

SENTINEL ASIA: DISASTER MANAGEMENT SUPPORT SYSTEM IN THE ASIA-PACIFIC REGION



The Sentinel Asia initiative is a collaboration between space agencies and disaster management agencies, applying remote sensing and Web-GIS technologies to support disaster management in the Asia-Pacific region.

OBJECTIVES

Sentinel Asia aims to:

- Improve safety in society by Information and Communication Technology (ICT) and space technologies
- Improve the speed and accuracy of disaster preparedness and early warning
- Minimize the number of victims and social/economic losses

BACKGROUND

According to statistics by *the ADRC-Natural Disasters Data Book-2007*, Asia has been seriously damaged by natural disasters over the last 30 years. The region sustained 57 percent of global fatalities and 89 percent of the total victims associated with such disasters. Under these circumstances, the APRSAF proposed Sentinel Asia in 2005 to showcase the value and impact of earth observation technologies, combined with near real-time Internet dissemination methods and Web-GIS mapping tools for disaster management support in the Asia-Pacific region. Sentinel Asia is promoted with cooperation among the space community such as APRSAF, the international community, including UN ESCAP, UN OOSA, ASEAN, the Asian Institute of Technology (AIT), and the disaster management community such as the Asian Disaster Reduction Center (ADRC) and its member countries.

ACTIVITIES

The main activities of Sentinel Asia are as follows:

- Emergency observation by earth observation satellites upon requests in case of major disasters
- Wildfire monitoring, flood monitoring, and glacier lake outburst flood (GLOF) monitoring
- Capacity building and human resources development for more effective disaster management

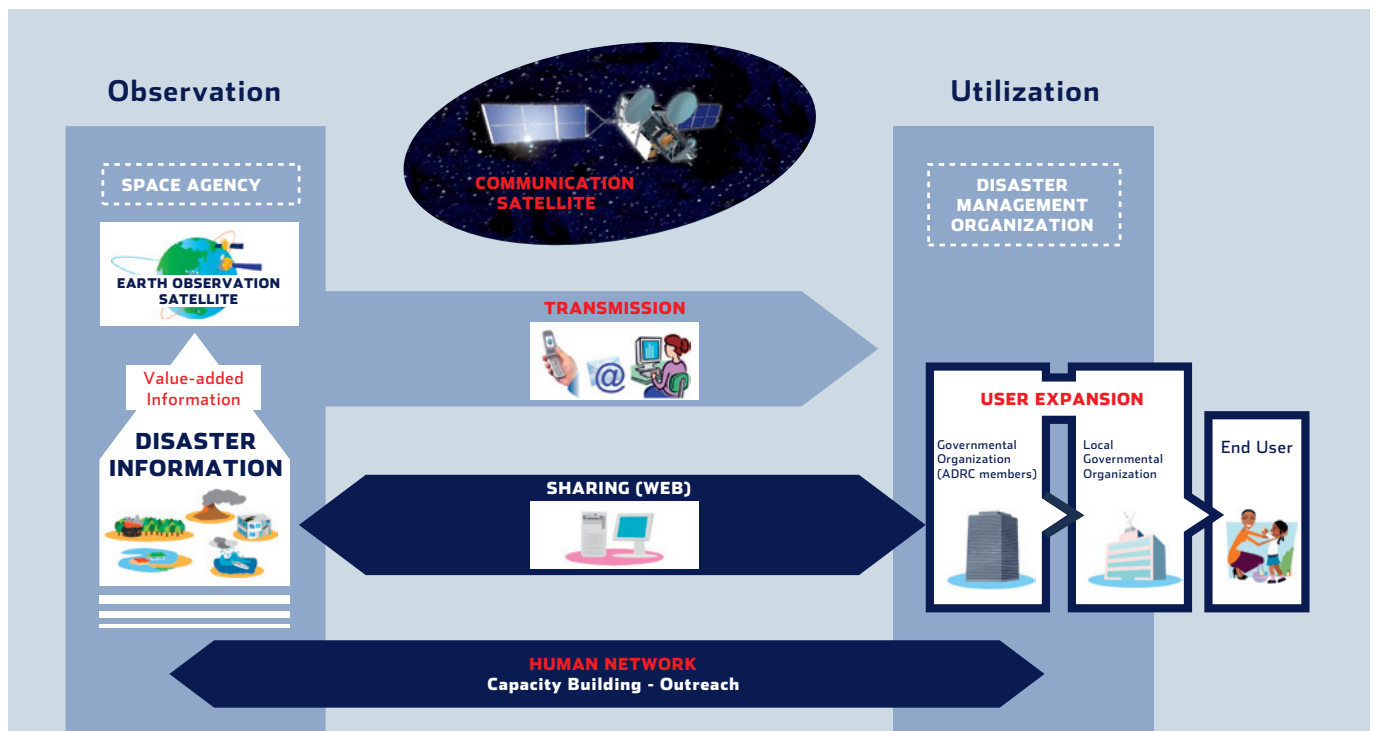
A step-by-step approach was adopted for the implementation of Sentinel Asia as follows:

Step 1: Implementation of the data dissemination system as a pilot project, to form the backbone of the Sentinel Asia and showcase the value and impact of the technology using standard Internet dissemination systems (2006-2007).

Step 2: Expansion of the dissemination backbone with new satellite communication systems, and enhancement of activities based on requirements and experiences acquired during Step 1 (2008-2012).

Step 3: Establishment of a comprehensive disaster management support system (2013 onwards).

Sentinel Asia provides disaster-related information, such as satellite imagery and satellite data products, on its website at: <https://sentinel.tksc.jaxa.jp/>



CONCEPT OF SENTINEL ASIA STEP 2.

(Components shown in red are to be strengthened during Step 2.)

- to make value-added information from satellite imagery,
- to transmit the information to users via communication satellites in addition to information-sharing over the Internet in Step 1, and
- to expand the human network through data utilization training and outreach activity.