Agrometeorological

Monthly Bulletin

July - 2006

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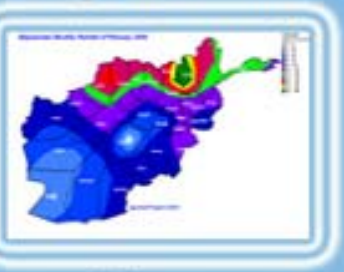
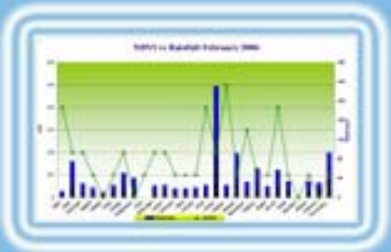


Rainfall Situation

Snow Depth



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)

Agromet Network

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Summary

The month of July 2006 experienced dry spell. Compression of rainfall of the month of July 2006 to the same month in 2005 shows a decrease of rainfall during the month of July 2006 over the same month in 2005 across the country except Ghazni which rainfall had an increase during the month of July 2006 over the same month in 2005.

In the south western region, as reported from Kandahar Province the wheat corps are in bad condition. Reports from Nawa, Nad Ali and Greshk Districts of Helmand Province shows normal condition of crops in these areas.

In East Central region crop condition is reported by observers to be better than normal as in the center of Bamyan Province.

Crop Phenological Stages

Central Region:

In the central region, the crops shows different crop conditions. In Kabul, Logar, Wardak and Parwan Provinces the winter wheat is in the harvesting stage. In the Behsod District of Wardak Province, wheat is in the grain filling stage. In Charikar center of Parwan Province maize is at the germination stage.

East Central Region:

In this region wheat is in the harvesting stage as in Bamyan Province but, in the Panjab District of Bamyan Province the winter wheat is in the grain filling stage.

North Eastern Region:

In this region wheat is already harvested as in the Imam Sahib, Aktipa, Qalaizal and Chardara Districts of Kunuz Province but, maize and rice are in the growing stage in these areas. In the Taluqan District of Takhar Province the rice is in the grain filling stage.

Eastern Region:

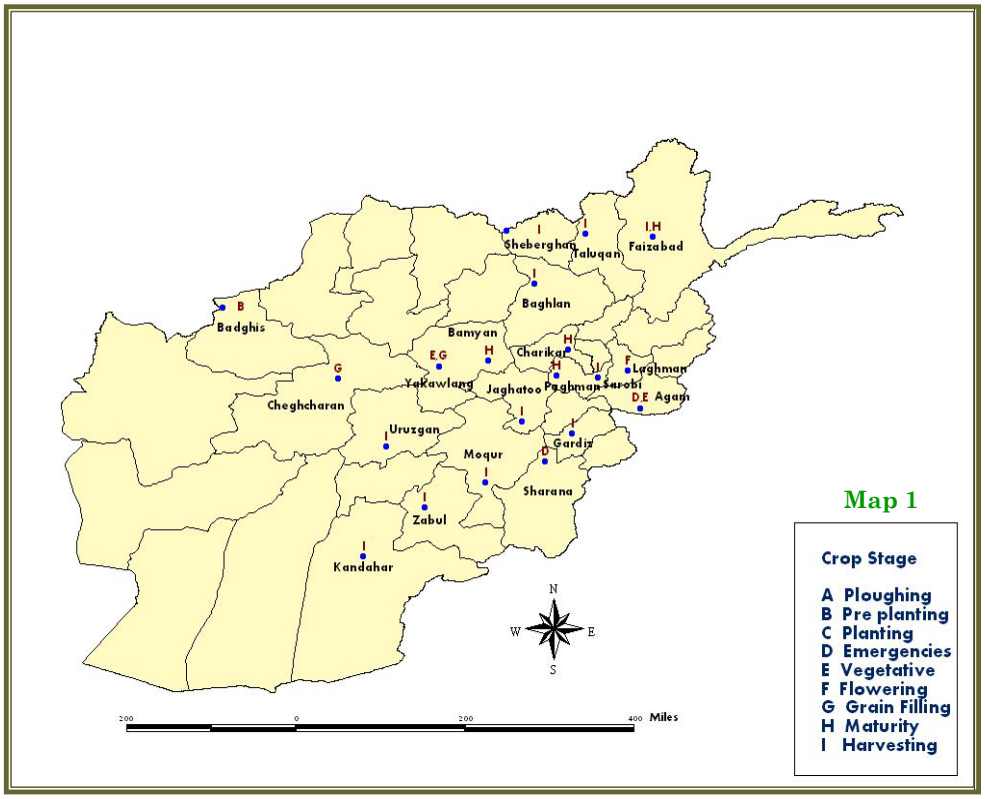
In the Eastern Region wheat is already harvested. Mize is in growing stage as in Asmar and Asad Abad Districts of Kunar Province.

North Region:

In this region mostly the wheat is already harvested . In the center of Jawzjan Province the wheat is in the harvesting stage. In the Dehdady and Nahershahi Districts of Balkh Province and Sari Pul Province the wheat is in the harvesting stage.

North Western Region:

In this region the wheat is already harvested as in Maqur District of Badghis Province. In the Ghor Province the wheat is in the grain filling and harvesting stage. Also in the Chakhcharan center of Ghor Province the wheat is in the matured stage (near to the harvesting stage).



Crop Phenological Stage

South Western Region:

In South Western Region Provinces such as Kandahar, Helmand, Farah, Nimroz and Zabul the wheat is already harvested. In the Grashk, Nad Ali and Nawa Districts of Helmand the maiz is in the growing stage.

Southern Region:

In the southern region the wheat is already harvested as in Maqur and Sardy Districts of Ghazni Province and Zurmat District of Paktya Province. In Zurmat District the maize is in the flowering stage and rice is in the growing stage (the height of plant more than 10 Cm). In the Khost Province the maize is the germination stage (the height of plant less than 10cm).

Crop Condition

East Central Region:

In this region crop condition is reported by observers to be better than normal as in the center of Bamyan Province.

Central Region:

In this region the crops condition is under normal as in the Sarobi District of Kabul Province and Chaharikar the center of Parwan Province. Reports from some areas shows that the crops are in the normal condition such as in Kapisa Province and the Paghman District of Kabul Province.

South Western Region:

In the south western region, as reported from Kandahar Province the wheat corps are in bad condition. Reports from Nawa, Nad Ali and Greshk Districts of Helmand Province shows normal condition of crops in these areas.

North Eastern Region:

In this region crops are in the normal condition such as in Aqtepa, Imam Sahib, Chahardara and Qala Zal Districts of Kunduze Province. Reports from Bangi District indicate the condition of crops are better than normal condition.

North Western Region:

In this region reports from Chakhcharan Center of Ghor Province shows bad condition of crops in this area. In Ghor Province crops are in the normal condition. In the Bangi District of Takhar Province and Baghlan Province the crops are in better condition than normal.

North Region:

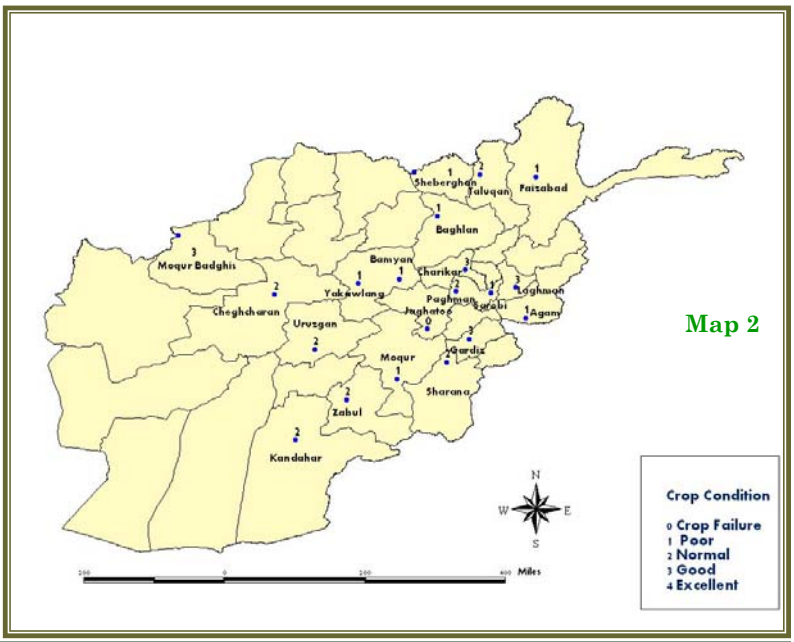
In this region the crops are in normal condition as in the Dahdady, Nahershahi Districts of Balkh Province. Reports from Sheberghan the Center of Jawzjan Province indicate that the bad condition of crops in these areas.

Eastern Region:

In the eastern region agriculture production is in the normal stage, also reported from Shesham Bagh and Ghaziabad forms of Nanagarahar Province the crop condition is in the normal stage also Asad Abad center of Kunar Province reported normal crop condition.

Southern Region:

In this region the wheat is in better condition than normal as in Khost Province and Zurmat District of Paktya Province. Maize is in normal condition in Zurmat District of Paktya Province but rice is in bad condition in this area.



Map 2

Adverse Factors

East Central Region:

In this region the adverse factors are lack of rainfall or less rain which has affected the crops in this region.

Central Region:

In this region the adverse factors are lack of rainfall, desert mice, wind, weeds, pest and diseases such as Gamoses, Antracnosis . Also the other main problem in the central region is deficiency of micronutrient in the fruit trees and non fruit trees which has decreased the products. Also wheat rust and smut are reported from Kapisa Province and Sarobi District of Kabul Province.

Eastern Region:

In this region lack of rainfall and dry season are the main problems. Also reports from Khogani and Sorkhroud Districts of Nangarahar Province saying about floods occurred in these areas which has destroyed agriculture land and had killed a number of animals.

In Laghman Province reports are saying about fire in the forests . Lack of agriculture equipment and facilities are the main problem in Asmar District and Asad Abad center of Kunar Province.

Western Region:

From the western region reports are saying about different adverse factors such as lack of rainfall pest and diseases. Also wind, storm, desert mice, locust and grasshoppers are the other main adverse factors of this region.

South Western Region:

In this region the main adverse factors are lack of rainfall, pests and diseases. Also in Zabul Province the micronutrient deficiency in the fruit trees and seedlings are the other main problems.

Southern Region:

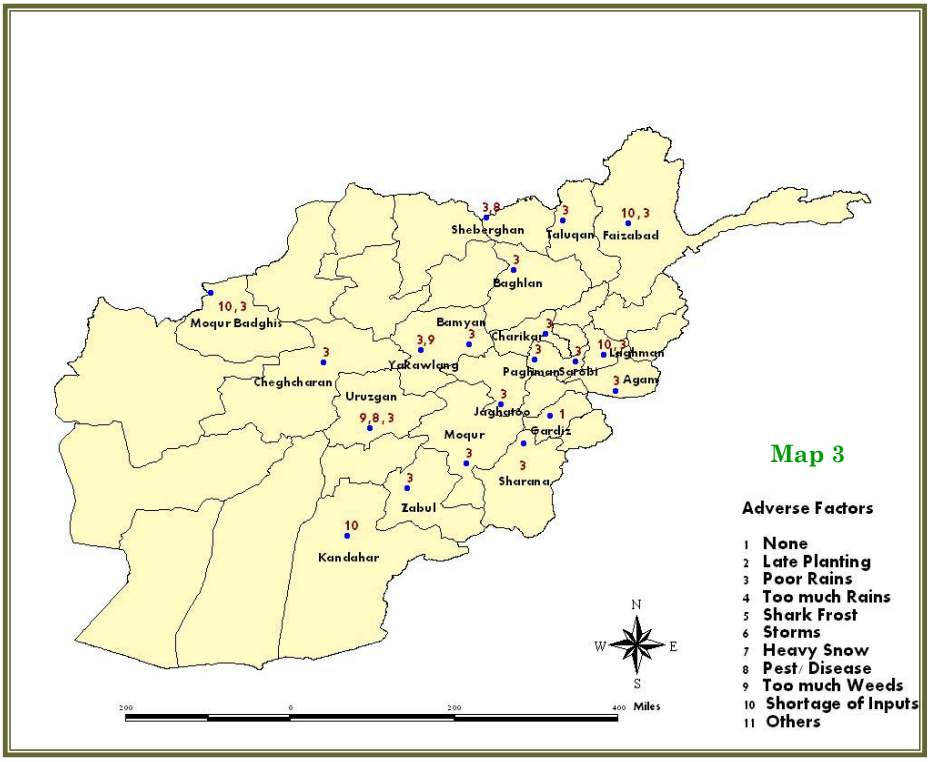
From the southern region especially Orgon, Gomal, Vermami, Sarobi, Khaircot, Sarahawza, Wazikhah and Sharana Districts of Paktika Province reports have been received about heavy floods which has damaged 330 jeribs of agriculture land and 20 bridges. From Ghazni Province reports about the heavy floods saying that the flood had damaged agricultural lands and had killed animals. Weed is another big problem in this area.

The North Region:

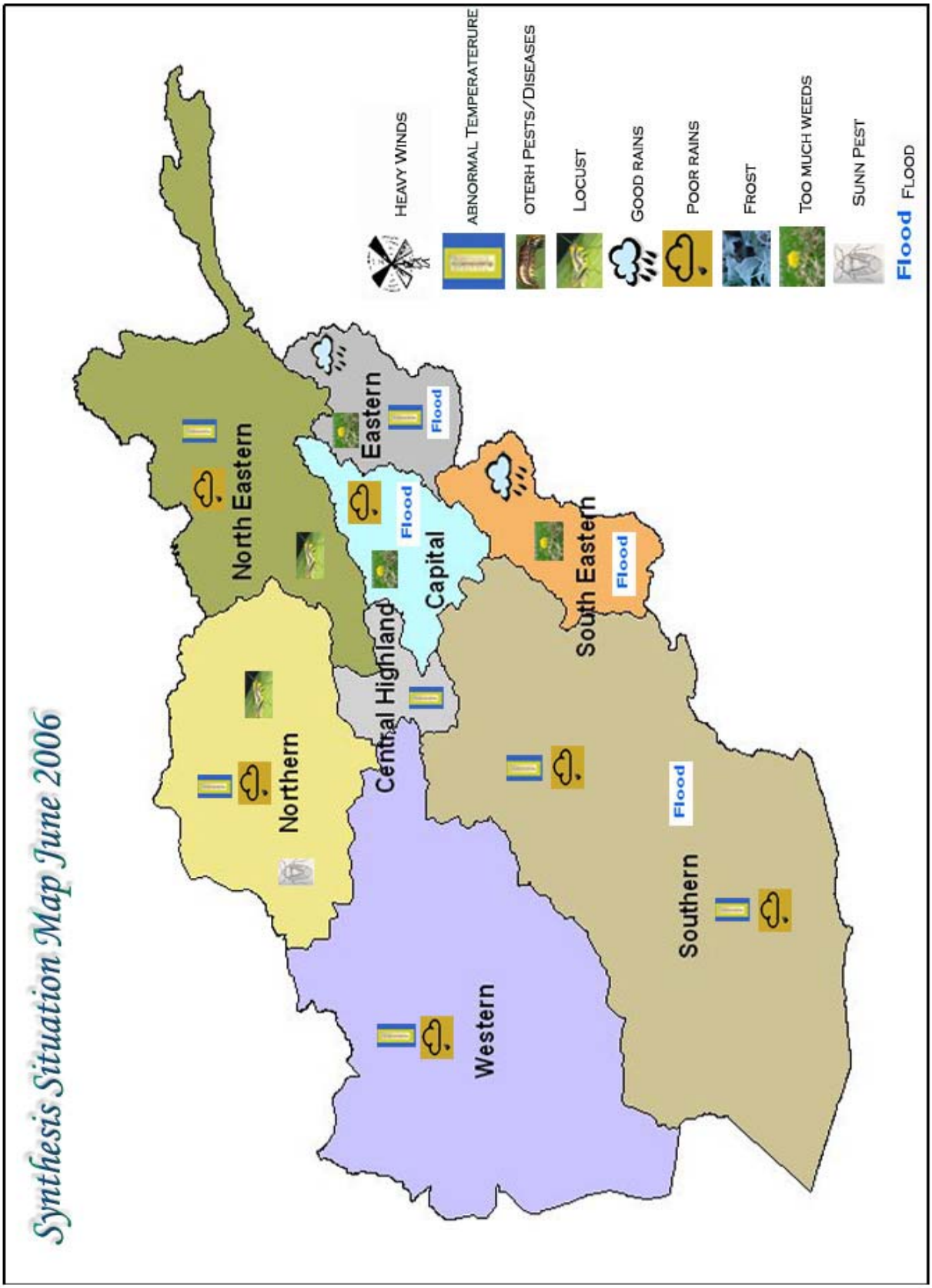
In this region the main adverse factors are a lack of rainfall and pests and disease which has decreased the water melon and melon production. Lack of rainfall and low irrigation have resulted 20% decrease in agriculture products as reported from Balkh Province.

North Western Region:

In this region the main adverse factors are lack of rainfall, pests and diseases. Dry season and grasshoppers are reported form Chaghcharan Center of Ghor Province.



Map 4


Synthesis Situation Map June 2006
North Eastern
Eastern
Flood
Flood
Capital
Central Highland
South Eastern
Flood
Northern
Western
Southern
Flood
Heavy Winds
Abnormal Temperaterure
Oterh Pests/Diseases
Locust
Good Rains
Poor Rains
Frost
Too much weeds
Sunn Pest
Flood Flood

Rainfall Satiuation

The month of July 2006 experienced dry spell. Compression of rainfall of the month of July 2006 to the same month in 2005 (chart 1) shows a decrease of rainfall during the month of July 2006 over the same month in 2005 across the country except Ghazni which rainfall had an increase during the month of July 2006 over the same month in 2005. However Eastern and Southeastern regions experienced some rainfall, but it did not sufficiently response to cover the water demand for irrigation.

The percentage + / - rainfall the month of July 2006 compared the same month in 2005 is as follow:

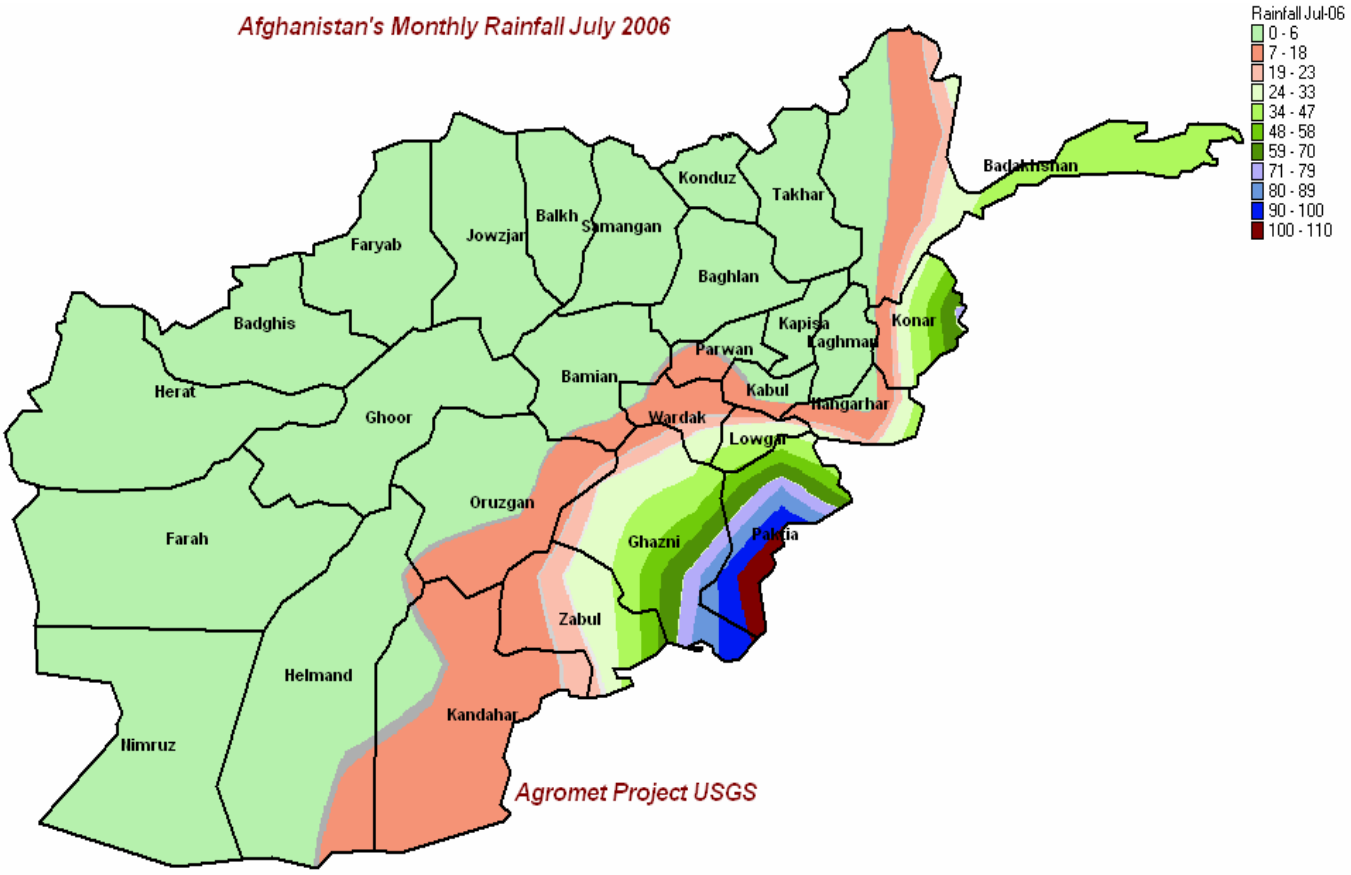
In Ghazi abad – 100 %,Lagman – 100 %, Khost – 77 %, Asmar – 22 %, Sarobi – 100 %.

In Ghzni rainfall had 100 % increased during the month of July 2006 over the same month in 2005.

For the month of July 2006 rainfall was bellow the same month of long term average in most part of the country except Asmar which the rainfall had an increase during the month of July 2006 compared to the same month in long term average. Chart (2) compares recorded rainfall for the month July 2006 with long term average. The percentage +/ -is as follow:

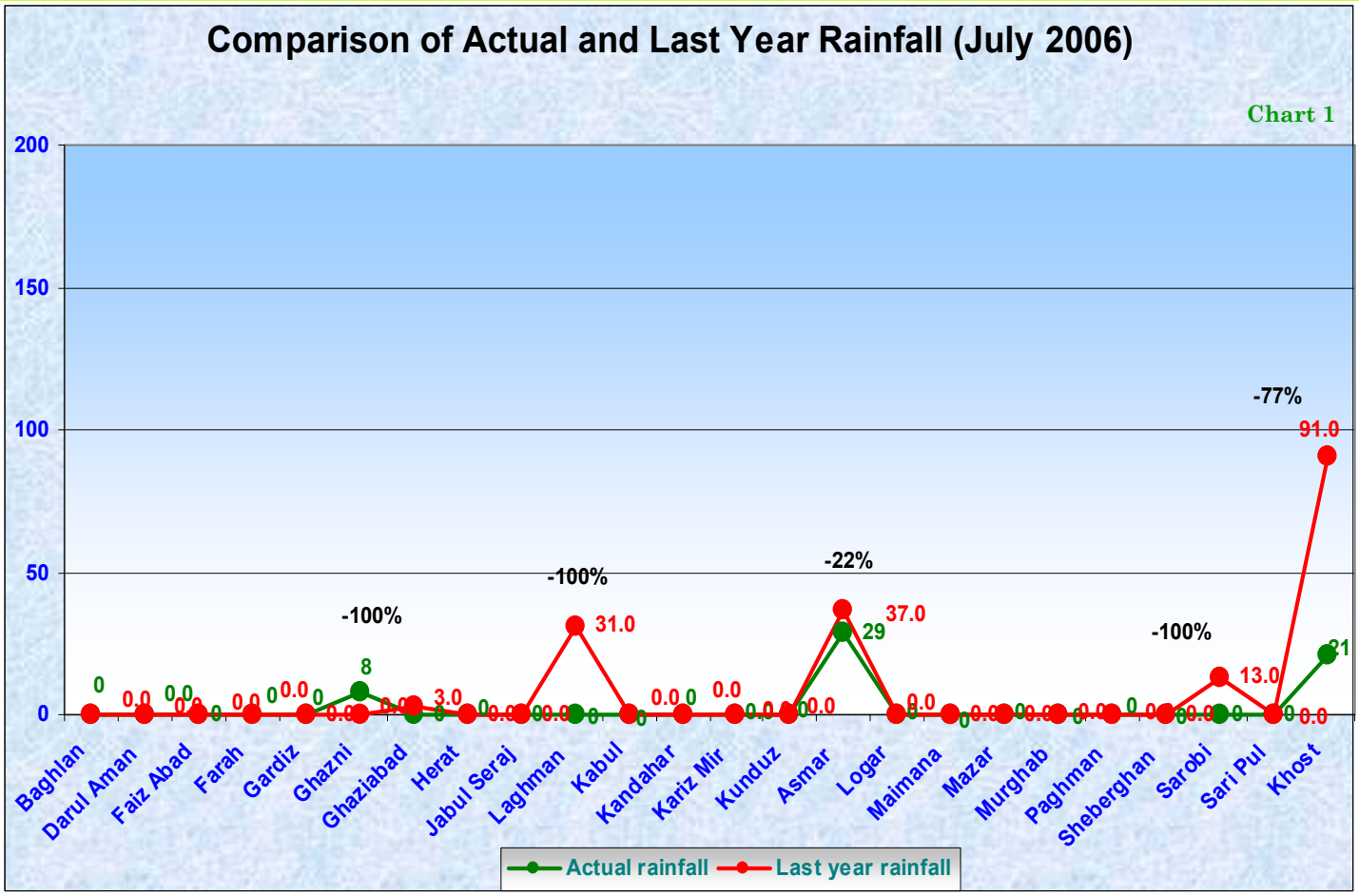
In Darul Aman – 100 %, Faz Abad – 100 %, Farah – 100 %, Gardiz – 100 %, Ghazni – 43 %, Ghaziabad – 100 %, , Jabul Seraj – 100 %,Laghman – 100 %, Kabul – 100 %, Kandahar – 100 %, Kariz Mir – 100 %, Kunduz – 100 %, Logar – 100 %, Maimana -100 %, Paghman – 100 %,Sarobi – 100 %, Khost – 74 %.

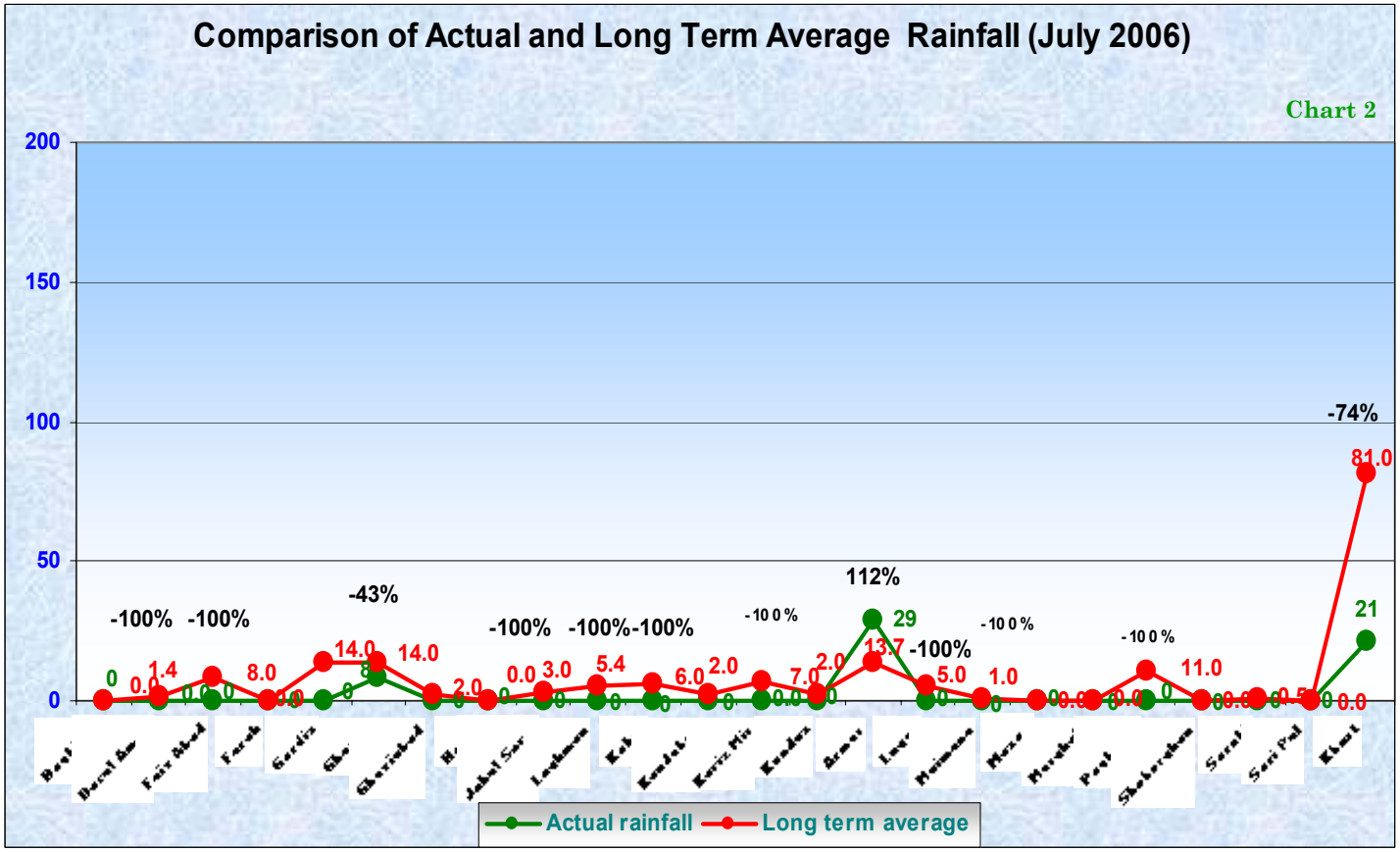
In Asmar rainfall had 112 % increase during the month of July 2006 to the same month in long term average.



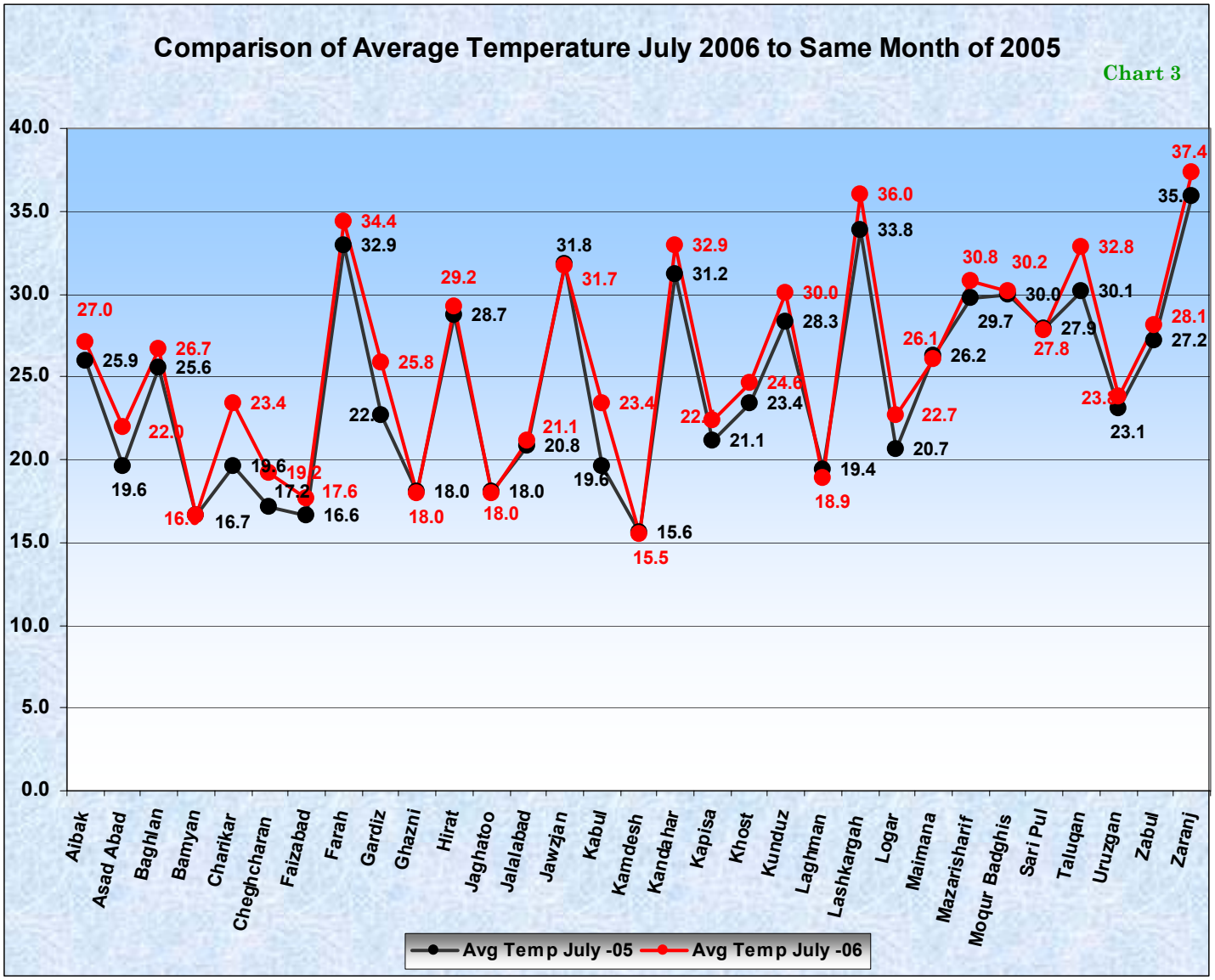
Map 5

Rainfall Graphs for the month of July 2006





Average Tempeature for the Month of July 2006

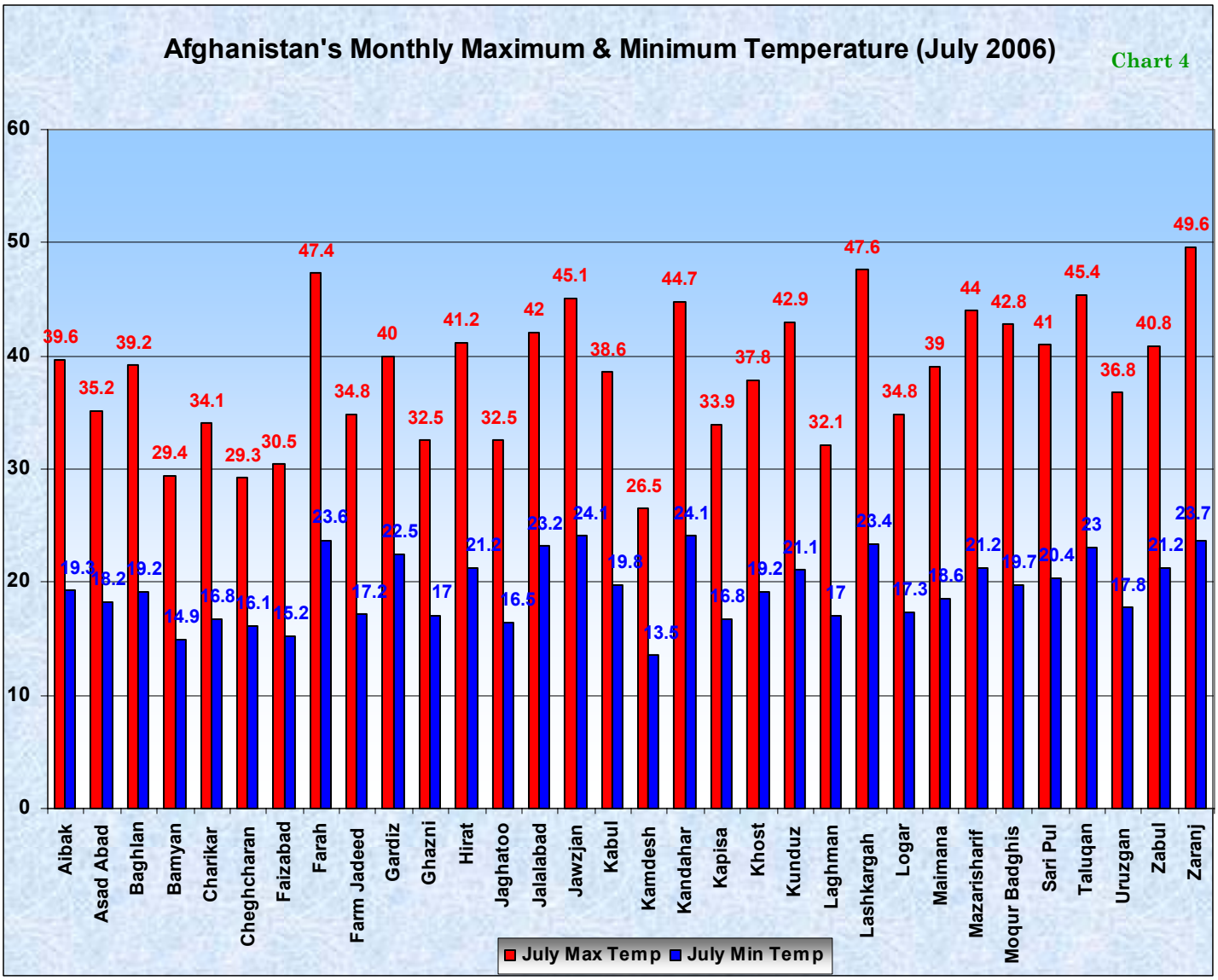


Temperature for the month of July 2006 had an increase over the same month in 2005 across the country.

Comparison of monthly temperature average the month of July 2006 to the same month in 2005 (chart 3) shows small increase of temperature during the month of July 2006 over the same month in 2005.

The monthly average temperature difference the month of July 2006 is 1 – 3 ° C compares to the same month in 2005.

Temperature for the Month of July 2006

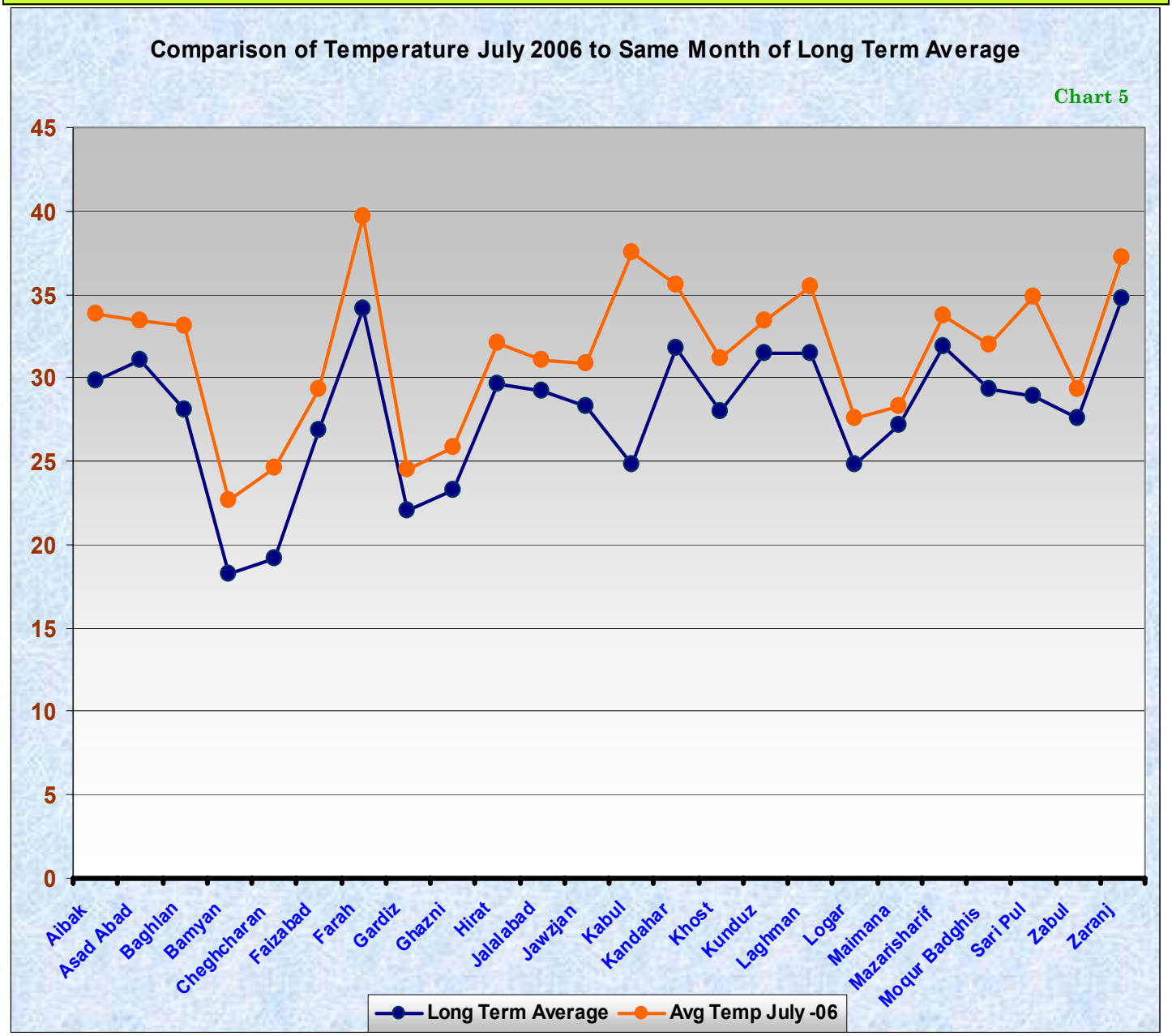


The distribution of temperature was variable in different regions during the month of July 2006.

The distribution of temperature was variable in different regions during the month of July 2006, the Eastern regions, Southern, South-western, western regions and some parts of low lands of the Northern regions experienced dry and hot weather during the month of July 2006 .

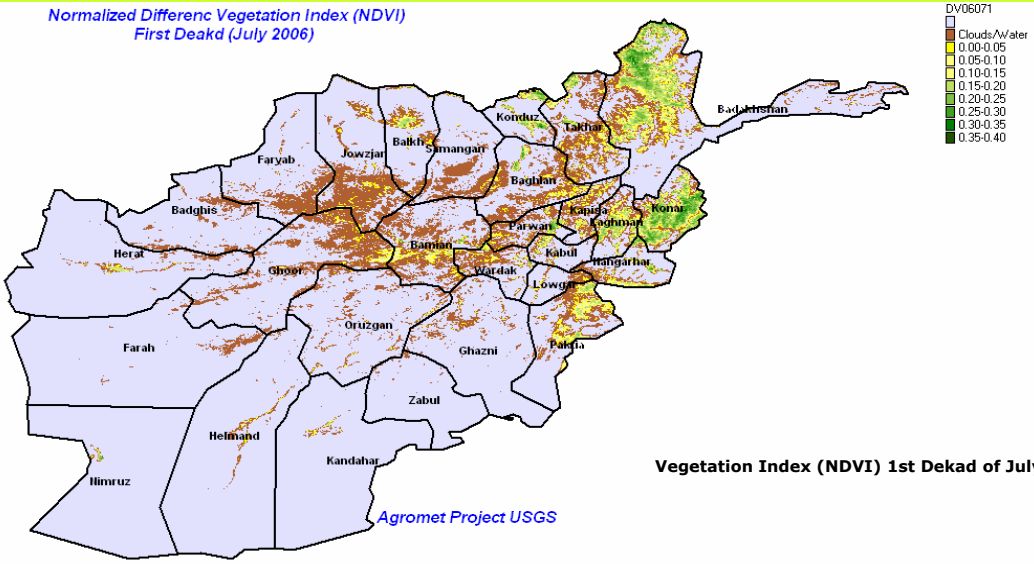
Chart (4) shows minimum and maximum temperature during the month of July 2006, as chart value shows, Zaranj with 49.6 ° C experienced the warmest temperature and Kamdesh with 13.5° C was the coldest point during the month of July 2006.

Temperature for the Month of July 2006



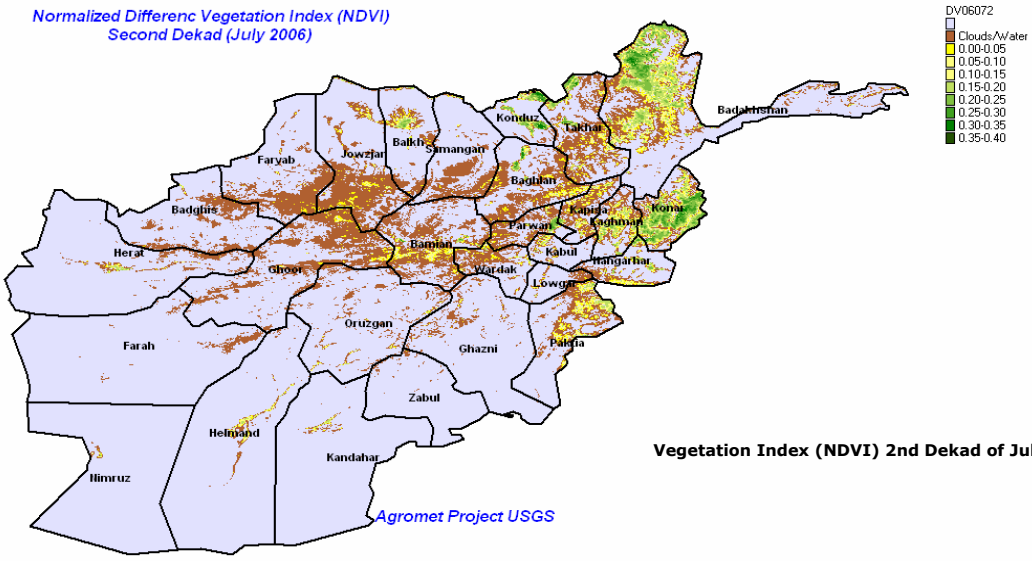
Comparison the monthly average temperature value the month of July 2006 to the same month of long term average (chart 5) shows an increase of temperature in the month of July 2006 to the same month of long term average, which significant change occurred in temperature regime across the country, although the temperature increasing is variable in different regions but generally the temperature had an increase from 2 – 5 ° C during the month of July 2006 compared to the same month of long term average around the country.

Normalized Difference Vegetation Index (NDVI) (July 2006)



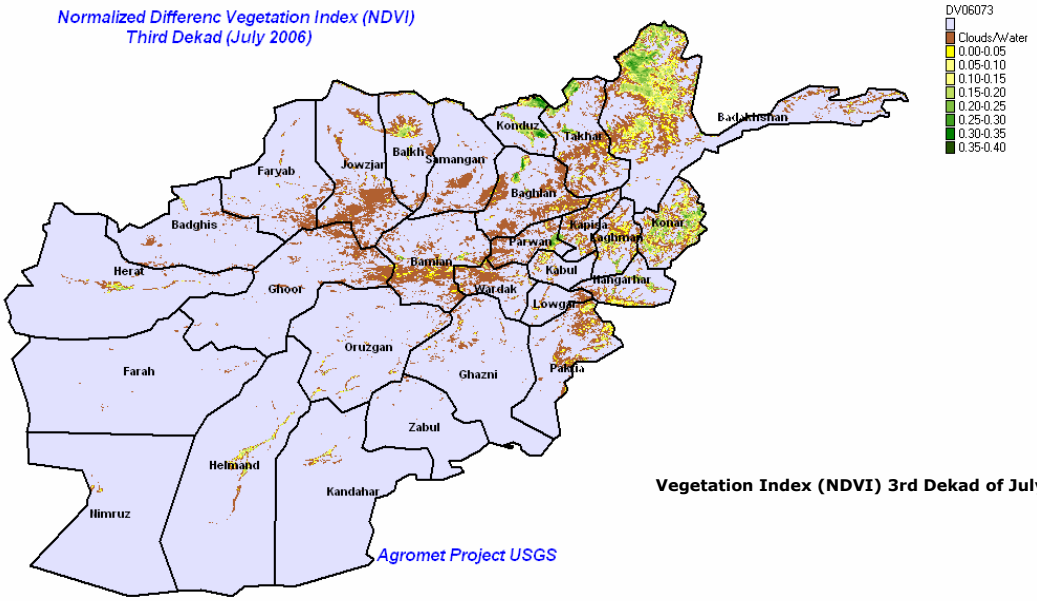
Map 6

Vegetation Index (NDVI) 1st Dekad of July 2006—Afghanistan



Map 7

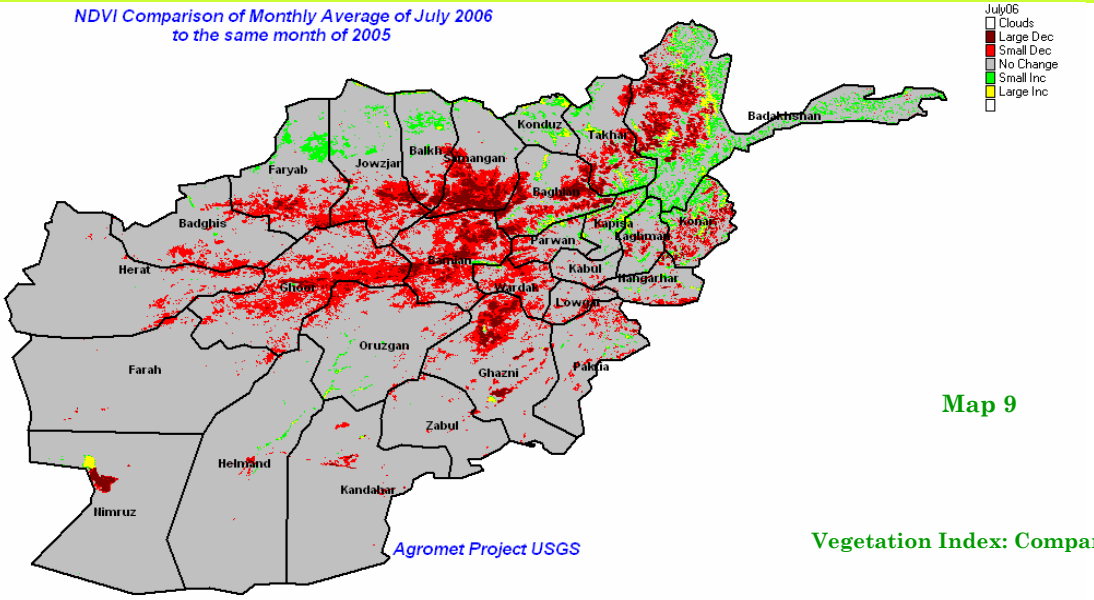
Vegetation Index (NDVI) 2nd Dekad of July2006—Afghanistan



Map 8

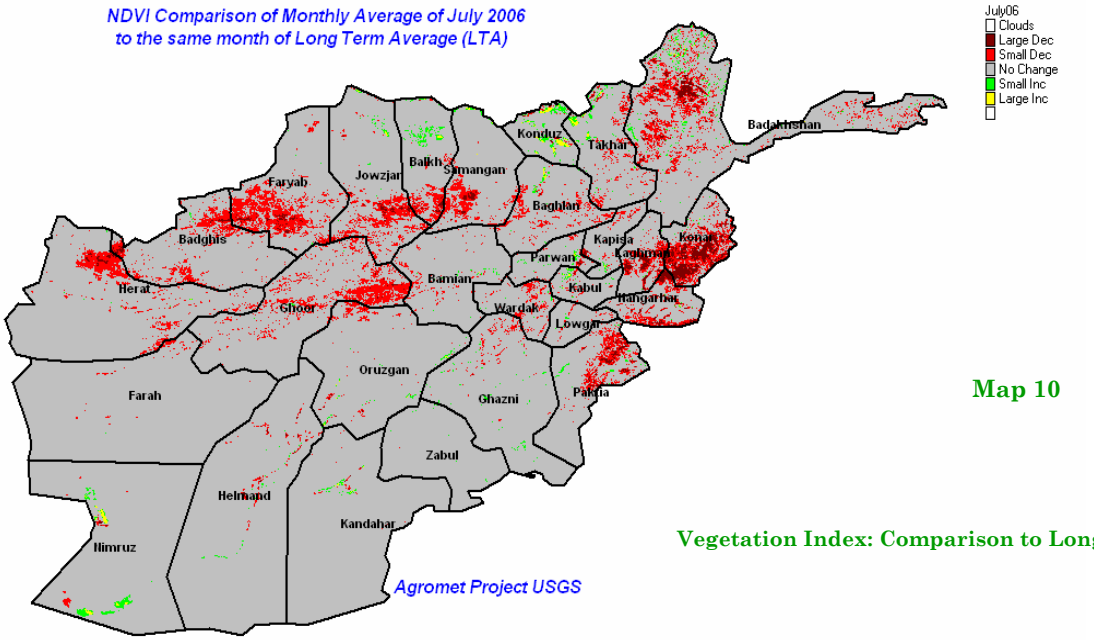
Vegetation Index (NDVI) 3rd Dekad of July 2006—Afghanistan

Comparison of NDVI July 2006



Map 9

Vegetation Index: Comparison to Last Year



Map 10

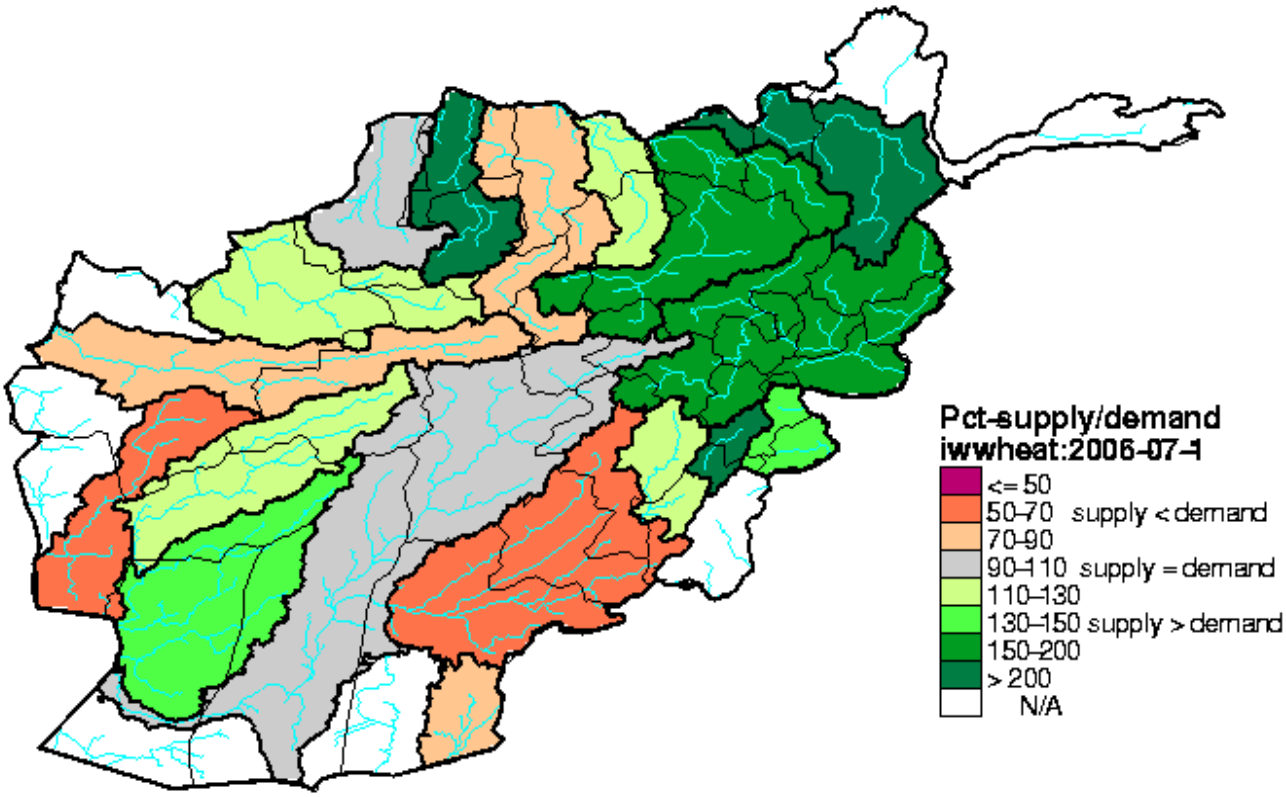
Vegetation Index: Comparison to Long Term Average

NDVI: July 2006

Comparison of NDVI the month of July 2006 to the same month in 2005 (map 9) shows small decrease of NDVI occurred in Central Highlands, some parts of the Northern mountainous areas, some parts of the Northeastern regions, and the Southeastern regions. Small increase of NDVI occurred in some parts of the Northeastern regions, and some parts of the Northern flat areas. There is no change of NDVI during the month of July 2006 over the same month in 2005 in the remaining regions of the country.

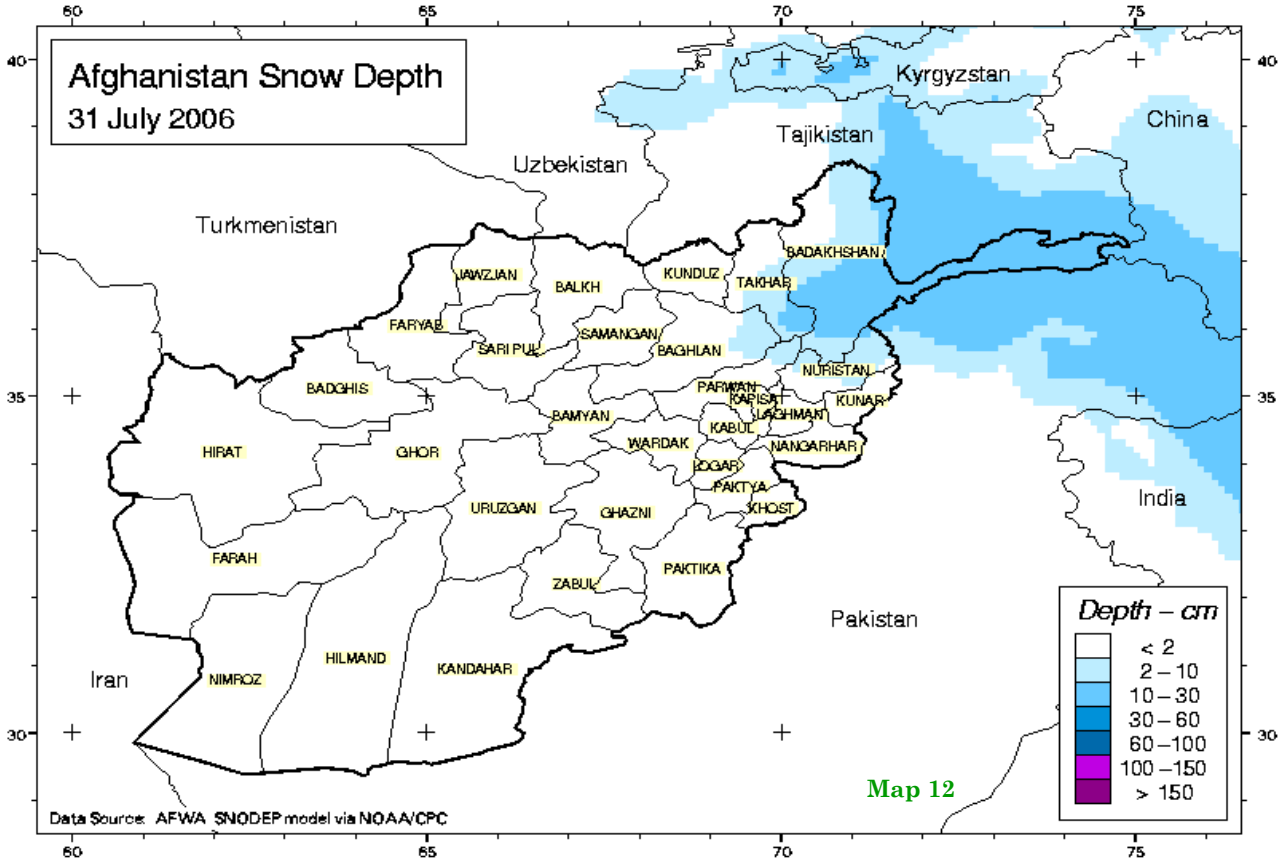
The NDVI comparison the month of July 2006 to the same month of long term average (map 10) shows small decrease of NDVI in the Eastern regions, some parts of Southern, Northern Western and the Northern mountainous areas. There is no change of NDVI in the remaining regions of the country during the month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

Water Supply and Demand for wheat Daked 1st July 2006



Water demand for the winter wheat was variable in different Agricultural areas during the 1st dekad the month of July 2006. As WRSI map(11) shows, in the Northern regions, Eastern regions, East Center, some parts of the Southwestern regions the water supply was more than water demand for the winter wheat. In Central Highlands, some parts in the Southern regions and some parts of the North the water supply was equal water demand for the winter wheat. In the Southwestern regions, some parts in the Northern and some parts in the Western region the water demand was less than the water supply for the winter wheat.

Afghanistan Snow Depth July 2006



Map 12

The Northern regions is major part of perment snow resources of the country, map (12) shows the snow existance in that region . As map shows the snow depth in the Northeastern regions is from 10 up to 30 cm .

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