



**PROJEK PEMERKASAAN KOMUNITI SETEMPAT  
DALAM KESIAPSIAGAAN & TINDAK BALAS BENCANA BANJIR**

**Sokongan ahli akademik melalui *Community Based Disaster Risk Management (CBDRM)* dan teknologi bagi menangani isu banjir**

**Ts. Dr Kogila Vani Annammala** CPESC

Fello Disaster Preparedness and Prevention Centre (DPPC)-Malaysian-Japan International Institute of Technology (MJIT),  
Senior Lecturer, Department of Water and Environmental Engineering, Faculty of Civil Engineering,  
UTM

Lead Southern Chapter, National Disaster Management Association (NADIM)

Ahli, Young Scientist Network- Academy of Sciences Malaysia (YSN-ASM)



# DPPC-MJIIT | 2015-2020-2030

Advancing science and technology for disaster risk reduction and resilience

## Vision 2030

A leading disaster risk reduction and management (DRRM) institute in multi-hazards and climate change to strengthen community resilience

## Visi 2030

Sebuah institusi terkemuka dalam pengurangan dan pengurusan risiko bencana (DRRM) untuk pelbagai bahaya dan perubahan iklim bagi memperkukuh ketahanan komuniti.



"Memupuk keterangkuman, memperkasa juara tempatan, mempromosikan sains & teknologi, dan memperkukuh ketahanan masyarakat."



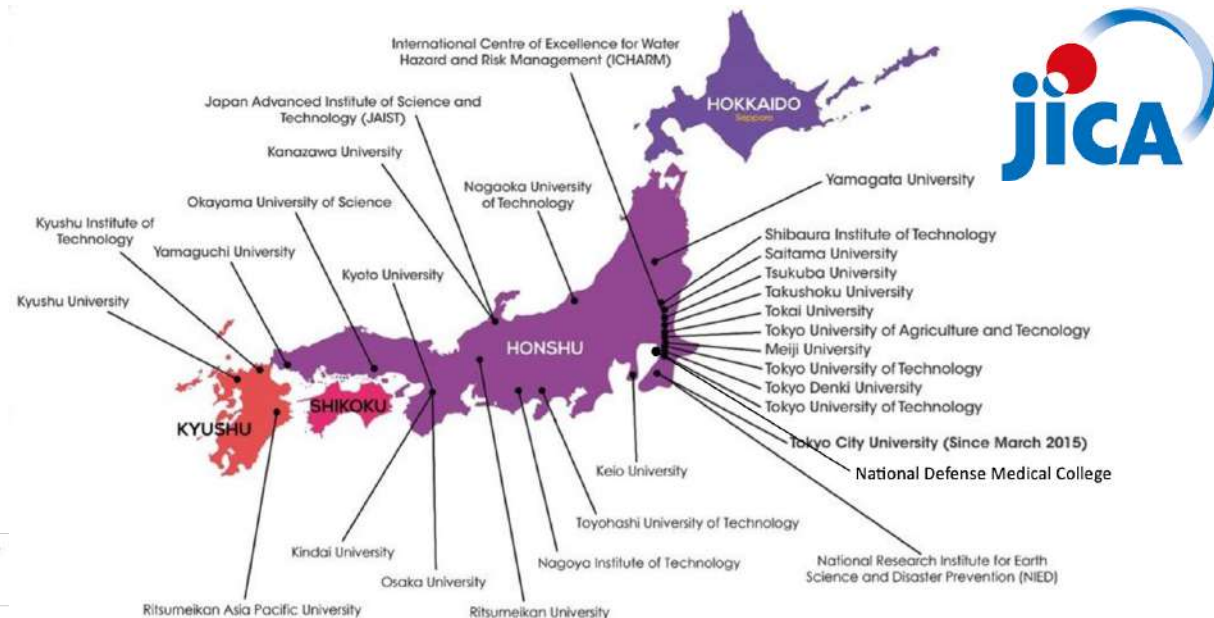
**Focus Area 1**  
Public-Private-Academic-Civil Society (PPAPCS) Platform for DRR

**Focus Area 2**  
Disaster Risk Governance, Communication and Investment

**Focus Area 3**  
Science-Evidence based Decision Making for Disaster Risk Reduction

**Focus Area 4**  
Locally-led and nationally-supported initiatives, programs and activities

**Focus Area 5**  
Area-based Action (Urban, Rural, Mountainous, Coastal, Tectonic)



<https://mjiit.utm.my/dppc/>



**DRR**

**Focus Area 1**

Public-Private-Academic-Civil Society (PPAPCS)  
**Platform** for DRR



**GCI**

**Focus Area 2**

Disaster **Risk** Governance,  
Communication and  
Investment



**SEM**

**Focus Area 3**

**Science**-Evidence based  
Decision Making for  
Disaster Risk Reduction



**LNI**

**Focus Area 4**

Locally-led and nationally-  
**supported** initiatives,  
programs and activities



**ABA**

**Focus Area 5**

Area-based **Action** (Urban,  
Rural, Mountainous,  
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**DRR**

**Focus Area 1**

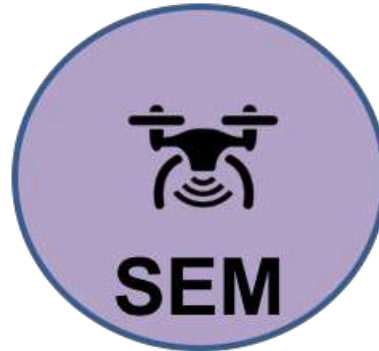
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**Platform** Awam-  
Swasta-Akademik-  
Masyarakat  
(PPAPCS) untuk  
Pengurangan Risiko  
Bencana (PRB)

Tadbir urus **Risiko**  
Bencana,  
komunikasi, dan  
pelaburan

Keputusan  
Berasaskan **Sains**  
dan Bukti untuk  
Pengurangan Risiko  
Bencana

Inisiatif, program  
dan aktiviti yang  
dipimpin secara  
tempatan dan  
**disokong** di  
peringkat nasional

**Tindakan**  
Berasaskan Kawasan  
(Bandar, Luar  
Bandar,  
Pergunungan,  
Pesisir, Tektonik)

# THE 2030 VISION

## ADVANCING SCIENCE AND TECHNOLOGY FOR DISASTER RISK REDUCTION AND RESILIENCE

FOSTERING INCLUSIVITY, EMPOWERING LOCAL ACTORS, PROMOTING SCIENCE & TECHNOLOGY, AND STRENGTHENING SOCIETAL RESILIENCE

Policy Recommendation

Technical Assessment

Data Analytics

Science- and evidence-based decision making



**Focus Area 1**  
Public-Private-Academic-  
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Platform for DRR



**Focus Area 2**  
Disaster Risk Governance,  
Communication and  
Investment



**Focus Area 3**  
Science-Evidence based  
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**Focus Area 5**  
Area-based Action (Urban,  
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# 3 PILLARS OF MJIIT'S DISASTER PROGRAM



## PROGRAM GOAL

To facilitate **Disaster Risk Reduction & Management (DRRM)** through **Education/Training, Research and Field Practice** in the **Asia-Pacific Region**

## PILLAR 3 Field Practice

Field Works, Stakeholder Engagements



## PILLAR 1 Education & Training

MDRM Programme Professional Training



## PILLAR 2 Research

Applied Research & Publications





# DPPC Laboratory



**Advanced Disaster Risk Management Laboratory  
X-band MP Radar System**



**Post-Disaster Water Quality & Disaster Waste Management Laboratory**



**IV Lab – Modeling and Simulation of Disaster Events**



**Multi Geo-hazard Laboratory**





ASIA-PACIFIC  
MINISTERIAL  
CONFERENCE ON  
DISASTER RISK  
REDUCTION

PHILIPPINES  
2024

# Merejuvenasi Agenda Pengurangan Risiko Bencana dan Ketahanan yang Dipimpin oleh Wanita dan Kanak-Kanak di Malaysia

**Khamarrul Azahari Razak & Kogila Vani Annammala,  
Disaster Preparedness and Prevention Center (DPPC), Malaysia-Japan International  
Institute of Technology (MJIT) Universiti Teknologi Malaysia (UTM) Kuala Lumpur**

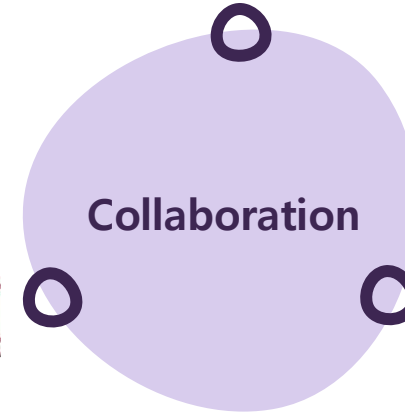


# strategic partners

a strategic collaboration between public-private-academia-civil society society and various local entities to fully utilized the strength and advantages each parties have.



- + Project Owner
- + Policy maker
- + Co-fundings
- + Monitoring & support



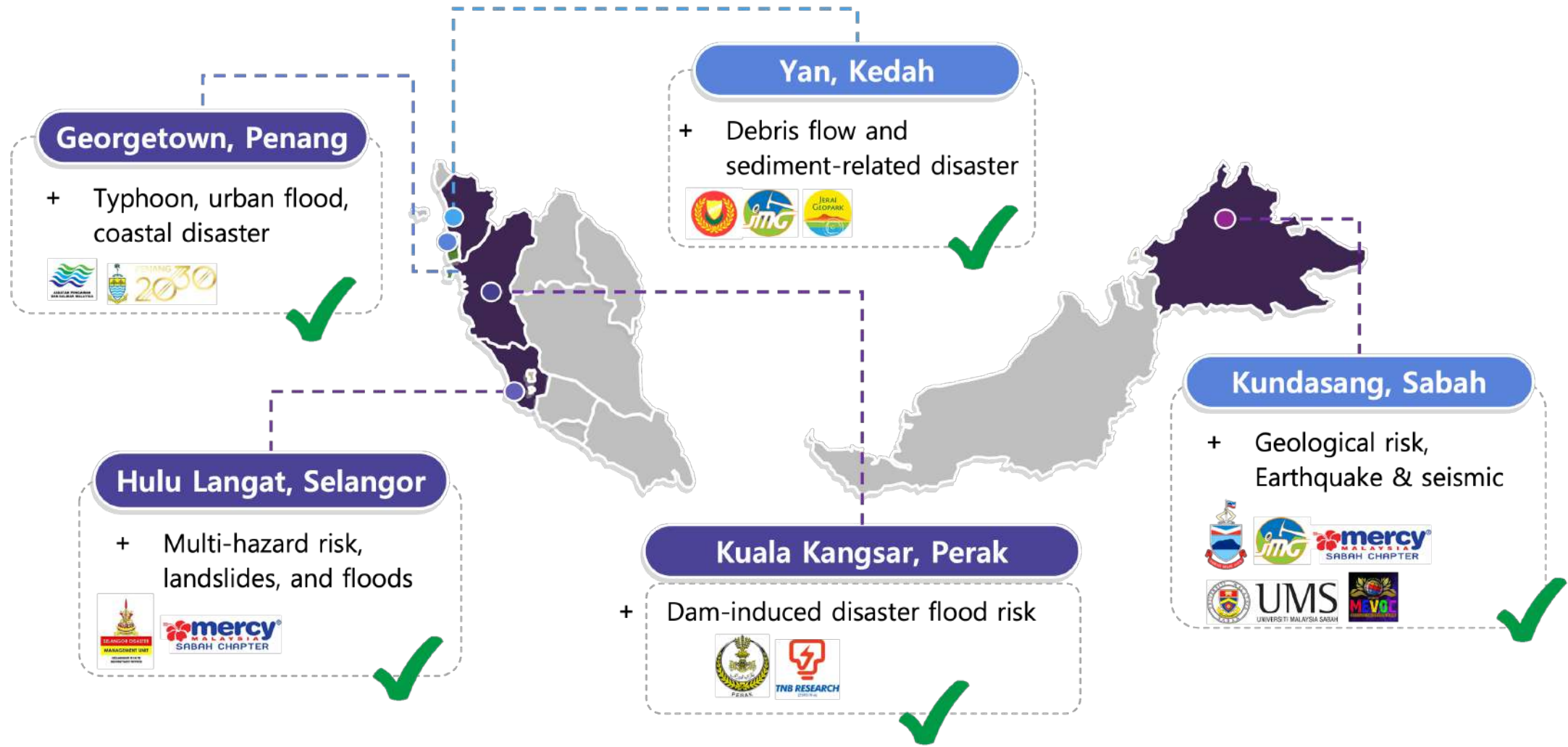
- + Implementer
- + Local connections
- + Scientific Experiences
- + Theory-to-Action

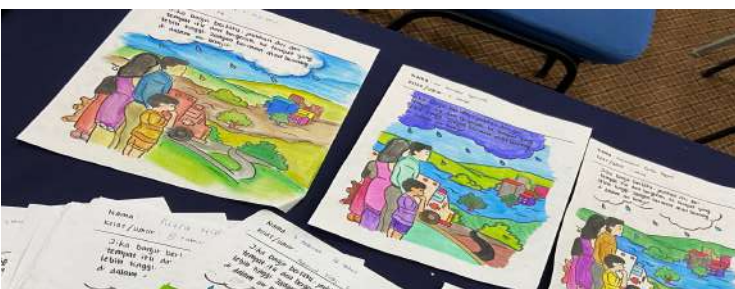


- + Funder
- + Technical Support
- + Co-implementer
- + International expertise



# Rejuvenating Women and Child-led Disaster Risk Reduction and Resilience Agenda in Malaysia







## SK LANGKASUKA | 18 OGOS 2022

Sekolah ini terlibat ketika bencana geologi aliran puing 1 tahun yang lepas. Partisipasi Murid dalam Program Pendidikan Bencana adalah seramai 142 orang murid





2024



2022



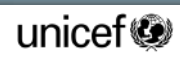
Agensi Pengurusan Bencana Negara



UTM  
UNIVERSITI TEKNOLOGI MALAYSIA



for every child



for every child



2024



2022



Agensi Pengurusan Bencana Negara

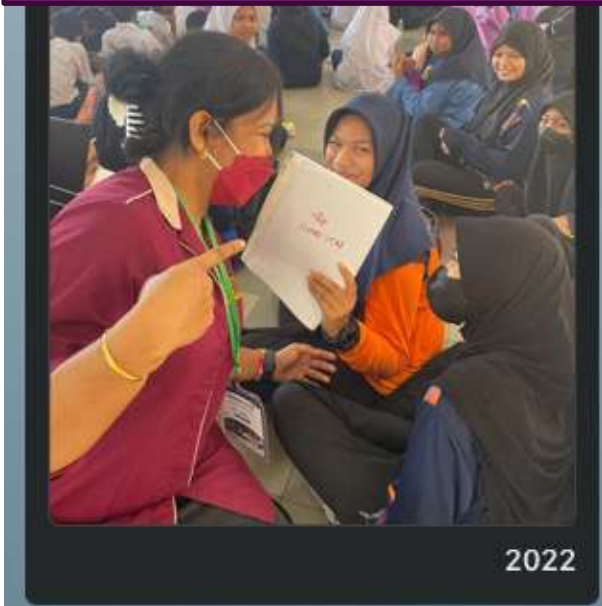




2024



# Kelestarian - pemerksaan - membina kepercayaan - ke arah komuniti yang berdaya tahan



2022



Agensi Pengurusan Bencana Negara



for every child





2024



# Kelestarian - pemerksaan - membina kepercayaan - ke arah komuniti yang berdaya tahan



2022

penambahbaikan dalam kandungan modul -tahap yang lebih tinggi





# SESI PERKONGSIAN PENGALAMAN BENCANA | 19 Ogos 2022



Penyertaan 27 peserta Wanita dan 27 penyertaan kanak-kanak





# SESI PEMERKASAAN | 19 Ogos 2024

Pengurangan Risiko Bencana  
dan Daya Tahan (STDR3), Jerai  
Geopark

Build Back Better



# Community - Based Tourism

CBT is a tourism management model that put local communities at the centre of the process.



**UNDP Thailand - Community Based Tourism**

<https://www.undp.org/thailand/blog/community-based-tourism-empowering-local-champions-sustainable-tourism-thailand>

# STDR3 @ Yan, Kedah - Mainstreaming geo-resilience, geo-heritage, and geo-tourism into local disaster risk reduction and resilience agenda





# Memahami Keperluan Tempatan dan Permintaan Mendesak





# Memperkasa Juara Tempatan untuk Tindakan Pengurangan Risiko Bencana (DRR)



GEORGETOWN | 17 DECEMBER 2022



# HULU LANGAT | 28 MEI 2023









# KUNDASANG | 03 OCTOBER 2023





**SYSTEMS-THINKING APPROACH**  
**(HUMANIZING DISASTER DATA)**

**LTIK APPROACH**  
**(LOCAL-TRADITIONAL-  
INDIGENOUS KNOWLEDGE)**  
**FOR CLIMATE DISASTER**



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA












**Faculty of  
Civil Engineering**

**HHRG**  

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**HYDRAULICS  
& HYDROLOGY  
RESEARCH GROUP**

# NICHE AREAS & COLLABORATORS

- Flood modelling 
- Urban stormwater management 
- Coastal and river engineering 
- Sediment transport 
- Hydraulics structure 
- Water resources management 
- Climate change assessment and impact 
- Watershed modelling 
- Eco-hydrology 
- Water quality 
- Pollution control 



# MEET THE TEAM



**Dr. Nor Eliza binti Alias (Leader)**

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Hydrology and Water Resources,  
Climate Change Impact, Disaster  
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Water Quality, Water Resources



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Sediment Transport



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Resources Management, Climate  
Change, Artificial Intelligence, Fuzzy



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Dynamics, Numerical Modelling, Flood  
Modelling



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Physical Modelling



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Modelling



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Evapotranspiration, Climate Modeling



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Non-Point Source Pollution



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Fluid Dynamics, Coastal Engineering



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Engineering



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Physical Modelling, Numerical Modelling,  
Sustainable Development, Environmental  
Toxicology



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Land-atmosphere Interactions, Climate  
Change Impacts, Urban Climatology, Hydro-  
meteorology, Water Resources, Satellite and  
Remote Sensing



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Geospatial Information System (GIS),  
Geospatial Technology, Remote sensing

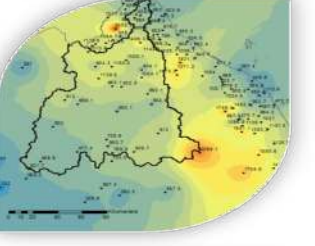
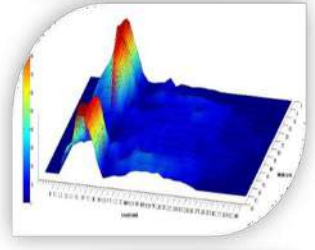
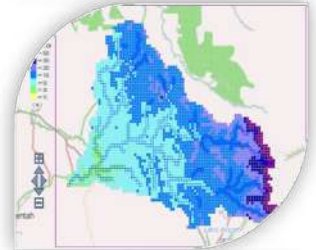


**Dr. Mohd Azlan bin Mohd Yusoff** [mohdazlan.mohdyusoff@utm.my](mailto:mohdazlan.mohdyusoff@utm.my)  
River Hydraulics, River Engineering,  
Water Resources Engineering



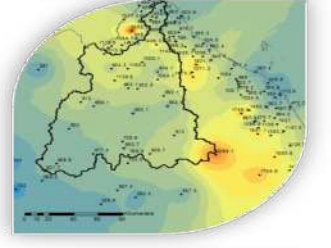
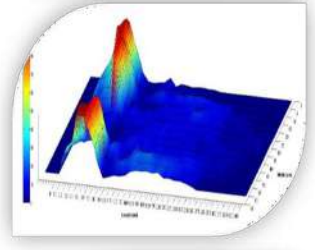
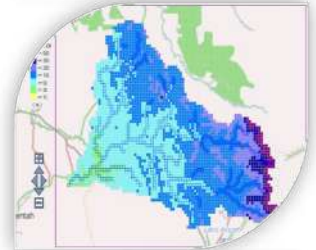
# FLAGSHIP RESEARCHES

- Total Maximum Daily Load for **Skudai River Basin**
- Revised and Update **Climate Change** Malaysia Adaptation Index
- **Computational Fluid Dynamics** for External Flow such as Turbine Blade
- **Digital Imaging** in Open Channel Hydraulics Innovations in Urban Drainage
- Assessment of Non-Point Source Pollution Hotspot in **Machap Dam Watershed**
- Identifying Influence of **Rainfall Characteristics** on First Flush Behaviour in Tropical Area
- Multiproxy Sediment Fingerprinting Use of Fallout Radionuclide and Geochemical Tracers for Spatial and Temporal Scale - **Large Scale River Basin Study**
- Development of **Construction Industry Standard (CIS)** – Guideline for Flood Risk Assessment and Flood Vulnerability Index For Critical Infrastructure In Malaysia, A project for the Malaysian Construction Development Board, Construction Research Institute of Malaysia
- Transference from Crime Scene to Forensic Evidence: Linking Land-Use, Erosion, Sediment and Quantitative Evaluation of **Erosion in Kelantan River Basin**, Malaysia
- Development of Flood Early Warning System Using Hydrologic Engineering Center-Real Time Simulation (HEC-RTS)
- Mechanism of climate change synergies under extreme heat- and water-related events in Peninsular Malaysia
- Physical Model on Coastal Stepped Revetment to Protect Shoreline from Erosive Waves Action
- Development of Rainfall Intensity-Duration-Frequency Curves and Flood Hazard Map for Different Climate Change Scenarios
- Investigation on hydroxyapatite-bentonite roles in maximizing power conversion efficiency and immobilizing Pb in perovskite solar cell



# FLAGSHIP RESEARCHES

- Sabo Dam Development Research Project in Gunung Jerai, Kedah, **National Water Research Institute Malaysia (NAHRIM)**
- Impact of Climate Change to **Regional Extreme Rainfall** Analysis Considering Homogeneous Regions
- Developing An **Integrated Disaster Risk Index** Considering Climate Change-A Pilot Project For Malaysian River Basin
- Considering Influence of Catchment Morphometric on Flood Characteristics for **Kelantan River Basin**
- **Finite Element Modelling** for Pollutant Transport Problem
- **Flood Mitigation** Projects in Sri Medan, Batu Pahat
- **River Hydraulics** and Morpho-dynamics
- **Riverbank Protection**
- **Bias Correction of Satellite Precipitation with Exogenous Variables**





*Reservoirs*

Reservoirs are large lakes created by the construction of dams to store fresh water.



*Swales*

Swales are channels that convey runoff water and can also be designed to store storm water.



*Retention area*

Detention/ retention tanks contain stormwater for limited time of period.



*Underground Storage Structures*

Various other underground structures can be built to store stormwater.



*Water Squares*

Water squares double up as public structures that temporarily store surface stormwater.



*Comprehensive Drainage Network*

Comprehensive Storm Water Drainage (SWD) network covering all parts of the city, especially vulnerable hotspots are crucial for mitigating floods. Canal widening and deepening can be adopted to accommodate for the return period of rainfall for various periods. In addition, addressing solid and wastewater management in the city, specifically if connected to the SWD network is crucial to enhance the functioning of the network during a flood.



*Flood mitigation structures*

Flood mitigation structures like dykes, embankments and levees are built along water bodies or low-lying areas to prevent flooding.



*Hydrodynamic modelling*

Hydrodynamic model can use historical data and weather projections to inform where inundation can happen along with the depth of inundation. In addition to regular monitoring, this information can support in visualizing future scenarios as well. Overall, such models can inform in planning for efficient flood management.



*End to End Early Warning System*

End to end early warning system is a comprehensive system that includes flood monitoring, forecasting and prediction, communication with people from vulnerable areas and relevant departments for initiating preparedness.



*Cloudburst Management*

Cloudburst is an event in which heavy rainfall occurs in a short duration of time. Cloudburst management includes a combination of measures to absorb, store, and transfer stormwater for minimizing flooding.



*Community based Early Warning System*

Community-based early warning system engages local communities in collecting and analysing flood related information and communicating warning messages with the community. The intent is to enable and empower communities to take actions for both mitigating floods and emergency management.



*Data driven flood management*

Data plays a key role in forecasting flood models, identifying vulnerable hotspots, planning for flood insurance programs etc. which can inform flood mitigation and emergency flood management. Adopting a data informed decision making can help cities develop a comprehensive strategy for flood management.



*Flood control centre*

Flood control centres are dedicated centres that regularly monitor the occurrence of a flood and water levels in water bodies, maintain flood mitigation infrastructure and communicate early warning messages.



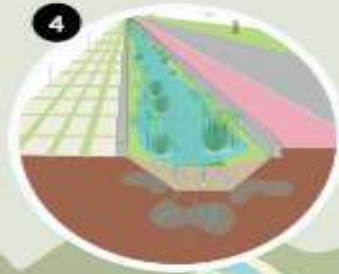
Wetland Restoration



Mangrove Restoration



Reviving Ecologically Important Regions



Bio-swales



Rain Water Harvesting



Green roofs and walls

# NATURE-BASED SOLUTIONS



River / lake Restoration



Riparian Vegetation Restoration



Bioremediation of water bodies



Recharge wells



Restoring Natural Drainage Terrain



Permeable Ground Surfaces



Retention Ponds



Bioretention Systems



# PLANNING Interventions



1  
River Basin Management  
plan



4  
Urban River Management  
Plan



2  
Plan for interlinking rivers  
and canals



5  
Flood Resilience Strategy



# ACTIVITIES - 2023

Consultation works involving ERG members (Flood Risk Standard with CREAM CIDB, Machap Dam Integrated Catchment Management Plan with DID, Climate Change Readiness Index with NAHRIM, and HecHMS & HecRAS Training for DID)

Climate Change Awareness Program with various schools and collaboration involving ERG members (SK Sg Telor, SMK Sri Pulai Perdana)



# ACTIVITIES - 2023

Networking Activities, Geoinformatics Badminton Tournaments 2023/1, Collaborative Initiation meeting JPS Sabah, JCorp Open House, Swim and survive Malaysia with DPPC Networking Gathering, Engagement with DID Johor More awaress programs: Mangrove Planting Program with FRIM, Child and Women DRR program with UNICEF-NADMA-KPM-DPPC-MJIIT, and CBDRM-ICT Kampung Mesilou-Kundasang Sabah. International presentation and sharing: WP4 workshop on Transboundary Disasters, Flood, Fire and Haze in Humid Tropics.



# ACTIVITIES - 2023

NTW 2023: Emergency Response Plan program with FKA UTM, Colaborative Initiative with ADUN N49, Kota Iskandar Datuk Pandak, Right Tree and Right Place Program Awareness & Tree Planting with CIMB-UTM-MBPG-FRIM, Hari Sungai Sedunia 2023: Kg Sg. Melayu.

Networking: Visit to DID Johor, Acceptance visit from Hasanuddin University Indonesia to Hydraulics and Hydrology Lab, visit and sharing from Prof Akutagawa Shinichi, co-organizing of session chair with COPE-BEST on climate resilience.





# Majlis Penutup Hari Sungai Sedunia 2023 (HSS2023)

*bersama komuniti Sg. Melayu & Sg. Pendas*

*Negara Madani, Sungai Lestari  
20 Disember 2023, Hotel Sunway*



## SUNWAY HOTEL



Ministry of Science,  
Technology & Innovation  
(MOSTI)



Ministry of Environment And  
Water



Jabatan Pengurusan Sisa Pejal  
Negara (JPSPN)



**Platform** Awam-Swasta-Akademik-Masyarakat

# ACTIVITIES - 2023

FKA ICE Day 11/12/2023  
Casual meeting with DID Johor  
Director on research project  
on Machap Dam 12/12/2023



# INDUSTRIAL VISIT/NETWORKING - 2024



Meeting with the Humid Tropics Centre (HTC) and DID on International Conference on Water Resources (ICWR 2025)

## Invitation to Colloquium on

# NUMERICAL SOLUTION FOR 1D AND 2D FLOOD MODELLING SOFTWARE DEVELOPMENT

*Speakers:*



**Ir. Lim Sin Poh**  
 Managing Director of Global Water Consultants Sdn Bhd (GWC)



**Dr Erwan Hafizi Kasiman**  
 Senior Lecturer at Faculty of Civil Engineering, UTM, Associate Fellow CRCE  
*Expertise in numerical modelling and fluid mechanics*



**Dr Mohamad Hasif Osman**  
 Senior Lecturer at Faculty of Civil Engineering, UTM  
*Expertise in computational fluid dynamic (CFD)*

SCAN QR CODE TO JOIN ONLINE:



**DATE**

24 April 2024



**TIME**

3.00 pm



<https://www.facebook.com/hrgutm>





*Moderator:*

**Dr. Nor Eliza Alias**  
 Group Leader Hydraulics and Hydrology Research Group, UTM







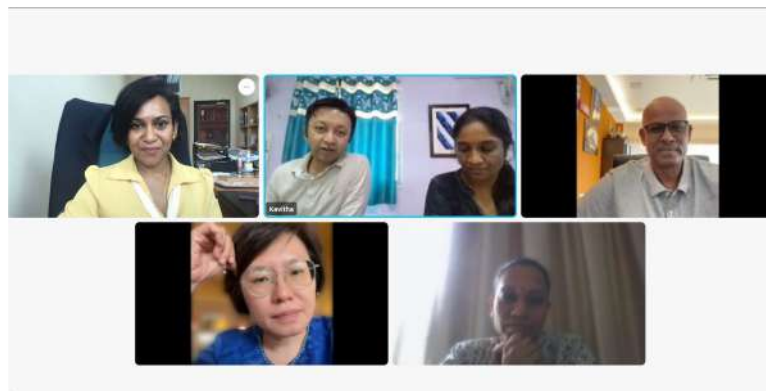




# INDUSTRIAL VISIT/NETWORKING - 2024



First Meeting: IWK, Kuala Lumpur



Virtual Meeting: Potential Research Opportunity



Multiple Engagement with IRDA

# Vietnam Engagement - Debris Flow Research - 2024



Vietnam March 2024: Debris flow potential research and collaboration with Disaster Preparedness and Prevention Center, MJIT and National Research Institute of Earth Science and Disaster Prevention (NIED) Japan and visited the Institute of Geological Science, Vietnam Academy of Science and Technology in Hanoi, Vietnam.

# Engagement and Networking - 2024



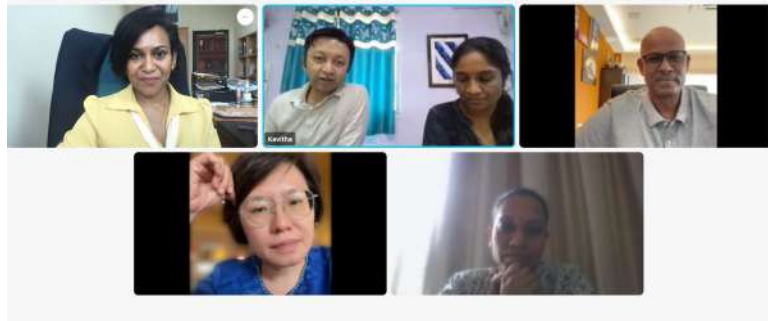
Engagement with Fisherman Community on Green Energy Solar CSR

# Engagement and Networking - 2024

First Meeting: IWK, Kuala Lumpur



Engagement with Village Leader Kg Kayu Ara Pasong on possible local flood CSR



Virtual meeting: Potential research opportunity.



Multiple engagement with IRDA



JBIOCC, MJB Visit July 2024

# Engagement and Networking - 2024



JBIOCC, MBBJ visit, August 2024



Angkatan Pertahanan Awam  
Negeri Johor  
Oct 2024



# Engagement and Networking - 2024



Engagement with UPPP Johor and BMSB for saltwater intrusion problem due to flood mitigation project of Belemang and Tanjung Olak bypass

# Engagement and Networking - 2024



Engagement with Disaster Preparedness and Prevention Center (DPPC) MJIT, and MetMalaysia, for **X-band radar** application - Advanced technology for weather predictions/forecasting

# CSR/KTP - PHOTO



Pertemuan bersama guru besar SK. Sungai Melayu dan SK. Pendas Laut

# Climate Change Awareness Program with Tenby International School Juniors



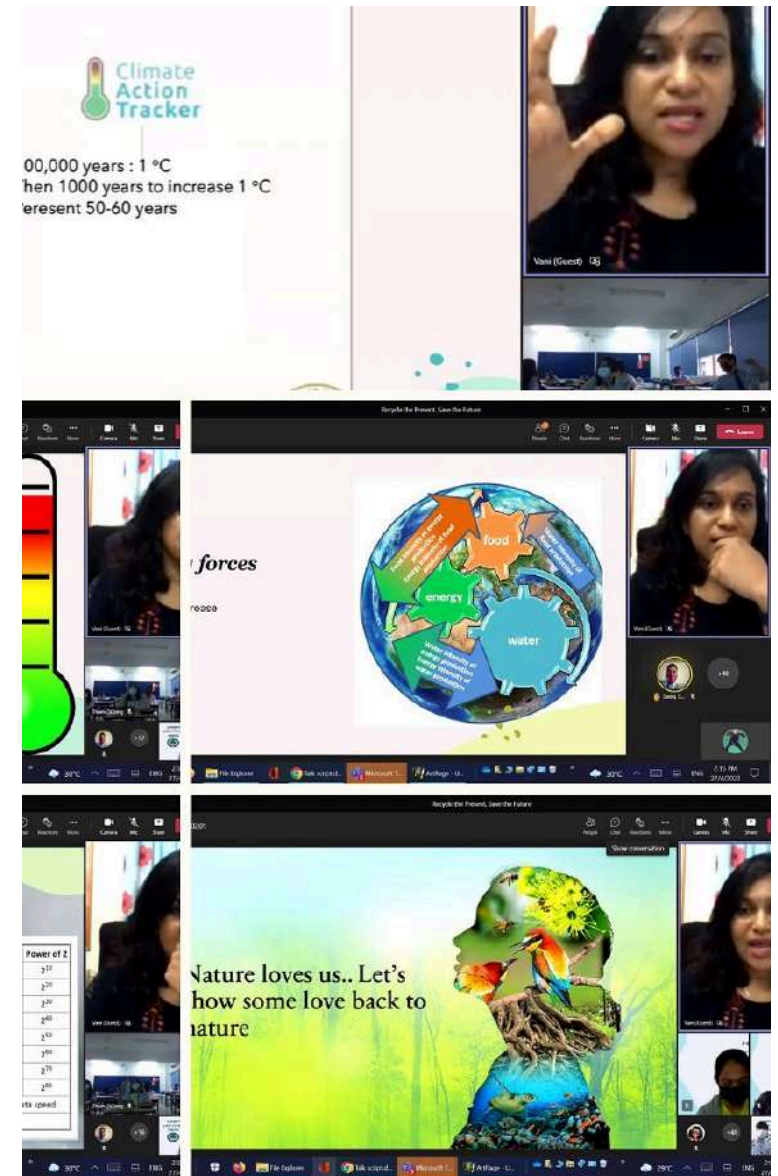
UTM  
RE  
**CLIMATE AWARENESS**  
19 SEPTEMBER 2022 | DEER

**OBJECTIVE**

- 1 To introduce students to climate change and its impact.
- 2 To engage students to awareness of climate change and its impact.
- 3 To inspire students to take an environmental protection and climate change preparedness.

MAKE AN EARTH WORTHY

# There is No Planet B", -Tenby Int Schools



# SK Seri Pulai Perdana, Johor



# CSR/KTP - PHOTO

Module 1 of 'Horizon Hijau' Programme by HHRG under FKA-KTP grant at SK Pendas Laut (7th August 2024). Led by Ts. Dr. Kogila Vani and other HHRG members, including Dr. Nor Eliza, Ts. Dr. Nor Azidawati, Dr. Ponselvi, Dr. Mohd Ridza, Ts. Dr. Josilva, Ts. Dr. Muhamad Zulhasif and Mr. Muhamad Anwar.



# Kursus Pengenalan Asas Sukarelawan UTM Prihatin Bagi Misi Bantuan Kemanusiaan (ASAS 101)





## Penganjur



## Rakan Strategik



## Sokongan



GDRN Bantu



Angkatan  
Pertahanan  
Awam Malaysia



Red A Humanitarian  
Development Global



National Association  
for Geo Disaster and  
Community Resilience

## Rakan Sinergi

UTMPrihatin

Fakulti Kejuruteraan Awam UTM (FKA UTM)

Persatuan Kakitangan Akademik (PKA)

Persatuan Pegawai Tadbir dan Iktisas (PERTISAS)

Badan Kebajikan Staf UTM (BAKES)

Kesatuan Kakitangan Am UTM (KKA)

Kesatuan Kakitangan Bukan Akademik (PERKABA)

UTM Marshall

Disaster Preparedness Prevention Centre (DPPC UTMKL)

Pusat Pelestarian Alam Sekitar dan Sekuriti Air (IPASA UTM)

## LATAR BELAKANG PENGANJUR

PERSATUAN PENGURUSAN BENCANA KEBANGSAAN (NADIM)

Persatuan Pengurusan Bencana Kebangsaan (National Disaster Management Association) NADIM MALAYSIA telah ditubuhkan semasa Banjir Besar yang melanda Pantai Timur Malaysia pada 2014 dengan sokongan Majlis Keselamatan Negara (MKN), pihak berkepentingan dalam keperluan untuk bekerjasama dengan NGO tempatan dan antarabangsa, dengan misi untuk menyampaikan bantuan kepada mangsa banjir yang kehilangan tempat tinggal dan memerlukan tempat perlindungan sementara.

Dengan tindak balas segera, lebih 900 keluarga telah berjaya disediakan dengan tempat perlindungan sementara dengan bantuan NGO antarabangsa ShelterBox.Org. NADIM telah berjaya menyediakan 1000 unit khemah sebagai tempat perlindungan sementara kepada mangsa banjir dan juga menyediakan khidmat pakar perunding dalam mereka bentuk dan membina kem transit sementara untuk 200 keluarga mangsa banjir berdasarkan keperluan piawaian Pertubuhan Bangsa-Bangsa Bersatu yang terletak di Bandar Baru Gua Musang atas arahan Majlis Keselamatan Negara MKN, Jabatan Perdana Menteri.



NADIM MALAYSIA sebagai pertubuhan peringkat kebangsaan didaftarkan sebagai Pertubuhan Bukan Kerajaan (NGO) dengan Agensi Pengurusan Bencana Negara (NADMA) dan dilantik sebagai Ahli Majlis Sukarelawan NGO-NADMA pada tahun 2018 oleh Menteri di Jabatan Perdana Menteri dan ketua NGO untuk Kluster Pusat Pemindahan Sementara PPS. NADIM telah terlibat dalam penganjuran pelbagai program pembangunan kapasiti dan latihan pemeraksanaan komuniti Community-Based Disaster Risk Management CBDRM dengan penerapan kaedah akademik dan juga penerapan ilmu berkait kesiapsiagaan, pengurusan tindak balas dan pengumpulan data berkait bencana bagi membantu agensi-agensi pelaksana dan organisasi penyelidikan dan pendidikan negara.

NADIM MALAYSIA

NATIONAL DISASTER MANAGEMENT ASSOCIATION  
PERSATUAN PENGURUSAN BENCANA KEBANGSAAN



HOME ABOUT NADIM ORGANISATION CHART ACTIVITIES CONTACT US

DONATE



## National Disaster Management Association Malaysia

Persatuan Pengurusan Bencana Kebangsaan (National Disaster Management Association) NADIM MALAYSIA was formed during the Big Flood of East Coast Malaysia in 2014/2015 with the support of Malaysian National Security Council (NSC), stakeholders in the needs to collaborate with local and the international NGOs, with the vision to deliver relief assistance for the "homeless flood victims" who needed emergency shelters.

With its urgent response over 900 homeless families were provided with temporary shelters with the assistance of the international NGO ShelterBox.Org.



NADIM has successfully provided 1000 units of tents as temporary shelters to the homeless beneficiaries and also provide the experts consultancy in designing and building the temporary transit camp for 200 homeless families based on United Nation standard requirement located at

Yayasan  
**PETRONAS**

**SENTUHAN KASIH : DISASTER RELIEF 2021**

**MUKIM GANCHONG**

**PEKAN, PAHANG**

**Revolutionizing  
Community Based  
Disaster Risk  
Management**

**Living With Water: Embracing Nature,  
People And Knowledge**

## COMMUNITY BASED DISASTER RISK MANAGEMENT (CBDRM)

Community-Based Disaster Risk Management (CBDRM) has listed the most effective innovation in disaster risk reduction in the UNDRR supported document entitled on 30 Innovations for Disaster Risk Reduction published in 2019 led by International of Disaster Science Tohoku University, the call by Yayasan PETRONAS is very timely to translate words into action and jointly strengthen our community resilience and build a resilient culture in Malaysia.

Any future CBDRM program must be properly co-designed, co-developed, and coimplemented, by considering the local context, condition, land use socioeconomic and complex behaviors and technological advancement. CBDRM has been recognized as the additional element in disaster risk management necessary to reverse the worldwide trend of exponential increase in disaster occurrence of and loss from small-and medium-scale disasters, build a culture of safety, and ensure sustainable development for all, leaving no one behind in a changing environment.

The local community is taken as the primary focus of attention (in disaster risk reduction) since that is the common unit which is affected by disaster and, more importantly, responds to deal with the event. Whether a disaster is major or minor, of national or local proportion, it is the people at the community or village level who suffer its adverse effects, and cascading impacts.



In order to achieve sustainable and

# CLOSURE REPORT

Sentuhan Kasih:  
Disaster Relief (SKDR)

Tumpat, Kelantan  
& Pekan, Pahang

Community Based Disaster  
Risk Management (CBDRM)

*Living With Water: Embracing Nature,  
People and Knowledge*



# SENTUHAN KASIH: DISASTER RELIEF 2021

**Revolutionizing Community Based  
Disaster Risk Management**

LIVING WITH WATER: EMBRACING NATURE, PEOPLE AND KNOWLEDGE

Prepared by:



In partnership with:



In collaboration with strategic partners:





PROJEK PEMERKASAAN KOMUNITI SETEMPAT  
DALAM KESIAPSIAGAAN & TINDAK BALAS BENCANA BANJIR

# Sokongan ahli akademik melalui *Community Based Disaster Risk Management (CBDRM)* dan teknologi bagi menangani isu banjir

**Ts. Dr Kogila Vani Annammala** CPESC

Fello Disaster Preparedness and Prevention Centre (DPPC)-Malaysian-Japan International Institute of Technology (MJIT),  
Senior Lecturer, Department of Water and Environmental Engineering, Faculty of Civil Engineering,  
UTM

Lead Southern Chapter, National Disaster Management Association (NADIM)  
Ahli, Young Scientist Network- Academy of Sciences Malaysia (YSN-ASM)



AHLI AKADEMIK membantu pelaksana utama mencapai hasil yang lebih berkesan. Ini seterusnya memperkukuh usaha dalam pengurangan risiko bencana dan menjadikan komuniti lebih berdaya tahan.

Public-Private-Academic-  
Civil Society (PPAPCS)  
**Platform** for DRR

Disaster **Risk** Governance,  
Communication and  
Investment

**Science**-Evidence based  
Decision Making for  
Disaster Risk Reduction

Locally-led and nationally- Area-based **Action** (Urban,  
**supported** initiatives, Rural, Mountainous,  
programs and activities Coastal, Tectonic)

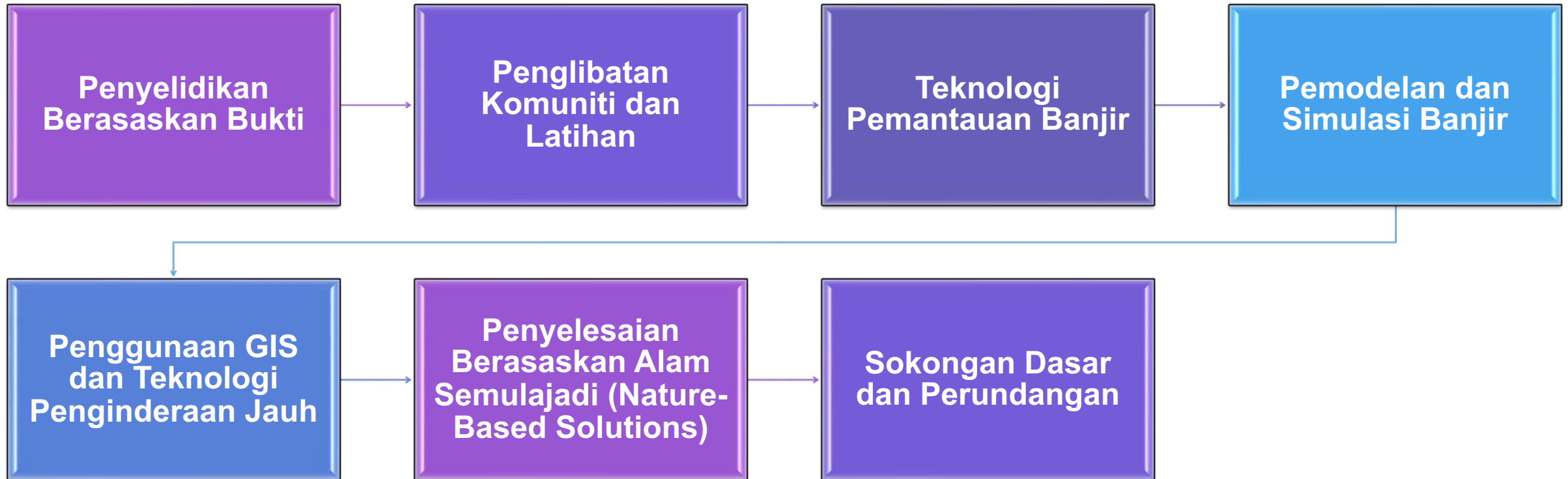
**Platform** Awam-  
Swasta-Akademik-  
Masyarakat  
(PPAPCS) untuk  
Pengurangan  
Risiko Bencana  
(PRB)

Tadbir urus **Risiko**  
Bencana,  
komunikasi, dan  
pelaburan

Keputusan  
Berasaskan **Sains**  
dan Bukti untuk  
Pengurangan Risiko  
Bencana

Inisiatif, program  
dan aktiviti yang  
dipimpin secara  
tempatan dan  
**disokong** di  
peringkat nasional

**Tindakan**  
Berasaskan Kawasan  
(Bandar, Luar  
Bandar,  
Pergunungan,  
Pesisir, Tektonik)



# Ahli akademik sebagai kumpulan sokongan untuk pelaksana dalam penstrukturan dan libat urus

Pemindahan  
Pengetahuan dan  
Kemahiran

Sokongan dalam  
Reka Bentuk  
Program dan  
Inisiatif

Pemantauan dan  
Penilaian

Analisis Risiko dan  
Kelemahan

Penetapan  
Indikator Kejayaan  
yang Jelas

Menyediakan  
Sumber Rujukan  
dan Latihan

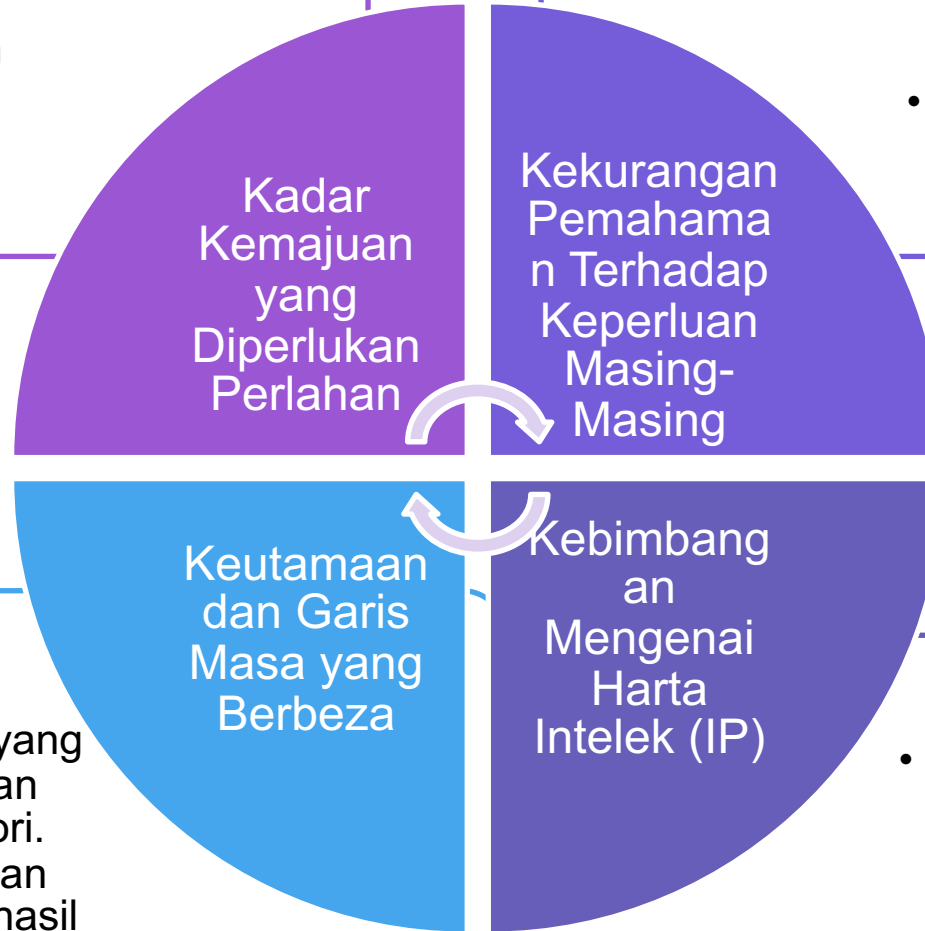
Menyediakan Data  
dan Kajian  
Tempatan

Pembinaan  
Jaringan dan  
Kerjasama



# Ragu untuk bekerjasama dengan ahli akademik ??

- Proses semakin rakan sebaya yang ketat, jangka masa penerbitan yang panjang, dan selalunya pembiayaan yang terhad. Industri pula, memerlukan hasil segera dan mungkin tidak mempunyai kesabaran untuk fasa penyelidikan



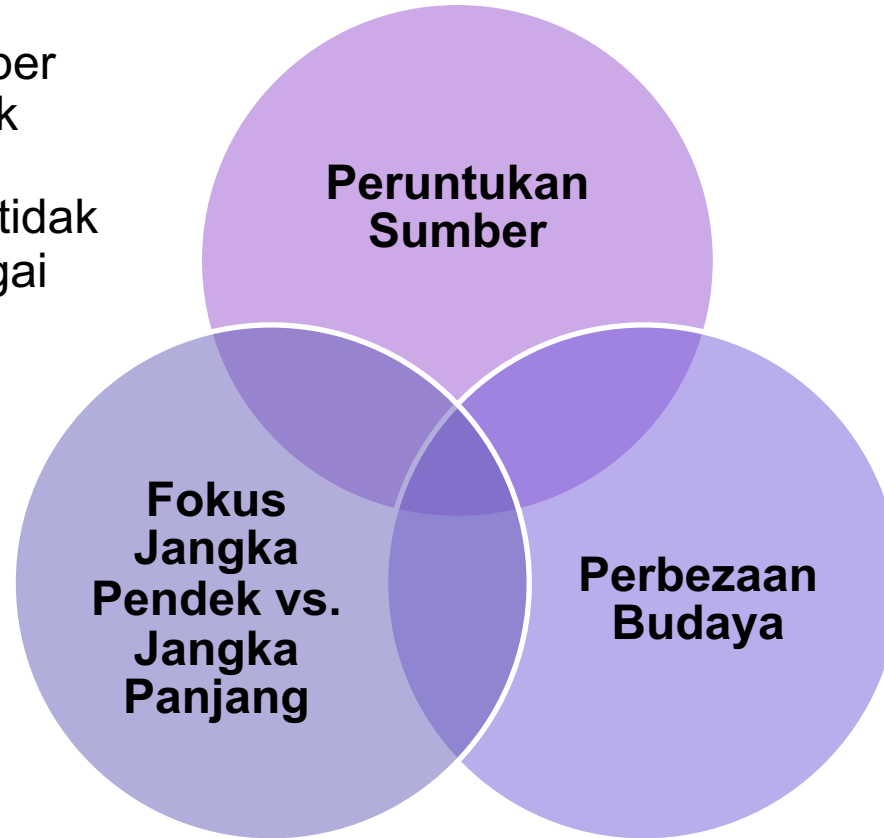
- tekanan komersial yang dihadapi oleh industri, seperti keperluan untuk penyeragaman, kos yang berkesan
- nilai penyelidikan teori atau kajian akademik jangka panjang

- Pojek penyelidikan jangka panjang yang memberi tumpuan kepada penciptaan pengetahuan dan pembangunan teori. Sebaliknya, industri memberi tumpuan kepada penyelesaian praktikal dan hasil jangka pendek.

- mengenai perkongsian atau perlindungan maklumat /penemuan akademik diterbitkan sebelum mereka dapat dikomersialkan

# Ragu untuk bekerjasama dengan ahli akademik ??

- akademik sering mempunyai sumber yang terhad untuk kerjasama, dan industri mungkin tidak melihatnya sebagai pelaburan yang berbaloi



- memberi tumpuan kepada hasil

# CONCLUSION AND WAY FORWARD

1



Jumlah Peserta masih dikira

2



Terdapat permintaan untuk lebih banyak program yang melibatkan golongan vulnerable

3



Platform Awam-Swasta-Akademik-Masyarakat (PPAPCS) untuk Pengurangan Risiko Bencana (PRB)

4



Publicity at Asia-Pacific Ministerial Conference on Disaster Risk Reduction (national and international platform)

# CONCLUSION AND WAY FORWARD

1



Total Participants  
still counting

2



## COMMITMENT

There are demands for more programs  
engaging the vulnerable groups.

3



Platform Awam-Swasta-Akademik-  
Masyarakat (PPAPCS) untuk Pengurangan  
Risiko Bencana (PRB)

4



Publicity at Asia-Pacific Ministerial  
Conference on Disaster Risk Reduction &  
current at MERCY Malaysia International  
Humanitarian Conference 2024

# CONCLUSION AND WAY FORWARD

1



Total Participants  
still counting

2



## COMMITMENT

There are demands for more programs  
engaging the vulnerable groups.

3



## SUPPORT

Platform Awam-Swasta-Akademik-  
Masyarakat (PAASS) untuk Pengurangan  
Risiko Bencana (PRB)

4



Publicity at Asia-Pacific Ministerial  
Conference on Disaster Risk Reduction &  
current at MERCY Malaysia International  
Humanitarian Conference 2024

# CONCLUSION AND WAY FORWARD

1



Total Participants  
still counting

2



## COMMITMENT

There are demands for more programs  
engaging the vulnerable groups.

3



## SUPPORT

Platform Awam-Swasta-Akademik-  
Masyarakat (PAASS) untuk Pengurangan  
Risiko Bencana (PRB)

4



Publicity at Asia-Pacific Ministerial  
**Conference on Disaster Risk Reduction &  
current at MERCY Malaysia International  
Humanitarian Conference 2024**

## HOPE

# CONCLUSION AND WAY FORWARD

1



Total Participants still counting

2



COMMITMENT

There are demands for the program engagement with various groups.

3



Platform Awam-Swasta-Akademik-Masyarakat (PAA-S) untuk Pengurangan Risiko Bencana (PRB)

4



Publicity at Asia-Pacific Ministerial Conference on Disaster Risk Reduction & current at MERCY Malaysia International Humanitarian Conference 2024

# CONTINUOUS

# SUPPORT

# HOPE

# 3K: Kerjasama, Koordinasi & Komitmen

Ulang tahun ke-10 DPPC pada tahun hadapan, dan kini kami sedang merancang untuk tahun 2030 dengan projek dan program berimpak tinggi dalam bidang pengurangan risiko bencana dan ketahanan iklim di Malaysia dan seluruh Asia Pasifik. **KESEDIAAN** adalah keutamaan utama kami, seperti yang dinyatakan dalam nama DPPC. Oleh itu, memperkasakan komuniti rentan adalah langkah strategik dan sentiasa menjadi tanggungjawab kami ahli DPPC- Ahli Akademik.





PROJEK PEMERKASAAN KOMUNITI SETEMPAT  
DALAM KESIAPSIAGAAN & TINDAK BALAS BENCANA BANJIR

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