

# The Afghanistan Agrometeorological Monthly Bulletin

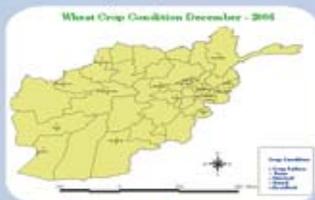


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Wheat Crop Condition

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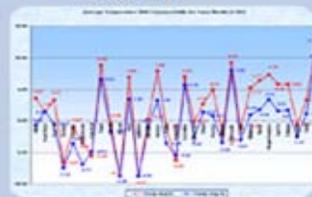
Synthesis Situation Map

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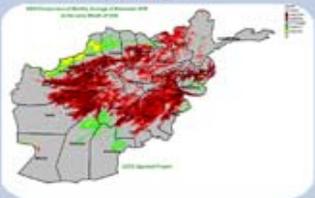
Rainfall Situation

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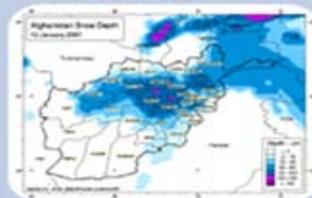
Rainfall Graphs

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Comparison of NDVI

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Afghanistan Snow Depth

The Agromet Project of USGS, supported by the US Agency for International Development (USAID), is working together with the Ministry of Agriculture and irrigation and the Afghan Meteorological Authority (AMA) of Ministry of Transport (MoT).

**Agromet Network**



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## Summary

**Comparison of rainfall data for the month of October 2007 with the same month in 2006 clearly shows a decrease of rainfall during the month of October 2007 over the same month in 2006 across the country.**

Zaranj with 35.5 ° C was the warmest spot of the country and Cheghcheran with - 8.4° C experienced stream cold weather during the month of October 2007.

## Cereal Crops Phenological Stages

### Central Region:

In most parts of this region Land preparation practices and wheat cultivation is in progress as in Ghorband District and Charikar center of Parawan Province, Paghman and Karizmir Districts of Kabul Province, Chak and Jaghatu Districts of Wardak province. Reports are indicating from Dashtak District of Panjsher Province, Ghorband District of Parawan Province, Karizmir District of Kabul province that maize is in grain filling stage, while in Kohistan District , Mahmud Raqi central Kapisa province, Chak District of Wardak Province and Charikar center of Parawan Province rice and maize are in harvesting stage.

### East Central Region:

Reports are indicating from Panjab District of Bamyán Province that Land preparation practices and winter wheat cultivation is in progress While In Yakawlang District and central Bamyán winter wheat is in planting stage.

### North Eastern Region:

In most parts of this region maize and rice are in harvesting stage as in Imam Sahib, Chahar Dara, Aqtipa and Qali-i-Zal Districts and center of Kunduz Province, Bangi District and center of Takhar Province, Baghlan and Badakhshan Provinces.

### Northern Region:

Reports from Shibirghan center of Jawzjan Province, Saripul Province, Dehdadi and Nahri Shahi Districts of Balkh Province, are indicating that farmers are preparing the lands for wheat cultivation.

### Southern Region:

From Nimroz, Zabul, Kandahar and Hilmand Provinces reports are indicating that farmers are preparing their lands for wheat cultivation. In Uruzgan and Hilmand Provinces maize and rice are in maturity stage.

### Western Region:

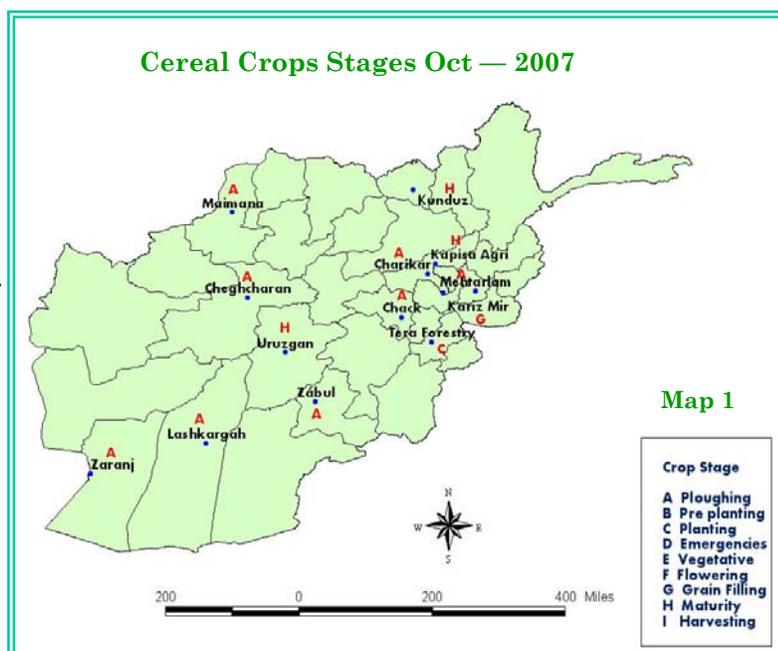
Reports are indicating from Muqur District and Qala-i-Naw central Badghis Province, Farah and Ghor Provinces that farmers are preparing their lands for wheat cultivation.

### Eastern Region:

In most parts of this region as Asmar District and Asadabad center of Kunar Province, Ghaziabad, Agam District and central Nangarhar Province reports are showing that Maize and rice are in harvesting stage. In Shesham Bagh and Mihterlam center of Laghman Province rice and maize are in grain filling stage.

### South Eastern Region:

In most parts of this region as Muqur and Sardy Districts of Ghazni Province, Tera and Gardez Districts of Paktya Province, Urgun and Khairkot Districts and Sharana Reports are showing that wheat is in planting stage. In Muqur District of Ghazni Province, Tera and Gardez Districts of Paktya Province and Khost Province maize is in harvesting stage.



## Central Region:

In most parts of this region wheat yield is already harvested. Other cereal crops (maize and rice) are in normal condition as in Mahmud Raqi , Dashtak District of Panjsher Province, Chaharikar , Syagerd District of Parwan Province and Chak District of Wardak Province. In Karizmir and Paghman Districts of Kabul Province and Dara District of Panjsher Province wheat and Maize are in good (better than normal) condition.

## Eastern Region:

Reports from Mihterlam, Agam District , Jalalabad city and Ghaziabad of Nangarhar Province are showing normal cereal crops (maize and rice) condition . Reports indicated from Asmar District and center of Kunar Province that cereal crops wheat, rice and maize are in good condition (better than normal).

## North Eastern Region:

In most parts of this region as in Imam Sahib, Chahar Dara, Aqtipa and Qala-i-Zal Districts of Kunduz Province and center of Kunduz Province, Bangi District of Takhar Province and central Badakhshan Province wheat yield is harvested and rice is in good condition and maize is in normal condition. In Baghlan Province maize and rice are in normal condition.

## Northern Region:

From most parts of this region reports are indicating that wheat yield is harvested. Other cereal crops rice and maize are in normal condition as in Maymana and Shibirghan center of Jawzjan Province.

## Southern Region:

Reports are showing from this region that wheat yield is harvested. Maize and rice are in good condition as in Uruzgan Province. In Kandahar Province maize is in normal condition.

## Western Region:

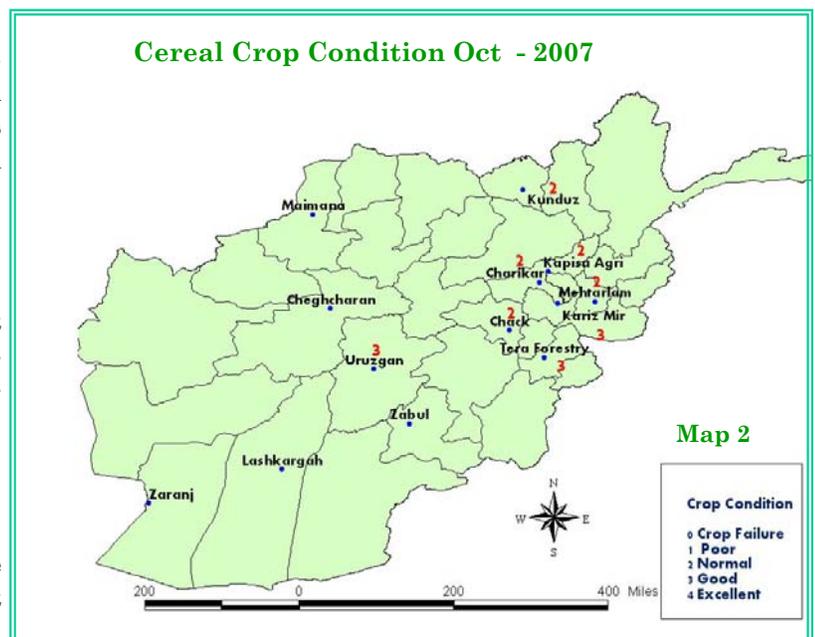
Report are indicating from Farah, Ghor Province and Qala-i-Naw central Badghis Province that wheat yield is harvested in these areas.

## East Central Region:

In Yakawlang, Panjab and Bamyam Districts of Bamyam province wheat yield is harvested.

## South Eastern Region

In this region the wheat yield is harvested. In Rohani Baba, Tera and Gardiz central Paktya province reports are indicating good maize and rice condition. Normal maize condition reported from Ali Sher and central Khost Province, Muqur and Sardy Districts of Ghazni Province.



## Adverse Factors

### Central Region

The adverse factors in Charikar and Syagerd Districts of Parwan Province are shortage of agricultural inputs and maize Rust. Reports from Jaghatu District of Wardak Province shows Anthrax disease in animals. In Dashtak and Dara Districts of Panjsher Province excessive weeds and shortage of agricultural inputs exist. In central Kapisa Province rice's pest, disease prevalence. In Karizmir District of Kabul Province frost has affected.



### North Eastern Region:

Reports from Imam Sahib, Chahar Dara, Aqtipa and Qala-I-Zal Districts and central Kunduz Province, indicated existence of pests, diseases and excessive weeds. Reports from Poza-i-Shan area Baghlan Province indicates shortage of agricultural inputs and prevalence of maize Rust.



### Northern Region:

Main adverse factors in Saripul, Faryab, Balkh and Jawzjan Provinces were shortage of agricultural inputs and less rainfall.

### South Eastern Region:

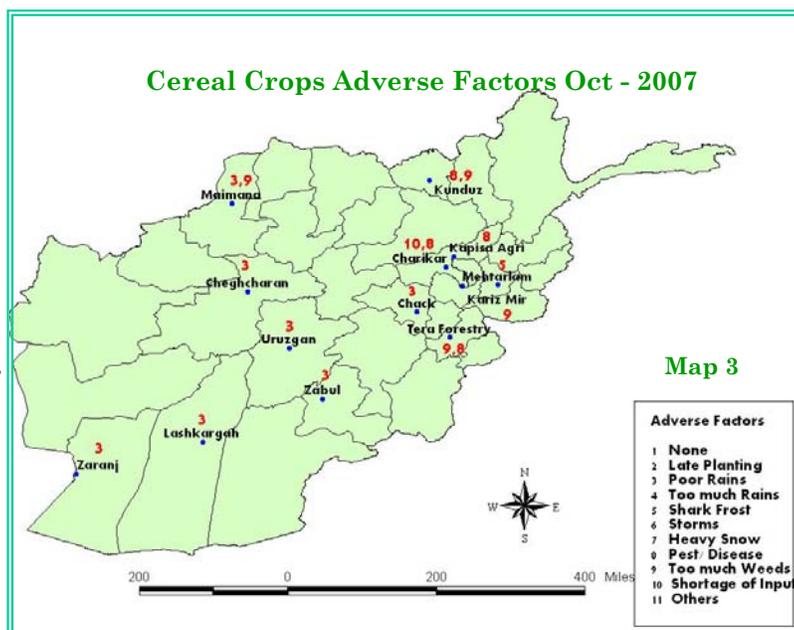
Reports are showing from Khost city shortage of agricultural inputs and excessive weeds existence. In Rohani Baba area of Paktya Province pests and disease, Storm and excessive weeds in maize areas prevailed.

### Southern Region:

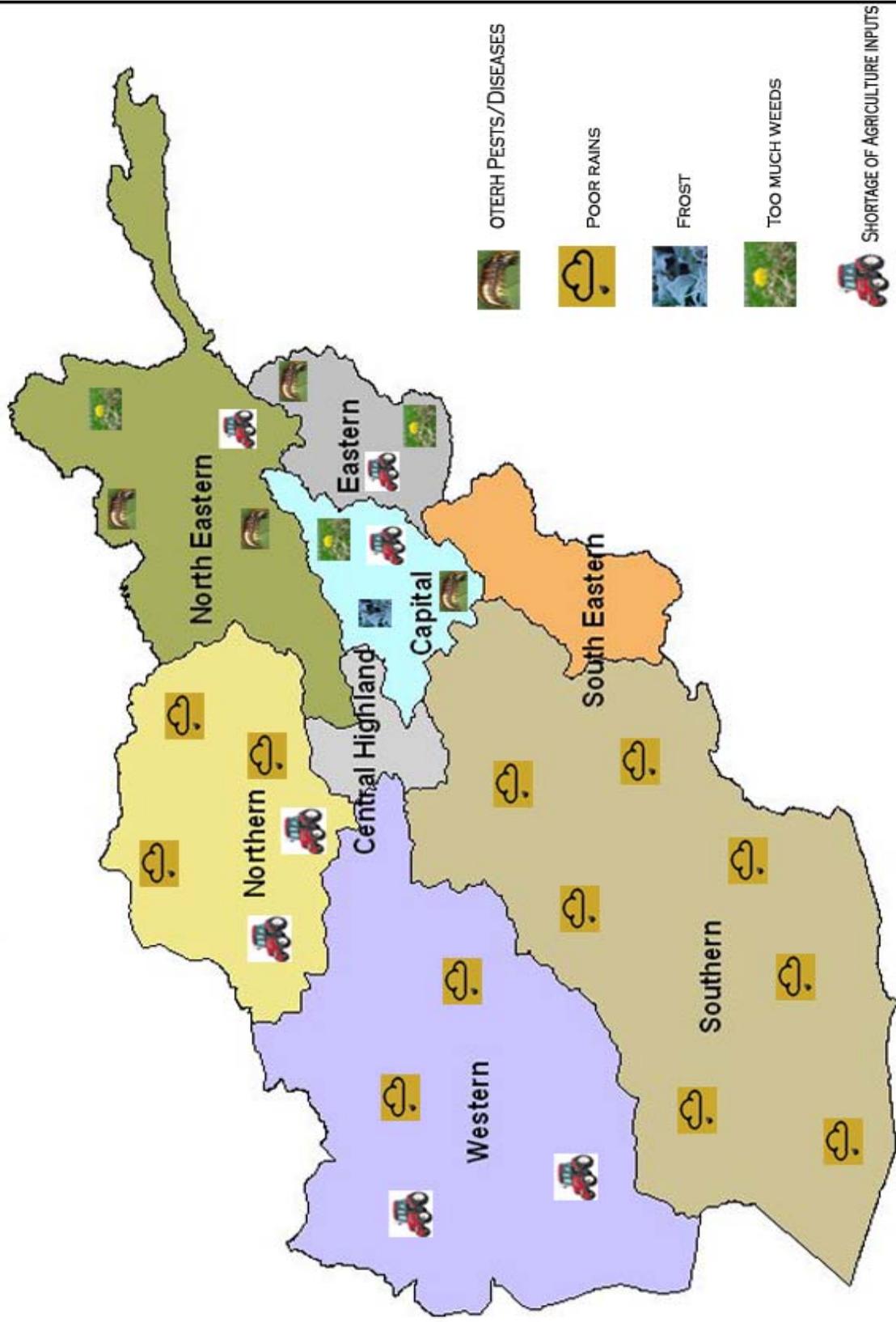
Report from Nimroz and Kandahar Provinces, Greshk, Nawa and Nad Ali Districts and Hilmand Province and Qalat city are showing dry spell and less rainfall.

### Eastern Region:

Reports from Laghman Province show shortage of agricultural inputs and prevalence of excessive weeds and less rainfall. In Shesham Bagh area of Nangarhar Province pests and diseases existence was reported.



*Synthesis Situation Map for October 2007*



Map 4

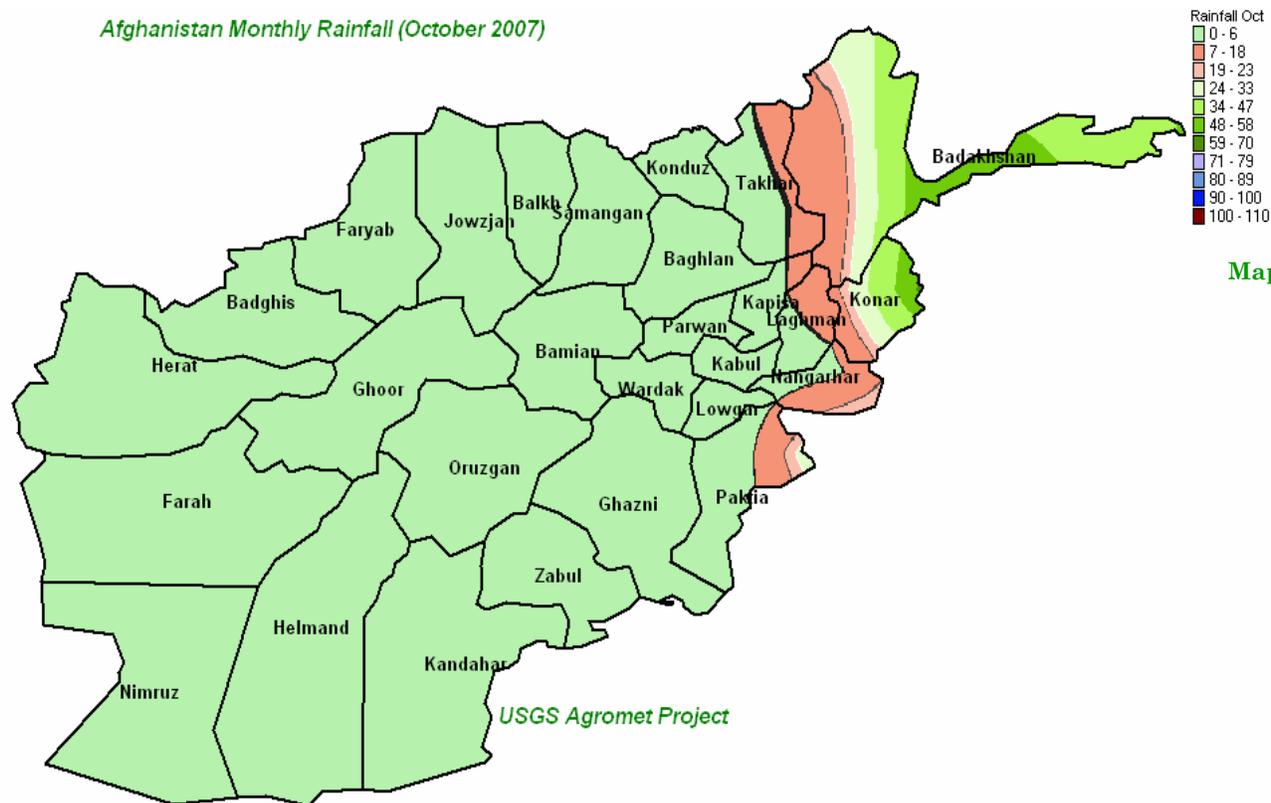
## Rainfall Situation

Rainfall for the month of October 2007 had a decrease compared to the same month in 2006 all over the country.

Comparison of rainfall data for the month of October 2007 with the same month in 2006 (Chart 1) clearly shows a decrease of rainfall during the month of October 2007 over the same month in 2006 across the country and the month of October was dry and no rainfall occurred in this month in fact significant change occurred in rainfall situation during the month of October 2007 compared to the same month of last year.

The percentage +/- of rainfall shown in chart ( Chart 2 ), as chart 1 shows rainfall during the month of October 2007 had 100 % decrease compared to the same month in 2006.

Comparison of rainfall value for the month of October 2007 with the same month of long term average (Chart 2 ) shows the rainfall had a decrease in Baghlan and Faizabad in the month of October over the same month of long term average but in the rest of stations there was no change in rainfall situation in fact no rainfall occurred during the month of October 2007. It is mentioned poor performing of rainfall stressed pasture conditions in parts of Northern region.



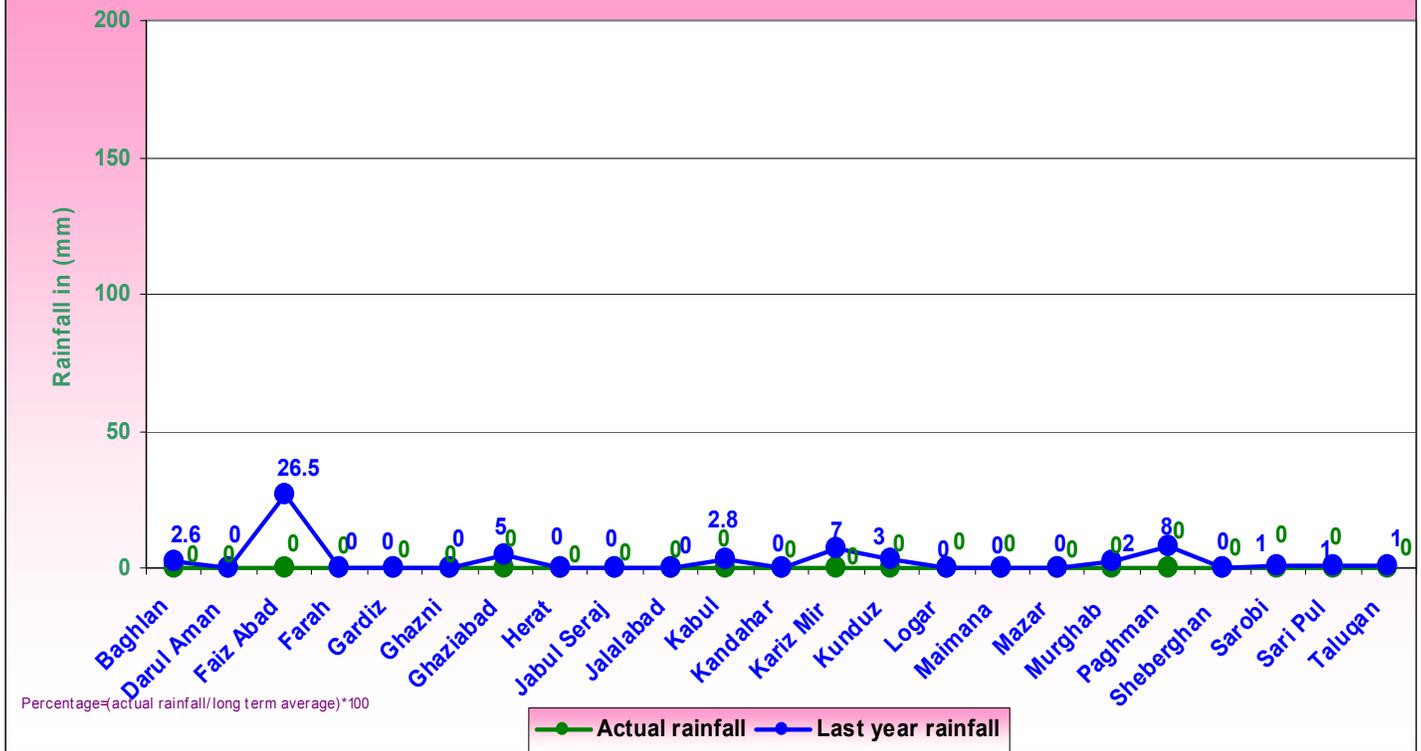
Distribution of rainfall for the month of October 2007 shown in the map( 5 ) however the North-eastern and some parts in the Eastern region experienced less amount of precipitation,

but in the remaining regions of the country no rainfall occurred during the month of October 2007.

# Rainfall Graphs for the Month of October 2007

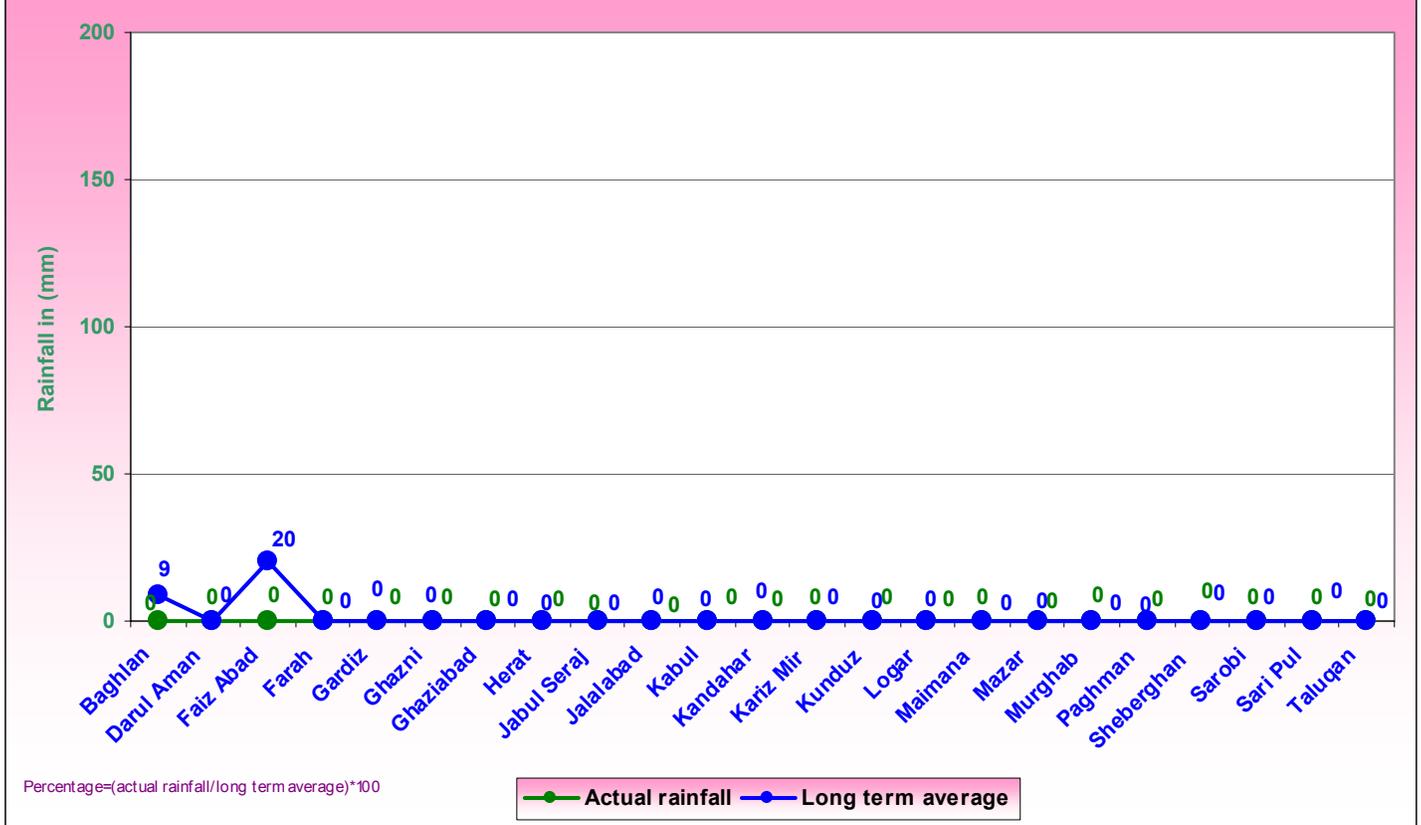
Comparison of Actual and Last Year Rainfall (October 2007)

Chart 1

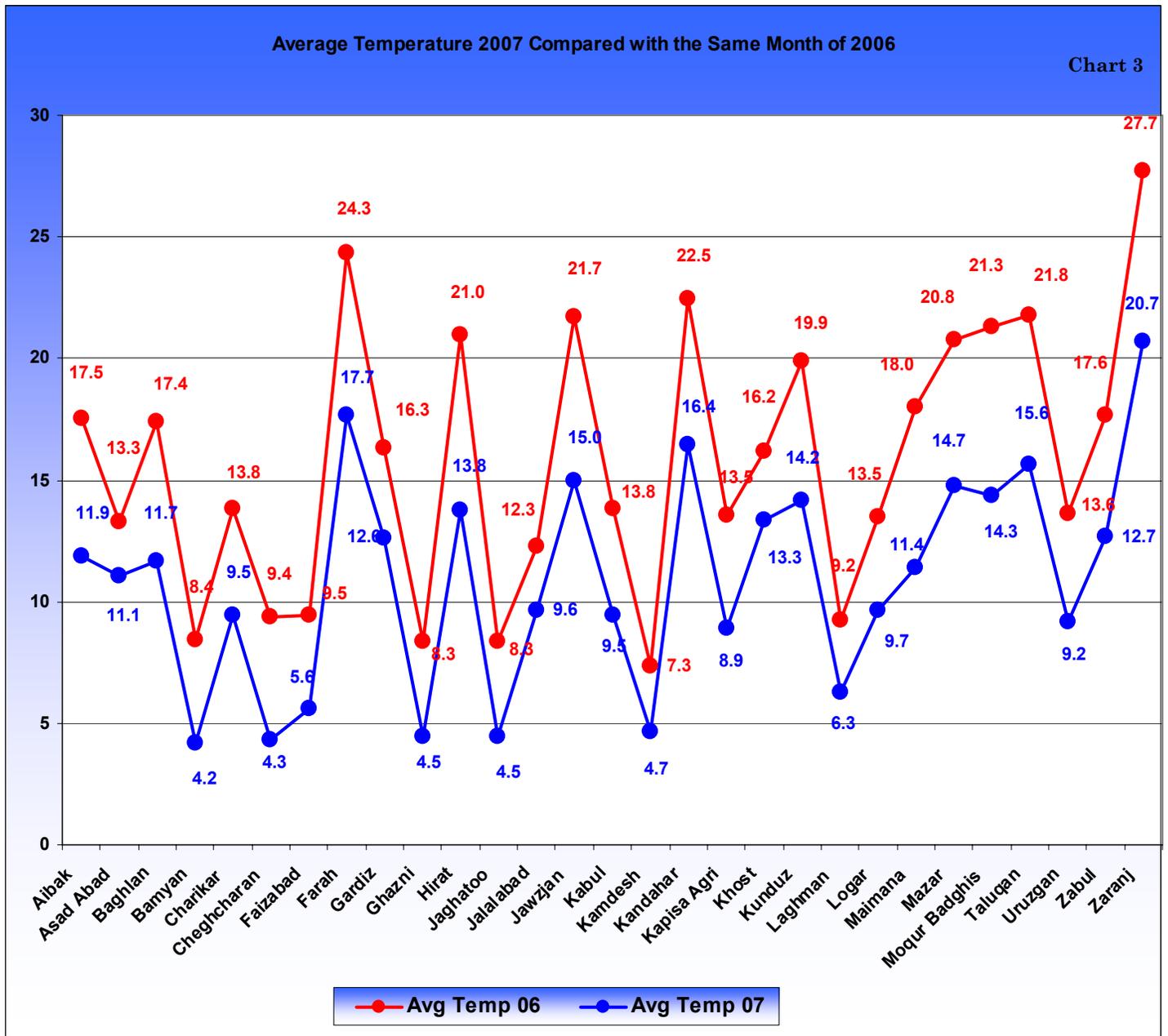


Comparison of Actual Rainfall and Long Term Average (October 2007)

Chart 2



## Average Temperature for the Month of October 2007

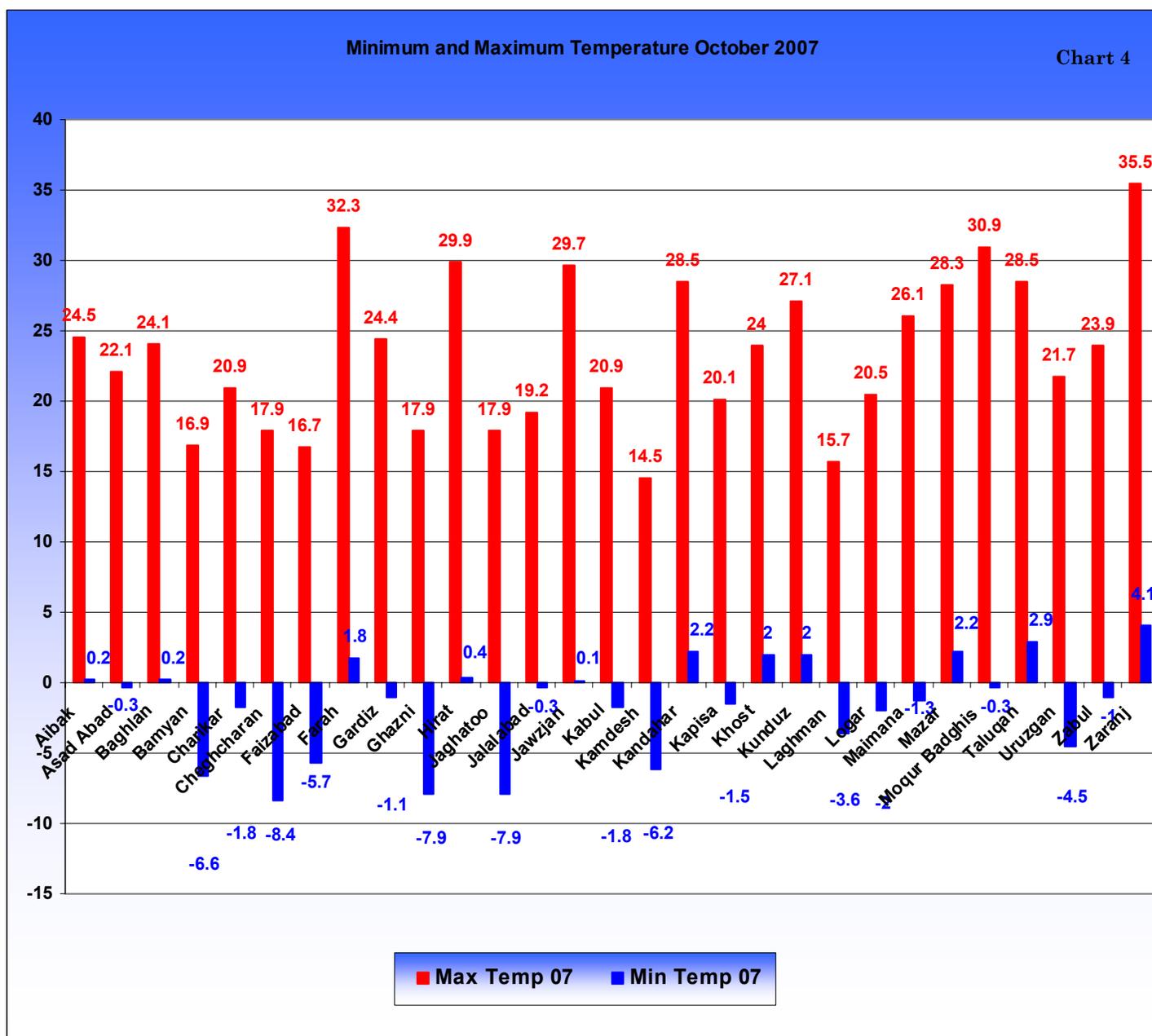


Comparison of temperature values show decrease of temperature during the month of October 2007 over the same month in 2006.

Comparison of temperature values show decrease of temperature during the month of October 2007 over the same month in 2006. In general country experienced lower temperature during the month of October 2007 compared to the same month in 2006.

The temperature decrease for the month of October over the same month in 2006 is 2 up to 7 ° C likely lower (Chart 3 ). Though low temperature may increase precipitation chance but inadequate moisture has decreased the rainfall occurrence chance during the month of October 2007.

## Temperature for the Month of October 2007



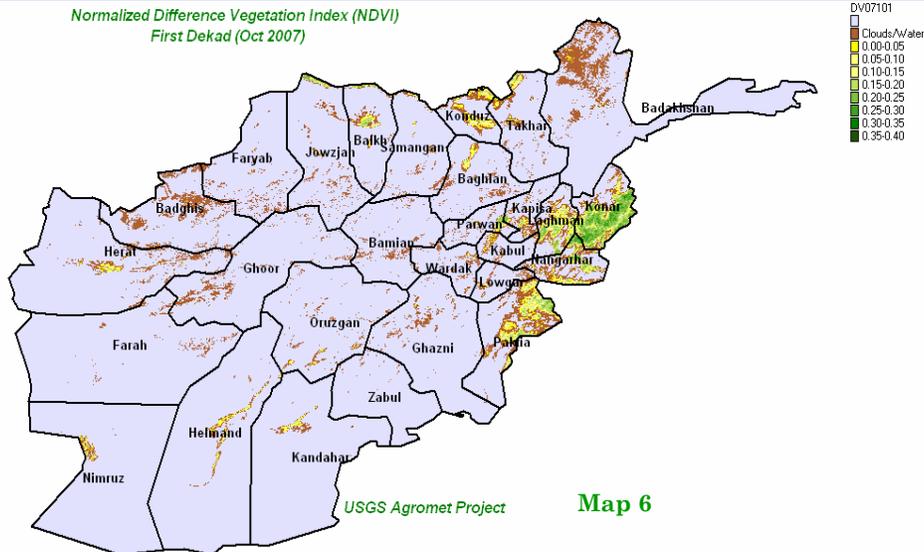
Zaranj center of Nimroz Province with 35.5 ° C was the warmest spot in the country

Chart ( 4 ) shows maximum and minimum temperature for the month of October 2007, chart shows the minimum temperature dropped down to freezing point in most parts of the country.

Zaranj with 35.5 ° C was the warmest spot of the country and Cheghcheran with – 8.4° C experienced stream cold weather during the month of October 2007 .

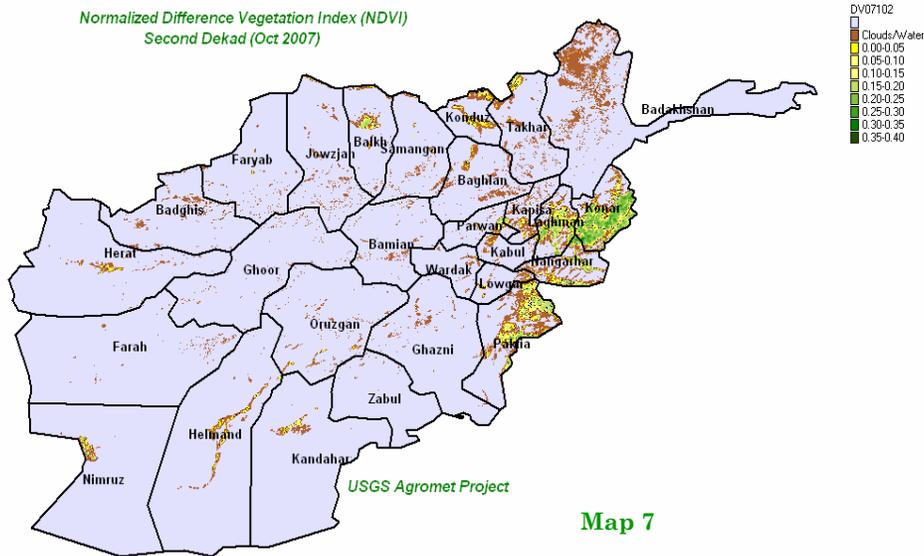
# Normalized Difference Vegetation Index (NDVI) (October 2007)

Normalized Difference Vegetation Index (NDVI)  
First Dekad (Oct 2007)



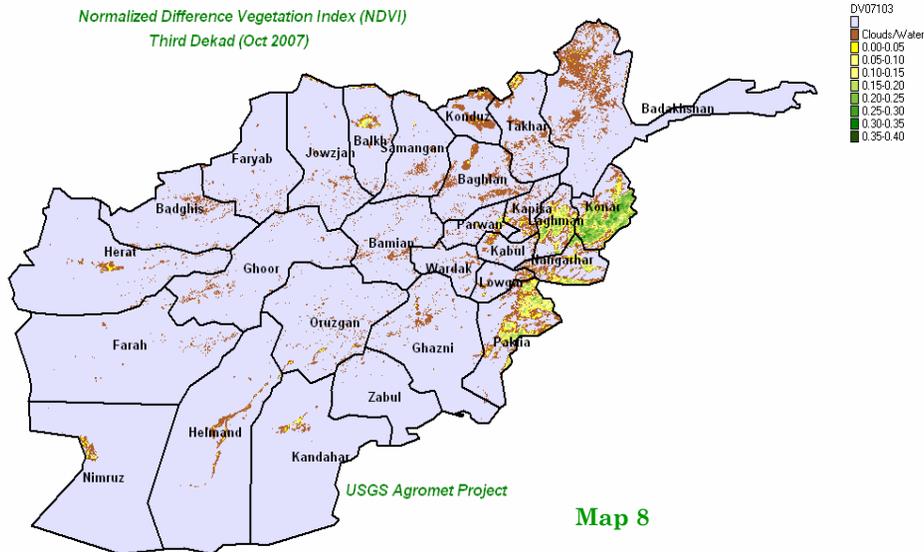
Vegetation Index (NDVI) 1st Dekad of October 2007—Afghanistan

Normalized Difference Vegetation Index (NDVI)  
Second Dekad (Oct 2007)



Vegetation Index (NDVI) 2nd Dekad of October 2007—Afghanistan

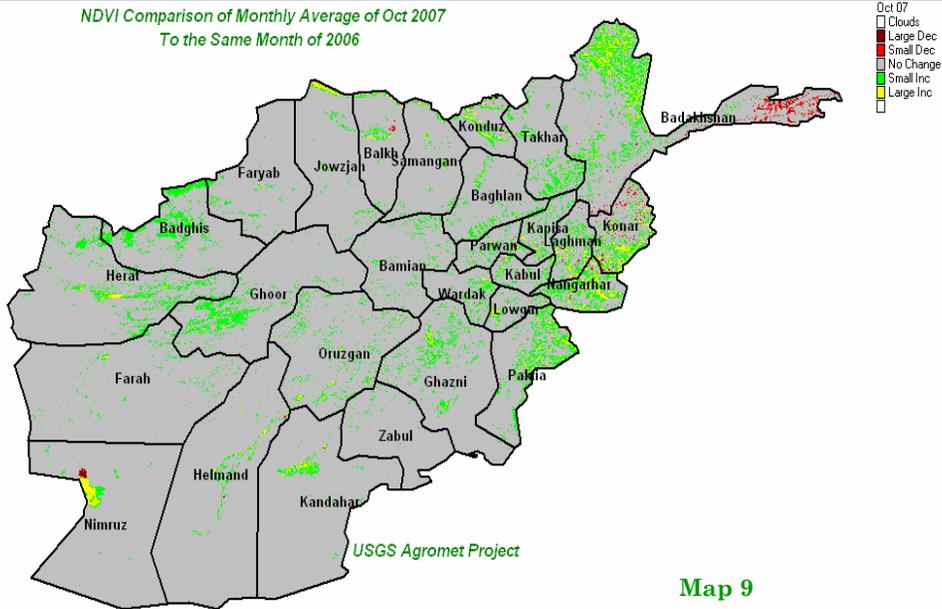
Normalized Difference Vegetation Index (NDVI)  
Third Dekad (Oct 2007)



Vegetation Index (NDVI) 3rd Dekad of October 2007—Afghanistan

## Comparison of NDVI October 2007

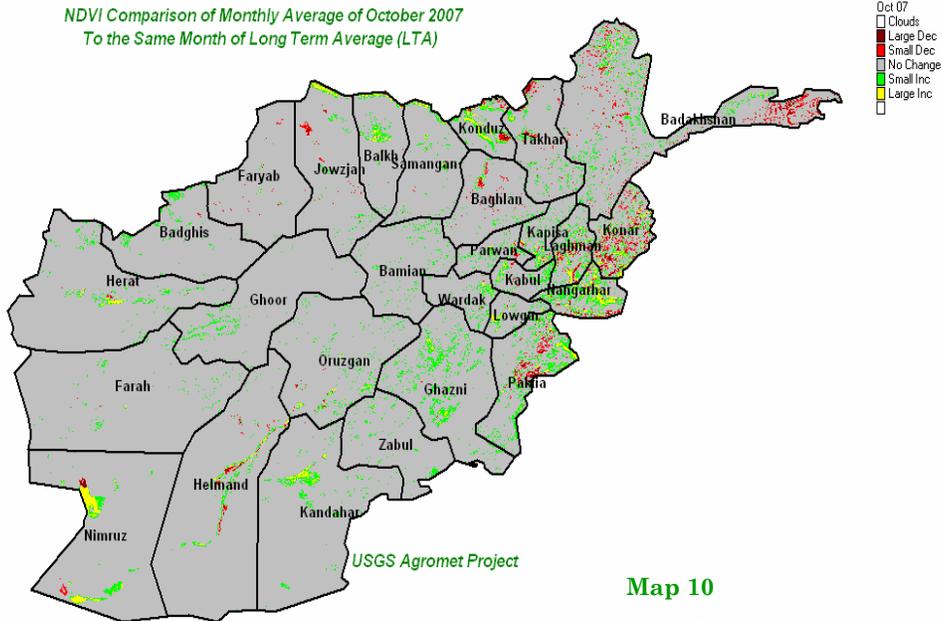
*NDVI Comparison of Monthly Average of Oct 2007  
To the Same Month of 2006*



**Map 9**

### Vegetation Index: Comparison to Last Year

*NDVI Comparison of Monthly Average of October 2007  
To the Same Month of Long Term Average (LTA)*



**Map 10**

### Vegetation Index: Comparison to Long Term Average

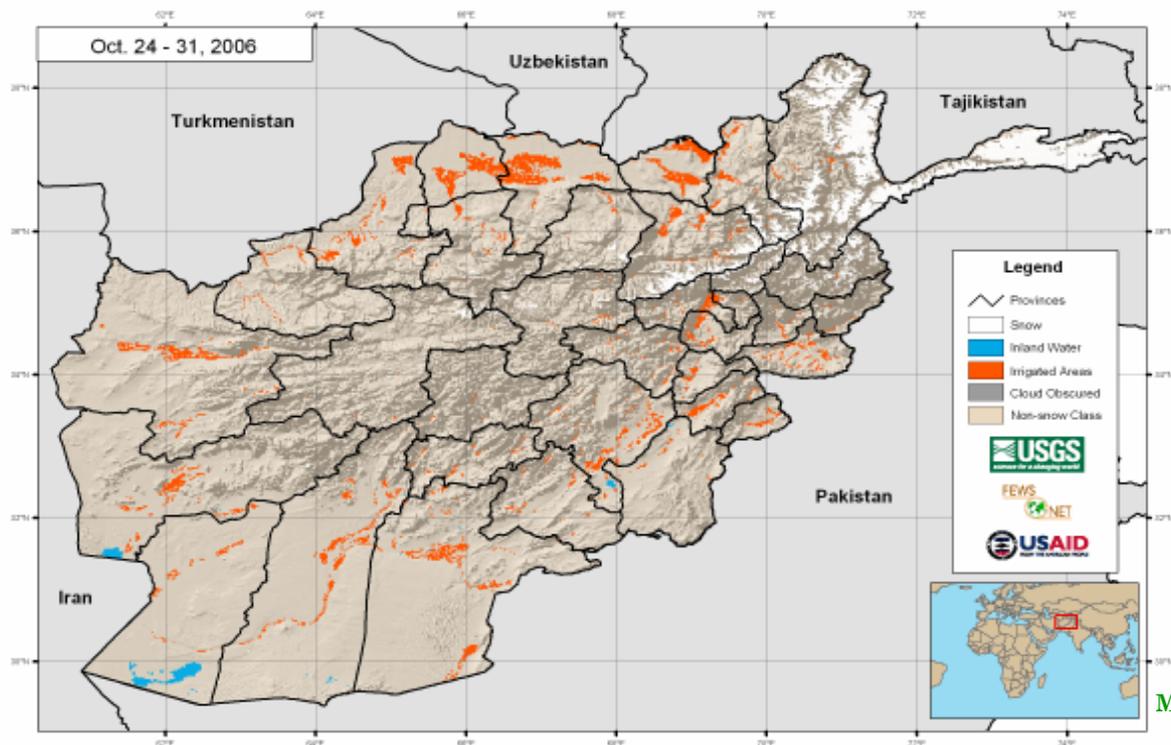
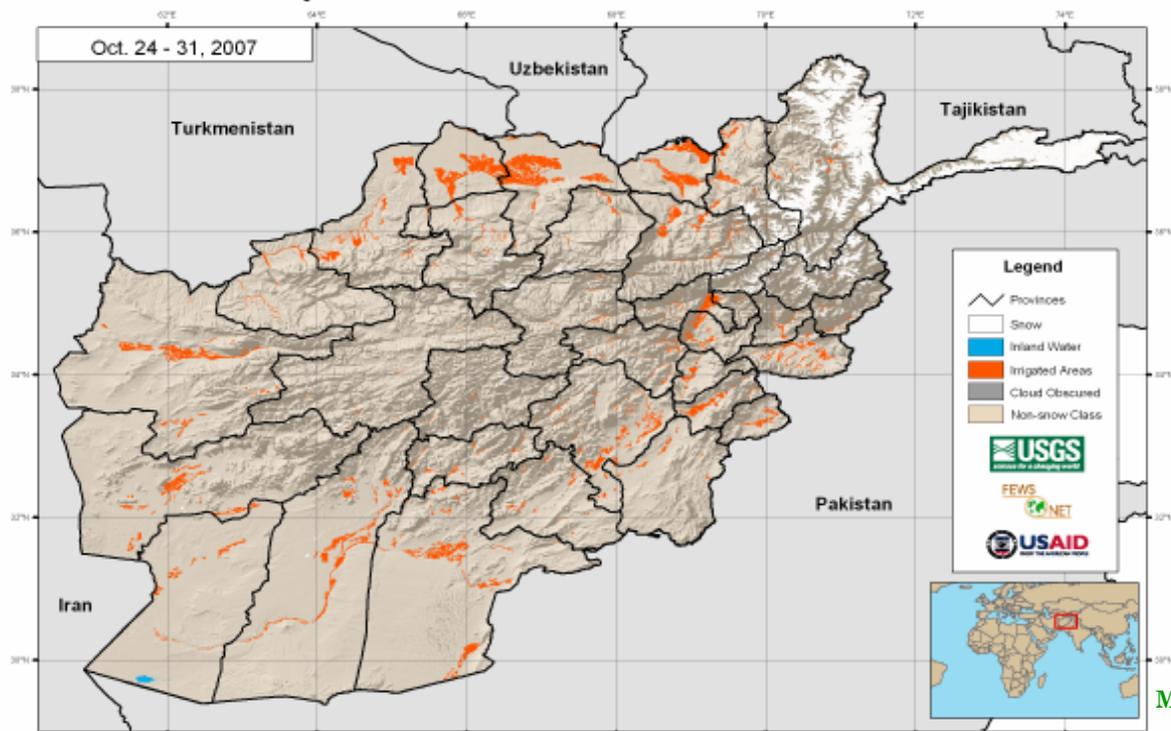
## NDVI: July 2007

Comparison of monthly average of NDVI for the month of October 2007 with the same month in 2006 (map 9 ) shows small decrease of NDVI value in separated areas in the Eastern region, Northeastern, some parts in the Western region and limited areas in the Southeastern regions during the month of October 2007 compared to the same month in 2006. there is no change in NDVI value in the remaining regions of the country for the month of October 2007 over the same month in 2006.

Comparison of monthly average of NDVI for the month of October 2007 with long term average of NDVI (map 10) shows there is no significant change occurred in NDVI value in most parts of the country during the month of October 2007 over the same month of long term average, just small decrease occurred in NDVI value in limited areas in the Capital and some parts in the Eastern region, also small increase occurred in NDVI value in limited areas in the Southeastern region.

## Comparison of Snow Extent

### MODIS 8-day Snow Cover Extent - Current Period 2007 vs 2006

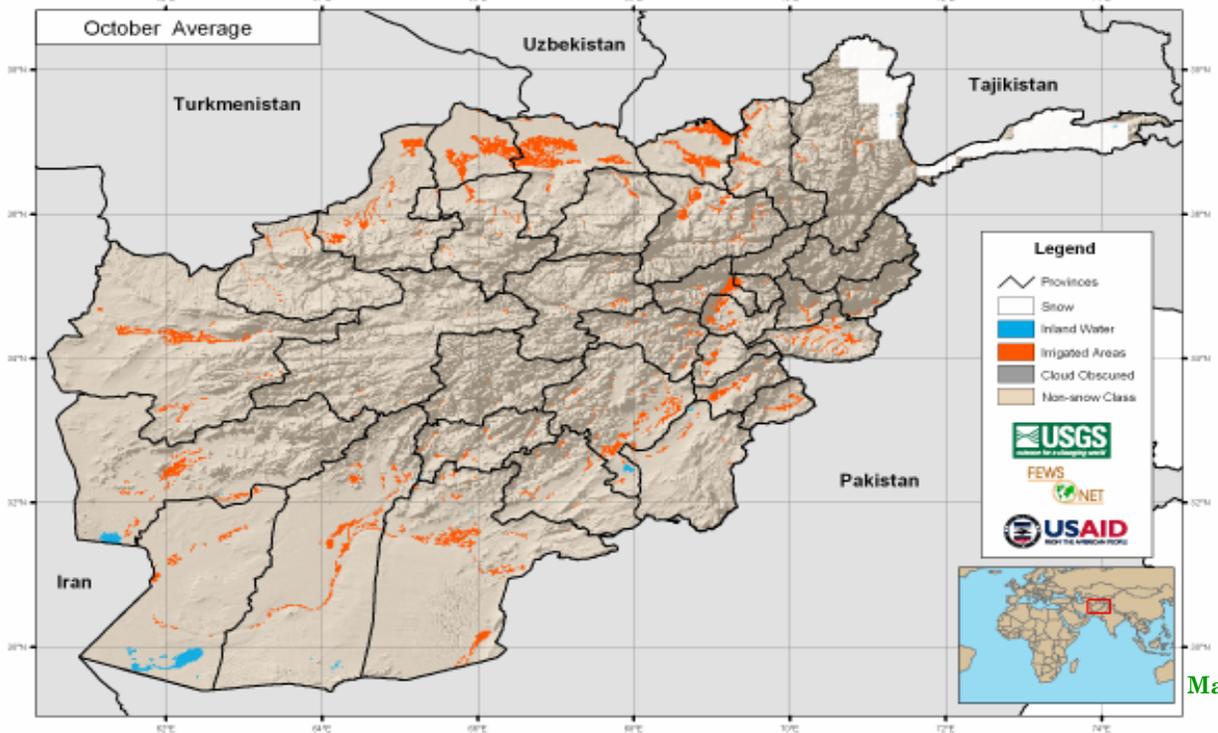
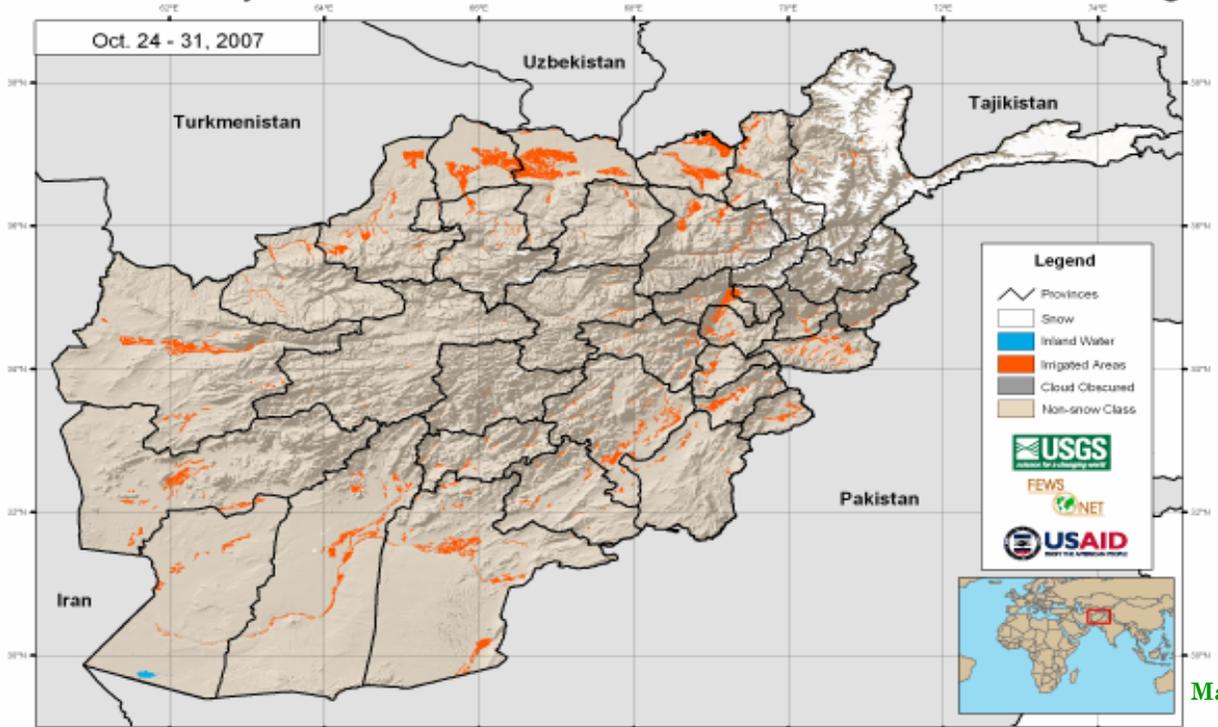


Comparison of snow extent for the period (24- 31) October 2007 with the same period in 2006 (map 11 and 12 ) shows small decrease of snow extent particularly in Hidokosh mountainous areas

during the month of October 2007 compared to the same period in 2006. Though at least the snow should be near last years which was expected but significant changed occurred in rainfall situation which also stressed the snow resources.

## Comparison of Snow Extent

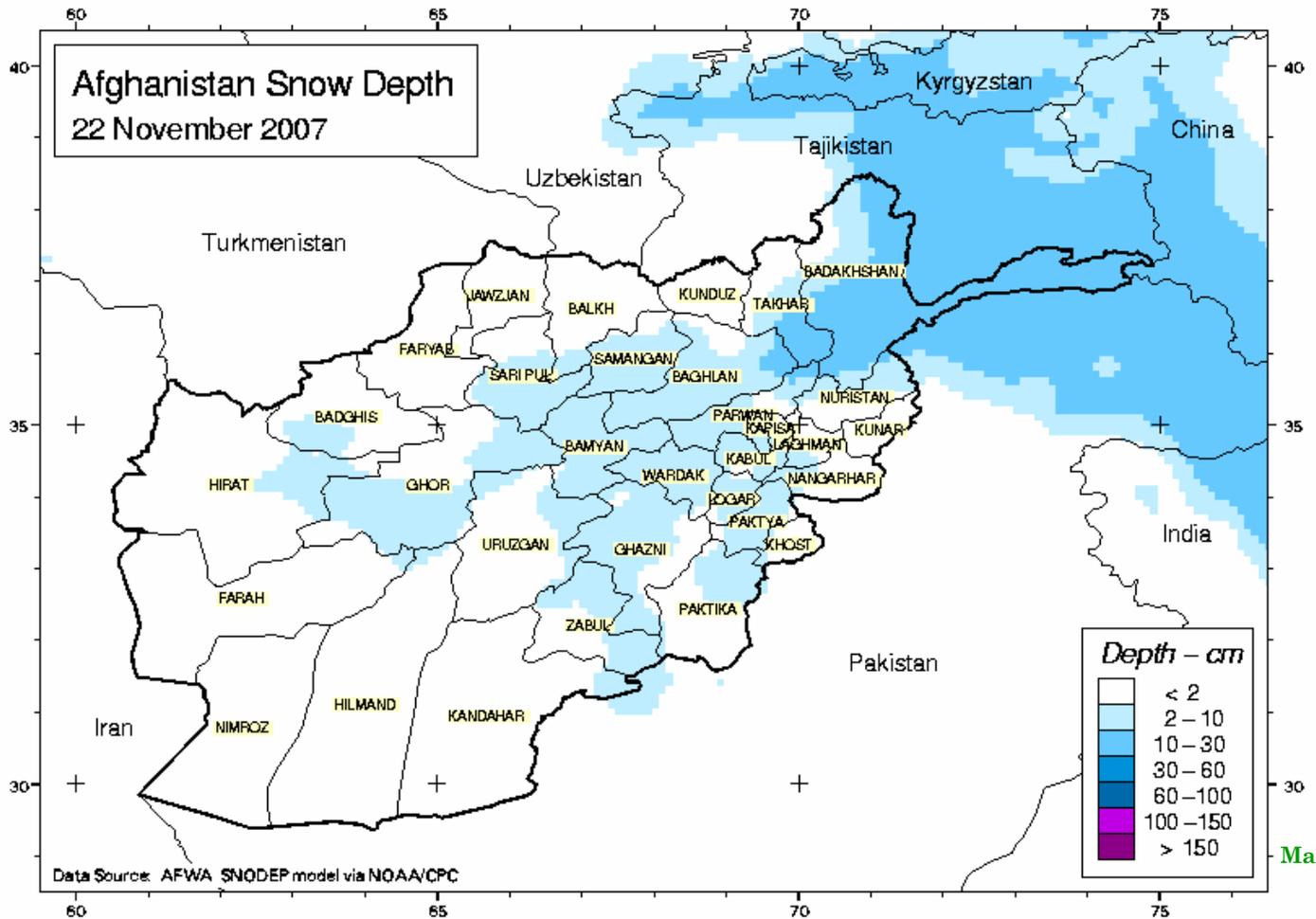
### MODIS 8-day Snow Cover Extent - Current vs. Historical Average



Comparison of snow extent for the month of October 2007 with the same month of long term average (map 13 and 14 ) shows small increase of

snow extent particularly in the Northeastern region during the month of October 2007 over the same month of long term average.

## Afghanistan Snow Depth for the month of October 2007



Map 15

Map ( 15 ) shows snow depth for the month of October 2007 in different regions. As figure shows the snow depth from 10 cm up to 30 cm 2 up to 10 cm for the Northeastern region and 2 up to 10 cm recorded for the remaining region of the country.

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