

Agrometeorological



Monthly

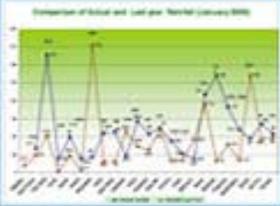


Bulletin



June - 2006

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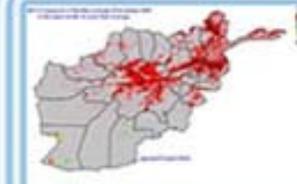
Agromet Project-Afghanistan
Helping Agriculture to End HUNGER



Rainfall vs NDVI



NDVI



Comparison of NDVI

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



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Summary

In the south western region most winter wheat fields are in the end stages, as in Lashkargah Center, Greshk, Nawa, Nadali Districts of Helmand Province, the Qalat Center of Zabul Province, Zaranj, the center of Nimroz Province, as well as Kandahar and Farah Provinces.

Maize and rice are not being cultivated due to the lack of water for irrigation.

In the northern region adverse factors are mainly less rain, resulting in 80% damage to the rain fed wheat and other plants, as in the Aibak Center of the Samangan Province and Jawzgan, Sar-i-pul and Farayab Provinces. Sunpest, and fly melon have damaged some agricultural lands in the center of Jawzjan Province. Melon flies have also been observed in Samngan Province.

Crop Phenological Stages

East Central Region :

Winter wheat (depending on the respective planting dates) the crop stage is in flowering stage and in the some other areas the winter wheat is in the grain filling stage for example, in the areas surrounding Bamyan.

Eastern Region:

In this region, the winter wheat stage is at its end and the crop is being harvested. However, the maize and rice crop is in the flowering stage (Soil preparation) in Ghazi Abad Nangarhar and Laghman Provinces, Asad Abad center, and the Asmar District of the Kunar Province.

In some other areas of the center of Asad Abad, the Asmar District of the Kunar Province and Laghman Province the planting is in progress for the maize and rice.

North Eastern Region:

Most of the Winter wheat fields are in the harvesting stage and some areas are in the end, for example, Baghlan, Bangi District, the Taluqan center of Takhar Province, Amam Sahib, Aqtipa and Qalaizal, Chardara Districts and the center of Kunduz Province. On the some other areas of this Regions the planting is in progress for the maize and rice.

In the North Region:

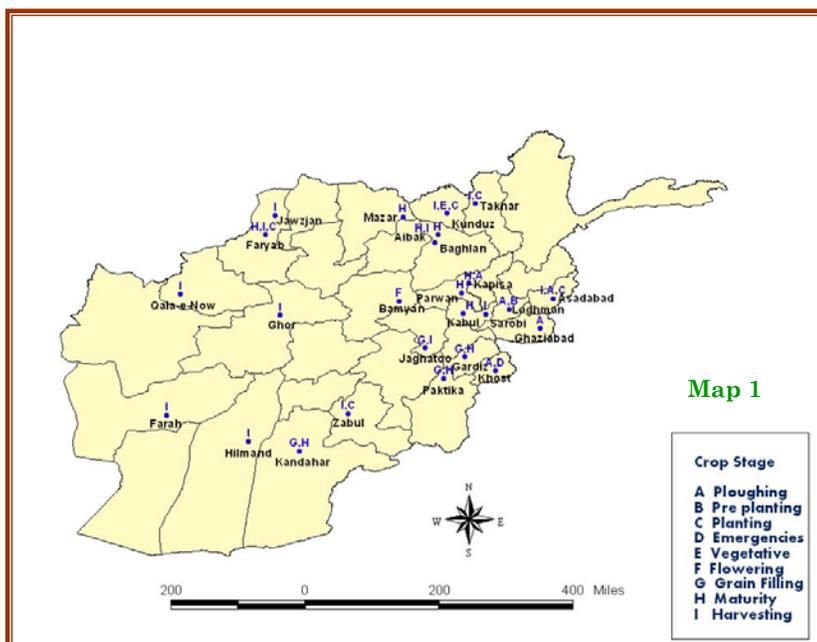
In most of the parts of this region the winter wheat fields are the harvesting stage and in the some areas the crop stages of wheat are at the end, as in Jawzjan, Aibak center, the Sozma Qala Areas of Samangan Province, the Maimana center of Faryab Province, Sar-i-pul Province, the Takhtapul areas and surrounding Mazar-i- Shrif center of the Balkh Province. But the maize and rice have not been not cultivated due to the lack of water for irrigation.

Western Region:

In this region most winter wheat fields are in grain filling stage, as in the Chaghcharan center of Ghor Province, but in some other areas of the Qalai-Naw center, the Maqur District of the Badghis Province, the winter wheat fields in the harvesting stages and in some areas at the end. In the Urdokhan Hirat Province the winter wheat fields are also in the end stages. However, the maize and rice have not been cultivated due to the lack of water for irrigation.

Central Region :

In this region the winter wheat is at different growth stages. In Chak and the Jaghatoo Districts of Wardak Province, and some areas of Paghman District of Kabul Province, the crop is in the grain filling stages. In the Mahmoodrahee Center of Kapisa Province, the Ghorband District, Center and Parwan Province, the winter wheat fields in the harvesting stages. In the other areas of the Sarobi District of Kabul Province, the wheat crops are at the end stage, and soil preparation is underway for the maize in Kapisa Province.



Crop Phenological Stage

The South Western Region:

In this region most winter wheat fields are in the end stages, as in Lashkargah Center, Greshk, Nawa, Nadali Districts of Helmand Province, the Qalat Center of Zabul Province, Zaranj, the center of Nimroz Province, as well as Kandahar and Farah Provinces.

Maize and rice are not being cultivated due to the lack of water for irrigation.

For the South Region:

The winter wheat is at different growth stages. In most parts, the wheat is in the grain filling stage, as in the Sharana Center of Paktika Province, Rohanee Baba and Tera of Paktia Province, Maqur and Sardi Districts of Ghazni Province but on the some other areas as Sardy and Maqur districts of Ghazni Province, Sharana Center of Paktika Province and Tera of Paktia Province the wheat crops are at the harvesting stages, But in the Khost Province the wheat crops are at the end over stages and the maize and Mange bean are at the planting and emerging stages

Crop Condition

For the east Central Region :

In this region, the condition of the crops is normal, as in the areas surrounding Bamyan Province.

For the Eastern Region :

Winter wheat fields are recording normal conditions, as in Laghman Province, Asadabad Center and Asmar District of Kunar Province and the Ggaziabad areas of Nangarhar Province.

For the North Eastern Region:

In this region, crops have exhibited normal conditions, as in Badakhshan Province, Chardara, Imamsahib, Akhtipa and Qalaizal Districts of Kundoz and the center of Kundoz Province, The Bangee District of Takhar Province and Baghlan Province have better than normal crop conditions.

For the Northern Region:

Crops have exhibited normal conditions, as in Mazar-i-Sharif the center of Balkh and the Takhtapul District of Balkh Province, but due to the lack of rain and water, Jawzjan, Aibak center and Sozma Qala District of Samangan, and Sar-i-pul Province have poor crop conditions and Faryab Province has failure crop conditions.

In the Western Region :

Due to the lack of rain and water the Chaghcharan Center of Ghor Province, Maqur District of Badghis Province, Qalia-i-new Center of Badghis Province and Herat Province have poor and failure crop conditions and almost no harvest is expected.

South Western Region:

In this region crops have shown normal conditions and in some areas poor conditions as observed in Zabul Province,

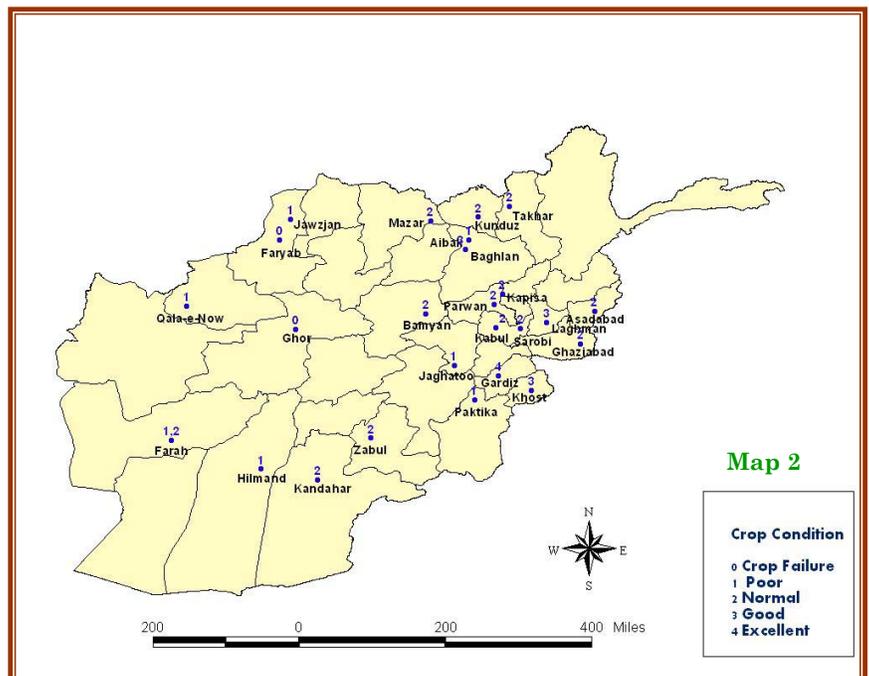
Greshk, Nawa, Nad Ali, Lashkargah Districts of Hilmand Province, Kandahar Province and the Zaranj center of Nimroz Province and Farah Province.

For the Central Region:

Winter wheat fields experienced better than normal conditions as for the Sarobi District of Kabul Province and Ghorband District, as well as the Charyakar center of Parwan Province. The crop conditions are normal for Kapisa Province and the Paghman District of Kabul Province. Due to the lack of water, available frost and an infestation of mice, the Jaghatoo and Chak Districts of Wardak Province have poor and failure crop conditions being reported.

For the South Region

Crop conditions are better than normal, as in Khost Province and Tera of Paktia Province, but poor crop conditions are reported from the Sharana Center of Paktika Province, Maqur and Sardey Districts of Ghazni Province.



Adverse Factors

In the Western Region:

The adverse factors are the lack of rain or less rain and a dry season which has affected the whole Western Region. Other Adverse factors include poor rains and sun-pest, locust and mice, as in the Chaghcharan Center of Ghor Province, Maqur District of Qaliamow, Center of Badghis Province and Herat Province.

In most parts of Herat and Badghis Provinces poor rain has affected 80% of wheat fields especially rain fed wheat in the whole regions.

In the South Western Region:

The adverse factors are the lack of rain or less rain and a dry season which has affected the whole South Western Region. In Lashkargah, Greshk, Nawa, Nad Ali Districts of Helmand Province, Zabul, Kandahar Zaranj and Farah Province there has been a lack of rain during the month of June 2006, also. Shortage of inputs such as tractors, chemical sprayers, and improved seeds and fertilizers are the other problems in this region.

In the South Region:

In this region weeds and floods account for the problems observed in Khost Province and lack of rain or less rain has been reported in Ghazni, Paktya and Paktika Provinces.

In the Eastern Region:

This region has experienced less rain and the burning of forests and a shortage of inputs in Laghman Province.

In the North east Region:

In this region weeds have affected the Winter wheat and other agricultural fields in Baghlan Province, Bangee District of Takhar Province and in the Imam Sahib, Chardara, Akhtipa and Qalai Zal Districts of Kunduz Province also, from the Bangee District of Takhar Province and Takhar Province there have been reports of wheat rust and plant aphids.

Floods have been observed in the Baghlan Province.

In the Northern Region:

Adverse factors are mainly less rain, resulting in 80% damage to the rain fed wheat and other plants, as in the Aibak Center of the Samangan Province and Jawzgan, Sar-i-pul and Farayab Provinces. Sunpest, and fly melon have damaged some agricultural lands in the center of Jawzjan Province. Melon flies have also been observed in Samangan Province.

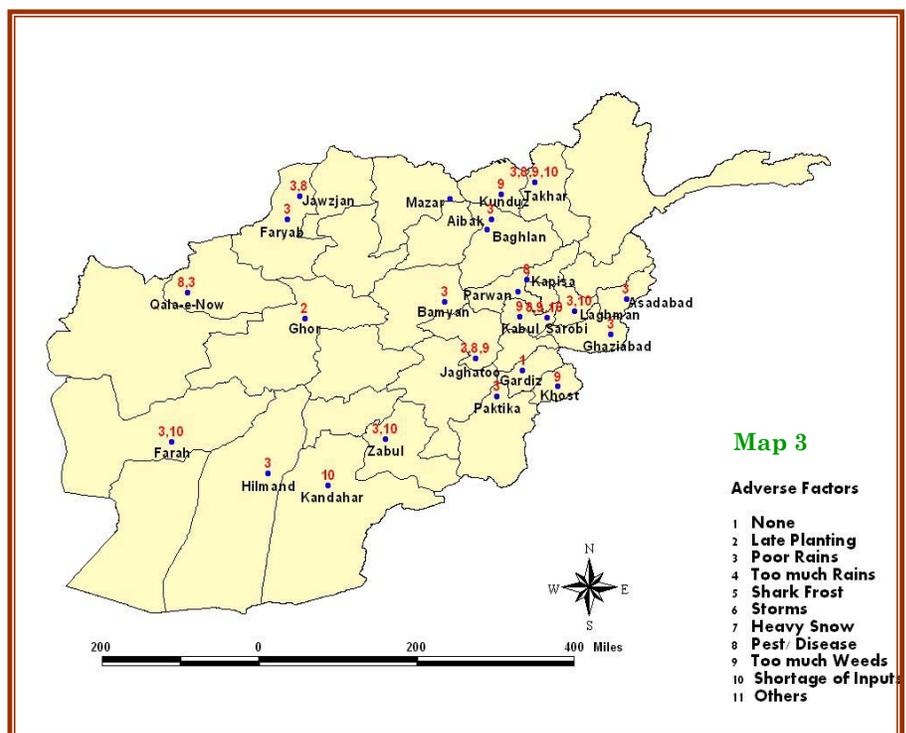
Central Region:

In this region the adverse factors are mice, weeds, high winds and less rain and frost conditions last month as in the Chak and Jaghatoo Districts of Wardak Province. A large number of fruit trees, especially apricots, apples and other agricultural plants are damaged due to these problems.

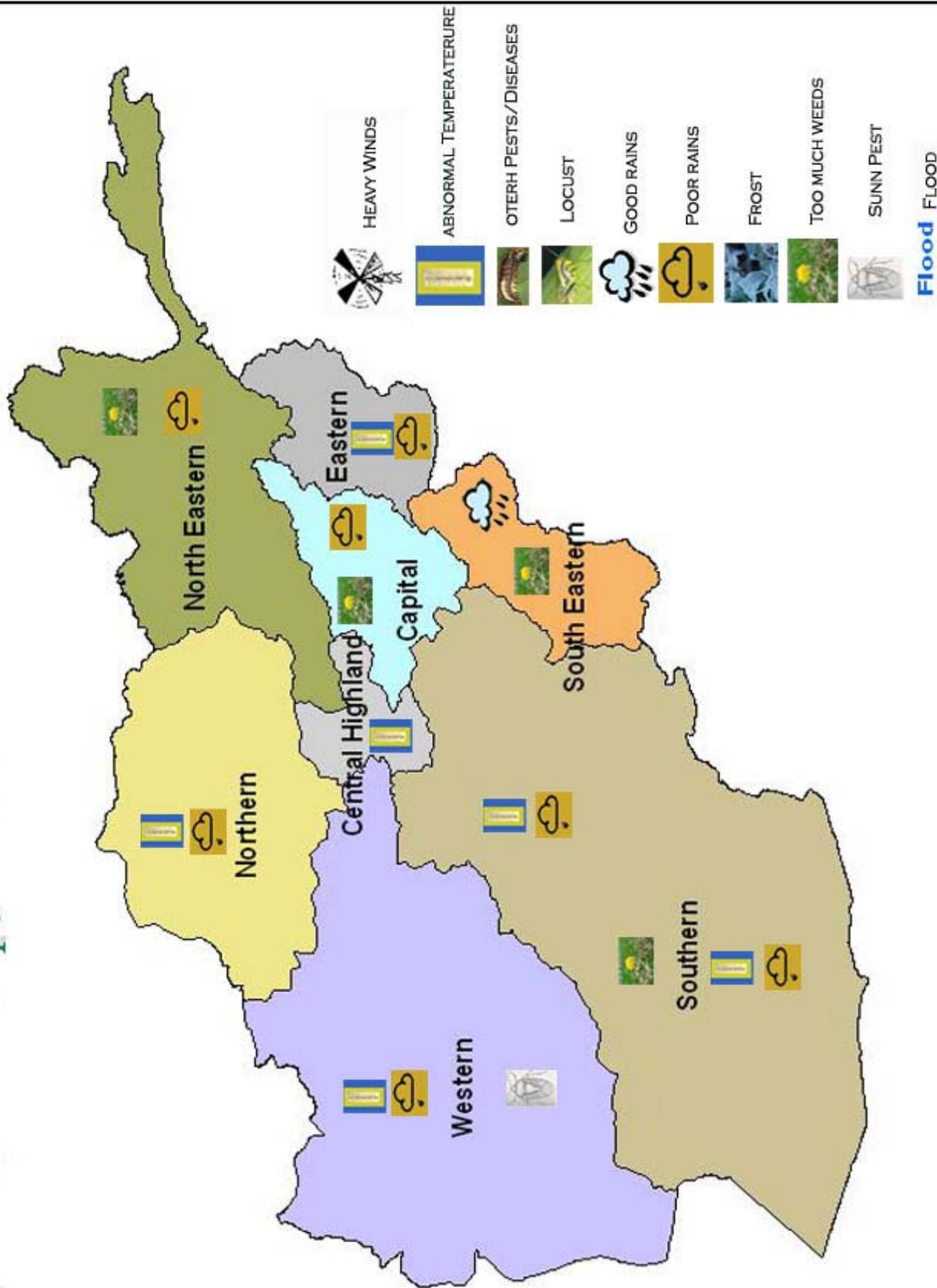
In the Jaghatoo District of Wardak Province, disease affected dogs are a big problem for the Farmers who need the help of MAAHF and other relevant organizations.

In the Mahmood Raqee Center of Kapisa Province, Charyakar Center of Parwan Province and in Paghman and Sarobe Districts of Kabul Province some crops are damaged due to weeds.

Wheat rust has been observed in the Mahmoodraqee center of Kapisa Province, In the Sarobi District of Kabul Province, wheat rust is a big problem.



Synthesis Situation Map June 2006

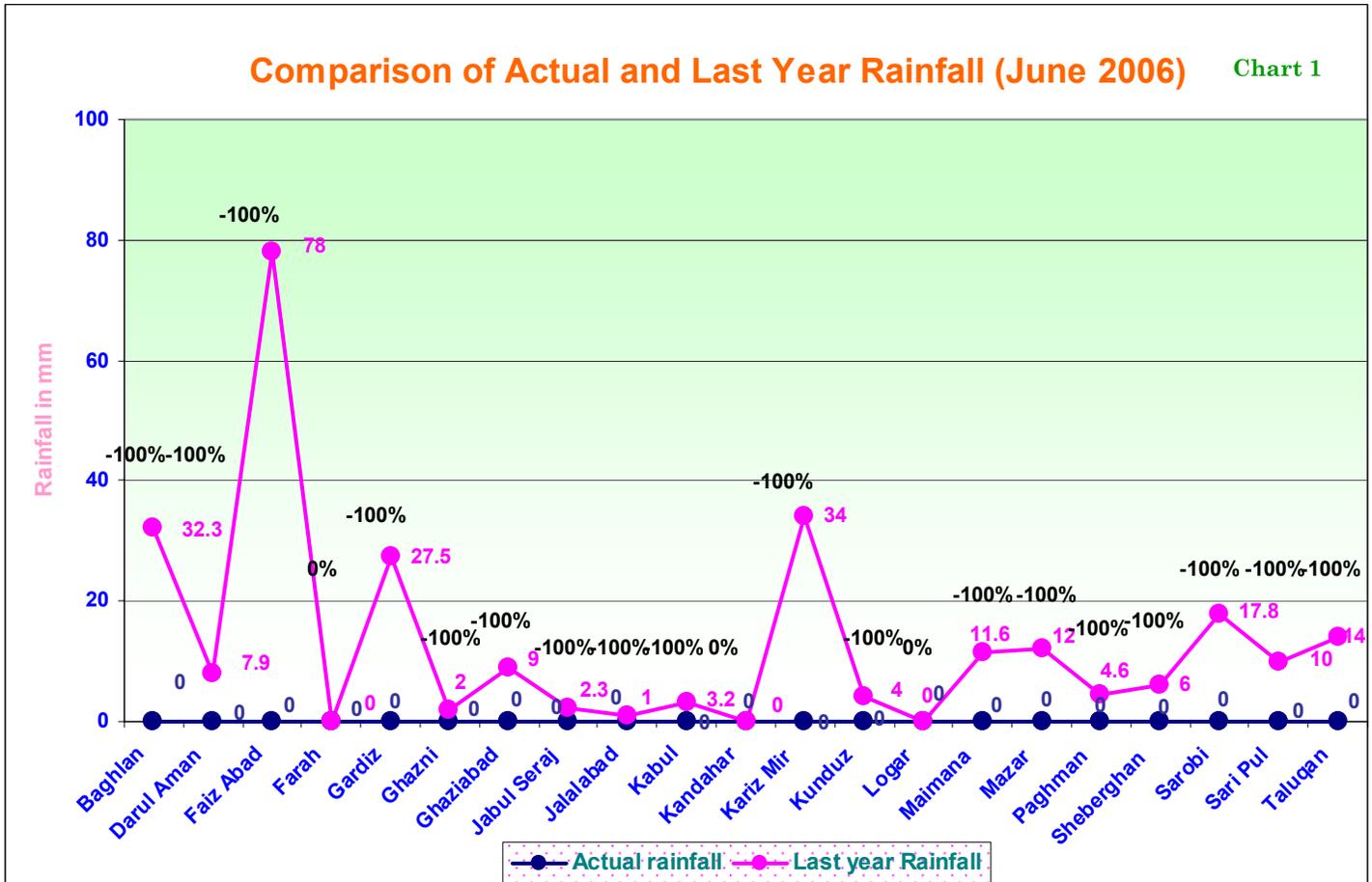


Map 4

Rainfall Graphs for the month of June 2006

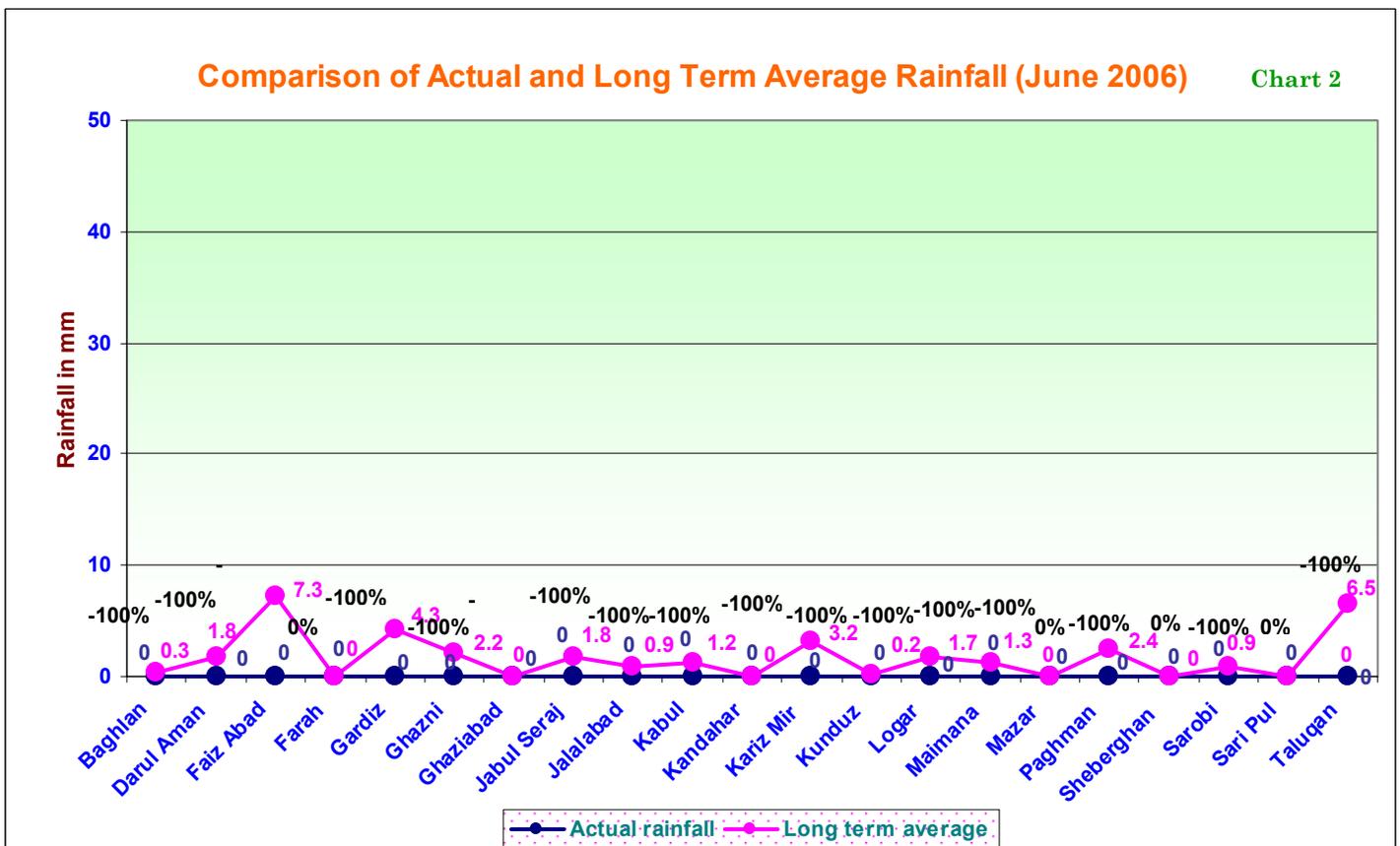
Comparison of Actual and Last Year Rainfall (June 2006)

Chart 1

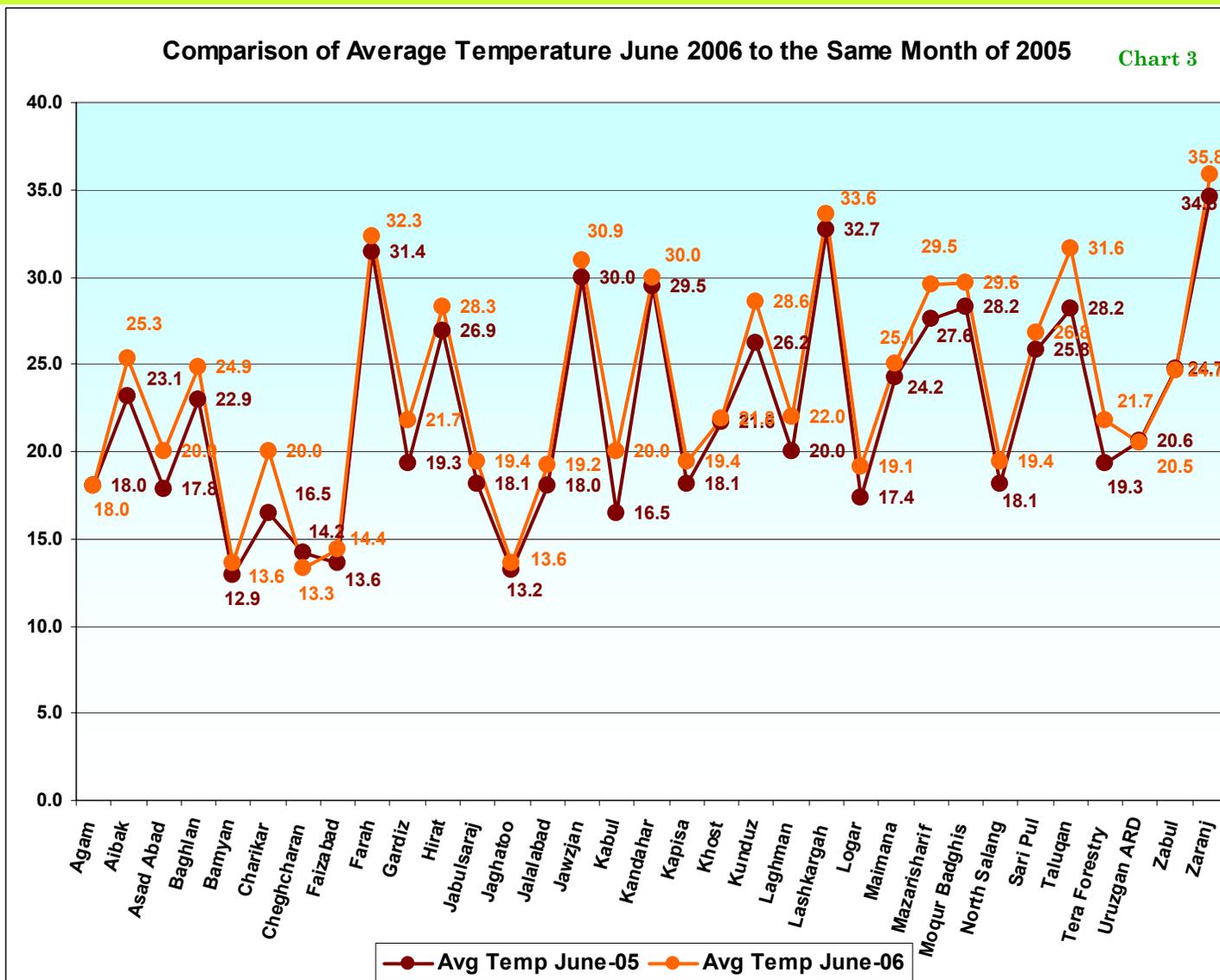


Comparison of Actual and Long Term Average Rainfall (June 2006)

Chart 2



Average Temperature for the Month of June 2006

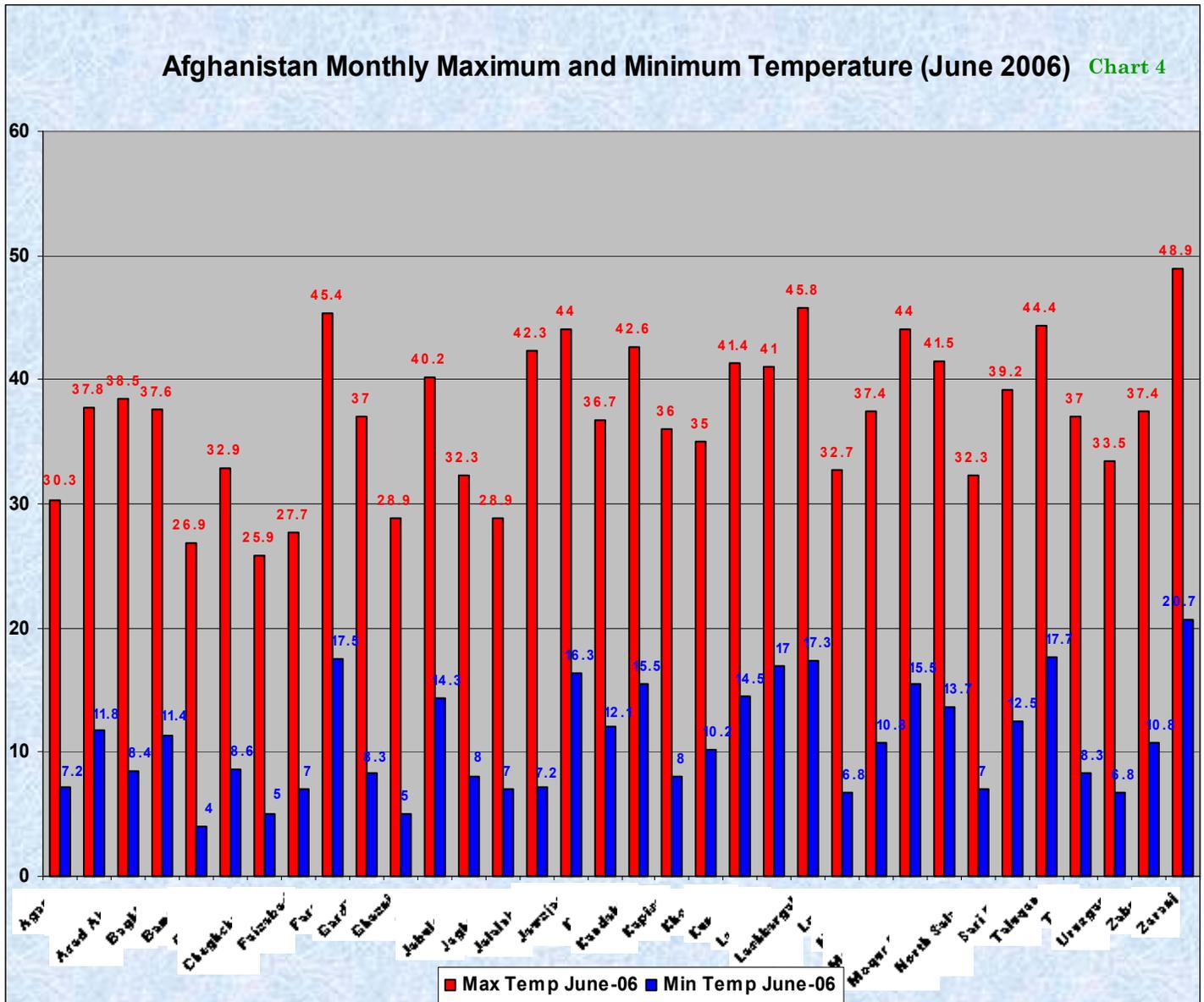


There is no significant changes in temperature during the month of June 2006 compare to the same month in 2005 across the country.

There is no significant changes in temperature during the month of June 2006 compare to the same month in 2005 across the country. Comparison of the monthly temperature average for the month of June 2006 to the same month in 2005

(Chart 3) shows small increase of temperature during the month of June 2006 over the same month in 2006. The average temperature difference the month of June 2006 is 1 – 2 ° C compares to the same month in 2005.

Temperature for the Month of June 2006



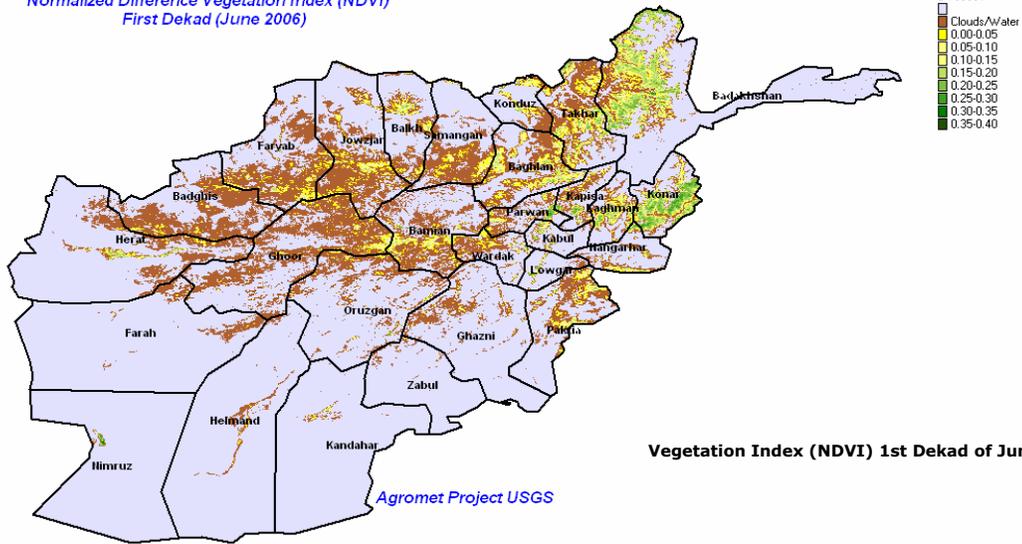
The Eastern regions, Southern, southwestern, western and Northern flat areas experienced dry and hot weather during the month of June 2006.

The Eastern regions, Southern, southwestern, western and Northern flat areas experienced dry and hot weather during the month of June 2006. Chart (4) shows maximum and minimum temperature during the month of June 2006.

As chart (4) shows, Zaranj with 48.9 ° C experienced the warmest temperature and Bamyān with 4 ° C was the coldest pint during the month of June 2006.

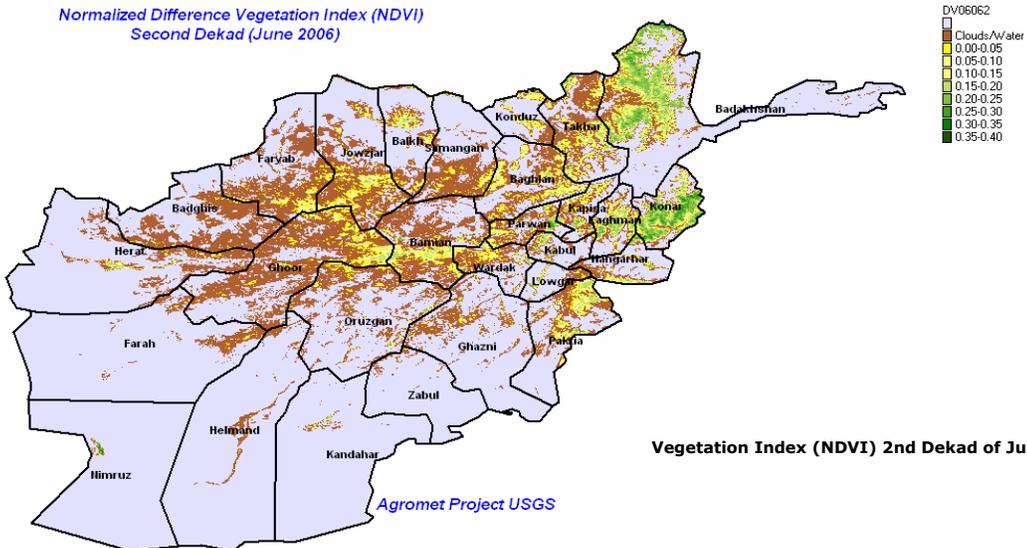
Normalized Difference Vegetation Index (NDVI) (June 2006)

Normalized Difference Vegetation Index (NDVI)
First Dekad (June 2006)



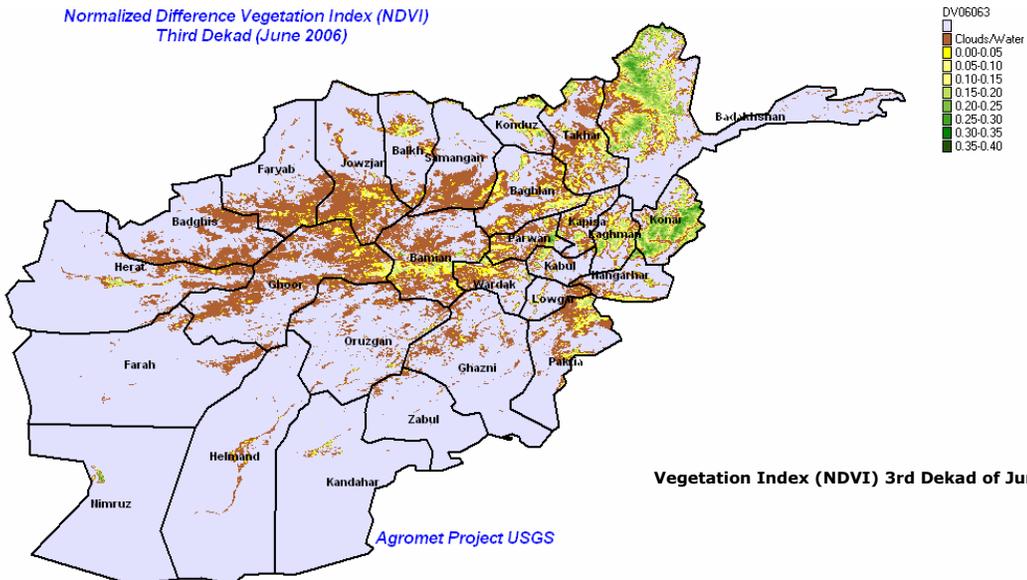
Map 6

Normalized Difference Vegetation Index (NDVI)
Second Dekad (June 2006)



Map 7

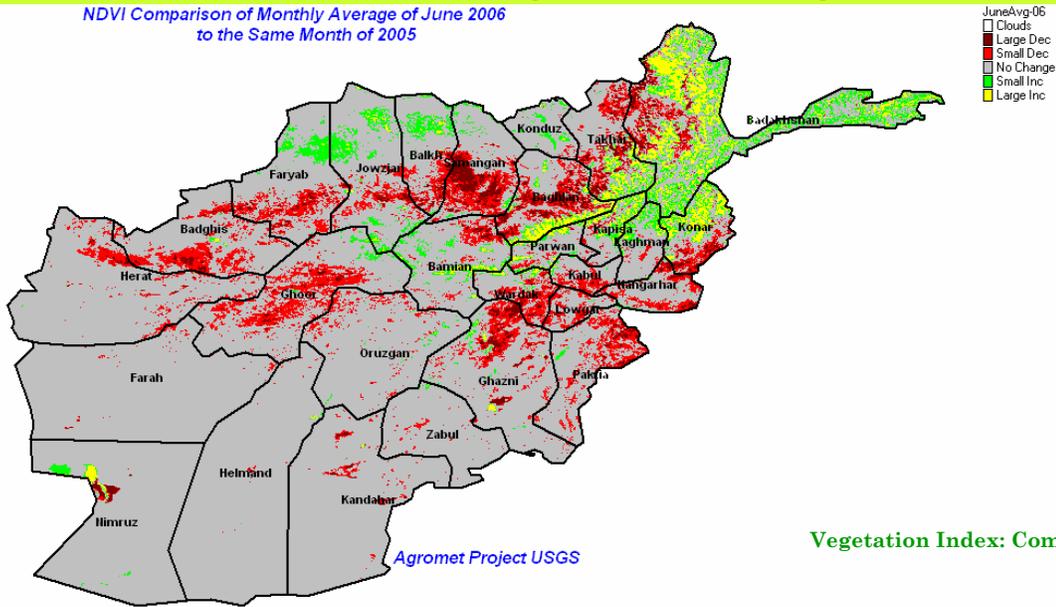
Normalized Difference Vegetation Index (NDVI)
Third Dekad (June 2006)



Map 8

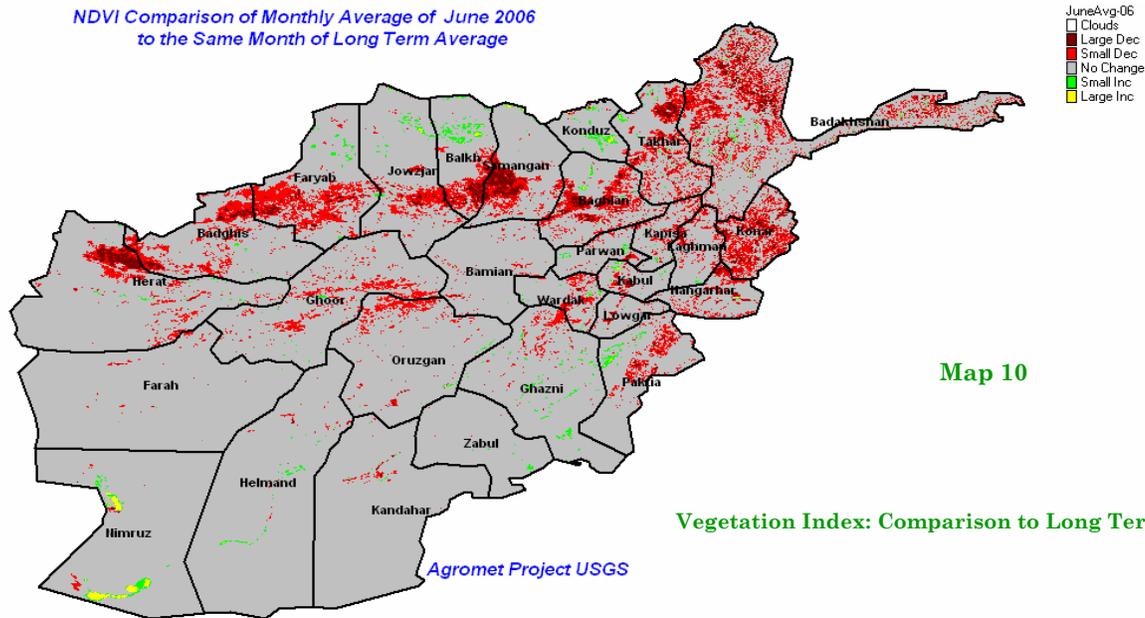
Comparison of NDVI May 2006

NDVI Comparison of Monthly Average of June 2006 to the Same Month of 2005



Vegetation Index: Comparison to Last Year

NDVI Comparison of Monthly Average of June 2006 to the Same Month of Long Term Average



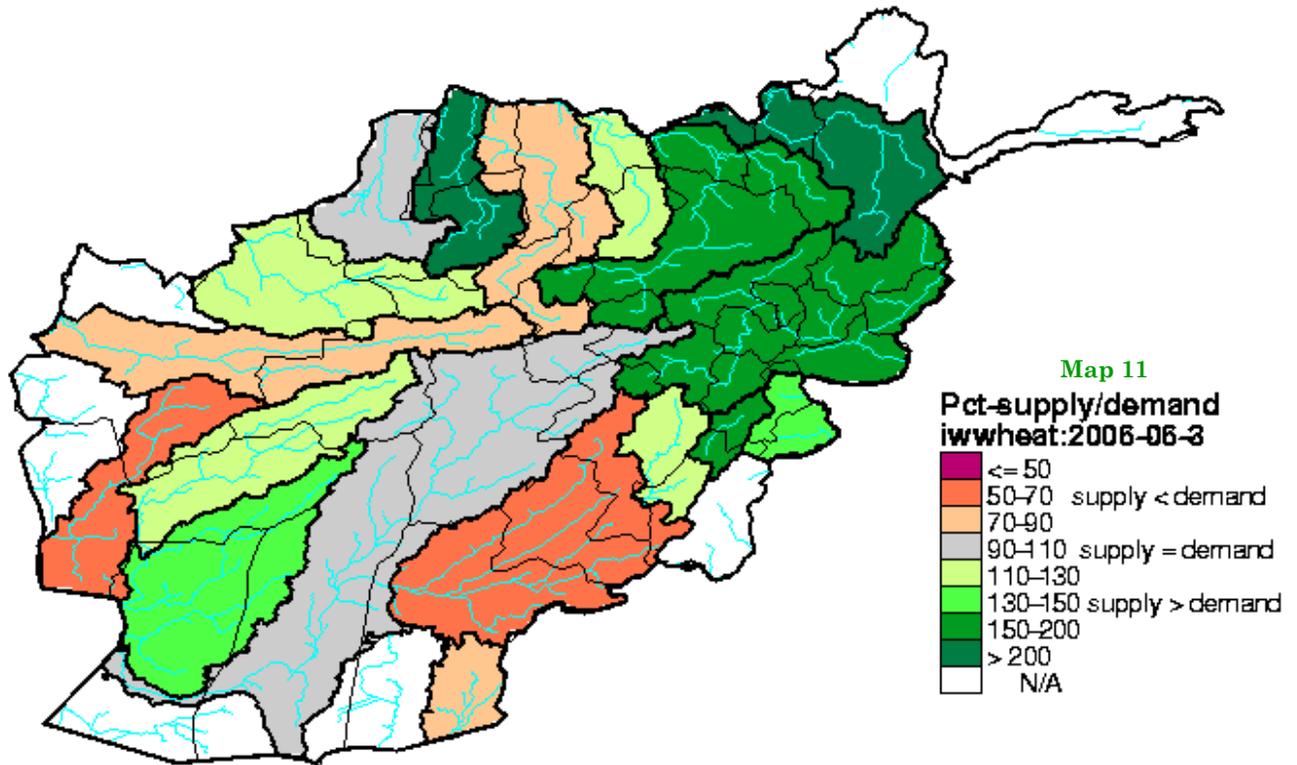
Map 10

Vegetation Index: Comparison to Long Term Average

NDVI: June 2006

Comparison of NDVI value for the month of June 2006 to the same month of 2005 is shown in map (map 9). Comparisons shows that a large increase of NDVI occurred in the Northeastern regions, Hindukush areas, some parts of the Eastern regions. Small increase of NDVI occurred in the Northern flat areas and, small decrease of NDVI occurred in the Northern mountainous areas, some parts of the Western regions, some parts of the East and Southeastern regions. There is no change of NDVI in the remaining regions of the country.

The NDVI comparison of the month of June 2006 to the same month of long term average (map 10) shows small decrease of NDVI in the Northeastern regions, Northern mountainous areas, some parts of the Western regions, Eastern and Southeastern regions. There is no change of NDVI in the remaining regions of the country in the month of June 2006 over the same month of long term average.



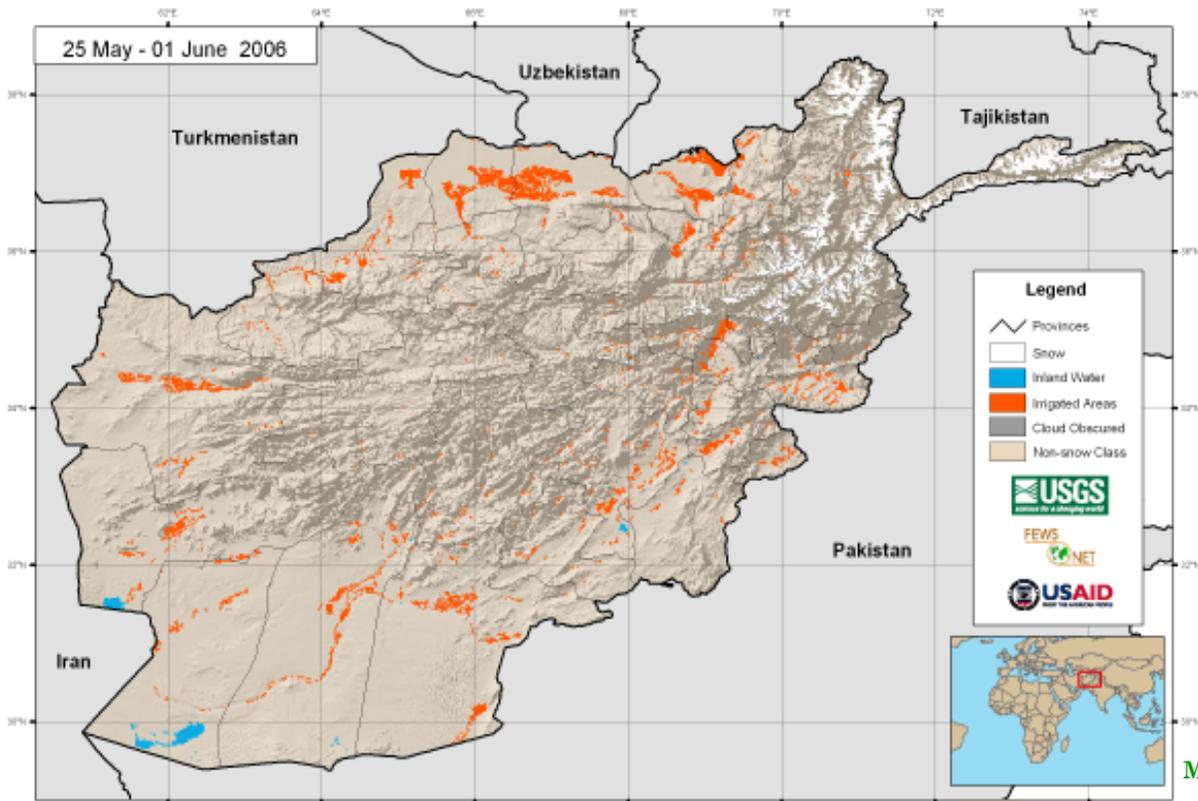
There is no significant change in WRSI for the winter wheat during the month of June 2006 compare to May 2006. As WRSI map (11) shows that in the Northeastern Regions, Hidukush areas, Eastern, the Eastern Central Regions, some parts of Southeastern Regions and, some parts of the Southwestern Regions the water supply is more than water demand for the winter wheat.

In some parts of the Southeastern and some parts of Western regions the water supply is less than water demand for the winter wheat.

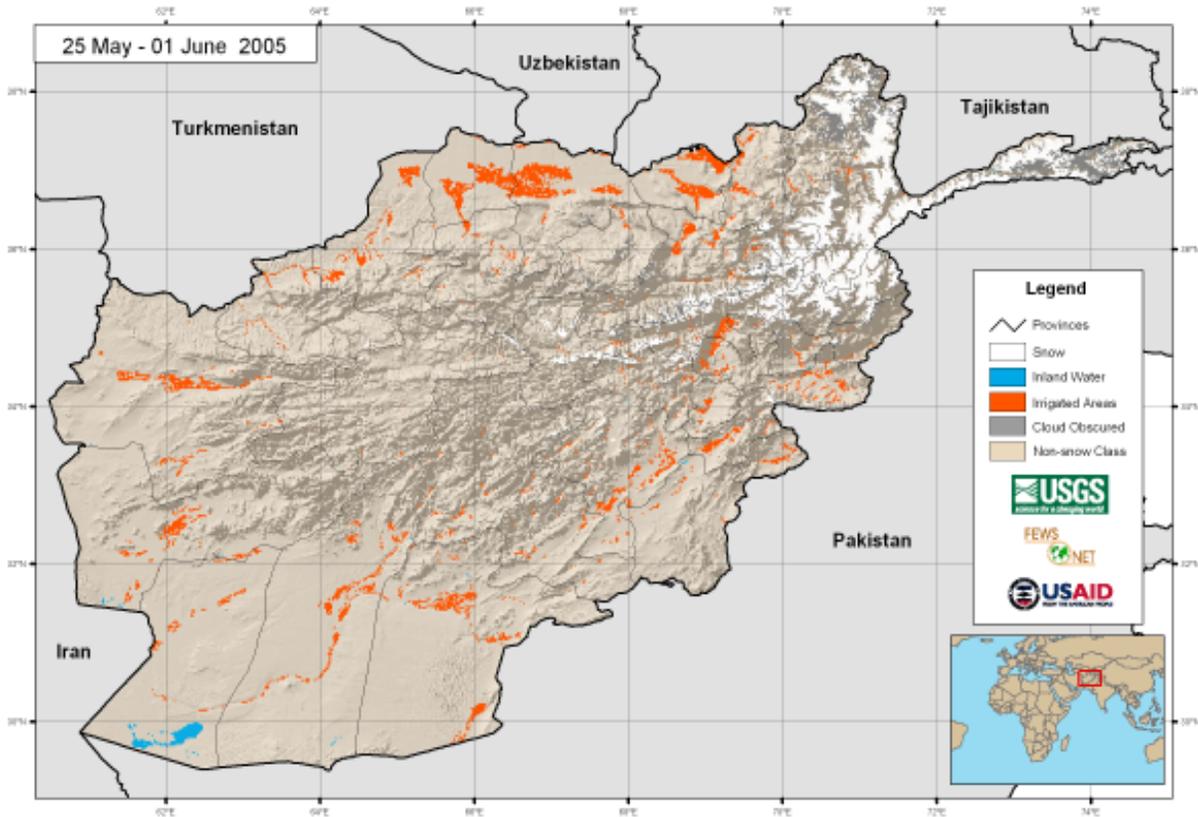
In the Central Highlands, some parts of Northern regions, some parts of the Southern and Western regions the water supply is equal water demand for the winter wheat.

Comparison of Snow extend and Depth

MODIS 8-day Snow Cover Extent - Current Period 2006 vs 2005



Map 12

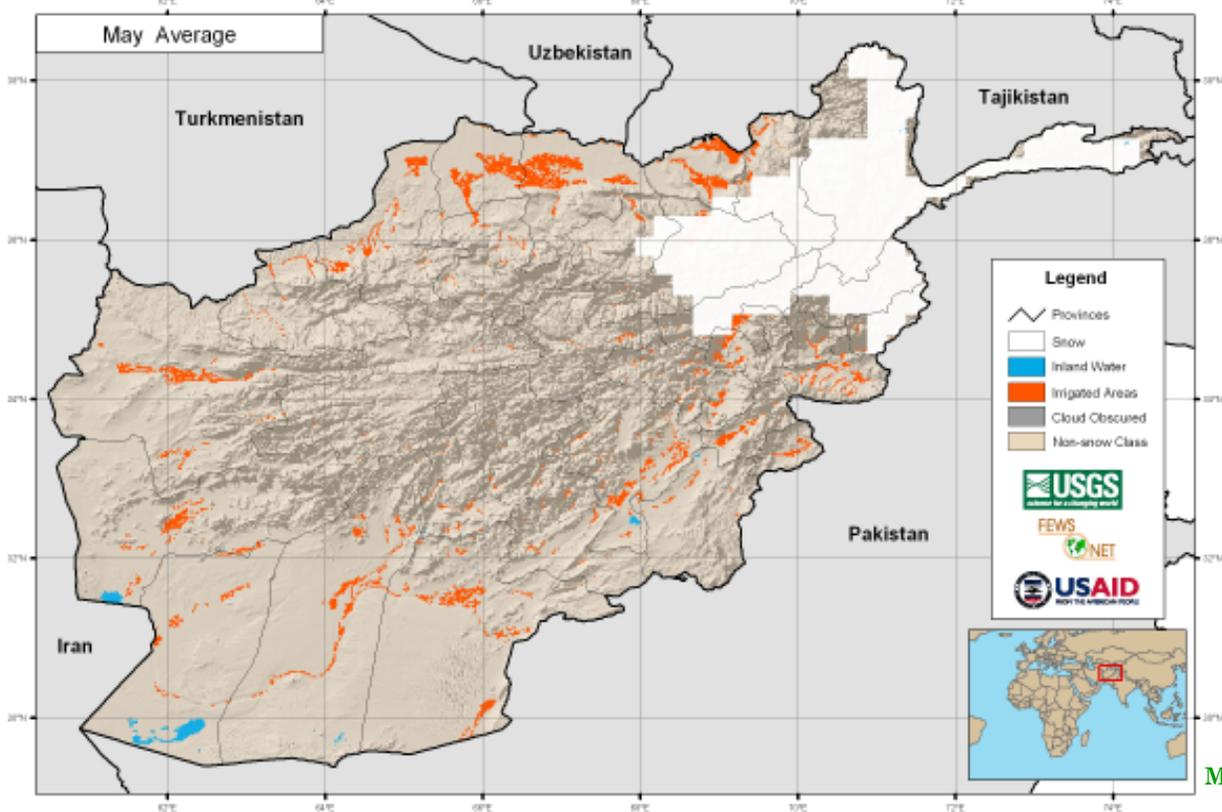
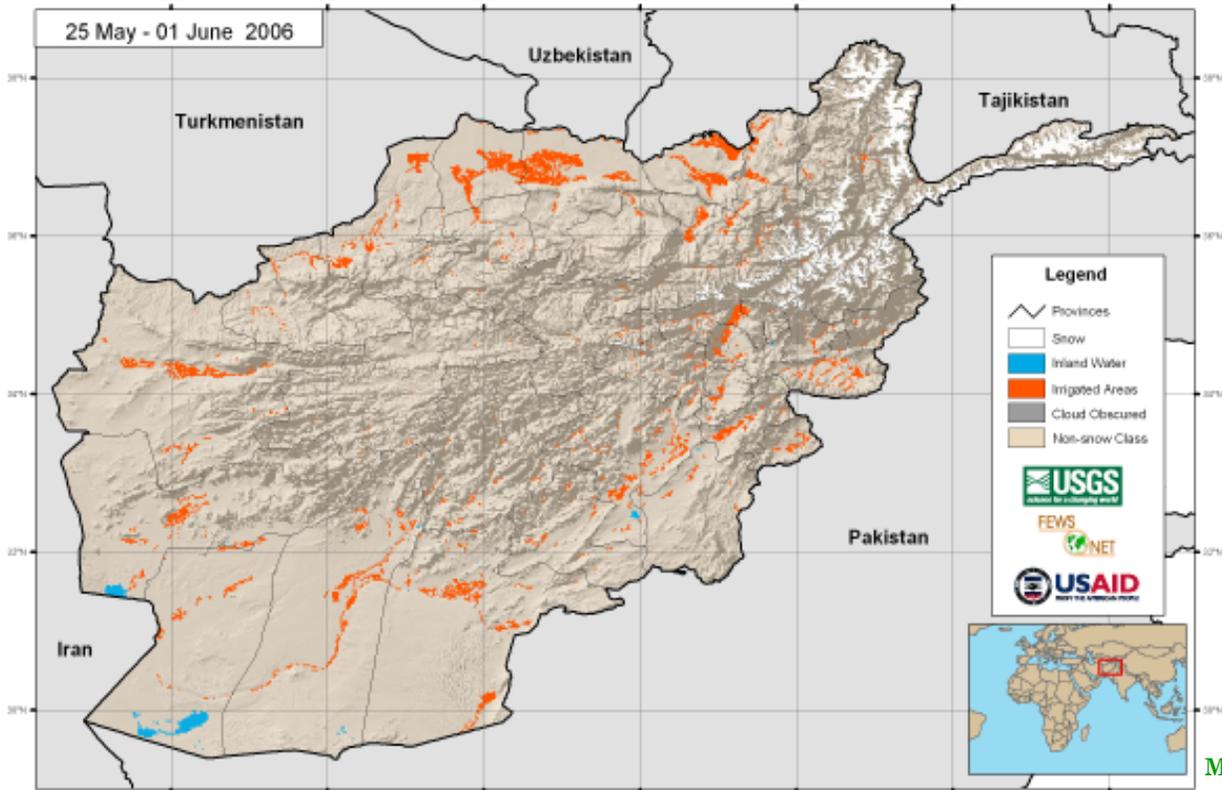


Map 13

Comparison of snow extent the month of June 2006 to the same month in 2005 shows a decrease in snow extent during the month of June 2006 over the same month in 2005 in the snow covered areas (maps 12 and 13) and the snow extent has been limited in Northern regions.

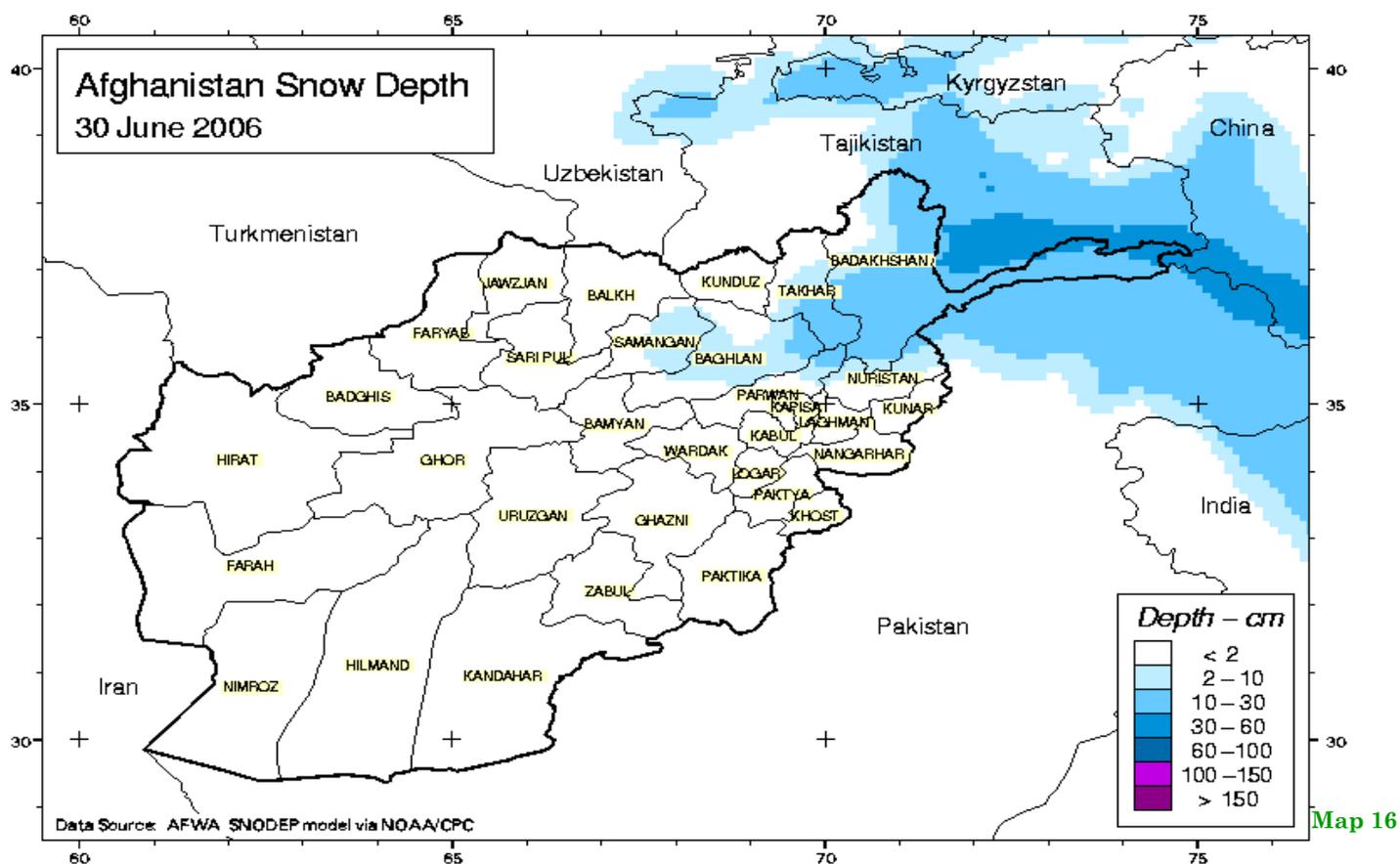
Comparison of Snow extend and Depth

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

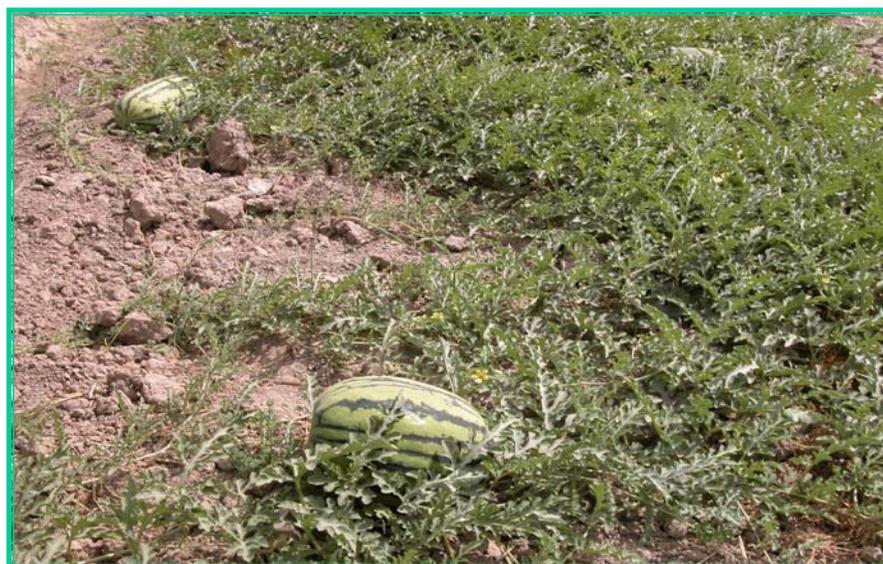


Comparison of snow extent for the month of June 2006 to the same month of long term average (maps 14 and 15) also shows a decrease of snow extent during the month of June 2006 to the same month of long term average.

Afghanistan Snow Depth May 2006



The snow depth is shown in map (16), which the snow depth from 10 to 30 cm in the Northeastern regions and from 2 to 10 cm in neighboring areas.



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