GEOGLAM Crop Monitor*

March 2014

No. 6

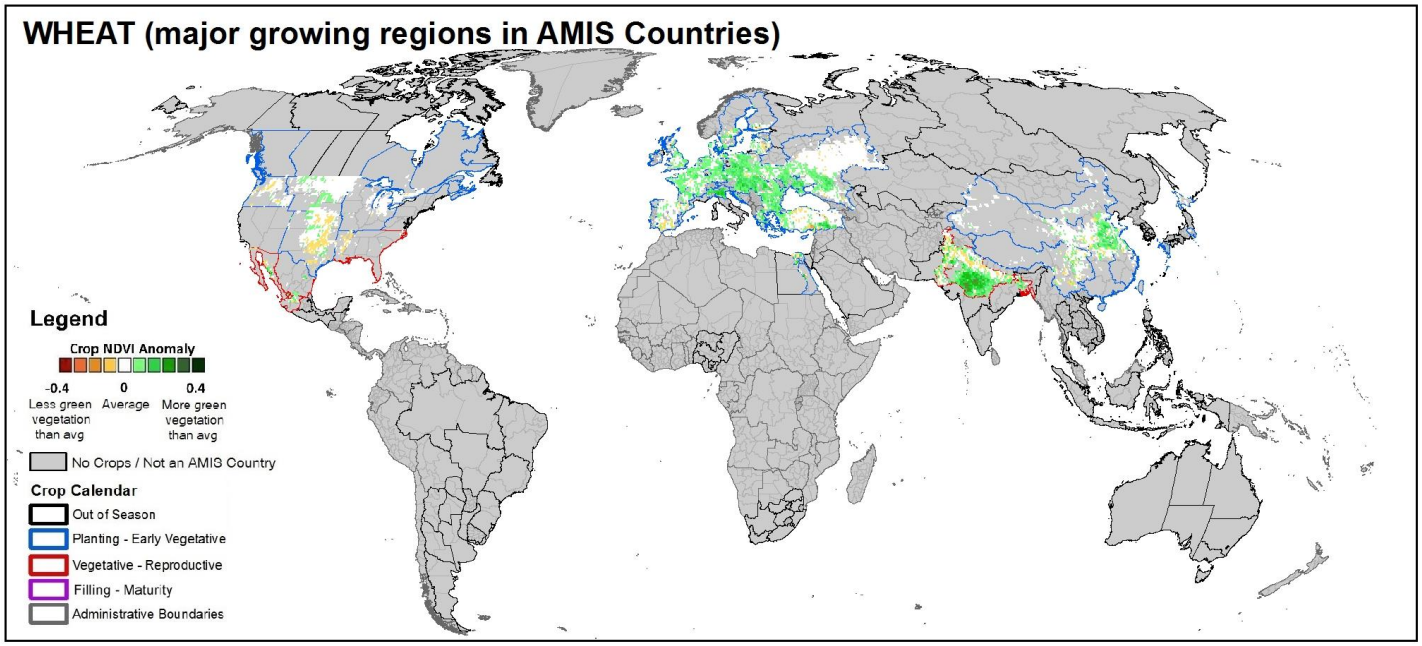
* Assessment based on Information as of February 28th

Prepared by members of the GEOGLAM Community of Practice

Crop Monitor

(As of February 28th)

Wheat:



*NDVI is a satellite-based indicator of photosynthesis often used for monitoring croplands. These anomaly images compare the NDVI for February 28th, 2014to the average NDVI for the same date from 2000-2013, 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.*

In the northern hemisphere, winter wheat conditions are favourable. Wheat is in early development stages and is mostly dormant. In **Ukraine** and **Russia,** conditions are good and the crop is in the dormancy phase. Following the extreme cold temperatures last month, unseasonably warm weather moved into southern regions of Ukraine and southern Russia, melting much of the snow cover which could increase their vulnerability to frost damage in the event of a drop in temperatures. To date, no wide-spread winter damage has been reported and an assessment of wintering and crop damage will be made at the end of dormancy. In the **EU,** conditions are variable. Western Europe has experienced a mild winter with very wet conditions. Central-Northern Italy and British Isles experienced exceptionally wet conditions leading to floods and widespread water logging. In the absence of drier conditions in coming weeks, winter crops may be locally severely impacted. Above average precipitation also occurred in western France and Spain with lower expected impacts. No significant frost damage is expected for winter cereals. **Canada** conditions are favourable. In the **US,** winter wheat is in good condition and planted area is slightly down relative to last season. Dryness across the Southern Plains is continuing to raise some concern over the dormant crop, particularly in areas that have experienced colder than normal temperatures and lack protective snow cover. However, no damage has been reported to date. In **Mexico,** conditions are favourable and unlike last year, the Northwest and Bajio regions have higher water availability. In **India,** wheat conditions are good and a bumper crop is projected due largely to an increase in planted area. In **China,** conditions are favourable for the dormant wheat crop.

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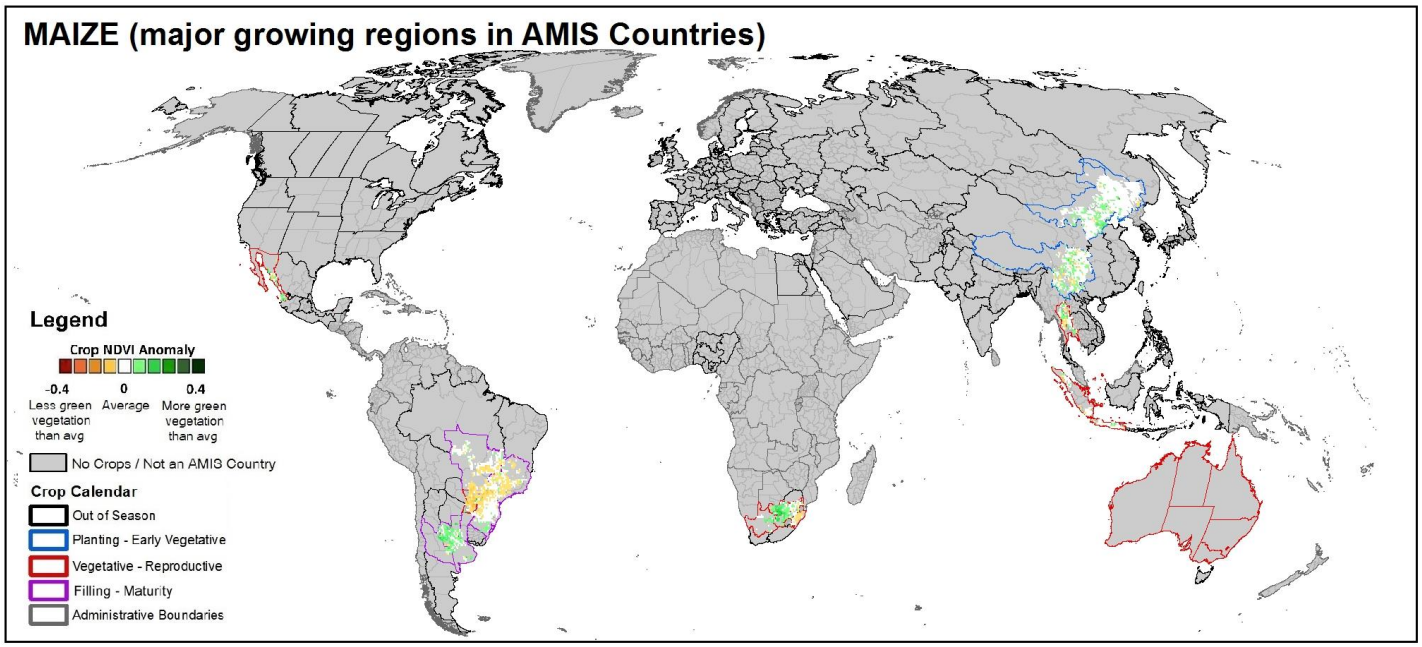
*Crop Monitor is developed for AMIS by GEOGLAM. It summarizes latest conditions (as of February 28th) for AMIS crops based on regional expertise and analysis of satellite data, ground observations, and meteorological data. GEOGLAM aims at strengthening global agricultural monitoring by improving the 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

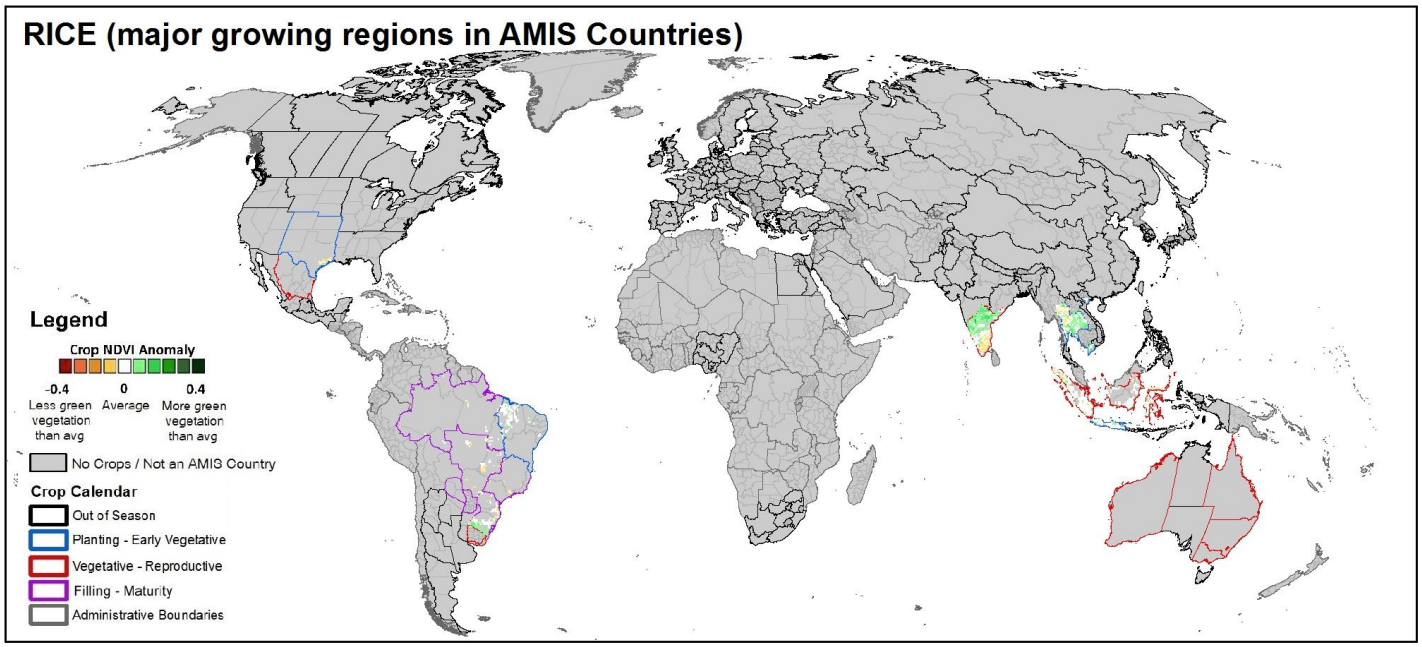
Maize:



NDVI anomaly image (NASA MODIS) depicting vegetative growth anomalies on February 28th 2014 over the main corn growing areas. (The legend is as for wheat above).

In the southern hemisphere conditions are mixed**.** In **Argentina,** approximately 70 % of the crop is rated in good condition. Welcome and timely precipitation across the major growing regions helped to support crop development and harvest has begun in northern growing regions for the early planted crop. In **Brazil,** conditions are mixed and have been slightly reduced since last month due to dry hot conditions in south east and south central growing areas. Planting of the second crop is underway though is delayed in Mato Grosso due to wetness, which is delaying soybean harvest. Planted area for both the first and second crops is down, due to an increased area planted to soybeans. In **South Africa,** conditions are generally favourable. Over the eastern parts the season started early and above normal rainfall was received. Over the western parts, rain started late, followed by dry conditions during mid summer. However, conditions have improved markedly since last month. Due to the late start and earlier dry conditions a negative impact on yields is still expected. In **Mexico,** harvest of the fall-winter planted crop, which has good grain quality, is nearly complete and sowing conditions for the crop planted in the northwest are favourable.

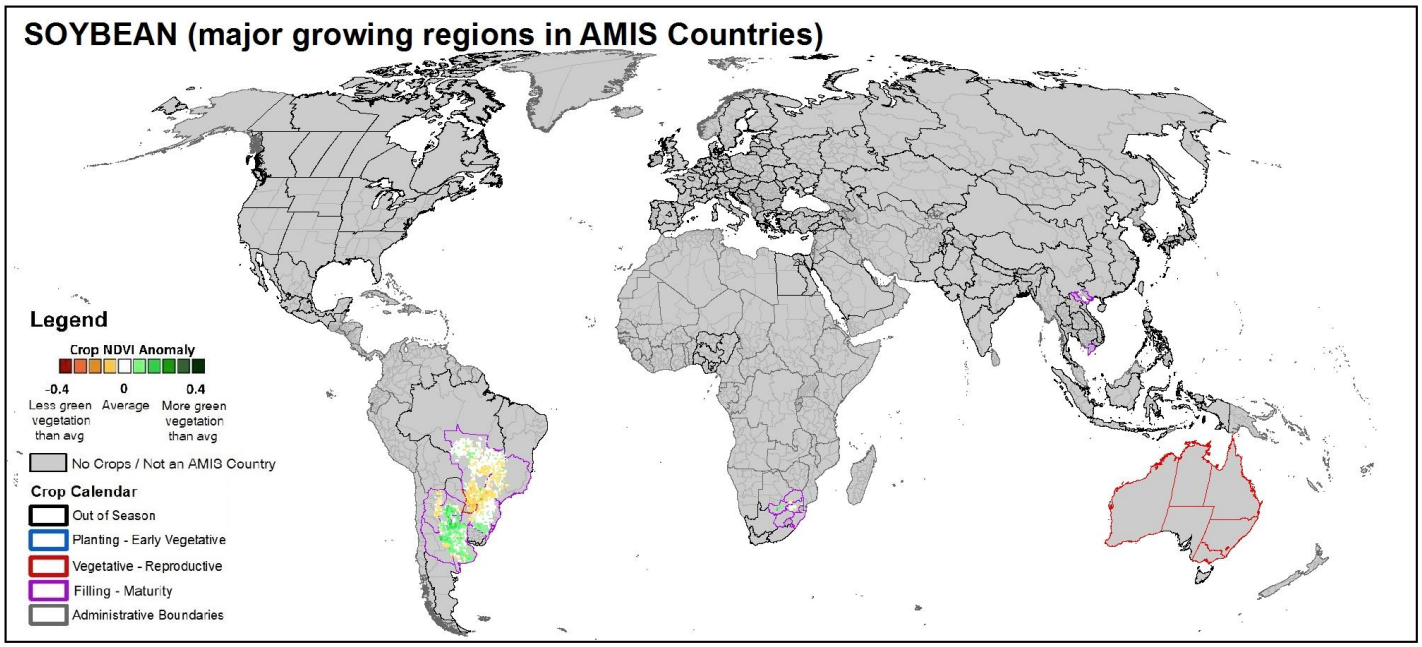
Rice:



NDVI anomaly image (NASA MODIS) depicting vegetative growth anomalies on February 28th 2014 over the main rice growing areas. (The legend is as for wheat above).

Conditions are generally favourable. In **Indonesia,** conditions are favourable for the fall planted crops that are in the vegetative to reproductive stages depending on planting date. Moisture conditions are continuing to support the crop, and there is some concern in Java over excess moisture. In **Vietnam,** prospects for the fall-winter rice are slightly lower than last year due, in part, to cold weather in the north. The winter-spring rice season has started and conditions so far are favourable. In **Thailand**, planted area is down from last year particularly in the northern and central regions, the primary production area, where the crop is in the reproductive phase, delayed by approximately one month due to cold weather. Farmers are facing problems of insufficient natural water resources and irrigation is at minimal levels. In the northeast regions, conditions are good and the crop is approaching harvest. In **Brazil** conditions, are favourable and crop yield and area are projected to increase relative to last year.

Soybeans:



NDVI anomaly image (NASA MODIS) depicting vegetative growth anomalies on February 28th 2014 over the main soybean growing areas. (The legend is as for wheat above).

In the southern hemisphere conditions are variable. In **Argentina,** conditions are good with approximately 85% of the first crop in good condition, and approximately 75% of the second crop (planted after winter crops) in good condition. The recent rainfall helped crop conditions recover from last month's hot and dry conditions. In **Brazil,** conditions are mixed. They have deteriorated since last month due to excessive wetness in Mato Grosso and dry hot conditions in Parana. A bumper crop is still expected because area planted relative to last year was expanded significantly at the expense of maize. Harvest is currently underway although it is likely to be delayed in some areas due to wetness. In other parts of the southern hemisphere, conditions in **South Africa**, are generally favourable for supporting average yields. Hot and dry conditions during mid-January may have had a slight negative impact on yields.

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/CSIRO (Australia), CONAB/INPE (Brazil), GISTDA (Thailand), EC JRC-MARS, FAO, ISRO (India), JAXA (Japan), ASIA RiCE, 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: January 21st – February 20th

JRC- MARS