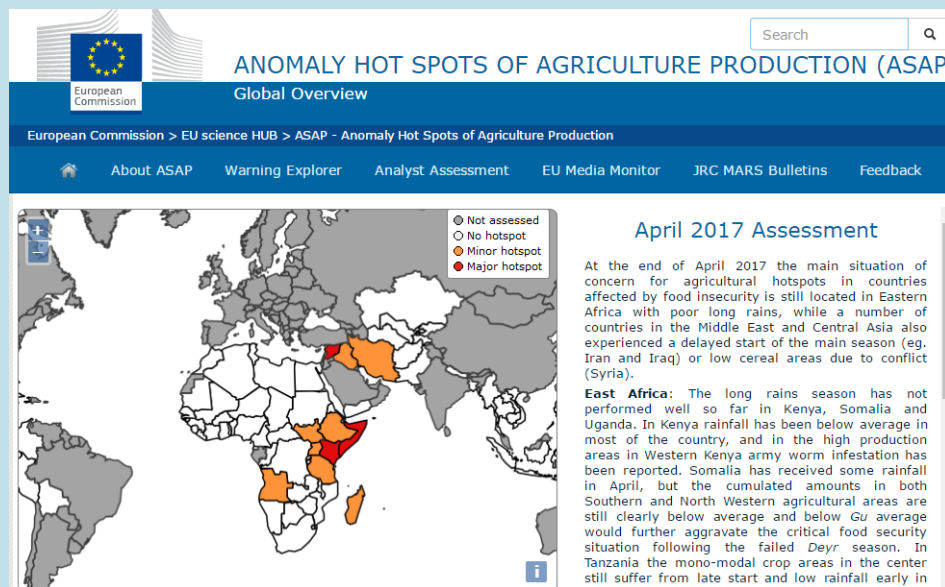



ASAP - Anomaly hot Spots of Agricultural Production



Why?

To provide information to the early warning community and inputs to multi-agency food security assessments:

- timely warnings and short narratives for countries affected by anomalies of agricultural production
- Earth Observation and weather indicators triggering the warnings



IPC
Integrated Food Security Phase Classification

Evidence and Standards for Better Food Security Decisions

About IPC Capacity Building Quality & Compliance Technical Development Region & Country Work

IPC Events

May - 2017

| S | M | T | W | T | F | S |
|----|----|----|----|----|----|----|
| 01 | 02 | 03 | 04 | 05 | 06 | |
| 07 | 08 | 09 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | 31 | | | |

more ...

IPC in the world

Breaking News

IPC GLOBAL ALERT - YEMEN - CONTINUES TO WORSEN
17 million people in need of urgent compared to the results of the last Global Alert.
Based on the Yemen IPC Technical MANY B. WHEN As of March and the

IPC Maps

Yemen: Projected Acute Food Insecurity Situation - March-June 2017
Food Insecurity situation continues to worsen. Immediate response is needed to prevent further

Funding Agencies



WFP World Food Programme

FEWS NET Famine Early Warning Systems Network

European Commission

Food and Agriculture Organization of the United Nations

Persistent drought in Somalia leads to major food security crisis

The European Commission's Joint Research Centre (IRC), the Famine Early Warning Systems Network (FEWS NET), the Food and Agriculture Organization of the United Nations (FAO) and the United Nations World Food Programme (WFP) are deeply concerned about the impact of the recent and persistent drought in Somalia. The latest extreme drought that hit Somalia during the 'Deyr' rainfall season in the last quarter of 2016 came after an already poor 'Gu' season from March to May. Combined with factors including high food prices, trade disruption, population displacement and insecurity, this drought is having a very severe impact on the food security of millions of people in the coming months, and could be exacerbated by a forecast poor 'Gu' rainfall season in 2017.

Somalia endured an extreme drought during the October-December 'Deyr' rainfall period (Fig. 1). Across most of the country, a persistent lack of rainfall led to extensive failures of the growing season, and record low vegetation cover and soil moisture conditions. The impact of the 'Deyr' season drought is amplified by the effects of the poor rains during the previous March to May 2016 'Gu' rainfall season. This had already led to significant losses in crop and pasture production, and weakened the capacity of households to deal with a shock of this magnitude.



CROP MONITOR FOR
EARLY WARNING

NO. 15
April 2017

The Crop Monitor for Early Warning brings together international, regional, and national organizations monitoring crop conditions within countries at risk of food insecurity. The focus is on developing timely consensus assessments of crop conditions, recognizing that reaching a consensus will help to strengthen confidence in decision making. The Early Warning Crop Monitor grew out of a successful collaborative relationship, the AMIS Crop Monitor (www.amis-outlook.org), which monitors the main producing countries.

Crop Monitor
a joint initiative

GROUP ON EARTH OBSERVATIONS

GLOBAL AGRICULTURAL MONITORING

Where?

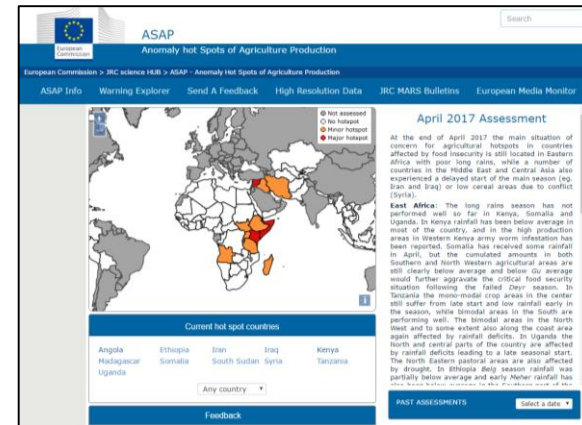
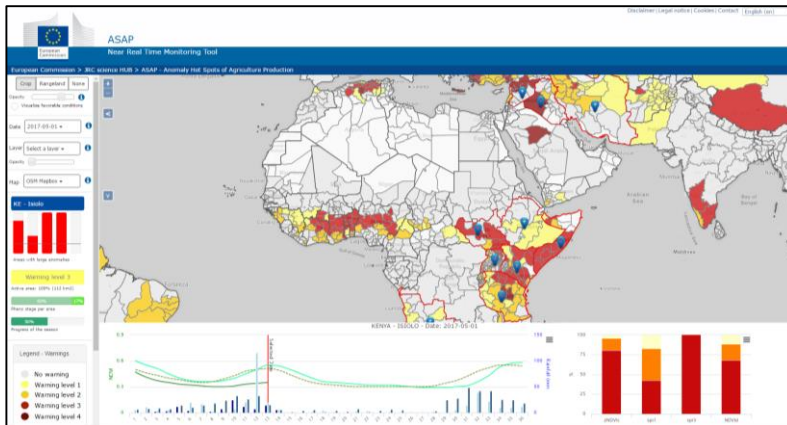
The monthly early warning assessment focuses on more than 80 countries where:

- food security and rural development are European Development Fund (EDF) focal sectors
- or the country is included the list of food insecure countries monitored by the GEOGLAM Crop Monitor for Early Warning



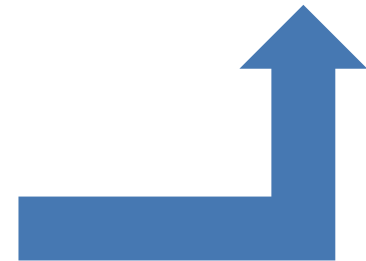
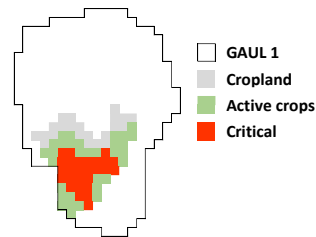
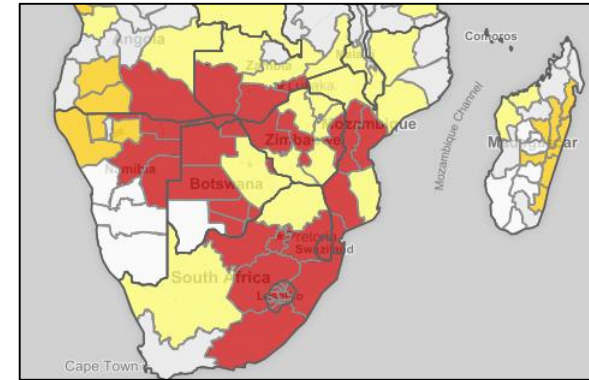
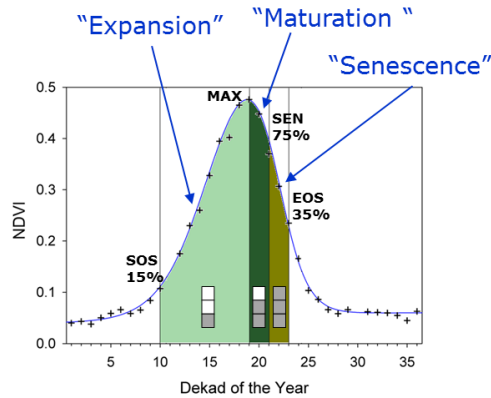
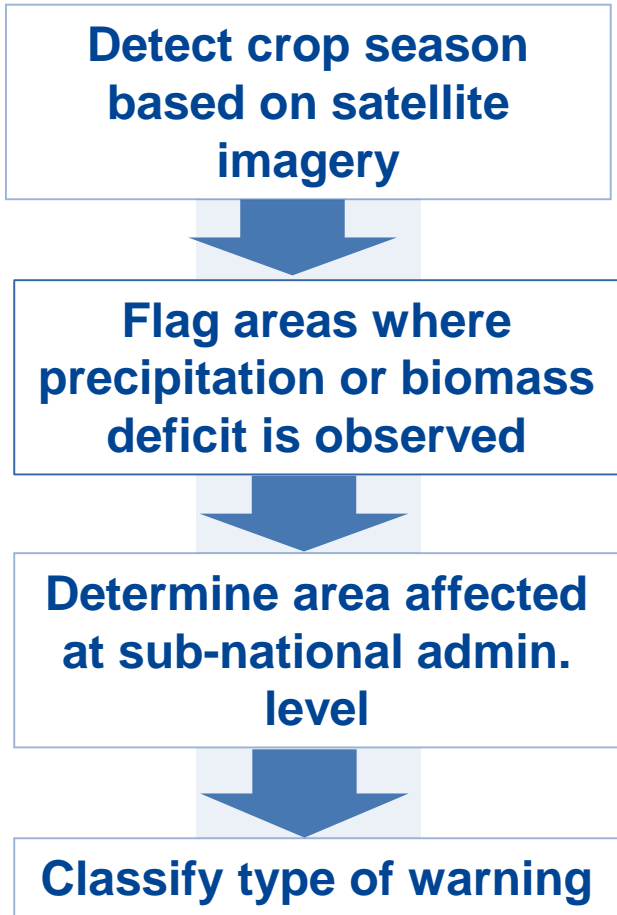
The visualization of warnings at province level and of the EO and weather indicators behind is not limited to the 80 countries but global

1. Automatic warning classification at first sub-national level, every 10 days
2. Identification of hotspot countries by analysts, completed by short summary narratives at national level, every 30 days



The final selection of hotspot countries depends on expert judgement, supported by the warning classification system and auxiliary information.

Automatic warning classification system, every 10 - days



| Level | Indicators concerned |
|-------|-----------------------------|
| 1 | Poor precipitation |
| 2 | Poor biomass |
| 3 | Poor biomass & prec. |
| 4 | Poor biomass @ end of seas. |

Automatic warning classification output



The Warning Explorer

ANOMALY HOT SPOTS OF AGRICULTURE PRODUCTION (ASAP)

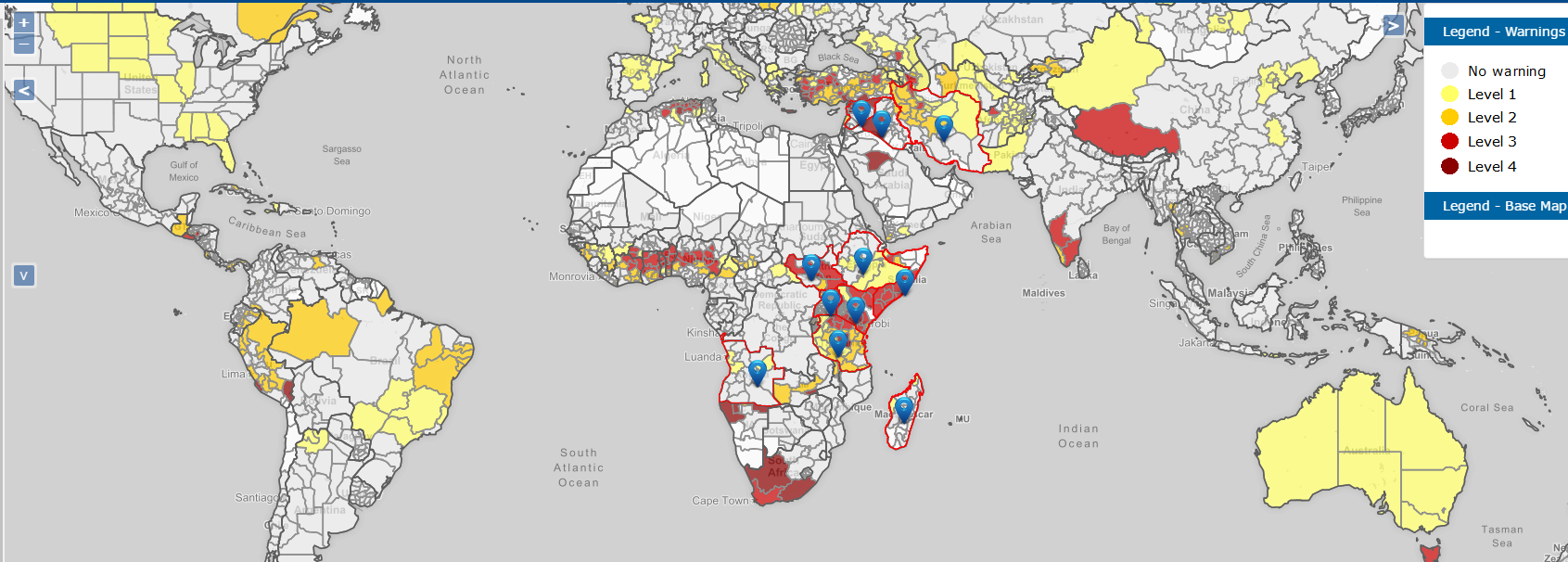
Warning Explorer



European Commission > EU science HUB > ASAP - Anomaly Hot Spots of Agriculture Production > Warning Explorer

Crop Rangeland None
 Opacity:
 Visualize favorable conditions
 Date: 2017-05-01
 Layer: No indicators
 Opacity:
 Map: OSM Mapbox
ZA - West Cape

 Areas with large anomalies
Warning level 8 test
 Active area: 66% (15545 km2)
 98%
 Pheno stage per area
 10%
 Progress of the season
High resolution data

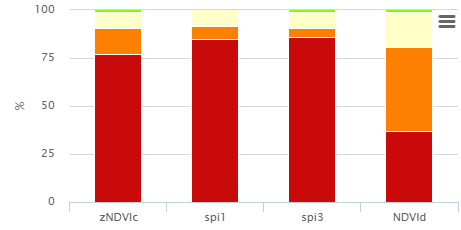
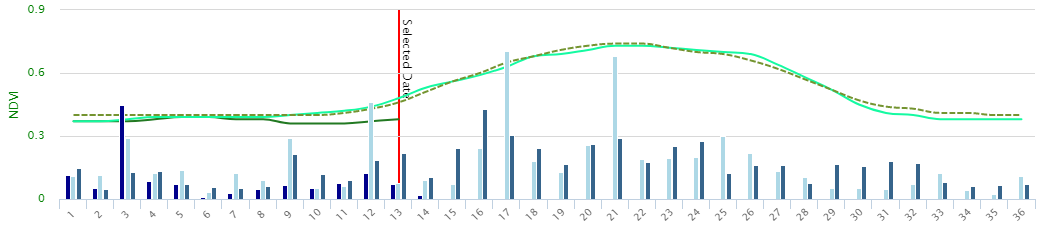


Legend - Warnings

- No warning
- Level 1
- Level 2
- Level 3
- Level 4

Legend - Base Map

SOUTH AFRICA - WESTERN CAPE - Date: 2017-05-01

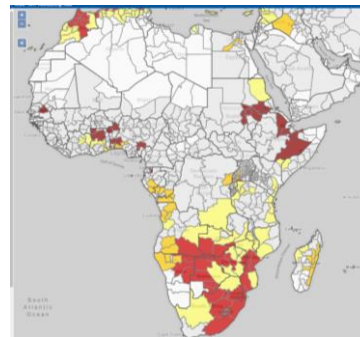


Hotspot analysis at country level, monthly

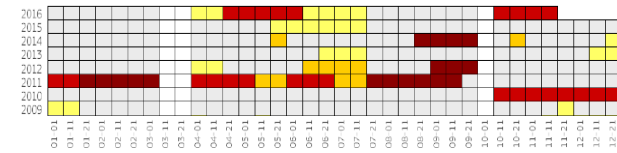
Analyse warnings and auxiliary information and assign hotspot status at national level

Publish hotspots on the home page and write a short narrative

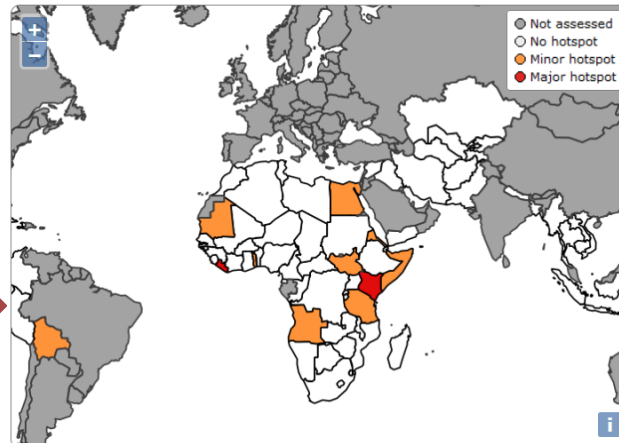
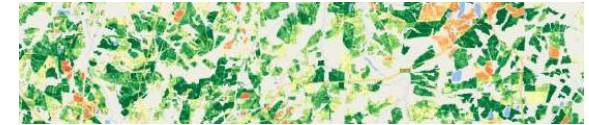
• Warning Explorer



• Maps and graphs



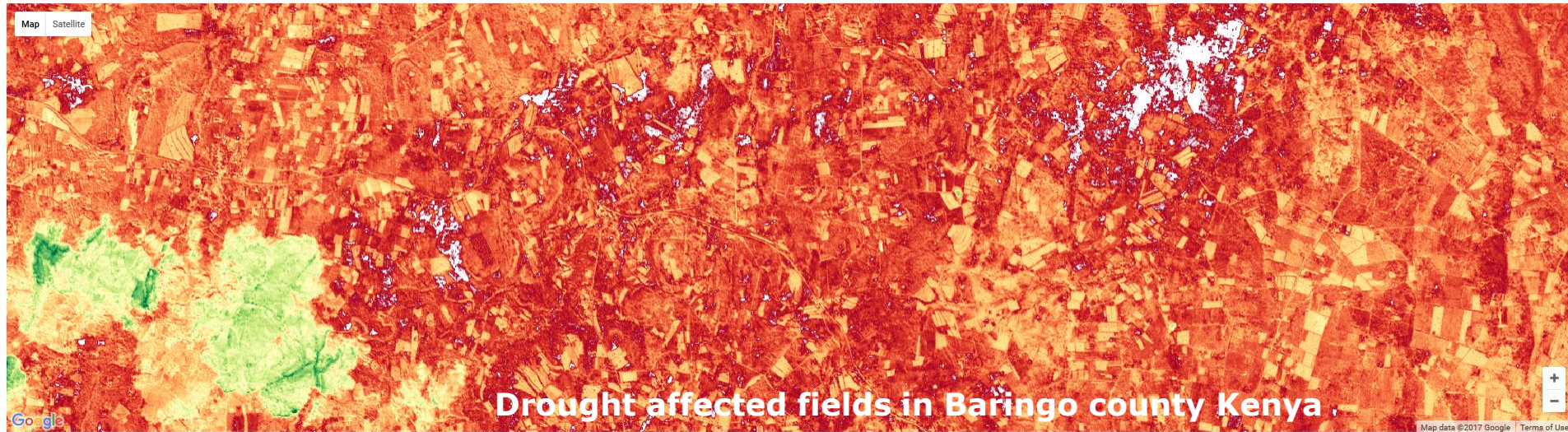
• High resolution analysis



High resolution data visualization

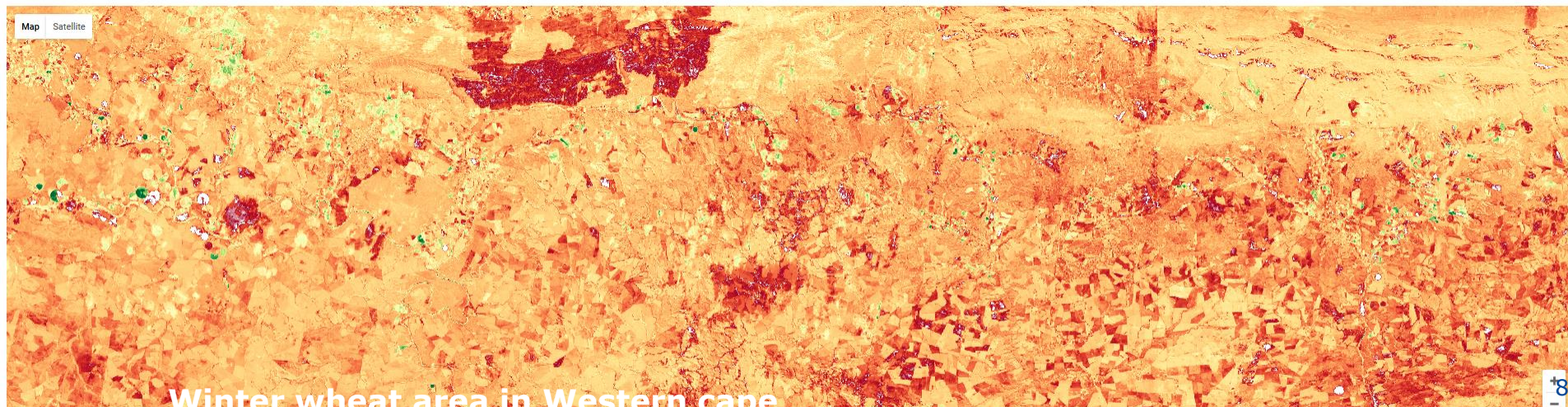
ASAP high resolution imagery viewer powered by Google Earth Engine

ASAP Experimental High Resolution View extension



GAUL 1 district: **Baringo** (Kenya)

ASAP Experimental High Resolution View extension



Hotspot analysis output (home page)



Global overview map and narrative

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Search

ANOMALY HOT SPOTS OF AGRICULTURE PRODUCTION (ASAP)

European Commission

European Commission > EU science HUB > ASAP - Anomaly Hot Spots of Agriculture Production

About ASAP Warning Explorer Analyst Assessment EU Media Monitor JRC MARS Bulletins Feedback

- Not assessed
- No hotspot
- Minor hotspot
- Major hotspot

April 2017 Assessment

At the end of April 2017 the main situation of concern for agricultural hotspots in countries affected by food insecurity is still located in Eastern Africa with poor long rains, while a number of countries in the Middle East and Central Asia also experienced a delayed start of the main season (eg. Iran and Iraq) or low cereal areas due to conflict (Syria).

East Africa: The long rains season has not performed well so far in Kenya, Somalia and Uganda. In Kenya rainfall has been below average in most of the country, and in the high production areas in Western Kenya army worm infestation has been reported. Somalia has received some rainfall in April, but the cumulated amounts in both Southern and North Western agricultural areas are still clearly below average and below *Gu* average would further aggravate the critical food security situation following the failed *Deyr* season. In Tanzania the mono-modal crop areas in the center still suffer from late start and low rainfall early in the season, while bimodal areas in the South are performing well. The bimodal areas in the North West and to some extent also along the coast area again affected by rainfall deficits. In Uganda the North and central parts of the country are affected by rainfall deficits leading to a late seasonal start. The North Eastern pastoral areas are also affected by drought. In Ethiopia *Belg* season rainfall was partially below average and early *Meher* rainfall has also been below average in the Southern part of the

Current hot spot countries

| | | | | |
|------------|----------|-------------|-------|----------|
| Angola | Ethiopia | Iran | Iraq | Kenya |
| Madagascar | Somalia | South Sudan | Syria | Tanzania |
| Uganda | | | | |

Any country ▼

Feedback

Coming soon...

Past Global Overview

Select a date ▼

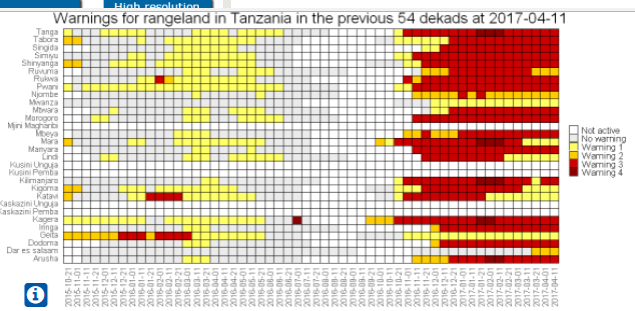
Hotspot analysis output (country report)



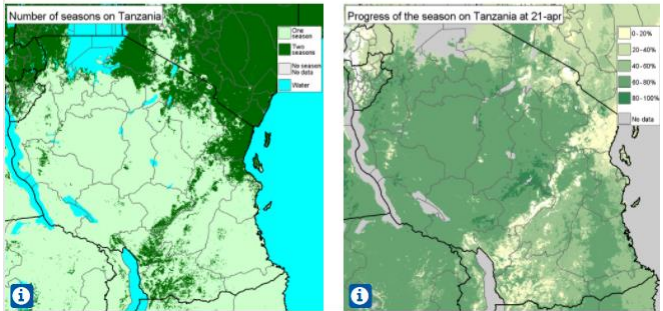
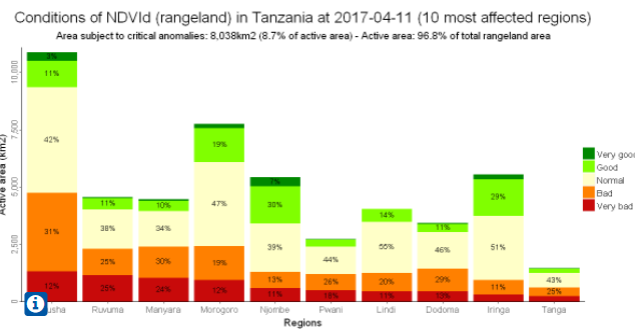
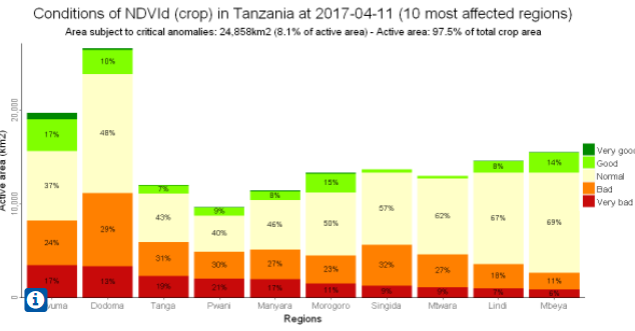
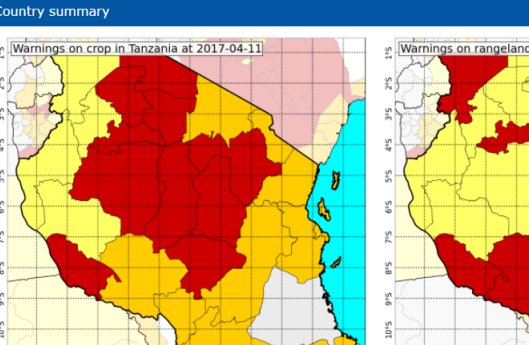
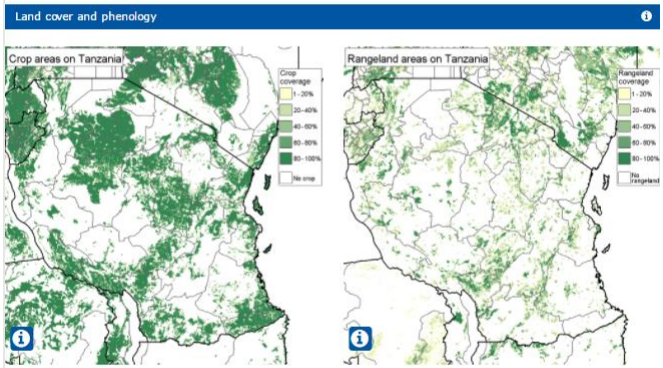
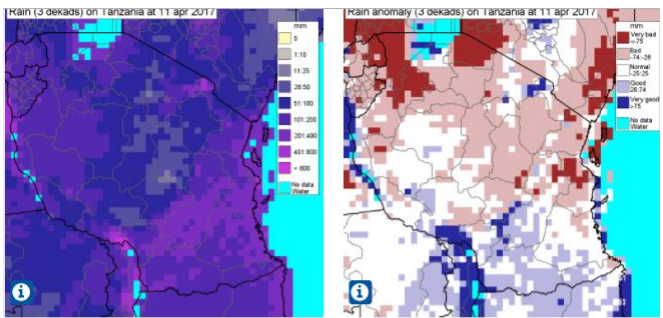
Situation overview

ASAP - Anomaly hot Spots of Agriculture Production
 Analyst Assessment
 European Commission > JRC science HUB > ASAP - Anomaly Hot Spots of Agriculture Production
 Main page | Current report | Past reports | European Media Monitor
 United Republic of Tanzania
 Country Assessment
Minor hotspot
 April 2017 Assessment
 Crop conditions are favourable in the Southern concerns remain in the central unimodal region significant rainfall deficits during the initial part northern regions and especially in the North East drought.
 Country summary | Maps of Indicators | Land cover and phenology | Previous Assessments

Detailed graphs



Maps with indicators and country characteristics



- Continuous monitoring and frequent updates for timely early warning and evidence for detailed assessments/analysis
- Automatic warning classification followed by analysts' assessment
- Homogeneous approach at global level based on state of the art use of weather and earth observation data
- Zoom into hotspot areas with latest generation high resolution imagery for vegetation anomaly mapping at parcel level
- Working in pre-operational mode since Oct. 2016 providing information to JRC analysts, GEOGLAM Crop Monitor for Early Warning etc...

Thank you!

<https://mars.jrc.ec.europa.eu/asap/>



EU Science Hub
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EU Science Hub - Joint Research Centre



Joint Research Centre



EU Science Hub

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Joint Research Centre

Directorate D Sustainable Resources

Food Security Unit