



Copernicus & Humanitarian Assistance

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EO HumAid Vienna 02 2016

Follow us on:



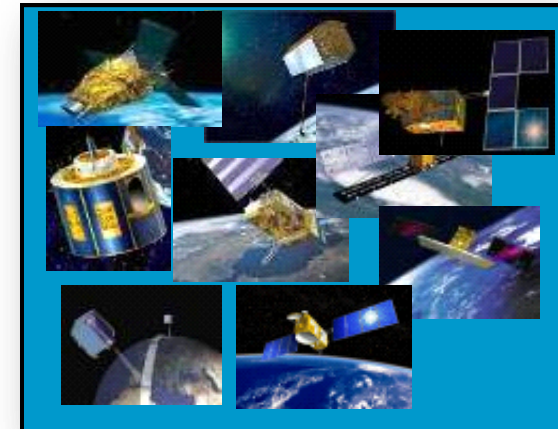
Space

- Copernicus Services – an overview
- Emergency Management < - > Security
- Humanitarianism <-> Humanitarian Assistance

Copernicus architecture

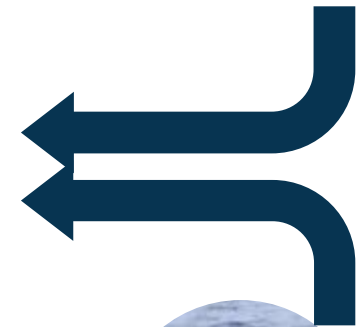


6 services use
Earth Observation
data to deliver ...

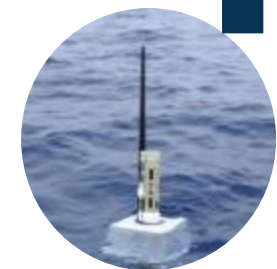


Sentinels

Contributing missions



...added-value products



in-situ

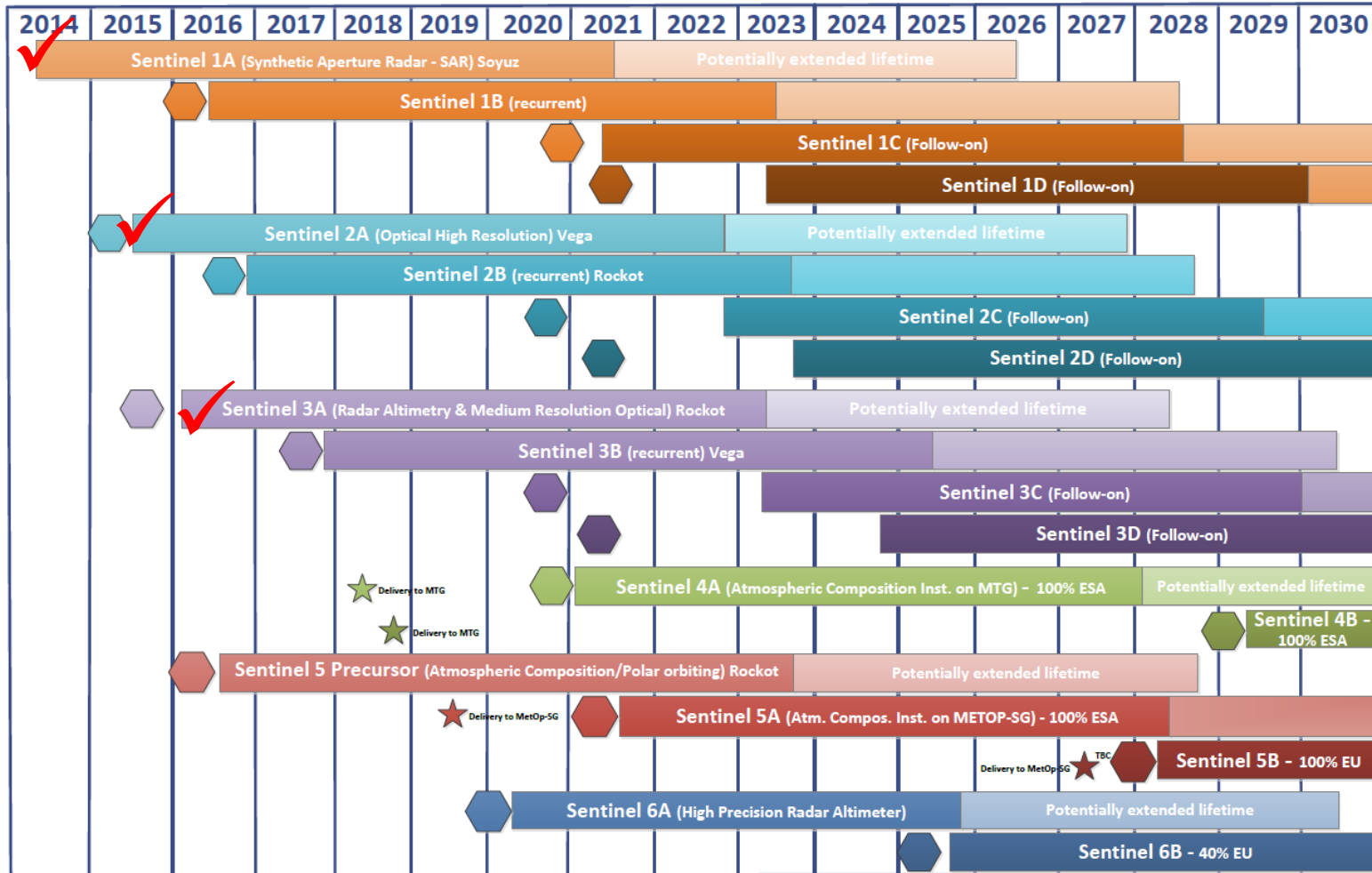
Deployment schedule



Status 29/01/2016



Copernicus Constellations Deployment Schedule



Legend: ○ Flight Acceptance Review

All data available as **Full Free and Open**



6 operational Services



Monitoring the State of the Earth System Environment ...



... cross-cutting Thematic Services

- Land Monitoring
- Marine Monitoring
- Atmosphere Monitoring
- Emergency Management
- Security
- Climate Change

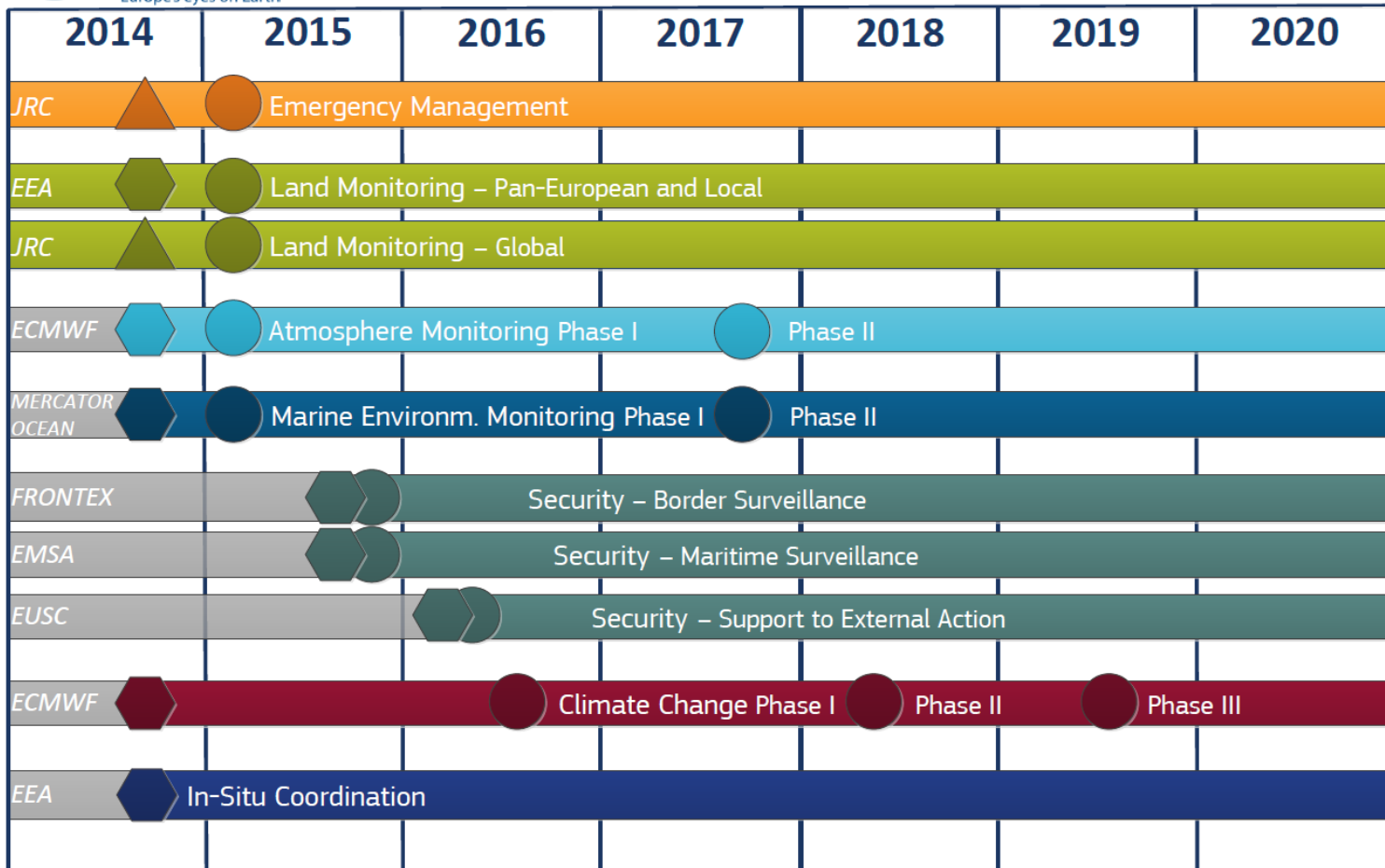
Services Deployment



Status 29/01/2016



Copernicus Services Implementation Schedule



Legend: ◆ Delegation agreement ▲ Direct management ● Operational phase



Copernicus Emergency Management Service

Mapping Component

*Early Warning
Component*

Implemented by:



DG JRC

Space



Emergency
Management





Flood and forest fire risk forecasts



EUE > HAL

Forecast Day	14	15	16	17	18	19	20	21	22	23	24	25	26
2010051400				17	31	30	19		5	1			
2010051412				15	25	16	2	1	1	1			
2010051500				15	45	42	30	5		2			
2010051512				48	50	36	8	1	1	1			
2010051600				12	33	44	26	1					
2010051612				14	33	31	13	1	2				
2010051700				13	33	49	8	1	1				

Providing support to emergency response services

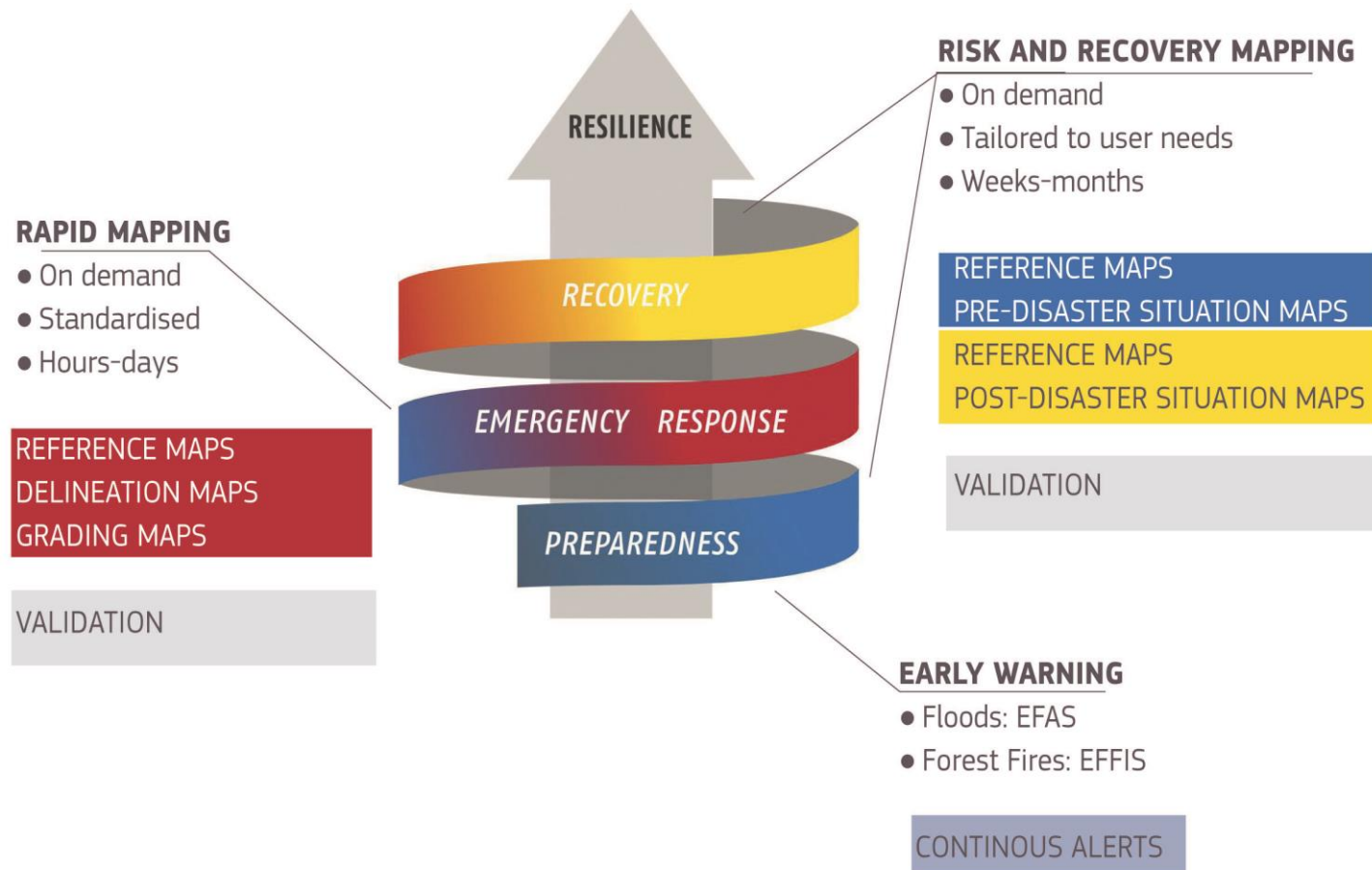
Situation maps, reference information



Legend:
 - Flood probability
 - Flood risk
 - River
 - Road
 - Railway
 - Administrative boundary

Metadata:
 - Date: 2010-05-14
 - Scale: 1:50,000
 - Source: Copernicus

QR code and Copernicus logo.



Service covers all the 3 phases of emergencies

Emergency Management Service (EMS)

has two components:

▶ **Early Warning**

- **EFAS (floods)**
- **EFFIS (forest fires)**

▶ **Mapping**

- **Rapid Mapping**
- **Risk & Recovery**



Emergency Management Service



Copernicus Emergency Management Service

Free and Open Access to Data & Information

Contact your
Authorised User

echo-erc@ec.europa.eu

Select map you need
for immediate response

Rapid Mapping

OR
Request pre-post
disaster assessment

Risk & Recovery Mapping

Activation production process

Request form

Map specification

Satellite data order

Map generation

Map delivery

User Feedback Form

Request form

Map specification

Satellite data order

Map generation

Map delivery

User Feedback Form

Request form

Map specification

Satellite data order

Map generation

Map delivery

User Feedback Form



More information on how to activate the EMS Mapping services is available in the dedicated EMS User Guide. The request forms are available at the following address: <http://emergency.copernicus.eu>

Space

Copernicus
Europe's eyes on Earth

<http://emergency.copernicus.eu/>



A wide range of user guides are available from web site



Copernicus Security Service



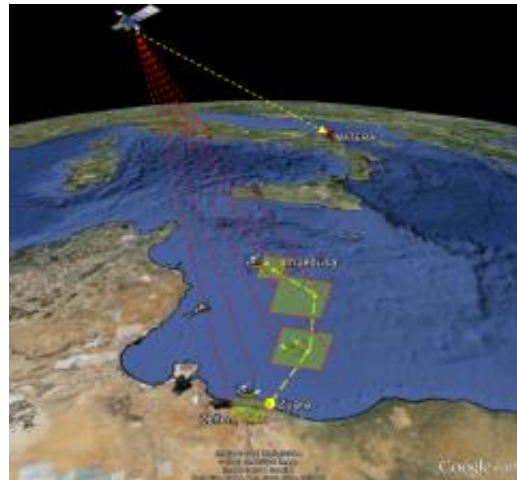
Security



 Copernicus
Europe's eyes on Earth

To provide European authorities with information in response to the following key areas, however during production benefit is taken of synergies between emergency mapping and security services

- ★ Border surveillance
- ★ Maritime surveillance
- ★ Support to EU External Action





Latitude: 32° 13' 47" Longitude: 44° 16' 53"

Leaflet | Geo4i, Microsoft



ALLSOURCE ANALYSIS

Ropucha-class LST

Trucks and equipment loading with personnel assisting with loading process

Bow ramp open for loading

810th Naval Infantry Brigade Loading on Ropucha-class LST, Sevastopol, Russia | September 27, 2015 | Satellite Image: DigitalGlobe

How far do we care?

Obstacles

(we need to be aware that they exist, and respond to criticism – constructive or not – adequately)

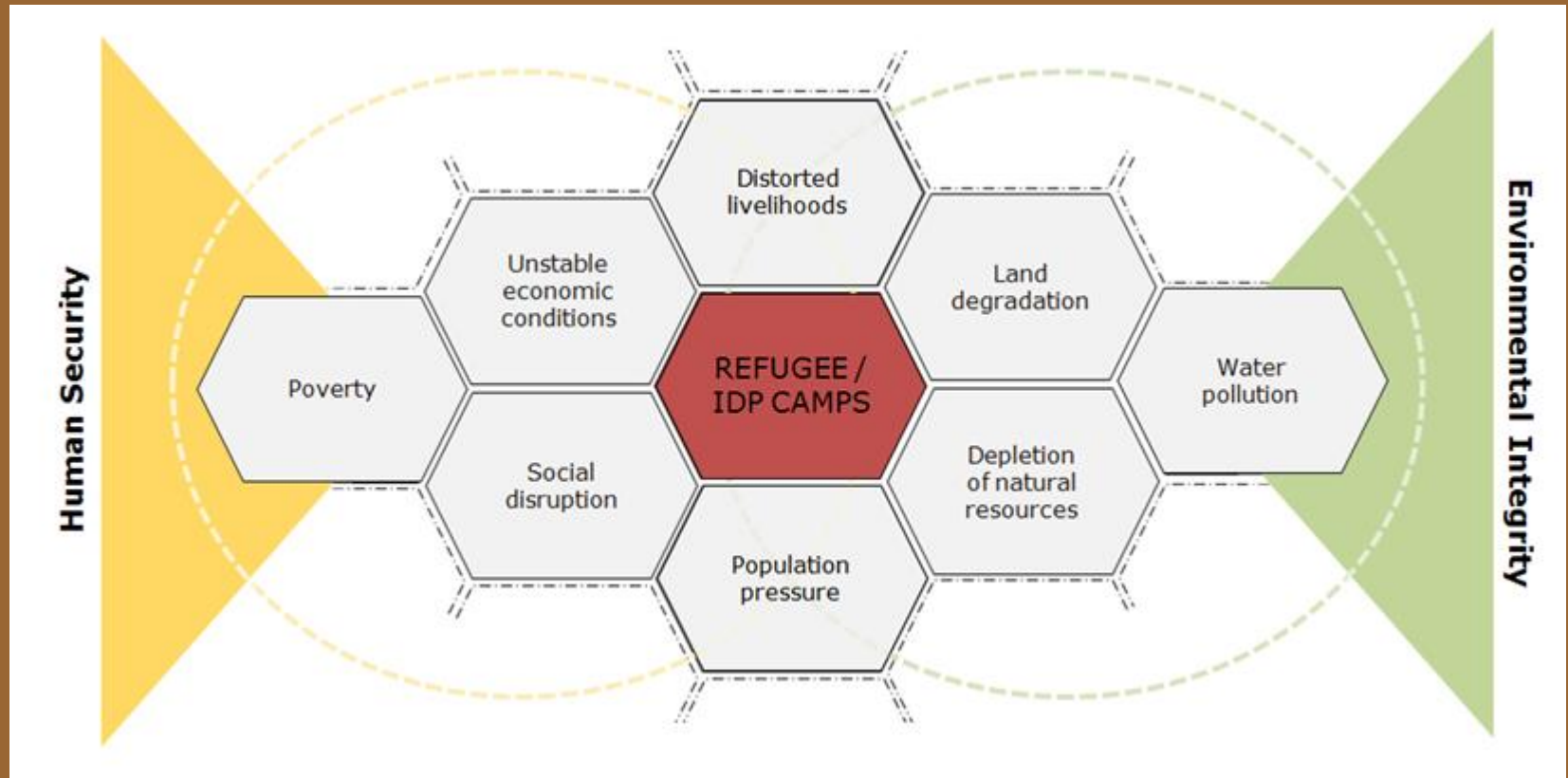
Humanitarianism

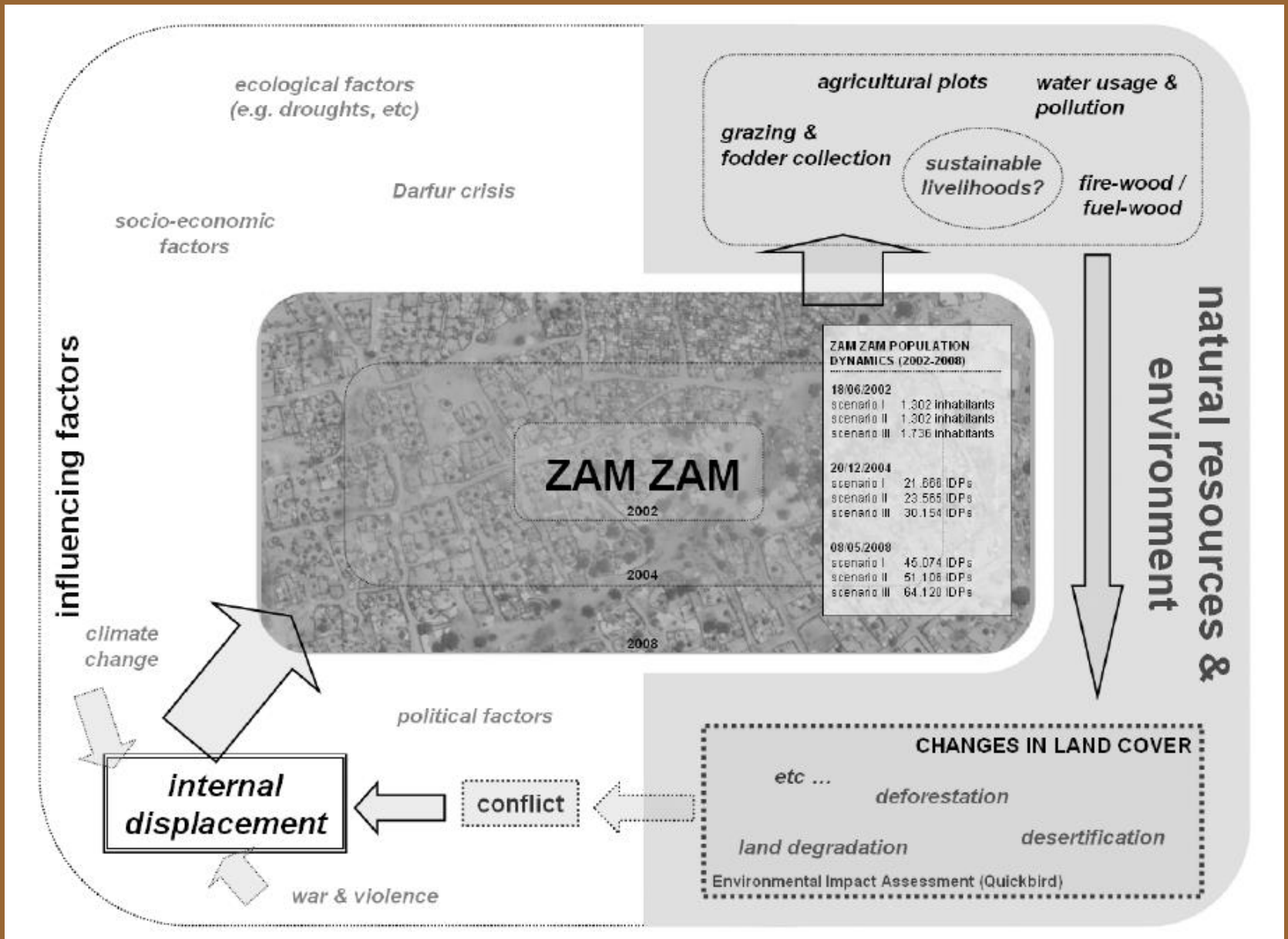
– that is, the political, economic and military interference in the domestic affairs of a state justified by a nascent transnational morality

Key messages:

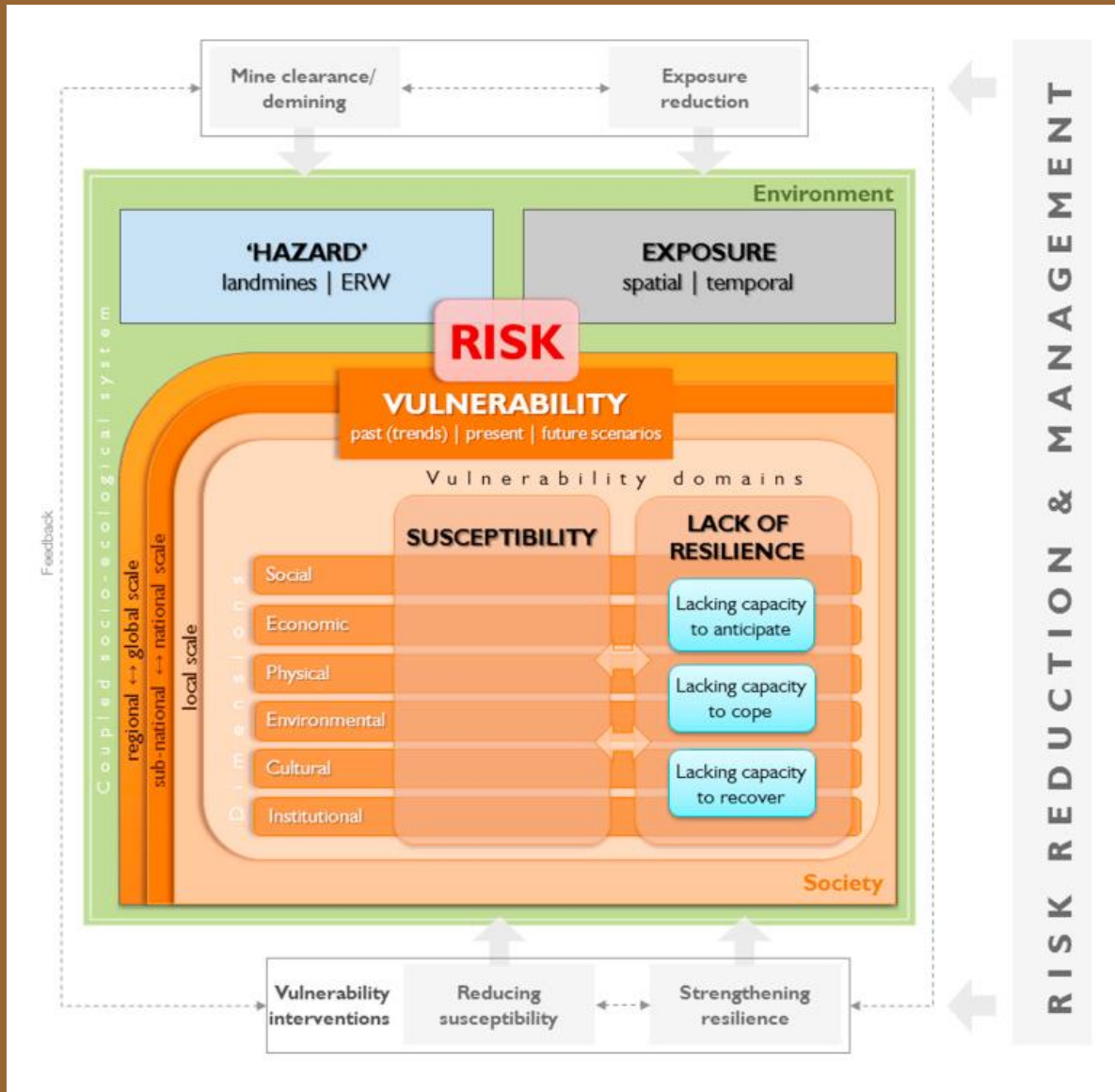
- **space-based information can support humanitarian action**
- **existing initiatives/services provide seldom / or not at all support beyond the emergency phase**
- **the impact of natural disasters / human induced crisis is only reduced by strengthening the resilience of societies**
- **resilient societies evolve through their own capacity to predict, cope and recover - affected countries must be able to generate and use space-based information themselves.**

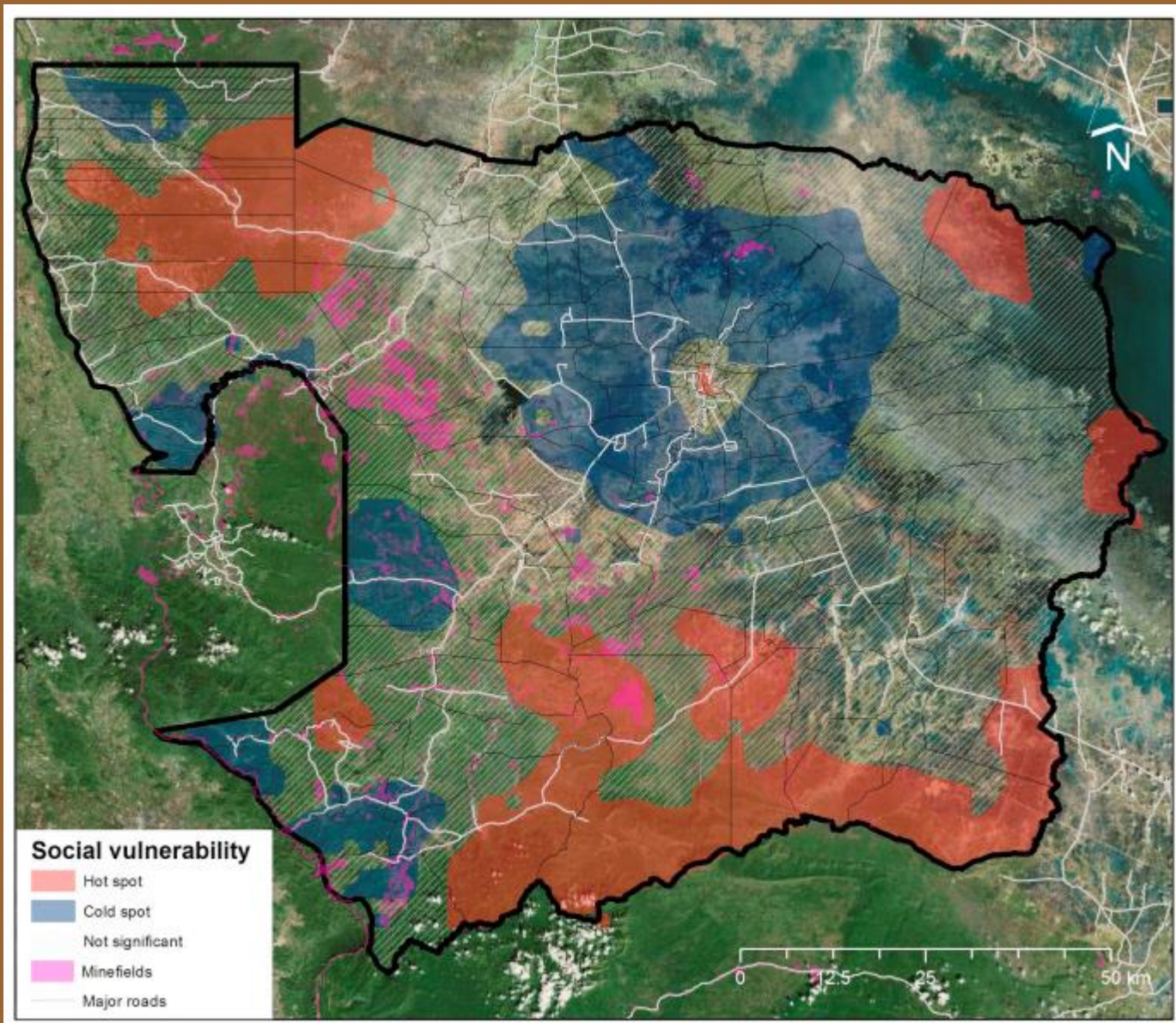
Factors to be considered when assessing livelihood security





Factors to be considered when assessing livelihood resilience





Hagenlocher M., Hölbling D., Kienberger S., Vanhuyse S., Zeil P. (2015): Spatial assessment of social vulnerability in the context of landmines and explosive remnants of war in Battambang province, Cambodia



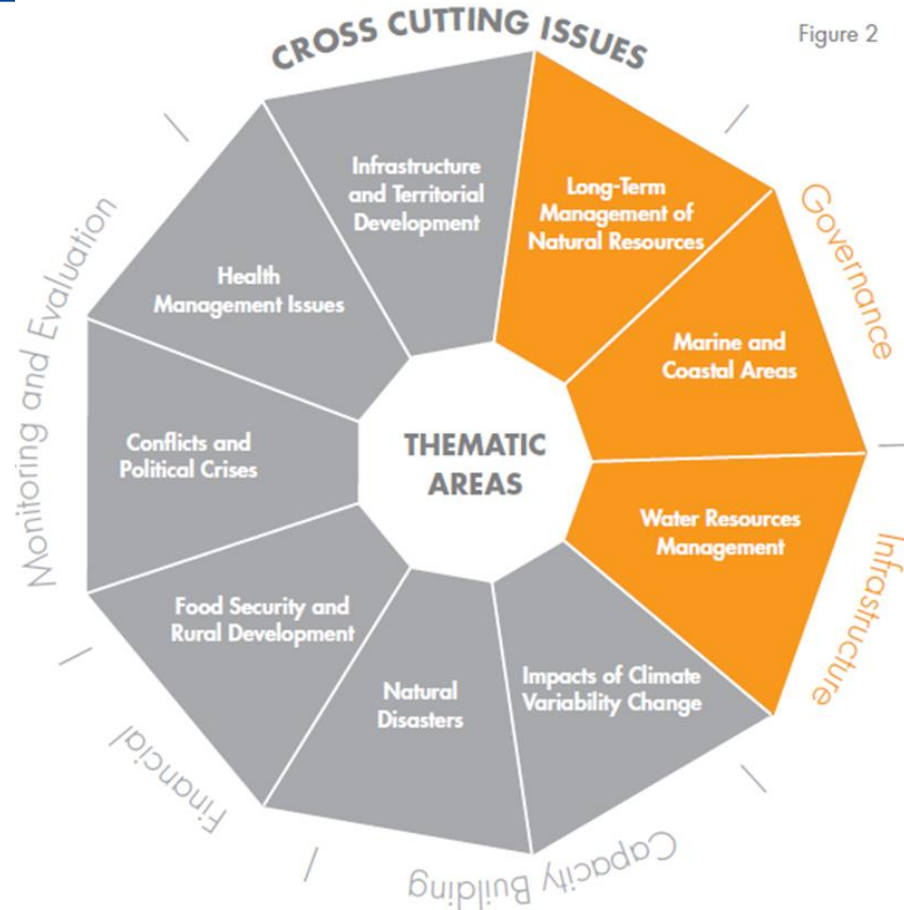
Implementation

AUC leads the process with support by the Coordination Team.

Long-term Management of Natural Resources
Water Resources Management
Monitoring of Marine & Coastal Environment
(start 2016)

The Coordination Team Meeting in Tunis Dec 2014 **selected three themes** for validation in 2015-2016:

Rural Development and Food Security
Climate Change Adaptation
Disaster Risks Reduction.
through a series of expert workshops.



- space-based information can support humanitarian action
- existing initiatives/services seldom / or not at all provide support beyond the emergency phase
 - the impact of natural disasters / human induced crisis is only reduced by strengthening the resilience of societies
 - resilient societies evolve through their own capacity to predict, cope and recover - affected countries must be able to generate and use space-based information themselves.
- **Priority action (development objective): strengthen preparedness = capacity to anticipate**