



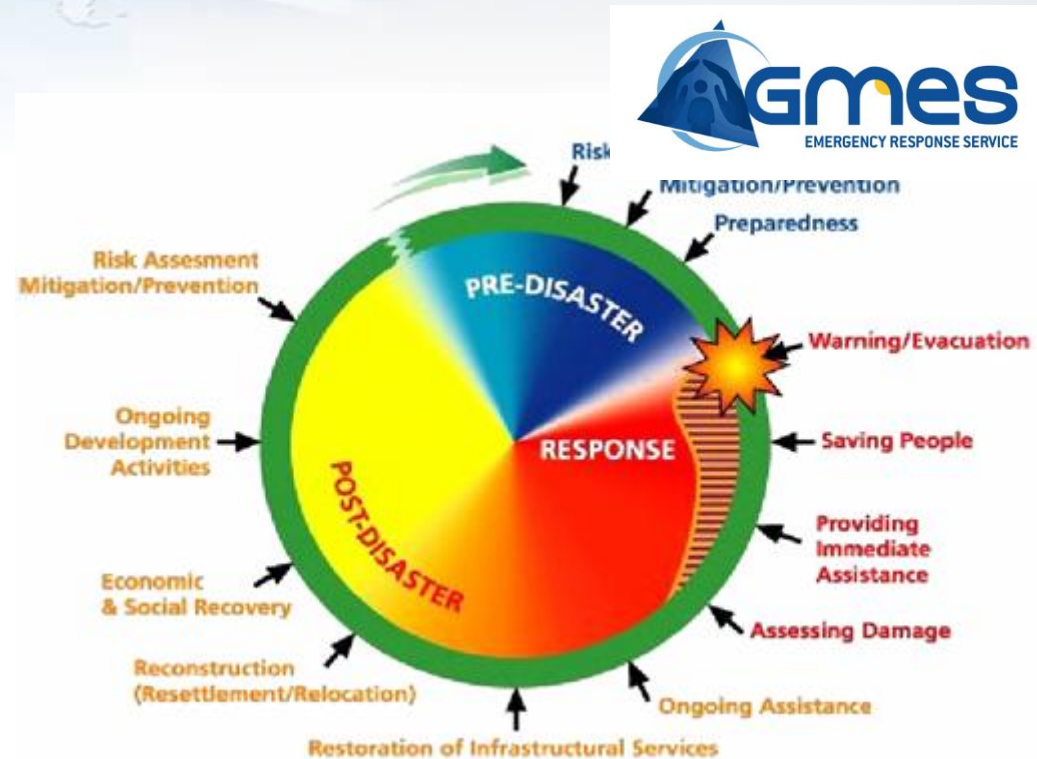
SAFER and the GMES Emergency Response Service:

WFP experience

SAFER project peculiarities

Implement and to validate a pre-operational version of the GMES Emergency Response Service.

Provide an operational capacity in Europe and worldwide, with benefits in terms of better quality of life, better health, and increased safety.



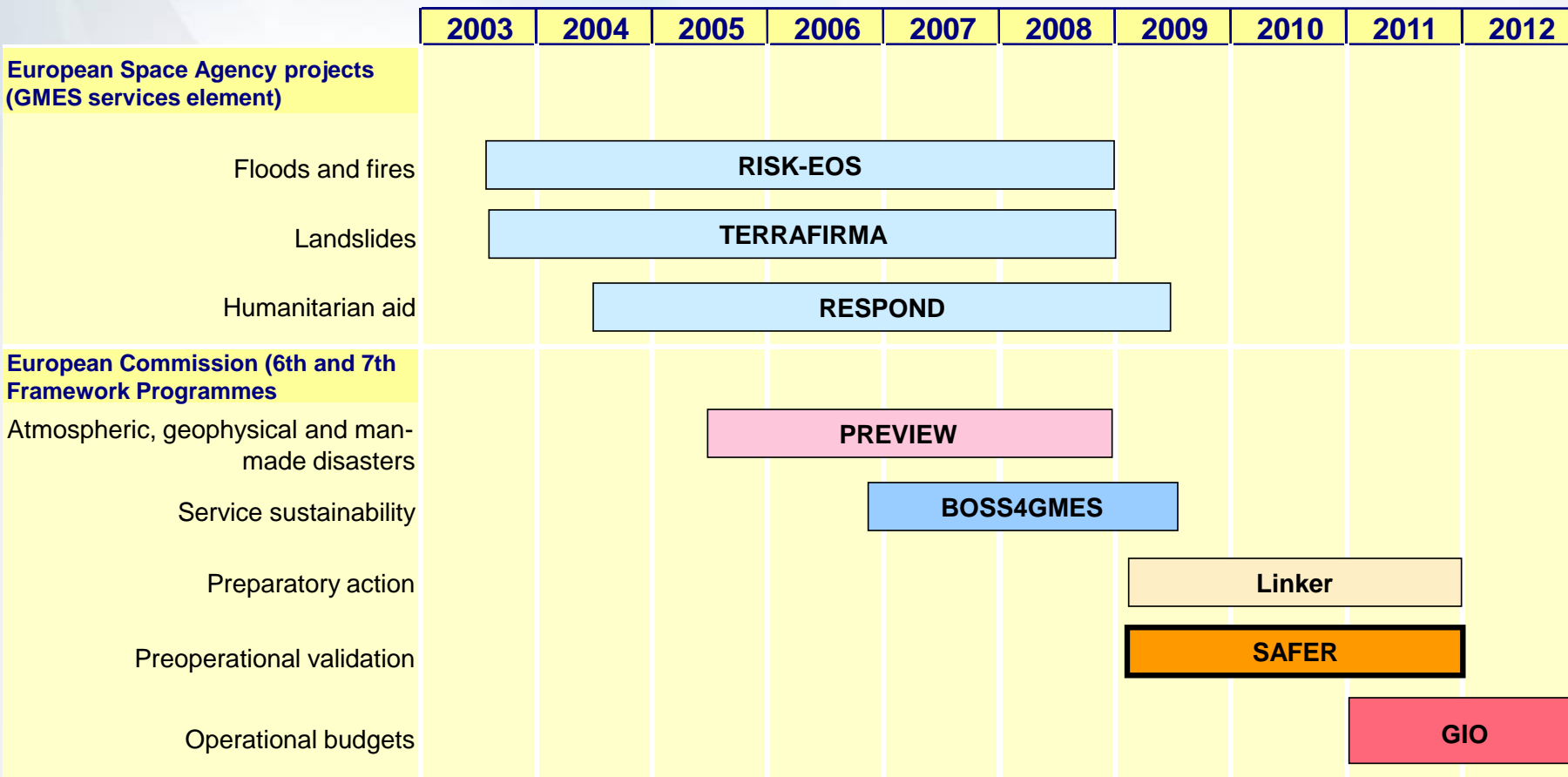
SAFER : key figures

Services and Applications For Emergency Response

- 🌐 3 years project
- 🌐 Budget: 40 M€. EC Grant: 27 M€
- 🌐 53 partners from 16 countries:
 - 29 private organisations (18 SME)
 - 24 public organisations
- 🌐 Coordinated by private sector
- 🌐 Service management board: ASTRIUM, DLR, e-GEOS
- 🌐 Project User Board: DPC, WFP, BBK, UNOSAT, DSC
- 🌐 Project ends April 2012



SAFER research background



Builds upon research

Users have a say on many project components

SAFER is a user centric project



Products & Categories

1. GENERAL SERVICE DESCRIPTION P.4

2. GEOGRAPHIC REFERENCE PRODUCTS P.5

PREPAREDNESS/PREVENTION & DISASTER RISK REDUCTION PRODUCTS

4.1	Hazard	p. 8
4.2	Vulnerability	p. 8
4.3	Key Assets	p. 8
4.7	Information dossier	p. 9
4.8	Refugee / IDP	p. 10
4.9	Evacuation Plan	p. 10

2. GEOGRAPHIC REFERENCE PRODUCTS P.5



RECOVERY PRODUCTS

4.3	Key Assests	p. 8
4.4	Detailed Damage Assessment	p. 9
4.5	Medium-term Impact	p. 9
4.6	Recovery Status	p. 9
4.7	Information Dossier	p. 9
4.8	Refugee / IDP	p. 10

2. GEOGRAPHIC REFERENCE PRODUCTS P.5 (RUSH MODE)

EMERGENCY RESPONSE PRODUCTS

3.1	Disaster Extent	p. 6
3.2	Damage Assessment	p. 6
3.3	Monitoring	p. 7
3.4	Affected Population	p. 7
3.5	Briefing Note	p. 7
4.8	Refugee / IDP	p. 10
4.9	Evacuation Plan	p. 10

Activ. #	Country	Country2	Type Disaster	Activating Organization
74	09.01.2011	Belgium	Flood	Service Public de Wallonie
76	15.01.2011	Germany	Flood	BBK
77	21.01.2011	Germany	Flood	BBK
79	10.02.2011		Other	G-MOSAIC
81	18.02.2011	Norway	Tech. Disaster	MIC
83	22.02.2011	New Zeland	Earthquake	International Charter
85	02.03.2011	Libya	Pop Movement	WFP
88	10.04.2011	Bulgaria	Fire	Min. of Interior Bulgaria
89	26.04.2011	Belgium	Fire	SPF Belgium
90	02.05.2011	Netherland	Fire	National Focal Point
91	12.04.2011	Spain	Earthquake	Spanish NFP
92	04.06.2011	Yemen	Evacuation	MIC
93	11.07.2011	Yemen	Conflict	OCHA
94	12.07.2011	Portugal	Fires	Portugal NFP
95	19.07.2011	Cyprus	Explosion	Cyprus NFP, MIC
96	26.07.2011	HoA	Humanitarian Crisis	GMLZ & WFP
98	11.08.2011	Italy	Fires	Italian Civil Protection
99	22.08.2011	HoA	Humanitarian Crisis	GMLZ
100	14.09.2011	Poland	Exercise	Polish State Fire Service
101	26.08.2011	Greece	Fires	General Secretariat For Civil Protection
102	09.09.2011	Pakistan	Flood	WFP
103	15.09.2011	Bulgaria	Fires	Bulgarian NFP
104	20.09.2011	Pakistan	Flood	WFP

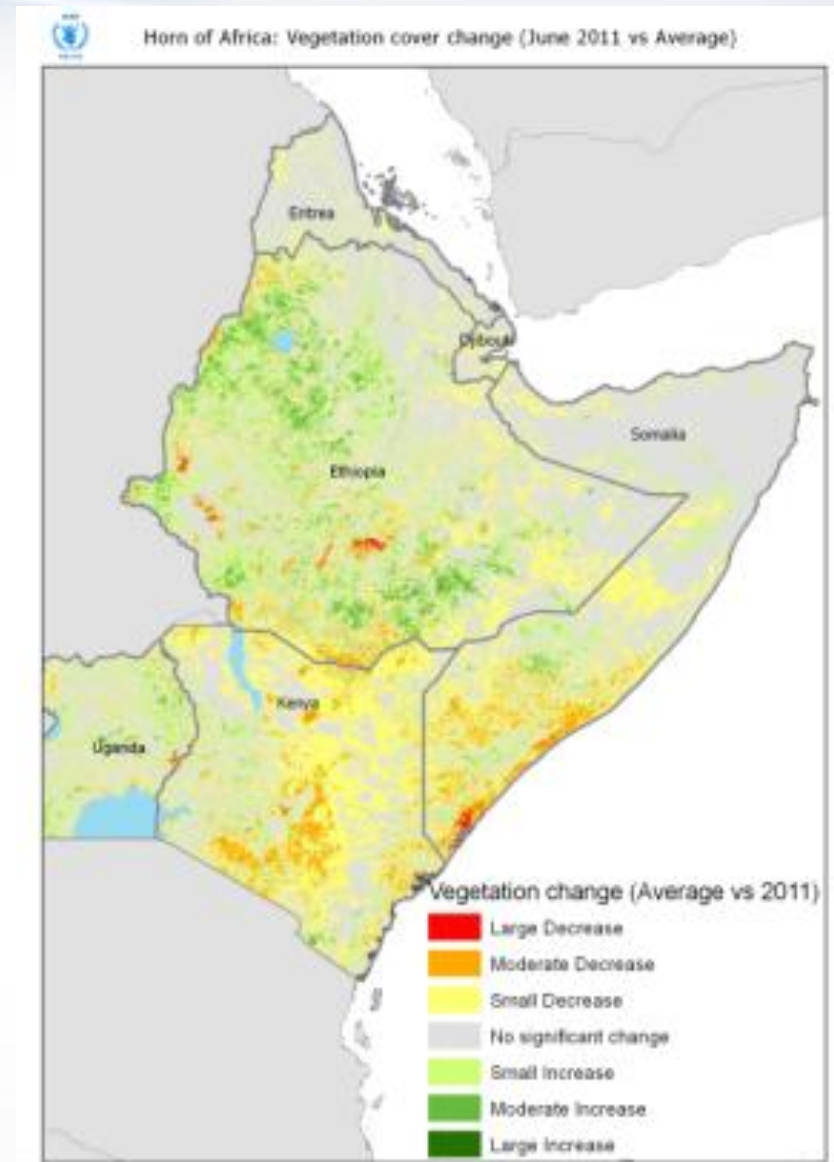


A Case Study

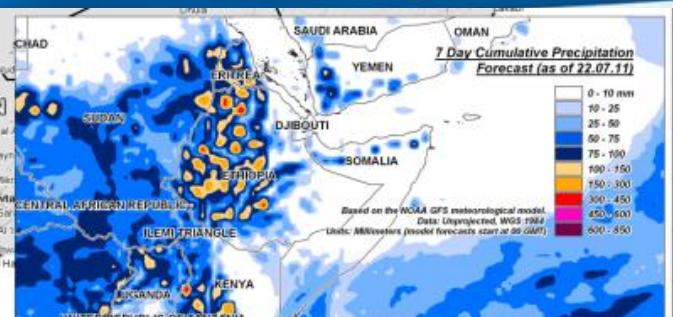
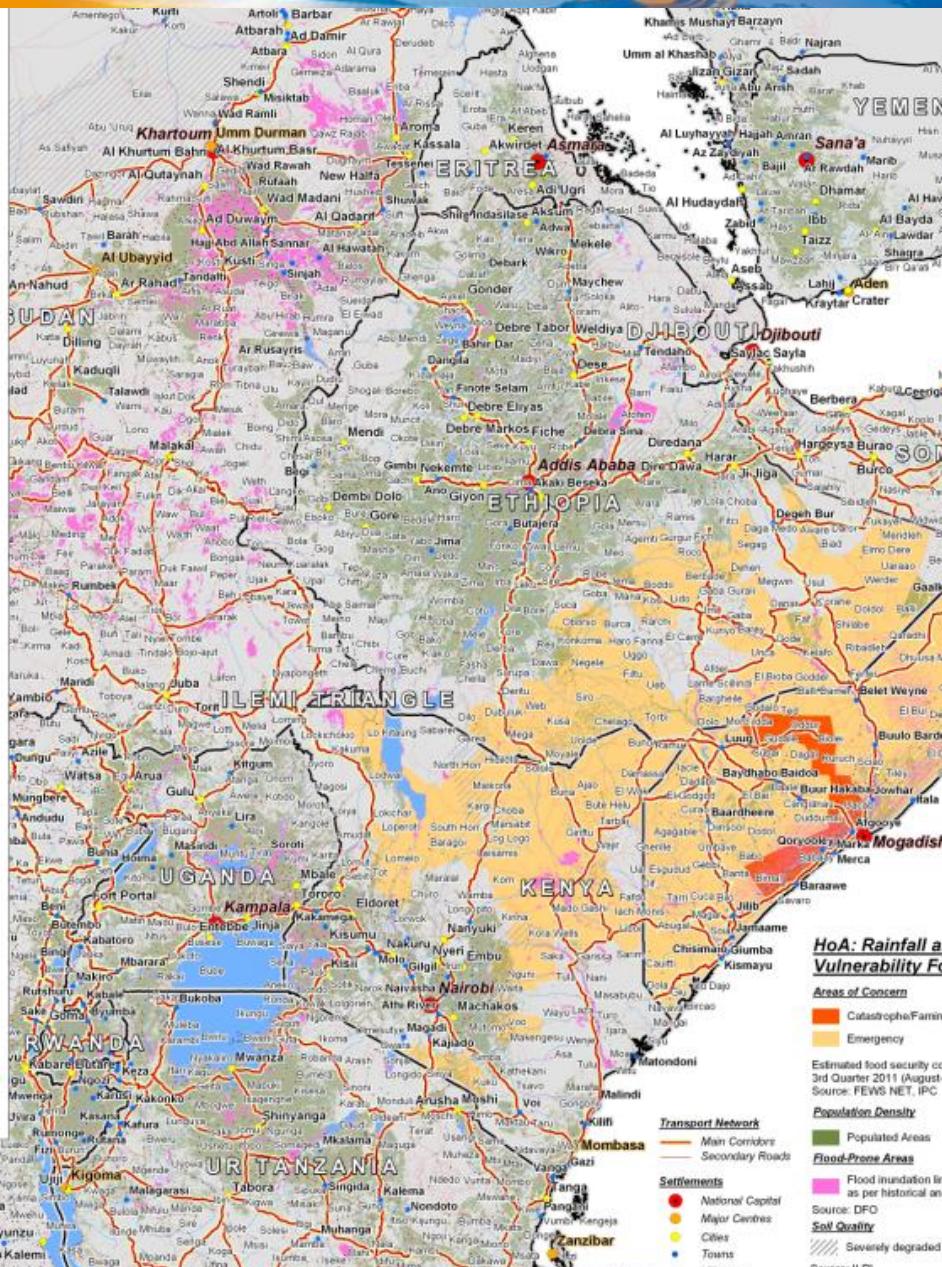
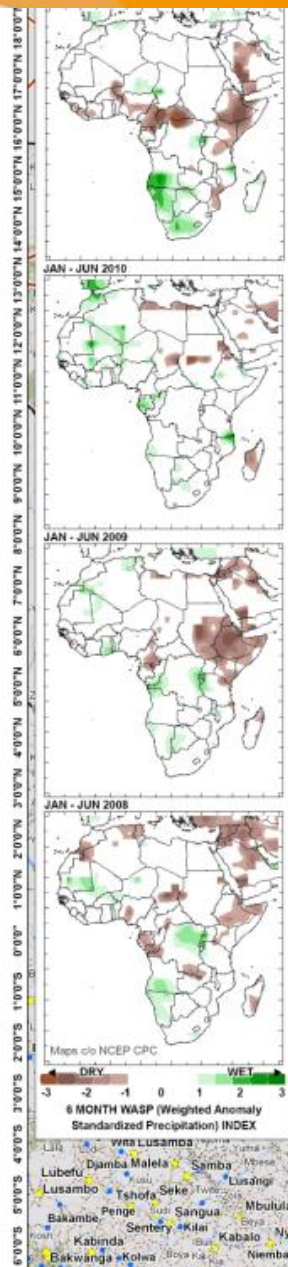
Horn of Africa

HoA is a complex, slow onset emergency

- Like any slow onset emergency WFP started monitoring months in advance
- Several of data sources have been used, including remote sensing and field information



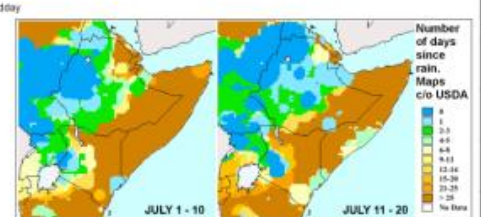
In July 2011 the situation gets worse



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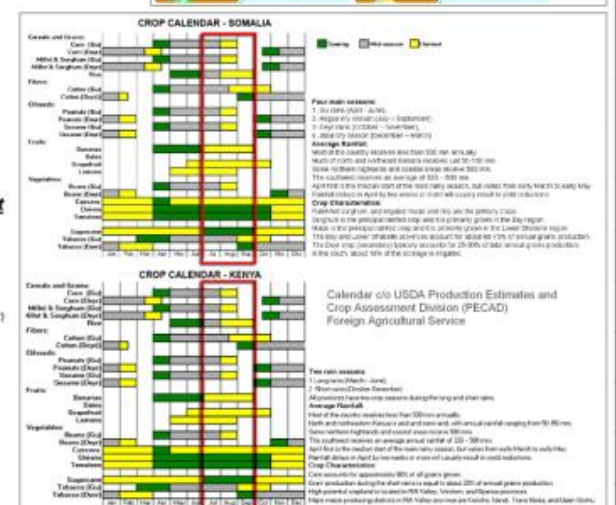
Map compiled by WFP Emergency Preparedness Branch (OIEP) 21.07.11

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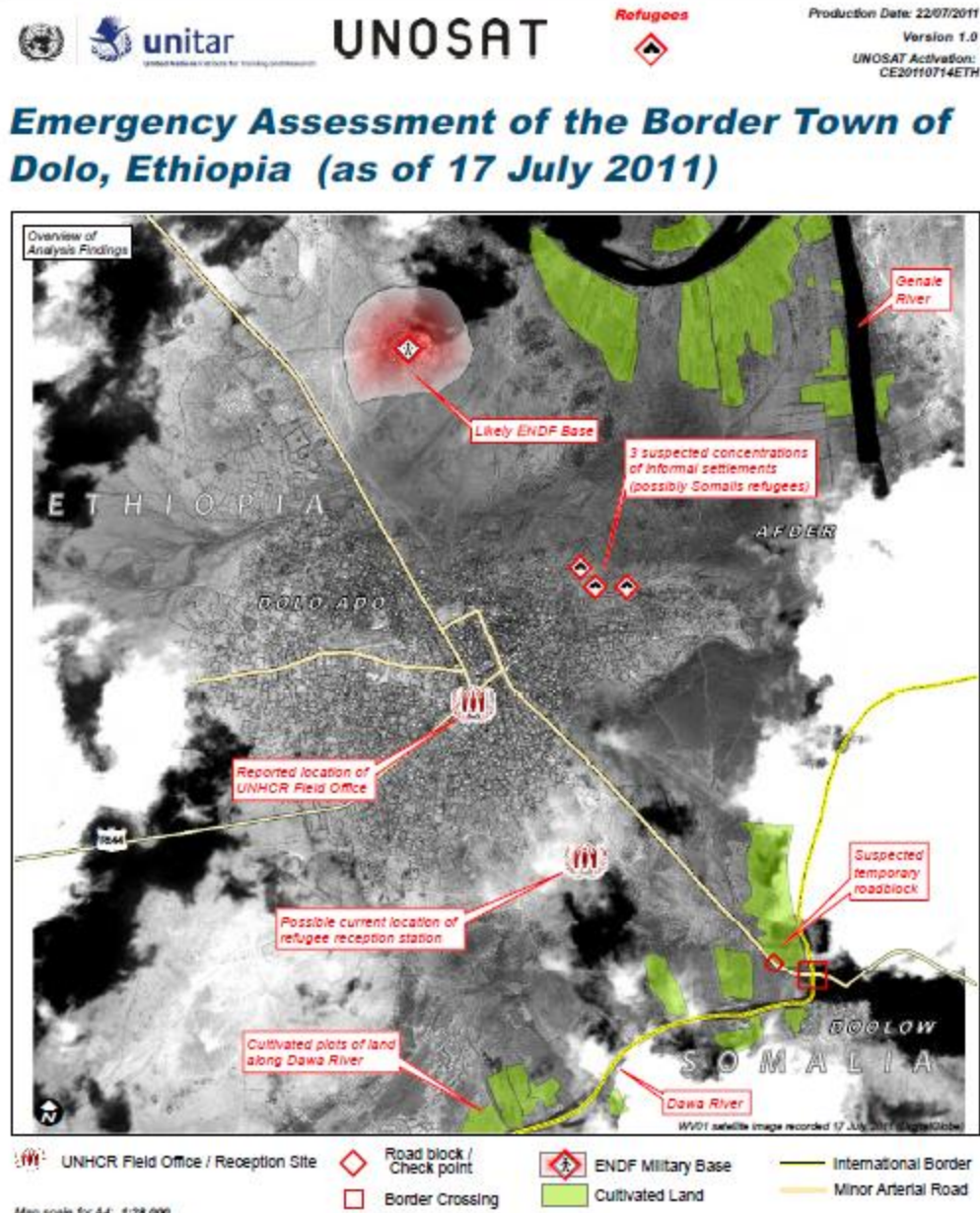
HoA: Rainfall and Vulnerability Forecast

- Areas of Concern**
- Catastrophic/Famine
 - Emergency
- Transport Network**
- Main Corridors
 - Secondary Roads
- Settlements**
- National Capital
 - Major Centres
 - Cities
 - Towns
 - Villages
- Population Density**
- Populated Areas
- Flood-Prone Areas**
- Flood inundation limits as per historical analysis
- Soil Quality**
- Source: DFO
 - Severely degraded soil
- Source: ILRI



End of July the HoA is in the news

- 🌐 The International community start using consistently RS
- 🌐 Refugee caps and border towns are monitored
- 🌐 26 July BBK activated SAFER emergency services over refugee camps in Ethiopia on behalf of GMLZ/ THW



Increased requests for multiple needs and actors

Needs

- 🌐 Changes in refugee camps to understand which is the number of people to support
- 🌐 Population movements: what is detectable is population concentration and new temporary shelters

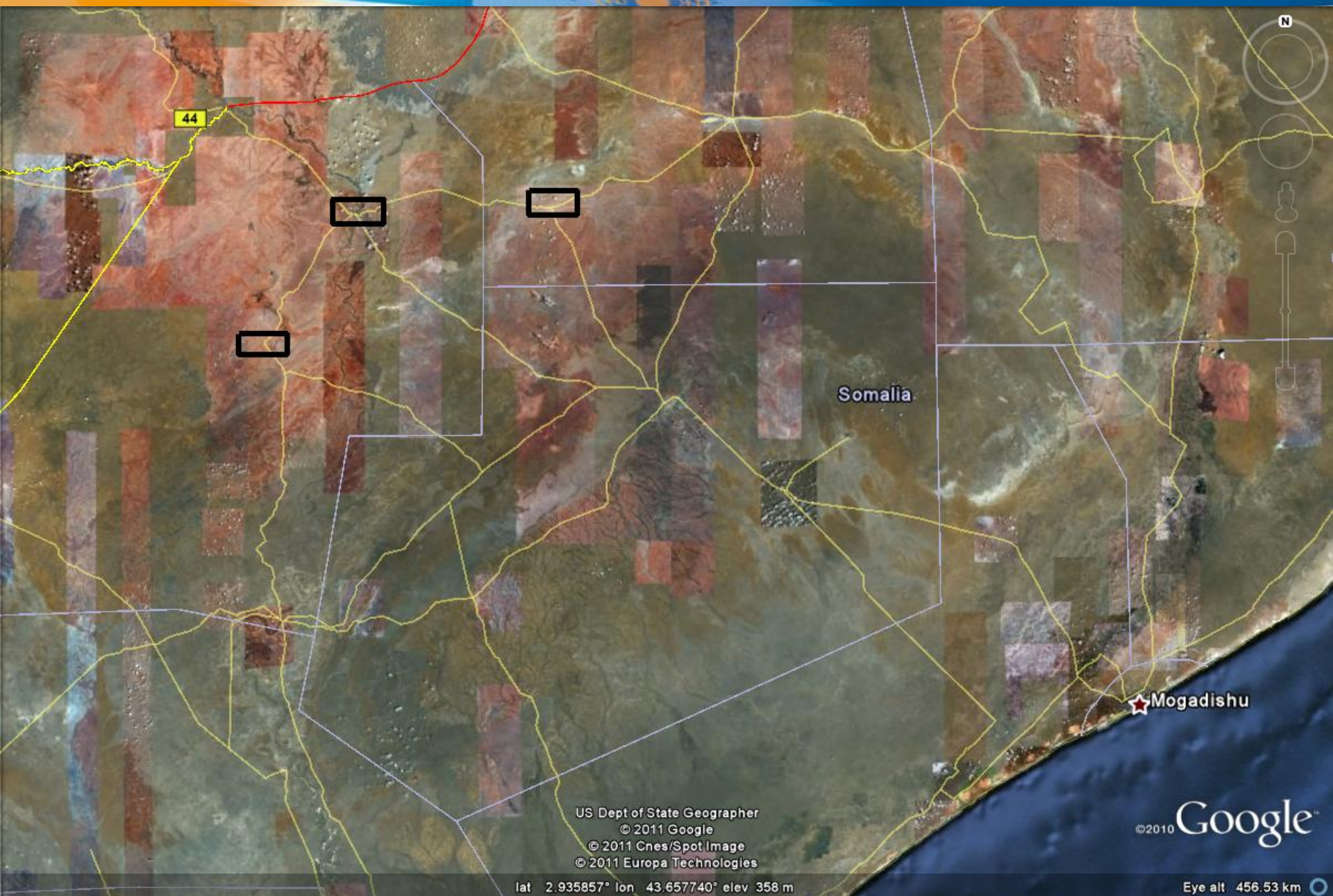
Actors

- 🌐 SAFER (via WFP)
- 🌐 US Department of State & UNOSAT
- 🌐 UN OOSA
- 🌐 Google (emergency team)

Proactive users

- 🌐 WFP, UNHCR and OCHA
- 🌐 GMLZ/ THW

28 July – WFP requests SAFER additional activation



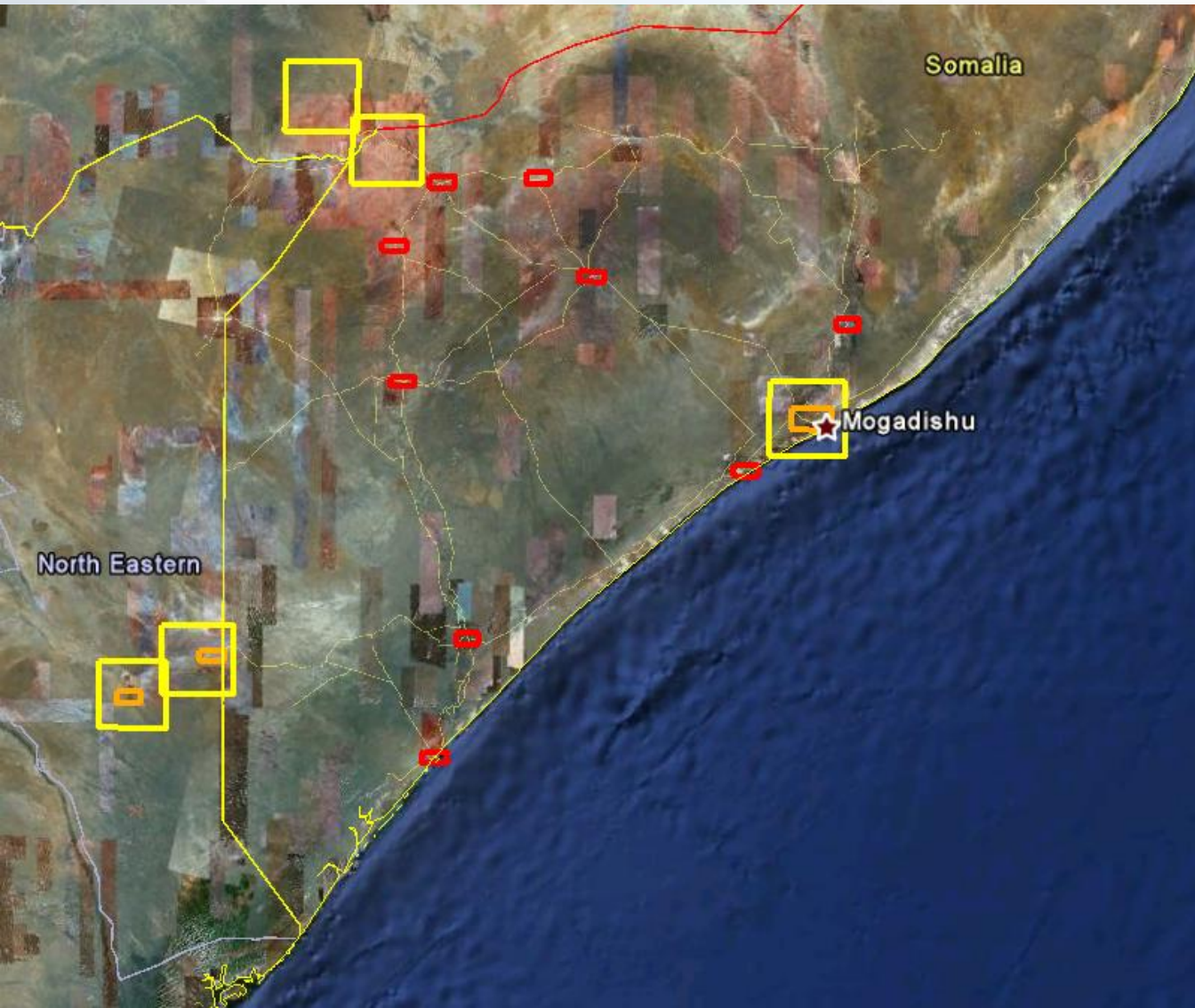
US Dept of State Geographer
© 2011 Google
© 2011 Cnes/Spot Image
© 2011 Europa Technologies



© 2010 Google

lat 2.935857° lon 43.657740° elev 358 m

Eye alt 456.53 km

Total WFP priorities as per field teams



-  Priority 1
-  Priority 2
-  Priority 3

28 July first coordination summary sent to partners

1. So far we have 3 requests of areas to monitor:
 - a. From GMLZ/THW that have been activating SAFER (refugee camps monitoring)
 - b. WFP with three groups of priority areas (Population movement monitoring)
 - c. UNHCR with a generic request to monitor refugee camps
2. WFP and UNOSAT agree to cooperate sharing responsibilities:
 - a. UNOSAT works as focal point with US Department of State
 - b. WFP works as focal point with SAFER
3. WFP and UNOSAT will maintain an inventory of AoI and acquisition footprints of acquired areas
4. Dissemination:
 - a. SAFER agree to have a dissemination hub within his portal that includes UNOSAT products
 - b. UNOSAT and UNOOSA are looking at feasibility of an FTP site
5. UNOOSA will post all activities in its knowledge portal (crisis wiki)

UN OOSA Portal

For additional information. The KML files are available for download at the bottom of



User Requests

These will be updated on an ongoing basis

- Areas of Interest-AOIs (sourced 28.07.2011, UNOCHA)
- SAFER User Requests (sourced 29.07.2011, WFP)

Satellites Tasked/Acquisitions

These will be updated on an ongoing basis

- SAFER Acquisitions (sourced 29.07.2011, WFP)

Mapping Products

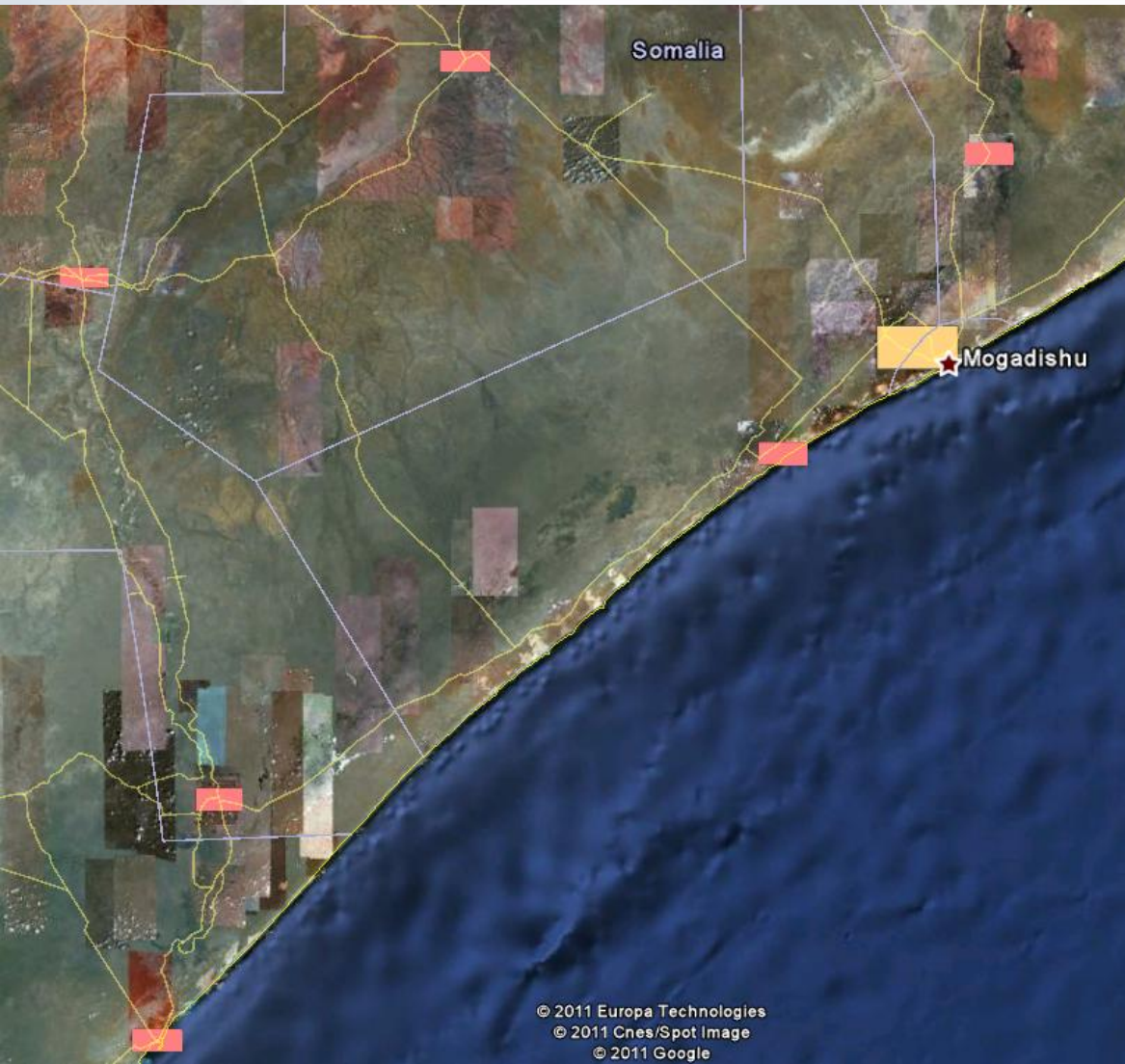
These will be updated on an ongoing basis

- Refugee Camp Map - Detail - Ethiopia - Buramino (sourced 29 July 2011, DLR)
- Crop Growth Monitoring with MODIS in the north part of Sudan (sourced 11 July 2011, NDRCC)

6. SAFER-IDP Camps in Ethiopia

Area	Satellite/Instrument	Remarks	Date	Link	Map of Refugee Camps in Dolo Ado Region, N.Eastern Ethiopia (August 2011, UNITAR)
Dolo Ado	Quickbird, 0.6 m res. IKONOS, 1.0 m res.	Last update August 31	September 1, 2011	ZKI/DLR	Map of Dolo Ado Region, N.Eastern Ethiopia (August 2011, UNITAR)
Dolo Ado	IKONOS, 1.0 m res.	Last update August 4	September 1, 2011	ZKI/DLR	Map of Dolo Ado Region, N.Eastern Ethiopia (August 2011, UNITAR)
Dolo Ado	SPOT-5, 2.5 m res.	Last update August 2	September 1, 2011	ZKI/DLR	Map of Dolo Ado Region, N.Eastern Ethiopia (August 2011, UNITAR)
Kobe	Worldview-2, 0.5 m res. Quickbird-2, 0.6 m res.	Last update August 31	September 1, 2011	ZKI/DLR	Map of Dolo Ado Region, N.Eastern Ethiopia (August 2011, UNITAR)
Kobe	Worldview-2, 0.5 m res. SPOT-5, 2.5 m res.	Last update August 31	September 1, 2011	ZKI/DLR	Map of Dolo Ado Region, N.Eastern Ethiopia (August 2011, UNITAR)
Kobe	Quickbird-2, 0.6 m res. SPOT-5, 2.5 m res.	Last update August 31	September 1, 2011	ZKI/DLR	Map of Dolo Ado Region, N.Eastern Ethiopia (August 2011, UNITAR)
Melkadida	Quickbird, 0.6 m res.	Last update August 31	September 1, 2011	ZKI/DLR	Map of Dolo Ado Region, N.Eastern Ethiopia (August 2011, UNITAR)
Melkadida	SPOT-5, 2.5 m res.	Last update August 1	September 1, 2011	ZKI/DLR	Map of Dolo Ado Region, N.Eastern Ethiopia (August 2011, UNITAR)
Bokolmanyo	GeoEye, 0.5 m res.	Last update August 24	September 1, 2011	ZKI/DLR	Map of Dolo Ado Region, N.Eastern Ethiopia (August 2011, UNITAR)

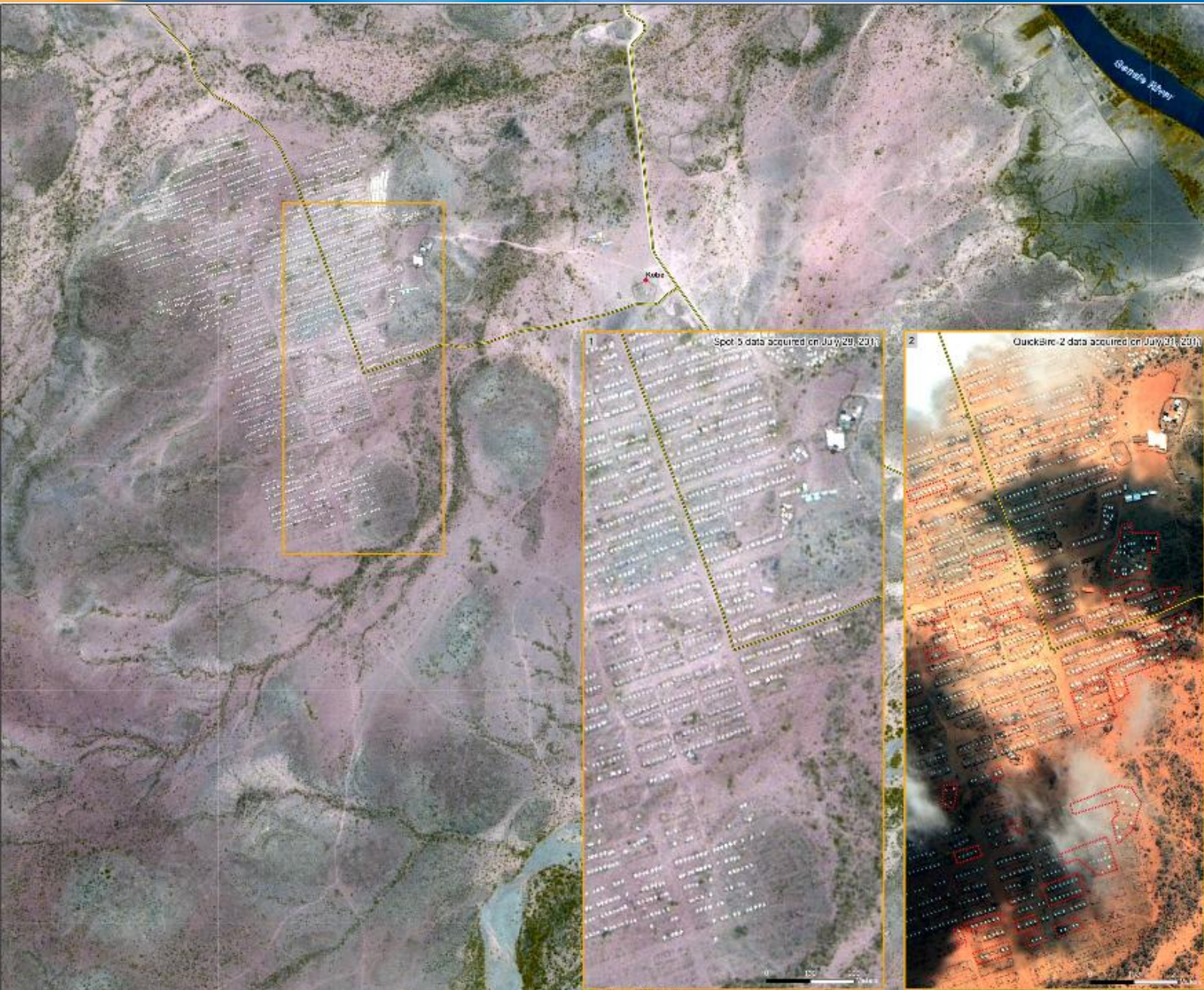
29 July - WFP activates Emergency Support



Labour share

-  Astrium
-  EUSC

29 July DLR - Ethiopia, Kobe Refugee Camp Map



SAPER Activation No. 08
Product No. 08

ETHIOPIA - Kobe

Situation as of July 28/31, 2011

Refugee Camp Map - Detail

Scale: 1:7.500

Location Diagrams

Legend

Building	Tent	Camp/Shadow
Perimeter of refugee camp	Wellhead	Water
Area tented observed on July 28, 2011	Wellhead	Water
Area tented observed on July 31, 2011	Water	Water

Interpretation

Due to famine in East Africa and the political situation in Somalia thousands of people are fleeing the country to neighbouring parts of Kenya and Ethiopia. Among these destinations are the refugee camps in the area around Dada Ab in Ethiopia which already housed about 100.000 people. The map shows the refugee camp near Kobe in Gashad 2 (Kobe) (Kobe refugee camp) observed on July 27, 2011 (QuickBird-2) and July 29, 2011 (SPOT-5) images (see frame 1). The SPOT-5 image (see frame 2) was used to highlight recent changes in the camp structure in comparison to SPOT-5 data of July 22, 2011 (see frame 1). The SPOT-5 image (see frame 2) also shows the wellhead.

Important note: Due to heavy cloud cover on the QuickBird-2 image, only changes in the eastern part of the refugee camp could be identified.

Cartographic Information:

Scale: 0 250 500 (m)

Local projection: UTM Zone 39N, Datum: WGS 1984
Geographic projection: East of Greenwich, Datum: WGS 1984
Scale: 1:7.500 for DLRAT users

Data Sources:

Vector Data	SPOT-5 2011
SPOT-5 (2.5 m)	QuickBird-2 (2.5 m)
QuickBird-2 (2.5 m)	SPOT-5 2011 (Interpolation SPOT-5 2.5 m)

Framework:

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The 2011 data maps are constantly updated. Please refer to the website for the latest version of the product.

Map produced July 28, 2011 by DLR
Updated Aug. 31, 2011 by DLR
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dlr@dca.de <http://www.dlr.de/dca>

Logos: European Commission, German Federal Government, German Aerospace Establishment, Center for Satellite Based Crisis Information - Emergency Mapping & Disaster Monitoring, German Remote Sensing Data Center, German Aerospace Center.



unitar
United Nations Institute for Training and Research

UNOSAT



Production Date:
06/09/2011
Version 3.0
UNOSAT Activation:
DR20110714HOA

UPDATE 2: CONTINUED EXPANSION OF SOMALI IDP CAMPS IN HODAN DISTRICT, MOGADISHU, SOMALIA (AS ON 4 SEPTEMBER 2011)

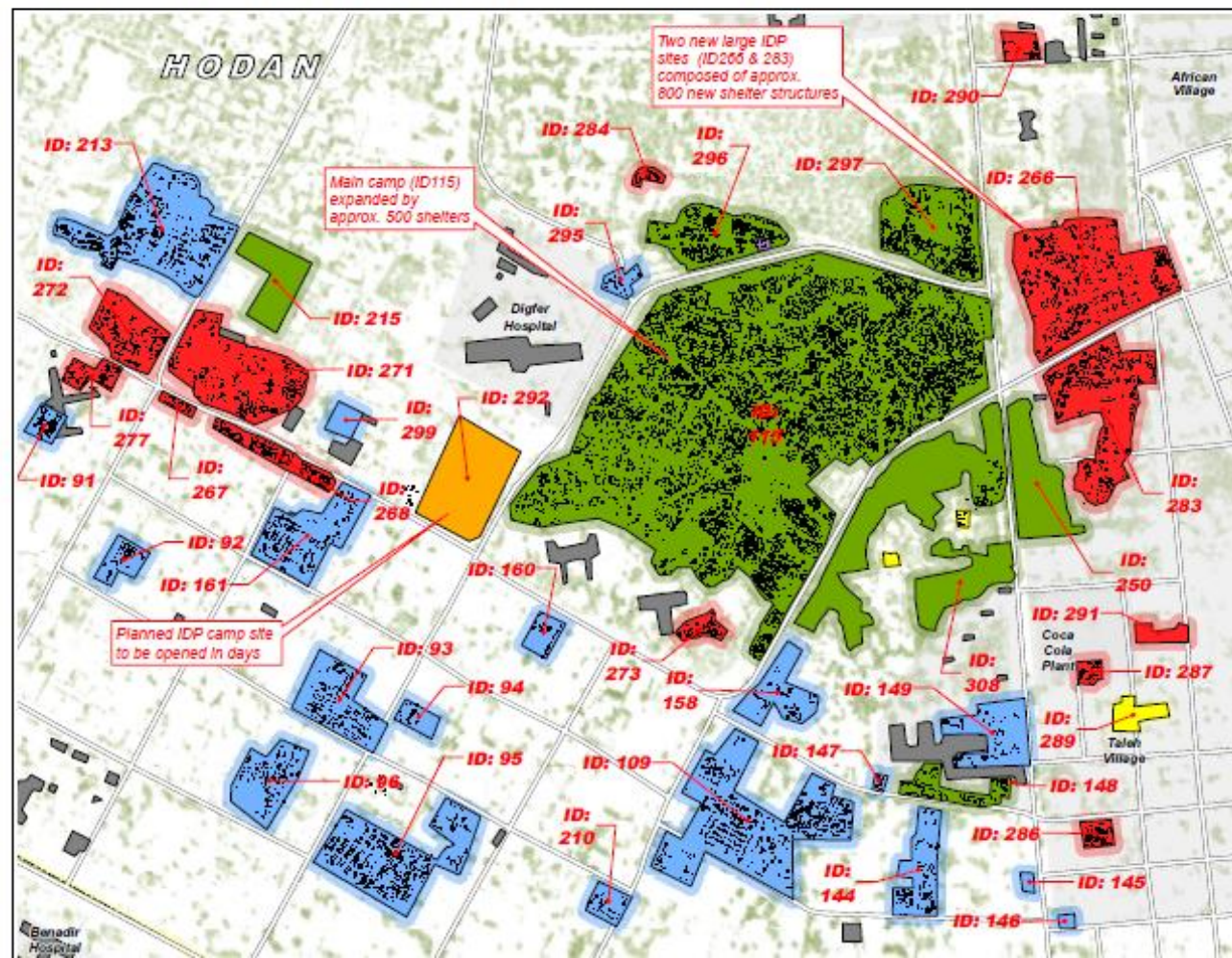


Analysis Summary: Within central Hodan district of Mogadishu there has been a dramatic expansion in the total number of IDP camps and shelter structures, strongly suggesting a increase in the total IDP population within this area of several thousand people. Between 22 August and 4 September 2011, a total of 12 new IDP shelter concentrations were erected, with the additional expansion in size of 9 existing camps. A total of

approximately 1,500 IDP shelters were erected within the new camp sites, along with approximately 1,000 additional newly erected shelters within the existing camps, making a total expansion of at least 2,500 shelter structures over a two week period. Further, there is at least one new camp site location under construction approximately 12,000m² in size which should be operational within days. This report is based on a time-

series analysis of Somali IDP shelter concentrations within the capital city of Mogadishu using satellite imagery recorded the mornings of 4 September, 21-22 August, 28 July, 15 April and 30 March 2011. This is a preliminary assessment and has not yet been validated in the field. Please send feedback to UNITAR/UNOSAT at the contact information below.

**6 Sept UNOSAT - Somalia,
Mogadishu IDP Camps**



19 Sept EUSC – Mogadishu new settlements



A close-up of one of the IDP Camp. Different types of tents and huts are visible.

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SAFE Map ID Number: SO-SMO-2011-0000000

SOMALIA - Mogadishu

Camps in Hawi-Wadag District

Location Diagrams

Legend

- Primary Roads, Pavement
- Secondary Roads, Unpaved
- Urban Roads, Unpaved
- Parkway area
- Camps open in January (2011)
- Camps open in July
- Camps open in August
- Camps present in July
- Camps existing in August

Camp size

- 0 - 50
- 51 - 200
- 201 - 400
- 401 - 600
- 601 - 800 dwellings
- 801 - 1000 dwellings

Settlements

- Population increase from January to 30 July 2011
- Population increase from July to 18 August 2011
- Number of dwellings present in the camp
- Dwellings in January 2011
- Dwellings in July 2011
- Dwellings in August 2011

Interpretation

This map shows the IDP Camps located in the Hawi-Wadag District of Mogadishu. Presented are population changes observed between January and August using satellite imagery and data made available by UNOSAT and SETRA. IDP camps are marked in the background and their size is represented with circles. Orange circles represent population increase from January to July. Red circles represent population increases from July to August. IDP Camps present in imagery of January are represented as yellow polygons.

Cartographic Information

Local projection: UTM 32Q Datum: WGS84
Geographic projection: Lat/Lon (DMS) Datum: WGS 84
Scale: 1:5 000 for A3 print

Data Sources

Satellite data
 SPOT/VEGETATION 2.5 Meter Resolution, 28 07 2011 (Background)
 GeoEye 1, 1.5 Meter Resolution, 05 08 and 27 01 2011
 WorldView 2, 0.5 Meter Resolution, 19 08 2011
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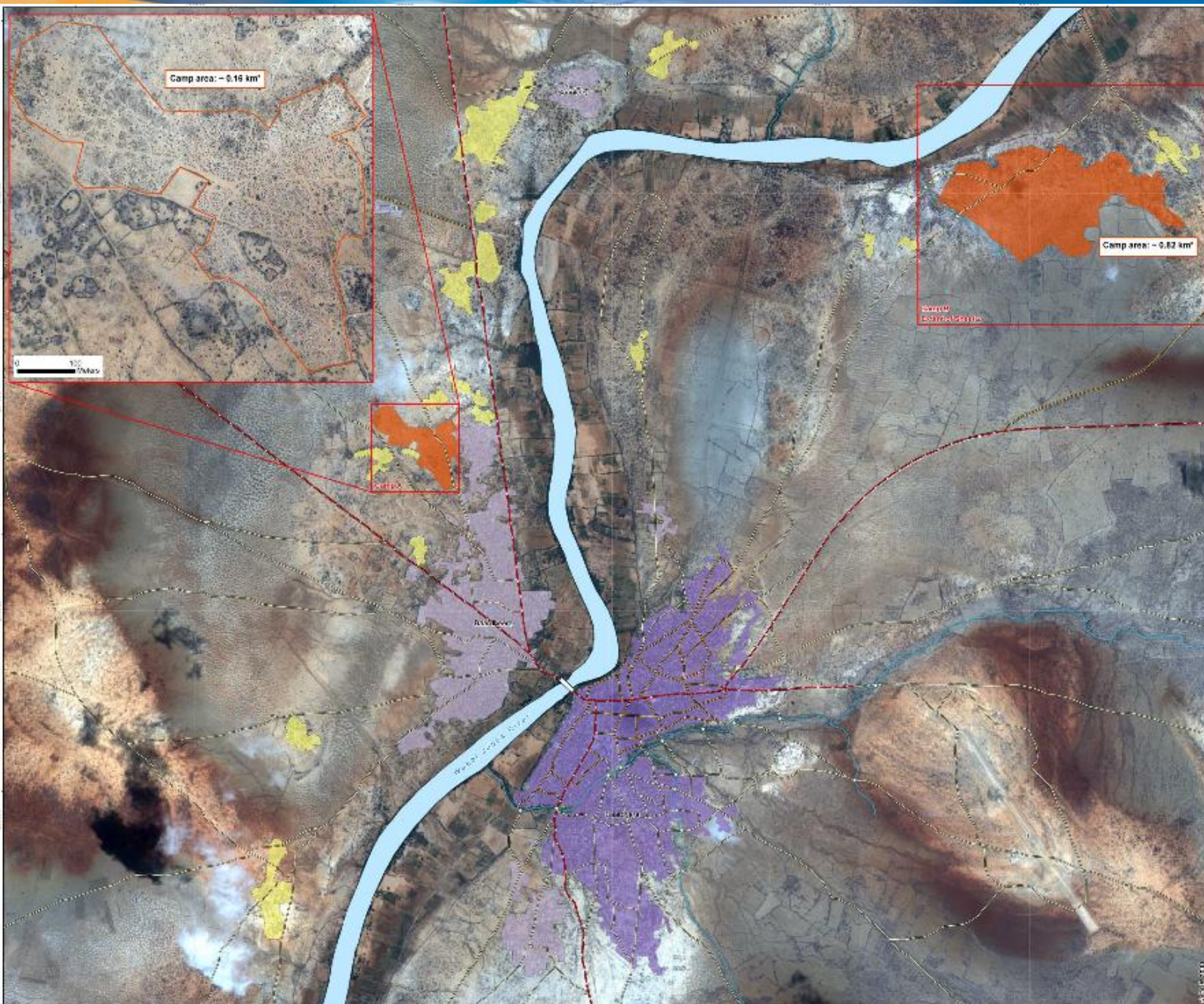
Framework
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Map produced the 08 09 2011
 by the European Union Satellite Centre. © EUSC 2011

The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement no. 216880.

Total new dwellings found from January to 28 July 2011: 3,665
 Total new dwellings found from 28 July to 18 August 2011: 3,214
 Total dwellings that disappeared from 28 July to 18 August 2011: 1,095

06 October DLR - Somalia, Baardheere



SAFER Map ID No. SCRUL13K32911066704

SOMALIA - Baardheere

Refugee/IDP - Location Mapping
 Situation as of September 22, 2011 - Sheet 1
 Scale: 1:12 500

Location Diagrams

Legend

■ Non-Functional Infrastructure (as of 22-09-2011)	■ Urban Infrastructure	— Primary Roads (as of 22-09-2011)
■ Population	■ Urban Infrastructure	— Secondary Roads (as of 22-09-2011)
■ Population	■ Urban Infrastructure	— Tertiary Roads (as of 22-09-2011)
■ Population	■ Urban Infrastructure	— Road Tracks
■ Population	■ Urban Infrastructure	— Fords
■ Population	■ Urban Infrastructure	— Fences
■ Population	■ Urban Infrastructure	— Barbed Wire
■ Population	■ Urban Infrastructure	— Airports

Hydrology

- Water
- Canal
- Stream
- Artificial

Interpretation

This map of the Baardheere area is based on the latest available satellite imagery and ground truth data. It is intended to provide a general overview of the situation in the area and is not intended to be used for legal or administrative purposes. The map is based on the latest available satellite imagery and ground truth data. It is intended to provide a general overview of the situation in the area and is not intended to be used for legal or administrative purposes.

Cartographic Information

Map ID No. SCRUL13K32911066704
 Coordinate Reference System: UTM
 Scale: 1:12 500
 Date: 22-09-2011

Data Sources

Map ID No. SCRUL13K32911066704
 Date: 22-09-2011
 Author: DLR
 Project: SCRUL13K32911066704

Disclaimer

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



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