

Advanced Flood Warning

The Problem

Malaysia does not have a working; consolidated and coordinated system for the advanced warning of land based flooding and land slides resulting from torrential rainfall. This means that the Disaster Relief Management agency lacks appropriate information to deploy a pro-active approach to preserving life

Malaysia has an evolved national and regional disaster response system that needs better information in terms of flood prediction models.

To this end the Government of Malaysia formally requests support from UKSA in provision of advice and possible solution that may embed into our existing capability by way of enhancement.

Context

Malaysia is located in what is termed 'The Tropics'. One fact of life in Malaysia is year round rainfall, often torrential deriving from two monsoon seasons. Throughout the past 200 years the effects of human activity and population expansion has put more people 'at risk' of the effects of flooding than ever before.

There are rainfall and water level sensors and information available in Malaysia but the information is not presented in a sufficiently robust and effective manner to support effective decision making and disaster relief action. Malaysia has a developed disaster relief model that cascades from the Disaster Relief Committee out to national and regional agencies. What Malaysia agencies need is advanced warning of a potential flood or land slide to take action prior to a disaster event.

Impact

The human and economic cost of flood disaster can be extensive and constitutes a frequent risk in The Tropics.

Between November 2014 and February 2015 Malaysia had such torrential rainfall that the nation experienced some of its most severe flooding in a generation.

- 21 people died
- More than 250,000 people were displaced from their homes
- The economic cost of disaster relief, clean-up, infrastructure loss and rebuilding exceeded USD \$ 9.42 billion.
- A State of Emergency was declared

Malaysia Requirement – What action Malaysia will take with the information provided

The Disaster Management committee and its Command and Control agencies of Malaysia need accurate information, updated frequently and presented effectively to coordinate an early evacuation of human beings from a potential disaster area. Specifically, the Malaysia requirement is to:

- Have iterative assessment of flood and land slide risk across known areas of potential threat to initiate the disaster relief protocol and commence evacuation of people.
- Have the flood and land slide risk information presented in a simple manner to all disaster management participating agencies in Malaysia. This will allow our Disaster Management committee to coordinate all agencies using the same source information
- Have a disaster management team trained to assess the information being consolidated into the information framework in order to provide update and disseminate to the chain of command effectively

The Malaysian government will:

- Use the information/data/methodology outputs developed in the Program to work alongside our national initiatives in this area and measure the effect they have over existing performance.
- If proven more effective and within a cost effective solution the program outputs will be:
 - Used to inform government policy and national strategy in dealing with disaster management
 - Embedded into disaster management and first responder working practice.