

だいちが変える地球観測 —ALOS— への期待



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内閣府災害予防・広報・国際防災推進担当参事官

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1. 災害時の情報収集の現状(日本)

- 昼間の災害発生時の状況把握
—>全国各地の消防、警察、国土交通省事務所の事務所職員が即座に点検
- その背景には、全国をカバーする複数の組織のネットワークと信頼性の高い道路網と情報通信網

夜間の中山間地の情報収集のむずかしさ
新潟県中越地震で判明

1. 災害時の情報収集の現状(アジア)

- 災害発生しても全容が把握できるまでに数日
—>未整備の地方組織、貧弱な陸路、情報通信網
- 多島国(インドネシア、フィリピンなど)や交通不便な山岳地域を抱える国にとっては、全国土の状況の掌握は困難。

**放置すれば、中央政府批判や社会不安
につながりかねない!**

2. ALOSの災害時情報把握能力への期待

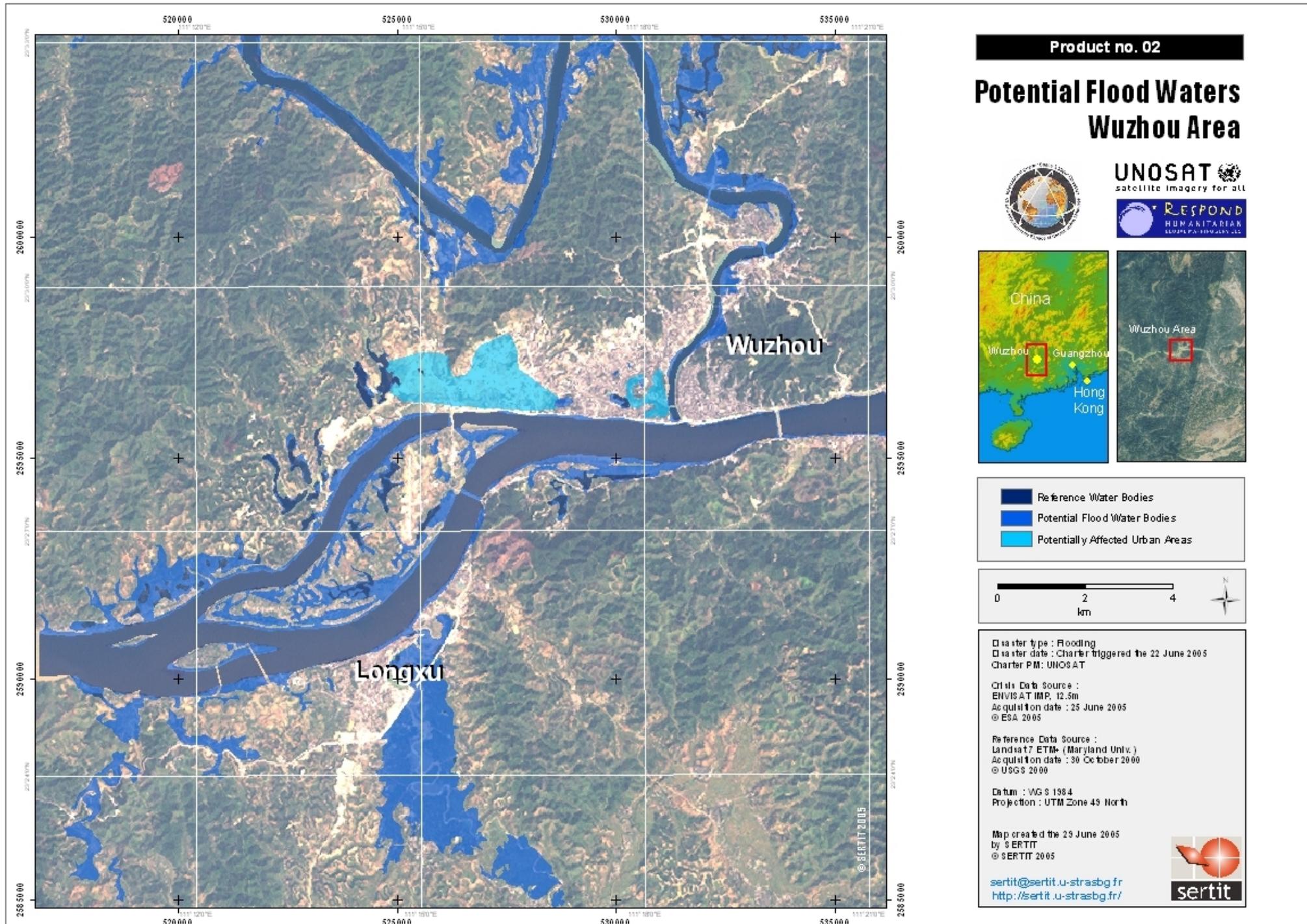
- アジア各国の被災状況の迅速な把握、地図との連動
(陸路で有人で把握が困難な情報の一元把握)

例：台風通過後翌朝の浸水域の把握

例：大規模地すべり発生後の被害地域のmapping

例：地震＋地すべり発生後の通行可能な道路の確認

例：日本の中山間地、沿岸集落の情報の迅速な把握、
特に夜間



Product no. 02

Potential Flood Waters Wuzhou Area



UNOSAT
satellite imagery for all



- Reference Water Bodies
- Potential Flood Water Bodies
- Potentially Affected Urban Areas



Disaster type : Flooding
 Disaster date : Charter triggered the 22 June 2005
 Charter PM : UNOSAT

 Crisis Data Source :
 ENVISAT IMP, 12.5m
 Acquisition date : 25 June 2005
 © ESA 2005

 Reference Data Source :
 Landsat 7 ETM+ (Maryland Univ.)
 Acquisition date : 30 October 2000
 © USGS 2000

 Datum : WGS 1984
 Projection : UTM Zone 49 North

 Map created the 29 June 2005
 by SERTIT
 © SERTIT 2005

sertit@sertit.u-strasbg.fr
<http://sertit.u-strasbg.fr/>

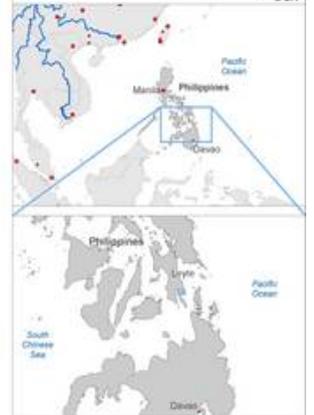


PHILIPPINES - Leyte Island - Village of Guinsaigon - Pre-Disaster Image

1:25.000



Center for Satellite Based Crisis Information
- Emergency Mapping & Disaster Monitoring -
German Remote Sensing Data Center
German Aerospace Center



On Friday, February 17, 2006 a landslide triggered by heavy rains buried the village of Guinsaigon, Sarr-Bernard, Southern Leyte Island (Philippines). This pre-disaster SPOT satellite image, acquired on June 1, 2003, displays the Southern Leyte Island affected by the landslide. The landslide extent could be derived from RADARSAT, acquired on February 22, 2006, and ASAR data acquired on February 24, 2006. The location of the landslide could partially be derived from ALOS AVNIR-2, acquired on February 20, 2006, due to cloudy weather conditions.

Scale: 1:25 000 for DinA1 printing

Reference coordinate system: [Geographic coord. info](#)

Projection: UTM Zone 51 N [Geographic \(GMS\)](#)

Spheroid: WGS 84 [WGS 84](#)

Datum: WGS 84 [WGS 84](#)

Data Sources

SRTM C-band	© USGS 2005	
SRTM X-band	© DLR 2005	
SPOT	© CNES 2003	
Gazetteer	© NGA 2005	
ALOS AVNIR-2	© JAXA 2006	
ASAR	© ESA 2006	
RADARSAT-1	© CSA 1998 and 2006, distributed by RSI	

Processing/Analysis

Image processing and map creation by DLR:

- image enhancement for SPOT
- atmospheric correction and the generation of a synthetic blue channel
- orthorectification
- contour lines from SRTM X/C - band DEM
- road network and settlements from SPOT panchromatic data
- landslide extension from RADARSAT, ASAR and ALOS AVNIR-2

Map created February 22, 2006 by ZK@DLR.DE
Map updated March 3, 2006

Map disseminated by **UNOSAT**
satellite imagery for all

Respond Job Manager: UNOSAT

RESPOND
and its partners supporting humanitarian relief, disaster prevention & reconstruction

For more information visit: <http://www.respond-int.org>
feedback@respond-int.org

INDONESIA / JAVA - Damage Assessment of the earthquake on May 27, 2006 - Jejeran Region

1:3.000

IKONOS PRE-DISASTER IMAGE - May 9, 2006

IKONOS POST-DISASTER IMAGE - May 28, 2006



Center for Satellite Based Crisis Information
Emergency Mapping & Disaster Monitoring
a member of DLR

German Remote Sensing Data Center
German Aerospace Center 



Legend

		
Damaged buildings	Potentially damaged buildings	Undamaged buildings
		
Roads	Administrative borders	Agriculture

Interpretation

On May 27, 2006 at 5:53 AM local time an earthquake of magnitude 6.2 has struck the very densely populated region of Yogyakarta on the island of Java, Indonesia. The map displays two IKONOS images (ground resolution: 1m) from the region of Jejeran, about 10 km south of Yogyakarta. The left image was taken on May 9, 2006, the right image on May 28, 2006 shortly after the earthquake. The digitized damage-areas are classified as damaged and potentially damaged areas.

Digitized damaged areas, geographic and administrative data and names shown here are subject to errors.



Scale

Scale: 1:3.000 for DnA1 printing

Reference coordinate system: Geographic coord. info

Projection: UTM Zone 49 S Geographic (GMS)
Spheroid: WGS 84 WGS 84
Datum: WGS 84 WGS 84

Data Sources

IKONOS © CRISP 2006
Administrative borders provided by the Indonesian RSGIS Forum

Processing/Analysis

Image processing and map creation by DLR:
- Identification of damaged areas

Map created May 30, 2006 by ZKI@DLR.DE



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3. 予防的防災 施策への適用

- ハザードマッピングへの利用
- 旱魃、森林火災、原野火災などCreeping Disasterへの適用、現状のモニタリングが必要

