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APEC Workshop on Enhancing Participation in Flood Disaster Preparedness through Community-based Hazard Mapping

APEC Emergency Preparedness Working Group

December 2021

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APEC Workshop on Enhancing Participation in Flood Disaster Preparedness through Community-based Hazard Mapping

Manual for Training

Virtual Format (Malaysia) | 15 - 24 June 2021

APEC Emergency Preparedness Working Group

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Contents

Introduction to the Manual

Objective

The objective of this manual is to assist trainers in organising and conducting a Training for Trainers on the Town Watching approach at the economy level.

The objective of the training in the Town Watching approach is:

- To enhance the capacity of community trainers to enhance community resilience towards flood disasters, to address the issue of increasing flood risk as result of climate change and growing human settlements in flood-prone areas;
- To share and create ownership by providing tools for developing community-based maps and preparedness procedures using the Town Watching approach; and
- To empower participants to implement the methodology during the workshop and propose a plan for similar training and dissemination in their locality.

Expected Outcomes

Participants can:

- Enhance their knowledge and skills on improving community resilience towards flood disasters through preparedness;
- Learn to conduct the Town Watching approach for flood disaster preparedness through community-based hazard mapping; and
- Develop a plan for implementation of a Town Watching approach at their community level.

Target audience

The target audience are potential community trainers in APEC economies who would like to conduct a Training of Trainers (ToT) workshop, although the training materials are suitable for use in any community flood response programme.

Adaptation of materials

The materials can also be repurposed for directly training community groups.

Trainers are encouraged to modify the materials according to their own situation.

Translation may also be needed to facilitate training at the local community level.

Different economies may already have websites for the local community on preparing for flood response, and these can be referred to for resources. For example,

- Chile has relevant information through the website www.onemi.cl;
- Chinese Taipei has a website at easy2do.ncdr.nat.gov.tw/community/;
- Japan has the Town Watching information for the community at the respective local government websites; and
- Malaysia has a website at www.civildefence.gov.my/.

Background of this manual

This manual and the related slides available on www.mywp.org.my/apec-workshop have been developed from materials presented at the virtual APEC Workshop on Enhancing Participation in Flood Disaster Preparedness through Community-based Hazard Mapping, 15 - 24 June 2021 (APEC project EPWG 02 2019a). The workshop was conducted virtually because of the Covid-19 situation. The writers of this manual have been normally engaged in physical face-to-face workshops before the Covid-19 pandemic and so the guidance materials presented here can be used in either a virtual or a physical setting. We recommend face-to-face training if possible, and some participants of the virtual workshop have given feedback that a physical workshop would be preferable for them, especially in relation to the on-site field exercise.

The workshop materials draw upon the experience of the trainers in Town Watching in the Malaysian context (Appendix 1) and so many of the examples and the videos used for on-site exercises are, of course, for the Malaysian situation. It builds on the Flood Ranger module and trainers may also refer to the relevant website at www.riverranger.my/FloodRanger/.

Reference to the Malaysian scenario for flood disaster management and to the community Flood Ranger programme are made in the training materials. For other economies, trainers may prefer to replace this information with that for local flood response programmes in their own economy.

Workshop materials and manual for training

All the materials from the virtual APEC Workshop are made available online at www.mywp.org.my/apec-workshop. The materials fall under two categories:

a) Training and Implementation of Town Watching Approach

This includes presentations and slide decks which cover the steps for conducting Town Watching; briefing on the field exercise; presentation on the use of online mapping tools; step-by-step use of the Town Watching methodology and field application; guidance on implementing the Town Watching exercise, virtually or physically; group mapping exercise in

participants' locality; facilitation of groups' presentation of the local maps made; and finally explanation on of emergency survival bags including use of of drinking water filtration kits. Videos formed an important part of the resource material for on-site observations, due to the virtual training mode. Videos are available upon request to the Project Overseer, Dr Zelina Ibrahim, zelina@upm.edu.my, or to the Malaysian Water Partnership Secretariat, Ms Athirah Lim, athirahlim@gmail.com.

b) Group Presentation and Reflection

At the end of the training, participants reviewed and presented proposals for planning and adaptation of the training modules for economy level training. This was conducted through break-out group discussion and group presentation. The maps and presentations made provide examples of facilitation for potential trainers and form part of the materials in this manual.

The workshop report provides an overview of all the presentations and exercises conducted in the virtual workshop.

This manual for training is covers the following modules:

1. Town Watching Exercise Briefing and Examples;
2. Use of Electronic Mapping Applications (E-Maps);
3. Town Watching Exercise;
4. Survival Preparation and Emergency Kits;
5. Way Forward: Planning Local Training.

How to use this manual

The manual provides guidance on the order of presentation of information.

The slide decks of training, which was conducted in the workshop, are available on the website. Trainers should download both materials in preparation for their own training workshop. Videos are available upon request to the Project Overseer, Dr Zelina Ibrahim, zelina@upm.edu.my, or to the Malaysian Water Partnership Secretariat, Ms Athirah Lim, athirahlim@gmail.com.

Guidance on organising a workshop is provided in Appendix 2.

View all the different slide decks to understand the progress in description and explanations presented.

Trainers may have to modify the slide deck in order to make them relevant for their own locality.

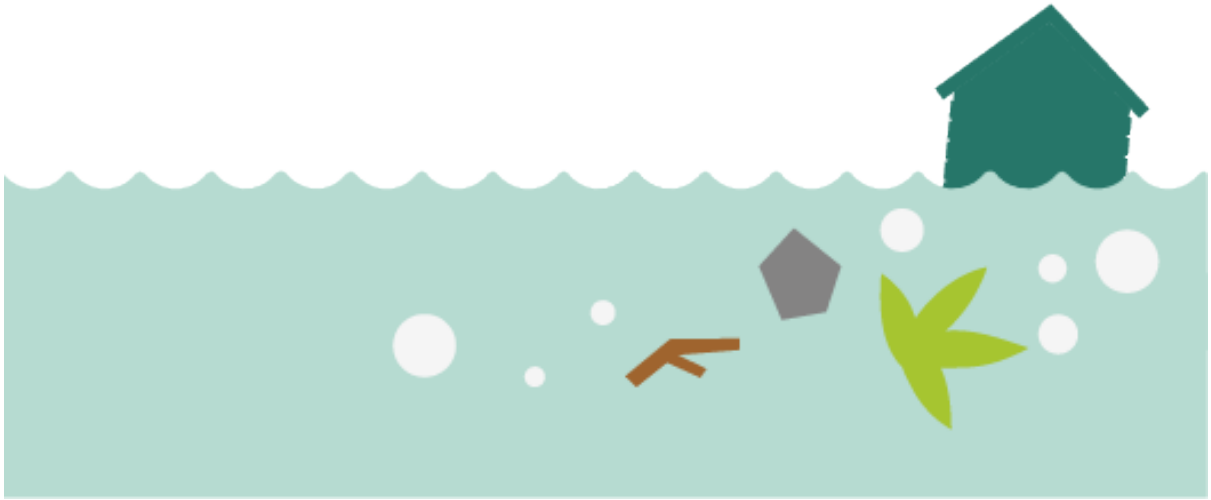
Module 1 Town Watching Exercise Briefing and Examples

Objective

The purpose of this module is to inform participants of the overall Town Watching approach for flood management and the steps required.

Course Materials

The slide deck is Module1.pdf shown in Figure 1.



1. Outline (slide 2)

The outline of the presentation is as follows:

A. Selection of Project Site
B. Early Preparation
C. Implementation of Town Watching
    1. Preliminary Review of the Area
    2. Town Watching Map Development
    3. Presentations and Discussions
    4. Submission and Sharing
D. Follow up

2. What is Town Watching? (slide 3)

Town Watching activity is a simple and practical tool for efficiently implementing community-based hazard mapping in various local communities around the world. It was originally use in town planning; however, it was also used in prevention of disaster impact such as flood. It is used to identify areas prone to have risk of danger and routes safe to travel during flood in the community residential area.

The Town Watching activity focuses on two main outputs which are (i) Community Based Flood Hazard Map and (ii) Community Based Flood Response Plan.

i. Community Based Flood Hazard Map emphasizes on how local community can develop their own map using local knowledge, experience and current condition.

ii. Community Based Flood Response Plan is action needed to be taken to prepare the site to be a safe route during flood and emphasizes on what needs to be done beforehand by individual, community, agencies and others.

Town Watching activity focuses on two main outputs, which are:

a) Community Based Flood Hazard Map (CBFHM)

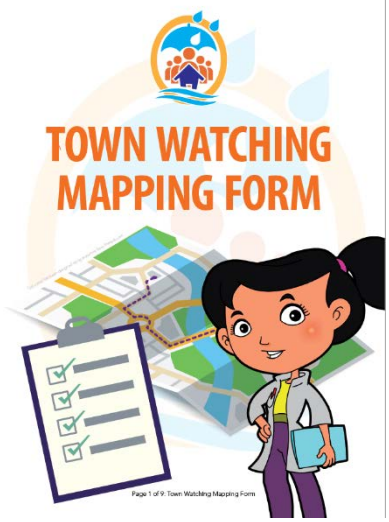
b) Community Based Flood Response Plan (CBFRP)

A. How Do You Select a Project Site? (slide 4)

To select a project site, the trainer may focus based on the needs such as flood prone areas and frequently affected community. Besides that, selection can be through smart partnerships, that is, with local authorities or other agencies' suggestions and recommendations or following project needs, funders and supporters.

B. What Do You Need to Prepare? (slides 5 to 13)

In terms of early preparation, the trainer should identify the area targeted for the location for the Town Watching activity, as well as the community members and stakeholders involved. The next step is to prepare a large map of the area; preferably including the information on topography or/and street map that is clear and to be used for future reference.



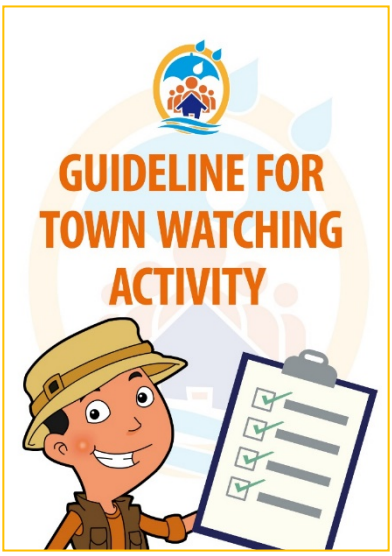
The trainer should also prepare all the necessary tools needed and print out the Town Watching Mapping form. The form can be downloaded at from the Flood Ranger website www.riverranger.my/FloodRanger, under the Module menu and selecting the file 'Town Watching Mapping Form (English)' (www.riverranger.my/FloodRanger/index.cfm?&menuid=5&lang=EN). The focus when filling the form is identifying potential Local Community Flood Gathering Centre (LCFGC), propose safe routes to the LCFGC site from respective houses, identify all hazards and risks along proposed safe routes, collect information on related community profile and also identify any resources in that area.

In addition to that, the trainer should also identify the resource person/s, be it internally from the community or external. Some examples of the resource person are the trainer, community group leader(s), and facilitator(s). After identifying these persons, each community member should be appointed specific tasks or roles, especially during the on-site activity. The roles of the group leader(s) and facilitator(s) are given in Slide 12. The last two preparations that should be taken care of by the trainers are the insurance cover for all participating members during the activity, and a suitable place with adequate facilities should also be arranged for meetings, group discussions and presentations.

C. How Do You Implement Town Watching Activity? (slides 14 to 24)

Trainers can refer to the document 'Guideline for Town Watching Activity' available at the Flood Ranger website www.riverranger.my/FloodRanger, under the Module menu and selecting the file 'Guideline for Town Watching Activity (English)' as a reference as it covers all the four main steps in the activity, which are:

i. preliminary review of the area,
ii. Town Watching map development,
iii. presentation and discussion,
then lastly is,
iv. submission and sharing.



Step 1: Preliminary review of the area (slides 16 to 17)

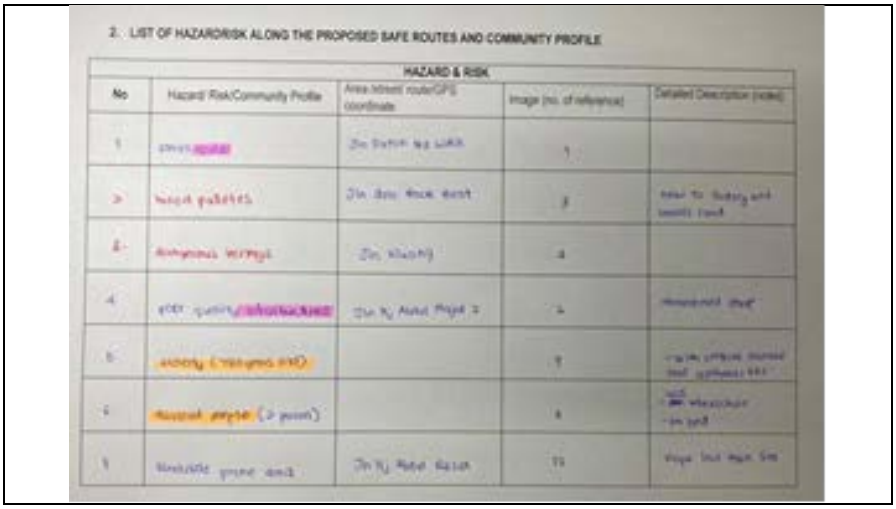
Trainers should introduce and brief the community on the map of the area using slide presentations and videos of the area, or by using large, printed maps. Later, trainers can ask participants to divide themselves into at least two groups and appoint a few people to play roles needed during the activity. If doing the activity physically, tools needed for the activity are maps, clip files, colour pens, camera (or mobile phone with camera) to be distributed accordingly to each group. The timekeeper appointed should focus and manage time well to ensure that all aspects as per the Town Watching form and checklist are covered. The trainers should remind the participants that they are required to make notes and take photographs of any disadvantageous (hazard) and advantageous (beneficial) areas along the path that they walk along while conducting the 'watching' activity. Trainers should also guide participants to interview other local residents so as to obtain specific local information and past experiences of floods. They should identify the existence of persons who would need special assistance for evacuation. The recommended data to be collected are such as hazard areas, elements at risk, potential flood evacuation centres or shelters, evacuation routes, as well as availability of critical facilities, in addition to the community profile.

Step 2: Town Watching map development (slides 18 to 20)

Once the on-site Town Watching activity is completed, the team trainer, leader, facilitator, resource person and members are to clean-up and compile all data to be translated into a map and plan. Each group is required to track information and observations that includes potential risk areas, hazardous obstacles, previous inundation areas, evacuation shelters and routes, location of vulnerable people, etc., as they walk around the area and conduct the field survey. Trainers should ensure that all local area observations and surveys that have been made should be recorded and sketched properly by participants.

From all this information collected during field observation, the participants have to then develop their own community-based Town Watching map that will be the Community-Based Flood Hazard Map (CBFHM) and Community-Based Flood Response Plan (CBFRP).

Community-Based Flood Hazard Map (CBFHM)



Community-Based Flood Response Plan (CBFRP)

Step 3: Presentation and discussion

After the maps are developed and ready, trainers may ask and guide all participants to discuss the overall vulnerabilities, possible counter-measures, priorities, degrees of difficulty and responsibility for implementing each proposed mitigation action, etc. The representatives from each group may present their respective group's community-based hazard map and response plan to members of the other groups.

Finally, the trainer/coordinator/leader would need to combine and merge all the sub-maps and plans into one main response plan as well as summarise the issues, problems, proposed mitigation, and future action plans that had been developed by this Town-Watching exercise.

Step 4: Submission and sharing

As the final step, the team trainer, leader, facilitator, resource person or members may submit and share the finished Town Watching map. The submission can be done by a hand-over to the related/relevant agencies/entities for their record and action.

Further sharing may be by placing the map in public spaces (for example at a community hall or religious centre) and by promoting its use to the community as well as constantly reminding of the response plan and map during meetings or gatherings. To make it easier and convenient for sharing, the map and details on town watching activity can also be developed into a pocket-sized brochure and shared with all the community residents.

D. Don’t Forget to Follow Up!

Along with all the main steps that has been done, a follow-up discussion with agencies should be carried out. This is to get feedback and responses from agencies, get information on any support that can be provided, or to mitigate any hazard and risks identified, supplemented with an endorsement of the proposed Community Flood Gathering Centre (CFGC) and safe evacuation routes.

Road repair after identification of possible hazard and feedback to authorities through community Town Watching exercise.

Use of training videos

If physical on-site observation can not be carried out during the training, an alternative is to prepare a training video.

The first video for the training could explain the first three steps, which are, i) preliminary review of the area, ii) town watching map development and iii) presentations and discussion.

This could be followed by two or three exercises where participants are asked to identify the potential local community flood-evacuation gathering centre (LCFGC) through a drone video of an area in Malaysia. Trainers may prepare their own videos of local sites.

Participants should list the advantages, disadvantages, weakness, and enhancements needed of each of the proposed LCFGCs. This can be followed by the third and fourth exercise which focuses on identifying a safe route, as well as mapping of hazards within the area. Answers can then be discussed and finalised during the session.

Figure 1 Slide deck for Module 1

5. Identification of Resource Person

i. Identify the trainer, group leader(s), facilitator(s) and resource personal (internal & external)
- ✓ Appoint those who are familiar with the area (local and traditional knowledge)
- ✓ Having a resource person that knows the area or who is experienced in disaster management and community preparedness is an added advantage
  - ✓ agencies, NGOs, experience community champion or subject-matter expert (if available)

ii. Plan detail and specific task/role of each community members
- ✓ Divide the task accordingly especially during the on-site activity, eg: observer (specific task), photographer, note-taker, community interviewer

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Role of Team Leader/Facilitator/Resource Person:

1. Guide how to observe for hazard, risk and resources
2. Explain how to collect data using the Town Watching Form
3. Demonstrate how to interpret information in the map.
4. Discuss how to evaluate buildings, bridges and other infrastructure strength (quality) with respect to a disaster.
5. Guide participant on how to develop respond plan (mitigation)
6. Evaluate methods for routes of evacuations.
   - Fastest and safest
7. Explain what type of photos needed
8. Lead on compiling all data collected and proposed respond plan
   - combine both and translate into the map
9. Present the findings

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6. Insurance

✓Coverage for the event (training) covers all participating members

7. Identify meeting/ discussion facility

i. Suitable area/building for group discussion and presentation
- ✓ Important as location should be accessible to all
- ✓ Usually located in the middle of the targeted area

ii. Ensure basic facilities available
- ✓ Tables, chairs, toilet, power supply etc

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C. IMPLEMENTATION OF TOWN WATCHING ACTIVITY

Main steps:

1. Preliminary Review of the Area
2. Town Watching Map Development
3. Presentations & Discussions
4. Submission & Sharing

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- Guideline For Town Watching Activity will be a good reference for the implementation
- It covers all the 4 steps

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1. PRELIMINARY REVIEW OF THE AREA

1. Introducing community on the area map using PowerPoint and videos of the area or printed map
2. The participants will be divided into at least two groups
3. Time management (time keeper)
   - Ensure cover all aspect as per Town Watching form and checklist
4. Each group need to have an area/base map
5. The participants will be required to make notes and take photographs of the aspects:
   - disadvantageous (HAZARD) & advantageous (resources)
6. Participants also have to interviews other local residents to obtain:
   - Specific local information and past experience
   - Identify existence of person with special assistance.

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1. PRELIMINARY REVIEW OF THE AREA

Recommended data to be collected:

1. Hazard Areas	2. Elements at Risk	3. Flood Evacuation Center/ Shelters	4. Evacuation Routes	5. Availability of Critical Facilities	6. Community Profile
• Landslide prone areas • Flood prone areas • Storm surge prone areas	• Identify structures in the high risk areas • Roads condition	• Public or Private Evacuation/ center/ shelters– capacity?	• Condition • Alternative routes • Pick up points / Staging Areas	• Water • Power • Health • Food Sources • Communication	• Vulnerable groups (baby, elderly) • People with special needs (disabled) • Pets

Note: Attributes of buildings and infrastructure are also important to note during site visit as they can be important assets (advantage) during disaster

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2. TOWN WATCHING MAP DEVELOPMENT

- Once the on-site town watching activity is completed, the team trainer, leader, facilitator, resource person and members are to clean-up and compile all data to be translated into a map and plan.
- Each group required to trace information and observations which includes potential risk areas, hazard obstacle, previous inundation areas, evacuation shelters and routes, location of vulnerable people, etc.as they walk over the area through the field survey.
- All local area observations and surveys that have been made should be recorded and sketched.
- All the information from the field observation, the photos and notes to be attached with the map, to develop their own Community Based Town Watching Map.
  - ✓ Community Based Flood Hazard Map (CBFHM)
  - ✓ Community Based Flood Response Plan (CBFRP)

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2. TOWN WATCHING MAP DEVELOPMENT

2.1 Community Based Flood Hazard Map (CBFHM)
- ✓ Compile all hazards observed
- ✓ Compile all the proposed safe route
- ✓ Discuss on the advantage and disadvantages of each propose safe route and finalise the best (safest & fastest)
- ✓ Transfer all information into the map
  - The map can help communities better understand their disaster risks, allow them to develop actions to reduce their risk and aware the of safe spaces and evacuation routes to be used during flood.

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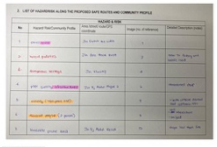
2. TOWN WATCHING MAP DEVELOPMENT

2.2 Community Based Flood Response Plan (CBFRP)
- ✓ Discuss on the mitigation measures
- ✓ Compile all identified Local Community Flood Gathering Centre
- ✓ Discuss on the advantage and disadvantages of each of proposed:
  - Mitigation measures
  - Local Community Flood Gathering Centre
- ✓ Once finalised, transfer all information into map
  - The map should be their main reference during flood disaster
- ✓ One more area can look into is insurance protection



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3. PRESENTATION AND DISCUSSION

- The group is then to discuss OVERALL the vulnerabilities, possible counter measures, priorities, degrees of difficulty and responsibility for implementing each proposed mitigation, etc.
- Representatives of each group present their respective group's community based hazard map and response plan to members of the other groups.

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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3. PRESENTATION AND DISCUSSION

- Finally, the trainer/coordinator/leader need to combine and merge all the sub-plan into one main plan
- Finally, the trainer need to summarised the problems, proposed mitigation and future action plans that had been developed by this Town-Watching exercise.

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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4. SUBMISSION & SHARING

- The finished Town Watching Map should be:
  - ✓**Handover** to the related/relevant agencies/entities for their recorded and action
  - ✓**Shared** in public spaces (community hall, religious centre)
  - ✓**Promote** its use to the community as well as constantly reminded during meetings/ gathering
    - ✓ Pocket size brochure

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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D. FOLLOW-UP

Organize a follow-up discussion with agencies

- On the feedback and response from agencies
- What support can be provided
  - ✓Signage
- Mitigate hazard and risk identified
- Endorsement of Community Flood Gathering Center (CFGC) and safe route

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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With the presentation and supporting documents and materials, we believe each of you will be able to conduct the FLOOD Ranger and **PREPARE** training as well develop your own **Town Watching Map**

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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NEXT

Detailed sharing
on actual Town Watching activities (video)
and supporting materials
on 21 June 2021

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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PREPARATION FOR PRACTICAL SESSION

Criteria for site selection

- ✓Nearest to your current location or strategic for all
- ✓Have local knowledge of the site
- ✓Local resource person from the site (added advantage)
  - ✓Focal point/community leader
- ✓Ensure site map available
  - Printed and photocopied
- ✓Safe to conduct activity (following SOP)

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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healthier environment; better economy; more cohesive society

together we achieve more

Thank You!

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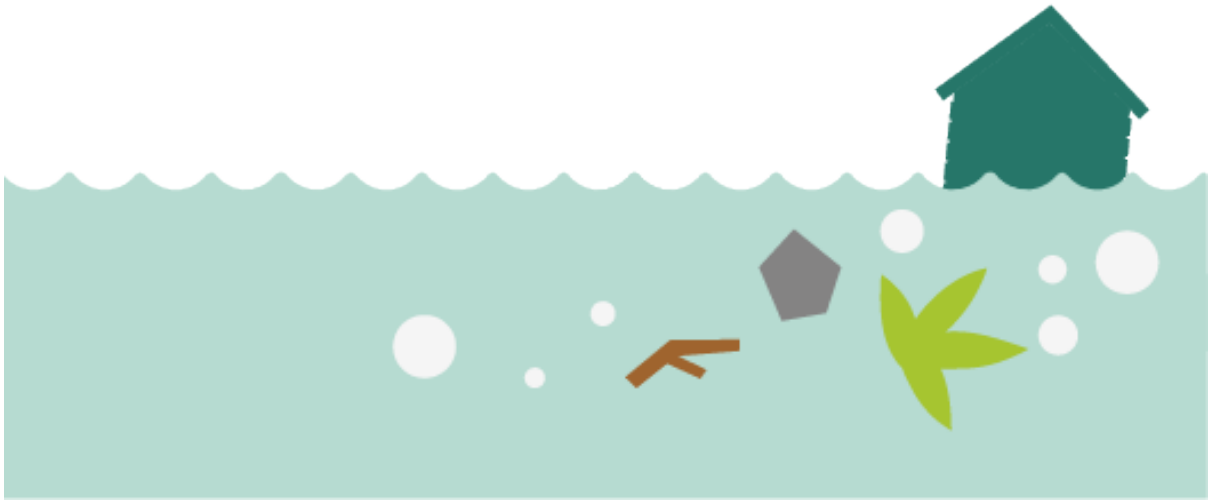
Module 2 Use of Electronic Mapping Applications (E-Maps)

Objective

The purpose of this module is to provide participants with tools for electronic and digital mapping for Town Watching mapping.

Course Materials

The slide deck is Module2.pdf shown in Figure 2.



1. Outline (slide 2)

E-maps are electronic or digital maps which can be a easy way to share and carry out collaborative work virtually. The outline of the presentation is as follows:

1. Hand drawn map
2. Digital map using MS PowerPoint
3. Digital map in Google My Maps
4. Digital map in Google Earth Pro Desktop

2. How to Develop a Town Watching E-Map?

Some basic terms and approach for digital maps (slides 3 to 6)

All mapping applications typically will have a minimum of three types of objects arranged in layers, that is:

- Points,
- Lines or polylines, and
- Polygons.

In addition, many mapping applications allow images to be added in a layer.

More sophisticated systems are known as Geographic Information Systems (GIS) and comprise mapping applications which are linked to a database. The data structure in mapping applications are of two types, raster or vector. Raster are similar to images and are normally from satellite images or aerial photographs. The other type of mapping data is vector and is similar to drawn lines. The biggest difference is in the space needed to keep these different data structures and in how calculations can be done on the map data. Many mapping applications use a combination of raster and vector data structures.

The topic of electronic or digital applications for developing maps can be done in steps.

There are four steps to progress to digital applications.

Step 1 is a hand-drawn map; step 2 is map using Microsoft PowerPoint; step 3 is using Google My Maps and step 4 is using Google Earth Pro Desktop. The trainer can emphasise that all mapping applications or “Geographic Information Systems (GIS)” will have a minimum of 3 types of objects arranged in layers. The objects are point, line/polyline and polygon. Once the basics of these objects and layers are understood then participants would be able to use any other mapping software. There are many mapping applications or GIS which will allow images and descriptive text to be added.

Present exercises which the participants could follow to create simple map drawings using the four steps; participants can be asked to draw a simple map of a room using the shapes in MS PowerPoint. After that explain how to open and use Google My

Maps. The trainer should ask participants to draw some simple objects on the My Maps application. Some examples of flood response maps made in Malaysia can be viewed through the URL links provided.

Based on feedback from participants in the virtual workshop, if there are newcomers to digital mapping applications then the trainer should allocate more time for this module to ensure that participants feel comfortable using the drawing controls.

Step 1 – A Hand Drawn Map (slides 7 to 9)

Trainers may create a flood hazard map through digital mapping platforms that are accessible online. A useful mapping format is that which can be converted to a Google Earth file (kmz/kml file), for example, if using Google My Maps platform. Examples of other platforms that can be used by trainers are Google Earth Pro and ArcGIS. The ArcGIS platform may require a license and so free software applications are preferred. The choice of mapping software is up to the trainer and may be based on ICT availability.

To develop a Town Watching e-Map, the first steps on doing so are the same as preparing a physical map. The only difference is whether the map is plotting by hand drawing or by digital drawing.

The first exercise for participants is to create a hand-drawn map and an example is provided in the slide. Trainers may wish to create their own hand-drawn map example.

Step 2 Drawing in MS PowerPoint (slides 10 to 24)

The next step is translating the hand-drawn map into a digital format. The easiest way to do this is by using a drawing application and a useful one to use is a slide presentation software like MS PowerPoint. The drawing tools can be used to trace the hand-drawn map which we just made.

The instructor can go through the different shapes available for drawing in MS PowerPoint.

Introduce that MS PowerPoint does have a layered structure for the different shapes which are drawn. The layers can be accessed by selecting the Selection Pane function in the 'Drawing' menu, under the 'Arrange' command. The visibility of shapes can be turned on or off by selecting the 'eye' icon in the Selection Pane. Shapes can be moved up or down layers and participants can also add an image and see it in the layer. Encourage participants to try out the different controls in the Selection Pane.

Step 3 Google My Maps (slides 25 to 36)

The trainer can then move to the next step which is to use Google My Maps.

Explain that My Maps uses similar functions as MS PowerPoint where My Maps also has drawing tools. Participants can draw Point, Polyline, and Polygon.

Ask them to add in an image, and they can try to add in a video, or a web link.

Then ask participants to practice grouping and layering their drawing shapes. This grouping is just like what a GIS would do. Participants have to think about what they would want to be able to turn off and turn on information on the different shapes they have drawn.

Once participants have created a map they can view it in Google Maps and even share it with others to collaborate on a single map. They have to make sure that are signed into a Gmail account on the browser.

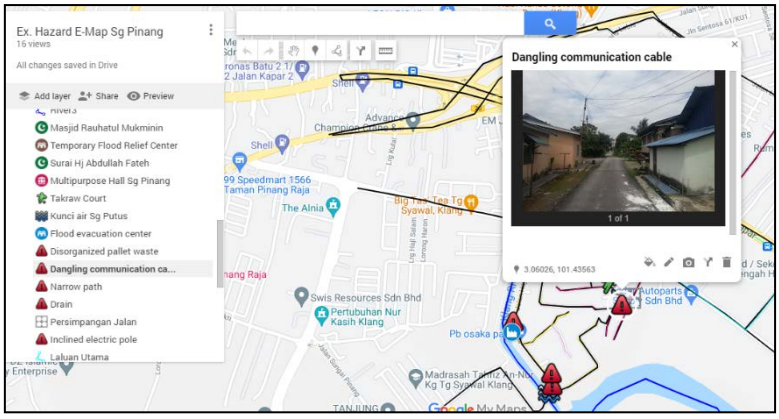
Step 4 Google Earth Pro Desktop (slides 37 to 66)

Finally, the trainer can demonstrate the use of Google Earth. The advantages of Google Earth can be compared to My Maps. The trainer can then go through the different controls and toolbars in Google Earth and the map projects which can be developed:

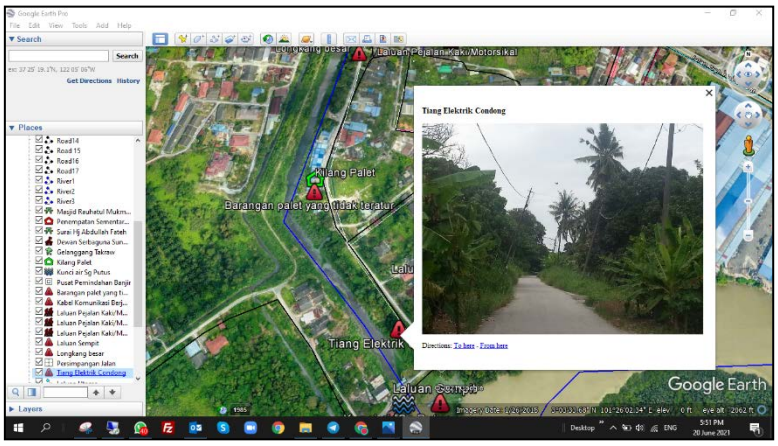
1. Contents Panel,
2. Navigation Controls,
3. Tools > Options Pop-up Menu,
4. Add Place Mark Points,
5. Drawing Lines / Paths,
6. Making Polygons,
7. Folders for Saving Work,
8. Add Photos,
9. Add Image in Properties,
10. Adding Image Overlays.

The trainer can reference to several online videos available on YouTube as listed in the slide deck. These videos provide step by step examples for a newcomer to digital applications and include drawing points, lines, polygons, organising files and folders, adding photographs and images and finally overlaying an image.

Some examples of Town Watching E-Maps are shown in the following images. The hazards symbols within images are shown in the map together with the safe routes.

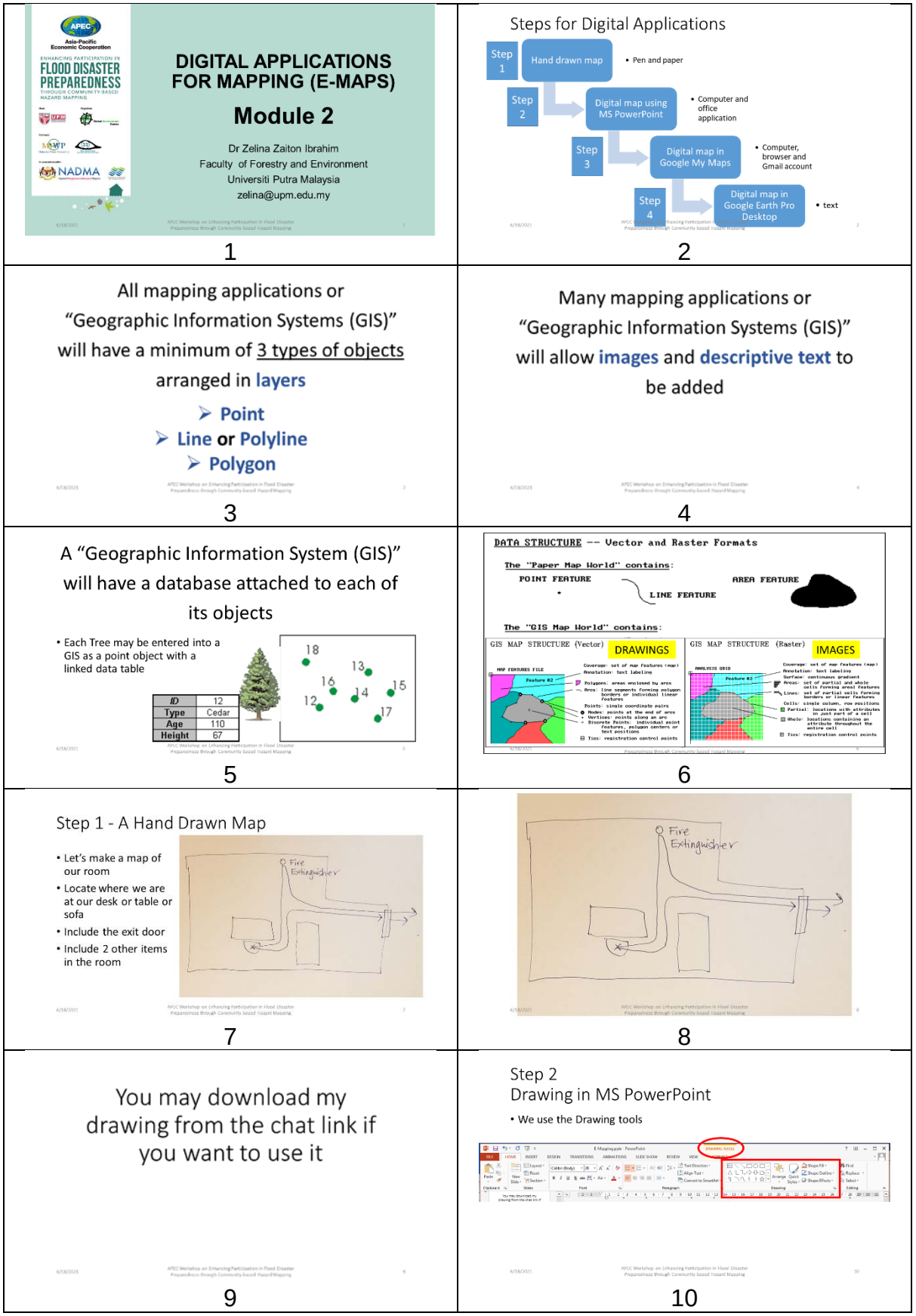


Example of a map created using Google My Maps

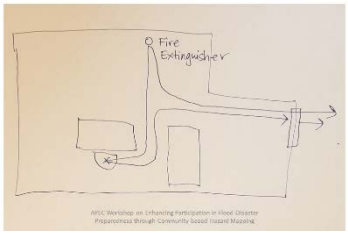


Example of a map created using Google Earth Pro.

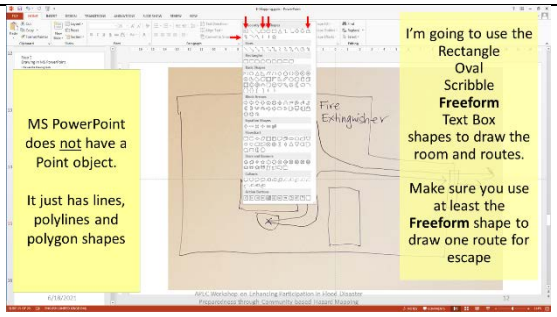
Figure 2 Slide deck for Module 2



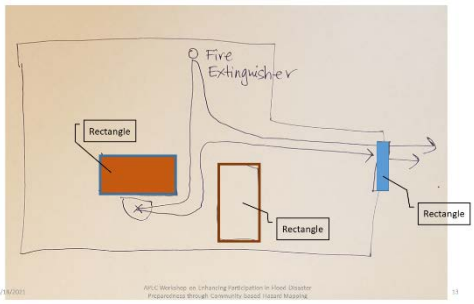
We'll use my hand drawn map from before and make a digital drawing



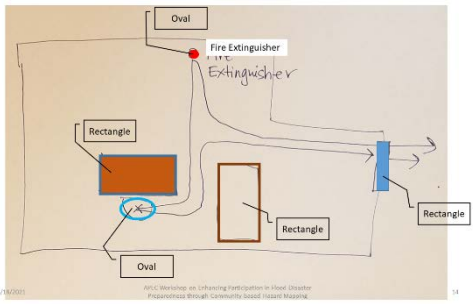
11



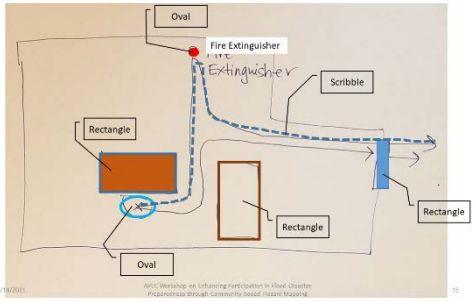
12



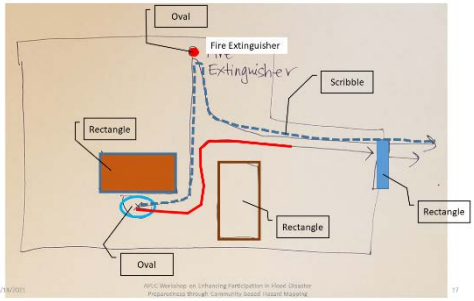
13



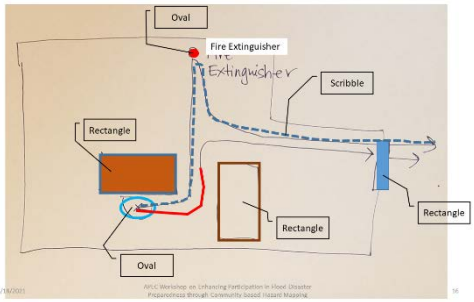
14



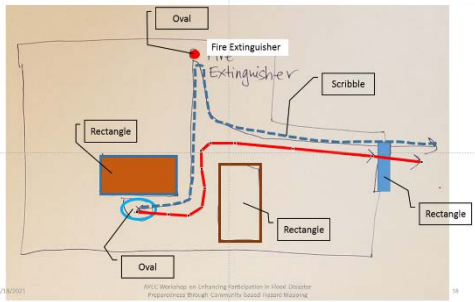
15



16



17



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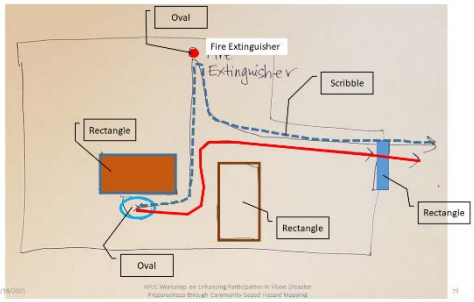

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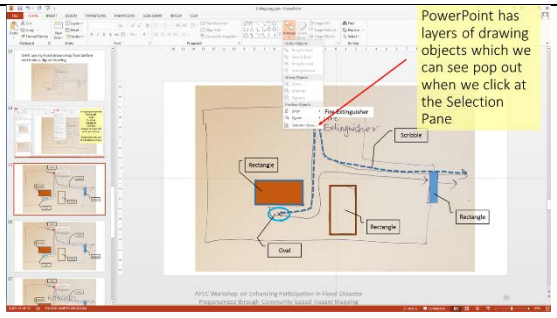
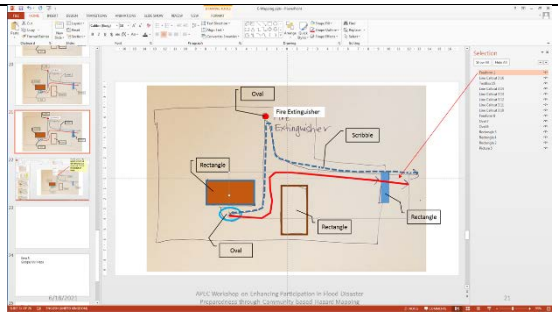


20



21

What's the purpose of the selection pane for layers?

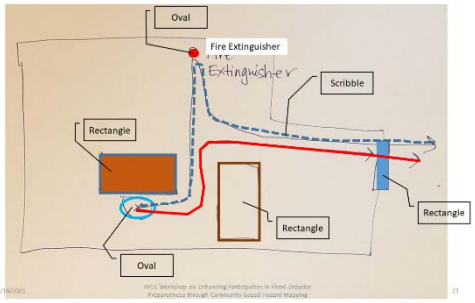
- We can arrange objects together in layers
- We can decide if we want to make the layer
  visible **(on)**
  or
  invisible (off)

22

Step 3
Google My Maps

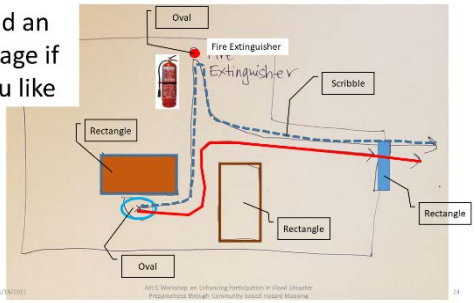
- Just like in MS PowerPoint My Maps has drawing tools
- And it has more!
- We can draw Point, Polyline, Polygon
- We can add an image, video, or link

23

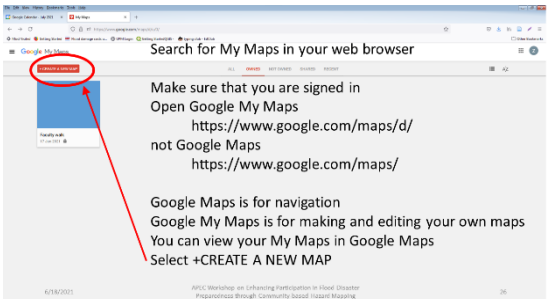


24

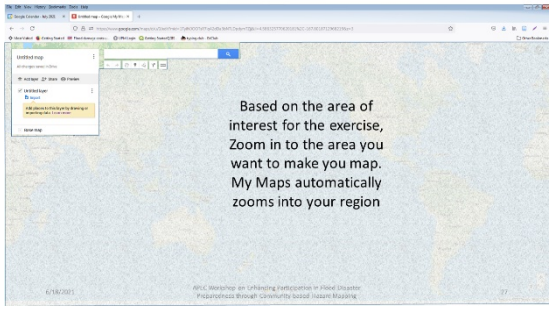
Add an image if you like



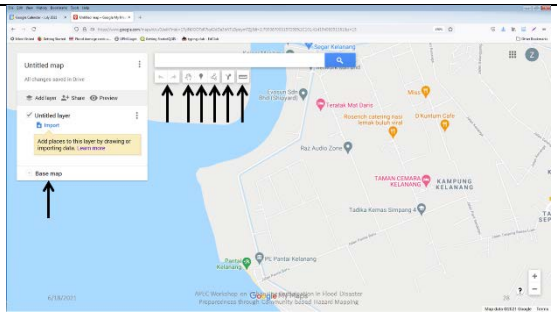
25



26



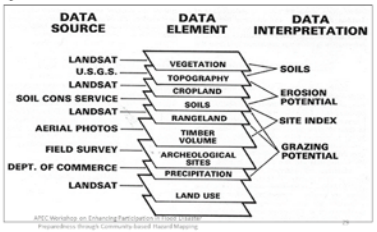
72



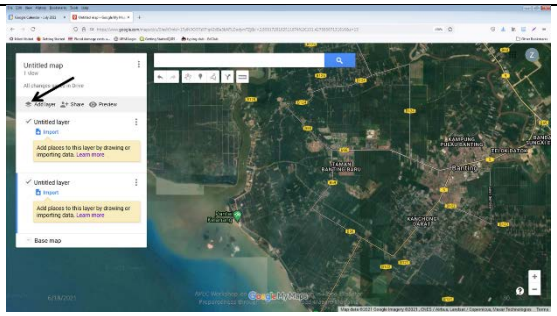
28

The best practice is to **group** and **Layer** your information just like a GIS would do

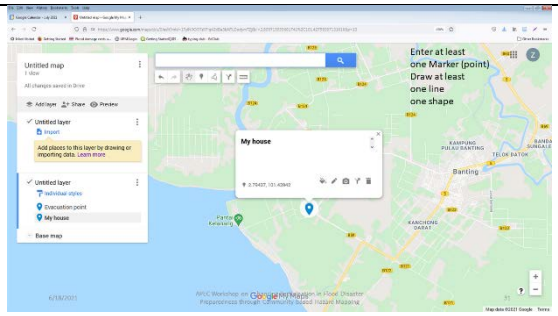
- Think about what you would want to be able to
  turn **off**
  and
  turn **on**



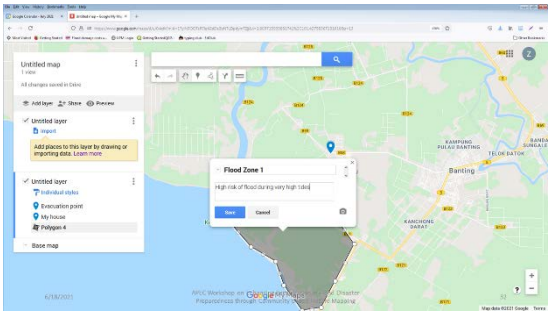
29



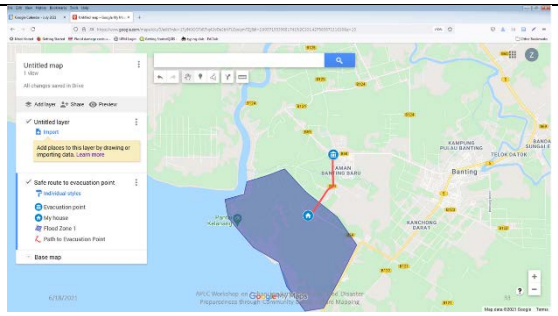
30



31



32



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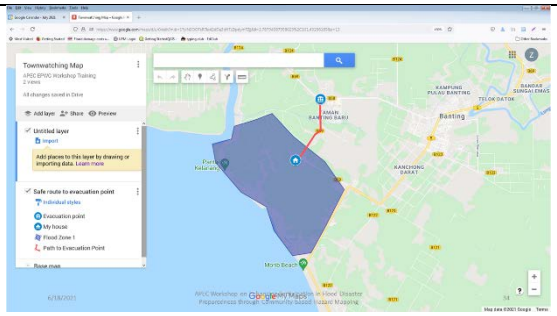


33

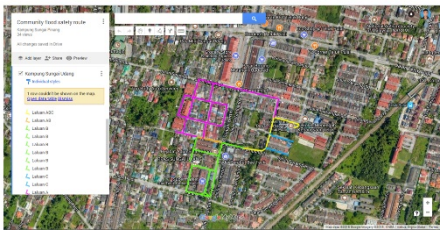
Once you have created a map you can view it in Google Maps

- Make sure you are signed into your gmail account on the browser
- Open Google Maps
- Select the Menu (3 horizontal bars on the top left)
- Select Your Places
- Select MAPS
- Select the map you want to view

35

Example of a Townwatching training map in My Maps

Address: https://www.google.com/maps/d/u/0/edit?mid=1W48faxinDuS61042StEeu12-bpo&ll=3.104915323288993%2C101.58561409999993&z=12



36

Step 4
Google Earth Pro Desktop

Google Earth
- Full satellite imagery
- 3D terrain model
- Measurements
- Downloadable (*Pro Desktop*)
- GIS-like, without the database
- Video tour feature

Google Maps (*drawing is in My Maps*)
- Navigation
- Location tracking
- Local use
- Lightweight
- Web browser

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Topics

- **Controls and Toolbars**
  - 1. Contents Panel
  - 2. Navigation Controls
  - 3. Tools > Options Pop-up Menu
- **Map Projects in Google Earth**
  - 4. Add Place Mark Points
  - 5. Drawing Lines / Paths
  - 6. Making Polygons
  - 7. Folders for Saving Work
  - 8. Add Photos
  - 9. Add Image in Properties
  - 10. Adding Image Overlays

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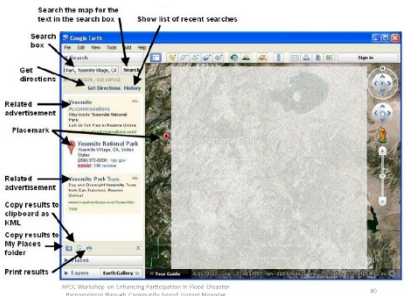
1. Contents Panel

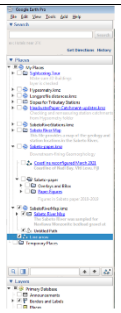
39

Search Panel



40

Places Panel



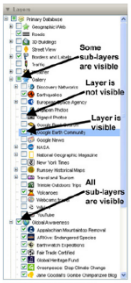
- The information that you have entered is divided into
  - My Places, stored in your computer memory. It returns when you reopen Google Earth.
  - Temporary Places, only stored in the Google Earth browser memory. It is lost when Google Earth is closed.
- You should always your work by right click and

  Save Place As... to save the file which you have made into a selected folder.

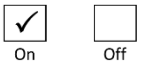
  The file will be saved as an xxxx.kml or a xxxx.kmz file. The "z" means "zipped" and there are more than one objects in it.

41

Layers Panel



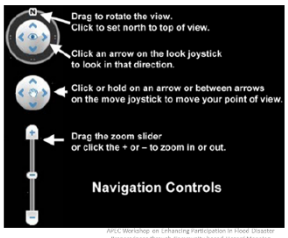
- Information from Google Earth
- Choose what you want to see



Layers are arranged in a hierarchy in the layers pane.

42

2. Navigation Controls



Shortcuts
N - North up
U - Up vertical

43

On zooming in, Pegman appears to give Street View

(where there are blue lines)

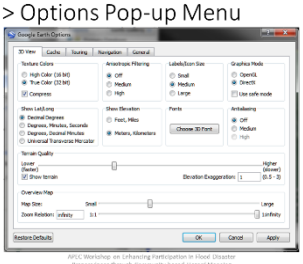
Click & drag Pegman to the road where there are blue lines

View using the eye joystick

44

45

3. Tools > Options Pop-up Menu



46

Map Projects in Google Earth

(Drawing and Marking)

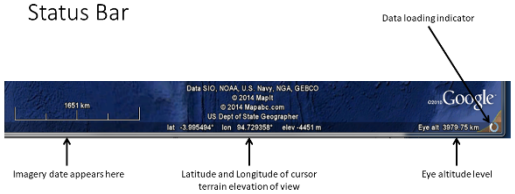
Point
Line
Polygon
Overlay
Images

47

Toolbar Menu

48

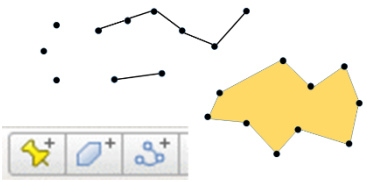
Status Bar



49

Three Objects in Google Earth

Point, Line, Polygon



50

YouTube Video

4. Add Place Mark Points

https://www.youtube.com/watch?v=FtJ3o1fdmrQ

1.4 mins

Resources from University of Toronto Library (UTM Library)

51

Placemark

You can only do editing in the object Properties box. Right-click the object and select Properties.

52

YouTube Video

5. Drawing Lines / Paths

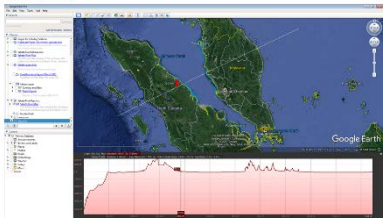
https://www.youtube.com/watch?v=u5coUxUXe9s

3 mins

53

The Elevation Profile along a Path

- Right click a path line
- Select Show Elevation Profile



54

YouTube Video

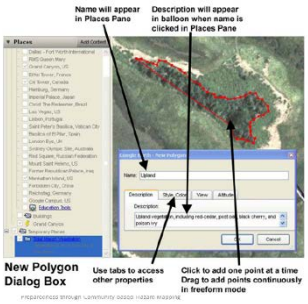
6. Making Polygons

https://www.youtube.com/watch?v=-O6lLOv0KgM

1.4 mins

55

Polygon *(a closed space)*



56

YouTube Video

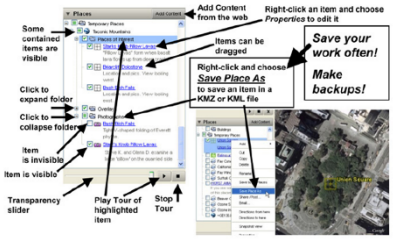
7. Folders for Saving Work

https://www.youtube.com/watch?v=dWVPsJDddN0

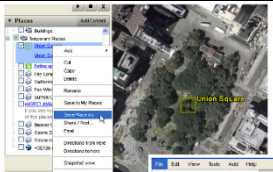
4.1 mins

57

Organise your files in My Places



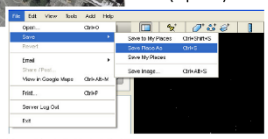
58



Saving Work

Save Place As

⇒.kmz file (zip file)



YouTube Video

https://www.youtube.com/watch?v=EQ2Fy3e5tcg

59

YouTube Video

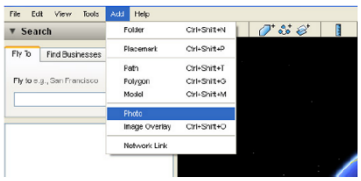
8a. Add Photos

https://www.youtube.com/watch?v=0e1sbyAePNs

1.3 mins

60

Use the Menu at the Top to add Photos



61

YouTube Video

8b. Add Image in Properties

https://www.youtube.com/watch?v=5gsTdPa5r6s

0.7 mins

62

YouTube Video

9. Adding Image Overlays

https://www.youtube.com/watch?v=8-AfyEDd6Ks

2 mins

63

Image Overlay

- Make the image transparent so you can see what is behind it
- Move,
- Stretch and
- Rotate the image to fit the image background.
- Do not expect a perfect fit.
- Align to known ground points, like crossroads and buildings

64

Add Points, Paths, Polygons on the map

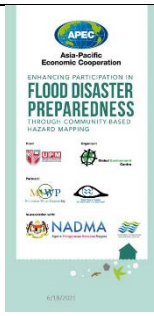
- Points
- Paths
- Polygons
- images
- Overlays

Have fun with Google Earth

65

Community Flood Response Map, Kampung Sungai Pinang

66



Thank you

67

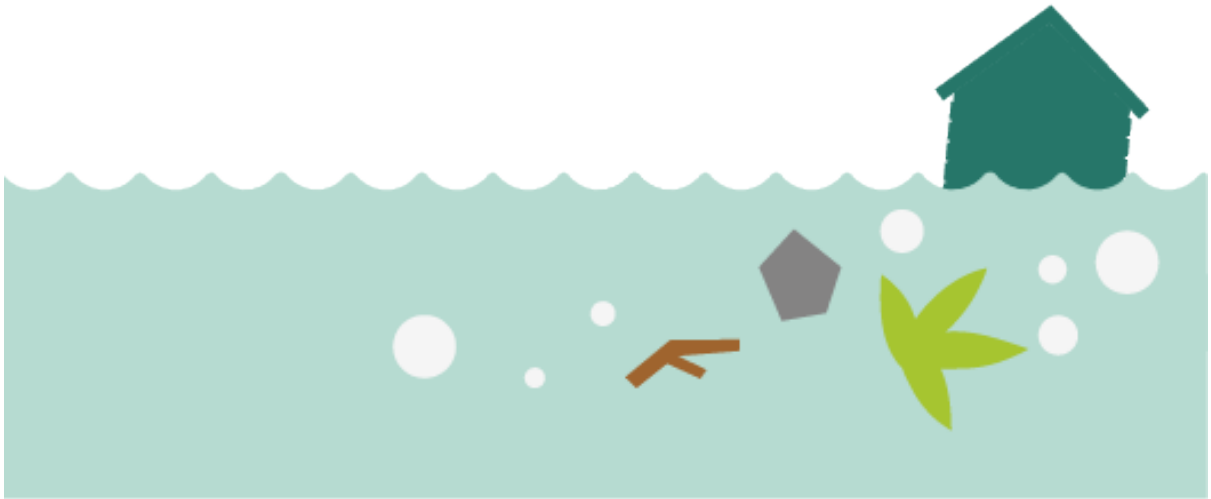
Module 3 Town Watching Exercise

Objective

The purpose of this module is to inform participants of the Flood PREPARE Approach and to describe, step-by-step, each of the activities for Town Watching in preparation for the field exercise.

Course Materials

The slide deck is Module3.pdf shown in Figure 3.



1. Outline (slide 2)

The outline of the presentation is as follows:

1. FLOOD Ranger
2. Town Watching Activity
    - Step-by-step diagram
3. Introduction to 3 main steps of Town Watching Activity
    - Town Watching Exercise at Outdoor (Field Site) or other options
    - In-class Hazard Mapping and Flood Response Plan
    - Discussion and presentation on final town watching map

2 FLOOD Ranger (slide 3 to 9)

Under the NSC Directive 20, Malaysia's NADMA is responsible for coordination of all activities and cooperation before, during and after disasters, including disaster risk prevention and mitigation activities, disaster preparedness and response activities, as well as recovery and redevelopment activities. One of the roles and responsibilities of NADMA is to coordinate the implementation of public awareness programs. The role of non-governmental organisations was viewed to be more on humanitarian services for rescue and support during flood disasters.

In an effort to support the NADMA public disaster preparedness, in 2014, Malaysian Water Partnership (MyWP) and the Global Environment Centre (GEC), with some financial support from the Global Water Partnership Malaysia and Global Water Partnership Southeast Asia, developed a community-based programme focusing on empowering stakeholders in preparing for flood disasters, that is the FLOOD Ranger programme.

The FLOOD Ranger components comprise:

i. Smart partnership

   The programme was developed to complement the NADMA framework. Community-based programme must be conducted in partnership with government agencies. It balances the role and responsibility of all stakeholders involving government agencies, statutory body, private sector, NGOs and volunteers.

ii. FLOOD Ranger Module

   The FLOOD Ranger module is an approach that can be adopted by all levels of the community and community-based initiative. It can help to reduce the risk of floods as well as reduce the socio-economic losses that have to be borne by all parties. It was developed in 2015 by MyWP and GEC in partnership with the Department of Irrigation and Drainage Malaysia (DID) and supported by local government as a pilot study. In 2018, the module

was enhanced with support from Universiti Putra Malaysia (UPM) and NADMA.

iii. Trainings or workshops

The main aim is to empower the key stakeholders especially local communities. Each workshop or training will have customized agenda to suit the local condition and setup. The module can be adapted to the local needs.

Targeted stakeholders are local communities, government agencies and voluntary organization/s. Moreover, it is organised in partnership with government agencies; i.e: disaster management, local government and community. The training duration usually takes 1 up to 2 days.

The FLOOD ranger training used the FLOOD PREPARE APPROACH. The Flood Prepare Approach is developed specifically for community-based flood resilience. The programme was customized to suit bottom-up and civic science as an overall approach.

There are three measures in catalysing the flood PREPARE approach, that are (i) preparedness, (ii) action and (iii) recovery. The Town Watching activity also follows closely to the Flood PREPARE approach design.

The Civic Science contribution to developing the Town Watching map is emphasised.

The trainer and participants may wish to download the materials of the Flood Ranger programme from the Flood Ranger website www.riverranger.my/FloodRanger, under the Module menu and selecting the file 'FLOOD Ranger Module (English)' (www.riverranger.my/FloodRanger/view_file.cfm?fileid=15). This document contains

five chapters on floods, their impacts, flood mitigation, community involvement and levels of flood management.

2. Town Watching Activity (slide 8)

In preparation for the on-site field observation, the trainer can share the diagram indicating the steps for the Town Watching exercise and remind participants of the materials that they should have ready.

A. Selection of Project Site (slide 9 to 10

Participants are reminded to select a site that they are familiar with for the exercise.

B. Early Preparation (slides 11 to 13)

The trainer should remind the participants of early preparation before going to the field and to download the forms for the Town Watching activity.

3. Introduction to 3 main steps of Town Watching Activity

C. Implementation of Town Watching (slides 14 to 15)

The 3 main steps emphasised for the training are the:

1. Preliminary review of the area

2. Town Watching map development

3. Presentation and discussion

The fourth step is the result of an actual Town Watching exercise where the resulting map is then shared with the relevant authorities.

1. Preliminary review of the area (slides 16 to 38)

The different steps which the participants must undertake during the site visit are described and examples of issues are presented. This is best conducted physically in the field together wit the trainer(s) and resource persons/facilitator.

For a virtual training, training videos recorded by drones can be used for the exercise. If drone videos are not available, participants can use online map applications such as Google Earth Pro to view their study area although the information are likely outdated.

The trainer can use any videos of their locality during the workshop to conduct exercises with the participants in class. The slide deck has placeholder slides for participant feedback on the video exercises. The trainer then provides feedback on the exercises. Trainers should adapt the slides for their situation.

Exercise 1 is to identify a potential local community flood gathering centre (LCFGC). A video can be used to present the participants with a field site. Give the participants time to answer the question. A discussion of the different options, their advantageous and disadvantageous, as identified by participants, is facilitated by the trainer.

Exercise 2 is to identify a potential local community flood gathering centre (LCFGC). A second video clip of a field site can be used if field excursion is not possible.

Exercise 3 and 4 are on hazards mapping or safe routes for two different field sites.

2. Town Watching map development (slides 39 to 43)

The development of the Town Watching map is briefly described. And the training focuses on the development of the Town Watching map by transferring the data compiled during the activity into a map. This is followed by a hands-on exercise to fill in a response plan form in Exercise 5.

3. Presentations and discussion (slides 44 to 53)

Finally, participants are informed of examples of the presentation of maps and plans which had been developed as well as discussion of the outcome of the activity.

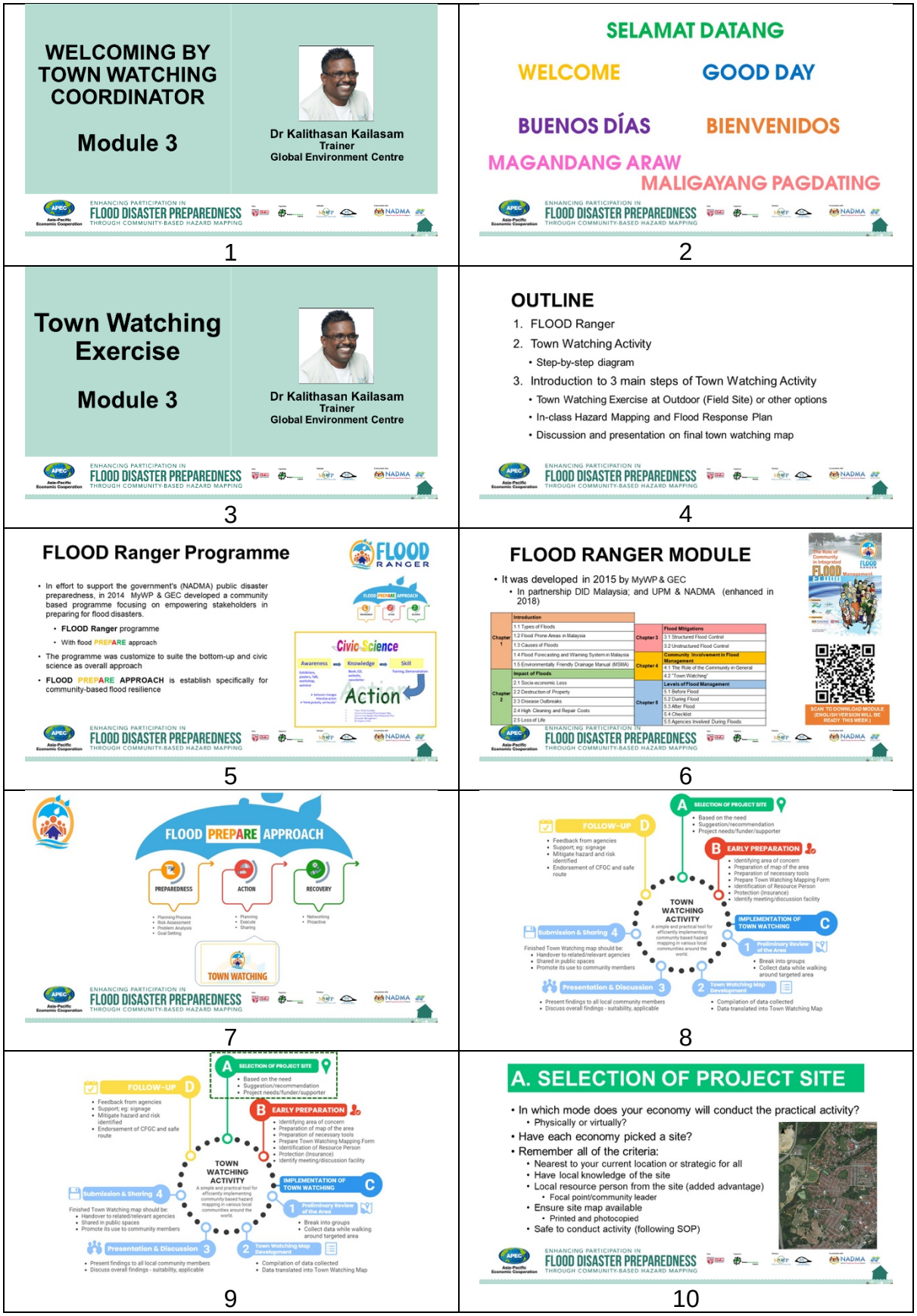
Participants are requested to share their thoughts and comments on the presentations and discussions presented.

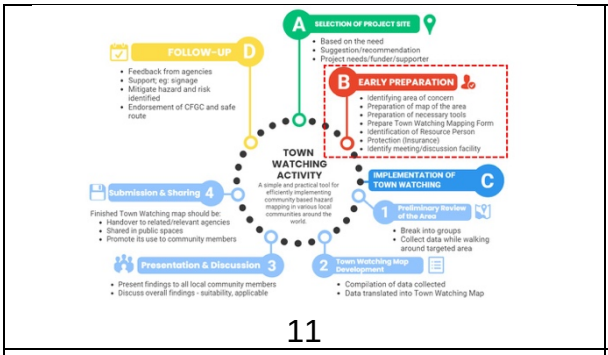
If using an online platform, then during this session the participants can be shown how to use some of the online meeting platform, for example, Zoom meeting service features, so that they can share the outcome of their town watching activity that would be conducted on the next day (Exercise 6). Examples of town watching maps from Malaysia were shared with the participants.

Towards the end of the session, the trainer should remind and brief participants on the preparation for the practical session which they were encouraged to do on Day 6 of the workshop. Participants were also briefed on the presentation that they would be preparing and making on Day 7 of the workshop.

Examples of the final map products are shared with participants.

Figure 3a Slide deck for Module 3





11

B. EARLY PREPARATION

1. Identified area of concern?
2. Are the map of the area ready?
3. Are all of necessary tools ready?
4. Download the Town Watching Mapping Form (next page)
5. Resource Person identifies?
6. All community covered?
7. Meeting location and facility identified?

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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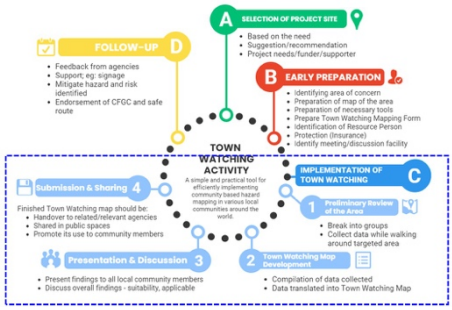
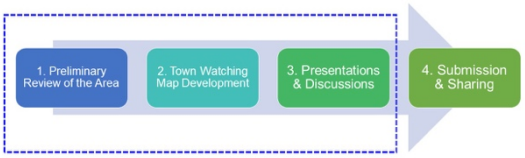


14

C. IMPLEMENTATION OF TOWN WATCHING

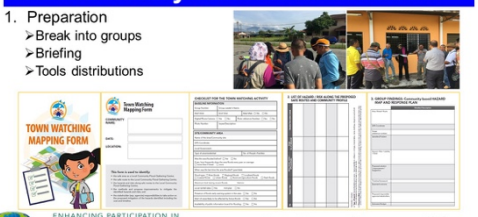


ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

15

1. Preliminary Review of the Area

1. Preparation
   - ➢Break into groups
   - ➢Briefing
   - ➢Tools distributions

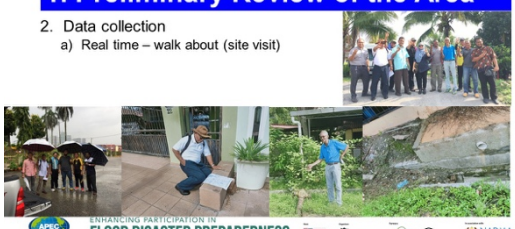


ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

16

1. Preliminary Review of the Area

2. Data collection
   a) Real time – walk about (site visit)



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ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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1. Preliminary Review of the Area

2. Data collection
   b) Pre-record drone video

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1. Preliminary Review of the Area

2. Data collection
   c) Google Earth Pro

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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1. Preliminary Review of the Area Data collection

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EXERCISE 1 : IDENTIFY LOCAL COMMUNITY FLOOD GATHERING CENTRE (LCFGC).

Please take note on the advantage & disadvantages of each of proposed LCFGC.

Part A : Form

1. LOCAL COMMUNITY FLOOD GATHERING CENTRE

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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EXERCISE 1: LCFGC (Option A)

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EXERCISE 1 (OPTION A) :
Local Community Flood Gathering Centre (LCFGC).

- Please take note on the advantage & disadvantages of each of proposed LCFGC.
- Please fill the form
- But for today, just list the advantage & disadvantage (if any)
- Once ready, please share in chat box

1. LOCAL COMMUNITY FLOOD GATHERING CENTRE

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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ANSWER OF EXERCISE 1
(OPTION A) : ii. Strength and Advantages

1) Many facilities, e.g.; toilets, cooking area, hall, parking area, ample of space, pa system.
2) Alternative power supply – solar energy.
3) The accessibility is disable friendly
4) There is a loudspeaker - centralized




ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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ANSWER OF EXERCISE 1
(OPTION A) : ii. Weakness & Enhancement needed

1) Gated – need alternative access gates
2) Single Storey & Lowland – need to look for back up
3) Power box is exposed – need to be higher position
4) The gate at the back of the building is broken – need to be fixed
5) Its very near to the drain - need to ensure not affected by the flood
6) Hazard in front of the toilet near the manhole – need to be fixed
7) Open and uncovered drains– to be covered
8) The facilities not organized - to organize




ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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EXERCISE 2: LCFGC (Option B)

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EXERCISE 1 (OPTION B) :
Local Community Flood Gathering Centre (LCFGC).

- Please take note on the advantage & disadvantages of each of proposed LCFGC.
- Please fill the form
- But for today, just list the advantage & disadvantage (if any)
- Once ready, please share in chat box

1. LOCAL COMMUNITY FLOOD GATHERING CENTRE

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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ANSWER OF EXERCISE 2
(OPTION B) : i. Strength and Advantages

1. Presence of open field for landing of rescue vehicles depending on water level
2. There is a loudspeaker - centralized
3. Many facilities, eg; toilets, hall, parking area, pa system.
4. 4 storeys which is safe especially for medium to high water level
5. Fenced and covered drainage holes /drains
6. Roofs looks new and in good condition
7. Alternative power supply-Solar energy



ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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ANSWER OF EXERCISE 2
(OPTION B) : ii.Weakness & Enhancement needed

1. Gated - need alternative access gates
2. Nearby to sewage treatment plant – possible overflow and water contamination; should avoid going
3. Presence of open field – Water level marker needed to access safety and surface vegetation (grass) need to be added
4. Some portion of Open and uncovered drains – need to be covered
5. Open land without vegetation – revegetate for good water retention or enhance with tarred road
6. Less or no gutters mostly – Build gutters especially for the 4 storey blocks and infuse rainwater harvesting system with secondary treatment for washing purpose

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EXERCISE 3 : HAZARDS MAPPING / SAFE ROUTE

- Please take note on the disadvantages (hazard / risk) & advantage of each of the area.

Part B : Form

No	Hazard / Risk	Area / street / route / GPS coordinate	Image (no. of reference)	Detailed Description (notes)

2. LIST OF HAZARD / RISK ALONG THE PROPOSED SAFE ROUTES AND COMMUNITY PROFILE

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EXERCISE 3 : Hazard mapping/safe route

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EXERCISE 3 : hazards mapping / safe route

- Please take note on the disadvantages (hazard / risk) & advantage of each of the area.
- Please fill the form
- But for today, just list the disadvantage (hazard / risk) and advantage (if any)
- Once ready, please share in chat box

No	Hazard / Risk	Area / street / route / GPS coordinate	Image (no. of reference)	Detailed Description (notes)

2. LIST OF HAZARD / RISK ALONG THE PROPOSED SAFE ROUTES AND COMMUNITY PROFILE

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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ANSWER OF EXERCISE 3 i. Hazard & Risk

List of Hazards & Risks :
1) Possible for the bridge to collapse
2) Erosion of river bank
3) Electric cables/wires on and across the road
4) Water bodies (river)
5) Narrow bridge – accessibility
6) Houses near the river bank
7) Nearby sewage treatment plant

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ANSWER OF EXERCISE 3 ii. Strength and Advantages

Water level marker

Multiple access routes - wider road & bridge

Power Supply

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EXERCISE 4 : HAZARD MAPPING/SAFE ROUTE

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ANSWER OF EXERCISE 4 i. Hazard & Risk

List of Hazard & risk:
1) Possible collapse of abandoned buildings.
2) Huge and unmaintained trees.
3) Hanging Electric cable/wire
4) Clogged and uncovered drain
5) Broken and damaged roofs
6) Broken concrete debris

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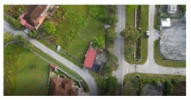
ANSWER OF EXERCISE 4 ii. Strength and Advantages

Safer temporary settlement

Good tarred road



Multiple access routes – more options

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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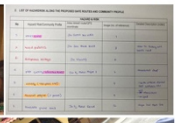
2. Town Watching Map Development

Main component:
1. Data compilation
2. Translate into map



39

2. Town Watching Map Development Data compilation & Translating into map

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PART C: EXERCISE 5

Table 3: GROUP FINDINGS: Community-based HAZARD MAP & RESPONSE PLAN

CONTENTS	DETAILED DESCRIPTION 1	DETAILED DESCRIPTION 2
Area / Street/ Route		
GPS coordinate		
Image (reference number)		
Identified Problem		
Hazard/ Risk/ Liability/ Asset		
Proposed solution/ improvement/ suggestion		
Timeline/ Framework		
Expected outcome		
Proposed responsible agencies/ stakeholders		
Estimated budget		

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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PART C: EXERCISE 5

GROUP FINDINGS: Community-based HAZARD MAP and RESPONSE PLAN

CONTENTS	DETAILED DESCRIPTION 1	DETAILED DESCRIPTION 2
Area / Street/ Route	Haji Abdul Majid Street 2, Tanjung Rambutan	Haji Abdul Razak Street, Tanjung Rambutan
GPS coordinate	3.0607578,101.4350738	3.0604951,101.4332116
Image (reference number)	jpeg01 – jpeg08	jpeg25-jpeg32
Identified Problem	Possible collapse bridge.	Erosion of river bank.
Hazard/ Risk/ Liability/ Asset		
Proposed solution/ improvement/ suggestion		
Timeline/ Framework		
Expected outcome		
Proposed responsible agencies/ stakeholders		
Estimated budget		

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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ANSWER EXERCISE 5

CONTENTS	DETAILED DESCRIPTION 1	DETAILED DESCRIPTION 2
Area / Street/ Route	Haji Abdul Majid Street 2	Haji Abdul Razak Street
GPS coordinate	3.0607578,101.4350738	3.0604951,101.4332116
Image (reference number)	jpeg01 – jpeg08	jpeg25-jpeg32
Identified Problem	Poor structure condition.	No planting at the river bank and poor soil condition.
Hazard/ Risk/ Liability/ Asset	Possible collapse bridge.	Erosion of river bank.
Proposed solution/ improvement/ suggestion	Monitor and strengthen the structure.	Tree planting at the river bank. Barrier installation.
Timeline/ Framework	3 – 5 months	3 - 5 months
Expected outcome	1 new wider and stronger bridge	Good condition of soil and less erosion.
Proposed responsible agencies/ stakeholders	Public Works Department	Department of Irrigation and Drainage.
Estimated budget	50k – 100k	30k – 50k

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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3. Presentations & Discussions

Main component:

1. Map & plan presentation
2. Outcome discussion

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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3. Presentations & Discussions Map & plan presented & Outcome discussed

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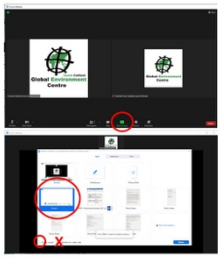
EXERCISE 6

- Learn to share your response plan or notes
- Share screen
  - ✓Click the 'SHARE SCREEN' button
  - ✓ Choose the screen you want to show and click 'SHARE'
  - ✓ If you are sharing video, click 'SHARE COMPUTER SOUND' as well
  - ✓ If you are sharing video with audio
  - ✓ DO not optimize the screen



ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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- ✓Now your screen is being shared
- ✓To change items shared, click 'NEW SHARE'
- ✓To stop sharing click 'STOP SHARING'

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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FINAL PRODUCT

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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Manual Map

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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Digitalized Town Watching Map

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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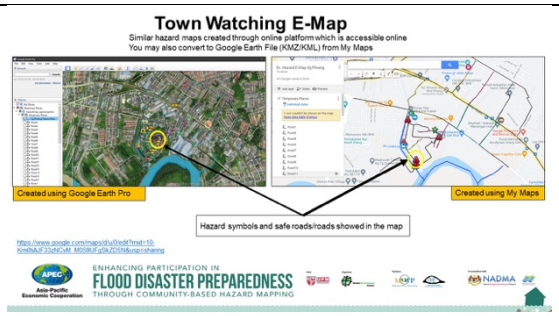
Town Watching E-Map
Similar hazard maps created through online platform which is accessible online
You may also convert to Google Earth File (KMZ/KML) from My Maps
Created using Google Earth Pro
Created using My Maps
Hazard symbols and safe roads/roads showed in the map
ENHANCING PARTICIPATION IN
FLOOD DISASTER PREPAREDNESS
THROUGH COMMUNITY-BASED HAZARD MAPPING

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Without Image Overlay
You may attached the map/any other relevant image to perform image overlay for your reference
(But is optional for Google Earth Pro user)
Map using ArcGIS
With Image Overlay
ENHANCING PARTICIPATION IN
FLOOD DISASTER PREPAREDNESS
THROUGH COMMUNITY-BASED HAZARD MAPPING

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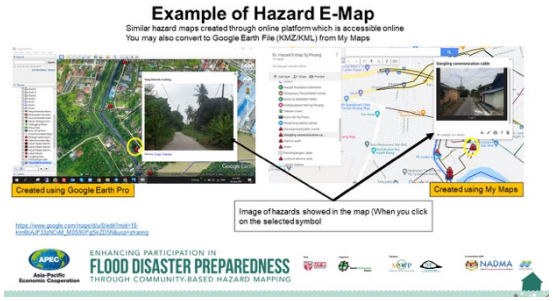
Example of Hazard E-Map
Similar hazard maps created through online platform which is accessible online
You may also convert to Google Earth File (KMZ/KML) from My Maps
Created using Google Earth Pro
Created using My Maps
Image of hazards showed in the map (When you click on the selected symbol
ENHANCING PARTICIPATION IN
FLOOD DISASTER PREPAREDNESS
THROUGH COMMUNITY-BASED HAZARD MAPPING

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healthier environment; better economy; more cohesive society
together we achieve more
Thank You!
Dr Kalithasan K
+6010 366 9772; kalithasan@gec.org.my
ENHANCING PARTICIPATION IN
FLOOD DISASTER PREPAREDNESS
THROUGH COMMUNITY-BASED HAZARD MAPPING

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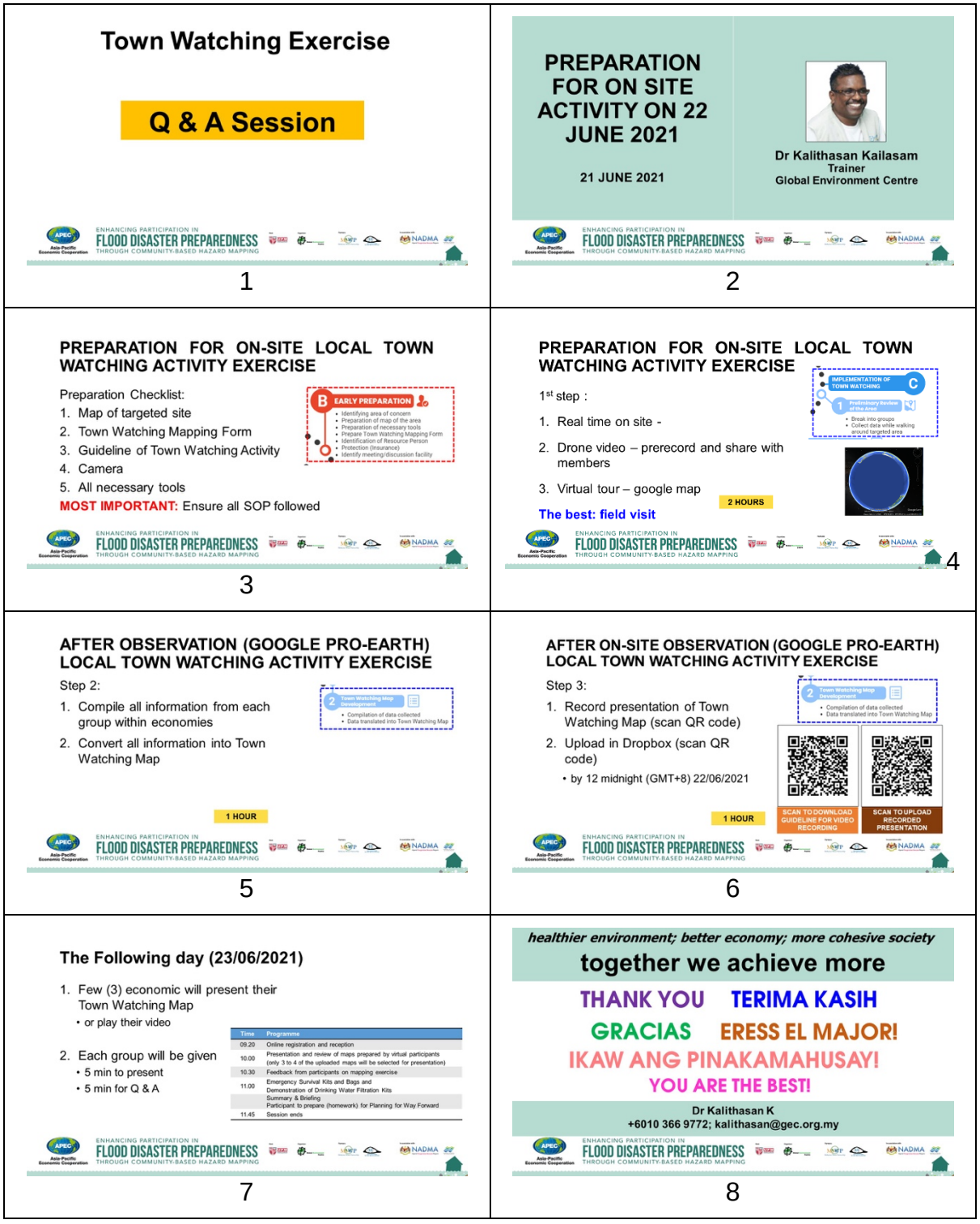
Figure 3b Slide deck for Module 3



Presentations were made by

- Brunei Darussalam team who developed a map in the Belais and Buda-buda Bokok area;
- Chile team who presented a map for Municipalidad de Iquique;
- The Philippines team who conducted town watching activity in the Poblacion, Ferrol, Rombon area; and
- Malaysia team who presented their map for Dengkil, Selangor area.

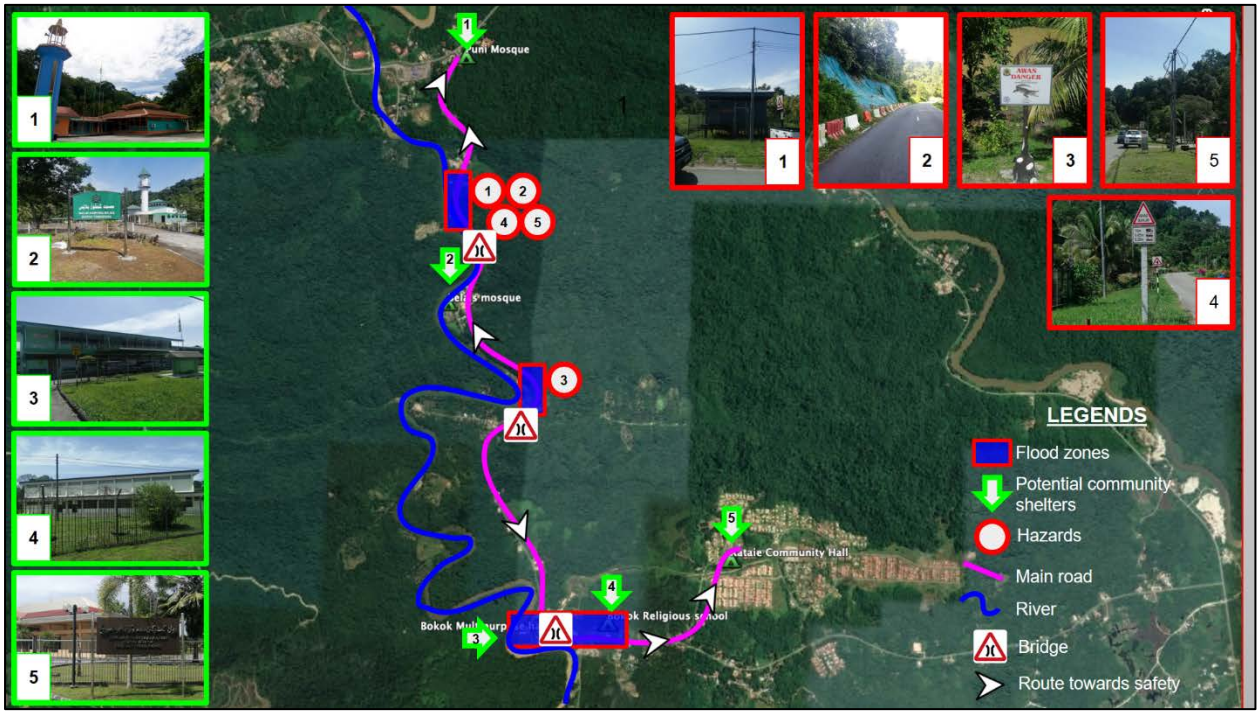
Dr Kalithasan provided comments and an overall summary of the presentations made by the five economy team which had submitted their exercises and reminded of the following steps and activities when conducting the Town Watching Mapping exercise for training:

- Do the three steps of preliminary review, hazard map and response plan;
- Prepare Town watching mapping forms, hazard maps and response plan;
    - If doing the assessment as a virtual or hybrid approach, digital mapping is a very useful tool. For example, virtual tour with Google Earth Pro is a common method to view the area of interest. Prepare to do live sharing or submit video presentation.
- Include supporting/reference images of hazards in the map;
- Provide directions (arrows) in evacuation routes, where path direction is vital component; and
- Provide information on the community profile.

When conducting the actual Town Watching Map activity at the local or with the community, understand that:

- Ideally, it should be initiated by the community in order to have ownership and sustainability (updating of information);
- The authority or agency plays a coordination and catalyst role;
- The Town Watching Map must be supported by images;
- Flood response plan must be included; and
- The response plan must be localised according to the community profile as needed (elderly, children, handicapped, medical needs/issues, etc).

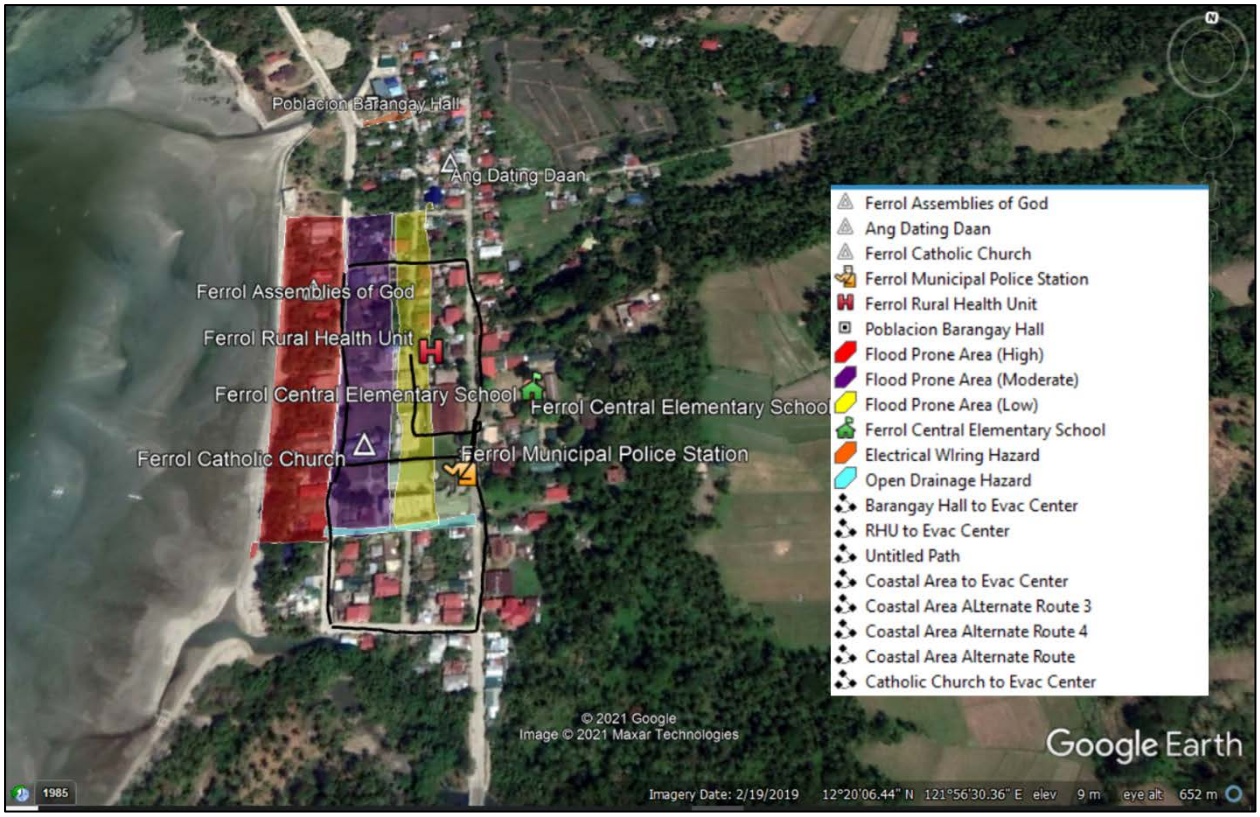
Examples of E-Maps developed during the workshop and comments on possible improvements



The first sharing was by Brunei Darussalam. team have developed a map in the Belais and Buda-buda Bokok area.

Strengths and potential improvements:

A. Preliminary review of the area
    - Real time visit and Google Earth Pro used
    - Details observation included
    - Community and area profiled done
    - LCFGC with its strength and enhancement highlighted
B. Town Watching Map
    - Good hazard map with hazards and evacuation route highlighted
    - Hazards supported with reference images
    - Flood response plan can be included



The second sharing is from the Philippines team conducted town watching activity in the Poblacion, Ferrol, Rombon area.

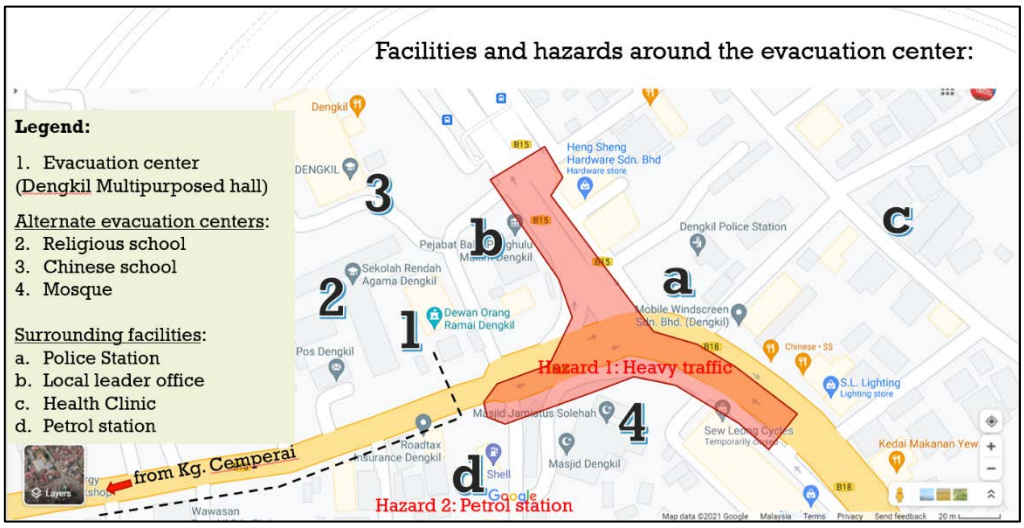
Strengths and potential improvements:

A. Preliminary review of the area
    - Real time visit and Google Pro Earth used
    - Photos/images can be attached
    - Only hall highlighted in Google Earth kmz file. Other items can be labelled.
B. Town Watching Map
    - Good map
    - Need to label school as evacuation centre in legend.
    - Evacuation routes can be made clearer with direction (arrows)
    - TWM form can be completed
    - Flood response plan can be added

The third sharing is from Chile team

Strengths and potential improvements:

A. Preliminary review of the area
    - Real time visit and Google Earth Pro used
    - Good baseline information (community profile is not included)
    - TWM form can be attached
B. Town Watching Map
    - Hazard map submitted and appears to have captured most of the information
    - Supporting images will be useful
    - Flood response plan can be included



The last sharing is by Malaysia team in Dengkil, Selangor area.

Strengths and potential improvements:

A. Preliminary review of the area
   - Real time visit and Google Earth Pro used
   - TWM form can be attached
   - Evacuation centres' advantages and hazards around highlighted
   - All aspects covered but it is based on an older situation.
   - No images on hazards

B. Town Watching Map
   - Good hazard map, evacuation route and response plan
   - Can have TWM form attached
   - Can add supporting/reference to images of hazards

Example of overall comments and summary of presentation by the trainer:

A. In total, five groups submitted their assignments:
B. Submitted hazard maps
    - Only one group submitted both hazard map and response plan
    - Some groups submitted the map but the response plan was not included
C. Overall only one group covered all the three steps
    - Preliminary review, hazard map and response plan
D. Overall all groups:
    - Used third method which is using virtual tour Google Earth Pro as a common method.
    - Presented live sharing of their findings
    - Only one group submitted the town watch mapping form.
E. Generally
    - Supporting /reference images of hazards were generally not included in the map except for one group.
    - Directions (arrows) were missing in a couple of evacuation routes, where the direction is a vital component
    - Community profile was missing in two groups
F. Workshop's Town Watching Map Activity
    - All focused on Town Watching Map development
    - Using Google Earth Pro due to current limitation (COVID-19 control movement)
G. Actual Town Watching Map Activity
    - Need initiated by community (ownership)
    - Agency play coordination and catalyst role
    - The Town Watching Map must be supported by images
    - Flood response plan must be included
    - Localise community profile needed

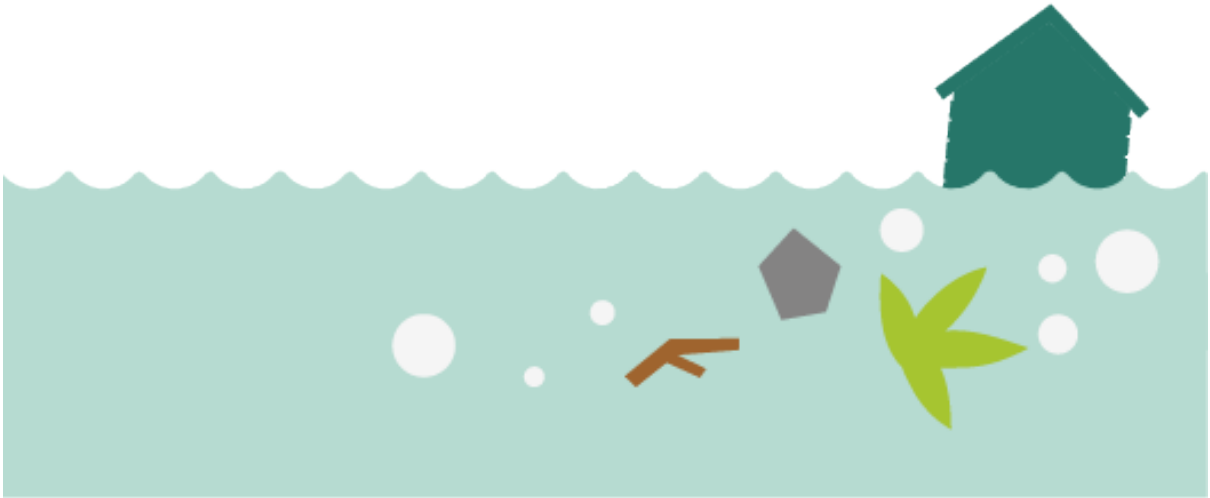
Module 4 Survival Preparation and Emergency Kits

Objective

The purpose of this module is to inform participants that flood management at the scene is very important, and it needs to be carefully understood to improve survival rates. Actions can be taken before, during and after a flood.

Course Materials

The slide deck is Module4.pdf shown in Figure 4.



1. Outline (slide 2)

The outline of the presentation is as follows:

1. FLOOD Ranger Programme
2. Flood PREPARE Approach
3. FLOOD Ranger Module
4. Flood Training Module
5. Level of Flood Management
    - Before, During and After

2. FLOOD Ranger Programme (Slide 3)

In this session, the trainer should emphasize that flood management at the scene is very important, and it needs to be carefully understood. This module reminds participants of the approach taken in the FLOOD Ranger community-based flood preparedness programme which focuses on empowering stakeholders in preparing for flood disasters, including the survival aspect. The programme takes a bottom-up and civic science approach.

3. Flood PREPARE Approach (Slide 4)

The three measures in catalysing the flood PREPARE approach are (i) preparedness, (ii) action and (iii) recovery. The planning, evacuation and sharing actions under this approach assist community-based flood emergency survival preparation

4. FLOOD Ranger Module (slide 5)

Chapter 5 of the FLOOD Ranger Module provides guidance to the community on the flood management actions to be taken before, during and after flooding. The focus of this presentation is on preparation before a flood.

5. Flood Training Module (slide 6)

In preparation for a flood a workshop or training session can consider different modules to customize according to the local situation. The issue of community-based flood emergency survival preparation is cross-cutting across all the training module.

6. Levels of Flood Management

Flood management at the scene is very important and it needs to be carefully understood. Everyone, especially the local community, plays a vital role in flood management. Trainers may introduce to participants that an early preparation is essential to reduce losses and damages due to flooding. Explain to participants that there the flood management can be divided into BEFORE, DURING and AFTER flooding. The trainer and participants may wish to download and refer to the materials of the Flood Ranger programme from the Flood Ranger website www.riverranger.my/FloodRanger, under the Module menu and selecting the file 'FLOOD Ranger Module (English)' (www.riverranger.my/FloodRanger/view_file.cfm?fileid=15).

Before Flood

Before flooding, it is important for the community to collect relevant information, survey their surrounding area and start preparing emergency and survival kits such as Grab bag and 72H bag. The community needs to be aware of action of evacuation as well as awareness of emergency action. Examples of actions are making sure the community knows their evacuation routes and have a list of emergency contacts and telephone number list. The Grab bag must store the most important survival kit such as important documents, emergency kit, medicine supply, personal hygiene kit as well as food. 72H kit should be able to provide needs for a person for minimum 3 days (72 hours). The main purpose of this kit is to ensure temporarily survival while in transit to a safer area and not as a life aid.

i. Information finding

In preparing for the worst during flooding season, community should always pay attention to flooding information in the area such as weather reports and flood warnings. Aside from that, trainer can also advise participants to visit the existing website to get information on flood updates. For example, for Malaysia the relevant websites are:

- NADMA website at portalbencana.nadma.gov.my/en/disaster-information
- Malaysian Meteorological Department at www.met.gov.my
- Department of Irrigation and Drainage at publicinfobanjir.water.gov.my/?lang=en
- Public Works Department at bencanaalam.jkr.gov.my

ii. Surrounding areas

In taking safety measurement of the surrounding area, guide participants on how to inspect water channels such as drains or sewers as well as checking that there are no barriers, and it is tightly closed to prevent water inflow. In addition, advice to ensure vehicle(s) is in good condition (tools) to prepare for evacuations along with place your pet(s) at a safe place as animals are usually not allowed at the relief centre for hygiene and health reasons.

Pets should be placed in a safe place with enough food and water.

iii. Emergency and survival kits

In the event of disaster, make sure each family or household have enough food, water and basic need/supplies to last at least 72 hours. Trainers may introduce the four emergency and survival kits that can be prepared beforehand that are the (a) Grab Bag, (b) 72H Kit, (c) Sandbags and (d) Potable water. For more information and details on what and what is inside the bag and kits, please refer to the materials of the Flood Ranger programme from the Flood Ranger website www.riverranger.my/FloodRanger, under the Module menu and selecting the file 'FLOOD Ranger Module (English)' (www.riverranger.my/FloodRanger/view_file.cfm?fileid=15).

During flood, the main problem of the victims is to get clean or potable water. Flood water may be contaminated by various impurities and can cause diseases. Therefore, there is a need to qualify the source as well as treat the water. Trainers may do a demonstration or show videos on how to properly boil water, use water filtration or treatment along with other safe and known methods.

iv. Action of evacuation

In finding ways to evacuate, highlight to participants to first identify the nearest evacuation centres and disaster relief centres in their area. Look for several sites. Also identify the evacuation routes, any hazards or risks along the way, to later develop a Town Watching map.

v. Awareness of emergency action

Advise participants to prepare a list of emergency contact numbers such as of family members, friends, ambulance, policemen, hospitals, Disaster Relief Centres or Evacuation Centres. Trainers may also show examples of these list of emergency contact numbers to all participants. At the same time, trainers should emphasise that safety is for every age group and to make sure to teach children or elderly parents on how to call flood-related agencies. Participants can benefit from Basic First Aid training too and some rescue know-how. Try to ensure that at least one of the family members has such basic skills.

During Flood

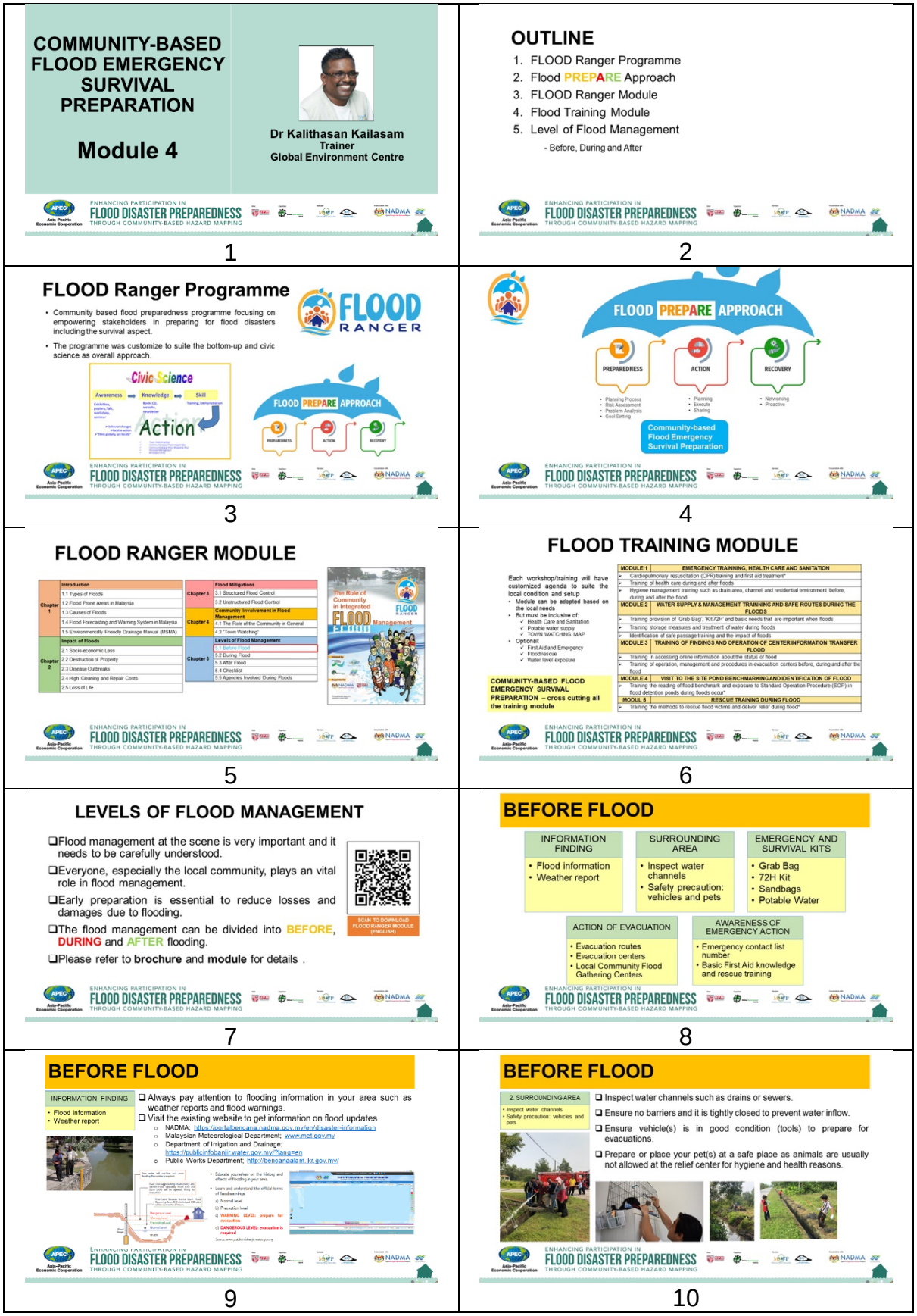
During a flood, the key community actions are to ensure that they are aware of what they should do when they are trapped inside or outside the house or inside a vehicle, during relocation An important part is awareness of electrical management safety guides. Information on these aspects can be found by referring to the FLOOD Ranger Module.

After Flood

During the early stage after a flood event, explain to participants that they should listen to media announcements or wait for instructions, and to not return home against instructions given, or before it is completely safe to do so. Help neighbours or people with disabilities among others who may need extra assistance. Introduce participants to taking safety precautions when entering any building, and how to inspect the surrounding area as well.

The trainer can conclude the session with a step-by-step presentation on Community-Based Flood Emergency Survival Preparation.

Figure 4 Slide deck for Module 4



BEFORE FLOOD

3. EMERGENCY AND SURVIVAL KITS
- Grab Bag
- 72H Kit
- Sandbags
- Potable Water

✓ In the event of disaster, make sure each family/ household have enough food, water and basic need/supplies to last at least 72 hours.

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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BEFORE FLOOD

3a. GRAB BAG

✓ Grab Bag (Emergency Bag) is an important survival kit.

✓ The bag is very useful while waiting for external help.

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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BEFORE FLOOD

3b. 72H KIT

✓ This kit should be able to provide needs for a person for minimum 3 days (72 hours).

✓ The main purpose of this kit is to ensure temporarily survival while transit to a safer area and not as a life aid.

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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BEFORE FLOOD

3b. 72H KIT

✓ **Waterproof:** Put all necessities in a waterproof bag or plastic bag so that it is not damaged by rain or flood water.

✓ **Portable:** This kit will not usable if it cannot be carried during the transfer process, so make sure it is compact and lightweight.

✓ **Validate :** Make sure food and drinks are consumable and medicines are not expired every 6 months.

✓ **Personal items:** The kit should have all necessities needs of your personal and family especially children needs. (The items may vary from family to family).

✓ **Safety of Use:** Make sure you know how to use all the items in the kit.

✓ **Easy Access:** Place this kit near the exit for easy access and make sure other family members also know where this kit is placed.

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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BEFORE FLOOD

3c. SANDBAGS

✓ One of the easiest & most effective ways to prevent floodwaters.

✓ Fortress in front of the door to prevent the inflow of water.

✓ Sandbag walls are a temporary prevention of water inflow.

✓ Sandbags should be placed in the toilet bowl cover to prevent sewage from overflowing.

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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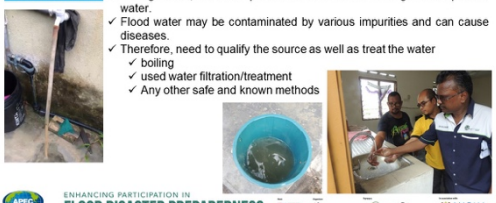
BEFORE FLOOD

3d.POTABLE WATER

✓ During floods, the main problem of the victims is to get clean/potable water.

✓ Flood water may be contaminated by various impurities and can cause diseases.

✓ Therefore, need to qualify the source as well as treat the water
- ✓ boiling
- ✓ used water filtration/treatment
- ✓ Any other safe and known methods



ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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BEFORE FLOOD

3d.POTABLE WATER

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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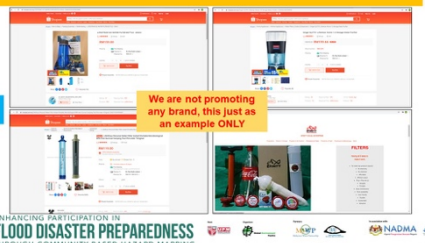
BEFORE FLOOD

3d. POTABLE WATER

We are not promoting any brand, this just as an example ONLY



ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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BEFORE FLOOD

4. ACTION OF EVACUATION
- Evacuation routes
- Evacuation centers
- Local Community Flood Gathering Centers

Refer to previous Town Watching Map video

✓ Identify and ensure evacuation center and disaster relief center in your area.

✓ Identify evacuation routes and hazard/ risk.

✓ Develop Town Watching Map

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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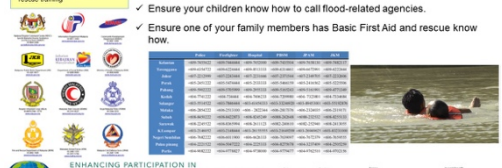
BEFORE FLOOD

5. AWARENESS OF EMERGENCY ACTION
- Emergency contact list number
- Basic First Aid knowledge and rescue training

✓ Prepare a list of emergency contact number such as of family members, friends, ambulance, policemen, hospitals, Disaster Relief Centers or Evacuation Center.

✓ Ensure your children know how to call flood-related agencies.

✓ Ensure one of your family members has Basic First Aid and rescue know how.



ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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BEFORE FLOOD

5. AWARENESS OF EMERGENCY ACTION
- Emergency contact list number
- Basic First Aid knowledge and rescue training

First aid : provide basic medical care to someone in the absence of proper medical care. For example the following treatment :

✓ Cardiopulmonary resuscitation (CPR), broken bone/fractures
✓ treat minor burns, cuts, and insect stings.

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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DURING FLOOD

Key community action during the flood time:

INSIDE THE HOUSE | OUTSIDE THE HOUSE | INSIDE THE VEHICLE

Refer to FLOOD Ranger Module

DURING RELOCATION

ELECTRICAL MANAGEMENT SAFETY GUIDE

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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AFTER FLOOD

1. EARLY STAGE
✓ Listen to the media announcements or wait for instructions. Do not return home against instruction or before the situation is completely safe.
✓ Help your neighbors or people with disabilities (elderly, children or disabled). Inspect your home, look for signs of cracks or deposits as it may not be safe.
✓ Avoid going to flooded and destroyed areas. The roads may be unstable and could collapse.
✓ Do not enter a house that is still flooded as there may be unknown dangers.

2. SAFETY PRECAUTIONS WHEN ENTERING A BUILDING
✓ Wear shoes
✓ Checks for damages on the walls, floors, doors, and windows.
✓ Beware of dangerous or venomous animals and insects.
✓ Use sticks to remove any obstructions inside the house.
✓ Watch out for any damaged ceilings and wall plasters.

IMPORTANT TIPS
- Beware of dangerous animals.
- Stay away from electrical cables and drainage areas.
- Clean and disinfect all items and personal belongings.

3. INSPECTIONOF THE SURROUNDING AREA
✓ Check any broken or leaked gas pipes.
✓ Check for any flammable materials that flow in during flooding (kerosene, gasoline, diesel, etc).
✓ Dispose food items submerged or exposed to flood water, including canned foods.
✓ Check damages on septic tank to avoid biological hazards. Report any public facilities damages to the authorities.

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- Video

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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healthier environment; better economy; more cohesive society

together we achieve more

Thank You!

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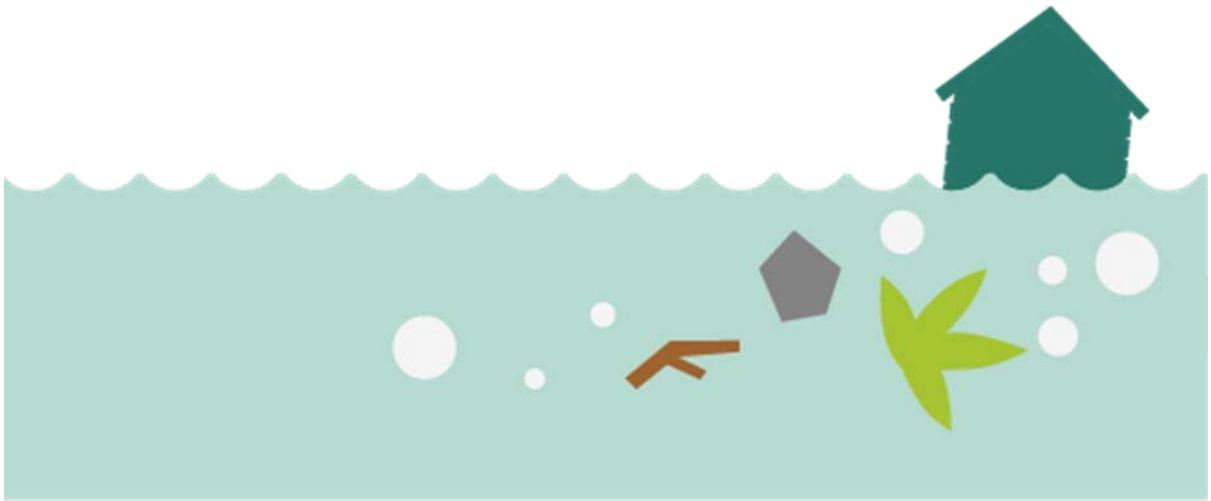
Module 5 Way Forward: Planning Local Training

Objective

The purpose of this module is to provide participants with the opportunity to plan and review the Town Watching training modules for local training or implementation.

Course Materials

The slide deck is Module5.pdf shown in Figure 5.



1. Outline (slide 2)

The outline of the presentation is as follows:

1. Way forward
2. Group discussion
3. Breakout room
4. Sharing session
5. Concluding remarks

2. Way Forward (slide 3 to 4)

The objectives of the Way Forward session is for participants to develop post-workshop action plan to:

- Adopt and apply Town Watching Mapping (TWM) at their local economy level;
- Share materials and skills acquired from training to be used at economy level;
- Engage stakeholders to develop a community-based Flood Disaster Preparedness plan at their economy level; and
- Explore integration of the Community-based FLOOD Ranger programme (or similar) and Town Watching Map into of their economy's existing policy framework.

Participants may consider the various aspects listed in slide 4.

3. Group discussion (slide 5 to 9)

Participants should fill in the forms given in slides 5 to 9 which cover:

1. Use or adapt materials relevant to your respective economies (especially module (slides), videos and Town Watching Map guideline and form)
2. Organise localised Training of Trainers (ToT) workshop within your economy
3. Town Watching Map
4. Integration of Community-based Town Watching Map into your economy's existing policy frame
5. Other plans or recommendations

Form for Way Forward discussion

Aspect	Proposed action	Quantity/ frequency	Timeline*	Any support needed**
1. **Use or adapt materials relevant to your respective economies (especially module (slides), videos and Town Watching Map guideline and form)**				
i. How are you going to share the training materials (modules and exercise) in your economy, with relevant agencies as well as local communities? ➢ through website, social media, print				
ii. Will you adopt these measures in flood prone areas within your economy? ➢ translate, enhance, localized, etc.				
ii. Do you plan to develop new and relevant material(s)				

Aspect	Proposed action	Quantity/ frequency	Timeline*	Any support needed**
2. **Organise localised workshop (TOT) within your economy**				
i. Conduct FLOOD Ranger training (community based preparedness programme)				
ii. Conduct Town Watching Map training (ToT) ➢ *Details include* ➢ *Numbers,* ➢ *Which level, federal (central), state/local level/ community level,* ➢ *your target group,* ➢ *smart partnership : Agencies, NGOS, private sectors and community*				

Aspect	Proposed action	Quantity/ frequency	Timeline*	Any support needed**
3. **Town Watching Map**				
i. Develop or support the Town Watching Map development ➢ Details include ➢ *Numbers,* ➢ *Which level, federal (central), state/local level/ community level,* ➢ *your target group,* ➢ *smart partnership : Agencies, NGOS, private sectors and community*				

Aspect	Proposed action	Quantity/ frequency	Timeline*	Any support needed**
4. **Integration of Community-based Town Watching Map into your economy's existing policy frame**				
i. How do you propose to integrate this approach into your economy's existing policy framework?				
ii. Do you think your economy has the right existing mechanisms and platforms for this? ➢ Detail : at federal/central, state and local level				

Aspect	Proposed action	Quantity/ frequency	Timeline*	Any support needed**
5. **Other plans or recommendations**				
i. Other plans besides abovementioned aspects				

4. Breakout room (slide 10 to 19)

Participants are divided into groups and assisted by a facilitator in their discussions. Discussions wuld normally follow a three step approach to allow for free discussion:

Step 1: Brainstorming

Step 2: Discussion

Step 3: Presentation

The group should selct a representative to present their results.

5. Sharing session (slide 20)

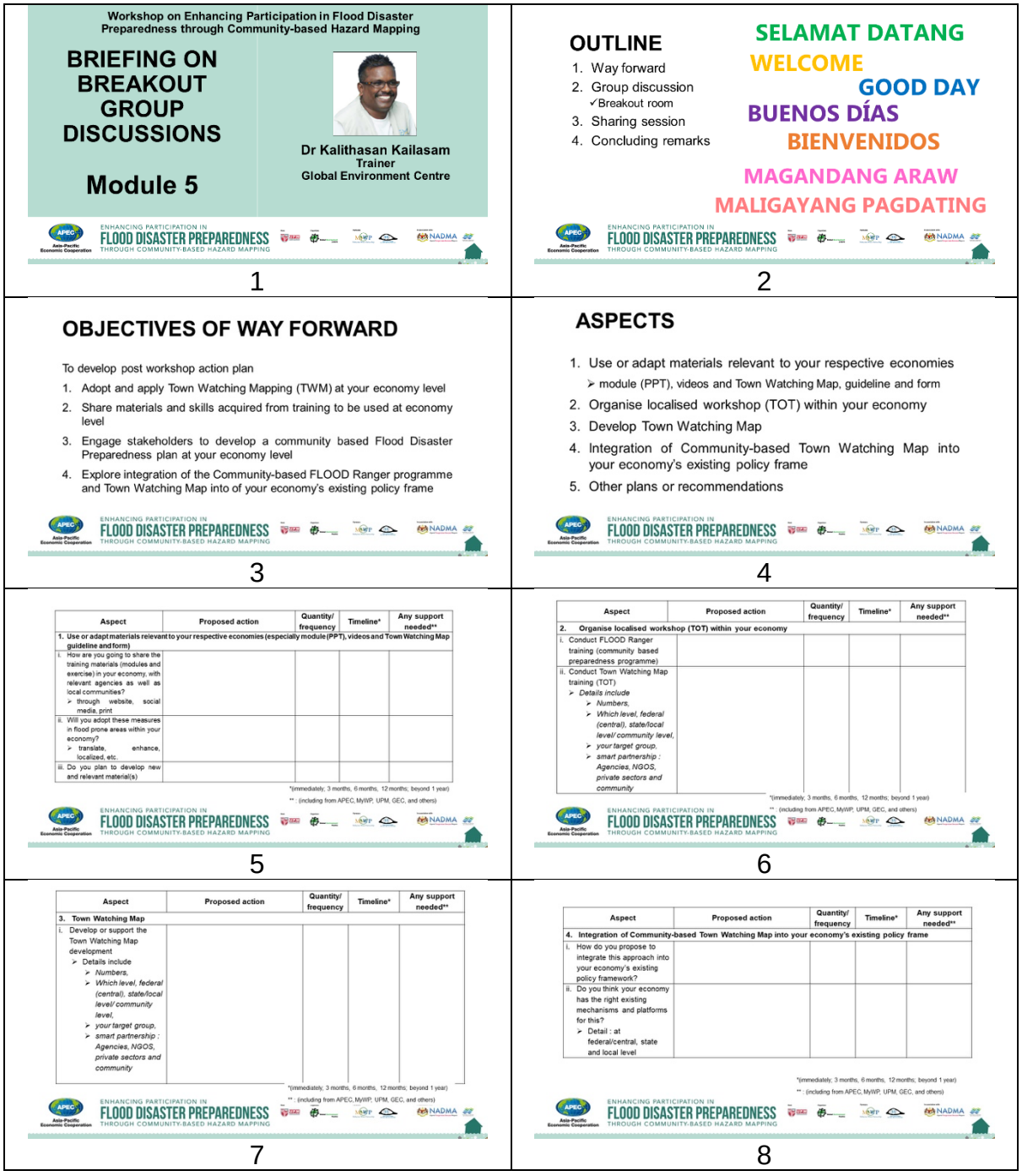
Groups can present their proposals and the trainer may provide comments to improve their proposals.

6. Concluding remarks

The trainer can summarise the workshop and proposals.

An example of the coverage and content is provided in Appendix 1.

Figure 5 Slide deck for Module 5



Aspect	Proposed action	Quantity/ frequency	Timeline*	Any support needed**
5. Other plans or recommendations				
i. Other plans besides abovementioned aspects				

*(immediately, 3 months, 6 months, 12 months, beyond 1 year)

** (including from APEC, MyWP, UPM, GEC, and others)

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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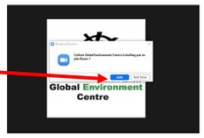
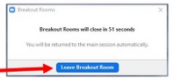
GROUP DISCUSSION

1. The group discussion will be carried out via the break out room.
   - We are going to use Zoom whiteboard feature as well as Google Slide
2. Once ready, the 'join' instruction will pop-out
3. Click the 'join' button
4. Discussion
   - Seven breakout groups
     - ✓ One for each economy (except for Philippines, 2)
   - Facilitator
     - One facilitator will be assigned to each group
   - Points of discussion:
     - ✓ Refer to Way forward template
   - Report back (in 45 minutes)





ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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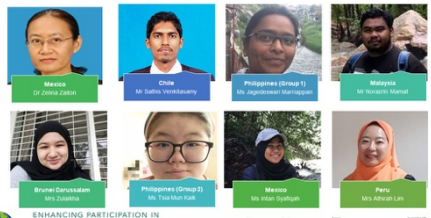
FACILITATORS



ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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STEPS FOR GROUP DISCUSSION

STEP 1: Brainstorming
STEP 2: Discussion
STEP 3: Presentation

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STEP 1: BRAINSTORMING

1. Using whiteboard
2. Throw (share) your idea
3. Hover your cursor on the 'VIEW OPTIONS'
4. Click 'ANNOTATE'
5. You can use the edit bar above to add in your input into the whiteboard

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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STEP 1: BRAINSTORMING

5. Click 'TEXT' to type your input
6. Click on the whiteboard where you want to place your input
7. Type in and click on the screen
8. Everyone in the your breakout room should be able to view your input

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STEP 1: BRAINSTORMING : THROW YOUR IDEA

What do you have to do:

- ✓ Based on each aspect, write keyword(s) of your idea on the white board
- ✓ Group members need to discuss all the ideas and come up with final (key) point(s) (not more than 3)
- ✓ The agreed final points will be discussed further in STEP 2
- ✓ After the discussion, you can save the whiteboard by pressing the 'SAVE ' button

Example:

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STEP 2: DISCUSSION

1. In this step, we will be using the Google Slide to fill in the Way Forward form
   - ✓ Link for each economy will be shared by the facilitator in chat box
   - ✓ Click on the link to go to the file
2. Appoint one member to take notes of the discussion
   - ✓ Facilitator will share his/her screen so everyone can see the input

Aspect	Proposed action	Quantity/ frequency	Timeline*	Any support needed**
1. Use or adapt materials relevant to your respective economies (especially module (PPT), videos and Town Watching Map guideline and form)				
i. How are you going to share the training materials (modules and exercise) in your economy, with relevant agencies as well as local communities? ➢ through website, social media, print				
ii. Will you adopt these measures in flood-prone areas within your economy? ➢ translate, enhance, localized, etc.				
iii. Do you plan to develop new and relevant material(s)				

*(immediately, 3 months, 6 months, 12 months, beyond 1 year)

** (including from APEC, MyWP, UPM, GEC, and others)

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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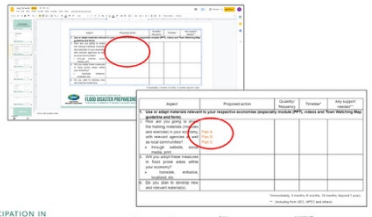
STEP 2: DISCUSSION

3. Take the agreed final point(s) and elaborate further to fill in the Way Forward Form in Google Slide.
4. Once finalized, appoint one member to present the findings in main session.



ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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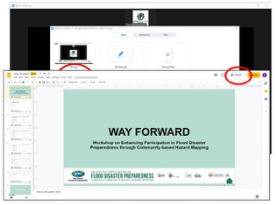
STEP 3: PRESENTATION

1. After the discussion session in breakout room end, all participants will be brought back to the main session
2. To present the finding, the presenter should open the Way Forward Google Slide and share his/her screen
3. Choose the right screen and click 'SHARE'
4. On the Google Slide, click 'PRESENT'
5. Each group will only be given 5 minutes to present the group findings



ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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BREAKOUT ROOM SESSION

- If you are ready, we will start now
- The 'join' instruction will pop-out
- Just click the 'join' button
- See you in 45 minutes

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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SHARING SESSION

Economic	Person
Malaysia	
Philippine (group 1)	
Chile	
Philippine (group 2)	
Brunei	

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healthier environment; better economy; more cohesive society

together we achieve more

Thank You!

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Appendix 1 Preparing for a Town Watching Workshop

1. Purpose of the Workshop

A workshop can demonstrate and encourage the practice of the Town Watching methods. The purpose is to present the steps of the method and to provide some tools for conducting the Town Watching observations and to translate the information into a map. It also provides the participants with hands-on skills since participants will be given the chance to try out the method and discuss with others about preparing a safe evacuation and response under a flood hazard situation.

2. Target Group

The participants targeted in this workshop are those who could be expected to lead, or contribute to, economy-level training in flood disaster response management to local communities. The participants will benefit by obtaining knowledge on best practices and foresight planning, learning the Town Watching approach, and consideration of its use for flood disaster response planning at their own economy-level. They are expected to use this knowledge to develop training workshops or sessions or events where the Town Watching approach is applied at their community level and/or for training other trainers on the approach. In this manner, the impact of this project may then be cascaded and multiplied at the local level.

3. Recommended background of participants

The participants should be from institutions which are actively engaged in community training or who can facilitate future community training. It is expected that participants are responsible for, and would have been involved in, community-level education and training activities for at least the past one year, either in formal or non-formal settings. The history of collaboration between the prospective participants with local-level government agencies is to enhance likelihood of support of any subsequent training to be delivered by the participants to the local-level later. Project participants may be from various agencies, such as from:

- community-level training and education units of central domestic-level disaster management agencies, community health agencies, educational or academic institutions.
- local government office units which are responsible for community training; and
- community-based (CBOs), and non-governmental organisations (NGOs), including school and higher education institution clubs/associations, which have been actively working with local government agencies in training and

education. NGO/CBO representatives are viewed as a sustainable solution for extension of training to the community at large.

No specific level of technical expertise in flood disaster response is required, although it is expected that participants have previously facilitated or conducted non-formal or adult community-level training in environmental or hazard-related topics. That is, participants should have some skills in adult education approaches.

4. Gender Perspective

Flood disasters affect both men and women, young and old, however, the impact is felt differently by the different groups. In consideration of this, the APEC economies are strongly encouraged to encourage a gender balanced team of trainers/facilitators and participants to the workshop as well as consider the potential leadership roles which their nominees may play in post workshop training at the local level. A target achieve at least 40% women participants in the workshop could be set. In this respect, trainers from gender-focal point agencies of the APEC economies are also suitable candidates as participants, as flood response thinking require gender perspectives and considerations for planning and management. The project outcomes and project objective are expected to benefit women by highlighting these different impacts and types of considerations that should be included in planning flood response activities in support of the APEC Gender Criteria Pillars of Skills, Capacity Building, and Voice.

5. ICT Facilities for Physical/Hybrid/Virtual Workshop

Participants in a physical workshop should be requested to bring laptops and the workshop organisers should also be prepared to make arrangements to have laptops available for participants to use if the E-maps module will be taught. Participants joining virtually will require access to a computer (desktop or laptop), preferably with an attached camera, and stable internet services capable of supporting interactive video streaming. Smartphones are not suitable for virtual participation.

We recommend the following hardware minimum requirements:

- CPU: 2 GHz Dual-Core I3 Processor
- RAM: 4GB
- Storage: 40GB
- Network Adapter: (Recommended) 256Kbps/2Mbps (Minimum)100Kbps/300Kbps
- Others: Digital camera(s), Headset

Participants joining virtually may choose to use headphones with a microphone, although this is usually not necessary.

A digital camera or phone camera with video recording capabilities is recommended for the Town Watching field exercise.

A video conferencing application will be used for hybrid/virtual events, and it is recommended that the software selected is one that participants may register and download the software for free. Guidance should be provided on the installation and use of the software. Participants should be able to contact the organisers to resolve any technical problems. Test runs could be conducted in the period of two weeks prior to the workshop to ensure all participants can be well connected and familiar with the application controls. It is recommended that a briefing session be conducted in the week before the workshop.

After confirmation of acceptance, all participants and speakers should conduct test runs on the Zoom platform with the organizer.

It is recommended that virtual participants connect to the workshop meetings in a quiet, undisturbed environment, to ensure the quality of the event for themselves and other participants. Participants may connect personally or in a group in a classroom or meeting room setting. In such cases, they should ensure that the audio-video facilities available are adequate to allow for all participants to be able to interact.

6. Facilities for the Town Watching Exercise

For the Town Watching exercise component of the training, the outdoor field exercise is considered as the best option although the exercise may be conducted as an indoor exercise as well, using materials available to the participants, either using online applications or offline using stationary materials, according to their local circumstances. The exercise may be conducted individually, although we recommend that the exercise is best conducted in small groups, within the local setting, to allow for discussion and consultation among group members.

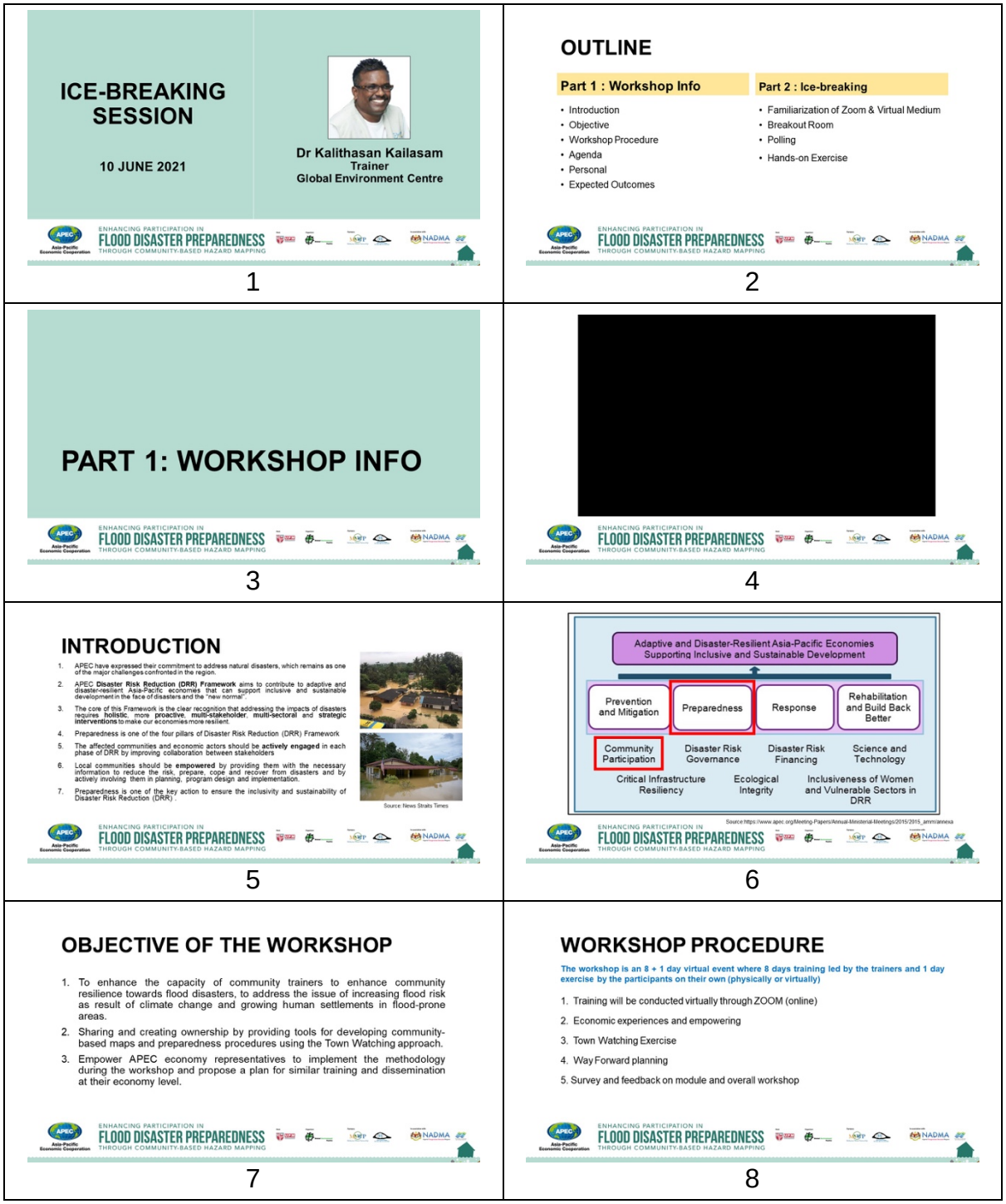
Online mapping applications (such as Google MyMaps, Google Earth and Openstreet Maps) could be demonstrated as one of the methods for flood disaster response plan mapping using the E-map module. Participants may also choose to use any mapping application with which they are familiar. This is not a requirement when conducting the workshop and participants may optionally develop the map manually and use physical materials (white paper, colour marker pens, sticky labels and other stationary) to create the maps. A list of stationary materials for the field exercise will be provided to participants. If the Workshop is conducted online, the participants should then be requested to photograph their map and upload into the Workshop folder online. Maps made do not have to be to scale. Please consider any confidentially requirements of the participants' economy when groups are developing the maps.

7.`Ice-Breaking Session Introduction to the Workshop

It is useful to conduct an introductory session before the workshop proper begins and to allow participants to understand the structure of the workshop and the different modules which will be presented.

An example is given in the slide deck on introducing the overall workshop programme as well as on use of online meeting platform, such as Zoom. We also include a slide deck of sample summary and concluding remarks.

Slideck for Introduction to workshop format



WORKSHOP PROCEDURE

1. VIRTUAL WORKSHOP

A. Training will be conducted virtually through ZOOM
   - pre-record video or live presentation

B. All Q&A will be live

C. Training will be conducted in meeting mode. Kindly ensure you are muted unless indicated by the trainer or secretariat.

Preparations:

- ✓ Ensure access to a desktop or laptop, preferably with camera, and stable internet connection.
- ✓ Preferable with LAN connection and if on WIFI ensure no background apps or browser is active to avoid disruption.
- ✓ Make sure you also connected to power cable or the battery is fully charged
- ✓ Connect to the training in a quiet, undisturbed environment.
- ✓ Connect personally or in a group in a classroom or meeting room setting.
- ✓ Use the function raise hand to ask questions during the training.

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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GLOBAL & ECONOMIC SHARING

- National Oceanic and Atmospheric Administration (NOAA/WMO)
- Malaysia
- Japan
- Chile
- Chinese Taipei

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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WORKSHOP PROCEDURE

2. TOWN WATCHING EXERCISE (21 June 2021)

A. This section will emphasize the detail of Town Watching concept and how to go about it.

B. EXERCISE OPTION : Outdoor field exercise **OR** indoor exercise (following your own SOP).

C. Outdoor field exercise

- ✓ If possible for the field exercise, then identify the site
  - ✓ Criteria : nearby, accessible, 'safe'
- ✓ Once identified, prepare the map (like street map or others)
  - ✓ Will be used during the on-ground mapping and marking
- ✓ Prepare the tools needed
- ✓ It is recommended that the exercise conducted in small groups, within the local setting.

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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WORKSHOP PROCEDURE

2. TOWN WATCHING EXERCISE (Cont.)

C. Alternatively an E-Map (Eg: Google Map/Earth) will be demonstrated too
   - ✓ Identify which platform or online map available locally
   - ✓ Step by step will be demonstrated during the training

D. Town watching plan submission
   - ✓ Participants may optionally develop the map manually and use physical materials to create the maps and are then requested to photograph their map and upload into the Dropbox folder online (link will be shared on training day)
   - ✓ A digital camera or phone camera with video recording capabilities is recommended.

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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WORKSHOP PROCEDURE

2. TOWN WATCHING EXERCISE (Cont.)

Tools needed:

A. Town Watching Exercise at Outdoor Field Site
- Map of the area printed in multiple or one A3 paper (as appropriate)
- Small colored stickers
- Marker/Pen/Highlighter pen/Pencil (stationaries)
- Town watching form
- Phone camera/digital camera

B. Develop Hazard Mapping and Flood Response Plan (In Class)
- Output from outdoor exercise (maps with notes)
- Mahjong paper (big white paper) – to combine multiple maps
- Small colored stickers
- Marker/Pen/Highlighter pen/Pencil (stationaries)

C. Map Presentation
A. Map sharing through dropbox (link will be shared on training day)

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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WORKSHOP PROCEDURE

3. WAY FORWARD (24 June 2021)

A. Participants will be assigned into groups or follow their own economy level.

B. Each group will be assigned in a breakout session medium with assigned resource personnel/trainer
   - ✓ A template will be shared to participants prior to the session as well the PPP template too
   - ✓ After discussion, participants need to present their way forward (using PPP template)

C. Ensure the presentation covers the followings
   - Local adaptation of training modules at your respective economic level (how)
   - Implementation plan (For whom? Target Audience? What outcomes and reactions are you seeking?)
   - Monitoring and Evaluation
   - Outreach and Sharing

D. Participants are welcome to volunteer to deliver the presentation. If not the trainers will select and request the group/person to present their way forward.
   - The presentation time is 5 minutes only

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WORKSHOP PROCEDURE

4. SURVEY, EVALUATION AND POLLING

- Survey
  - Pre-training and post training
- Feedback and evaluation on the modules
- Polling for the session

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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PARTICIPANTS

APEC's 21 member economies

1. Community-level training and education units of central domestic-level disaster management agencies, community health agencies, educational or academic institutions;
2. Local government office units which are responsible for community training; and
3. Community-based (CBOs), and non-governmental organisations (NGOs), including school and higher education institution clubs/associations, which have been actively working with local government agencies in training and education.
   - NGO/CBO representatives are viewed as a sustainable solution for extension of training to the community at large.

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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AGENDA

Pre-Workshop Briefing - Wednesday 10 June 2021 (today)

Time	Programme
09.40	Online registration and reception
10.00	Ice-Breaking Session (Introductions, Procedures, Expectations) by Dr Kalithasan Kailasam, Manager, Global Environment Centre
11.00	Session ends

Key Aspect:
1. Workshop Introduction
2. Preparation

Opening Ceremony - Tuesday 15 June 2021

Time	Programme
09.15	Online registration and reception
09.45	Opening Ceremony
	Session Chair
10.15	Key Note: Weather Ready Nations
11.00	Q & A Session
11.30	Session ends

Key Aspect:
1. Opening speech by NADMA
2. Key note

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AGENDA

Panel Session: Sharing of Experiences in Flood Preparedness and Response
Wednesday 16 June 2021

Time	Programme
09.20	Online registration and reception
09.50	Welcome by Panel Chair
10.00	Presentation by Chile
10.20	Presentation by Chinese Taipei
10.40	Presentation by Malaysia
11.00	Q & A Session
11.30	Session ends

Key Aspect:
Sharing sessions on experience by key economics

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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AGENDA

Panel Session: Town Watching Approach for Flood Disaster Response Planning - Thursday 17 June 2021

Time	Programme
09.20	Online registration and reception
09.50	Welcome by Panel Chair
10.00	Town Watching Experiences Other Implementations in Japan
10.40	Malaysian Experience in Town Watching by Dr Kalithasan Kailasam, Manager, Global Environment Centre
11.00	Q & A Session
11.30	Session ends
09.20	Online registration and reception

Key Aspect: Different experience and approach of Town Watching in Japan and Malaysia

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AGENDA

Town Watching Exercise Briefing - Friday 18 June 2021

Time	Programme
09.20	Online registration and reception
09.50	Welcoming by Project Coordinator
10.00	Town Watching Exercise Briefing and Examples by Dr Kalithasan Kailasam, Manager, Global Environment Centre
10.30	Use of Electronic Mapping applications (E-Maps) – Interactive by Dr Zelina Zaiton
11.30	Session ends

Key Aspect: Methodology of Town Watching : physical and electronically

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AGENDA

Town Watching Exercise in Malaysia – Monday 21 June 2021

Time	Programme
09.20	Online registration and reception
09.50	Welcome by Town Watching Coordinator
	Video of Town Watching Exercise at outdoor Field Site
	Video of In-class Hazard Mapping and Flood Response Plan
	Video of finished group maps for presentation
10.50	Q & A Session
11.30	Summary and preparation for the next day of town watching exercise

Key Aspect: Virtual step-by-step on development of Town Watching Map

Town Watching Exercise – Tuesday 22 June 2021

Time	Programme
	Virtual participants may conduct their Town Watching exercise (indoor or outdoor) and upload the map into the Dropbox folder online (link will be shared on training day) by end of the day.

Key Aspect: Localise on-site or e-map exercise by participants at their economic level

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AGENDA

Emergency Kits – Wednesday 23 June 2021

Time	Programme
09.20	Online registration and reception
10.00	Presentation and review of maps prepared by virtual participants (only 3 to 4 of the uploaded maps will be selected for presentation)
10.30	Feedback from participants on mapping exercise
11.00	Emergency Survival Kits and Bags and Demonstration of Drinking Water Filtration Kits
	Summary & Briefing Participant to prepare (homework) for Planning for Way Forward
11.45	Session ends

Key Aspect:
1. Town Watching map presentation by participants
2. Sharing on survival module

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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AGENDA

Way Forward: Planning and Local Adaptation of Training Modules - Thursday 24 June 2021

Time	Programme
09.20	Online registration and reception
10.00	Briefing on Breakout group discussions
10.15	Breakout Group Discussions on Planning and Local Adaptation of Training Modules
10.45	Report back - 3 or 5 of them selected to present
11.30	Concluding remarks
11.45	Session ends
	Closing Ceremony – Project Coordinator

Key Aspect:
1. Breakout group discussion
2. Presentation on planning and local adaptation plan
3. Closing ceremony

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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GLOBAL & ECONOMIC SHARING

Organisation
Name
Department

Organisation
Name
Department

Organisation
Name
Department

Organisation
Name
Department

Organisation
Name
Department

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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COORDINATOR & TRAINER

COORDINATOR
Dr Zelina Zaiton
Project Coordinator, Universiti Putra Malaysia

An environmental analyst with over 30 years experience in catchment, lake, estuarine and coastal processes, to descriptive physical oceanography. She has a PhD in Oceanography, from the University of Southampton, U.K., and a B.Sc.(Hons) Environmental Sciences, from the University of East Anglia, U.K.

TRAINER
Dr Kalithasan Kailasam
Project Trainer, Global Environment Centre

20 years of river ecosystem management experience. Dr Kalithasan is a pioneer in Civic Science and Community-based River Management and disaster preparedness in Malaysia. he has developed various river, water, solid waste and disaster management projects, programmes and module

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RESOURCE PERSON

Ms Jagedeswari Marriappan
Senior Programme Officer, (GEC)
12 years experiencing in various environmental related initiatives and programmes - esp on environmental monitoring & evaluation, climate change mitigation through community & public engagement.

Mr Sathis Venkitasamy
Senior Programme Officer, GEC
8 years' experience on water quality, wetland plants, water auditing and conservation, disaster management and climate adaptation (flood preparedness), citizen science and stakeholder engagement.

Mr Norazrin Mamat
Senior Programme Officer, (GEC)
6 years experiences with local community, indigenous people, education institution and other stakeholders, and specialized in community based solid waste, community empowerment and recycling initiatives as well as flood management.

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SECRETARIAT/FACILITATORS

Officers from Malaysia Water Partnership (MyWP), Global Environment Centre (GEC), Water Watch Penang (WWP)

Mrs Athirah Lim
Executive Secretary, Malaysian Water Partnership. She's been with MyWP for more than 10 years

Dr Hong Chern Wern
Executive Management, Water Watch Penang
16 years of experience in river and water education programmes, and water demand management as well as environmental education programmes that involve public and private education institutions, private and public organisations, and local communities

Mrs Sharifah Nur Zulaikha
Programme Officer, GEC
4 years experience in local community and education institution engagement in river and solid waste management

Ms Tsia Mun Kaik
Programme Officer, GEC
4 years experience in stakeholder engagement in river and solid waste management

Ms Intan Shafiqah
Programme Officer, GEC
University Malaysia Kelantan graduate of Forest Resources Technology experience in for community encroachment and river management

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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POST TRAINING

- Modules and materials will be shared in MyWP & GEC website (link will be shared soon)
- Adoption of the Module and Implementation at Economy level
- Follow-up Activities
- Post-training Survey (after 6 month)
- Reporting and Updates
  - Participants to send report on implementation
  - Via Zoom or face-to-face (if possible)

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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EXPECTED OUTCOMES

1. Participants able to enhance their knowledge and skill on community resilience towards flood disasters preparedness.
2. Participants able to address the issue of increasing flood risk as a result of climate change and growing human settlements in flood-prone areas.
3. Participants learn to adapt the experiences from other APEC economic.
4. Learn a comprehensive module on Flood Disaster Preparedness through Community-based Hazard Mapping
5. Develop a proposed plan their economy level implementation
   - Organize series of training and capacity building, workshop and hands on training for community participation at local level
   - Develop and promote the town watching map

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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CERTIFICATES

- E-certificate
- Will be given after the training
- Need to attend all the days

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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PRE-TRAINING SURVEY

- Please find the link for pre-training survey
- Please ensure to fill-up before the **END** of the session
- Link will be shared in CHAT or you can just scan the QR code!

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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healthier environment; better economy; more cohesive society

together we achieve more

Thank You!

Dr Kalithasan Kailasam
+6010 366 9772; kalithasan@gec.org.my

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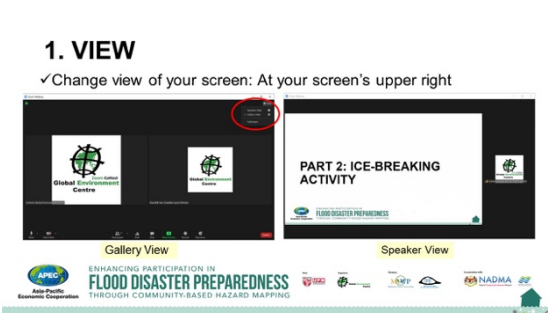
Slide deck for introduction to online meeting platform

1



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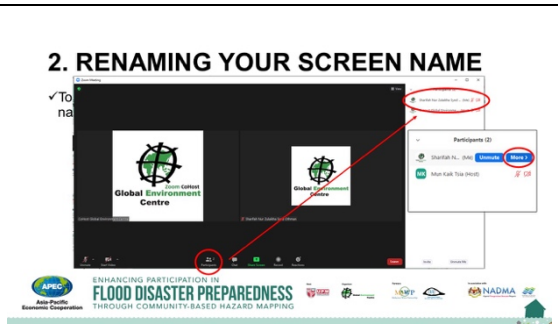

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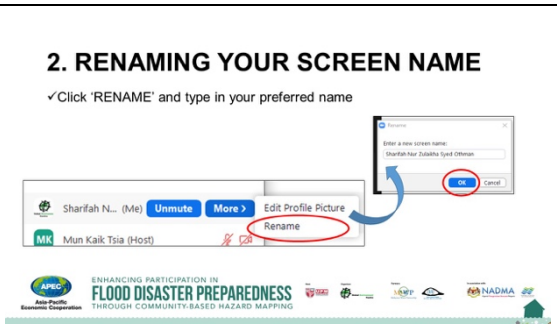

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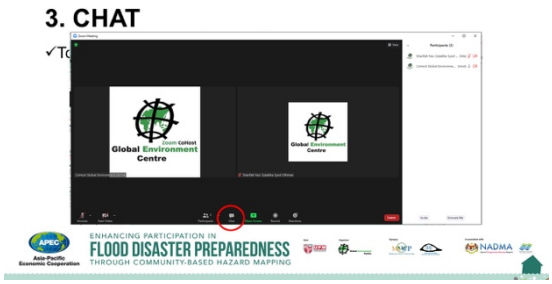

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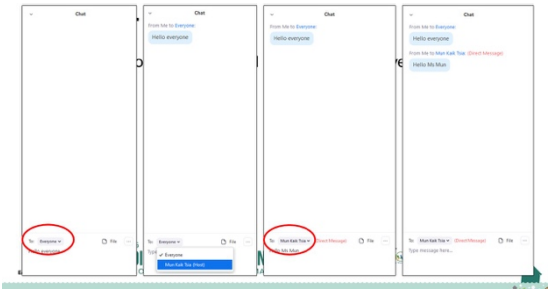

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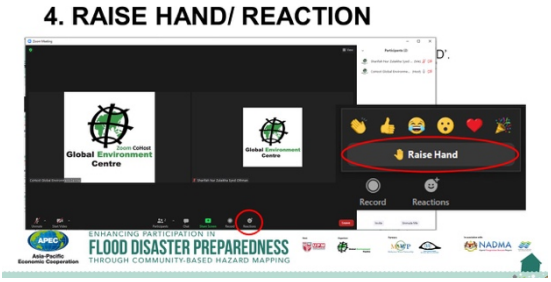

8

4. RAISE HAND/ REACTION

✓You can also click on any other reactions.
✓It will show in your video as well as beside your name in the participants list

5. VIRTUAL BACKGROUND

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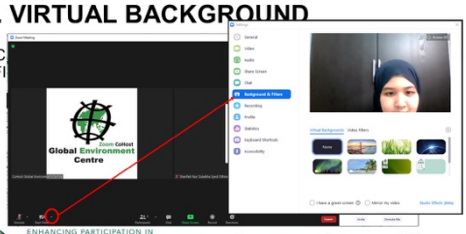
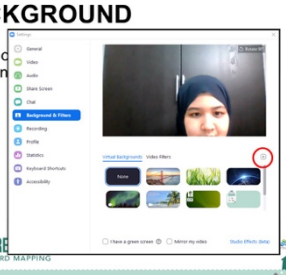


5. VIRTUAL BACKGROUND

✓Click the '+' button to add c
you can use the existing on



6. SHARE SCREEN

✓Du
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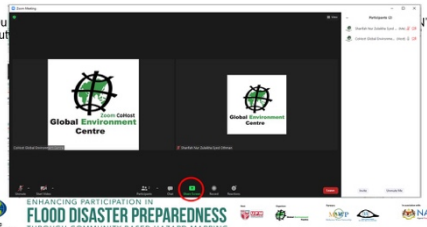
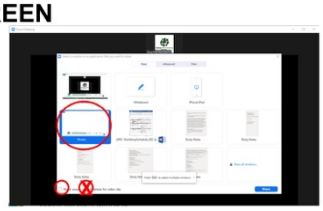


6. SHARE SCREEN

✓Choose the screen you want to show and click 'SHARE'
✓If you are sharing video, click 'SHARE COMPUTER SOUND' as well
✓If you are sharing video with audio **DO not optimize the screen**

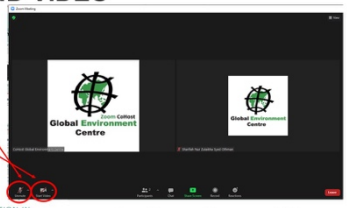


6. SHARE SCREEN

✓Now your screen is being shared
✓To change items shared, click 'NEW SHARE'
✓To stop sharing click 'STOP SHARING'

7. VOICE AND VIDEO

✓During training, please ensure that you press the 'MUTE' button
✓To talk, press the 'UNMUTE' button
✓To show video, press the 'START VIDEO' button
✓To stop sharing video, press 'STOP VIDEO' button



ACTIVITY 2: ME

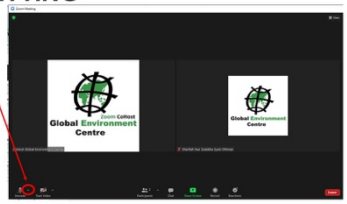
Introduce yourself:

1. Name, designation, organization

Steps:
➢Click on 'START VIDEO' (Bottom left)
➢Click 'UNMUTE' (Bottom left)
➢Speak
➢Click on 'MUTE' when you are finished
➢Click on 'VIDEO' to close the video

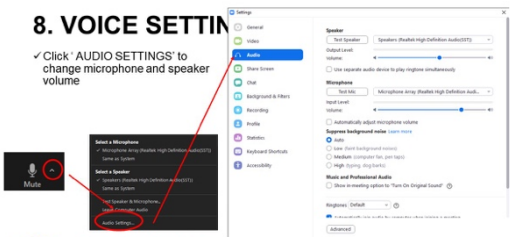
8. VOICE SETTING

✓If you have problem with the voice, click the ^ button beside mute, choose a suitable microphone or speaker.
✓It is usually automatic unless if you use an external microphone or external speaker



8. VOICE SETTI

✓Click ' AUDIO SETTINGS' to change microphone and speaker volume



9. VIDEO SETTING

- ✓If you have problem to turn on video, click the ^ button beside video, choose a suitable camera.
- ✓It is usually automatic unless if you use an external camera

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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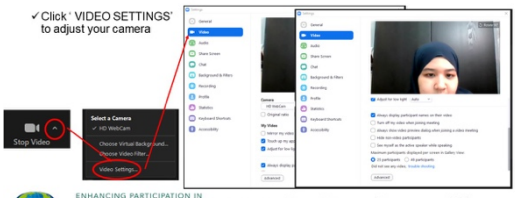
9. VIDEO SETTING

- ✓Click ' VIDEO SETTINGS' to adjust your camera



ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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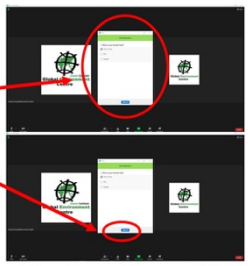
10. POLLING

1. The poll will pop-out
2. Click the right answer
3. Press 'SUBMIT'



ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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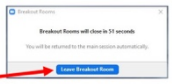
11. BREAK OUT ROOMS

1. The join instruction will pop-out
2. Click the join button
3. Exercise
   1. Two breakout groups:
      - Group 1
      - Group 2
   2. Points of discussion:
      - Advantage (Group 1) and disadvantage (Group 2)
   3. Report back as a group (in 3 minutes)



ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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PRE-TRAINING SURVEY

- Please find the link for pre-training survey
- Please ensure to fill-up before the **END** of the session
- Link will be shared in CHAT or you can just scan the QR code!
  - Surveyhttps://docs.google.com/forms/d/e/1FAIpQLSfQd1t5bQnBB_PXaEf6JeNRZxbTt6iUgYEw6imrNVxxfjKS2g/viewform?usp=sf_link
  - https://forms.gle/Jptbtn4PEZpuaK8N9

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23

THANK YOU!

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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Slide deck of summary and concluding remarks

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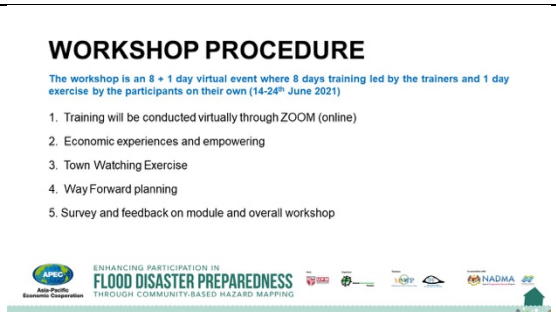

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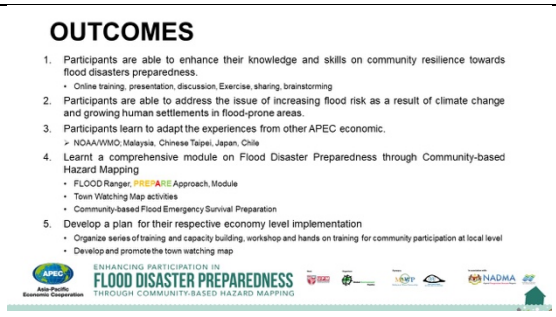

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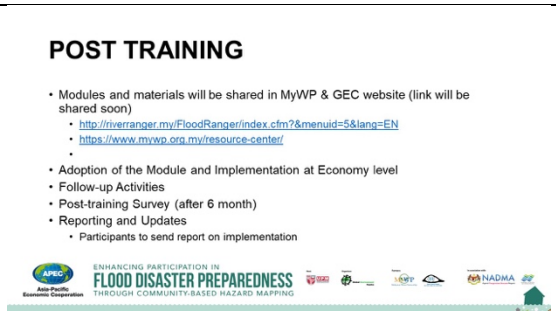

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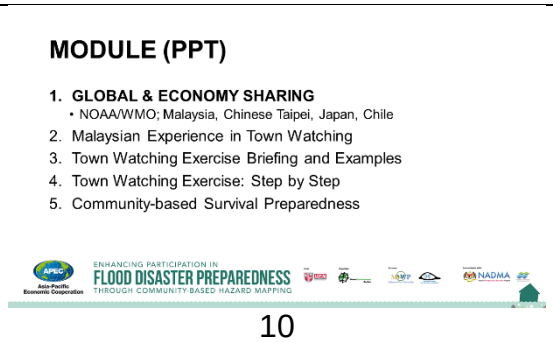


10

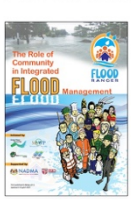
TRAINING VIDEOS

1. Summary of Flood Ranger Community Preparedness Training in Malaysia
2. Town Watching Exercise at Outdoor Field Site in Malaysia
3. In-class Hazard Mapping and Flood Response Plan
4. Finished Group Maps for Presentation
5. Community-based Survival Preparedness
6. Way Forward

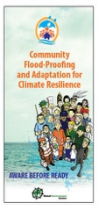
ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

11

FLOOD RANGER MODULE & BROCHURE



SCAN TO DOWNLOAD FLOOD RANGER MODULE



SCAN TO DOWNLOAD FLOOD RANGER BROCHURE

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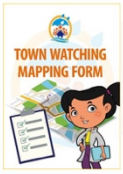
TOWN WATCHING MATERIALS

SCAN TO DOWNLOAD GUIDELINE FOR TOWN WATCHING ACTIVITY



SCAN TO DOWNLOAD TOWN WATCHING MAPPING FORM

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VIDEOS

Search in YouTube:

- ❑ Training of trainers (TOT): Community Flood Preparedness 2015
- ❑ Community Flood - Proofing and Adaptation for Climate Resilience
- ❑ Seminar: Community awareness and participation in facing the frood scenario
- ❑ Flood Preparedness Workshop

SCAN TO WATCH VIDEOS

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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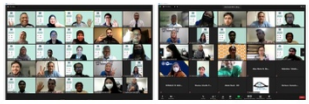
GROUP PHOTOS

Day 0



Day 1

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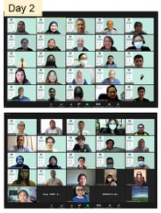
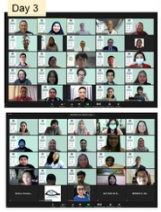
GROUP PHOTOS

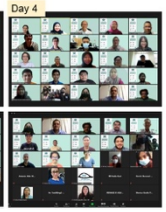
Day 2



Day 3



Day 4



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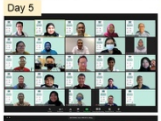
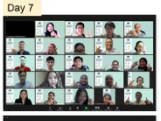
GROUP PHOTOS

Day 5

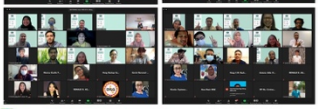


Day 7



Day 8

IT'S TODAY!
KEEP ON SMILING ☺



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CERTIFICATES

- E-certificate
- After the training

Video Workshop Recap

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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healthier environment; better economy; more cohesive society

together we achieve more

Thank You!

Dr Kalithasan K
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ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

19

healthier environment; better economy; more cohesive society

together we achieve more

THANK YOU **TERIMA KASIH**

GRACIAS **ERESS EL MAJOR!**

IKAW ANG PINAKAMAHUSAY!

YOU ARE THE BEST!

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+6010 366 9772; kalithasan@gec.org.my

ENHANCING PARTICIPATION IN FLOOD DISASTER PREPAREDNESS THROUGH COMMUNITY-BASED HAZARD MAPPING

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Appendix 2 Malaysian Experience in Town Watching

Presentation by Dr Kalithasan Kailasam

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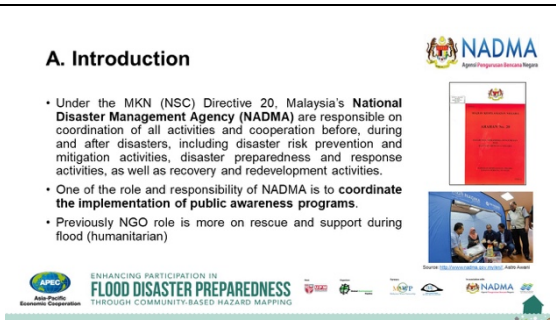

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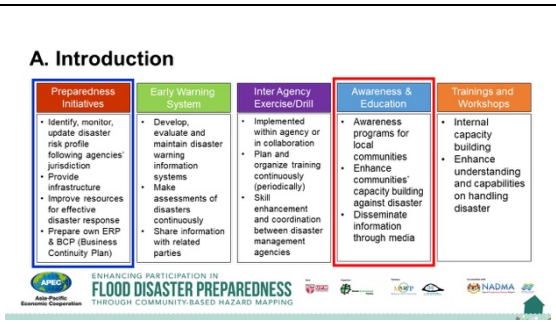

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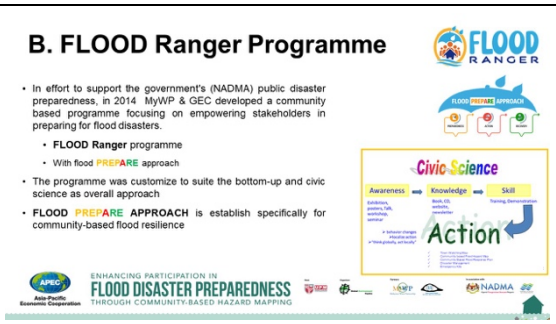

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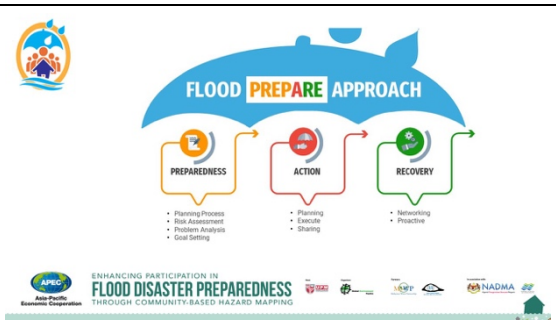

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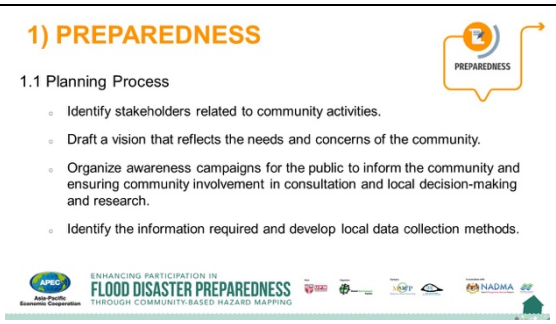

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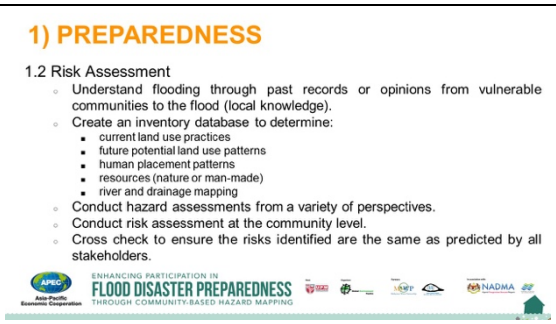

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1) PREPAREDNESS

1.3 Problem Analysis

- Conduct vulnerability and capacity assessments to identify at-risk communities.
  - Identify houses with people with special needs (senior citizen, disabled community, baby/kids, etc)
- Identify the community causes (activities) that lead to floods.
- Identify flood plain areas to determine flood risk.

1. 4 Goal Setting

- Determine objectives based on risk assessment results.
- Determine the scope of community activities.

2) ACTION

2.1 Planning

- Assess the various measures necessary to address their local flood risk
  - in that context given such as land use planning, building codes, conservation zones, drainage repairs and others.
- Develop an action plan listing specific mitigation/activities, roles and stakeholder responsibilities.
- Set timelines and expected results.
- Establish monitoring, evaluation and study procedures.
- Distribute agreed draft plans, especially to those directly involved.

2) ACTION

2.2 Execute

- Town Watching activity is an effective way to create flood resilient community.
  - **Town Watching Map**
    - Community Based Flood Hazard Mapping
    - Community Based Flood Response Plan
- Test the mapping plan and the availability of the parties involved for their respective responsibilities.
  - Training, drilling activities and discussions related to flood management can increase the availability and capability of individuals to deal with flood scenarios.
- Increased individual capacity and ownership will have a 'synergy' impact for community.

2) ACTION

2.3 Sharing

- Once finalized, hand over the Town Watching Map to district office, local authorities and other key related/relevant stakeholders for further action and acknowledgement.
- Distribute the Town Watching Map to all community members and place at main gathering area of the neighbourhood such as community hall, mosque, school and others.
- Always share and promote the Town Watching Map to all community members during an event or gathering.
- Regular reminders through meetings will also create an impact for sustainable flood management.

3) RECOVERY

3.1 Creating networks between community individuals and relevant agencies.

- Including government, national disaster management agencies, and donors focused on flood recovery
- To support the flood mitigation, recovery activities

3.2 Communities Proactive and become more sensitive to their local hazard situation.

- Be the eyes and ears
- To minimize flood risk

C. FLOOD RANGER COMPONENTS

1. SMART Partnership
2. FLOOD Ranger Module
3. Training and Workshop
4. Tools and Materials
5. PREPARE Training
6. Post Training Activities
   - ✓Town Watching
   - ✓Sharing
   - ✓Recovery

1. SMART PARTNERSHIP

- The programme develop to compliment Malaysian government's (NADMA) framework.
  - Community based programme must be in partnership with agencies
- It balance the role and responsibility of all stakeholders
  - Government
  - Statutory body
  - Private sector
  - NGOs
  - Volunteer

2. FLOOD RANGER MODULE

- The **FLOOD Ranger module** is a highly effective approach that can be adopted by all levels of the community and community based initiative.
- It can helps to reduce the risk of floods as well as reducing the socio-economic losses that have to be borne by all parties.
- It was developed in 2015
  - By MyWP & GEC
  - In partnership DID Malaysia and supported by local government (MPK) as pilot study
  - Later in 2018, the module was enhance with support from UPM & NADMA

2. FLOOD RANGER MODULE

Chapter1	Introduction	
	1.1 Types of Floods	
	1.2 Flood Prone Areas in Malaysia	
	1.3 Causes of Floods	
	1.4 Flood Forecasting and Warning System in Malaysia	
	1.5 Environmentally Friendly Drainage Manual (MSMA)	
Chapter2	Impact of Floods	
	2.1 Socio-economic Loss	
	2.2 Destruction of Property	
	2.3 Disease Outbreaks	
	2.4 High Cleaning and Repair Costs	
	2.5 Loss of Life	
Chapter3	Flood Mitigations	
	3.1 Structured Flood Control	
	3.2 Unstructured Flood Control	
Chapter4	Community Involvement in Flood Management	
	4.1 The Role of the Community in General	
	4.2 "Town Watching"	
Chapter5	Levels of Flood Management	
	5.1 Before Flood	
	5.2 During Flood	
	5.3 After Flood	
	5.4 Checklist	
	5.5 Agencies Involved During Floods	

3. TRAININGS/WORKSHOPS

- Its main aim is to empower the key stakeholders especially local communities
- Each workshop/training will have customized agenda to suite the local condition and setup
  - Module can be adopted on the local needs
- Target: local communities, government agencies, volunteers organization
- Organised in partnership
  - Government agencies; ie: disaster management
  - Local government
  - Community
- Training duration
  - 1 to 2 days

4. TRAINING MODULE

Each workshop/training will have customized agenda to suite the local condition and setup

- Module can be adopted on the local needs
- But must cover main areas:
  - ✓ Health Care and Sanitation
  - ✓ Potable water supply and management
  - ✓ Flood hazard map & response plan (TOWN WATCHING MAP)
- Optional:
  - ✓ First Aid and Emergency
  - ✓ Flood rescue
  - ✓ Water level exposure

MODULE 1	EMERGENCY TRAINNING, HEALTH CARE AND SANITATION
➢	Cardiopulmonary resuscitation (CPR) training and first aid treatment*
➢	Training of health care during and after floods
➢	Hygiene management training such as drain area, channel and residential environment before, during and after the flood
MODULE 2	WATER SUPPLY & MANAGEMENT TRAINNING AND SAFE ROUTES DURING THE FLOODS
➢	Training provision of 'Grab Bag', 'Kit 72H' and basic needs that are important when floods
➢	Training storage measures and treatment of water during floods
➢	Identification of safe passage training and the impact of floods
MODULE 3	TRAINING OF FINDINGS AND OPERATION OF CENTER INFORMATION TRANSFER FLOOD
➢	Training in accessing online information about the status of flood
➢	Training of operation, management and procedures in evacuation centers before, during and after the flood
MODULE 4	VISIT TO THE SITE POND BENCHMARKING AND IDENTIFICATION OF FLOOD
➢	Training the reading of flood benchmark and exposure to Standard Operation Procedure (SOP) in flood detention ponds during floods occur*
MODUL 5	RESCUE TRAINING DURING FLOOD
➢	Training the methods to rescue flood victims and deliver relief during flood*

* : Optional

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5. TOOLS AND MATERIALS

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6. PREPARE TRAINING

1. Pilot project took place in December 2014 in collaboration with MyWP, GEC and Klang Municipal Council (local authority).
2. Activity were participated by 230 local participants. Only theoretical workshop took place involving presentation from GEC/MYWP, MPK, DID, LUAS and MERCY.
3. Hands-on training took place in June and November 2015 respectively which include both theoretical as well as practical training which involves 58 local communities. The first Town Watching (Flood Hazard) Map were developed during the training.
4. Since then, more than 8 trainings took place in all regions in Peninsular Malaysia.

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6. PREPARE TRAINING

Two types of training:

1. FLOOD Ranger Training
2. Town Watching Training

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7. POST TRAINING ACTIVITIES

I. Developed Community Based **Town Watching Map** (Flood Hazard & Response Plan)

II. Share with:
- Agencies
  - For endorsement/ acknowledgement
  - For action
- Other stakeholders
- Community member

III. Recovery (Action)

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7.1 TOWN WATCHING

1. **Town Watching** is an activity engaging communities in the integrated flood management.
   - It was originally use in town planning, however it was also use in prevention of disaster impact such as flood. It is to identify areas prone to have risk of danger and routes safe to travel during flood in the community residential area.
2. Town Watching activity focuses on two main output which then will be combined to one simple map.
   - **Community Based Flood Hazard Map** & **Response Plan**
3. This is key part of community based preparedness action.

Community Based Flood Hazard Map emphasize on how local community can develop their own map using:
- Local knowledge & Experience
- Current condition

Community Based Flood Response Plan is action need to be taken to prepare the site to be safe route during flood and emphasize on what need to be done before hand by:
- Individual
- Community
- Agencies
- Others

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TRAINING OUTPUT

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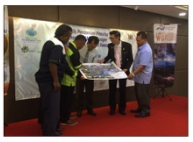
7.2 SHARING

A. With agency
- Submission of plans to local authorities and district office
- Plans submitted to the local authorities as reference and further actions.



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7.2 SHARING

B. Community members
- Pocket booklet shared to all community members with all relevant information as well as Town Watching Map.

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7.3 RECOVERY

Action taken from local authorities
- plan translated into action.

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D. VISIBLITY :MEDIA COVERAGE

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D. VIDEOS

Search in YouTube:
- Training of trainers (TOT): Community Flood Preparedness 2015
- Community Flood - Proofing and Adaptation for Climate Resilience
- Seminar: Community awareness and participation in facing the frood scenario

SCAN TO WATCH VIDEOS

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E. OVERALL IMPACT

- Increased awareness in flood disaster preparedness among local communities
- Reduce risk of floods
- Reduce socio-economic losses
- Mitigation action from relevant agencies
- Produced local facilitators/trainer
  - Can be engaged for training or peer-to-peer session

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NEXT

More details will be given during the Town Watching training on 18 June 2021

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healthier environment; better economy; more cohesive society

together we achieve more

Thank You!

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Abbreviation	Meaning
72H	72-hour
ADB	Asian Development Bank
ADRC	Asian Disaster Reduction Center
AIDEP─ACCEDER	*Análisis Histórico, Investigación en terreno, Discusión de Prioridades, Elaboración de Mapa, Planificación─Alarma, Comunicación, Coordinación, Evaluación Primaria, Decisiones, Evaluación Complementaria, Readecuación del Plan* Analysis of the history, Investigation of the terrain, Discussion of priorities, Elaboration in maps, Planning─Alarm, Communication, Coordination, Preliminary Evaluation, Decision, Complementary Evaluation, Readjustment of the Plan
ASF	APEC Support Fund
CB4DR	Clothing Bank for Disaster Relief Project, Malaysia
CBDRM	Community-based Disaster Risk Management
CBFHM	Community-Based Flood Hazard Map
CBFRP	Community-Based Flood Response Plan
CFGC	Community Flood Gathering Centre
CSO	Civil society organisation
DID	Department of Irrigation and Drainage
DRR	Disaster Risk Reduction
E-Maps	Electronic mapping applications
EPWG	Emergency Preparedness Working Group
ERP	Emergency response plan
F	Female
GEC	Global Environment Centre
GIS	Geographic Information Systems
ICT	Information and Communication Technology
IPCC	Intergovernmental Panel on Climate Change
KML	Keyhole Markup Language
KMZ	Keyhole Markup language Zipped
LCFGC	Local community flood-evacuation gathering centre
M	Male
MPK	*Majlis Perbadanan Kelang*

	Klang Municipal Council
MS	Microsoft
MyWP	Malaysian Water Partnership
n.d.	Not determined
NADMA	National Disaster Management Agency
NCDR	National Science and Technology Center for Disaster Reduction
NGO	Non-governmental organisation
NOAA	National Weather Service, National Oceanic and Atmospheric Administration
NSC	National Security Council, Malaysia
ONEMI	*Oficina Nacional de Emergencia del Ministerio del Interior* Office of National Emergencies, Ministry of the Interior
PADR	Participatory Assessment of Disaster Risk
PRA	Participatory Rural Appraisal
SBDRM	School-based disaster risk management
SBT	Science Based Targets
SMS	Short Message Service
SOP	Standard Operating Procedure
ToT	Training of Trainers
TWM	Town Watching Mapping
UNDRR	United Nations Office for Disaster Risk Reduction
UNISDR	United Nations International Strategy for Disaster Reduction
UPM	Universiti Putra Malaysia
USA	United States of America
UTC	Universal Time Coordinated
WMO	World Meteorological Organization
WWP	Water Watch Penang