

# **GEOGLAM Crop Monitor\***

## **December 2013**

No. 4



\* Assessment based on Information as of November 28th

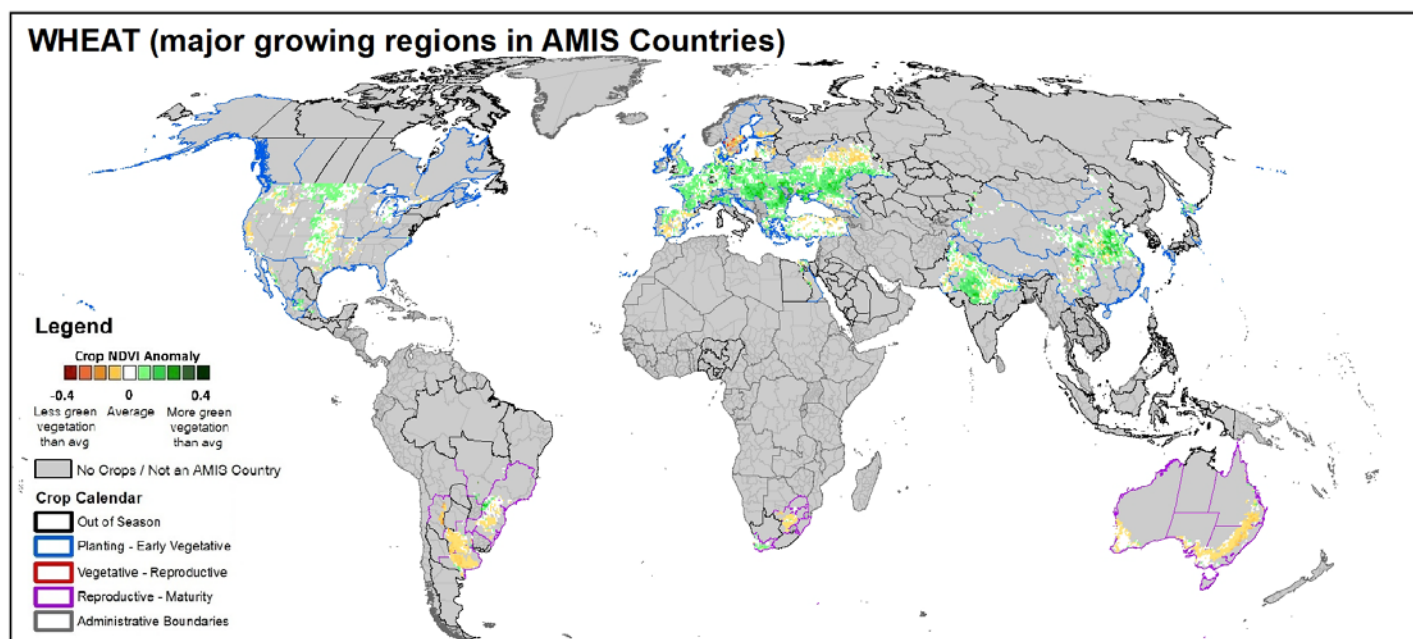
**Prepared by members of the GEOGLAM Community of Practice**

# Crop Monitor

(As of November 28th)

*Crop Monitor is developed for AMIS by GEOGLAM\*. It summarizes latest conditions (as November 28th) for AMIS crops based on regional expertise and analysis of satellite data, ground observations, and meteorological data.*

Wheat:



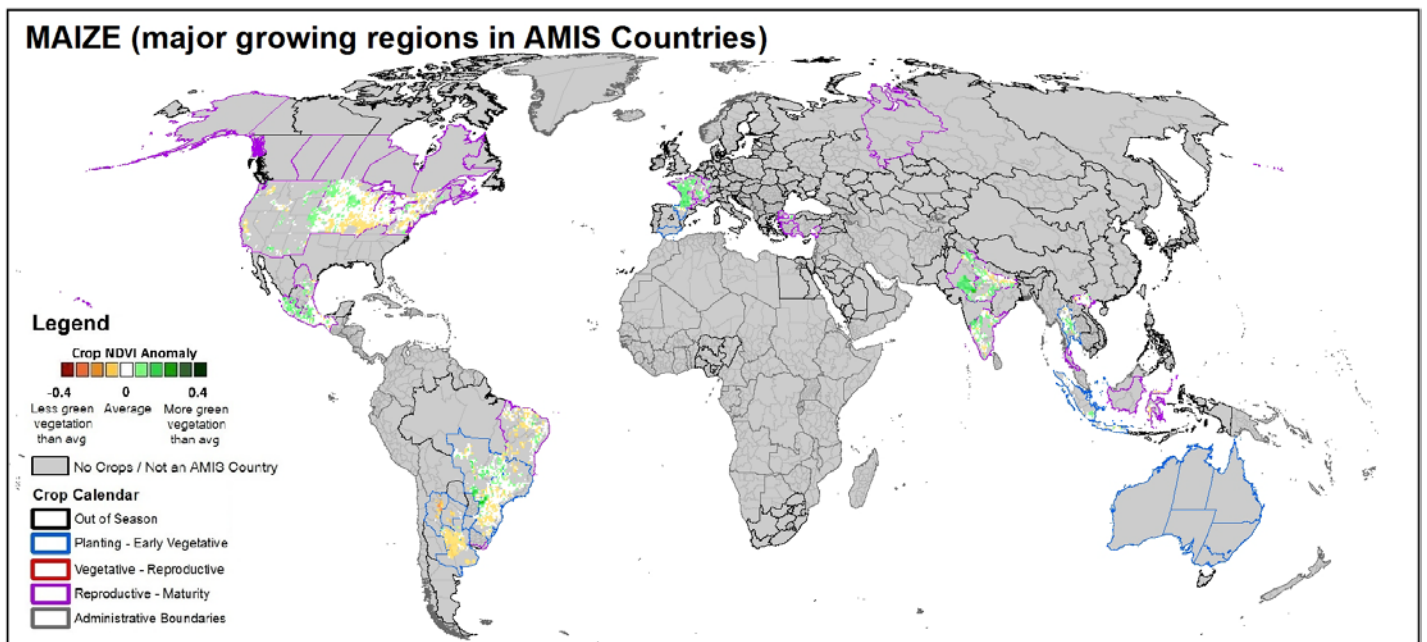
NDVI is a satellite-based indicator of photosynthesis often used for monitoring croplands. These anomaly images compare the NDVI for November 28<sup>th</sup>, 2013 to the average NDVI for the same date from 2000-2012, over the main growing regions of the four AMIS crops. Orange to red indicates less green vegetation than average, green indicates higher than average vegetation. Administrative unit outline colours indicate crop growth stage: **Blue- planting to early vegetative**, **Red- Vegetative to Reproductive** (generally the most sensitive crop growth period), **Purple- Reproductive to Maturity**, **Black- areas out of season**. Note: only AMIS countries are highlighted.

Overall prospects are good for the ending season in the northern hemisphere. Spring wheat harvest is complete and winter wheat is in early development stages. In **Russia**, **Kazakhstan** and **Canada** harvest is complete with overall production up from last year. In **Ukraine**, warmer than usual temperatures and favourable soil moisture conditions are benefitting the emerging crop. In **Russia** topsoil moisture is generally favourable, and the crop has not entered dormancy yet due to above normal temperatures. In both Russia and Ukraine sown area is down. In the **US** winter wheat is nearly all emerged and over 60% is in good to excellent condition. In the **EU** parts of western and central Europe experienced excessively wet conditions, however overall this did not significantly hamper winter wheat sowing. The crop emerged and early establishment benefited from warm temperatures. In **China** overall conditions are good for winter wheat establishment and rainfall in major growing regions boosted soil moisture. In **India** early season conditions are good owing to favourable soil moisture condition after the monsoon season. In **Mexico** planting has began and based on water availability it is expected that sown area will increase in the northwest and western regions. In the southern hemisphere overall conditions are favourable. In **Australia** overall winter wheat prospects are slightly above average despite variable growing conditions. Harvest is well under way with isolated delays due to rainfall. The northern parts of the eastern growing region remain the main area of concern. In **Argentina** conditions are mostly favorable. In the northern part of the country harvest has initiated. In **South Africa** overall prospects are above average. Conditions in the winter rainfall area deteriorated due to heavy November rain, affecting the quality, however yield is still above average.

GEOGLAM aims at strengthening global agricultural monitoring by improving the use of satellite information for crop production forecasting. It is implemented within the framework of the inter-ministerial Group on Earth Observations (GEO). Both GEOGLAM and AMIS were endorsed by the G20 Heads of States Declaration (Cannes, November 2011) when GEOGLAM was tasked to "coordinate satellite monitoring observation systems in different regions of the world in order to enhance crop production projections and weather forecasting data." Within this framework, GEOGLAM is providing global crop outlook assessments in support of AMIS market monitoring activities.

More detailed information on the GEOGLAM crop assessments is available on: [www.geoglam-crop-monitor.org](http://www.geoglam-crop-monitor.org)

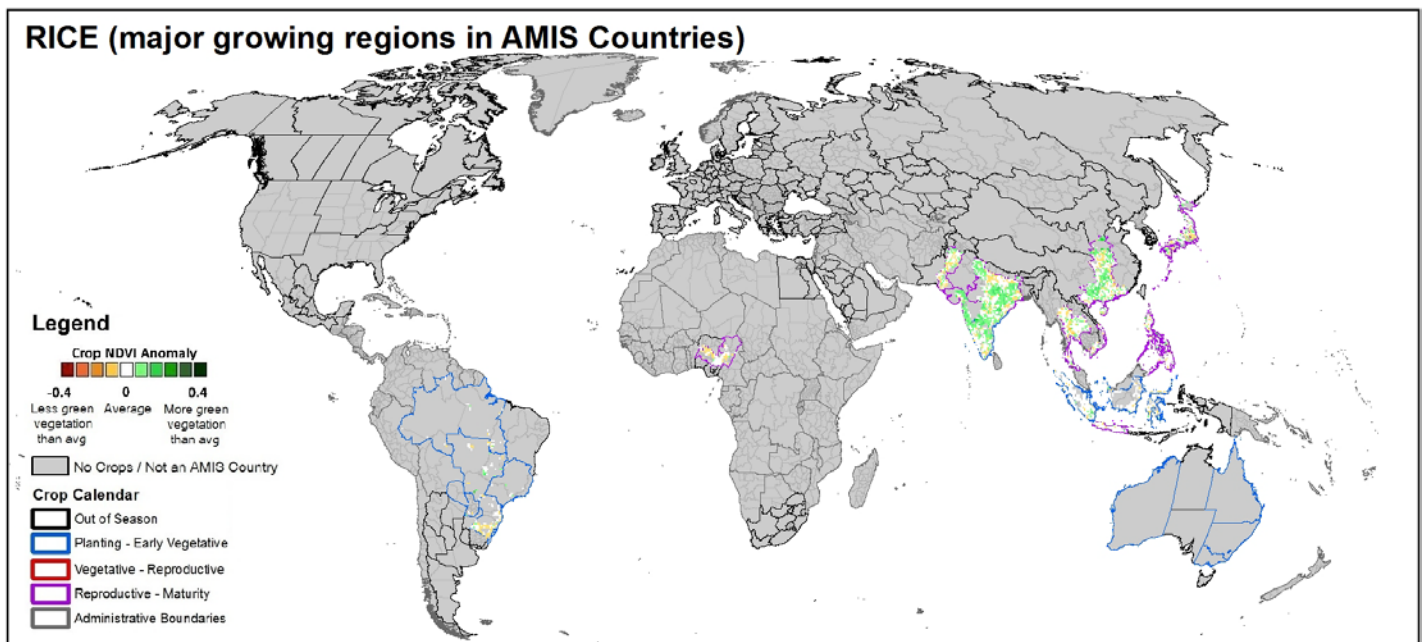
## Maize:



NDVI anomaly image (NASA MODIS) depicting vegetative growth anomalies on November 28th 2013 over the main corn growing areas. (The legend is as for wheat above).

In the northern hemisphere prospects are very good. In the **US** harvest is nearly complete. Late season conditions were favourable overall and expected yields have increased slightly. The total production in the US is expected to be a record. In **Canada** harvest is complete and production is above average. In **Russia, Ukraine** and **India** prospects are above average. Reported maize yield are up significantly in both Ukraine, and Russia with harvest almost complete. In **China** a bumper crop is projected owing to increases in area and yield. In **Mexico** prospects are good and some areas excess moisture could delay harvest. In **Argentina** planting of the first crop is progressing, though delayed relative to average due to heavy rainfall in mid November. In **Brazil** the first crop planting started in October and will continue to December. The crop is in early development and planted area is reduced in favour of soybeans. In the southern regions weather has been favourable, but in the central-western region rainfall has been sparse and therefore planting is delayed.

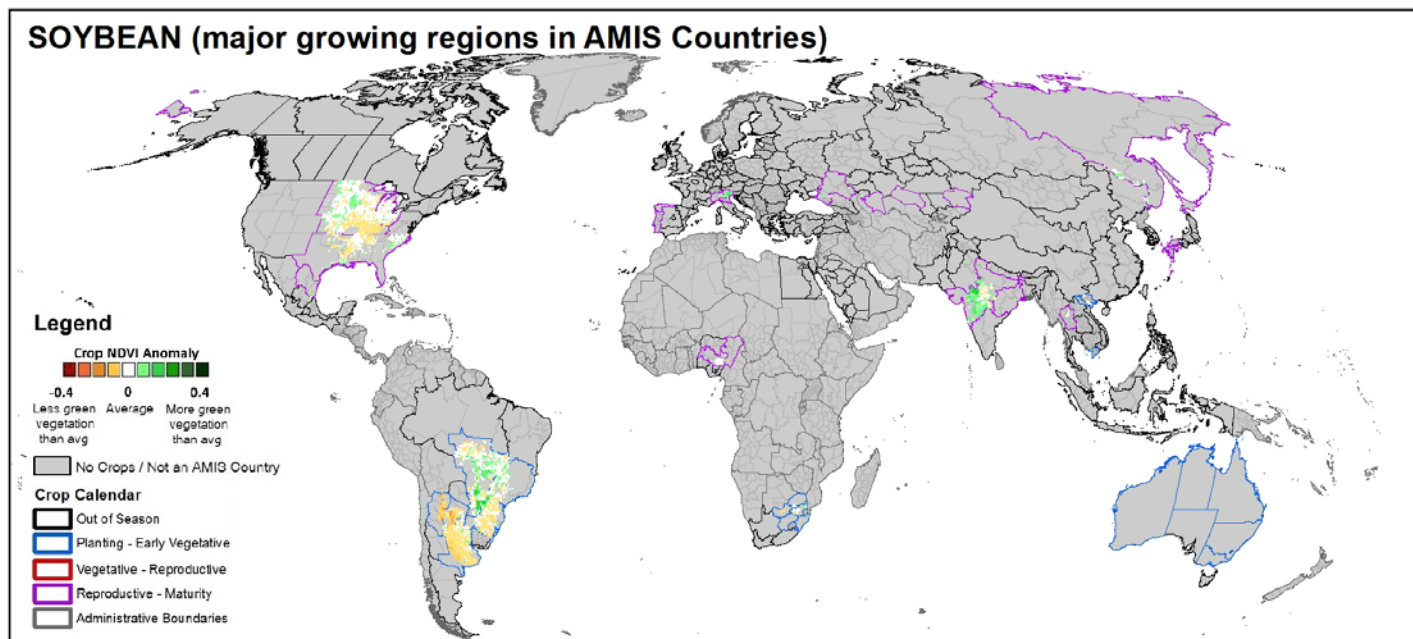
## Rice:



NDVI anomaly image (NASA MODIS) depicting vegetative growth anomalies on November 28th 2013 over the main corn growing areas. (The legend is as for wheat above).

Overall conditions are favorable. In **Bangladesh** prospects are good. In **Thailand** rice has mostly been harvested in northern growing regions and yields are slightly higher than last year but there was some damage due to flooding in north-eastern and central regions. In **Indonesia** overall conditions are favorable. Rice is in the early vegetative to reproductive stages with favorable November rainfall. In **Vietnam** production in central and northern coastal regions production could be reduced due to excess moisture from Typhoon Haiyan. In the **Philippines** rice prospects may be negatively affected where Typhoon Haiyan hit due to flooding, high tide and salt water contamination, however damage is expected to be limited as most of the crop was harvested. In **China** harvest of late rice is complete and production is expected to increase slightly.

## Soybeans:



NDVI anomaly image (NASA MODIS) depicting vegetative growth anomalies on November 28th 2013 over the main corn growing areas. (The legend is as for wheat above).

In the northern hemisphere harvest is complete and overall production projections indicate above average production. In the **US**, late season conditions were favorable and expected yields have increased a few %. Total US production will be large, but not quite a record. In **China** harvest is complete and average yields. However due to the decrease in planted area, overall production is down slightly from last year. In the southern hemisphere the season has commenced and early conditions are favorable. In **Brazil** soy planting is in progress and planted area is expected to increase largely at the expense of corn area. In the southern regions weather has been favourable, but in the central-western region planting has been delayed due to insufficient rainfall. In **Argentina** soy planting is progressing and catching up to last year's rates, with approximately half the crop planted. Overall moisture conditions are good in the primary production areas supporting the emerging crop.

### Sources & Disclaimer

The Crop Monitor assessment has been conducted by GEOGLAM with inputs from the following partners (in alphabetical order): AAFC (Canada), CAS CropWatch (China), ARC (South Africa), ABARES/DA/CSIRO (Australia), CONAB (Brazil), GISTDA (Thailand), EC JRC-MARS, FAO, ISRO (India), JAXA (Japan), ASIA RiCE, AFSIS, IKI (Russia), INTA (Argentina), IRRI, LAPAN/MOA (Indonesia), Mexico (SiAP), NASA, UMD, and USDA FAS/ USDA NASS (US), Ukraine Hydromet Center/NASU-NSAU (Ukraine), VAST/VIMHE (Vietnam).

The findings and conclusions found in this joint multiple-agency reporting are only consensual statements from the GEOGLAM expert group, and do not necessarily reflect those of the individual Agencies represented by these experts.

Map data sources: Main crop type areas based on the IFPRI/IIASA SPAM 2005 beta release (2013). Crop calendars based on FAO and USDA crop calendars. NDVI anomaly data produced by NASA/USDA/UMD based on NASA MODIS data.



# Global Temperature and Precipitation Anomalies: October 21<sup>st</sup> –November 20<sup>th</sup>

JRC- MARS

## TEMPERATURE SUM

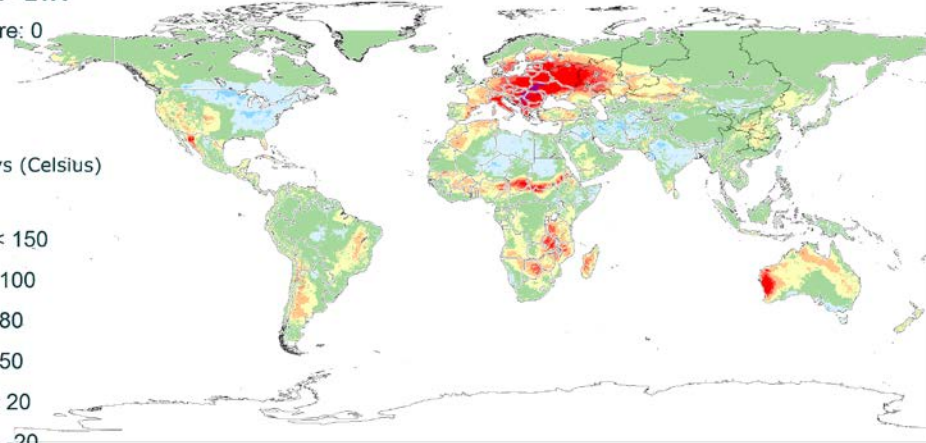
from : 21 October 2013  
to : 20 November 2013

Deviation:

Year of interest - LTA

Base temperature: 0

Unit: Degree days (Celsius)



22/11/2013  
resolution: 0.25 x 0.25 degrees



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Source: Joint Research Centre (JRC GWSI ECMWF)  
Processed by: Alterra consortium

## RAINFALL

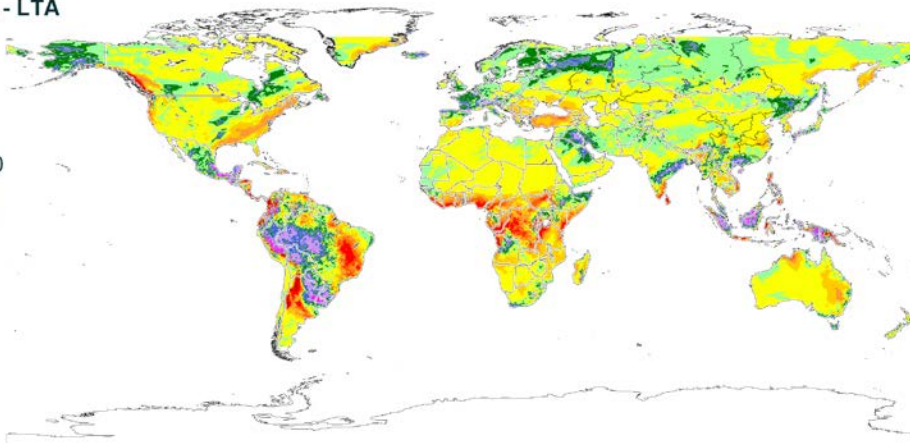
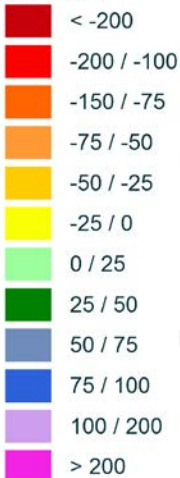
Cumulated values

from : 21 October 2013  
to : 20 November 2013

Deviation:

Year of interest - LTA

Unit: mm



22/11/2013  
resolution: 0.25 x 0.25 degrees



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Source: Joint Research Centre (JRC GWSI ECMWF)  
Processed by: Alterra consortium