

# Tsunami Early Warning System (TEWS)

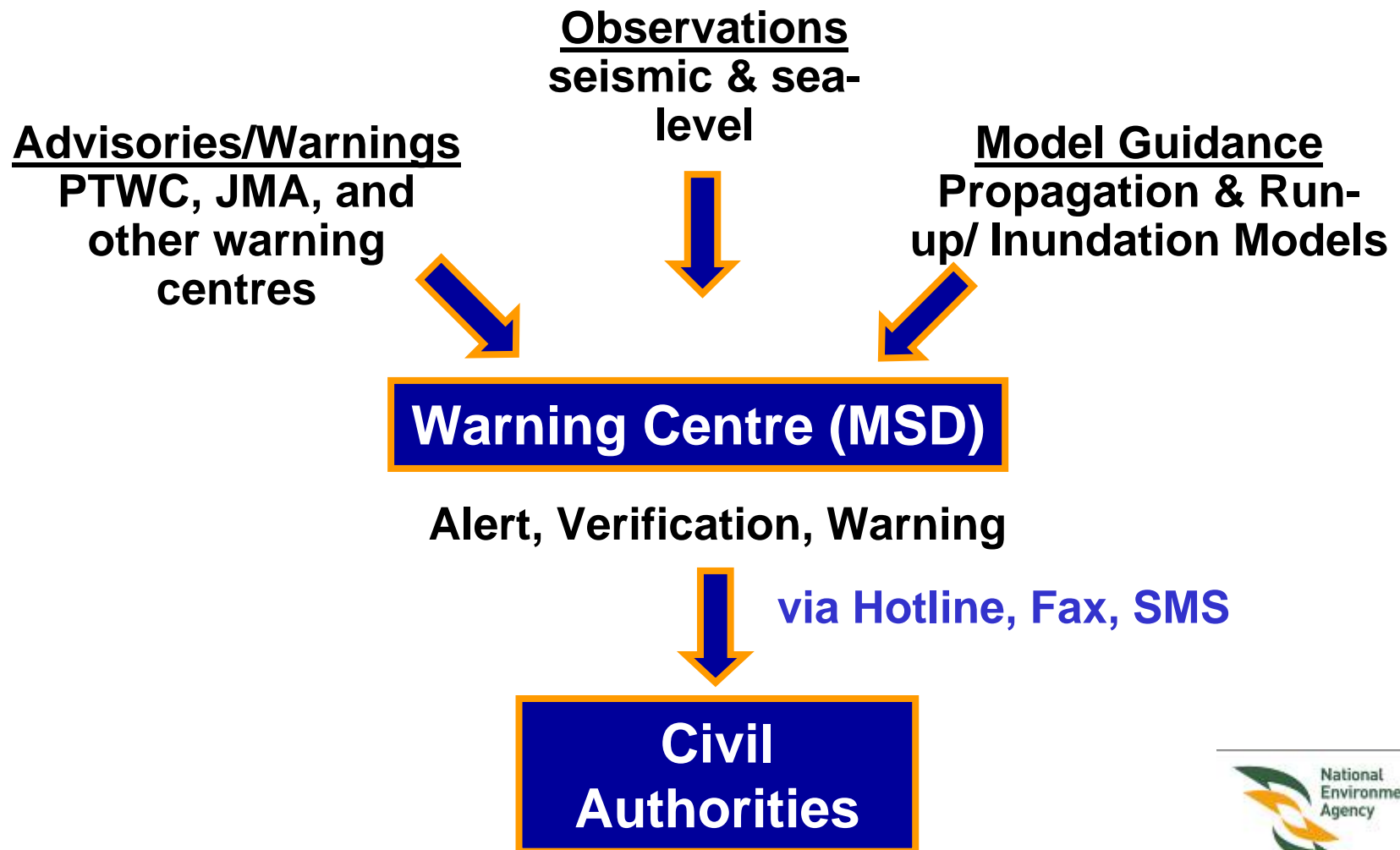
**Meteorological Services  
SINGAPORE**

# Background

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- ❑ **26 Dec 2004 tsunami in the Indian Ocean showed the need for countries to be prepared for such events**
- ❑ **Aug 05- Apr 06, funding was approved for the development of TEWS**
- ❑ **May 06 – Singapore participated in Pacific Wave Exercise 2006**

# TEWS – Key Components



# Aim of TEWS

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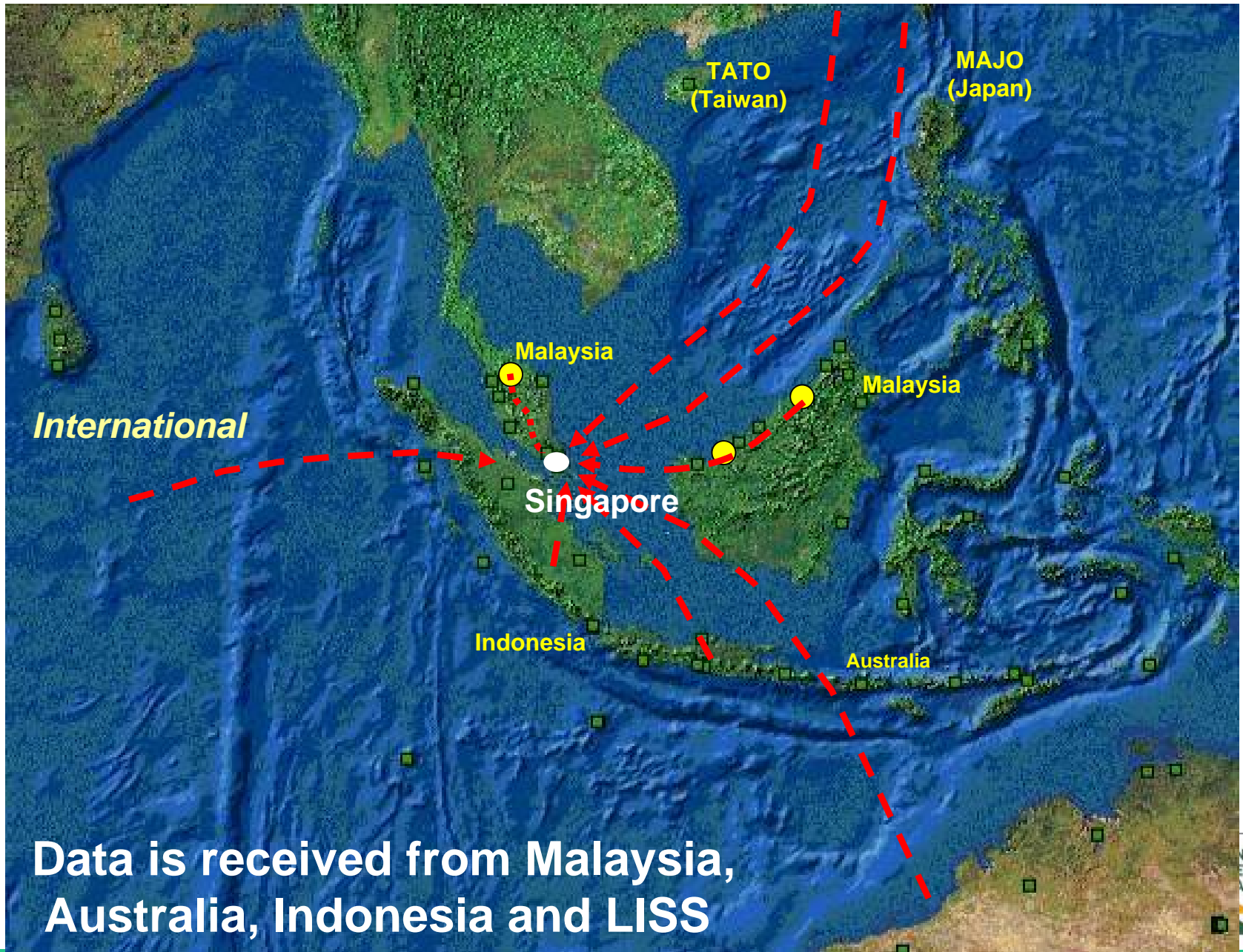
- ❑ **Provide accurate and timely tsunami warning to emergency response agencies**
- ❑ **Minimise false alarms by verification before issuing warning**

# Tsunami Project

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## **Phase I (completed by Q1 2006)**

- ❖ **Upgrade of Central Data Processing System of Seismic Network**
  - ▣ **Real-time seismic data exchange for faster and more accurate detection of the location and magnitude of earthquakes**



# Tsunami Project

## Phase II (by end 2006)

- ❖ **Seismic Monitoring Enhancement:**
  - ❑ Install an additional GSN station
  - ❑ Install 2 sensors on reclaimed land to assess local tremor impact
  - ❑ Replace aging components of existing system
  
- ❖ **Water Level Monitoring Enhancement:**
  - ❑ Enhance current network with 2 additional real-time tide gauges

# Tsunami Project

## Phase III (by 2007)

- ❖ **Modelling Capability**
  - ❑ Tsunami-genic Earthquake Characterisation
  - ❑ Propagation and Inundation Models
- ❖ **Operational 24x7 Tsunami Early Warning Centre**
  - ❑ Multi-hazard (earthquakes/tremors, tsunamis, smoke haze,etc)
  - ❑ Build on existing resources

# Response Capability

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- ❑ **National response plan in the process of being developed based on findings of risk assessment and impact studies by modelling**

# Thank You