

Global Young Academy
The voice of young scientists around the world

Climate Change and Disaster Risk Reduction: Roles and contribution of Global Young Academy

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UNIVERSITI TEKNOLOGI MALAYSIA (UTM)



UTM#18 - QS World University Rankings [Top 50 Under 50]



24,426 total students (3201 international from 71 countries)
10,000 students @ International Mobility Programme over 24 countries
UTM Alumni Worldwide, 179,467 Local & 5,361 International

VISION

To be a premier global academic and research institution, excelling in science, technology and engineering.

MISSION

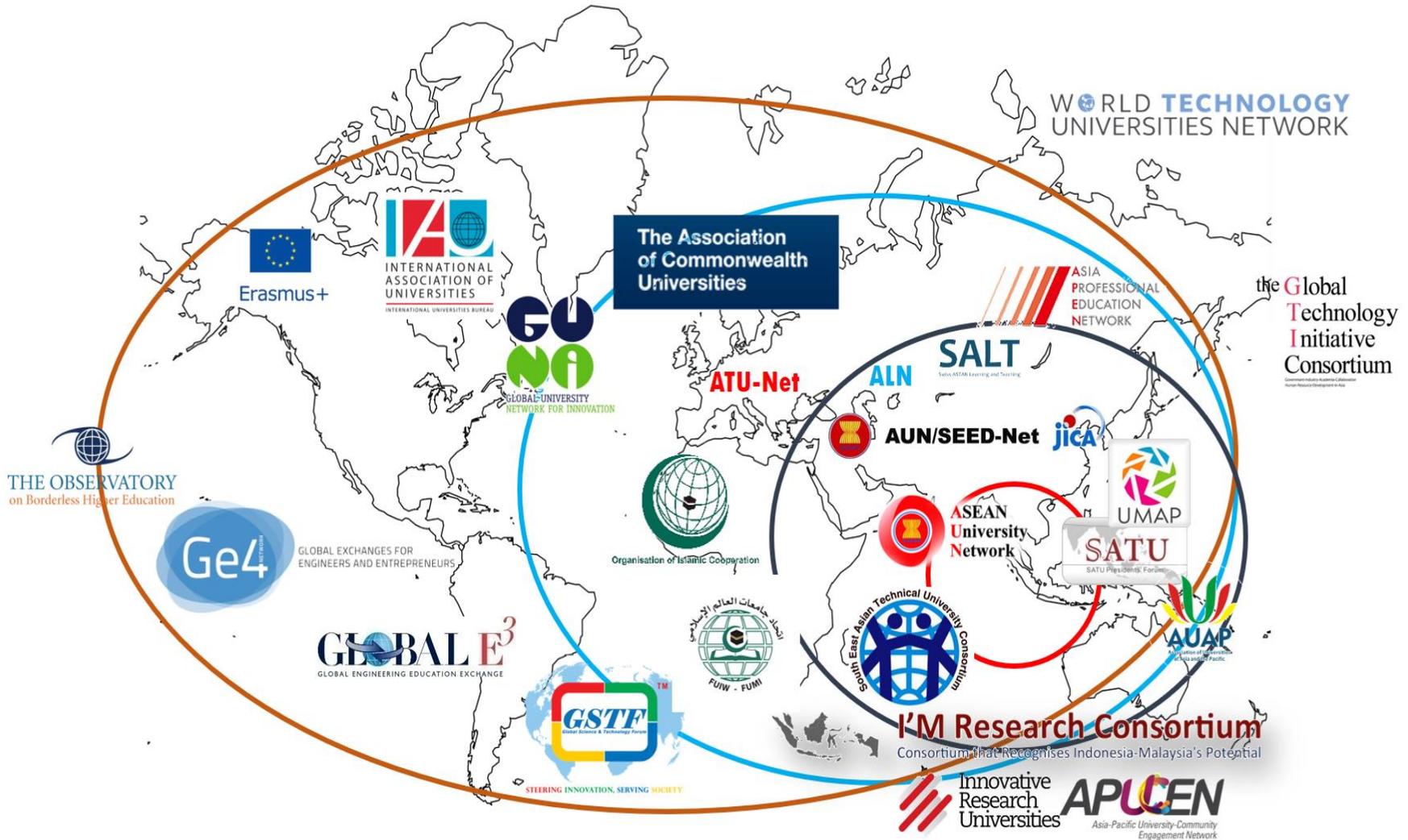
To lead in the development of holistic talents and innovative technologies for universal well-being and prosperity.

UTM is a leading innovation-driven entrepreneurial research university in engineering, science and technology located both in Kuala Lumpur and Johor Bahru, Malaysia.

It is renowned for being at the forefront of engineering and technological knowledge and expertise. UTM as the biggest postgraduate research university in technology has also established a reputation for innovative education and cutting-edge research, with a vision towards the development of creative human capital and advanced technological innovation.

UTM operates based on the core values of Integrity, Synergy, Excellence and Sustainability. These values guide our practices and they are embedded in the strategic thrusts that propel the University to greatness.

GLOBAL ALLIANCES IN NICHE AREA (MULTI-LATERAL PARTNERSHIPS)





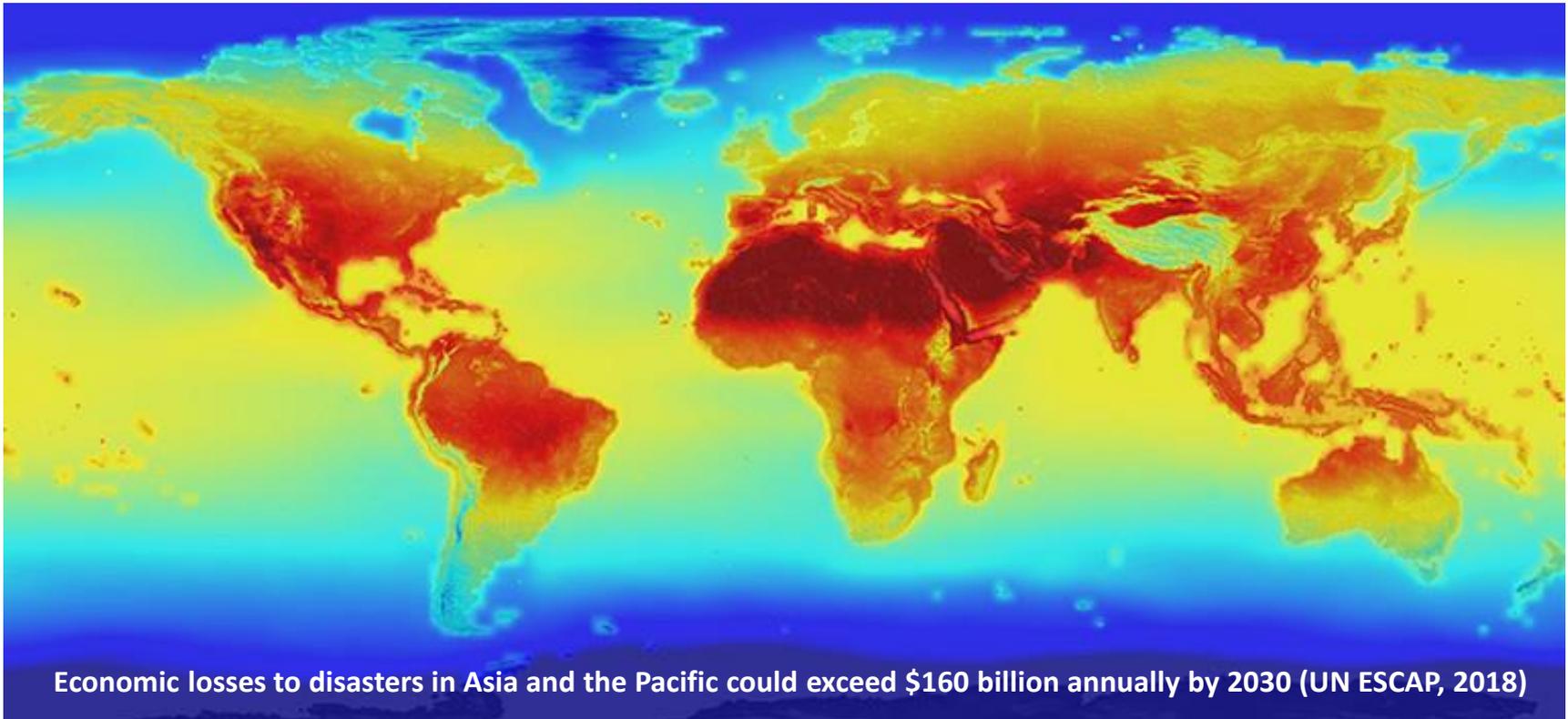
Annual cost of global climate change adaptation ranges between **US\$ 120-150 billion** (UNEP, 2014)



@ <https://climate.nasa.gov/>



The average annual infrastructure investment needed to achieve the **2° C stabilization target** is almost **US\$ 4.5 – 5.4 trillion** (CCFLA, 2015)



The new NASA global data set combines historical measurements with data from climate simulations using the best available computer models to provide forecasts of how global temperature (shown here) and precipitation might change up to 2100 under different greenhouse gas emissions scenarios. Credit: NASA @ @ <https://climate.nasa.gov/>



**GLOBAL
YOUNG
ACADEMY**

The Global Young Academy

- A worldwide network of 200 members and 134 alumni from 70 countries
- Selection criteria
 - Research excellence
 - Commitment to service/outreach to further society
- Median age ~37y
- 36% female, 64% male
- 5y membership term



Leading young scientists, typically 3-10 years after their PhD, between 30 to 40 years of age, and in the early stages of their independent academic careers. Members are selected for their scientific excellence and their commitment to service, and serve five-year terms.



**GLOBAL
YOUNG
ACADEMY**

GYA Vision and Mission

- Vision:

To be the voice of young scientists around the world

- Mission:

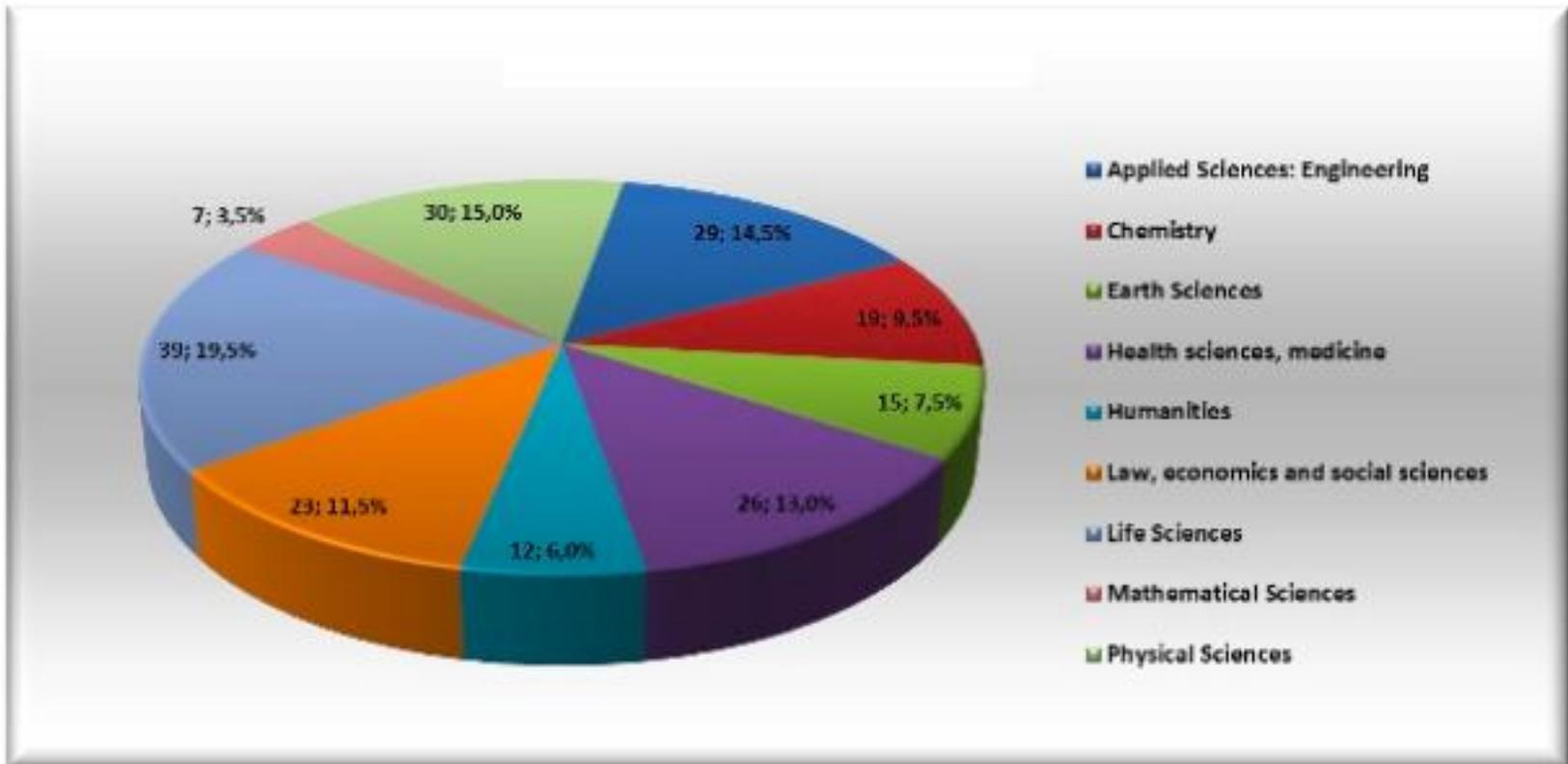
- Empower outstanding early-career researchers to lead international, interdisciplinary and intergenerational dialogue, both with each other and with external stakeholders
- Develop, connect and mobilise young talent from six continents
- Promote reason and inclusiveness in global decision-making
- Create a better world

GYA Themes: Science & Society; Science Education & Outreach; Research Environment



**GLOBAL
YOUNG
ACADEMY**

Membership by Discipline



3rd FIG Young Surveyors Network Asia and the Pacific Meeting, 21-22 April 2019 @ Hanoi, Vietnam
Climate Change and Disaster Risk Reduction: Roles and Contribution of Global Young Academy

Disaster Risk Reduction and Management

Advancing science and technology for disaster risk reduction and management
Supporting evidence-based decision making for reducing future disaster risk
Promoting Transdisciplinary Approach (TDA) for building societal resilience



3rd FIG Young Surveyors Network Asia and the Pacific Meeting, 21-22 April 2019 @ Hanoi, Vietnam
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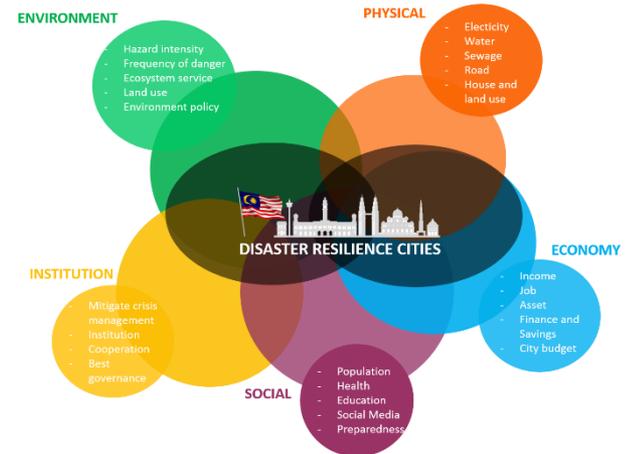
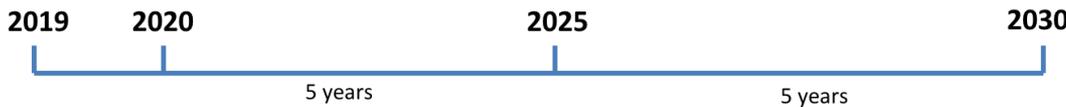
Disaster Risk Reduction and Management

MULTI-HAZARD RISK ASSESSMENT, MAPPING, MONITORING,
 EARLY WARNING-BASED IMPACT AND PREDICTIVE MODELLING

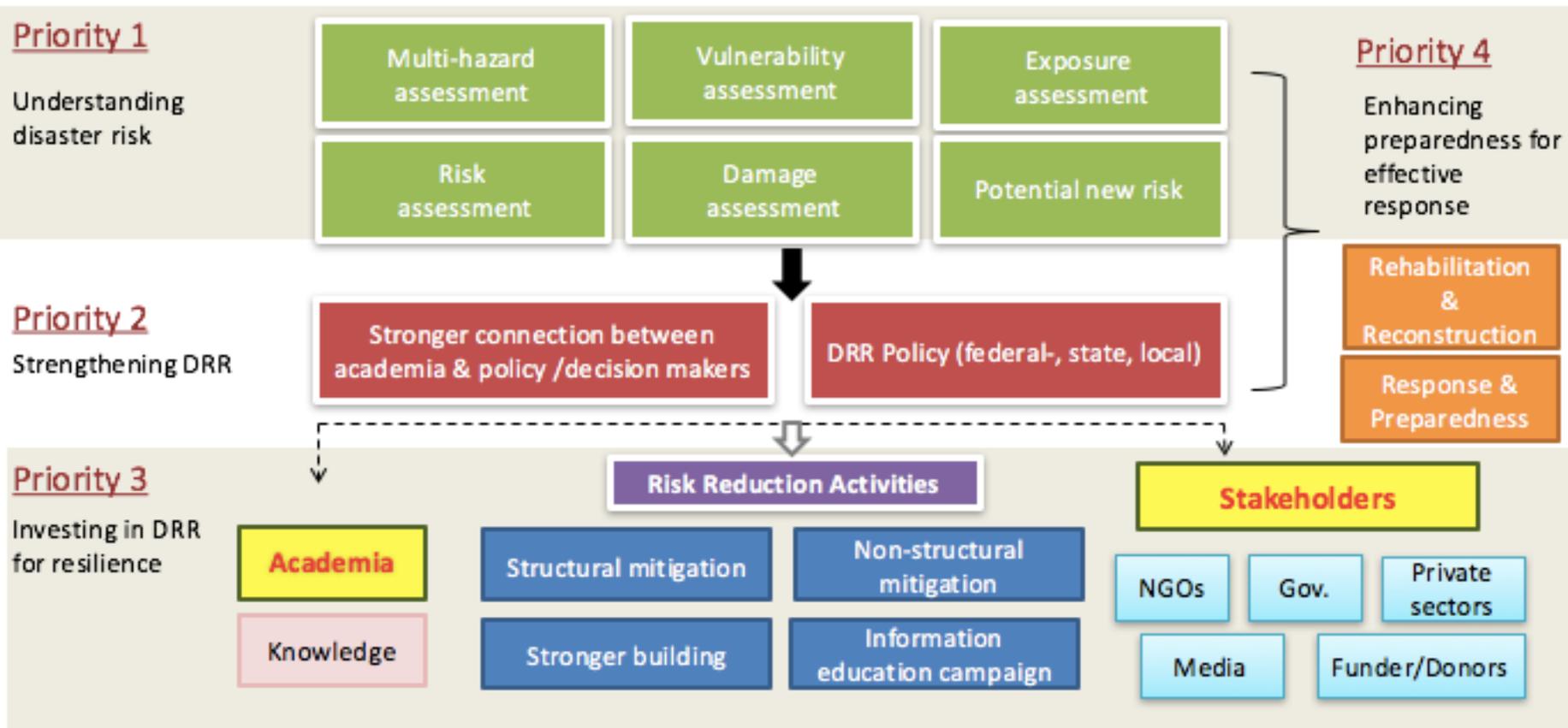
DATA MANAGEMENT & ANALYTICS

DECISION MAKING

- ASEAN Vision 2025 on Disaster Management
- Sendai Framework for Disaster Risk Reduction 2015-2030
- Paris Agreement on Climate Change
- New Urban Agenda
- Agenda 2030 for Sustainable Development

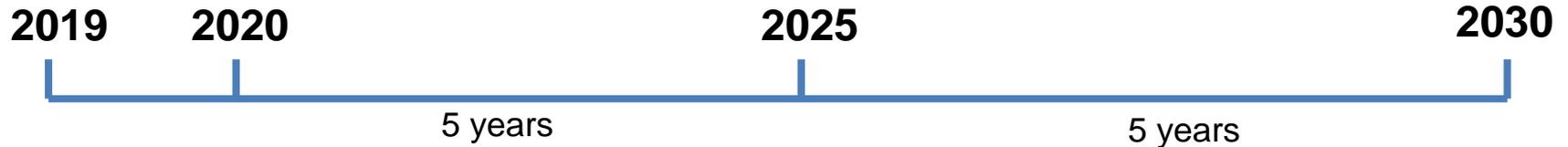


Sendai Framework for Disaster Risk Reduction 2015-2030: Progress & Challenges



Complexity of disaster – multisectoral & disciplinary group - special need & interest
Action oriented program – scientific-based decision support – transdisciplinary approach

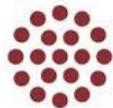
Advancing science and technology for disaster risk



National Conference on Science, Technology and Innovation for Disaster Risk Reduction 2019, October 2019 @ Kuala Lumpur

Asian Ministerial Conference on Disaster Risk Reduction 2020

Global Platform for Disaster Risk Reduction 2021



**International
Science Council**
Regional Office for Asia and
the Pacific



Interested for collaboration, please drop your email @ khamarrul.kl@utm.my

#DisasterRiskUTM

PLENARY SESSION 3

THURSDAY 25 APRIL 2019, 09:00 – 10:30

Geo-led Horizon Scanning Programme for Disaster Risk Reduction (DRR): A New Insight into 2030 Global Vision

KHAMARRUL AZAHARI RAZAK

Co-Chair, Climate Change and Disaster Risk Reduction WG,
Global Young Academy & Universiti Teknologi Malaysia (UTM)

This talk explores a new, joined-up approach to horizon scanning characterized by modern and advanced geospatial technology to help inform current policy making in disaster risk reduction and management. It urges the need for geo-smart innovation and cross-sectoral partnership to strengthen science-based decision making. Geo-led solutions, which promote a collaborative, data-driven and evidence-based is a way forward to reduce current disaster risk and prevent new, emerging risk. This session also promotes a Transdisciplinary Approach (TDA) for building societal resilience to disaster in a changing climate. Collective action by our profession is critical to support targets and goals underlying Sendai Framework for Disaster Risk Reduction 2015-2030 and 2030 Agenda for Sustainable Development.

He is currently a Co-Chair of Climate Change and Disaster Risk Reduction Working Group, Global Young Academy, the voice of young scientists around the world. He is a senior lecturer at Razak Faculty Technology and Informatics, and also a full research member to the Disaster Preparedness and Prevention Center (DPPC), Malaysia-Japan International Institute of Technology, Universiti Teknologi Malaysia (UTM) Kuala Lumpur. He received a PhD from Utrecht University, Faculty of Geosciences, the Netherlands, with cooperation of Faculty of Geoinformation Science and Earth Observation, University of Twente, United Nation University (UNU) Disaster Risk Management (DRM) Centre for Spatial Analysis and Risk Management.



THANK YOU FOR YOUR ATTENTION



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Malaysia-Japan International Institute of Technology
Universiti Teknologi Malaysia (UTM) Kuala Lumpur

Geospatial Intelligence Research Initiative
Cascading GeoHazards Research Initiative
UTM RAZAK Faculty of Technology and Informatics
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