



# Central and South America

## The 2014 Rainfall Season



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- Severe and widespread rainfall deficits affected Central America during the first half of 2014 leading to major crop losses during the *Primera* season (first cropping season).
- The start of the agricultural season was delayed due to the late arrival of the rains. The situation was further exacerbated due to rainfall shortages during the critical crop development stages causing serious damage. This has caused significant maize and bean production losses resulting in significantly higher market prices.
- Initial estimates put the number of affected and food insecure people at about 2 million – WFP estimates 1.5 million people will need food assistance. Most severe impacts are felt by poor subsistence farmers in Nicaragua, El Salvador, Guatemala and Honduras.
- Seasonal forecasts have shown an increased likelihood of the continuation of dry conditions into the *Postrera* (second) season. However, good rainfalls in September and early October may improve these perspectives.

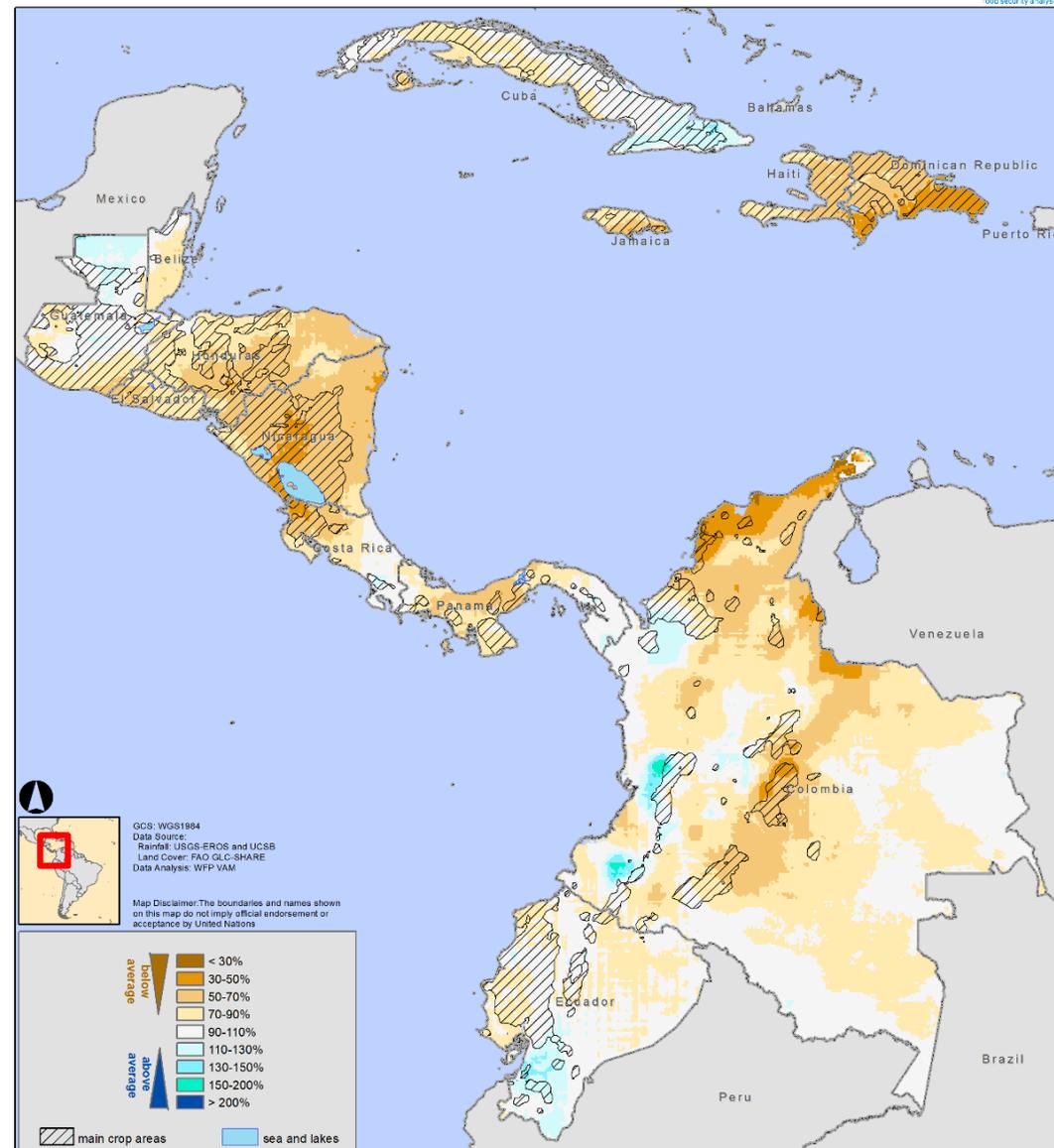
# *Primera, The First Season: March-Aug 2014*



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# CENTRAL and SOUTH AMERICA SEASONAL ANALYSIS – 2014

CENTRAL and NORTHERN LATIN AMERICA  
Total Rainfall (percent of Average) by 31 Jul 2014



## Severe drought affects the *Primera* Season

The first cropping season across Central America (*Primera*) was characterized by severe rainfall deficits—in places the driest in the last 20 years.

The region was affected by not only delayed start of the rains (April-May) but also a pronounced deficit during the most sensitive crop development stages (July).

Worst affected areas included Nicaragua, Honduras, El Salvador, Guatemala as well as Haiti and Dominican Republic.

The extensive rainfall deficits and irregular distribution had a significant impact on crops:

Maize produced in the *Primera* season, which accounts for the bulk of the production, experienced heavy losses—over 50 percent in some of the most affected areas.

Beans also experienced similar losses, although the *Postrera* season is more important in terms of the annual production.

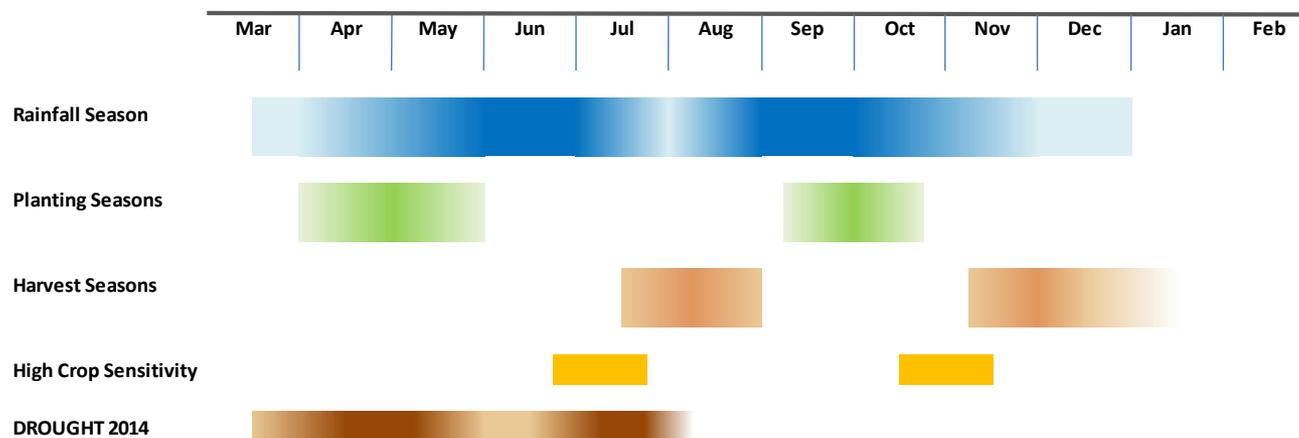
Staple food prices are already rising fast in response to production shortages.

Total rainfall from February to July 2014 as a percentage of the 20 year average.  
Hashed pattern indicates main agricultural areas.  
Brown shades for below average rainfall, blue shades for above average seasonal rainfall

## Impacts of the *Primera* Season Drought

Initial WFP analysis indicates that nearly 3 million people in Central America are affected of which about 2 million are food insecure. WFP estimates that initially **1.5 million people** will require food assistance for three months.

The impact of the drought comes on top of the coffee rust disease which is affecting vulnerable households since 2012. Households which depend on grain production and agricultural daily labour are of most concern.



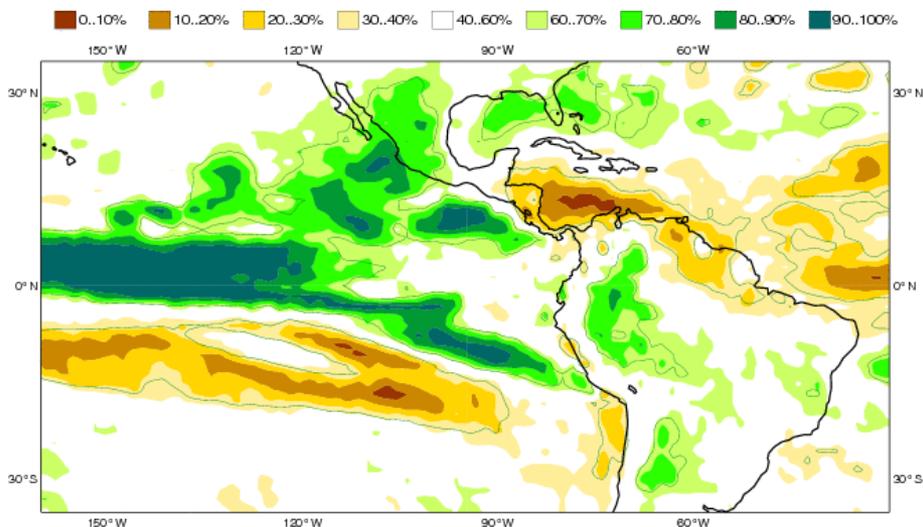
### Simplified Calendar for Central America

In Central America there are two broad cropping seasons, the first (*Primera*) extending from April-May (planting) to August (harvests) and beyond, with a second season (*Postrera*) starting in August until December and beyond.

The *Primera* season provides most of the maize in the Central American countries, while the majority of the beans are produced in the *Postrera* season.

ECMWF Seasonal Forecast  
 Prob(precipitation > median)  
 Forecast start reference is 01/09/14  
 Ensemble size = 51, climate size = 450

System 4  
 OND 2014  
 Solid contour at 1% significance level



Forecast for the rainfall situation for October-December 2014:  
 Probability of rainfall to exceed the usual amount. Green shades denote higher likelihood of above average rainfall, brown shades higher likelihood of below average rainfall. Source: ECMWF  
 Similar forecasts from the Regional Climate Outlook Forum had been produced for the Aug-Oct period and should be updated shortly

## Perspectives for the *Postrera* season

It is critically important that the rains significantly improve during the *Postrera* season to avoid further negative effects on poor and vulnerable households.

However, the prognosis for the *Postrera* season was pessimistic, whereby drier than average conditions were forecast for most of Central America. *Foro del Clima de America Central* also indicated a likelihood of a shorter than usual rainfall season. The forecasts were more favourable for South America (above or on average rainfall for most of the continent).

Given that September and early October have so far been wetter than average and soil water reserves are now reasonably well stocked, perspectives for the *Postrera* may be considered **more favourable** than those indicated by the seasonal forecasts.

However the forecasts cover a three month period from October, with mid October to mid November being the crucial period when crops are most sensitive to water deficits. Hence the possibility of further negative impacts should not be entirely discarded.

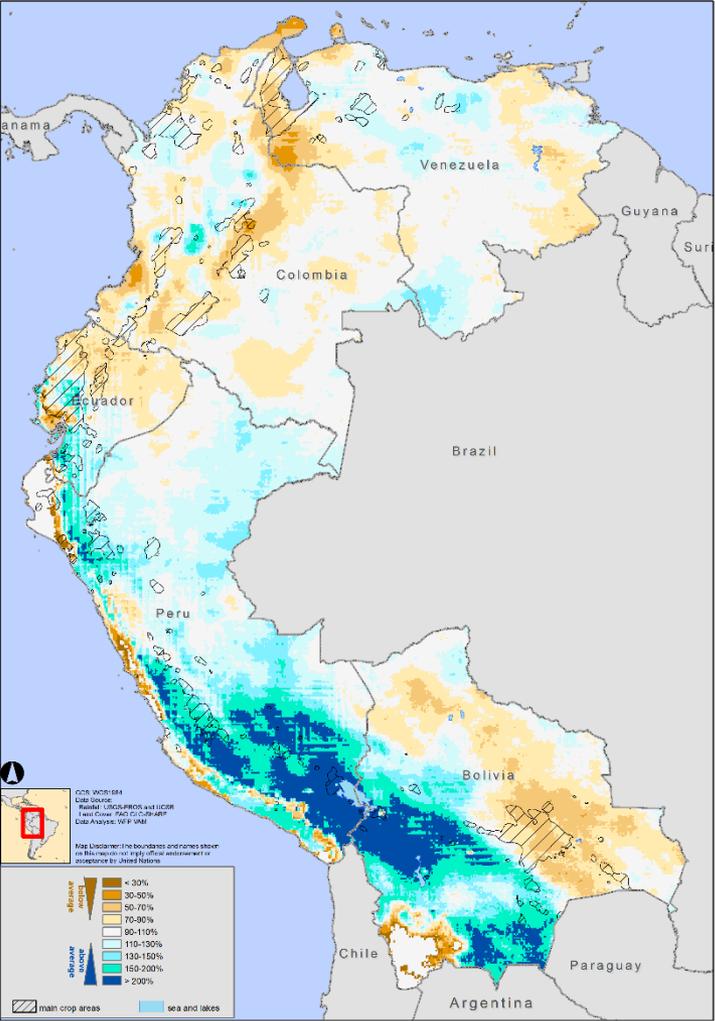
# Current Situation – *Postrera* Season 2014



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# CENTRAL and SOUTH AMERICA SEASONAL ANALYSIS - 2014

10 Oct 2014 SOUTHERN AMERICA  
Total Rainfall (percent of average) by 10 Oct 2014



Total rainfall from August to early October 2014 as a percentage of the 20 year average.  
Hashed pattern indicates main agricultural areas.  
Brown shades indicate below average rainfall, blue shades indicate above average seasonal rainfall

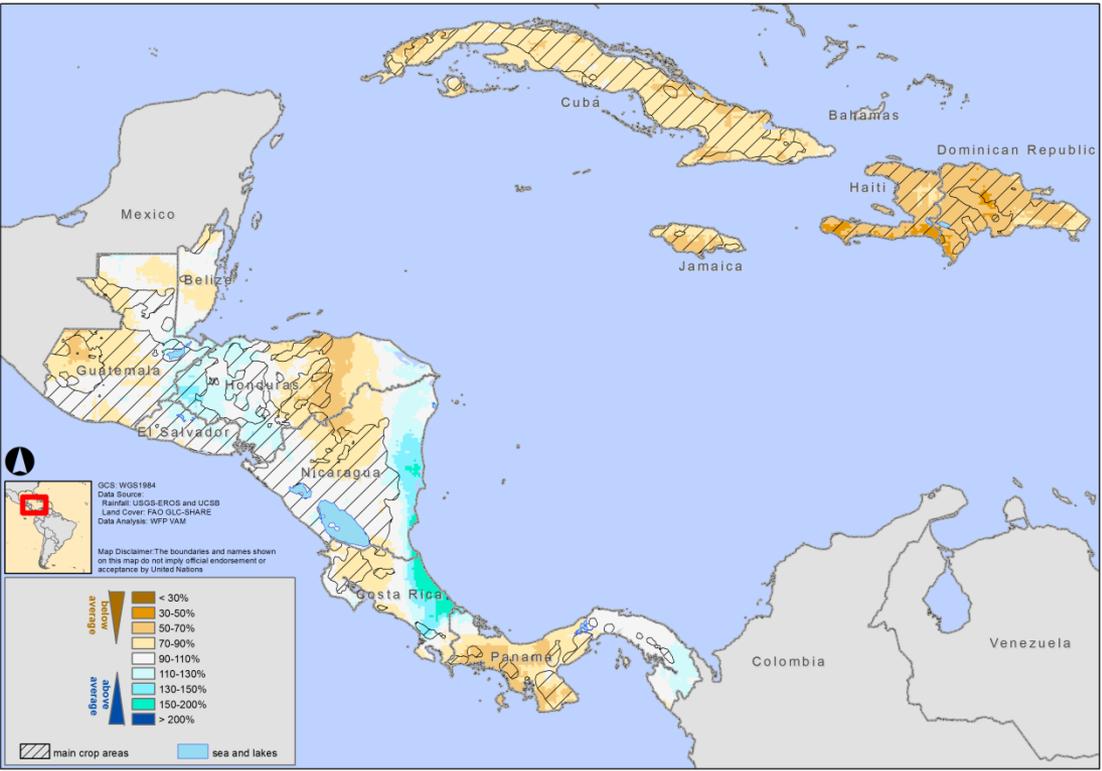
## August-September

The early *Postrera* season rainfall is still affected by the dryness of the *Primera* season.

Although August still displayed significantly drier than average conditions, September rainfall was widespread and abundant across Central and South America, providing good conditions for planting and early crop development. Pronounced deficits still remain in Hispaniola, with light dryness in Cuba and the Caribbean.

Early October saw continuation of this pattern with localized heavy rains in Guatemala and Costa Rica. Wetter than average conditions are also noticed in southern Peru and SE Bolivia (in contrast with the western part of the country).

10 Oct 2014 CENTRAL AMERICA  
Total Rainfall (percent of average) by 10 Oct 2014

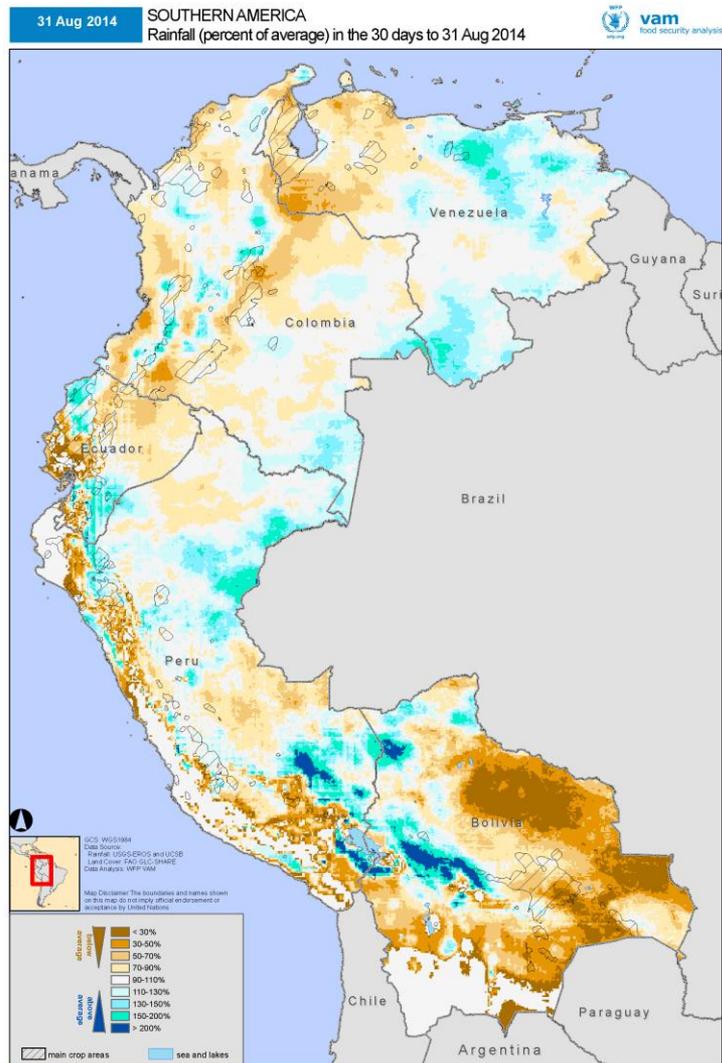


# How the Season is Evolving



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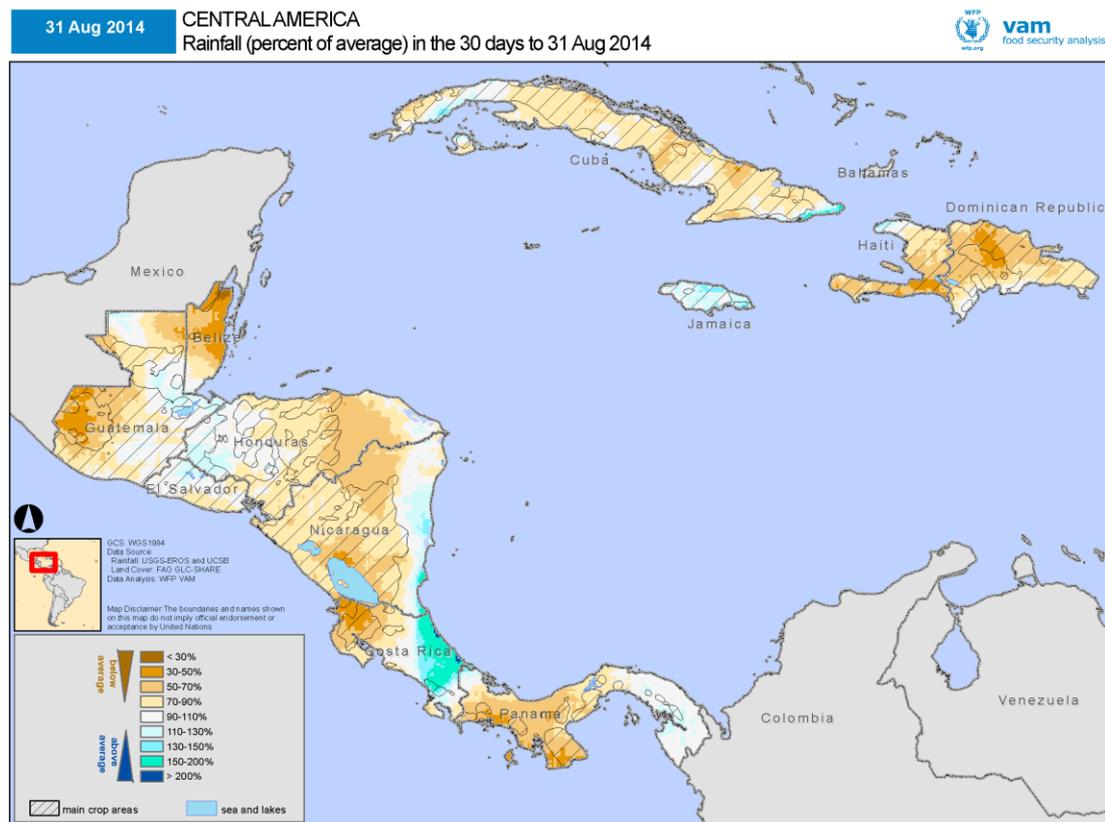
# CENTRAL and SOUTH AMERICA SEASONAL ANALYSIS - 2014



Total rainfall in August 2014 as a percentage of the 20 year average.  
Hashed pattern indicates main agricultural areas.  
Brown shades indicate below average rainfall, blue shades indicate above average seasonal rainfall

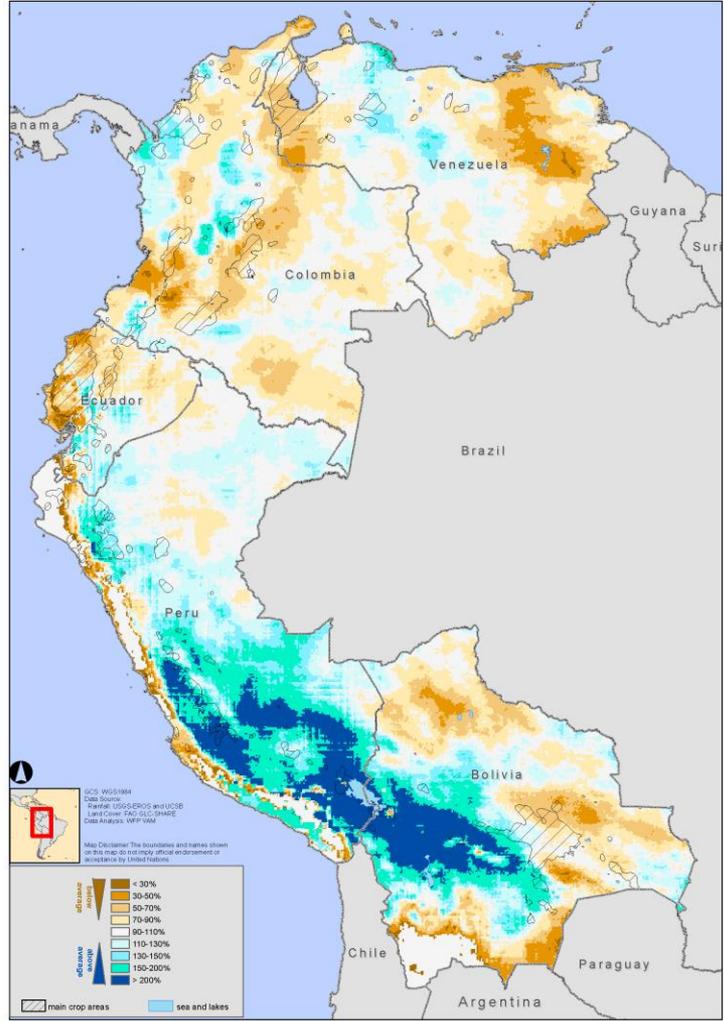
## August

Rainfall during August still displayed drier than average conditions across most of the region, which precluded an early start to the *Postrera* season.



# CENTRAL and SOUTH AMERICA SEASONAL ANALYSIS - 2014

30 Sep 2014 SOUTHERN AMERICA  
 Rainfall (percent of average) in the 30 days to 30 Sep 2014



Total rainfall in September 2014 as a percentage of the 20 year average.  
 Hashed pattern indicates main agricultural areas.  
 Brown shades indicate below average rainfall, blue shades indicate above average seasonal rainfall

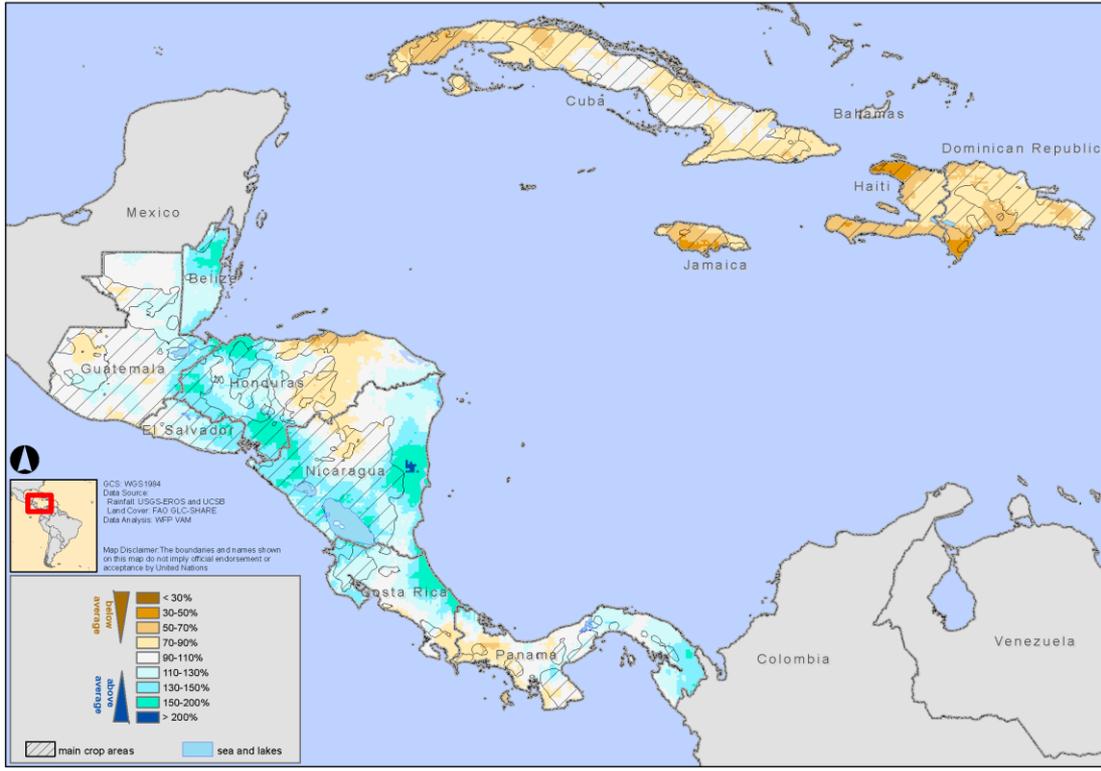
## September

During September, rainfall was mostly above average across Central America, bringing much needed relief to farming communities and allowing planting of Postrera crops across the region.

The above average rainfall did not extend to Haiti, where drier than average conditions have prevailed.

In South America, drier than average conditions were also noticeable in Colombia and parts of Ecuador, but Peru and central Bolivia are experiencing good rains at the start of the season.

30 Sep 2014 CENTRAL AMERICA  
 Rainfall (percent of average) in the 30 days to 30 Sep 2014



## Data Sources:

Rainfall: CHIRPS, Climate Hazards Group, UCSB

Vegetation: MODIS NDVI, EOSDIS-NASA

Land Cover: FAO GLC-Share

## Processing:

VAM software components, ArcGIS

## For more information, please contact:

Rogério Bonifacio

[rogerio.bonifacio@wfp.org](mailto:rogerio.bonifacio@wfp.org)

+39 06 6513 3917



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