

German Aerospace Center (DLR)

Bringing Disaster Management Information to the Web:
Efforts at the German Remote Sensing Data Center

Stefan Plattner
DLR-DFD



The German Remote Sensing Data Center (DFD)

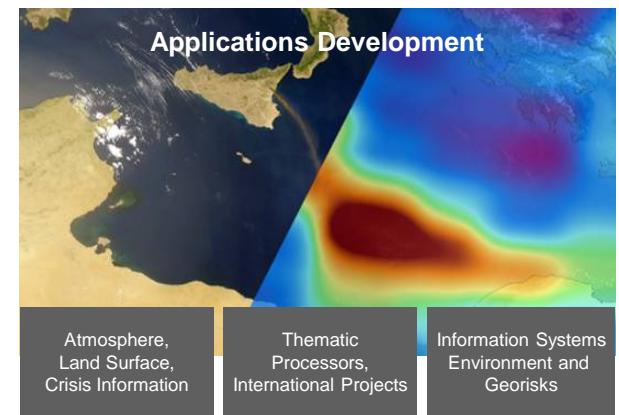
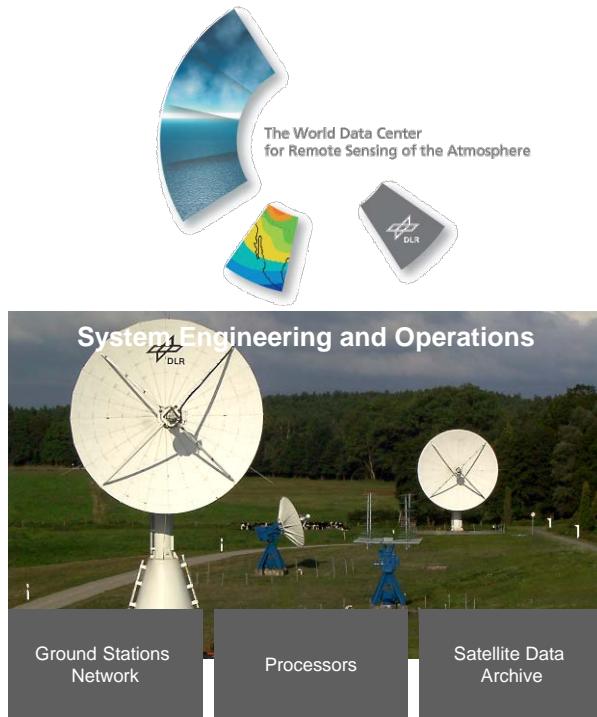


Staff: ~200 People in 7 Departments

- National Ground Segment (Neustrelitz)
- International Ground Segment
- Information Technology
- Atmosphere
- Land Surface
- Civil Crisis Information and Geo Risks
- Scientific Communication and Visualization (GeoVIS)

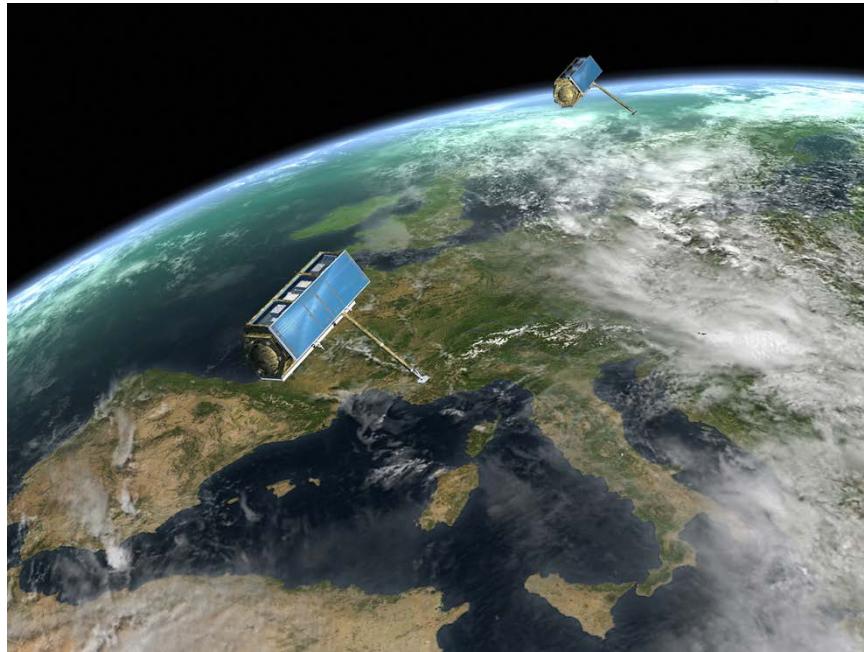


The German Remote Sensing Data Center (DFD)



International Charter 'Space and Major Disasters'

- DLR joined in 2010
- TerraSAR-X/TanDEM-X
- up to 1m resolution

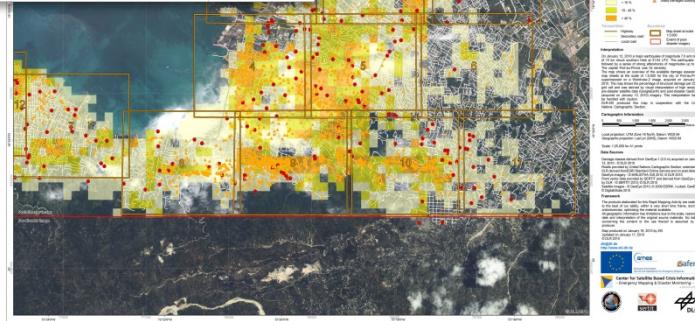
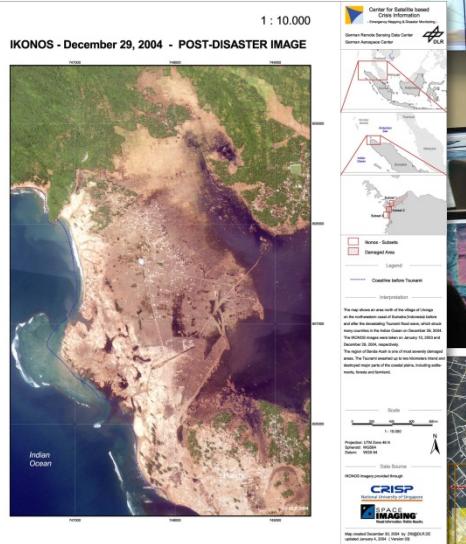


The screenshot shows the Charter Data Portal homepage. At the top, there's a large image of the Earth from space. Below it, the DLR logo and the text "Charter Data Portal". A navigation bar with links for "Home", "Mission Statement", "Login for Data Access", and "Mission Statement". The main content area features a photograph of a satellite in orbit and a text box about DLR joining the International Charter. On the right side, there's a circular logo for the International Charter and a link to the "International Charter Space and Major Disasters" page.

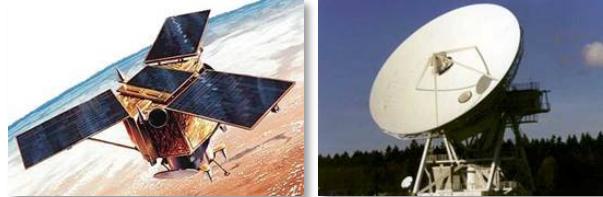
- ~250 scenes delivered
(archived and newly acquired)



The Center for Satellite Based Crisis Information (ZKI)

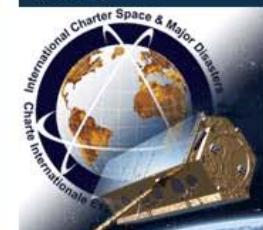


The Center for Satellite Based Crisis Information (ZKI)



Publishing ZKI Products via the Web



Feature

Search

**About ZKI**[Mission](#)[Rapid Mapping](#)[Training](#)[Projects](#)[Research and Development](#)[Partners and Cooperations](#)[FAQ](#)[Location and Directions](#)[GMES Emergency Response Service](#)**ZKI Activations**[Interactive Map](#)[Complete List](#)[GeoRSS Feed](#)[Google Earth KML](#)**Articles Archive**[All Articles](#)**ZKI Fire Service**[About](#)[Interactive Map](#)[MODIS Overpasses](#)[Statistics](#)**ZKI Certification**

ISO 9001

Certified Organization

**Welcome to the Center for Satellite Based Crisis Information**

The Center for Satellite Based Crisis Information (ZKI) presents a service of the German Remote Sensing Data Center (DFD) of DLR. It provides a 24/7 service for the rapid provision, processing and analysis of satellite imagery during natural and environmental disasters, for humanitarian relief activities and civil security issues worldwide. The resulting satellite based information products are provided to relief organisations and public authorities and are also freely available on the ZKI website.

[Read more](#)**ZKI Latest News****Tropical storm in Mozambique**

2 March 2012, 23:59 CET

On March 2, 2012, Tropical storm IRINA struck Madagascar at about 00:00 GMT and is forecasted to strike Mozambique as a tropical cyclone at about 20:00 GMT on March 3.

According to the information supplied by the Joint Typhoon Warning Center (JTWC), the point of landfall will be north the border of Mozambique and South Africa. IRINA is expected to bring 1-minute maximum sustained winds to the region of around 129 km/h (80 mph). The cyclone is expected to cause heavy rain and flash flooding in Mozambique, and storm surges generally between 1.2 and 1.5 metres (4-5 feet).

[Full article](#)**DLR joins International Charter 'Space and Major Disasters'**[Read more...](#)**Topics**

- Flood (47)
- Earthquake (14)
- Wild Fire and Burn Scars (14)
- Landslide (3)
- Severe Storm and Hurricane (2)
- Tsunami (3)
- Volcanic Eruption (2)
- Technical Accident (7)
- Humanitarian Crisis (7)
- Exercise (8)
- Other (5)

[ZKI RSS Newsfeed](#)

Feature**Topic: Earthquake****Country****Earthquake in Turkey on October 23, 2011**

23 October 2011, 23:17 CEST - last update on 26 October 2011, 23:52 CEST

On Sunday October 23, 2011 an earthquake with a magnitude of 7.3 at 5 km depth hit the province of Van in eastern Turkey, followed by a series of powerful aftershocks of magnitudes up to 5.6. The epicentre was located at 38° 37' 40.80"N, 43° 29' 9.60"E, at the village of Tabanli 19 km Northeast of the city of Van between the Van Lake and the Iranian border.

[Full article](#)**Earthquake in the Qinghai province in China on April 14, 2010**

14 April 2010, 15:45 CEST - last update on 22 April 2010, 17:02 CEST

On April 14, 2010, an earthquake with a magnitude of 6.9 hit the Yushu prefecture in the Qinghai province of China, followed by several aftershocks. Many hundred people were reported dead, injured or missing. Buildings collapsed or were severely damaged. Road network and communication lines were interrupted.

[Full article](#)**Earthquake in Turkey on March 8, 2010**

10 March 2010, 10:51 CET - last update on 10 March 2010, 13:30 CET

On March 8, 2010, an earthquake of magnitude 6.0 struck the eastern part of Turkey near the city of Elazig. Many aftershocks followed. Numerous residential buildings in the adjacent villages were destroyed, according to press reports 51 people were killed and hundreds became homeless.

[Full article](#)**Earthquakes in Haiti on January 12, 2010**

13 January 2010, 12:40 CET - last update on 12 February 2010, 10:24 CET

On January 12, 2010 a severe earthquake took place at the Coast of Haiti with a magnitude of 7.0 causing major damage. The epicentre was registered about 10 km deep and 16 km southwest of the capital city Port-au-Prince. In the city a large number of buildings such as the palace, government and UN-buildings, embassies and hospitals were affected or destroyed.

DLR joins International Charter 'Space and Major Disasters'

[Read more...](#)**Topics**

- Flood (47)
- Earthquake (14)**
- Wild Fire and Burn Scars (14)
- Landslide (3)
- Severe Storm and Hurricane (2)
- Tsunami (3)
- Volcanic Eruption (2)
- Technical Accident (7)
- Humanitarian Crisis (7)
- Exercise (8)
- Other (5)

[ZKI RSS Newsfeed](#)

DLR Portal

[Home](#) | [Imprint](#) | [Contact](#) | [RSS](#) | [Login](#) | [Deutsch](#)

Monday 23 Apr 2012

Fontsize: [-] Text [+]

Feature

DLR joins International Charter 'Space and Major Disasters'

[Read more...](#)**Topics**

- Flood (47)
- Earthquake (14)
- Wild Fire and Burn Scars (14)
- Landslide (3)
- Severe Storm and Hurricane (2)
- Tsunami (3)
- Volcanic Eruption (2)
- Technical Accident (7)
- Humanitarian Crisis (7)
- Exercise (8)
- Other (5)

[ZKI RSS Newsfeed](#)**World Map of ZKI Activations**

POWERED BY
 Google
Kartendaten ©2012 - Nutzungsbedingungen

Center for
Satellite Based
Crisis Information
a service of DFD

- About ZKI**
- Mission
- Rapid Mapping
- Training
- Projects
- Research and Development
- Partners and Cooperations
- FAQ
- Location and Directions
- GMES Emergency Response Service

- ZKI Activations**
- Interactive Map
- Complete List
- GeoRSS Feed
- Google Earth KML

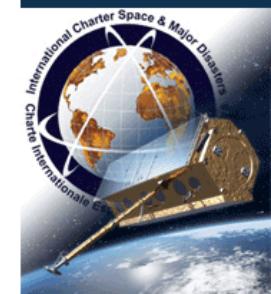
- Articles Archive**
- All Articles

- ZKI Fire Service**
- About
- Interactive Map
- MODIS Overpasses
- Statistics

- ZKI Certification**

ISO 9001
Certified Organization

Copyright © 2011 German Aerospace Center (DLR). All Rights reserved.

Feature

DLR joins International Charter 'Space and Major Disasters'

[Read more...](#)

Topics

-  Flood (47)
-  Earthquake (14)
-  Wild Fire and Burn Scars (14)
-  Landslide (3)
-  Severe Storm and Hurricane (2)
-  Tsunami (3)
-  Volcanic Eruption (2)
-  Technical Accident (7)
-  Humanitarian Crisis (7)
-  Exercise (8)
-  Other (5)

 ZKI RSS Newsfeed [Read more...](#)

Complete List of ZKI Activations**Country**

- Any -

Topic

- Any -

Date ▾**Title****Topic****Countries**

2 March 2012, 23:59 CET	Tropical storm in Mozambique	Severe Storm and Hurricane	Mozambique
10 February 2012, 21:55 CET	Flood in Bulgaria	Flood	Bulgaria
24 January 2012, 23:33 CET	Flood in Mozambique	Flood	Mozambique
3 January 2012, 22:10 CET	Fires in Chile	Wild Fire and Burn Scars	Chile
23 November 2011, 16:35 CET	Forest fires in Bulgaria	Wild Fire and Burn Scars	Bulgaria
8 November 2011, 21:30 CET	Forest fires in Romania	Wild Fire and Burn Scars	Romania
23 October 2011, 23:17 CEST	Earthquake in Turkey on October 23, 2011	Earthquake	Turkey
27 September 2011, 20:39 CEST	Parking occupancy at the NRW-Day and German Unity Day, Bonn 2011, Germany.	Exercise	Germany
14 September 2011, 11:00 CEST	EU CARPATHEX exercise on CBRN threats held in the Podkarpackie Region, Poland	Exercise	Poland
13 September 2011, 01:35 CEST	Floods in Pakistan	Flood	Pakistan
28 July 2011, 11:40 CEST	Famine in East Africa	Humanitarian Crisis	Ethiopia, Somalia
8 June 2011, 17:40 CEST	Volcanic eruption in Chile	Volcanic Eruption	Chile
5 May 2011, 00:32 CEST	Dune fires in the Netherlands	Wild Fire and Burn Scars	Netherlands
11 April 2011, 15:23 CEST	Forest fires in Bulgaria	Wild Fire and Burn Scars	Bulgaria
11 March 2011, 15:27 CET	Earthquake and Tsunami in Japan	Tsunami	Japan
24 February 2011, 18:56 CET	Civil unrest in Libya	Humanitarian Crisis	Egypt, Libya, Malta
19 February 2011			

DLR - ZKI | Activations GeoRSS Feed

[Tropical storm in Mozambique](#)

Freitag, 2. März 2012 22:59



On March 2, 2012, Tropical storm

According to the information supplied by the National Hurricane Center, 1-minute maximum sustained wind speeds were between 1.2 and 1.5 metres (4-5 fms).

[Flood in Bulgaria](#)

Freitag, 10. Februar 2012 20:55



Due to heavy snow that has covered the ground, the water conditions and the water released from the melting snow.

[Flood in Mozambique](#)

Dienstag, 24. Januar 2012 22:33



On January 16, 2012, Mozambique's coast was hit by the tropical depression "Dando" followed by cyclone "Funso". With wind speeds up to 220 km/h and torrential rains the storms have caused severe damages and floods.



Google Earth

Datei Bearbeiten Ansicht Tools Hinzufügen Hilfe

Suchen

Anfliegen Unternehmen suchen Routenplaner

Anfliegen Bsp.: Baumwall, Hamburg

Orte

- Meine Orte
- Temporäre Orte
- DLR - ZKI | Activations KML Feed

Ebenen

Google Earth-Galerie >>

- Primäre Datenbank
 - Grenzen und Beschriftungen
 - Orte
 - Fotos
 - Straßen
 - 3D-Gebäude
 - Ozean
 - Wetter
 - Galerie
 - Globales Denken
 - Mehr

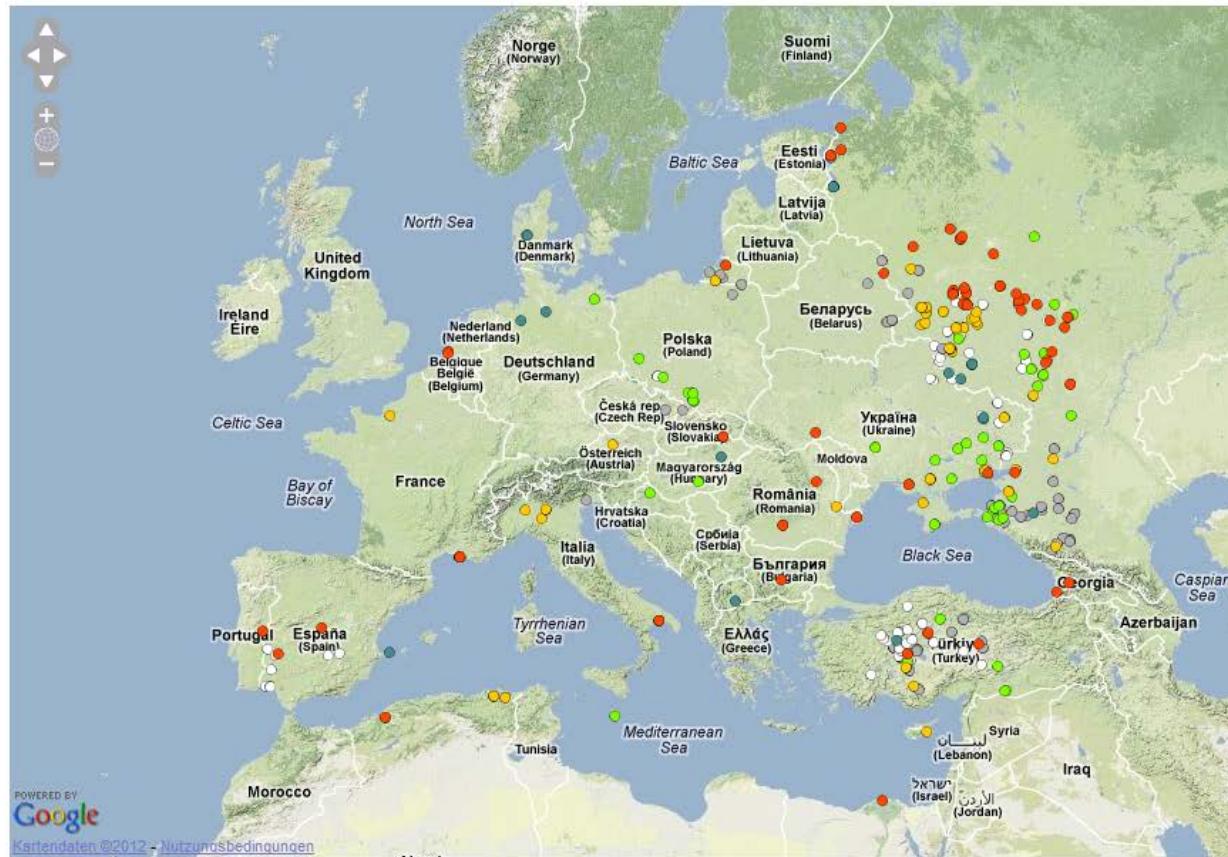
DLR Portal

Home | Imprint | Contact | RSS | Login | Deutsch

Monday 23 Apr 2012

Fontsize: [-] Text [+]

Search

Fireservice Map**Special Service:**

- Get fires of last seven days as a [Web Feature Service \(WFS\)](#) or a [Web Map Service \(WMS\)](#).
- Get today's fire hotspots as a [Google Earth KML file](#).

ISO 9001
Certified Organization


About ZKI

- Mission
- Rapid Mapping
- Training
- Projects
- Research and Development
- Partners and Cooperations
- FAQ
- Location and Directions
- GMES Emergency Response Service

ZKI Activations

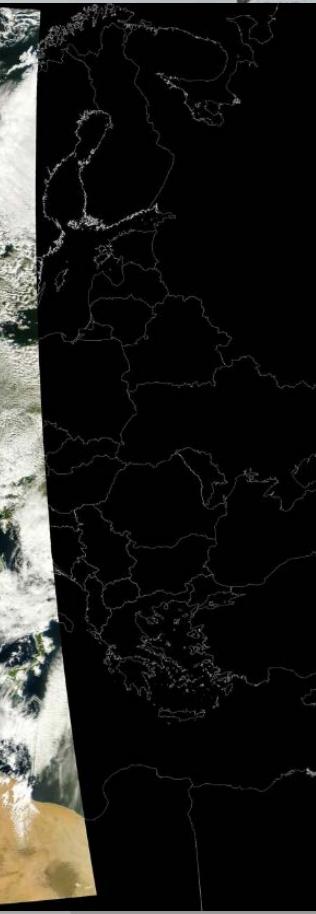
- Interactive Map
- Complete List
- GeoRSS Feed
- Google Earth KML

Articles Archive

- All Articles

ZKI Fire Service

- About
- Interactive Map
- MODIS Overpasses
- Statistics

ZKI Certification**Icon****No. of fires****Time (UTC)****Date****Platform and sensor**

	3	13:07:00	2012-04-22	MODIS - aqua-1
	15	11:29:00	2012-04-22	MODIS - aqua-1
	4	11:21:00	2012-04-22	MODIS - terra-1
	29	09:54:00	2012-04-22	MODIS - aqua-1
	8	09:43:00	2012-04-22	MODIS - terra-1
	16	08:07:00	2012-04-22	MODIS - terra-1
	11	12:23:00	2012-04-21	MODIS - aqua-1



DLR Portal

[Home](#) | [Imprint](#) | [Contact](#) | [RSS](#) | [Login](#) | [Deutsch](#)

Monday 23 Apr 2012

Fontsize: [-] [Text](#) [+]
 
About ZKI

-  [Mission](#)
-  [Rapid Mapping](#)
-  [Training](#)
-  [Projects](#)
-  [Research and Development](#)
-  [Partners and Cooperations](#)
-  [FAQ](#)
-  [Location and Directions](#)
-  [GMES Emergency Response Service](#)

ZKI Activations

-  [Interactive Map](#)
-  [Complete List](#)
-  [GeoRSS Feed](#)
-  [Google Earth KML](#)

Articles Archive

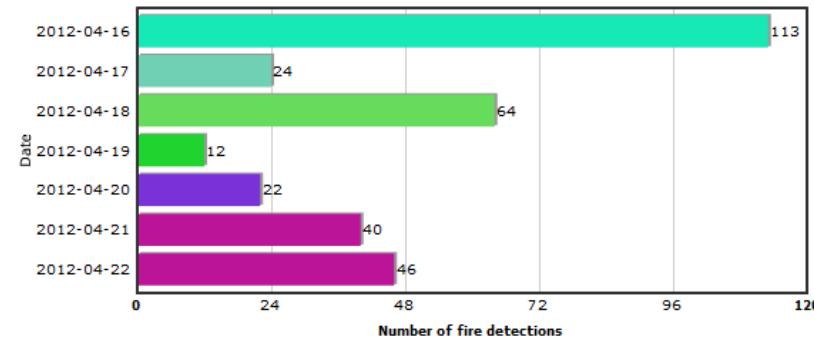
-  [All Articles](#)

ZKI Fire Service

-  [About](#)
-  [Interactive Map](#)
-  [MODIS Overpasses](#)
-  [Statistics](#)
-  **Predefined**
-  [Userdefined](#)

ZKI Certification**Fireservice statistics predefined**

Fires detected in 'Russia' over the period of last 7 day(s)



Status	Country	Region	Province	CLC type	Date	Time	Lat.	Lon.	Sensor
486701	Russia	Russia	Nordkaukasus-Gebiet	Cultivated and managed areas	2012-04-18	08:31:00	41.6944	48.0841	MODIS - terra-1
486702	Russia	Russia	Nordkaukasus-Gebiet	Mosaic: Cropland / Shrub and/or grass cover	2012-04-18	08:31:00	41.6312	46.7257	MODIS - terra-1
486703	Russia	Russia	Wolgagebiet	Cultivated and managed areas	2012-04-18	08:31:00	41.9373	46.0087	MODIS - terra-1
486704	Russia	Russia	Nordkaukasus-Gebiet	Cultivated and managed areas	2012-04-18	08:31:00	42.9778	45.3441	MODIS - terra-1
486705	Russia	Russia	Nordkaukasus-Gebiet	Cultivated and managed areas	2012-04-18	08:31:00	42.971	45.3438	MODIS - terra-1
486706	Russia	Russia	Nordkaukasus-Gebiet	Mosaic: Cropland / Shrub and/or grass cover	2012-04-18	08:31:00	42.7857	45.1235	MODIS - terra-1
486707	Russia	Russia	Nordkaukasus-Gebiet	Cultivated and managed areas	2012-04-18	08:31:00	38.3194	45.6942	MODIS - terra-1
486708	Russia	Russia	Nordkaukasus-Gebiet	Tree Cover, broadleaved, deciduous, closed	2012-04-18	08:31:00	37.8047	45.6742	MODIS - terra-1
486709	Russia	Russia	Nordkaukasus-Gebiet	Regularly flooded shrub and/or herbaceous cover	2012-04-18	08:31:00	38.3621	45.3796	MODIS - terra-1
486710	Russia	Russia	Nordkaukasus-Gebiet	Tree Cover, needle-leaved, evergreen	2012-04-18	08:31:00	37.9873	45.2261	MODIS - terra-1
486711	Russia	Russia	Nordkaukasus-Gebiet	Mosaic: Cropland / Tree Cover / Other natural vegetation	2012-04-18	08:31:00	42.2808	44.2828	MODIS - terra-1

DLR Portal

[Home](#) | [Imprint](#) | [Contact](#) | [RSS](#) | [Login](#) | [Deutsch](#)

Monday 23 Apr 2012

Fontsize: [-] [Text](#) [+]
 [\[x\]](#)
About ZKI[\[x\] Mission](#)[\[x\] Rapid Mapping](#)[\[x\] Training](#)[\[x\] Projects](#)[\[x\] Research and Development](#)[\[x\] Partners and Cooperations](#)[\[x\] FAQ](#)[\[x\] Location and Directions](#)[\[x\] GMES Emergency Response Service](#)**ZKI Activations**[\[x\] Interactive Map](#)[\[x\] Complete List](#)[\[x\] GeoRSS Feed](#)[\[x\] Google Earth KML](#)**Articles Archive**[\[x\] All Articles](#)**ZKI Fire Service**[\[x\] About](#)[\[x\] Interactive Map](#)[\[x\] MODIS Overpasses](#)[\[x\] Statistics](#)**ZKI Certification**

ISO 9001

Certified Organization

Earthquake and Tsunami in Japan

11 March 2011, 15:27 CET - last update on 18 March 2011, 16:15 CET

An earthquake of magnitude 8.8 hit north-east Japan followed by a series of powerful aftershocks and Tsunamis. The epicentre of the earthquake is located 400 km away from the capital Tokyo at a depth of 32 km. The earthquake occurred at 14:46 local time (05:46 GMT) on March 11. The areas most affected are the prefectures of Miyagi, Fukushima, and Iwate.

The town of Sendai was severely affected and a tsunami of more than 10 m height hit the coastline. Massive surges of debris-filled water swept away buildings, cars and ships and were reaching far inland. Fires occurred in several cities, and nuclear power plants, refineries, airports, and parts of the transport networks were shut down.

Apart from the downloadable maps below, ZKI also provides an interactive web mapping component showing selected satellite imagery, making it possible to compare pre- and post disaster images. As work progresses, more interactive images will become available. Click [here](#) to get to the application.



Click [here](#) to get an overview of recent map products (KMZ-file for Google Earth - 20.84 MB).

Click [here](#) to get an overview of recent map products as map extents (KMZ-file for Google Earth - 6.92 KB)

Products**Disaster Extent Map - Japan - Sendai Region**

16 March 2011, 17:42 CET

Map type: Satellite Map

Scale: 1:150 000

Producer: DLR

Print size: DIN A1

[Full view](#) [\[x\]](#)**TerraSAR-X Change Analysis of Sendai Area, Japan**

14 March 2011, 22:24 CET - last update on 15 March 2011, 19:28 CET

Map type: Satellite Map

Scale: 1:75 000

Producer: DLR

Print size: DIN A1

[Full view](#) [\[x\]](#)**Estimated directly affected inhabitants by tsunami inundation and debris - Japan, Honshu**

18 March 2011, 16:04 CET

Map type: Satellite Map

Scale: 1:85 000

Producer: DLR

Print size: DIN A1

[Full view](#) [\[x\]](#)

- Topic**
 - Tsunami [\[x\]](#)
- Countries**
 - Japan [\[x\]](#)
- Related projects**
 - International Charter 'Space and Major Disasters' [\[x\]](#)
- Related links**
 - TerraSAR-X 2D Displacement Analysis of Sendai region by DLR-DFD/IMF [\[x\]](#)
 - Recent satellite imagery of the Fukushima nuclear facility (Copyright: Digital Globe, 2011) [\[x\]](#)
- Downloads**
 - Overview of recent ZKI maps (Google Earth KMZ - 20.84 MB) [\[x\]](#)

 Center for
Satellite Based
Crisis Information
a service of DFD

DLR Portal

Search 

About ZKI

- Mission
- Rapid Mapping
- Training
- Projects
- Research and Development
- Partners and Cooperations
- FAQ
- Location and Directions
- GMES Emergency Response Service

ZKI Activations

- Interactive Map
- Complete List
- GeoRSS Feed
- Google Earth KML

Articles Archive

- All Articles

ZKI Fire Service

- About
- Interactive Map
- MODIS Overpasses
- Statistics

ZKI Certification

 ISO 9001
Certified Organization



[Home](#) | [Imprint](#) | [Contact](#) | [RSS](#) | [Login](#) | [Deutsch](#)

Monday 23 Apr 2012

Fontsize: [-] Text [+]

Topic

Tsunami 

Countries

Japan 

TerraSAR-X Change Analysis of Sendai Area, Japan

14 March 2011, 22:24 CET - last update on 15 March 2011, 19:28 CET

Map type: Satellite Map

Scale: 1:75 000

Producer: DLR

Print size: DIN A1



Downloadable products:

- [Low resolution map](#) (JPEG, 1.03 MB)
- [Medium resolution map](#) (JPEG, 2.39 MB)
- [KMZ file for Google Earth](#) (1.23 MB)

Please login in order to download the following products:

- High resolution map (JPEG, 10.34 MB)
- ESRI world file for high resolution map (91 bytes)

 [Login/Registration](#)

Google Earth

Datei Bearbeiten Ansicht Tools Hinzufügen Hilfe

Suchen

Anfliegen Unternehmen suchen Routenplaner

Anfliegen Bsp.: Baumwall, Hamburg

Orte

- Meine Orte
- Temporäre Orte
- DLR - ZKI | Activations KML Feed
- DLR_20110312_japan_tsunami_sendai_ts...

Ebenen

- Primäre Datenbank
- Grenzen und Beschriftungen
- Orte
- Fotos
- Straßen
- 3D-Gebäude
- Ozean
- Wetter
- Galerie
- Globales Denken
- Mehr

TerraSAR-X Change Analysis of Sendai Area, Japan

1:75.000

Kurokawa Miyato-jima

Präfektur Miyagi

Shibata Natori Tagajo

Ishinomaki Onaga

Higashimatsushima Airport

Sendai Airport

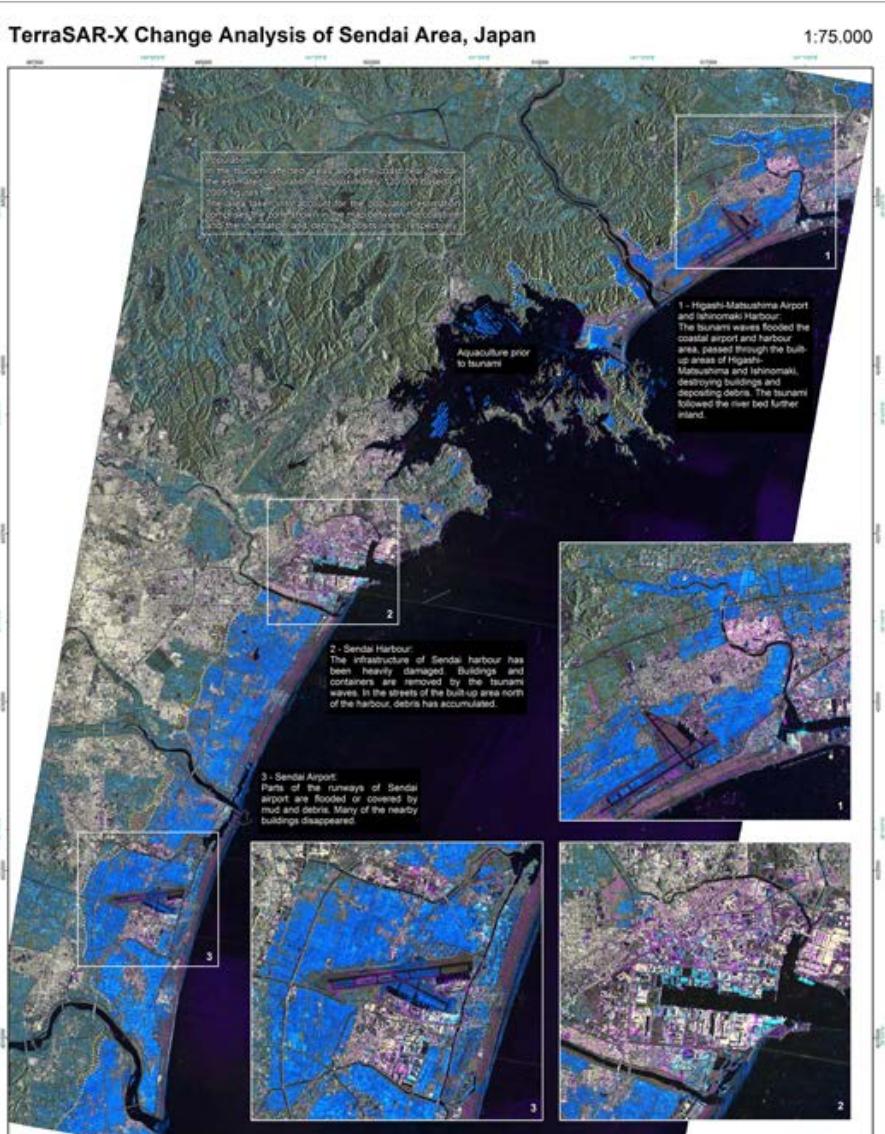
Data SIO, NOAA, U.S. Navy, NSG, GEBCO
© 2012 ZENTRIN

38°13'54.44" N 141°03'49.53" O Höhe -21 m

Sichthöhe 65.77 km

Center for Satellite Based Crisis Information – Emergency Mapping & Disaster Monitoring –

TerraSAR-X Change Analysis of Sendai Area, Japan



Downloadable Crisis Map

Pros:

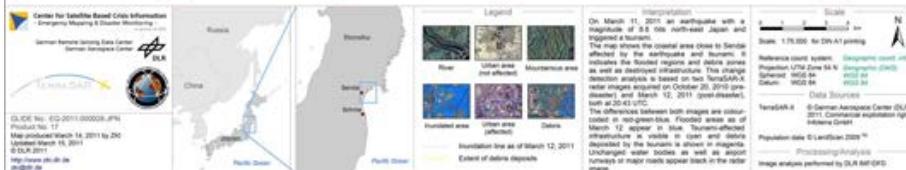
- large print format
- no computer, no internet needed when printed

Limitations:

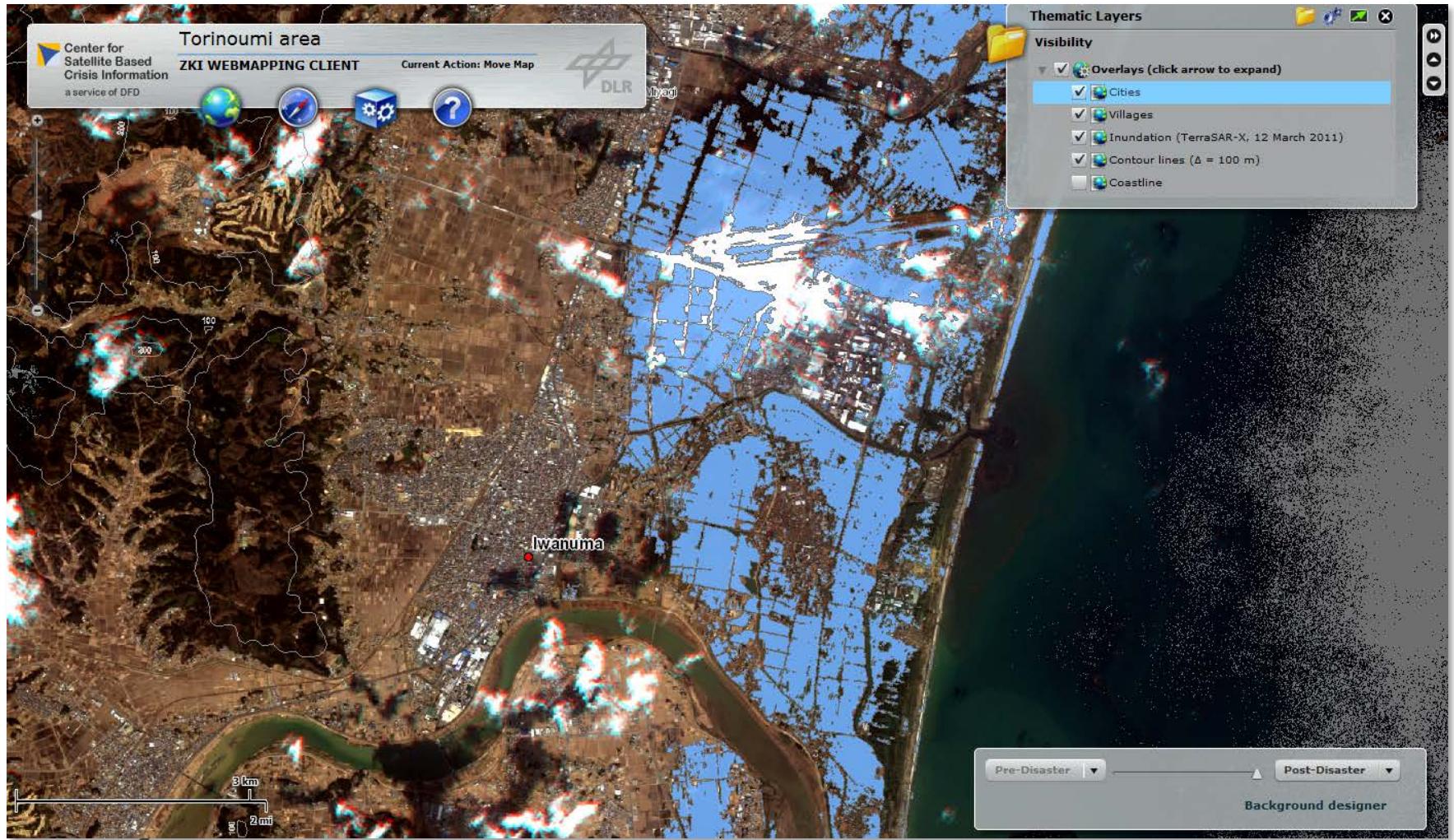
- scale
- extent
- content
- time

Field work: printed maps

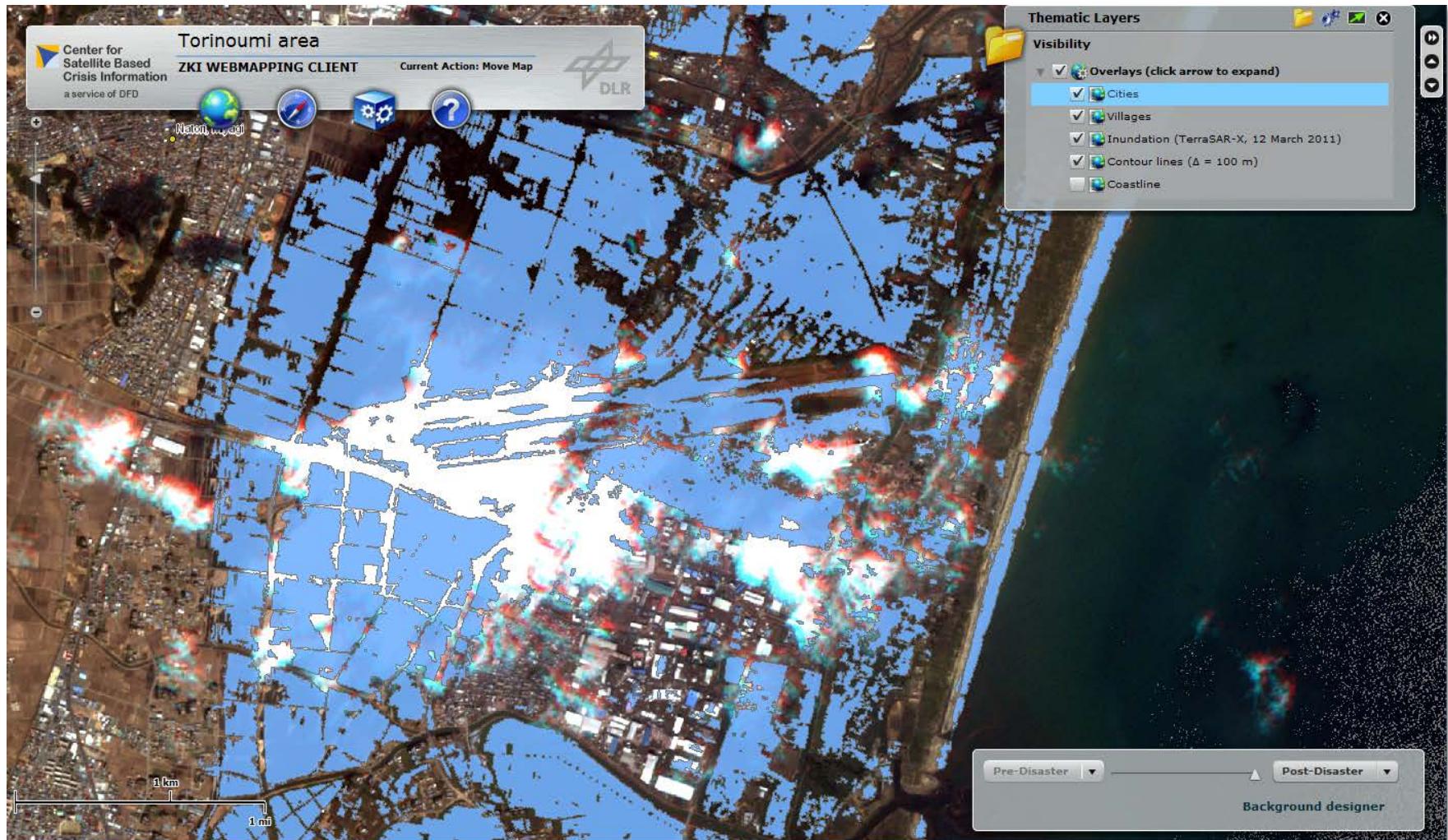
Office: better solution



Interactive Web Mapping



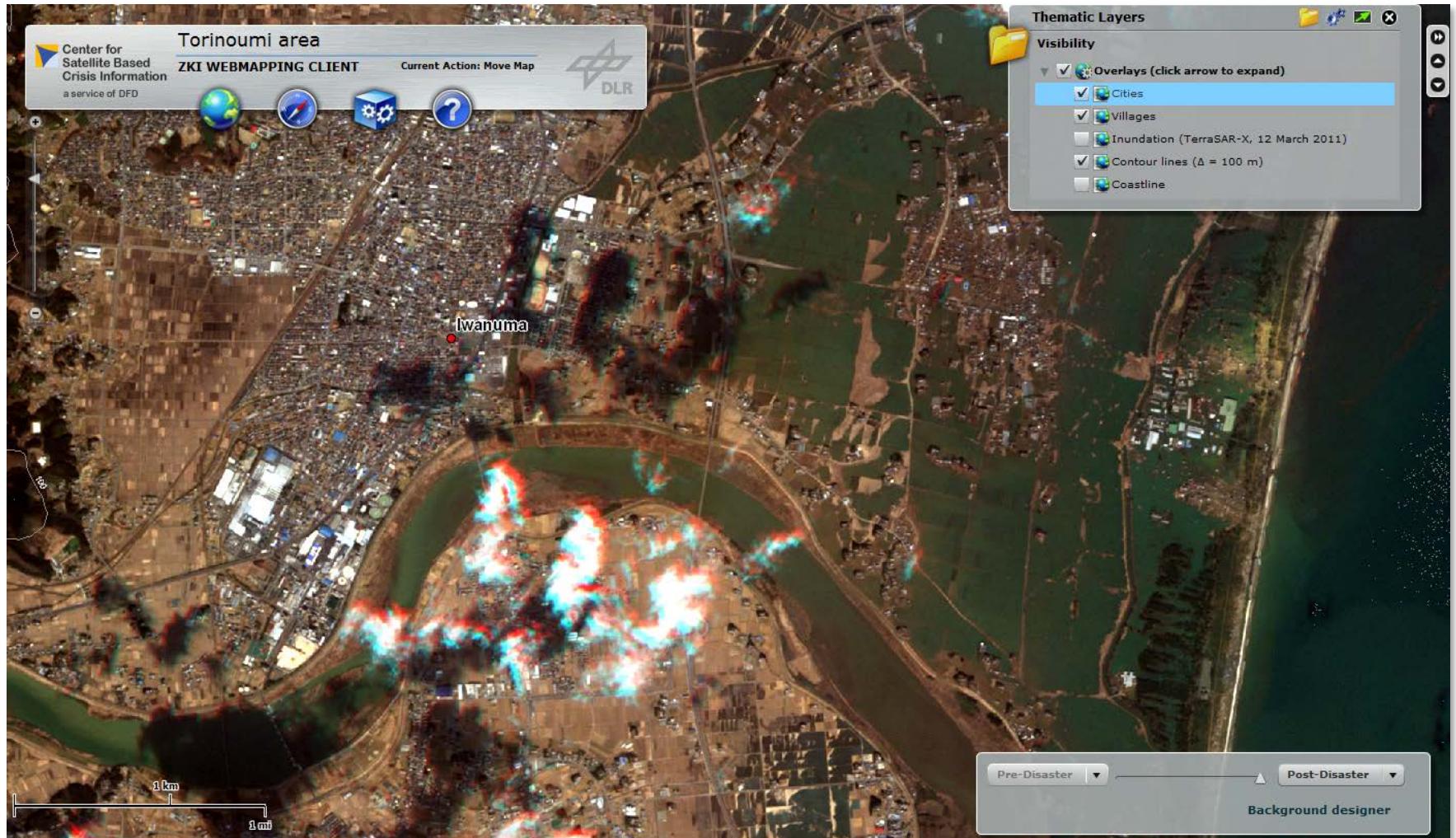
Interactive Web Mapping



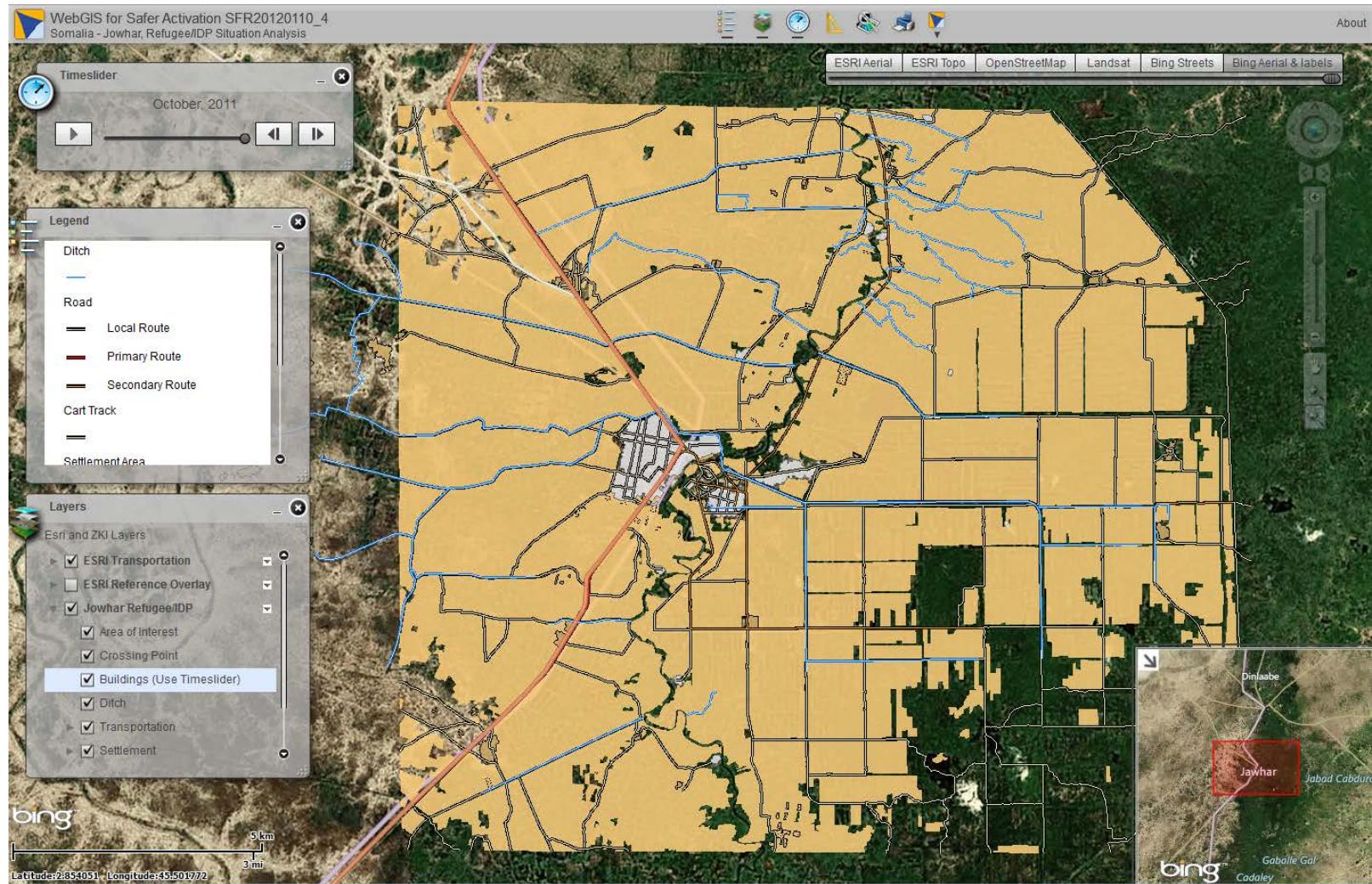
Interactive Web Mapping



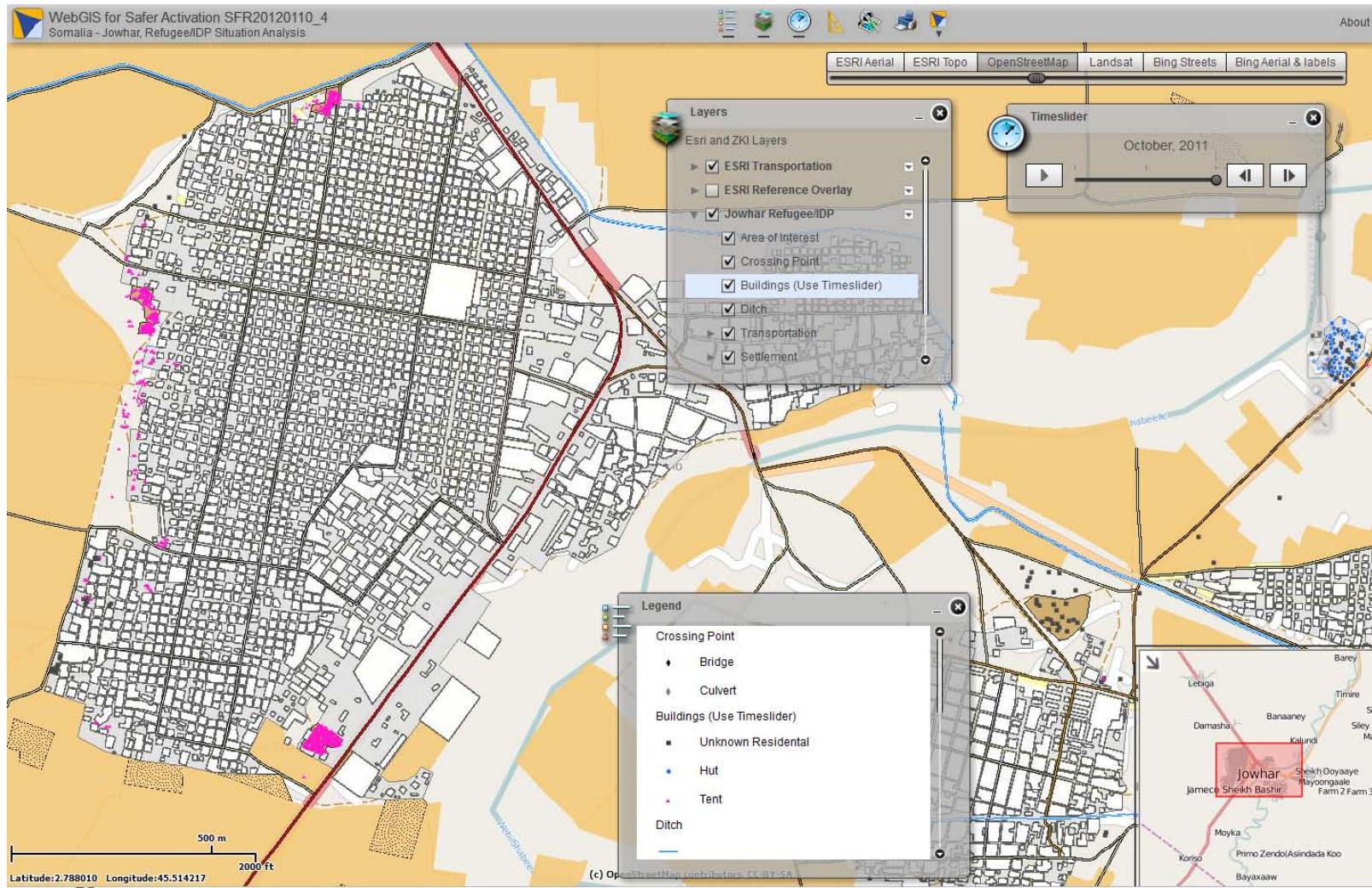
Interactive Web Mapping



Interactive Web Mapping



Interactive Web Mapping





Publishing Risk Information via the Web



Indian
Ocean

SRI
LANKA

Coastal Regions
(broad scale assessment, 100k)

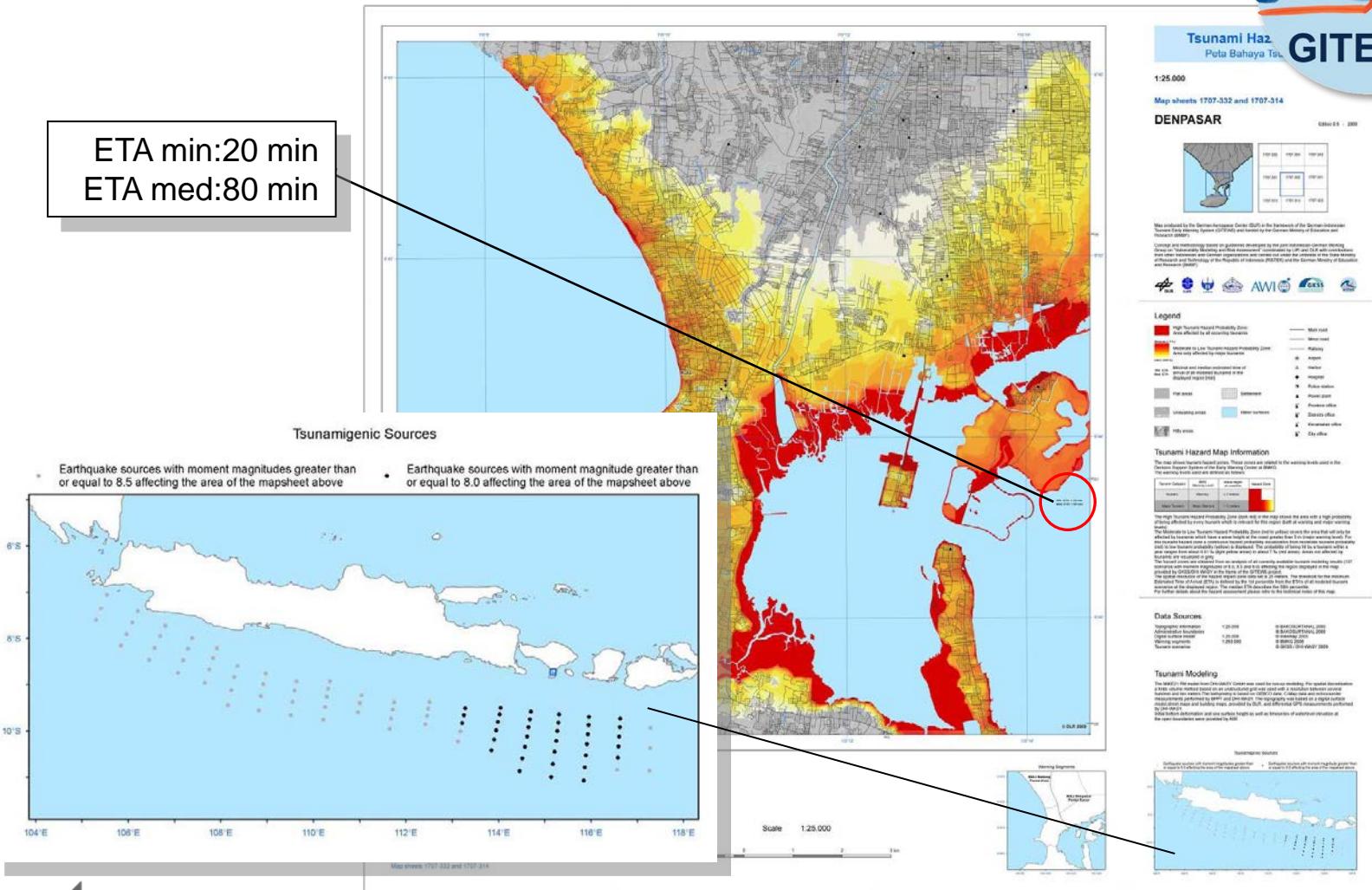
4 available risk products:

- hazard maps
- vulnerability maps
- evacuation time maps
- risk maps

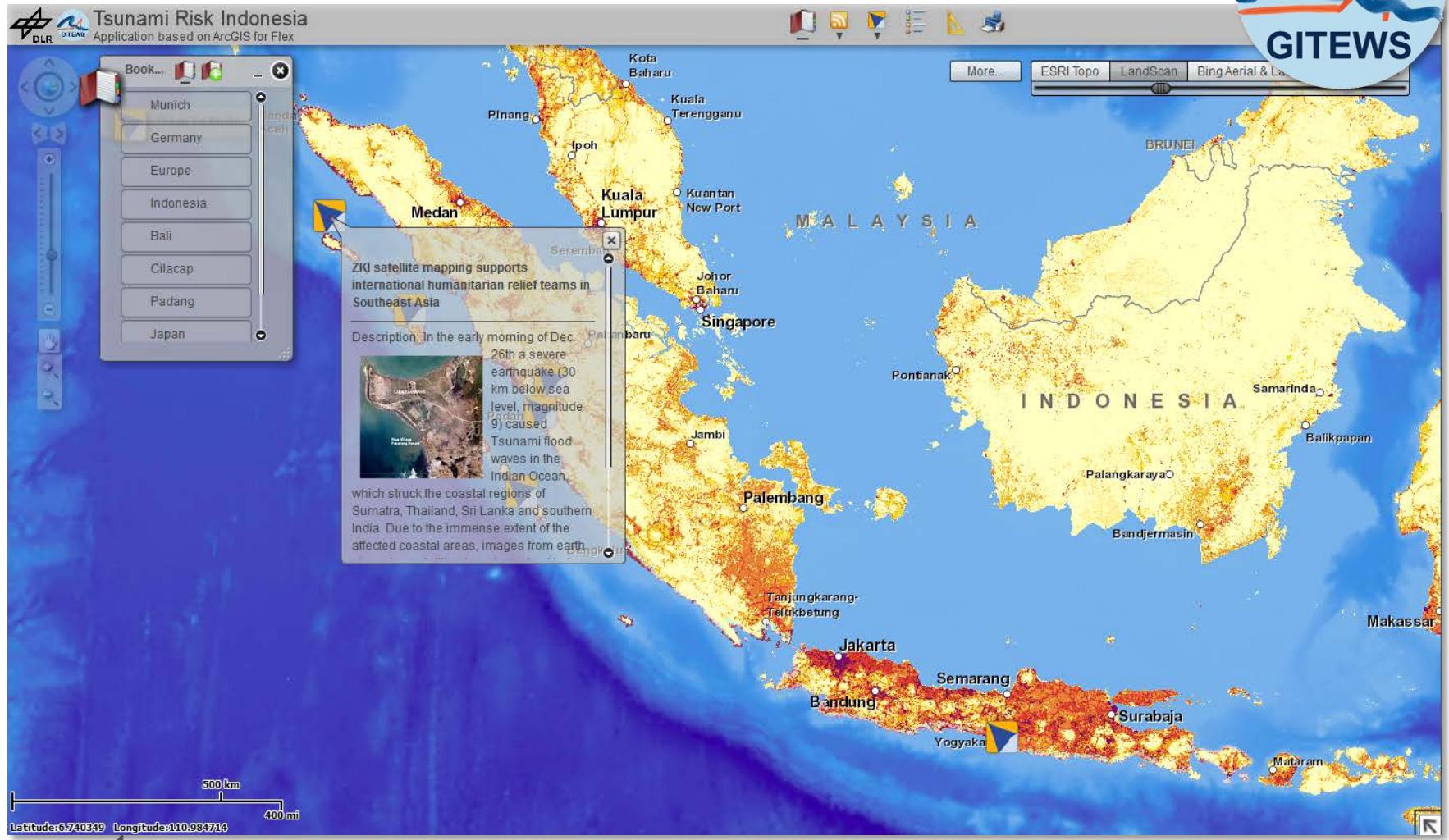


Pilot Areas
(detailed assessment, 25k)

Publishing Risk Information via the Web

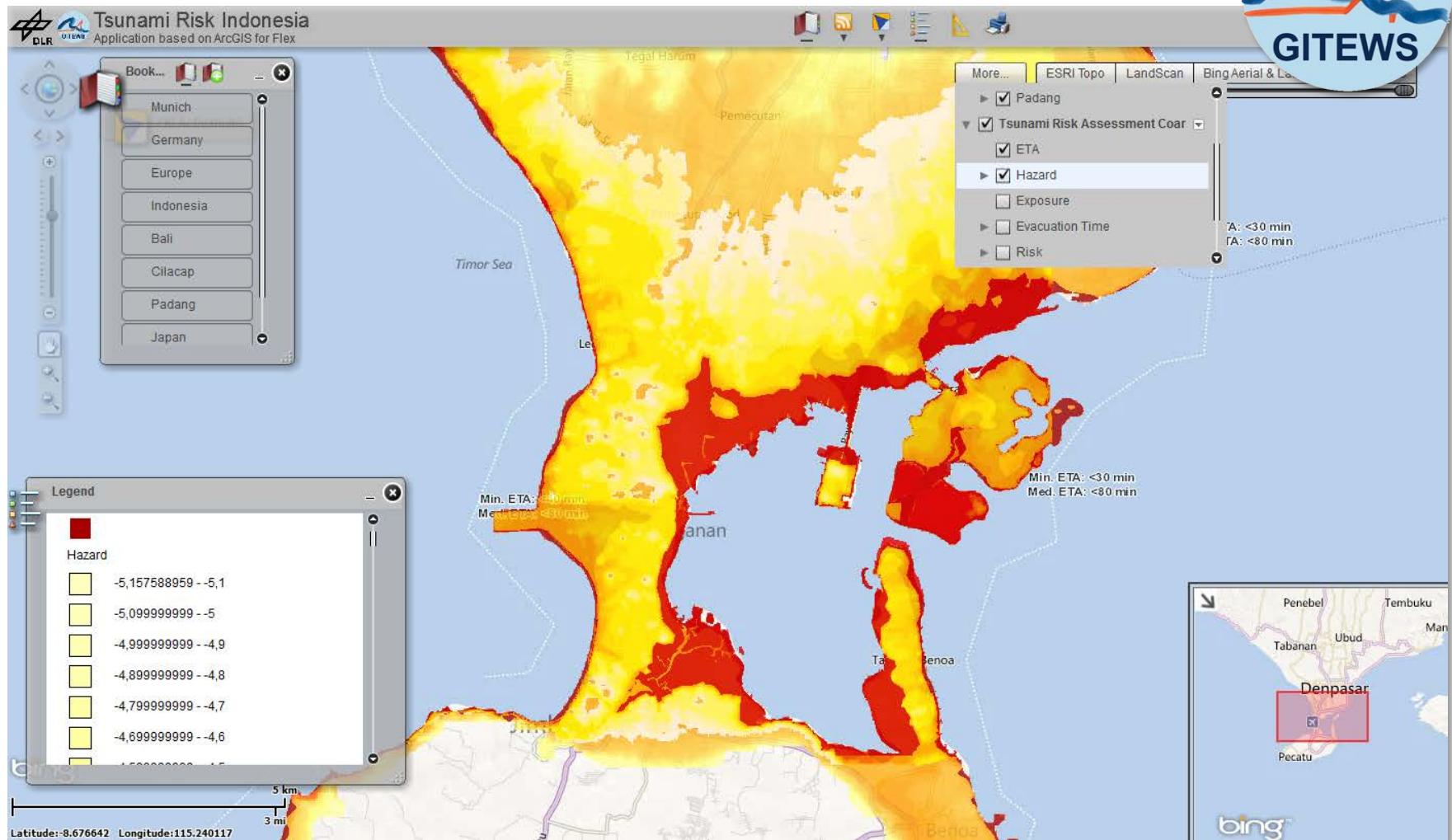


Publishing Risk Information via the Web



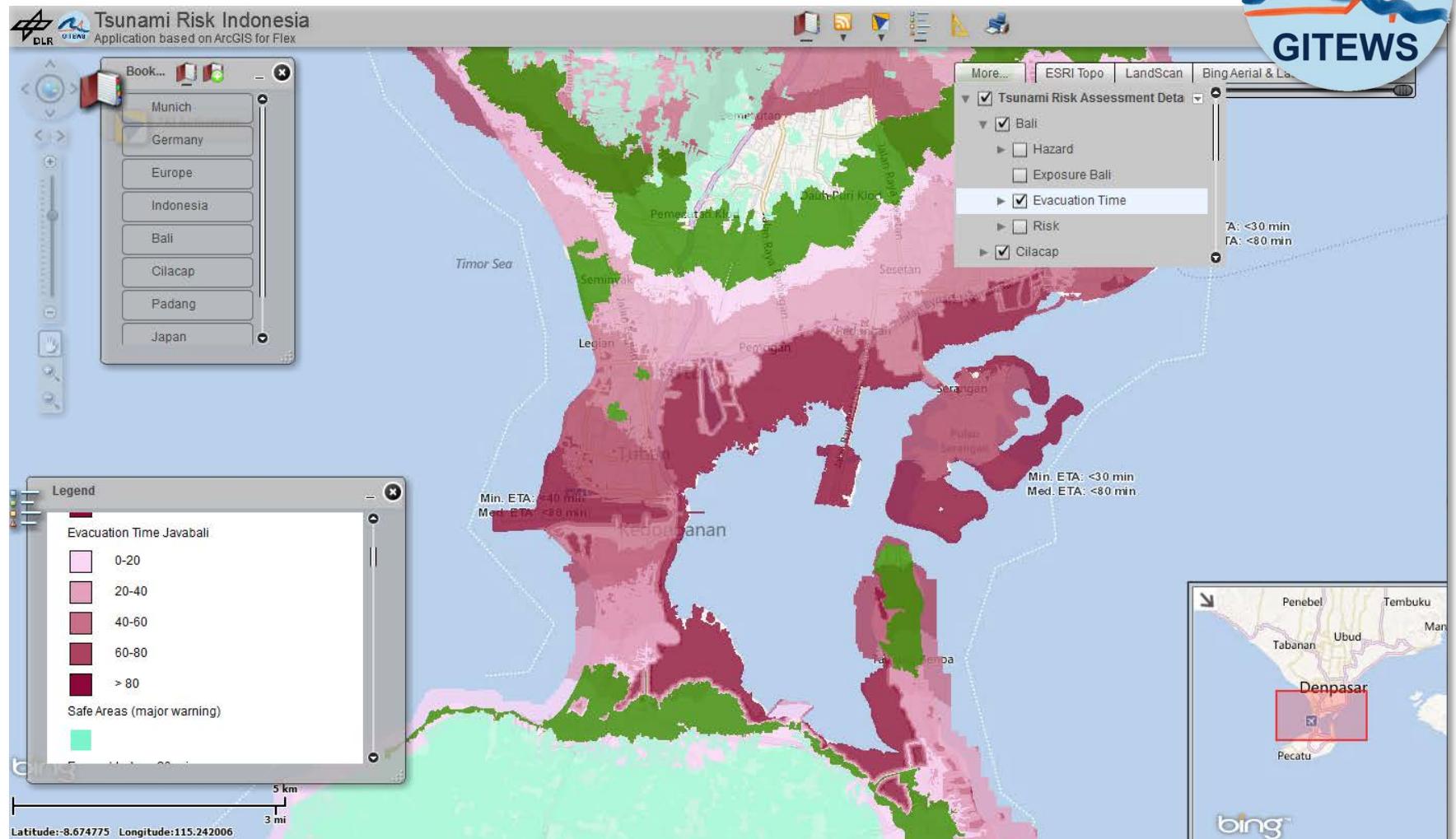


Publishing Risk Information via the Web





Publishing Risk Information via the Web



Ongoing Research and Development (Examples)



Disaster and Civil Security: The VABENE Project

Airborne Platform (FX)



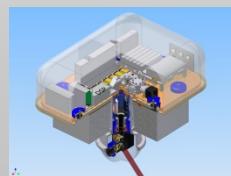
3K Camera System (MF)

SAR (HR)

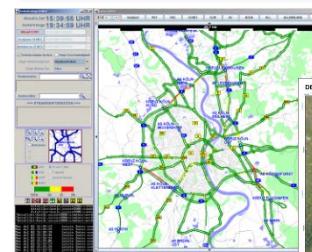
Microwave Link (KN/MF)
20 MBit/s

Data Transmission

Optical Link (KN)
1.25 GBit/s



EmerT-Portal (TS)



ZKI Portal (DFD)



DMT (KN)



Mobile Ground Station (KN)

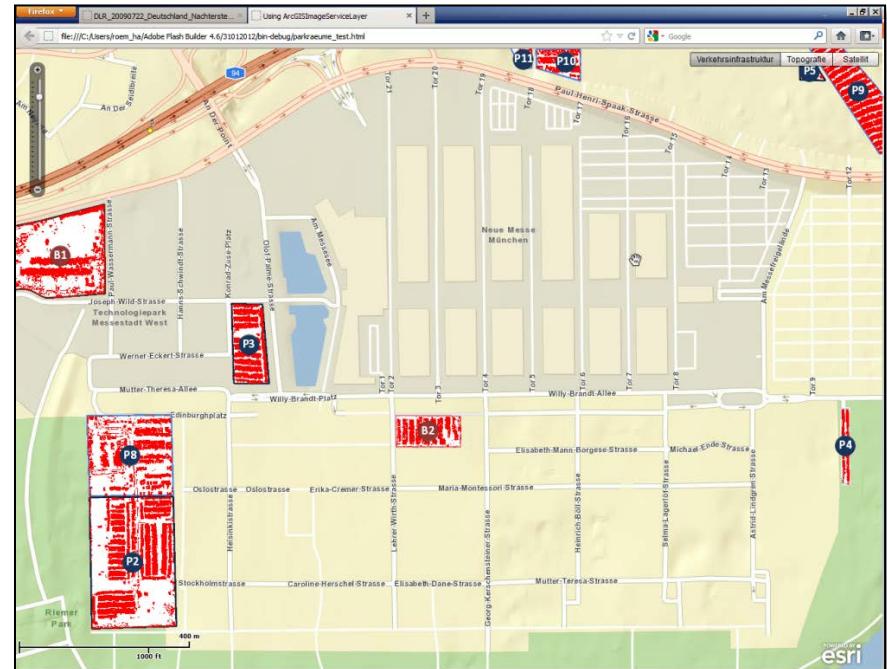
Disaster and Civil Security: The VABENE Project

The screenshot shows a web page titled "DLR - ZKI - Parkplatzbelegung am NRW-Tag sowie am Tag der Deutschen Einheit 2011 in Bonn, Deutschland - Microsoft Internet Explorer 6". The page displays several links to download maps related to parking space utilization on specific dates in 2011. The links include:

- Parkplatzbelegung am NRW-Tag sowie am Tag der Deutschen Einheit 2011 in Bonn, Deutschland - 27. September 2011, 20:38 MESZ
- Parkplatzbelegung - Parkraum Nord; 2. Oktober 2011, 11:45 Uhr
- Parkplatzbelegung - Parkraum Ost; 3. Oktober 2011, 9:45 Uhr
- Parkplatzbelegung - Parkraum Nord; 3. Oktober 2011, 09:45 Uhr

Each link provides a thumbnail image of the map and a brief description.

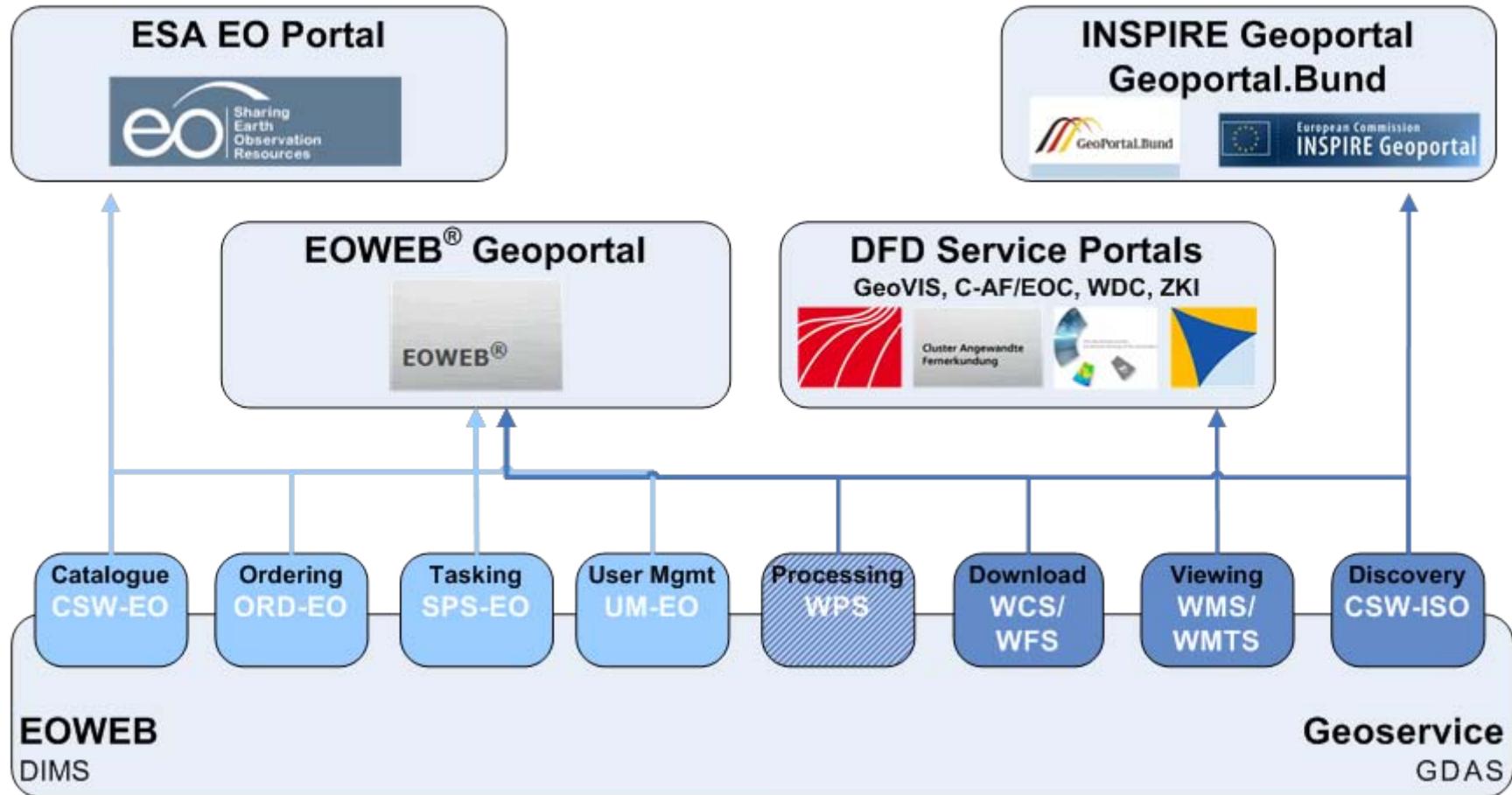
downloadable maps and map series

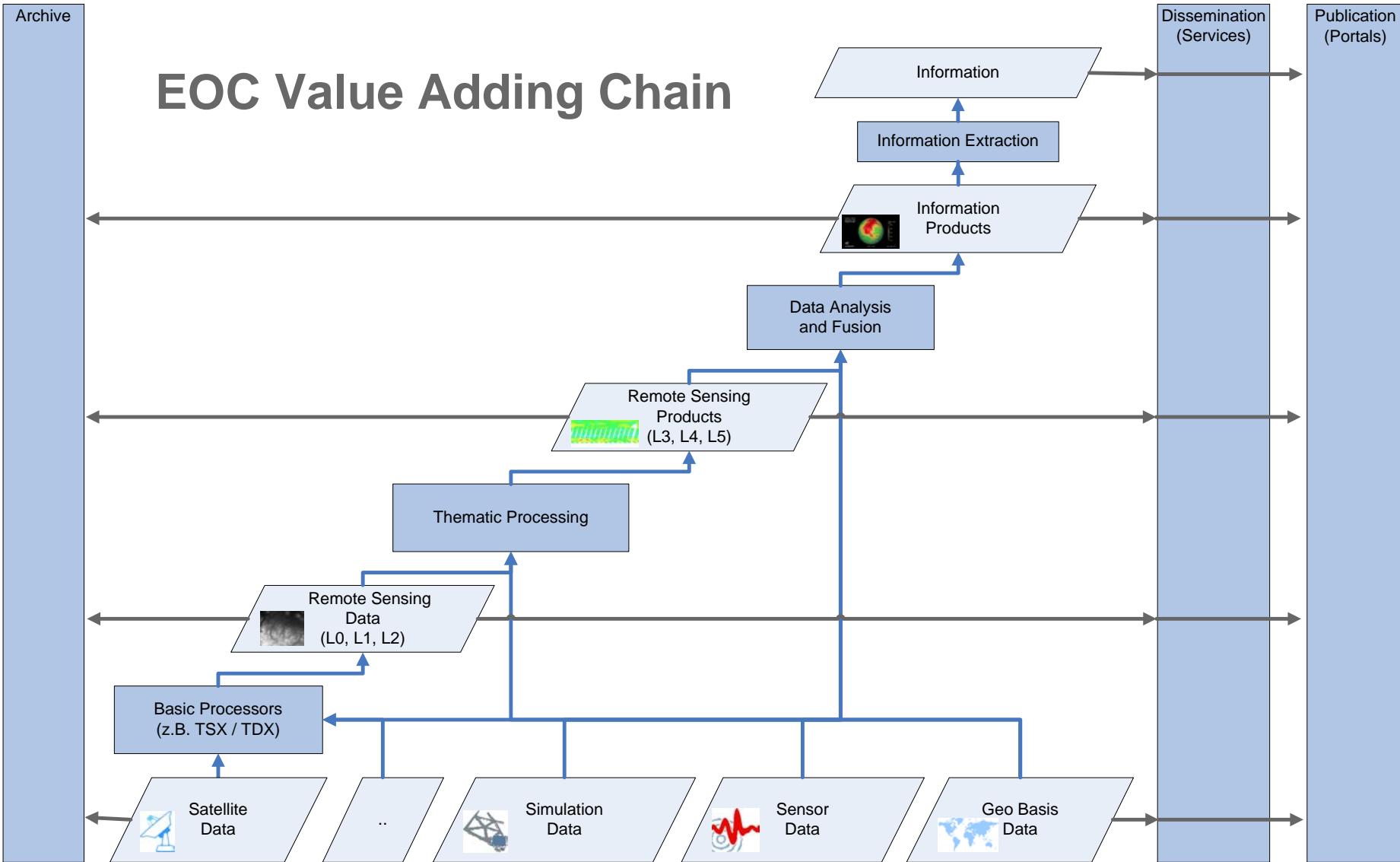


services and interactive web applications



EOC Geodata Access (GDAS)





3D/4D Visualization of Disaster Management Information



TerraExplorer - U:\Skyline\TerraExplorer Kit-Pakistan2005\Default.fly

File View Navigation Measurements Tools Help

Project Navigation Measurements Terrain Route

LocationManager VisibilityManager LocationManager Information

3D | Legend | MapInfo

Overview Notes

- general overview
- northern overview
- central overview
- southern overview
- bird eye overview from north
- bird eye overview from south
- bird eye overview from west
- bird eye overview from east

Damaged and blocked roads Notes

- Damaged road and damaged bridge north of Muzaffarabad
- Possibly blocked road near the Red Fort
- Damaged Road in the City of Muzaffarabad
- Damaged roads near Jalalabad Stadium
- Damaged road south of Muzaffarabad
- Damaged road west of Muzaffarabad

Important Places and Locations Notes

- Muzaffarabad Airport
- Jalalabad Stadium

Navigation Map

Navigation Map | MeasurePolyline |

NavMapMuzaffarabad

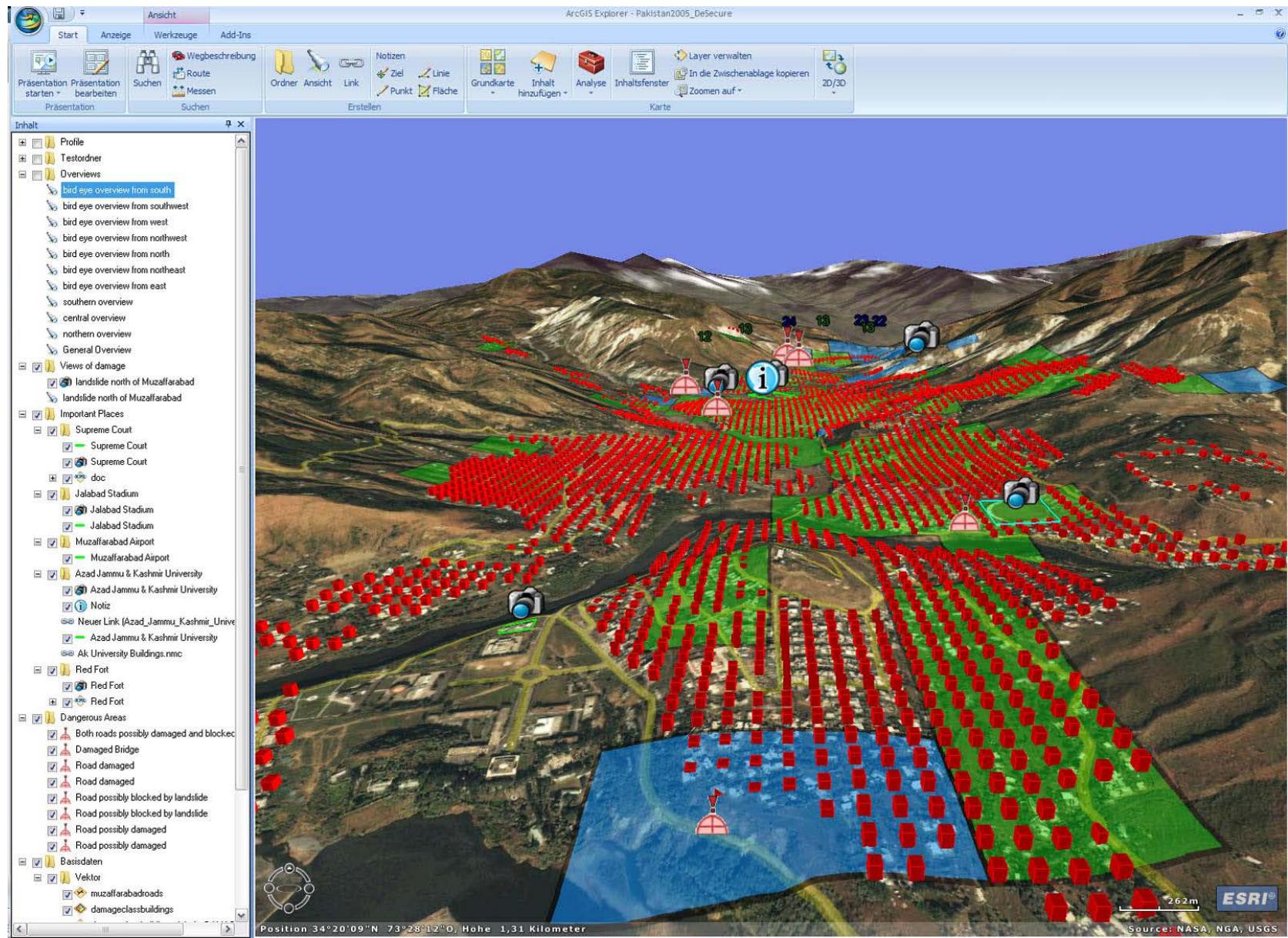
Failed to load map

Messages

UN - OSOCC
Road possibly damaged
Neelum river
Office
Jalalabad Stadium
Supreme Court of Azad Kashmir
Mosque Bilal Masjid
State Bank of Pakistan
Road damaged
Pearl Continental Hotel
Jehlum River
islamic Assembly
Prime Minister secretariat

Direction: 357.3° Long: 73°28'15.349" Speed: 0.00 Km/h
Tilt: -10.6° Lat: 34°19'58.867" Alt: 372.82 Meters AGL

Buffering 1 2 3 4 5 STOP



Thank you for your attention!

