

The Afghanistan Agrometeorological Monthly Bulletin

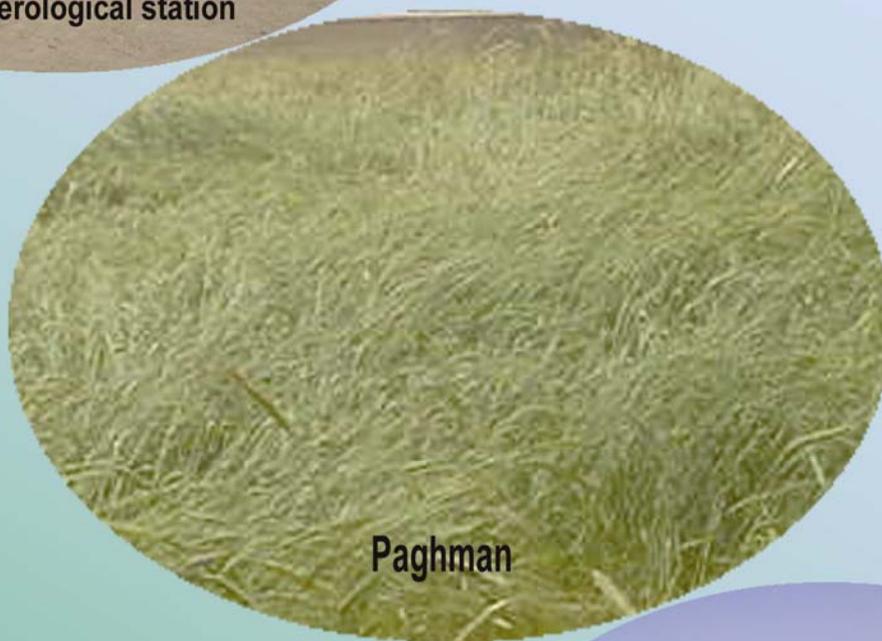


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May 2008



Field Visit in Paghman Automatic Agro Meterological station



Paghman

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).



Field Visit in Paghman Automatic Agro Meterological station

2008

Agromet Network



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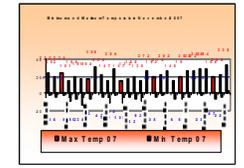
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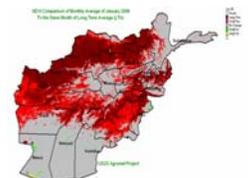
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Summary

Comparison of rainfall data for the month of May 2008 with the same month of long term average shows a decrease of rainfall in most parts of the country .

Zaranj with 45.9 ° C was the warmest spot during the month of May 2008 and Gazni, Jaghatoo and Kamdish with - 4.9 ° C had lower temperature.

Zone	Provinces	District	Station	Crop Stage	Crop Condition	Adverse Factor
Central	Kabul	Shakardara	Karizmir	Flowering	Normal	Excessive weeds
		Paghman	Paghman	Grainfilling	Normal	Excessive weeds and Less amount of rainfall
		Sarobi	Sarobi	Harvesting	Normal	Shortage of Agricultural inputs as tractors threshers and etc
	Panjsher	Dara	Dara	Flowering	Normal	Excessive weeds, Wild oats, trees worm and shortage of agricultural inputs
		Dashtak	Dashtak	Grainfilling	Poor (below normal)	Excessive weeds
	Parwan	Syagerd	Ghorband	Grainfilling	Normal	Not improved seed, Shortage of Agricultural inputs Excessive weeds
		Charikar	Charikar	Grainfilling	Good (better than normal)	Not improved seed, Shortage of Agricultural inputs, Less amount of rainfall
	Kapisa	Mahmoodraqi	Mahmoodraqi	Grainfilling	Normal	Excessive weeds, Wild oats, wheat Rust
	Wardak	Chak	Chak	Flowering	Normal	Excessive weeds
		Jaghatoo	Jaghatoo	Flowering	Good (better than normal)	Not existed
East Central	Bamyan	Central Bamyan	Bamyan	Vegetative	Normal	Lack of rainfall
		Yakawlang	Yakawlang	Vegetative	Normal	Lack of rainfall, Lack of improved seed and Shortage of Agricultural inputs
		Panjab	Panjab	Vegetative	Normal	Not existed
Eastern	Nangarhar	Agam	Agam	Grainfilling	Normal	Not existed
		Batikot	Ghaziabad	Harvesting	Normal	Not improved seed, Shortage of Agricultural inputs
		Jalalabad	Sheshembagh	Harvesting	Normal	Not improved seed, Shortage of Agricultural inputs
		Jalalabad	Farm Jadeed	Harvesting	Normal	Not improved seed, Shortage of Agricultural inputs
	Konar	Asmar	Asmar	Harvesting	Good (better than normal)	Not improved seed, Shortage of Agricultural inputs
		Asadabad	Asadabad	Harvesting	Normal	Not improved seed, Shortage of Agricultural inputs
	Laghman	Mihtarlam	Mihtarlam	Harvesting	Good (better than normal)	Shortage of Agricultural inputs

Crop Stage, Crop Condition and Adverse Factor

Zone	Provinces	District	Station	Crop Stage	Crop Condition	Adverse Factor
Northeast	Takhar	Bangi	Bangi	Grainfilling	Normal	Less amount of rainfall, Locust and Potato Bark beetles and excessive weeds
		Taloqan	Taloqan	Grainfilling	Poor (below normal)	Less amount of rainfall, Locust and Potato Bark beetles and excessive weeds
	Kunduz	Imam Sahib	Imam Sahib	Harvesting	Poor (below normal)	Wheat cut worm, wheat smut and rust, oats
		Aqtipa	Aqtipa	Harvesting	Poor (below normal)	Wheat cut worm, wheat smut and rust, oats
		Chardara	Chardara	Harvesting	Poor (below normal)	Wheat cut worm, wheat smut and rust, oats
		Kunduz	Kunduz	Harvesting	Poor (below normal)	Wheat cut worm, wheat smut and rust, oats
	Baghlan	Baghlan Jadid	Pozaishan	Grainfilling	Normal	Less amount of rainfall
	Badakhshan	Faizabad	Faizabad	Flowering	Normal	Less amount of rainfall
South Eastern	Khost	Khost	Khost	Harvesting	Normal	Excessive weeds
		Shimal	Shimal	Harvesting	Normal	Excessive weeds
		Ali Sher	Ali Sher	Harvesting	Normal	Excessive weeds
	Paktai	Gardiz	Rohani Baba	Grainfilling	Normal	Not existed
		Gardiz	Tera	Grainfilling	Good (better than normal)	Not existed
	Paktika	Urgon	Urgon	Grainfilling	Normal	Less amount of rainfall
		Sharana	Sharana	Grainfilling	Normal	Less amount of rainfall
		Kairkot	Kairkot	Grainfilling	Normal	Less amount of rainfall
	Ghazni	Muqur	Muqur	Grainfilling	Poor (below normal)	Less amount of rainfall, drought and lack of water in spring and Gully(Kariz)
		Bande Sardi	Bande Sardi	Grainfilling	Poor (below normal)	Less amount of rainfall, drought and lack of water in spring and Gully(Kariz)
Southern	Nimroz	Zaranj	Zaranj	Harvesting	Poor (below normal)	Lack of water in Khashrod River, low water in Hilmand River and 70% wheat yields are lost
	Kandahar	Kandahar	Kandahar	Grainfilling	Normal	Not improved seed, Shortage of agricultural inputs, Less amount of rainfall
	Zabul	Qalat	Qalat	Grainfilling	Normal	Wheat cut worm, wheat smut and rust.
	Urozgan	Tarikot	Tarikot	Grainfilling	Normal	Less amount of rainfall and shortage of agricultural inputs.
	Hilmand	Nad Ali	Nad Ali	Harvesting	Good (better than normal)	Shortage of Agricultural inputs .
		Greshk	Greshk	Harvesting	Good (better than normal)	Shortage of Agricultural inputs as .
		Nawa	Nawa	Harvesting	Normal	Shortage of Agricultural inputs .
		Lashkargah	Bolan	Harvesting	Normal	Shortage of Agricultural inputs .

Crop Stage, Crop Condition and Adverse Factor

Zone	Provinces	Distirect	Station	Crop Stage	Crop Condition	Adverse Factor
North	Balkh	Dihdadi	Dihdadi	Grainfilling	Poor (below normal)	Less amount of rainfall and Locust Problem
		Nahrishahi	Nahrishahi	Grainfilling	Poor (below normal)	Less amount of rainfall and Locust Problem
	Jawzjan	Sheberghan	Sheberghan	Grainfilling	Crop failure, no harvest is expected	100% rain fed wheat and 60% irrigated wheat is lost due to the lack of water and rainfall
	Saripul	Saripul	Saripul	Harvesting	Crop failure, no harvest is expected	100% rain fed wheat and 60% irrigated wheat is lost due to the lack of water and rainfall
		Sozmaqala	Sozmaqala	Harvesting	Crop failure, no harvest is expected	100% rain fed wheat and 60% irrigated wheat is lost due to the lack of water and rainfall
	Faryab	Maimana	Maimana	Grainfilling	Poor (below normal)	90% rain fed wheat and 50% irrigated wheat is lost due to the lack of water and rainfall
Samangan	Aibak	Aibak	Grainfilling	Crop failure, no harvest is expected	100% rain fed wheat and 60% irrigated wheat is lost due to the lack of water and rainfall	
West-ern	Badghis	Qalainow	Qalainow	Flowering	Crop failure, no harvest is expected	Less amount of rainfall and drought
		Muqur	Muqur	Flowering	Crop failure, no harvest is expected	Less amount of rainfall and drought
	Ghor	Chaghcharan	Chaghcharan	Flowering	Normal	Less amount of rainfall and drought
	Hirat	Shindand	Shindand	Grainfilling	Normal	Less amount of rainfall and drought
		Hirat	Farm Urdokhan	Harvesting	Poor (below normal)	Less amount of rainfall and drought
	Farah	Farah	Farah	Harvesting	Normal	No improved seed, Shortage of agricultural inputs, Less amount of rainfall

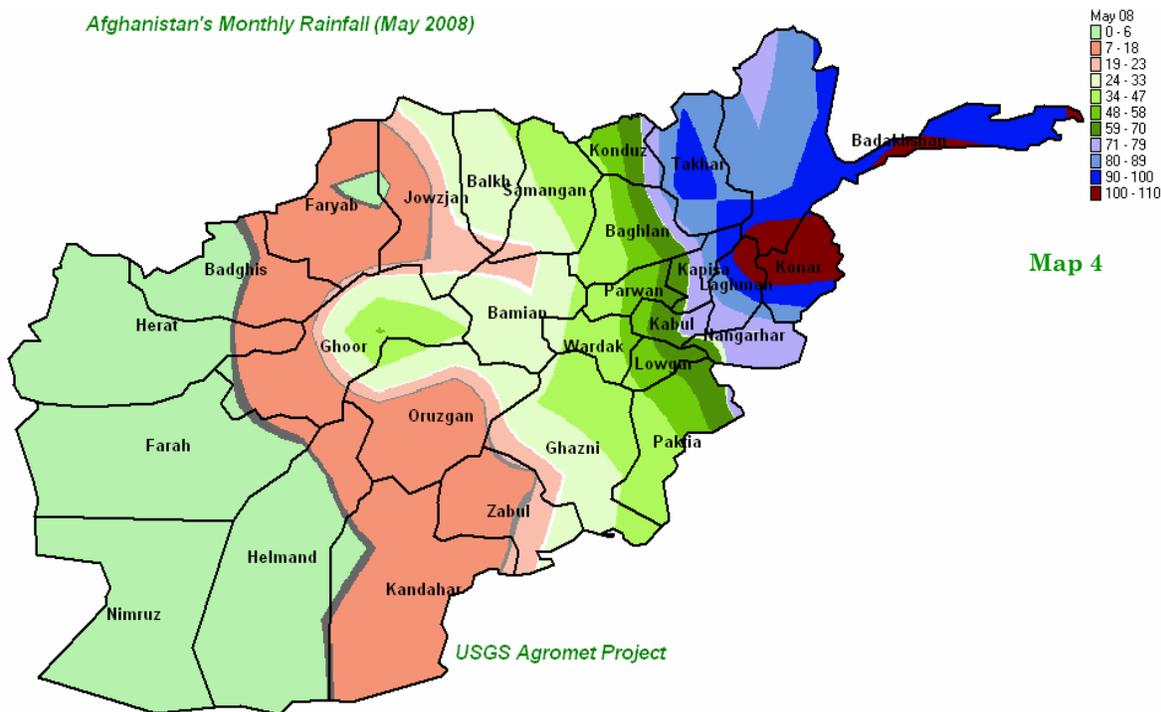
Rainfall Situation

Rainfall for the month of May 2008 had a decrease in most parts of the country compared to the same month in 2007.

Comparison of rainfall data for the month of May 2008 with the same month in 2007 (chart 1) shows a decrease of rainfall during the month of May 2008 over the same month of last year in most parts of the country, except Darulaman, Gardiz, Jalalabad, Kunduz, Paghman and Saribi where the rainfall had small increase during the month of May 2008 compared to the same month in 2007. As chart (1) shows total amount of rainfall for the month of May 2008 is lower compared to the same month of last year and the country experienced lower precipitation during the month of May over the last year

The percentage +/- of rainfall shown in next page (table 1).

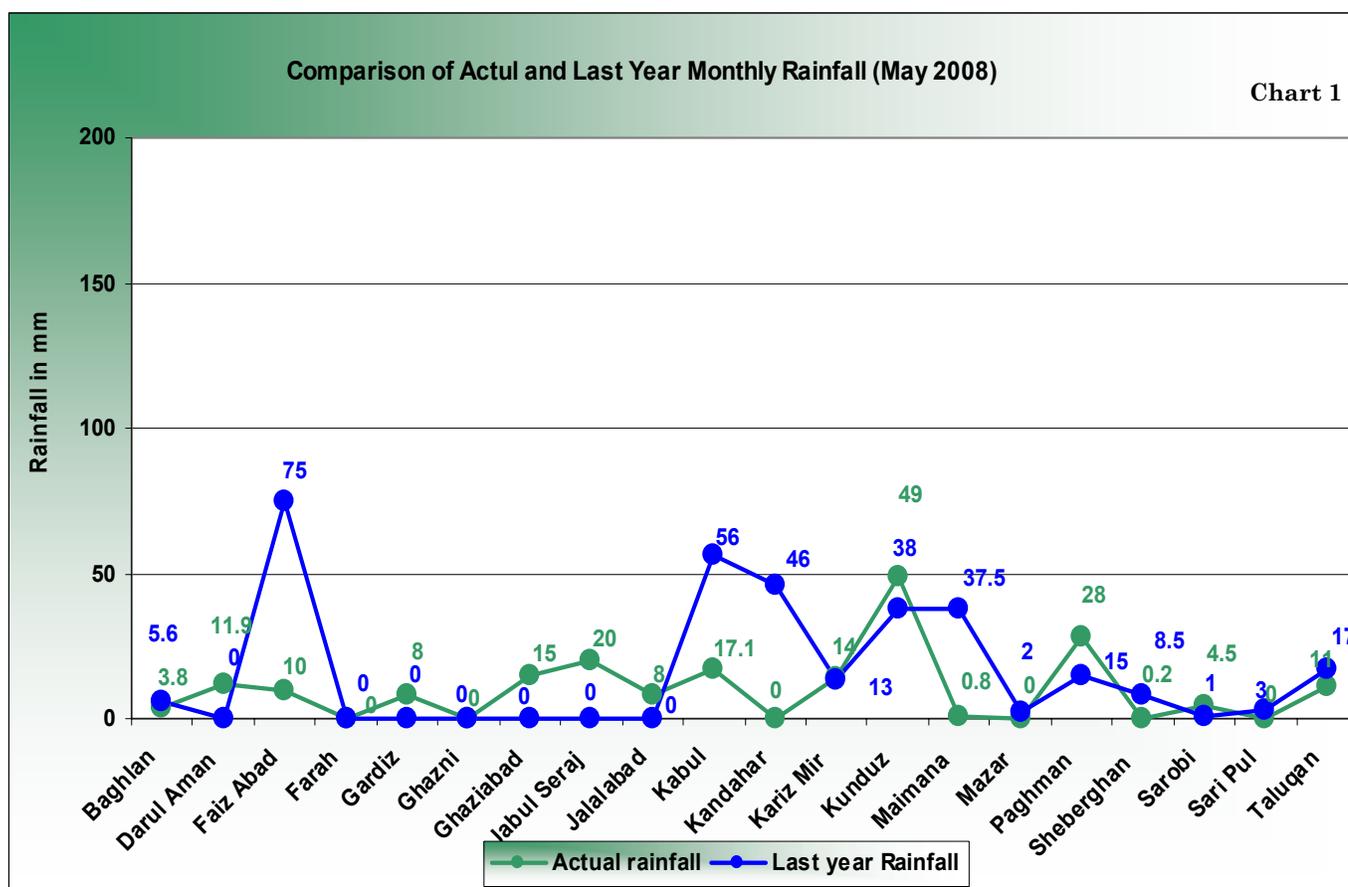
Comparison of rainfall data for the month of May 2008 with the same month of long term average (chart 2) shows a decrease of rainfall in most parts of the country during the month of May 2008 over the same month of long term average except Gaziabad and Kunduz where rainfall had small increase. Based on rainfall data (charts 1,2) the month of May was dry which dryness conditions have negative impacts on crop yields particularly will damage rain wheat and irrigated wheat and other agricultural activities.



Map (4) shows the distribution of rainfall for the month of May 2008 across the country. As map (4) shows that the distribution of rainfall was variable during the month of May 2008 around the country, and most amount of rainfall occurred in the Eastern region particularly in Kunar province and the Northeastern

region also experienced good rainfall. The Southern region, Southwestern region, Western and Northwestern region was dry and experienced less amount of rainfall during the month of May 2008.

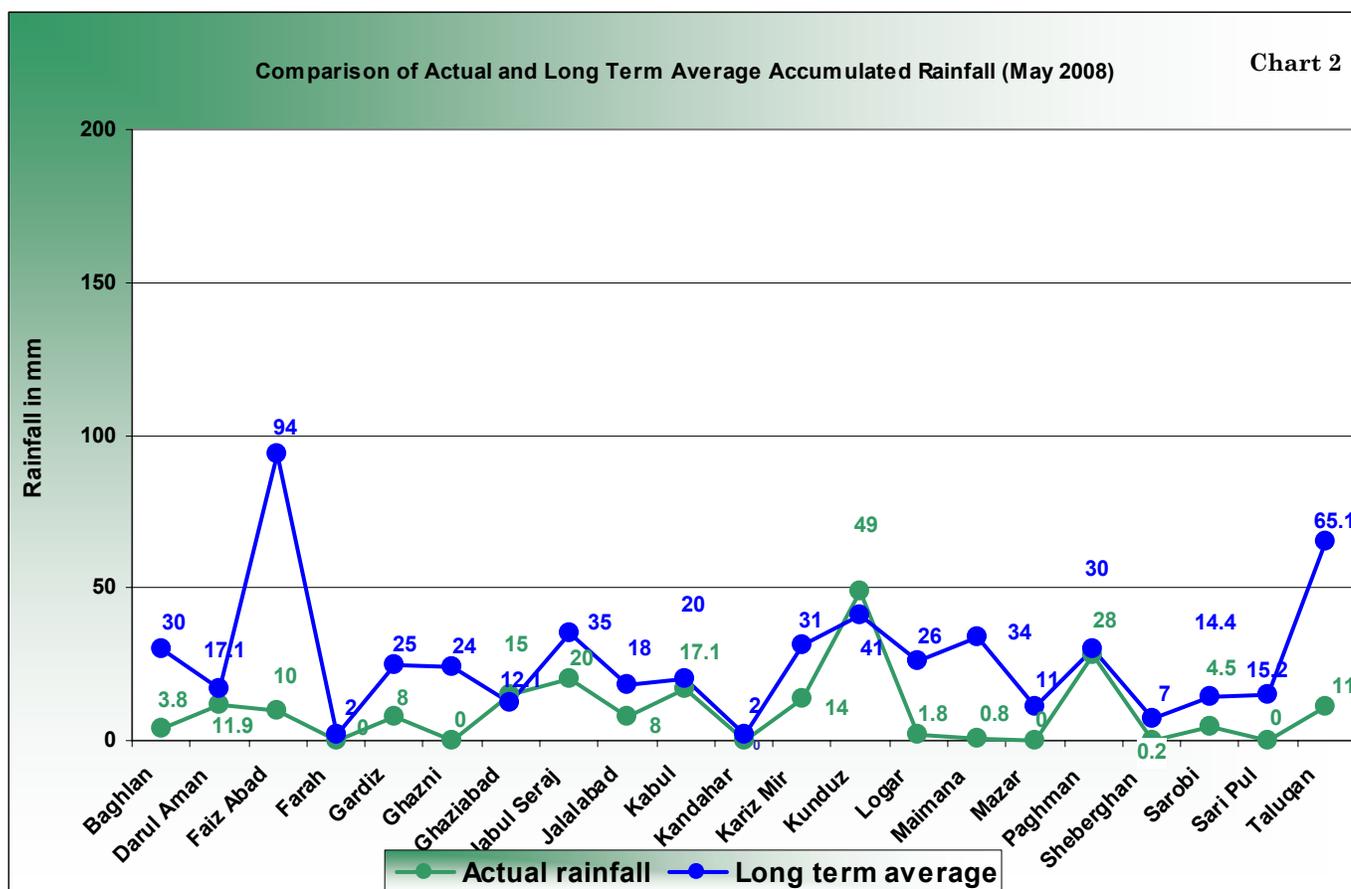
Rainfall Graphs for the Month of May 2008



Station	Actual rainfall	Last year Rainfall	%
Baghlan	3.8	5.6	-32
Darul Aman	11.9	0	0
Faiz Abad	10	75	-87
Farah	0	0	
Gardiz	8	0	
Ghazni	0	0	
Ghaziabad	15	0	
Jabul Seraj	20	0	
Jalalabad	8	0	
Kabul	17.1	56	-69
Kandahar	0	46	-100
Kariz Mir	14	13	8
Kunduz	49	38	29
Maimana	0.8	37.5	-98
Mazar	0	2	-100
Paghman	28	15	87
Sheberghan	0.2	8.5	-98
Sarobi	4.5	1	350
Sari Pul	0	3	-100
Taluqan	11	17	-35

Table 1

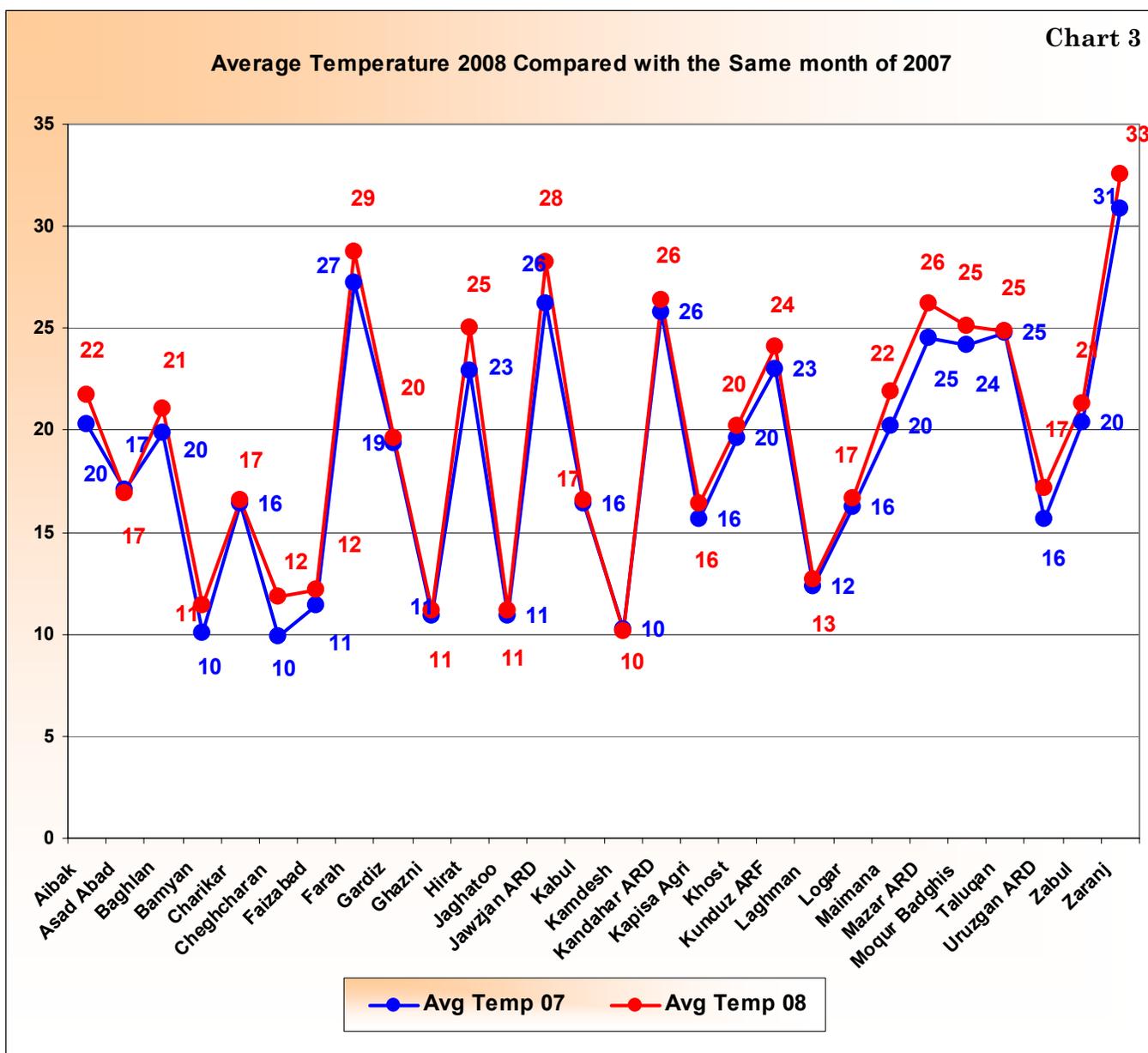
Rainfall Graphs for the Month of May 2008



Station	Actual rainfall	Long term average	%
Baghlan	3.8	30	-87
Darul Aman	11.9	17.1	-30
Faiz Abad	10	94	-89
Farah	0	2	-100
Gardiz	8	25	-68
Ghazni	0	24	-100
Ghaziabad	15	12.1	24
Jabul Seraj	20	35	-43
Jalalabad	8	18	-56
Kabul	17.1	20	-15
Kandahar	0	2	-100
Kariz Mir	14	31	-55
Kunduz	49	41	20
Logar	1.8	26	-93
Maimana	0.8	34	-98
Mazar	0	11	-100
Paghman	28	30	-7
Sheberghan	0.2	7	-97
Sarobi	4.5	14.4	-69
Sari Pul	0	15.2	-100
Taluqan	11	65.1	-83

Table 2

Average Temperature for the Month of May 2008

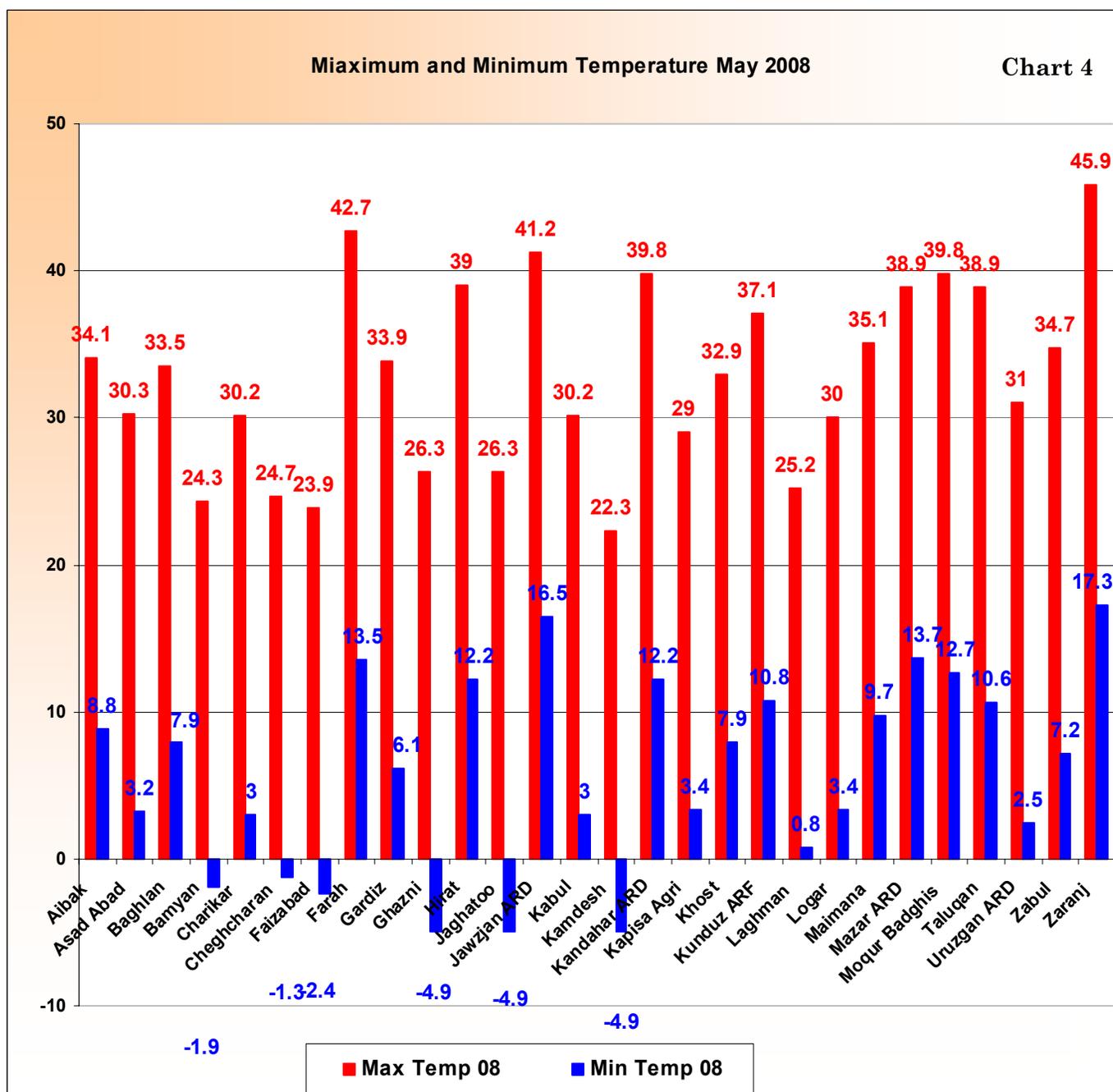


Temperature for the month of May 2008 had increase compared to the same month in 2007.

Temperature for the month of May 2008 had small increase compared to the same month in 2007 across the country. Comparison of temperature data for the month of May 2008 with the same month in 2007 (Chart 3) shows that temperature during the month of May 2008 was higher compared

to same month of last year across the country. The temperature of May 1 – 2 ° C was higher compared to last year across the country. Higher temperature during the month of May have depleted snow pack early and evaporated more water

Temperature for the Month of May 2008

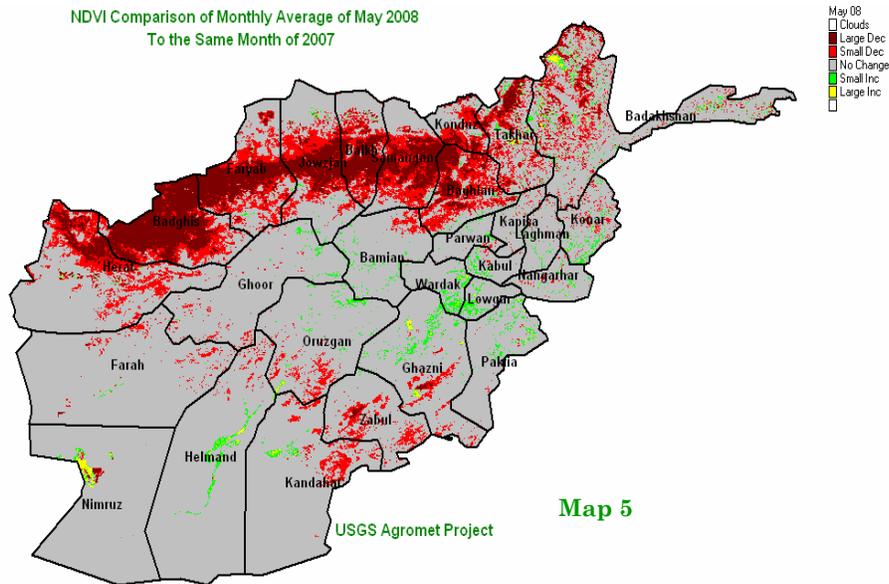


Zaranj with 45.9 C was the warmest Spot in the Country.

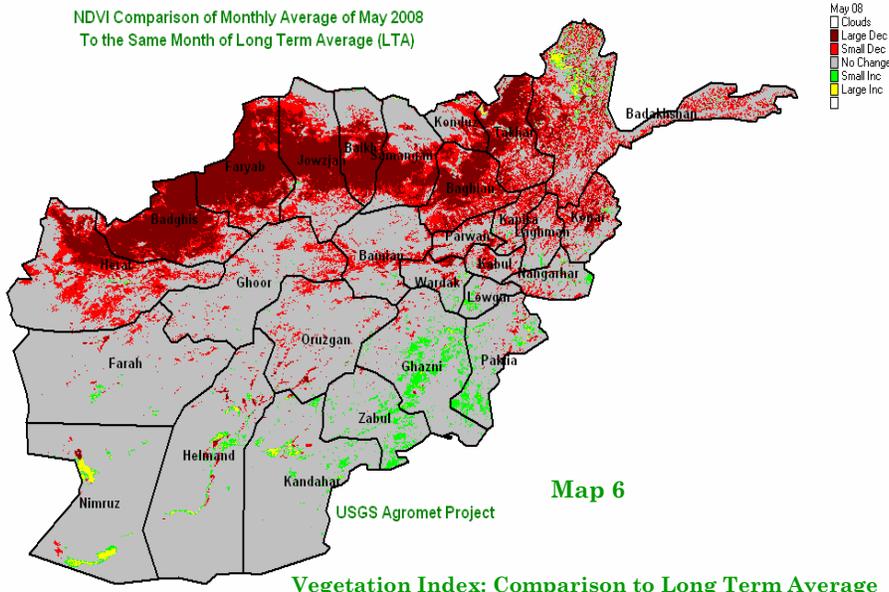
Chart (4) shows maximum and minimum temperature for the month of May 2008 around the country, as chart (4) shows in most station the temperature was free from frost during the month of May 08 except Bamyan, Cheghchran, Faizabad, Gazni, Jaghatoo

And Kamdesh where the minimum temperature was at freezing point. Zaranj with 45.9 ° C was the warmest spot during the month of May 2008 and Gazni, Jaghatoo and Kamdish with - 4.9 ° C had lower temperature.

Comparison of NDVI May 2008



Vegetation Index: Comparison to Last Year



Vegetation Index: Comparison to Long Term Average

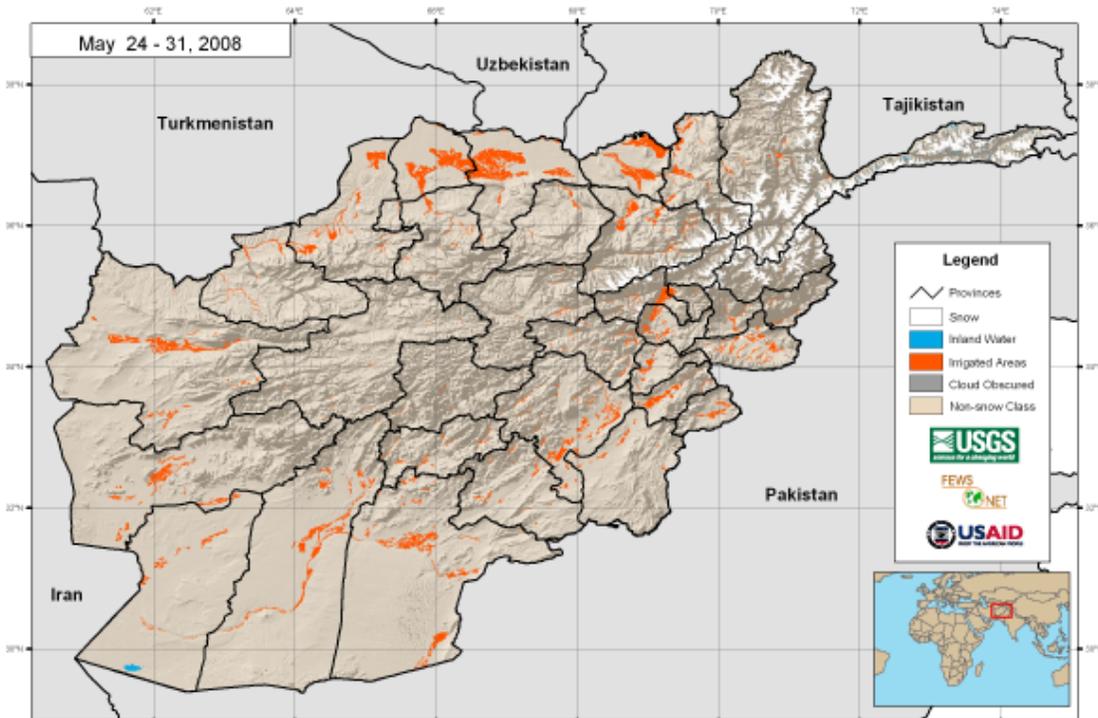
NDVI: May 2008

Comparison of monthly average of NDVI for the month of May 2008 with the same month in 2007 (Map 5) shows large decrease of NDVI in the Northwestern regions and Northern regions during the month of May 2008 compared to the same month of last year, and small decrease occurred in NDVI value as separated in the Northeastern region. Small increase occurred in NDVI value in limited area in the Capital region. There is no change of NDVI in the remaining regions of the country during the month of May 2008 over the same month of last year.

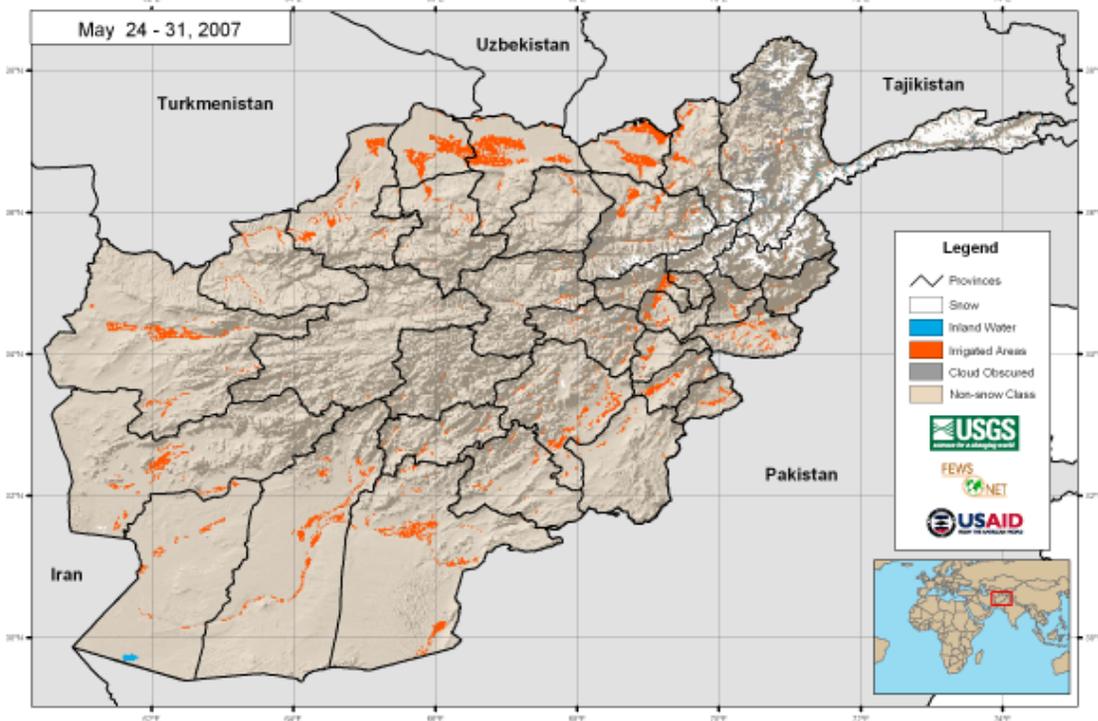
Comparison of monthly average of NDVI for the month of May 2008 with the same month of long term average (Map 6) shows large decrease of NDVI in the Northwestern region, some parts in the Western region, Northern region during the month of May 2008 compared to the same month of long term average. There is no significant change in NDVI value in the remaining regions of the country during the month of May 2008 over the same month of long term average.

Comparison of Snow Extent

MODIS 8-day Snow Cover Extent - Current Period 2008 vs 2007



Map 7



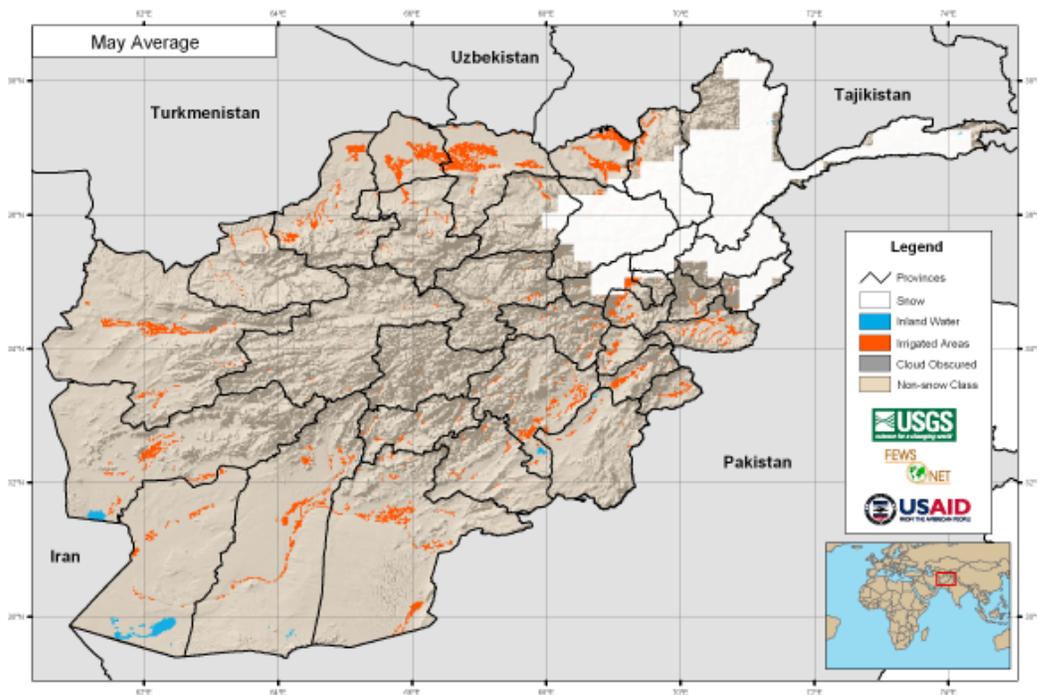
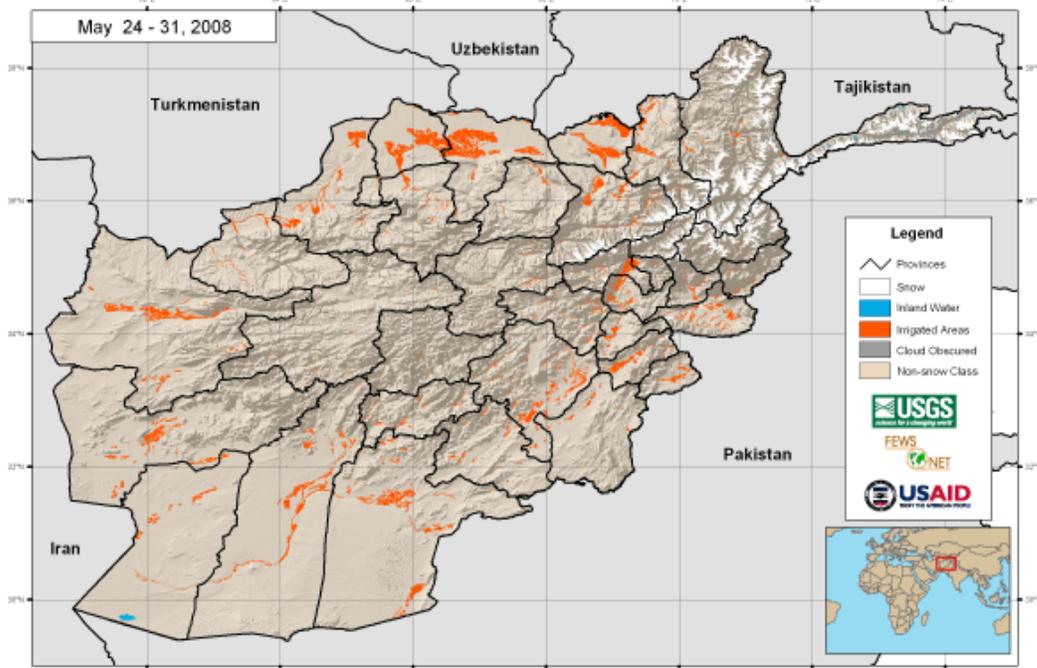
Map 8

Comparison of snow extent for the period (24 – 31) May 2008 with the same period in 2007 (Maps 7– 8) shows there is no significant change in snow extent during the month of May 2008 compared to the same period of last year.

However small decrease occurred in snow extent in the extreme portion in the Northeast region but it is not considerable.

Comparison of Snow Extent

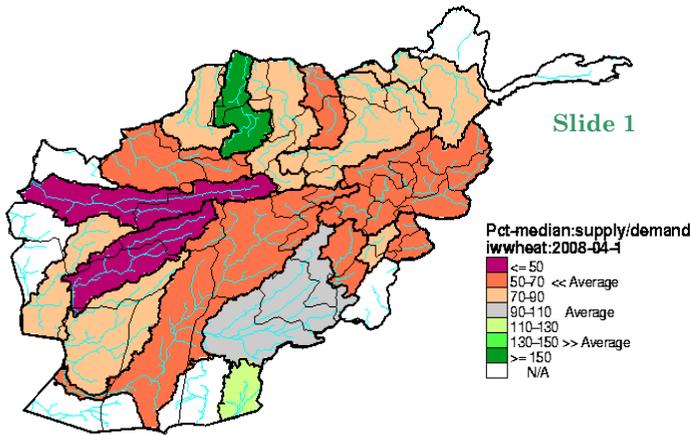
MODIS 8-day Snow Cover Extent - Current vs. Historical Average



Comparison of snow extent for the month of May 2008 with the same month of long term average (Maps 9 - 10) shows significant decrease in snow extent during the month of May 2008 compared to the same month of long term average in the snow coverage area. Below normal snow fall after January 2008 and early snow melt due higher temperature

resulted below normal snow extent in snow coverage area. Higher temperature has depleted snow pack earlier than normal. Almost all of the remaining snows pack is in the Northeastern region. Snow pack in the highland areas is critical because it is used for irrigation.

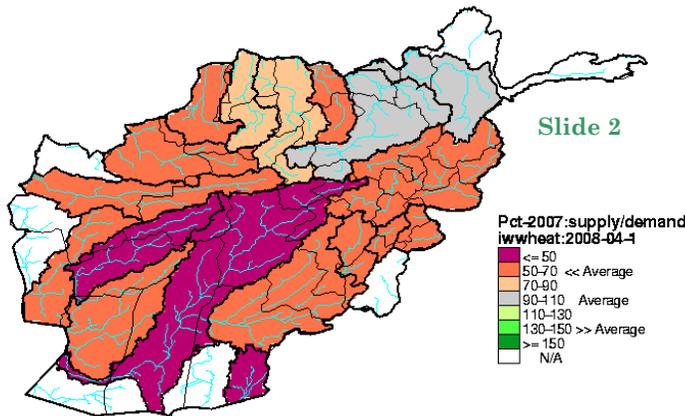
Irrigation Supply & Demand Anomaly (Median Year)



Slide 1

Winter

Irrigation Supply & Demand Percent of Previ-



Slide 2

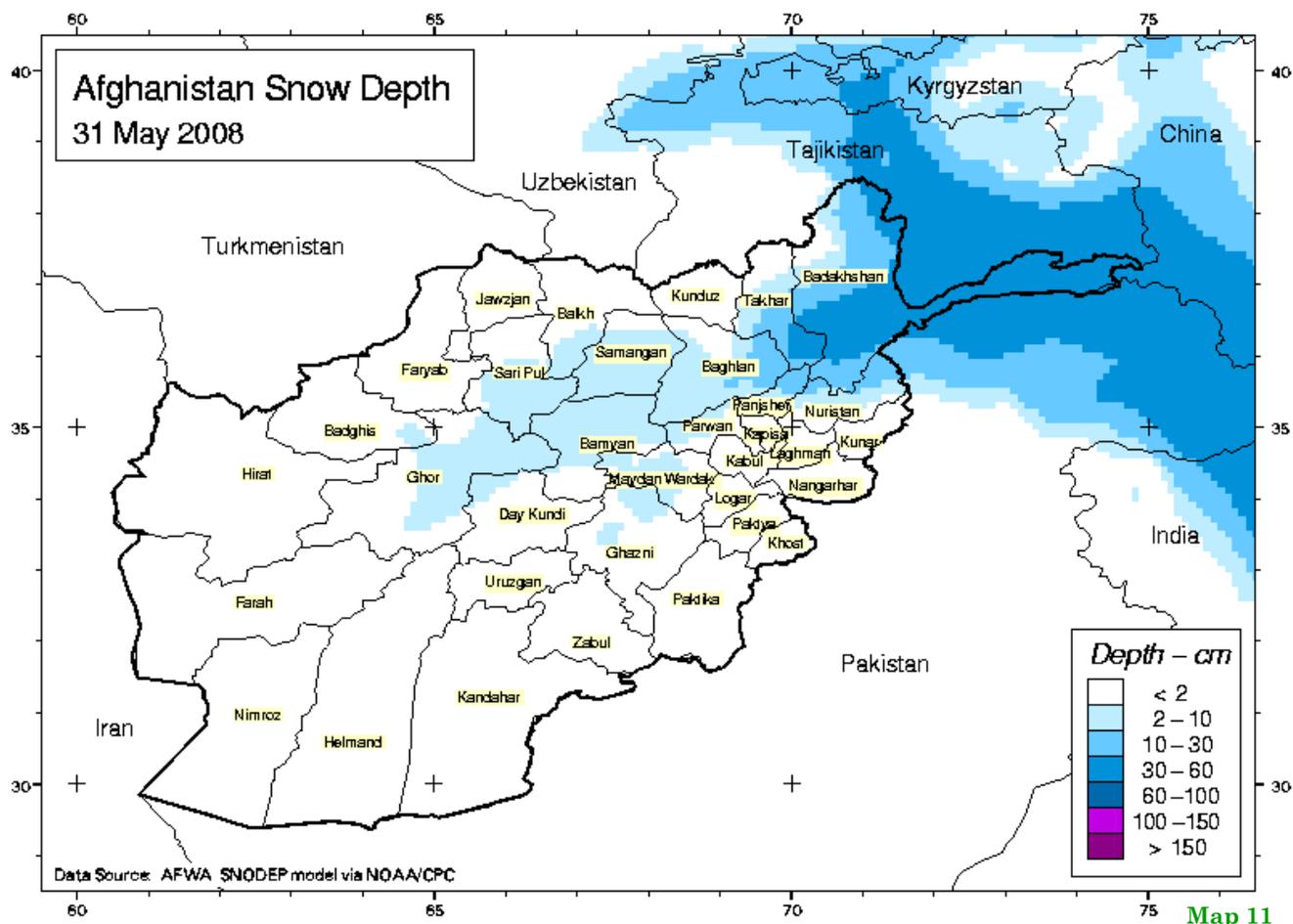
Winter Wheat

Irrigated Winter Wheat

During the first dekad of April, irrigated wheat throughout the country is at average to excellent condition in terms of water supply meeting water demand for the current phenological crop stage. North and Northwest of the country (light orange color) is at average in terms of water supply meeting water demand. For the rest of the country, water supply meets or exceeds crop water demands for that phenological crop stage (light green to darker green, respectively). However, the forecast of irrigated wheat at the end of the growing season (slide 1) shows crop mainly below average or failing season compared to long term median year (1961-1990), according to data obtained from IWMI. Only a small part on the Northern tip of the country, dark green, (small part of Faryab, most of Jawzjan, small part of Saripul) is better than average. Compared to last year, slide 1, only parts of the Northeastern and Northern (gray and light orange colors, respectively)

part of the country are at average or better than average. The rest of the country (dark orange and red colors) experiencing a shortage of water (water supplies are less than water demands), which will significantly reduce production. In other words, our forecast is telling us according to the long term meteorological data (1961-1990) and assuming the area of Winter wheat planted this year is the same as that of last year, Afghanistan will have less production than last year. This suggests that if Afghanistan had wheat shortage last year, this year will be of a greater shortage and need to be prepared ahead of time. If we assume that farmers planted less area than last year knowing it's a dry year, the outcome will be the same in terms of less production than last year.

Afghanistan Snow Depth for the month of May 2008



Map (11) shows snow depth in snow coverage area for the month of May 2008. As map shows the snow extent 30 to 60 cm for the Northeast

and 2 – 10 cm has been recorded for Central Highlands and neighboring areas.

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<http://afghanistan.cr.usgs.gov/agro.asp>