emergency Kit **pricing**, **financial aids**

Emergency Kit **modular design.**

Emergency Kit contents.



PWHYINFORMATION IS TAKEN

Household Structure

To ensure the kit suits the specific needs of the household based on size, age, and special conditions.

Number

Ensures enough supplies (food, water, masks, etc.) for everyone in the household.

Age group

Includes age-appropriate items

Disabilities

Adds necessary medical or support items.

Income

To offer emergency kits that are financially accessible and suitable for the budget of the household. It helps prioritize which households may need subsidies or sponsored kits, ensuring no one is left unprotected.

Type of dwelling

To assess the delivery **feasibility** and **logistics**.

For example: high-rise apartments may require different delivery methods than rural houses, and certain emergency items (like waterproof gear or tools) might be more relevant depending on how exposed or secure the dwelling is.

SPONSORSHIP NEEDED

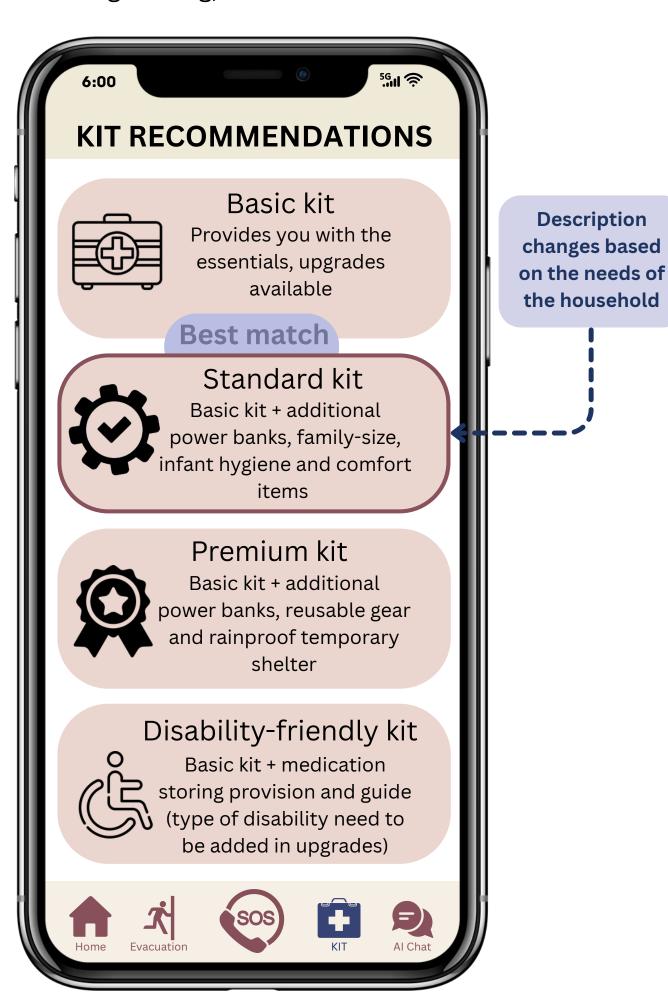
Based on the household's income, vulnerability, and size

The app determines who qualifies for financial assistance or fully sponsored kits

Ensuring aid reaches to those who can not afford the kits on their own

After registering, users will be faced with a 'Kit Recommendations' screen.

Description



KIT PURCHASE You've selected: Standard kit Description: Basic kit + additional power banks, family-size, infant hygiene and comfort items Contents: Emergency whistle, rain poncho, drinking water (1 gallon), emergency flashlight...more RM 197.00 Price: Upgrades Proceed to checkout

Upgrades are offered in modules for easy customization

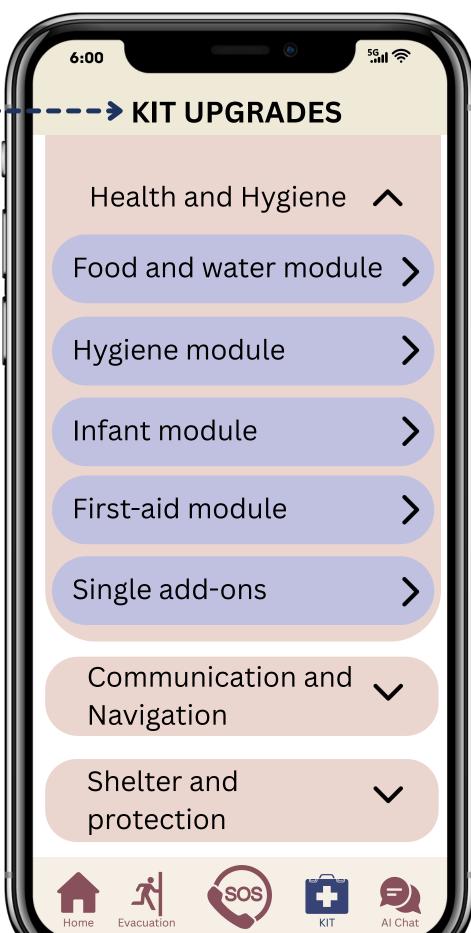
Upgrades are

available before

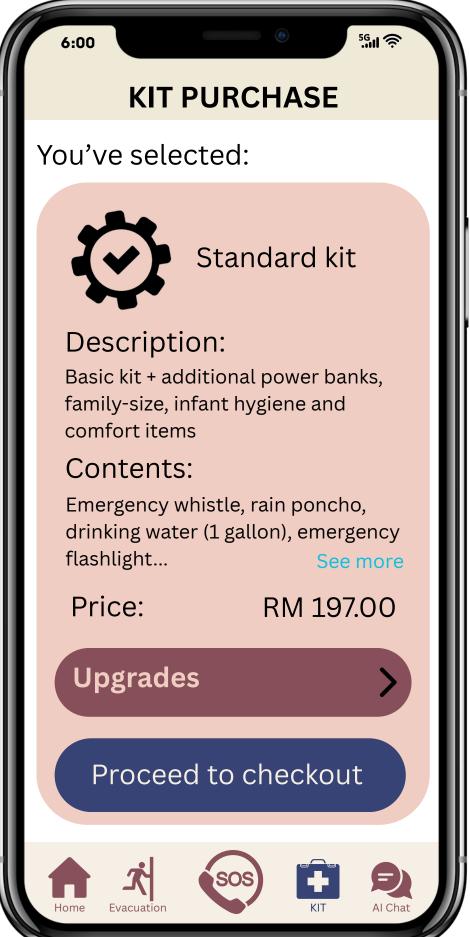
proceeding to

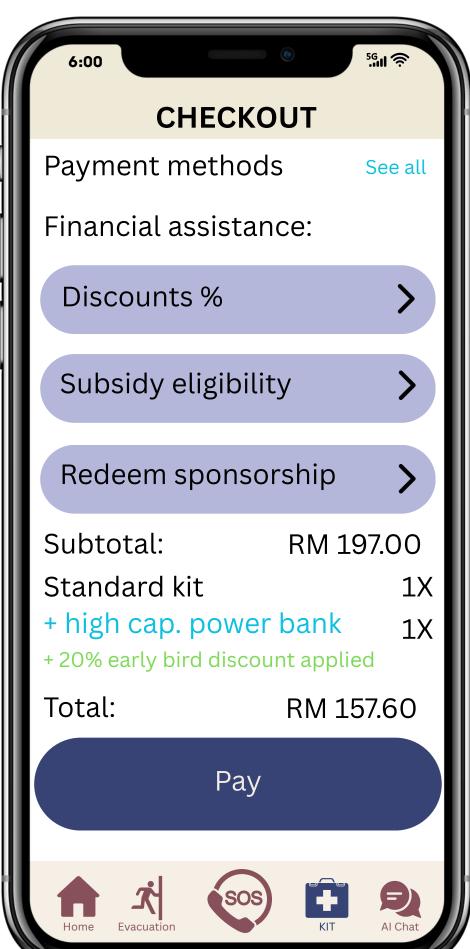
checkout

*Will be explained further in kit design section









Discount options:

Who is eligible?

B40 households

Users living in highrisk flood zones

Household with vulnerable members Those who register before flood season

Those who purchase kits in bulk

Those who add on many upgrades

Benefits:

- encourages early preparedness
- increases accessibility to emergency kits before flood seasons
- users practice responsible behavior

Subsidy options:

Who is eligible?

B40 households

Single mothers

Low income households : (\$)

Government grant programs

Co-funded by:

Social Welfare Department (JKM)

MERCY Malaysia

National Disaster Management (NADMA) Agency Grants & Programs

Malaysian Red Cresent Society

More formal, possible after an eligibility check

Sponsor options:

Who is eligible?

Single mothers

Disabled or elderly people

Those who are directly affected by the flood

Fully-funded by:

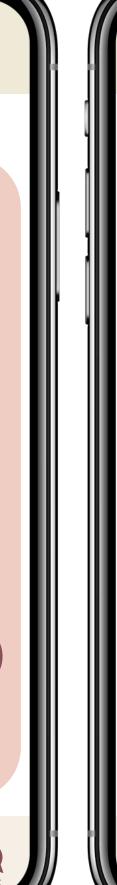
Local and **International NGOs**

Community **Fundraising**

Insurance Companies

Benefits:

- seeking multi faceted support making the kit more sustainable and effective
- will help to get the vital products for the kits



FLOOD SURVIVAL KIT: PROPOSAL



Stakeholder involvement in this project offers multifaceted advantages:

By supporting this advanced technological solution, you position yourselves at the forefront of disaster preparedness innovation

BENEFITS

Enhanced Public Trust



Aligning with a project
that directly protects
lives and property during
natural disasters
significantly bolsters
stakeholder organization's
image as a responsible
and caring entity.

g Social

Fulfilling Social Mandates & Missions



For government agencies and NGOs, this initiative directly supports mandates related to public safety and community welfare, offering a tangible and measurable impact.

Cost-Effectiveness & Efficiency



By enabling proactive preparedness, our solution can reduce the long-term costs associated with emergency relief efforts and postdisaster recovery.

Direct Community



You will directly contribute to building more resilient communities, safeguarding vulnerable populations, and empowering individuals to take control of their safety.

Employee Engagement & Philanthropy



For corporations and private donors, this project provides a meaningful avenue for corporate social responsibility, employee volunteerism, and targeted philanthropic investment.

FLOOD SURVIVAL KIT

2WHO

ARE STAKEHOLDERS & SPONSORS

Basic Kit

- Government Agencies (NADMA),
- NGO's like Malaysian Red Crescent Society, MERCY Malaysia,
- Malaysian Relief
 Agency and Corporate
 Social Responsibility
 (CSR) Programs.

Standard Kit

- Non-Governmental Organizations (NGOs) like, Yayasan Sejahtera, The Salvation Army Malaysia and RedR Malaysia.
- Community-Based
 Organizations/Group

Premium Kit

- Private Donors / High-Net-Worth Individuals.
- Technology Companies.
- Large Corporations / Philanthropic
 Foundations
- Organized Fundraising Campaigns









ARE THEY INTERESTED

Government Agencies (e.g., NADMA, JKM)

- Fulfilling mandate
- Cost effectiveness
- Political will and public trust

NGOs

- Donor appeal
- Community resilience
- Mission alignment

Community Groups and Associations

- Direct community benefit
- Grassroots support
- Community empowerment

Corporations

- Corporate social responsibility
- Brand reputation and public image
- Employee engagement
- Risk engagement

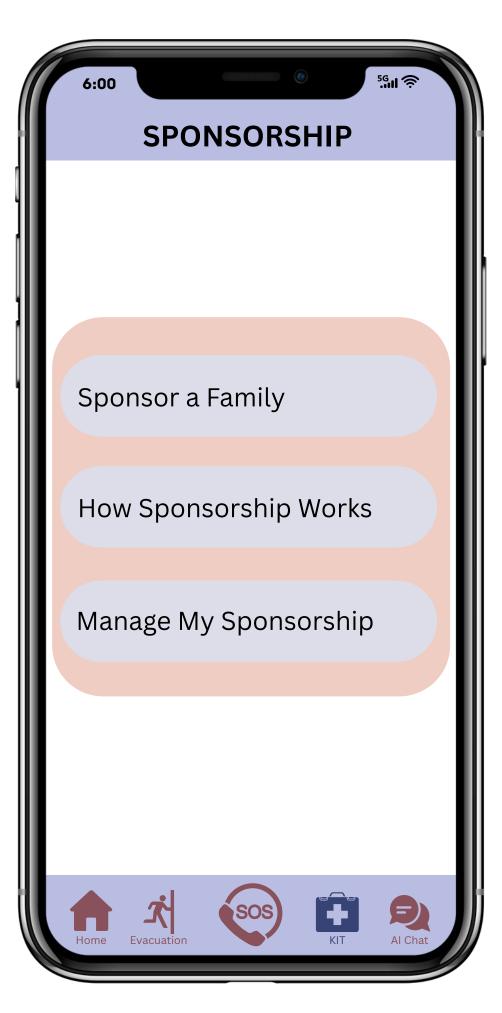
Private Donors

- Philanthropy
- Direct impact
- Addressing inequality

STRATEGIC NETWORKS CAN BE CULTIVATED

Our proposal is designed for collaborative success, integrating a diverse range of stakeholders:

- Government Agencies (e.g., NADMA, JKM): are vital for policy alignment, funding, and leveraging national disaster management systems.
- NGOs & Community-Based Organizations: bring grassroots expertise, volunteer mobilization, and direct support for effective outreach and feedback. Key players include the Malaysian Red Crescent Society, MERCY Malaysia, Yayasan Sejahtera, and The Salvation Army Malaysia.
- CSR Programs & Large Corporations: can contribute through financial support, logistics, and brand influence to boost development and adoption of the kits.
- Private Donors & Philanthropic Foundations: provide essential funding to ensure equitable access, especially for B40 and high-risk communities.



FLOOD SURVIVAL KIT PROPOSAL

BUSINESS PROPOSAL REQUEST

We seek funding to produce and distribute flood survival kits.

WILL FUNDS BE ALLOCATED TOWARDS

- App Development and maintenance of the user interface and security.
- Kit Manufacturing and procurement of essential supplies.
- Establishing and optimizing efficient delivery and pick-up points, particularly during flooding events.
- Raising awareness and ensuring communities understand how to effectively use the app and kits.
- Operational costs for sustained functionality and responsiveness of the system.

We also have a system in place to identify households eligible for financial assistance or fully sponsored kits based on income, vulnerability, and household size, ensuring aid reaches those who need it most.

MARKET AND COMPARISON

In Malaysia, emergency kits commonly referred to as "go bags" or "disaster kits" are generally sold through online platforms such as Shopee, Lazada, and specialty safety equipment stores. Most of these kits are standardized and designed for general emergencies (not specifically tailored for floods), often including:

BASIC CONTENTS:

First aid items, flashlight, batteries, thermal blanket, water pouches, whistle, multi-tool, and basic hygiene items.

PRICING RANGE:

- Basic emergency kits (individual use): RM50-RM150
- Family-sized kits (3-5 pax): RM200-RM400
- Premium disaster kits (with advanced items like solar chargers, radios, water filtration): RM500 and above

LIMITAIONS

- One-size-fits-all design with no customization based on family size or vulnerabilities.
- Static contents that are not replenished or monitored over time.
- No integration with alert systems, app-based navigation, or delivery coordination.
- No link to local community aid centers or emergency logistics.

Feature	Existing Emergency Kit	Proposed Emergency Kit
Customization	Standardized content	Tailored to household size, age, income, etc.
App Integration	None	Flood alerts, Kit tracking and navigation
Delivery options	Limited courier services	Direct delivery and community pick up stations
Maintenance	No expiry tracking or reminders	Automated tracking and refill alerts via app
Scalability	Designed for individual sale	Designed for mass distribution
Targeted Vultibility Support	Not included	Subsidies and kit configuration based on need
Modular Design	Fixed items	Easy to upgrade, expand and personalizes

SWOT ANALYSIS FLOOD SURVIVAL KIT

STRENGTHS:

Innovative, Tech-Driven Solution: App-based system delivers real-time flood alerts and personalized emergency kits, enhancing disaster preparedness.

Intelligent & Sustainable Kit Management: Recommends and maintains emergency kits with expiry tracking and replenishment alerts.

Strong Collaborative Potential & Social Impact: Fosters stakeholder partnerships to boost social responsibility and community resilience.

OPPORTUNITIES:

Addresses a Growing Threat: Tackles the urgent and increasing risk of flooding with a proactive approach.

Strong Stakeholder Appeal: Attracts partners by offering reputational benefits and fulfilling social goals.

Scalability: Can expand nationwide through partnerships with government disaster agencies.

WEAKNESSES:

Dependence on User Input & Digital Access: Relies on accurate data from users and excludes those without smartphones or internet.

Funding Reliance: Requires consistent external funding for development, kits, and operations.

Complex Logistics During Crises: Delivering kits during floods is challenging and demands careful planning.

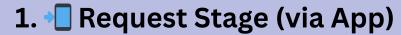
THREATS:

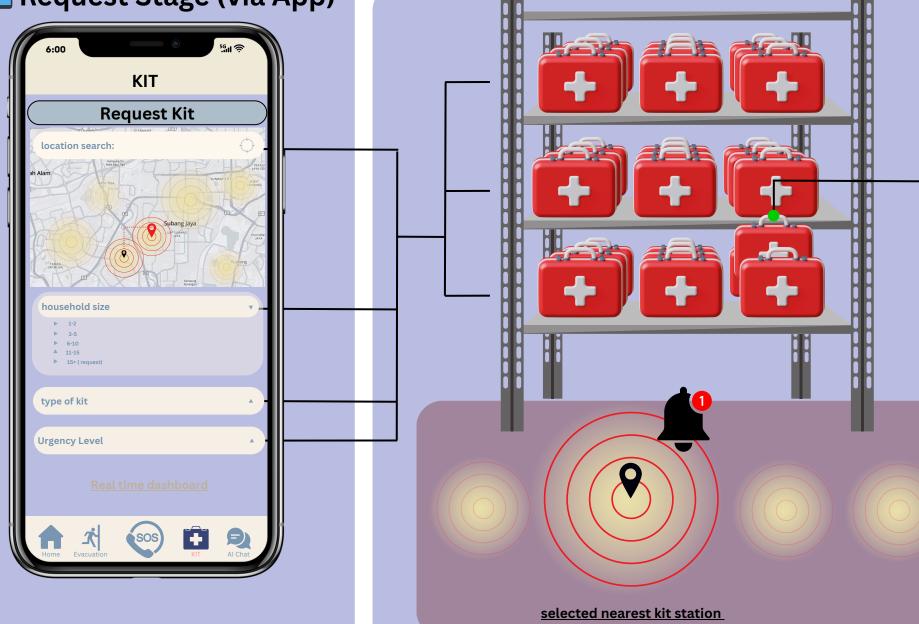
Funding Shortfall Risk: Limited financial support could delay or stall key components.

Adoption & Engagement Challenges: Project success depends on user awareness and consistent usage.

Logistical Disruptions During Floods: Severe events might still interrupt delivery of emergency kits.

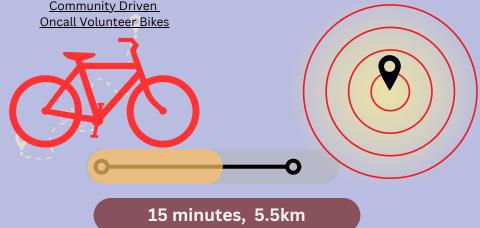
BEFORE FLOODING EVENT











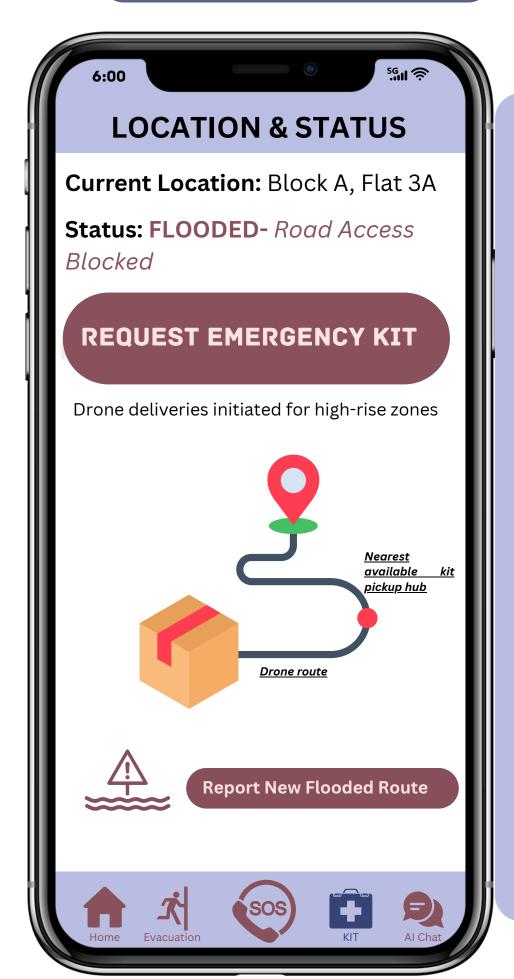


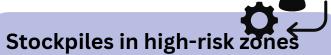


Kit arrival 2 minutes track Kit



AFTER FLOODING EVENT





Delivery Method Options

- Boat or drone delivery for unreachable areas
- Community hubs with predistributed kits

Navigation Aid

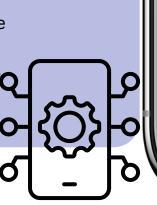
- Real-time map with nearest pickup points
- Alternate routes avoiding flooded roads

<u>Dwelling Type Specificity</u>

- High-rise: kits delivered to lobby
- Single-storey: doorstep drop-off or neighbour cluster point

<u>App Integration</u>

- "Request Kit" feature
- Track delivery status
- Contact help line





Kit Maintenance Guide

<u>Kit Inventory Tracker</u>

- Checklist of items with expiry dates
- Used item status toggle

Replenishment System

- "Buy again" button for depleted items
- Link to nearest pharmacy/shop

Storage Tips

Advice based on dwelling type:

- Low shelf for elderly homes
- Watertight boxes for landed houses

App Integration

- "Restock Kit" button
- Push notifications for expiry alerts
- Emergency manual download

FLOOD SURVIVAL KIT: PROPOSAL

USER BENEFITS

Personalized Emergency Support

The Intelligent Needs Assessment customizes kits based on household details like size, age groups, and income, ensuring effective and relevant flood preparedness.

Easy Procurement & Delivery

Users can pre-order kits or receive instant delivery during emergencies, with logistics tailored to housing types to ensure timely access to essential supplies.

Real-Time Alerts & Offline Navigation

The app delivers critical flood alerts, real-time updates, and offline navigation to nearby kit stations, helping users make quick decisions and access help even without internet.

Kit Maintenance & Replenishment

The app tracks expiry dates, sends replacement alerts, and allows quick reordering, supporting long-term preparedness beyond one-time use.

Modular, Upgradeable Design

The modular kits can be customized or upgraded as household needs change, making them sustainable, reusable, and adaptable over time.

PRECEDENT STUDIES

EXISTING MODULAR EMERGENCY KITS:

ShelterBox (global disaster relief charity)



A modular emergency kit:
-consist of a core kit and add ons

Something that can improve:

• boxy shape can have multipurpose uses besides storing items

2. Aussie Storm Shop (family owned business)



A modular emergency kit:

-consist of first aid kit with modular add ons -medical only modular approach

Something that can improve:

 consist only of first aid supplies, could broaden the different types of modular packs offered

Molle system (Modular lightweight Load-carrying equipment)

- uses woven nylon straps to tightly secure pouches and gears
- will not loosen in water, mud or wind
- pouches (modular add-ons can be added and removed easily







DESIGN IDEATION:

- 1) To broaden the provision of modular kits from medical-focused kits to bigger emergency scope for full flood readiness.
- ス Z
- 2) **Customization**; allowing every user to pick and choose modules they need for their household rather than wasting money and space purchasing items in the kit they don't need.



3) A **comprehensive emergency kit** designed to **adapt** to the **evolving needs of individuals.**







Main material:

Nylon

Tough, tearresistant, suitable lightweight base. Thermoplastic polyurethane (TPU)

A waterproof, weldable, abrasion-resistant and non-toxic layer.

Core bag function:

Emergency Floatation Device

0.3 x 0.72 x 0.13 = 0.028 1m³ displaces 1000kg 0.028 x 1000 = **28 kg**



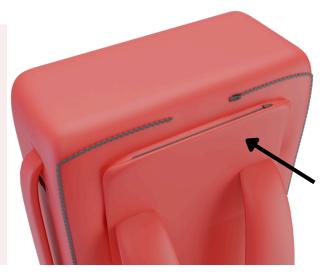
Rescuers (volunteers) stay afloat in harsh flood conditions.



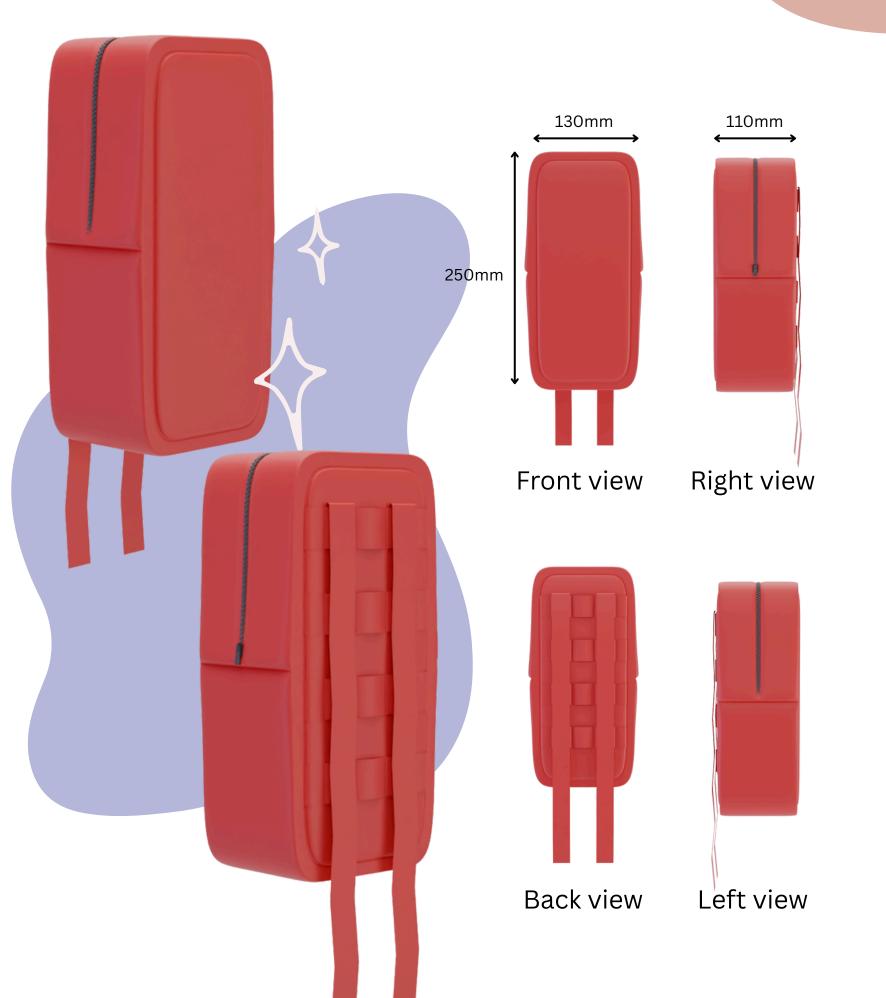
With **safety straps**, infants from 5 to 15kg can be **completely buoyant**.

Encouraging Emergency Preparedness

The core bag has a
compartment sealed
with a zipper for users
to store important
documents,
encouraging them to be
always prepared.



SMALL MODULE







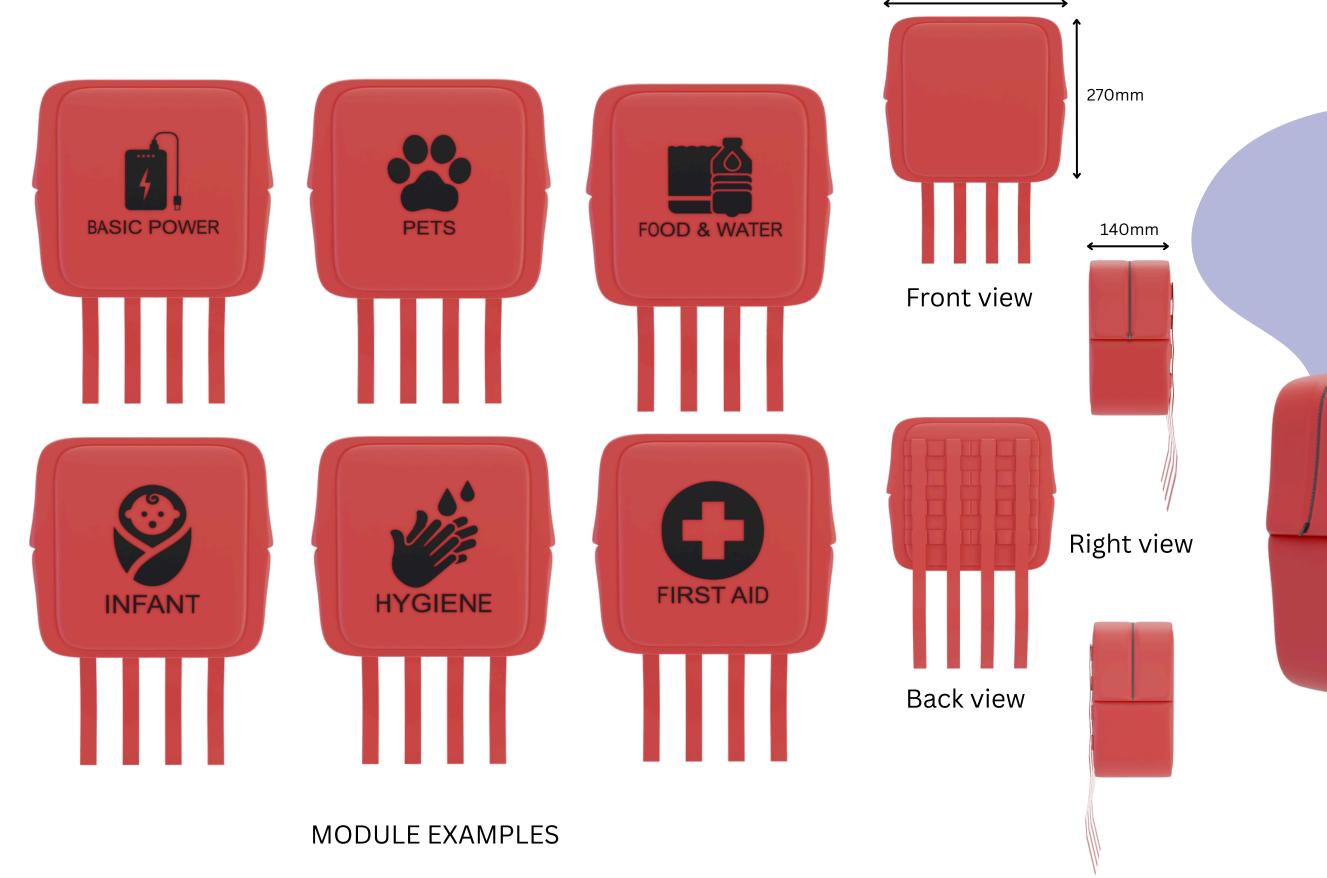
Users can use this module to fill up their own prescribed medication, practicing preparedness before a flooding event.

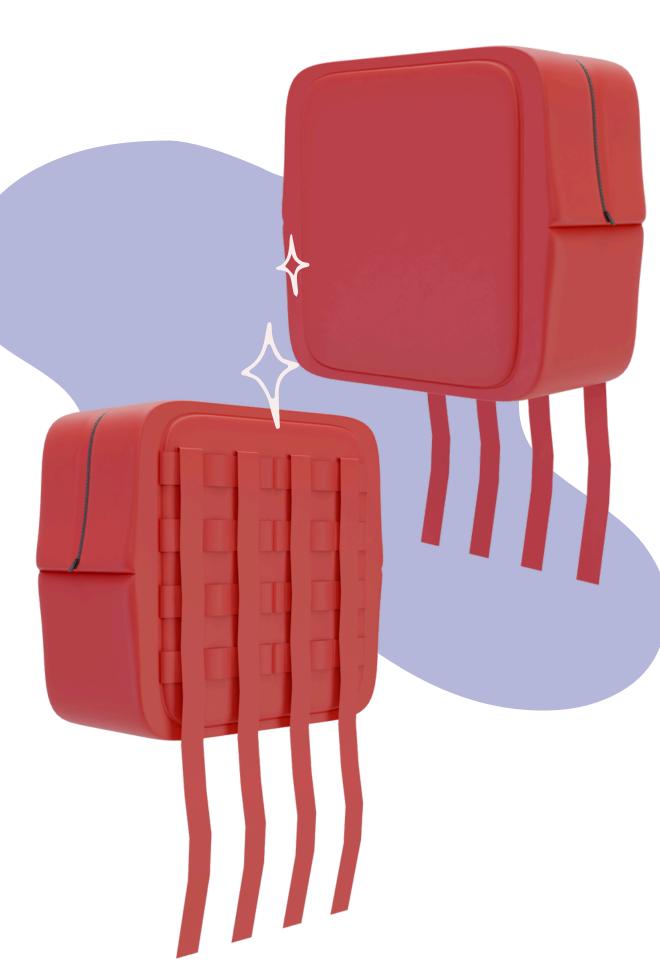


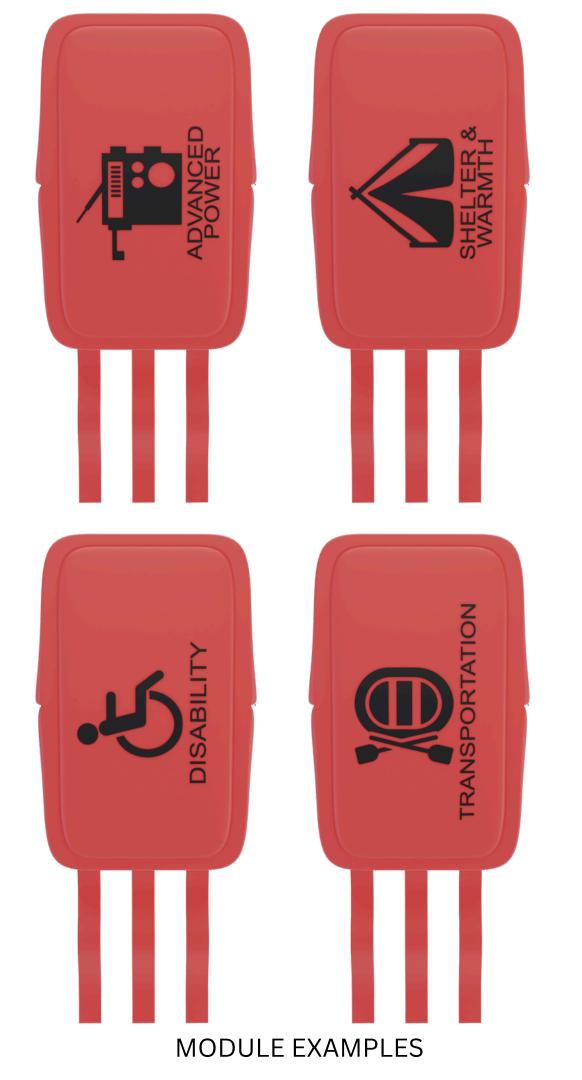
MEDIUM MODULE

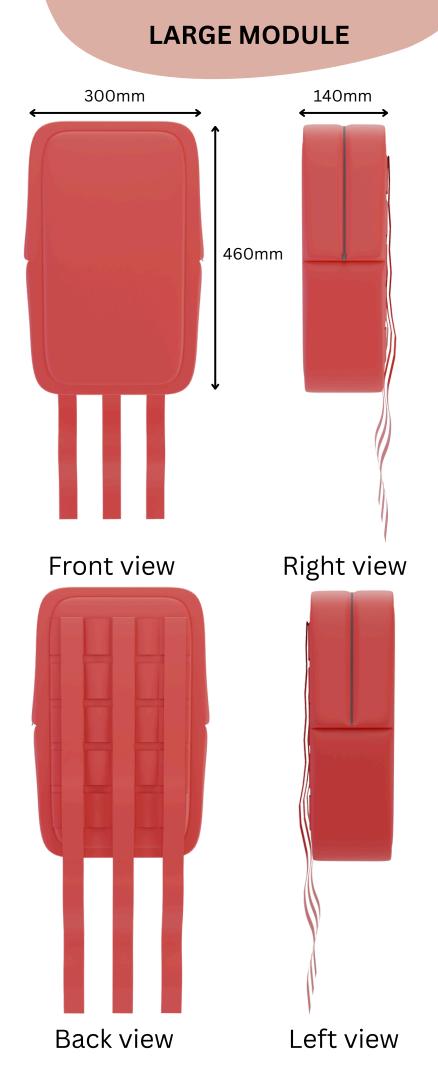
300mm

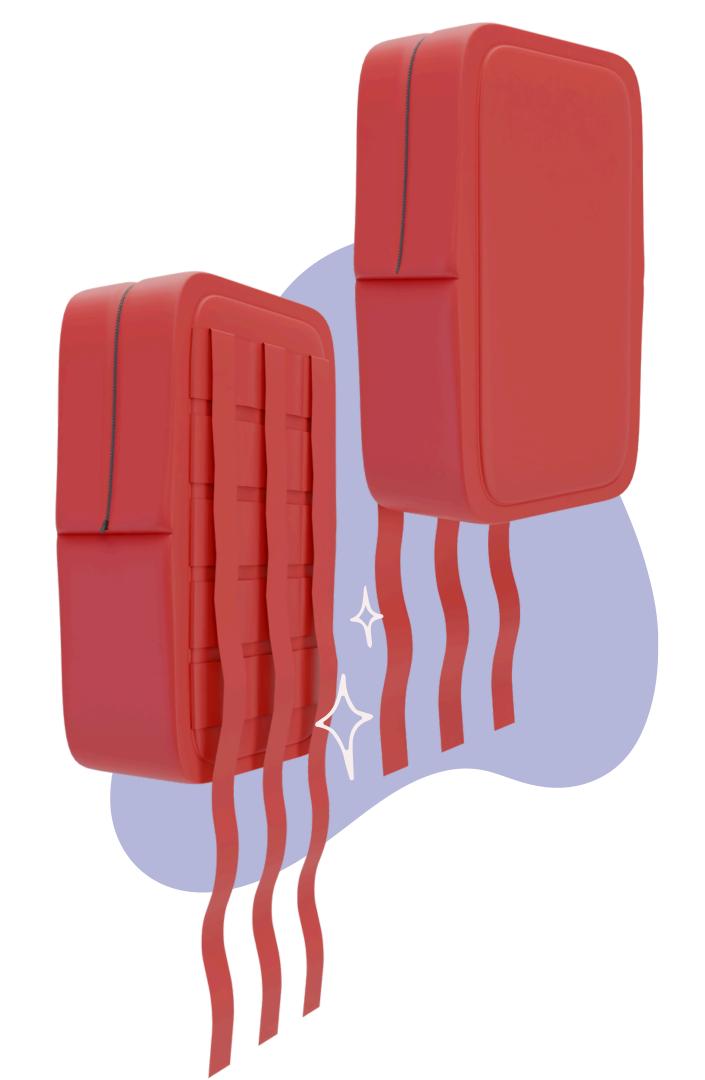
Left view

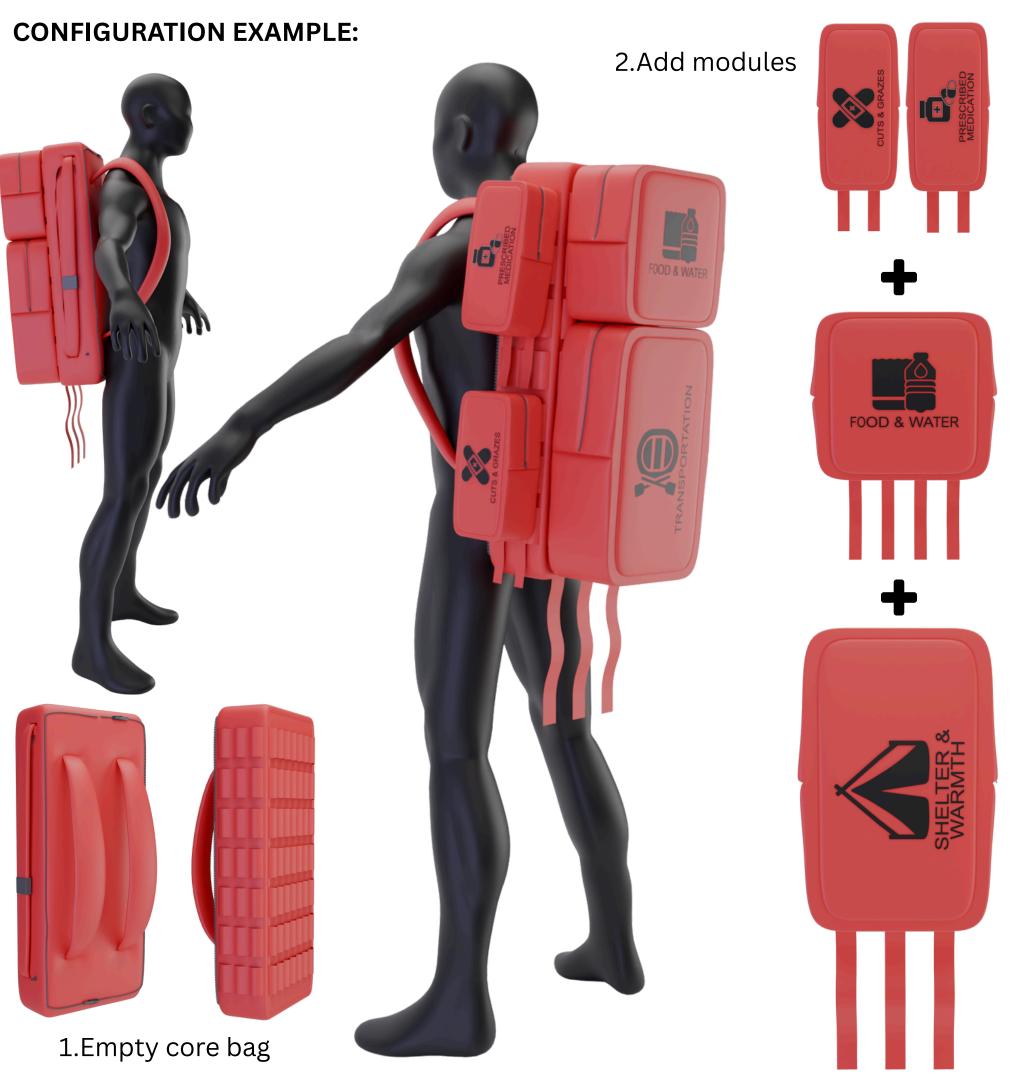


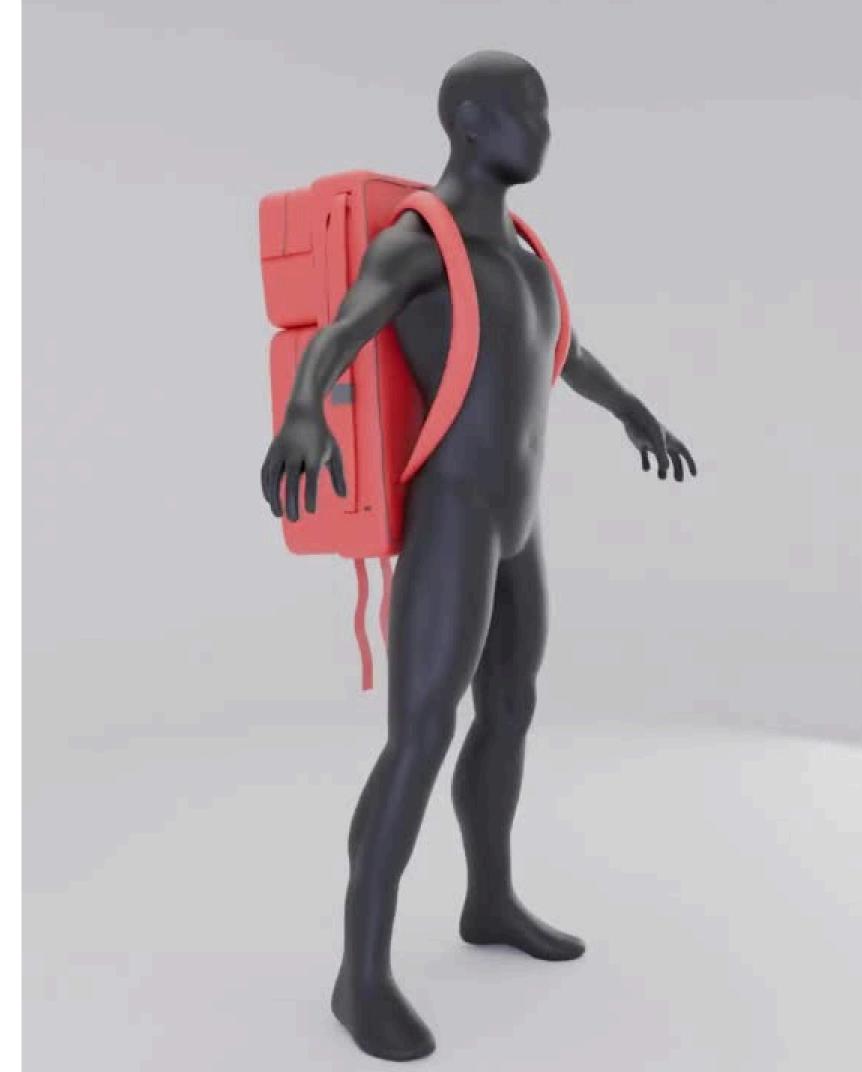




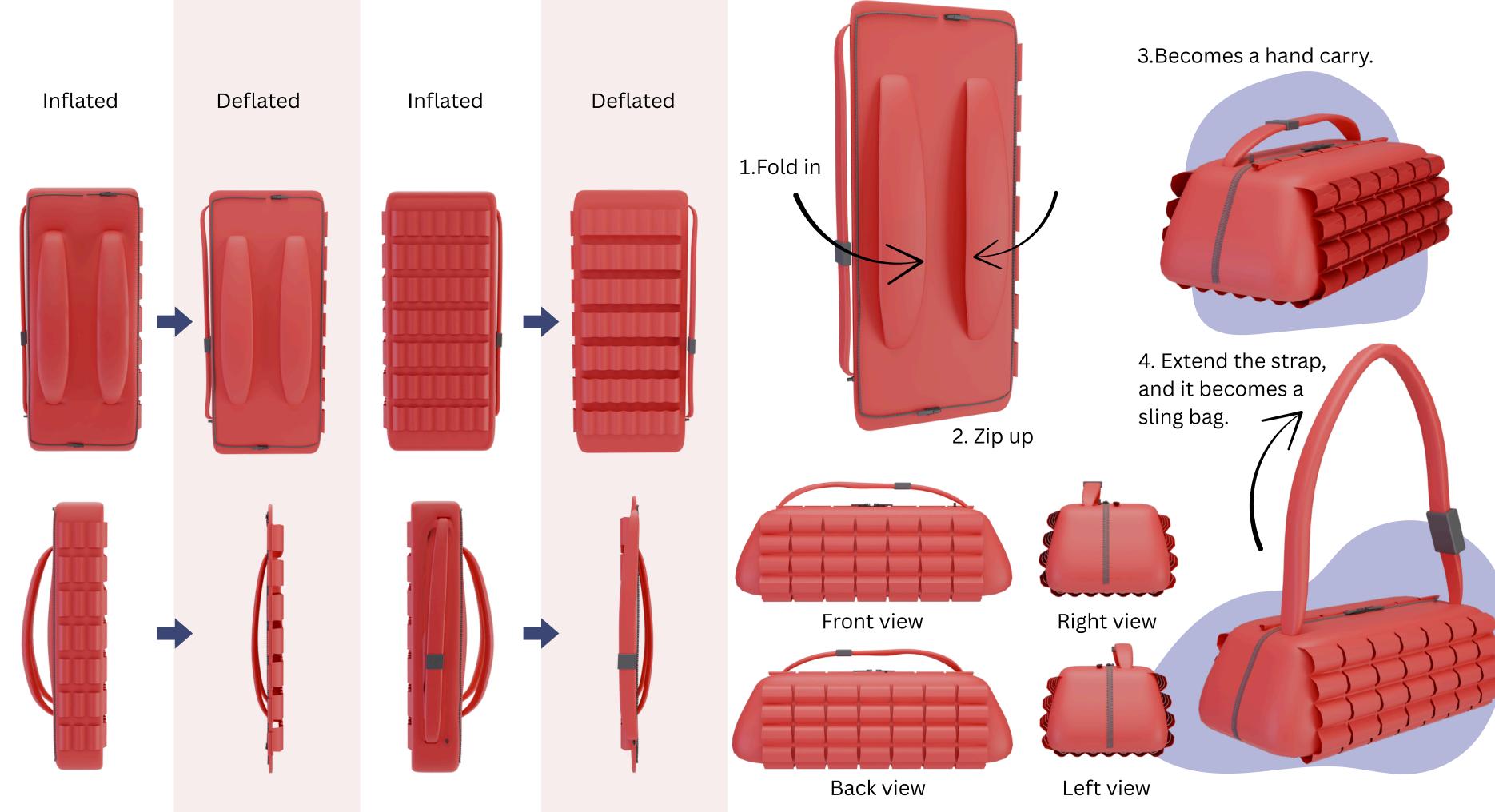


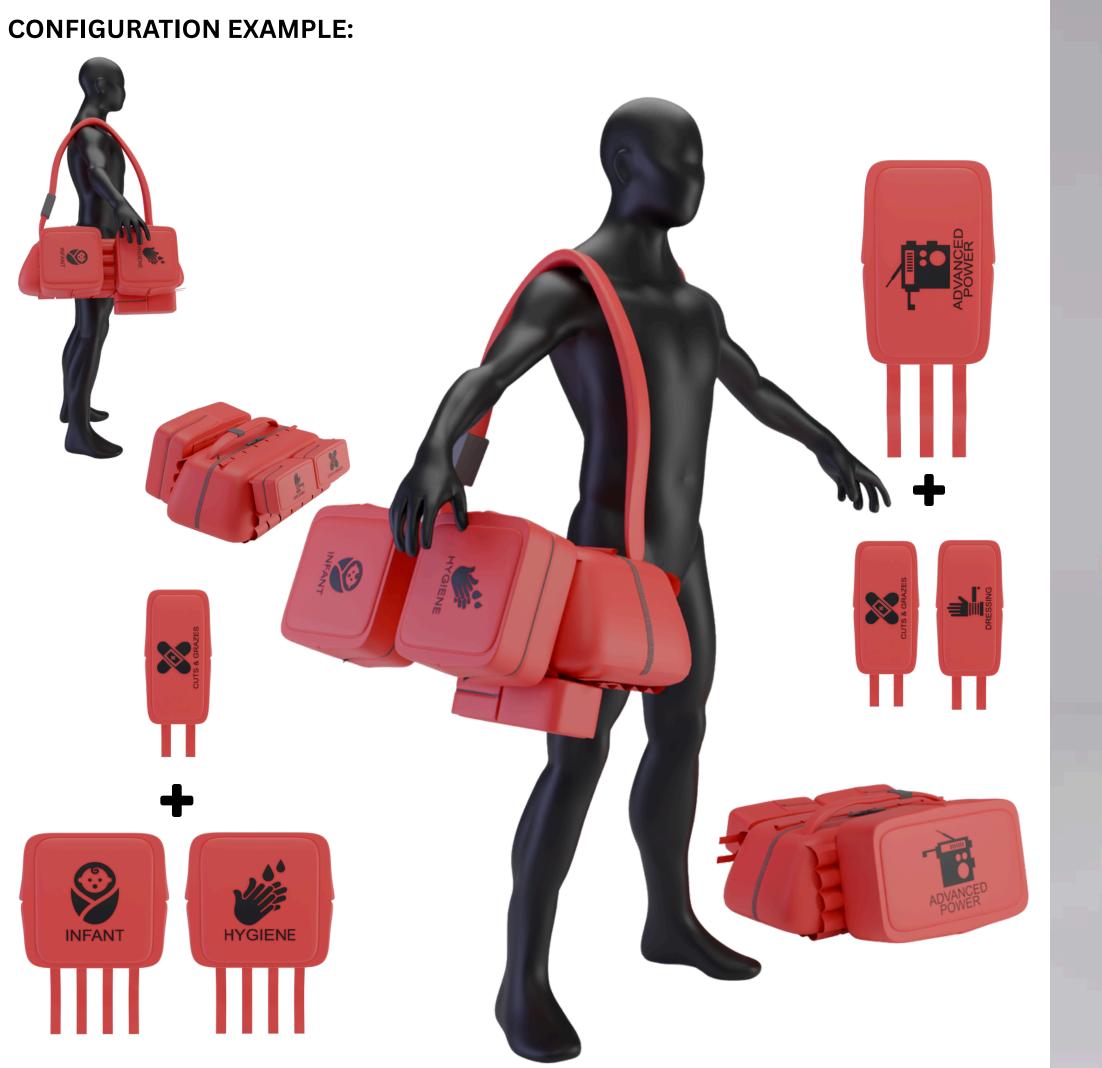






When the core bag is deflated:







BASIC EMERGENCY KIT ITEM LIST

No.	Item	Description	Price (RM)	Weight (g)	Source
1	First Aid Kit (Mini)	Basic plasters, antiseptic wipes	RM6.00	20g	Shopee
2	Rain Poncho	Same	RM5.00	80g	Mr DIY
3	Drinking Water (500ml x2)	1L total; lighter	RM3.00	1000g	7-Eleven
4	Mini Flashlight (Keychain LED)	Compact version	RM5.00	50g	Lazada
5	Cereal/Energy Bar x2	Reduced quantity	RM6.00	100g	Mydin
6	Basic Wound Pouch	Gauze, bandage, tape	RM10.00	120g	Guardian
7	Meds Pouch	Smaller pill container	RM3.00	30g	Shopee
8	Essentials Meds Kit	Only 3 common types	RM10.00	100g	Guardian
9	First Aid Manual (Leaflet)	Printed 1-page guide	RM2.00	20g	MPH bookstores
10	Hand Hygiene Wipes Only	Wet wipes only	RM6.00	150g	Watsons
11	Feminine Kit (Pads x2 + wipes)	Essentials only	RM10.00	200g	Guardian
12	Disinfectant Wipes (Travel Pack)	Small pack	RM3.00	80g	Watsons
13	Dust Mask (1x) & Gloves (1x)	One set only	RM4.00	100g	Mr DIY
14	Mini Lighter	Smaller size	RM2.00	30g	7-Eleven
15	Tools Kit (Scissors, Pins)	Compact version	RM6.00	100g	Shopee
16	Signal Mirror (Plastic Type)	Plastic version	RM3.00	30g	Decathlon
17	Flood Stick	For checking water depth and safety	RM10.00	500g	Shopee

• Total Estimated Price: RM94.00

• Total Estimated Weight: 2.71kg

STANDARD EMERGENCY KIT ITEM LIST

No.	ltem	Description	Estimated Price (RM)	Estimated Weight (g)	Source
1	Power bank (basic)	5,000mAh rechargeable	RM40.00	200g	Shopee
2	Mylar blanket	Thermal foil blanket	RM10.00	50g	Shopee
3	Multitool (mini)	Knife + screwdriver	RM30.00	150g	Shopee
4	Duct tape	Small roll	RM10.00	100g	Mr.DIY
5	Mini First Aid Kit	Bandages, gauze, alcohol swabs	RM30.00	200g	Guardian
6	Gloves	1 pair latex/nitrile	RM5.00	50g	Mr.DIY
7	Dust mask	Basic N95 or surgical mask	RM2.00	10g	Guardian
8	Whistle	Signal whistle	RM5.00	20g	Shopee
9	Flashlight (basic)	Battery-powered small torch	RM20.00	150g	Shopee
10	Water filter straw	Budget version	RM45.00	100g	Shopee

[•] Total Estimated Price: RM 197

[•] Total Estimated Weight: 1.03 kg

PREMIUM EMERGENCY KIT ITEM LIST

No.	Item	Description	Estimated Price (RM)	Estimated Weight (g)	Source
1	Multitool pliers	Grips, unscrews, cuts, moves debris	RM30.00	250g	Shopee
2	Hand crank radio	Alerts, flashlight, no battery needed	RM60.00	400g	Shopee
3	Portable water filter	Filters dirty water for drinking	RM50.00	100g	Shopee
4	First aid kit (basic)	Bandages, antiseptic, pain relief	RM30.00	300g	Guardian
5	Emergency food (instant noodles + bars)	Cheap calorie source (DIY food kit)	RM20.00	800g	Local store
6	LED flashlight (battery)	Basic torch (Not Solar)	RM20.00	150g	Mr.DIY
7	Duct tape (mini roll)	Secures items or seals leaks	RM10.00	100g	Mr.DIY
8	Rain poncho	Compact, keeps you dry	RM10.00	150g	Shopee
9	Thermal blanket	Reflects body heat	RM10.00	50g	Shopee
10	Gloves (latex pair)	Protects hands	RM5.00	50g	Mr.DIY
11	Whistle	Signal alert tool	RM5.00	20g	Shopee
12	Waterproof pouch (basic)	Store IDs and cash	RM10.00	100g	Shopee

[•] Total Estimated Price: RM 310

[•] Total Estimated Weight: 2.47 kg

DISABILITY EMERGENCY KIT ITEM LIST

No.	ltem	Description	Estimated Price (RM)	Estimated Weight (g)	Source
1	Everyday LED tactical flashlight	Ideal for reliable lighting in power outages	RM20.00	150 g	shopee
2	20000 mAh power bank	Essential backup power for medical devices or phones.	RM130.00	400g	shopee
3	Emergency survival whistle	Loud emergency whistle; plastic version, Great for signalling	RM5.00	10g	Shopee
4	Emergency Rechargeable Lantern	Small lantern or bulb light	RM13.00	200g	MR.DIY
5	Portable Emergency Blanket	Mylar blanket, compact; keeps body warm and dry during evacuation.	RM10.00	100g	Mr.DIY
6	First Aid & Medication Pouch	Pre-packed pouch with essential meds & first-aid including assistive-device spares.	RM20.00	300g	Guardian
7	Spare Adaptive Device Batteries	AA/AAA or lithium batteries for hearing aids or mobility aids.	RM5.00/pc	20g each	Mr.DIY
9	Portable Charger Cable Bundle	Pre-packed cables (USB-C, Lightning) for power bank & devices.	RM20.00	100g	Shopee
10	Wheelchair seatbelt harness	Adjustable belt to secure wheelchair users during transport or sudden jolts	RM30.00	200g	Ace Hardware
11	Portable folding ramp (aluminium)	Compact ramp to bridge short gaps	RM150.00	2000g	Shopee
12	Hearing aid dryer / dehumidifier	Non-electric silica bead box	RM50.00	300g	Shopee
13	Emergency alert button with pendant	Personal alarm to call for help. Useful during falls or panic situations	RM80.00	50g	Gaurdian
14	Personalized Visual Communication Board	Lightweight board with symbols, phrases, or images to assist those with speech or cognitive disabilities in communicating during emergencies.	RM30.00	300g	Shopee

- Total Estimated Price: RM 568
- Total Estimated Weight: 4.15kg

INFANT EMERGENCY KIT ITEM LIST

No.	Item	Description	Estimated Price (RM)	Estimated Weight (g)	Source
No.	Infant First Aid Kit	Includes baby-safe antiseptic, bandages, and teether gel	RM25.00	250g	Guardian
No.	Ready-to-feed Formula (2x200ml)	Liquid formula for emergency feeding, no prep needed	RM30.00	500g	Watsons
3	Sterilized Bottles (x2)	Pre-sterilized, disposable feeding bottles	RM20.00	200g	Shopee
4	Diapers (10-pack, NB size)	Compact disposable newborn diapers	RM25.00	300g	Shopee
5	Baby Wipes (travel pack)	Fragrance-free wet wipes for sensitive skin	RM8.00	250g	Mr DIY
6	Changing Mat (foldable)	Waterproof and reusable baby changing pad	RM15.00	150g	Shopee
7	Pacifier with case	Comfort soother with hygiene case	RM10.00	50g	Guardian
8	Baby Blanket	Soft, warm microfiber blanket for wrapping infant	RM25.00	400g	Shopee
9	Baby Food Pouch (x2)	Ready-to-eat baby puree, no refrigeration	RM14.00	240g	Mydin
10	Emergency Infant ID Tag	Writable waterproof ID tag (name, allergy, contact)	RM5.00	10g	Shopee
11	Infant Oral Rehydration Salts (ORS)	Baby-safe hydration solution	RM8.00	60g	Guardian
12	Nasal Aspirator (manual)	Clears infant nasal passages	RM12.00	100g	Shopee
13	Hand Sanitizer (baby-safe)	Alcohol-free sanitizer for caregiver's hands	RM10.00	150g	Watsons
14	Compact Baby Carrier Wrap	Lightweight wrap to hold baby hands-free	RM45.00	500g	Shopee

• Total Estimated Price: RM282

• Total Estimated Weight: 3.16 kg

FIRST-AID EMERGENCY KIT ITEM LIST

No.	ltem	Description	Estimated Price (RM)	Estimated Weight (g)	Source
1	Multitool pliers	Grips, unscrews, and safely moves debris like glass	RM30.00	250g	Shopee
2	Hand crank radio	Gets flood alerts, charges phones, built-in flashlight	RM60.00	400g	Shopee
3	Portable water filter	Filters floodwater for safe drinking	RM50.00	100g	Decathlon
4	First aid kit	Basic medical supplies for wounds, cuts, pain relief	RM30.00	300g	Guardian
5	LED flashlight	Waterproof flashlight (basic, battery-operated)	RM20.00	150g	Mr.DIY
6	Thermal blanket	Reflects body heat for warmth if stranded	RM10.00	50g	Shopee
7	Duct tape	Sealing tape for quick repairs or emergencies	RM10.00	100g	Mr.DIY
8	Whistle	High-pitched whistle to alert rescue teams	RM5.00	20g	Shopee

[•] Total Estimated Price: RM 215

[•] Total Estimated Weight: 1.37 kg

HYGIENE EMERGENCY KIT ITEM LIST

No.	Item	Description	Estimated Price (RM)	Estimated Weight (g)	Source
1	Toothbrush & Toothpaste Set	Compact hygiene pack for oral care	RM10.00	150g	Guardian
2	Biodegradable Wet Wipes (Large Pack)	Multipurpose body wipes; safe for sensitive skin	RM12.00	400g	Watsons
3	Compact Towel (Microfiber)	Fast-drying, reusable towel	RM15.00	200g	Mr DIY
4	Sanitary Pads (10 pcs)	For menstrual hygiene	RM8.00	300g	Guardian
5	Pocket Tissue (3 packs)	Dry cleaning or face wipe	RM5.00	120g	Mr DIY
6	Alcohol-based Hand Sanitizer (100ml)	Quick disinfectant for hands	RM6.00	100g	Shopee
7	Disinfectant Spray (Travel Size)	Kills germs on surfaces or hands	RM12.00	150g	Watsons
8	Nail Clipper & Tweezers Set	Basic grooming tools for cleanliness	RM6.00	100g	Shopee
9	Soap Sheet Pack (Portable)	Water-soluble sheets for washing hands/body	RM5.00	50g	Shopee
10	Toilet Seat Cover (10 pcs)	Disposable covers for hygienic toilet use	RM10.00	200g	Shopee
11	Comb + Hair Ties Kit	Compact grooming for all hair types	RM5.00	80g	Guardian
12	Underwear (Disposable, 3 pcs)	Clean change of underwear for emergencies	RM10.00	150g	Shopee
13	Deodorant Stick (Travel Size)	Body odor control for several days	RM8.00	120g	Guardian
14	Laundry Soap Bar	Wash small clothing items by hand	RM3.00	200g	Mr DIY

- Total Estimated Price: RM115
- Total Estimated Weight: 2.42 kg

FOOD AND WATER KIT ITEM LIST

No.	Item	Description	Estimated Price (RM)	Estimated Weight (g)	Source
1	Instant Cup Noodle (5x)	Quick source of carbs , although need boiling water	RM10.00	300g	Mydin
2	Canned Beans (3x)	Fully cooked and can be eaten straight out of can	RM 12.00	1200g	Mydin
3	Bottled water	Immediate source of clean water	RM 10.00	9500g	Mydin
4	Instant Oats	Quick and nutritious , can last for hours	RM 13.00	1350g	Mydin
5	Granola Bars (5x)	Snack that's easy to carry	RM 20.00	38g	Mydin
6	Tortillas / Flat Bread	No cook carbs	RM 8.60	360g	Mydin
7	Electrolyte Powder (5x)	Prevents dehydration	RM 35.00	20g	Shopee
8	Dried Fruits	Source of fibre for digestion	RM 15.00	150g	Mydin
9	Powdered Milk	Source of calcium	RM 67.00	600g	shopee
10	Crackers	Easy and lightweight snack	RM 5.00	428g	Mydin

[•] Total Estimated Price: RM 195

[•] Total Estimated Weight: 14kg

POWER SUPPORT ITEM LIST

No.	Item	Description	Estimated Price (RM)	Estimated Weight (g)	Source
1	Mini Power Bank (5000mAh)	Compact emergency power	RM30.00	150g	Shopee
2	USB Charging Cable (3-in-1)	For multiple device types	RM8.00	50g	Mr DIY
3	Solar USB Charger (Mini)	Backup if no power available	RM25.00	200g	Lazada
4	Battery Pack (AA x4)	Extra batteries for devices	RM15.00	80g	7-Eleven
5	Headlamp (Rechargeable)	Hands-free light source	RM15.00	100g	Decathlon

• Total Estimated Price: RM88.00

• Total Estimated Weight: 580g

TEMPORARY SHELTER ITEM LIST

No.	Item	Description	Estimated Price (RM)	Estimated Weight (g)	Source
1	Tent (foldable or pop-up)	waterproof shelter option	RM 200.00	2000g	Lazada
2	Plastic Sheeting or Trap (3*4m or larger)	used as a roof or waterproof wall	RM 20.00	1500g	Mr.DIY
3	Rope or Nylon Cord (at least 10 to 15 m)	to tying down or securing structures	RM 5.00	200g	Mr DIY
4	Ground Sheet/ floor mat	insulation and barrier from wet and rough ground	RM 10.00	1000g	shopee
5	Blanket or sleeping bags	for warmth at night	RM 20.00	500g	Lazada
6	foldable sleeping mats/ foam pads	comfortable sleeping surface	RM 15.00	800g	Mr.DIY
7	Mosquito Net	Essential for tropical areas	RM 10.00	300g	Shopee

• Total Estimated Price: RM280.00

• Total Estimated Weight: 6.3kg

PET CARE ITEM LIST

No.	Item	Description	Estimated Price (RM)	Estimated Weight (g)	Source
1	Pet Food (Dry, 500g)	Basic emergency ration	RM8.00	500g	Mydin
2	Travel Bowl (Foldable)	Compact feeding option	RM6.00	100g	Shopee
3	Pet Waste Bags (Roll x10)	For hygiene	RM3.00	50g	Mr DIY
4	Pet Towel / Blanket (Small)	Comfort or drying use	RM5.00	300g	7-Eleven
5	Leash & Collar (Basic)	Emergency restraint & ID support	RM10.00	200g	Lazada
6	Pet Treats (Small Pack)	For calming or rewarding	RM5.00	100g	Mydin
7	Pet First Aid Kit (Mini)	Essentials for small injuries	RM12.00	150g	Shopee

• Total Estimated Price: RM49.00

• Total Estimated Weight: 1.4kg