



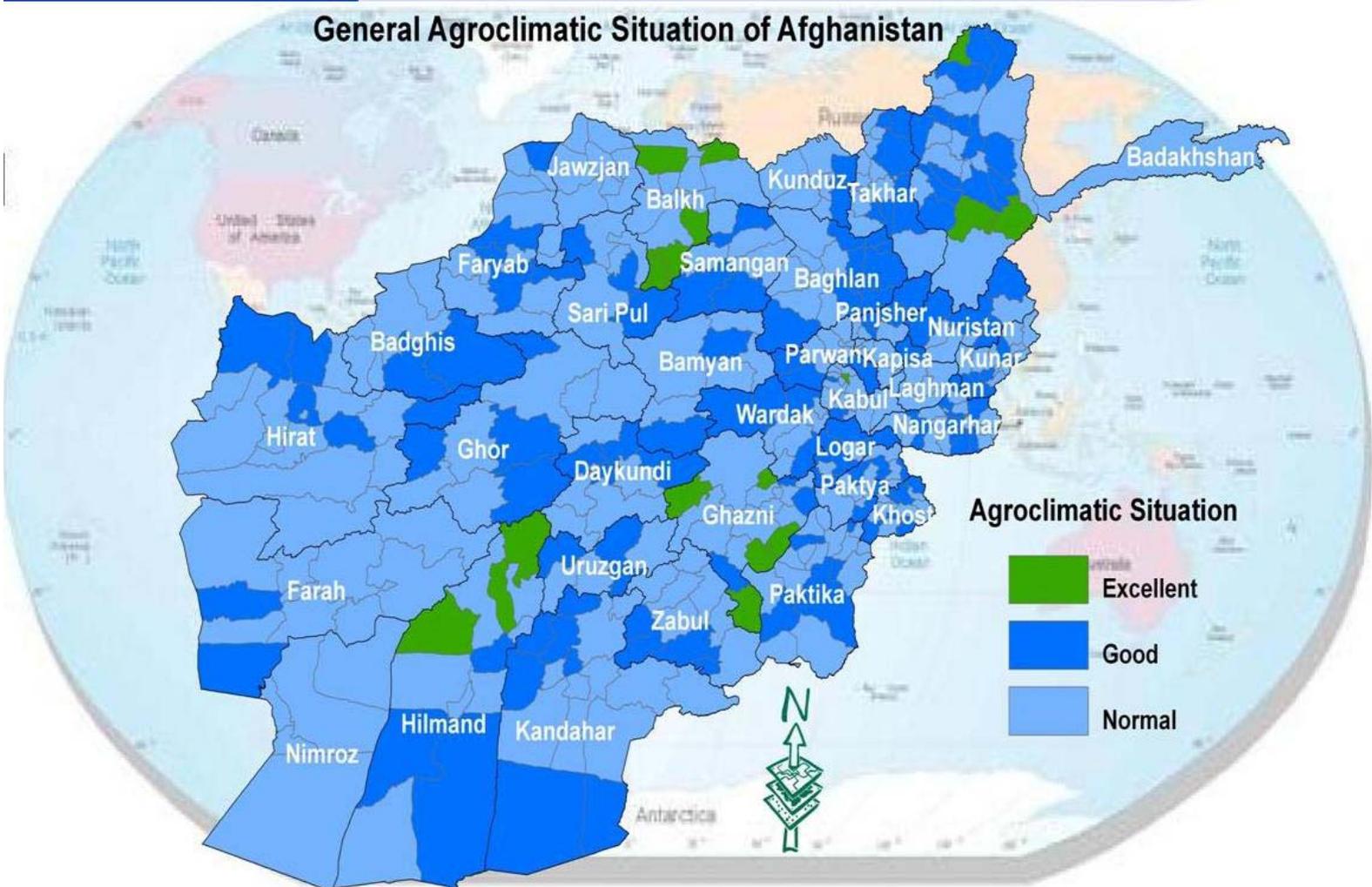
Issue No: 57

January: 2010

The **afghanistan** agrometeorological **AM**onthly Bulletin

Topics Crop Information Precipitation Temperature NDVI

General Agroclimatic Situation of Afghanistan



Snow Extent

12

Crop Stage

2

Crop Condition

2



The Agromet Project of USGS, supported by United State Agency for International Development (USAID), is working together with the Ministry of Agriculture, Irrigation and Livestock (MAIL) and the Afghan Meteorological Authority (AMA) of Ministry of Transport (MoT)

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Data Source

Ministry of Agriculture , Irrigation and Livestock (MAIL), Agromet Project , Afghan Meteorological Authority (AMA), United State of Geological Survey (USGS), Food and Agriculture Organization of United Nation (UNFAO)

Summary

Rainfall for the month of January 2010 was critical low, the country experienced unusually short – term dryness from early December 2009 up to mid of January 2010.

Precipitation had significant decrease during the month of January 2010 over the same month of last year and long term average around the country, which may have negative impact in water resources. The good news, more rainfall is expected in coming months which will cover short - term dryness. Temperature has remained high across the country during the last few months, which is likely, continue in to coming months, temperature had significant increase during the month of January 2010 compared to the same month of last year across the country.

High temperature in to coming months resulting rapid snow melt than expected time, which may case of localized floods. Snow extent had an increase in some parts, but snow depth was critical low than the same month of last year.

In most parts of the country winter wheat as a dominated cereal crop has been in emergence, vegetative and in some parts of the country are in Dormancies stages during January 2020 in all over the country.

In some parts of the spring wheat cultivation is stated but in some parts still the spring wheat cultivation is not started due to some reasons. In most parts of the central highland, eastern region as in Nuristan Province and some parts of the central region like Jabalseraj, South Salang and some other parts in Dormancy.

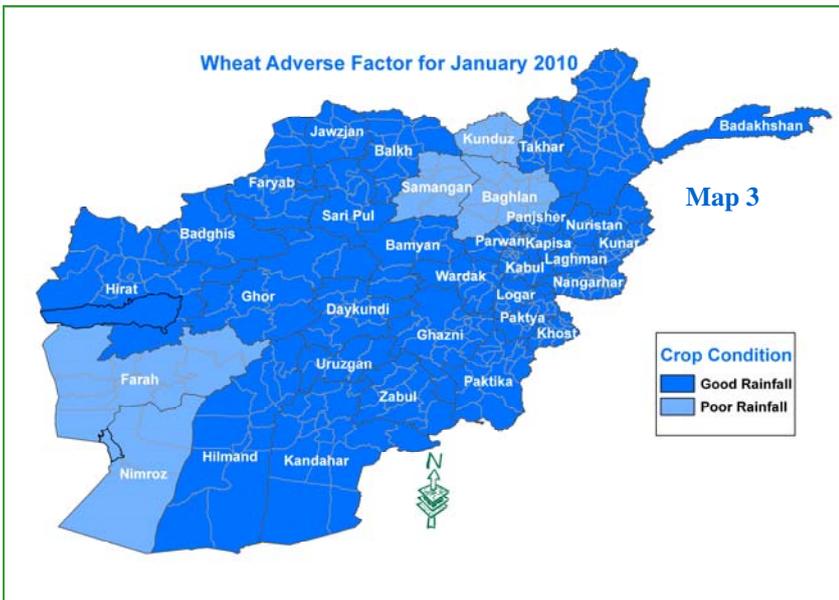
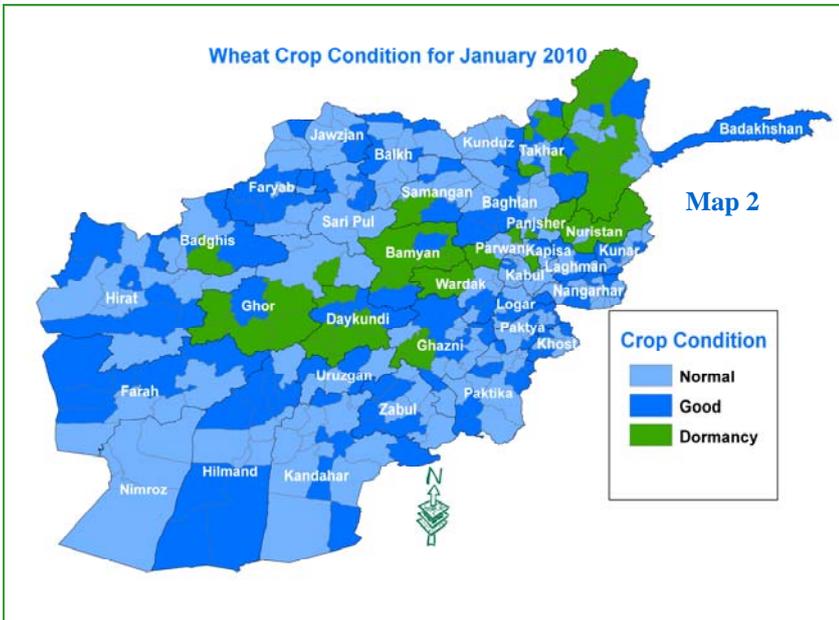
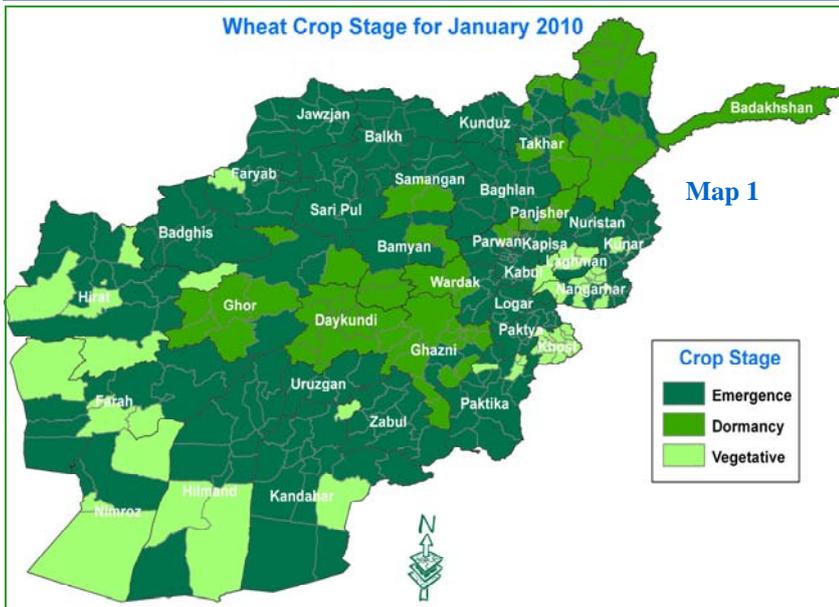
Wheat Crop Stage, Crop Condition and Adverse Factor

Zone	Province	District	Station	Wheat		
				Crop Stage	Crop Condition	Adverse Factor
Central	Kabul	Shakardara	Karizmir	Emergence	Not visible	Not seen
		Paghman	Paghman	Emergence	Not visible	Not seen
		Kabul	Darulaman	Emergence	Not visible	Not seen
		Surubi	Surubi	Vegetative	Normal	Not exist
	Panjsher	Dara	Dara	Emergence	Not visible	Not seen
		Dashtak	Dashtak	Emergence	Not visible	Not seen
	Parwan	Syagerd	Syagerd	Emergence	Not visible	Not seen
		Charikar	Charikar	Emergence	Not visible	Not seen
	Kapisa	Mahmoodraqi	Mahmoodraqi	Emergence	Not visible	Not seen
		Kohistan	Kohistan	Emergence	Not visible	Not seen
	Wardak	Chak	Chak	Emergence	Not visible	Not seen
		Jaghatoos	Jaghatoos	Emergence	Not visible	Not seen
East Central	Bamyan	Bamyan	Bamyan	Emergence	Not visible	Not seen
		Yakawlang	Yakawlang	Emergence	Not visible	Not seen
		Panjab	Panjab	Dormancy		
Noristan	Paroon	Paroon				
Eastern	Nangarhar	Agam	Agam	Vegetative	Normal	Not exist
		Batikot	Ghaziabad	Vegetative	Normal	Not exist
		Jalalabad	Sheshembagh	Vegetative	Normal	Not exist
		Jalalabad	Farm Jadeed	Vegetative	Normal	Not exist
	Kunar	Asmar	Asmar	Emergence	Not visible	Not seen
		Asadabad	Asadabad	Vegetative	Normal	Not exist
	Laghman	Mihtarlam	Mihtarlam	Vegetative	Normal	Not exist

Wheat Crop Stage, Crop Condition and Adverse Factor

Zone	Province	District	Station	Wheat		
				Crop Stage	Crop Condition	Adverse Factor
Northeastern	Takhar	Bangi	Bangi	Emergence	Not visible	Not seen
		Taluqan	Taluqan	Emergence	Not visible	Not seen
	Kunduz	Imam Sahib	Imam Sahib	Emergence	Not visible	Not seen
		Qaliazal	Aqtipa	Emergence	Not visible	Not seen
		Chardara	Chardara	Emergence	Not visible	Not seen
		Kunduz	Kunduz	Emergence	Not visible	Not seen
	Baghlan	Pulikhomri	Pozaishan	Emergence	Not visible	Not seen
	Badakhshan	Faizabad	Faizabad	Emergence	Not visible	Not seen
Baharak		Baharak	Emergence	Not visible	Not seen	
South Eastern	Khost	Khost	Khost	Vegetative	Normal	Not exist
		Khost	Shimal	Vegetative	Normal	Not exist
		Ali Sher	Ali Sher	Vegetative	Normal	Not exist
	Paktai	Zormat	Rohani Baba	Emergence	Not visible	Not seen
		Gardiz	Tera	Emergence	Not visible	Not seen
	Paktika	Urgon	Urgon	Emergence	Not visible	Not seen
		Sharana	Sharana	Emergence	Not visible	Not seen
		Khairkot	Khairkot	Emergence	Not visible	Not seen
Ghazni	Muqur	Muqur	Emergence	Not visible	Not seen	
	Andar	Bande Sardi	Emergence	Not visible	Not seen	
Southern	Nimroz	Zaranj	Zaranj	Vegetative	Normal	Not exist
	Kandahar	Kandahar	Kandahar	Emergence	Not visible	Not seen
	Zabul	Qalat	Qalat	Emergence	Not visible	Not seen
	Urozgan	Tarinkot	Tarinkot	Emergence	Not visible	Not seen
	Hilmand	Nad Ali	Nad Ali	Emergence	Not visible	Not seen
		Greshk	Greshk	Emergence	Not visible	Not seen
		Nawa	Nawa	Emergence	Not visible	Not seen
		Lashkargah	Bolan	Emergence	Not visible	Not seen
Northern	Balkh	Dihdadi	Dihdadi	Emergence	Not visible	Not seen
		Nahrishahi	Nahrishahi	Emergence	Not visible	Not seen
	Jawzjan	Sheberghan	Sheberghan	Emergence	Not visible	Not seen
		Darzab	Darzab	Emergence	Not visible	Not seen
	Saripul	Saripul	Saripul	Emergence	Not visible	Not seen
		Sozmaqala	Sozmaqala	Emergence	Not visible	Not seen
	Faryab	Maimana	Maimana	Emergence	Not visible	Not seen
	Samangan	Aibak	Aibak	Emergence	Not visible	Not seen
Dara Souf Bala		Dara Souf Bala	Emergence	Not visible	Not seen	
Western	Badghis	Qalainow	Qalainow	Emergence	Not visible	Not seen
		Muqur	Muqur	Emergence	Not visible	Not seen
	Ghor	Chaghcharan	Chaghcharan	Emergence	Not visible	Not seen
	Hirat	Shindand	Shindand	Vegetative	Normal	Not exist
		Zindajan	Zindajan	Vegetative	Normal	Not exist
		Gwazara	Falahat	Vegetative	Normal	Not exist
		Hirat	Farm Urdokhan	Vegetative	Normal	Not exist
	Farah	Farah	Farah	Vegetative	Normal	Not exist

Wheat Crop Stage, Crop Condition and Adverse Factor, Maps



Data Source: Agromet Network

Badakhshan

Climate in this province:

Badakhshan has wet climate with dry and moderate summer. Annual average rainfall is 41.1 mm, mostly coming during the winter and spring months, while the lowest amount of rainfall occurs in summer months, maximum monthly average temperature is 26.9 in July and minimum monthly average temperature -0.6 in January. December up to May is humid months, and maximum monthly average sunshine duration 3274 hour in the month of July.

Information on Geographical and Agricultural situation of this province:

The total area of Badakhshan Province is 4.72 million square kilometer with a total population of 1.300 million persons. This Province has 28 District, 66,000 Hectare of this province irrigated but, 1,96,000 Hectare is rain fed. 60,000 Hectare of this province is for forest, 128,000 Hectare is pasture and grazing area, 5000 Hectare is orchard. Badakhshan Province has big natural resources such as pistachios forestry, medicine plants and water.

With these natural resources and suitable climate this Province is well suited for Agricultural, Horticultural and Livestock.

Before 2001, an experimental farm with 28.8 Hectare was in Faizabad center of Badakhshan Province which had experimental and research activities in different trials like Wheat, Maize and barley.

Also, fruit and non fruit saplings was produced and distributed in this farm. Unfortunately, in 2002 and 2003 changed to a resident area. Starting March 2006 Agricultural research department started activities in two individual farms. In 2009 Ganj Abad farm with 6 Hectare land. Badakhshan Province is having following agricultural researches farms:

- 1- Bahark Zakhira farm with 4 Hectare and with good water for irrigation
- 2- Fruit trees nursery with 1 Hectare land.
- 3- Ganj Abad farm with 6 Hectares land.

Total irrigated areas of agricultural research farms are 10.8 Hectares land.



Precipitation

Rainfall for the month of January 2010 was significantly lower compared with the same month in 2009 all over the country.

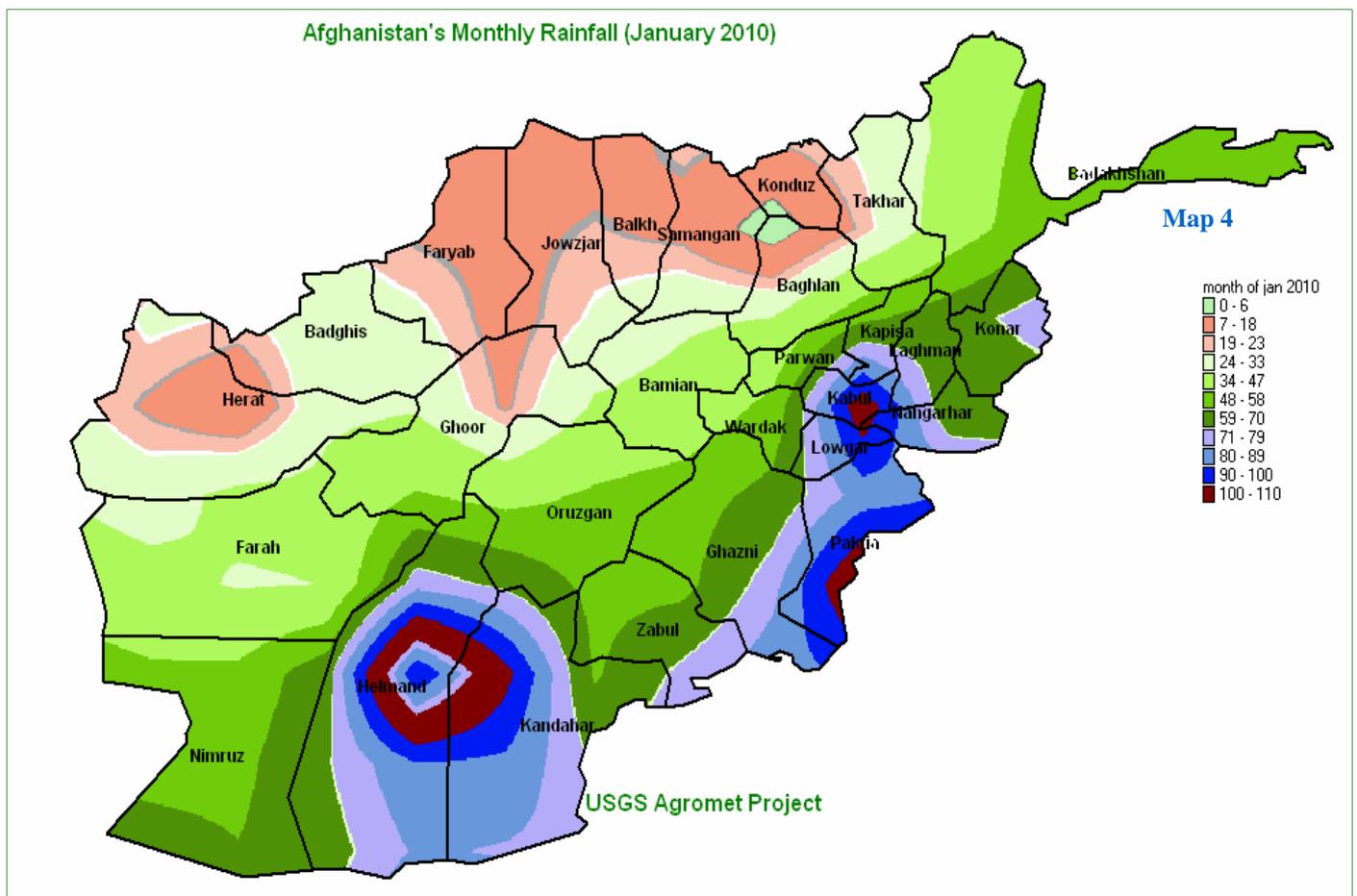
The country experienced abnormally short-term drought from early December up to early January; however at the end of January a low pressure system with adequate moisture tracked in to the country and brought precipitation to most parts of the country. The Northeast higher elevations, Central Highlands and the capital region experienced snow fall, leading snow pack increases in the above mentioned areas, and the lowlands receiving most likely rain.

Comparison of rainfall data for the month of January 2010 with the same month in 2009 (chart 1) shows significant decrease of rainfall during the month of January 2010 over the same month of last year around the country.

Comparison of rainfall data for the month of January 2010 with the same month of long term average (chart 2) shows significant decreases of rainfall during the month of January 2010 compared to the same month of long term average in most parts of the country, except Gaziabad, Kost, Lashkargha, Paghman and Urgan where the rainfall had an increase during the month of January 2010 over the same month of long term average.

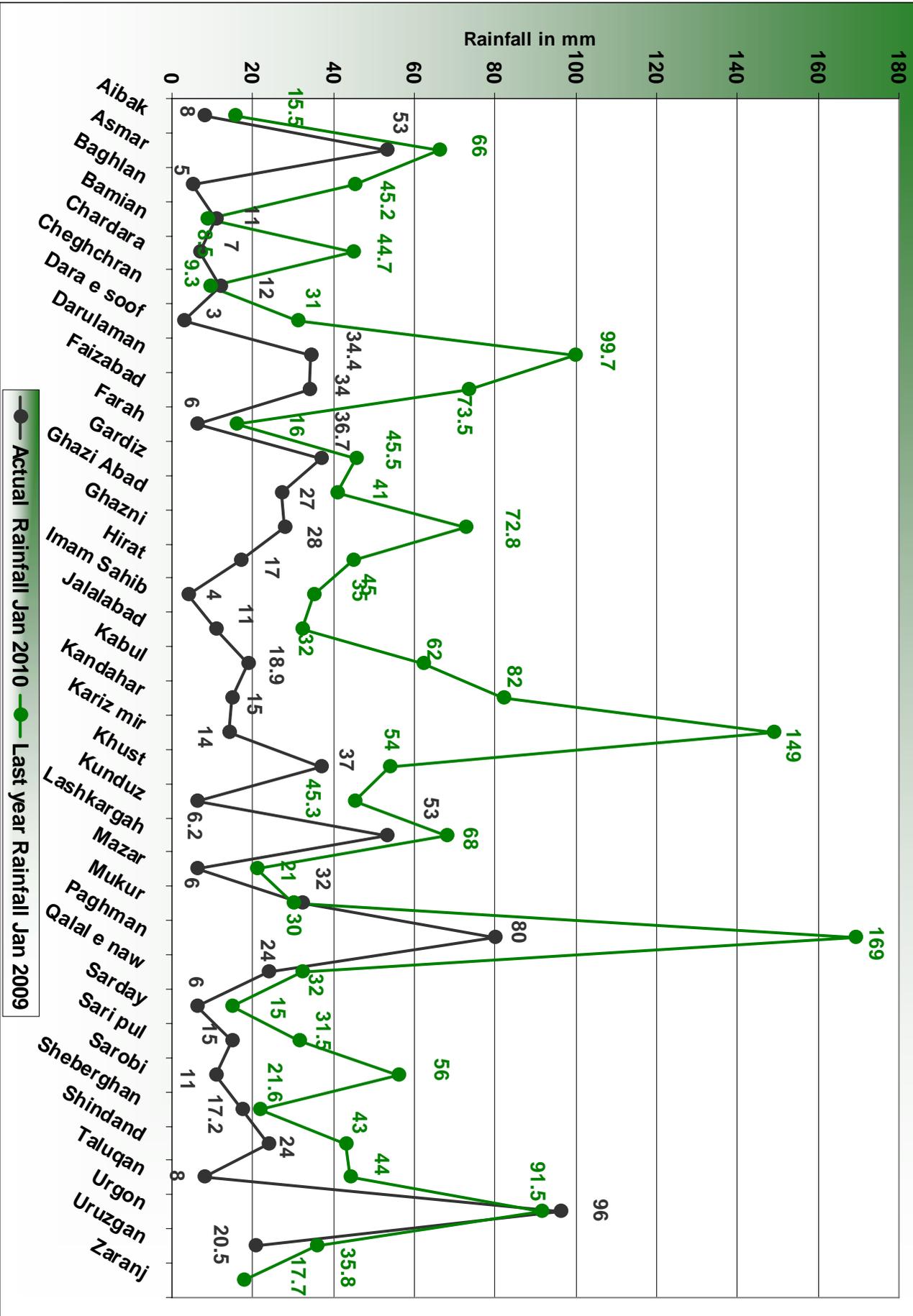
Distribution of rainfall for the month of January 2010 as usual was variable in different regions of the country.

As map (4) shows most amount of rainfall occurred in the southern region during January, while the Southeastern and some parts of the eastern region experienced less amount of rainfall. The remaining regions of the country received moderate rainfall.



Rainfall Graphs for the Month of January 2010

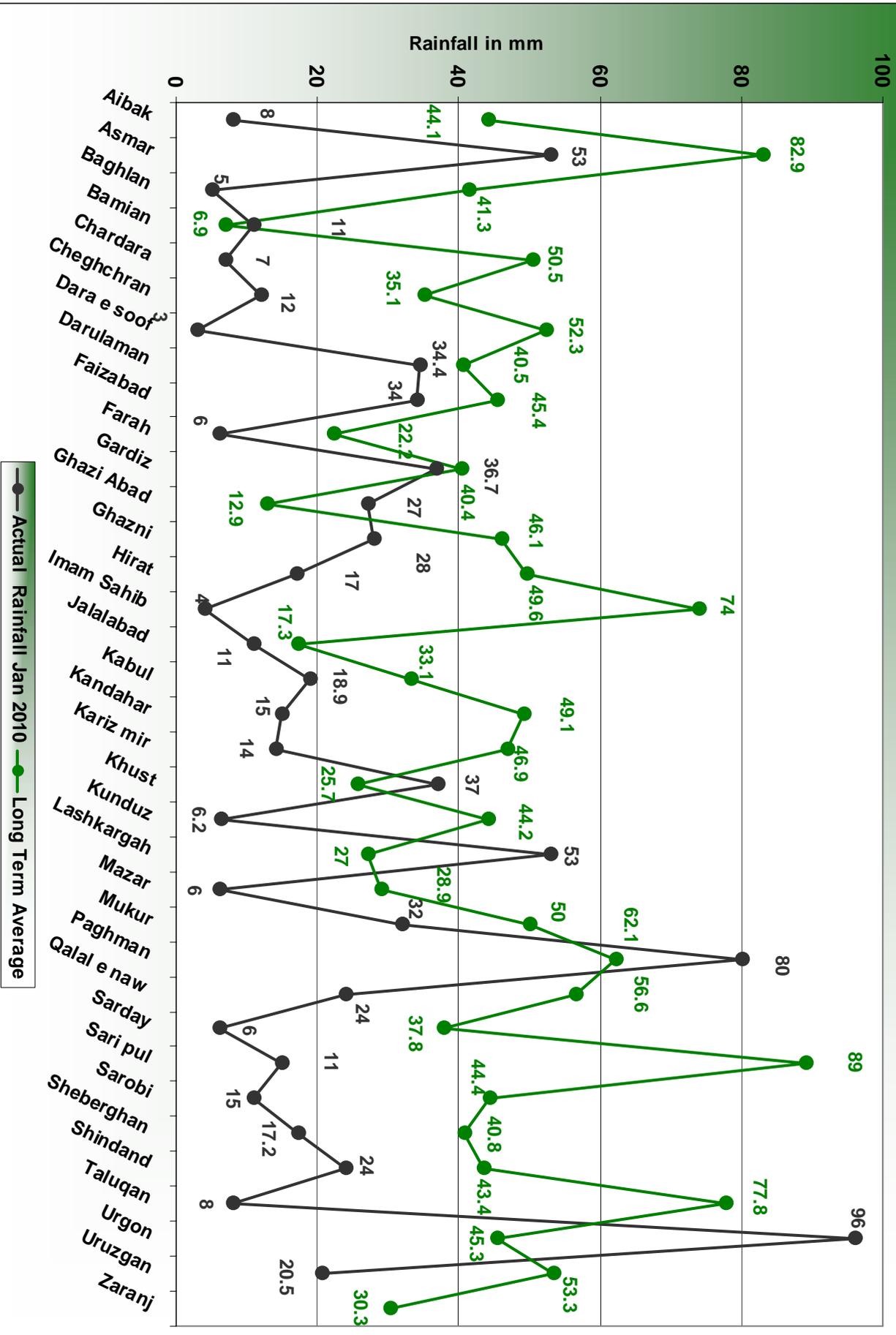
Comparison of Actual Rainfall (Jan 2010) with the same month in 2009



Char 1

Rainfall Graphs for the Month of January 2010

Comparison of Actual Rainfall (January 2010) to the same month of the Long Term Average



Char 2

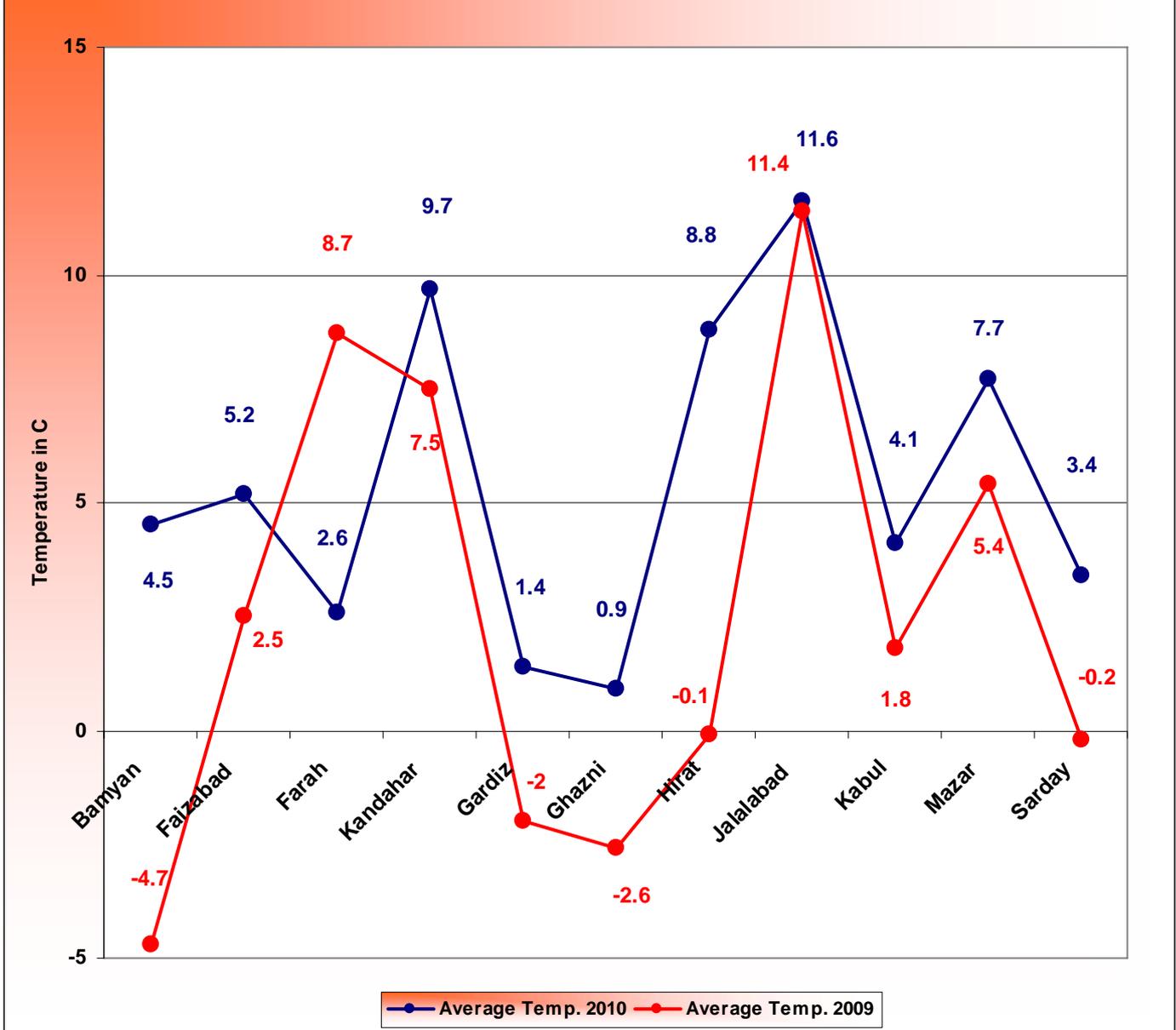
Rainfall for the Month of January 2010

Table 1

Name	Actual Rainfall January 2010	Last year Rainfall January 2009	Long Term Average
Aibak	8	15.5	44.1
Asmar	53	66	82.9
Baghlan	5	45.2	41.3
Bamian	11	8.5	6.9
Chardara	7	44.7	50.5
Cheghchran	12	9.3	35.1
Dara e soof	3	31	52.3
Darulaman	34.4	99.7	40.5
Faizabad	34	73.5	45.4
Farah	6	16	22.2
Gardiz	36.7	45.5	40.4
Ghazi Abad	27	41	12.9
Ghazni	28	72.8	46.1
Hirat	17	45	49.6
Imam Sahib	4	35	74
Jalalabad	11	32	17.3
Kabul	18.9	62	33.1
Kandahar	15	82	49.1
Kariz mir	14	149	46.9
Khust	37	54	25.7
Kunduz	6.2	45.3	44.2
Lashkargah	53	68	27
Mazar	6	21	28.9
Mukur	32	30	50
Paghman	80	169	62.1
Qalal e naw	24	32	56.6
Sarday	6	15	37.8
Sari pul	15	31.5	89
Sarobi	11	56	44.4
Sheberghan	17.2	21.6	40.8
Shindand	24	43	43.4
Taluqan	8	44	77.8
Urgon	96	91.5	45.3
Uruzgan	20.5	35.8	53.3
Zaranj	7	17.7	30.3

Data Source: Agromet Network

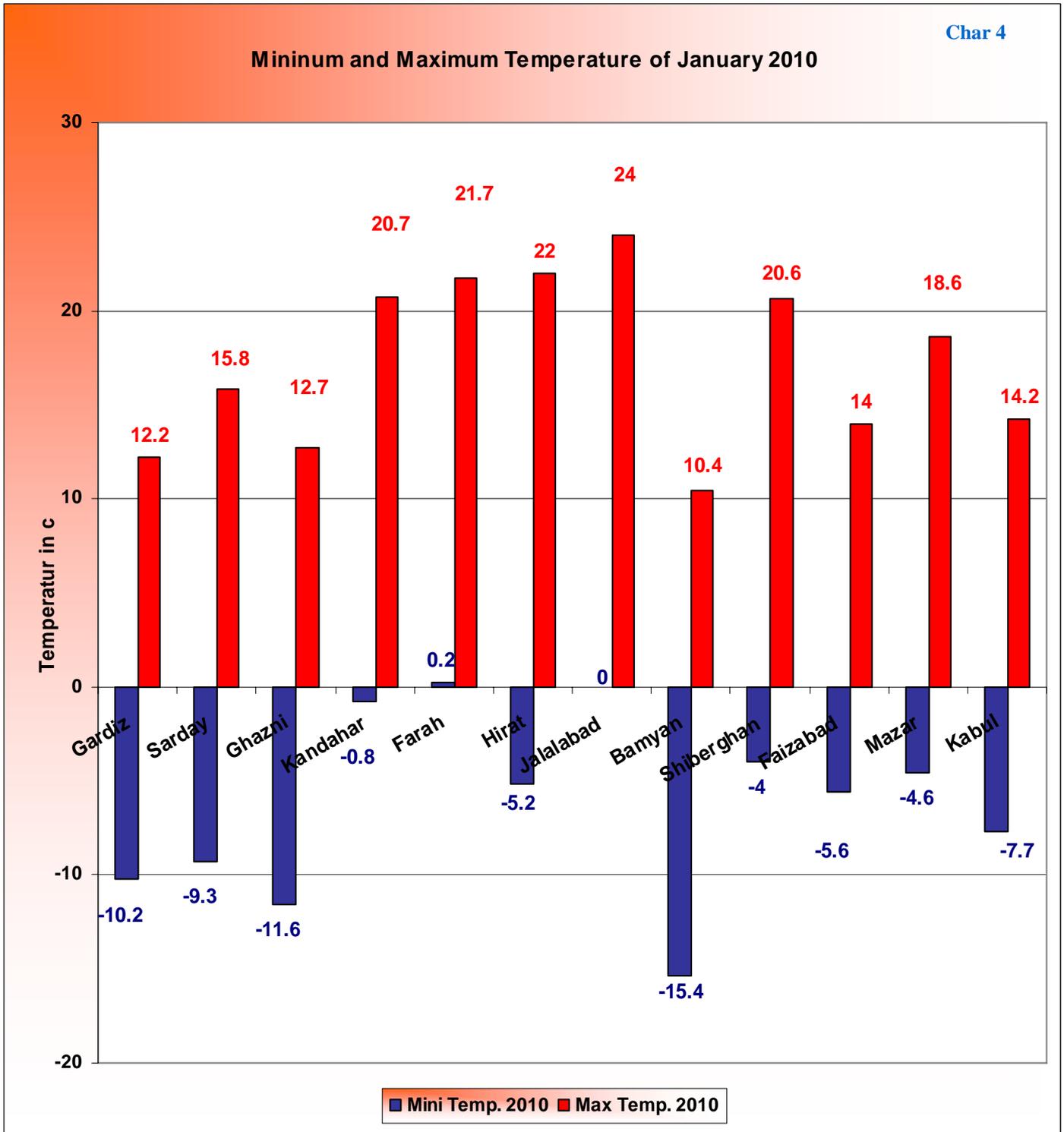
Average Temperature (January 2010) Compared with the Same Month of 2009



During the month of January 2010 temperature was higher compared to the same month of last year all around the country.

Temperature for the month of January 2010 unusually high compared with the same month in 2009 around the country. Temperature has remained high across the country during the last few months, which is likely, to continue in coming months. Temperature dropped below $-20\text{ }^{\circ}\text{C}$ in the Northeastern high elevations while the minimum temperature has been recorded $-15.4\text{ }^{\circ}\text{C}$ in Central Highlands.

Comparison of monthly average of temperature for the month of January 2010 with the same month in 2009 (chart3) shows significant increase of temperature during the month of January 2010 compared to the same month of last year across the country. Temperature departure dramatically was 8 to $9\text{ }^{\circ}\text{C}$ in most stations.

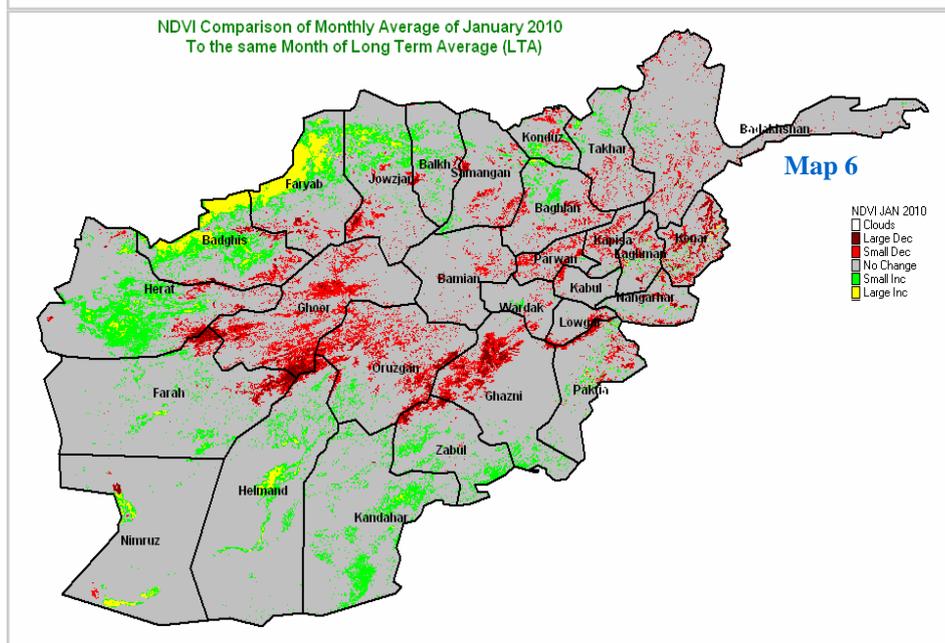
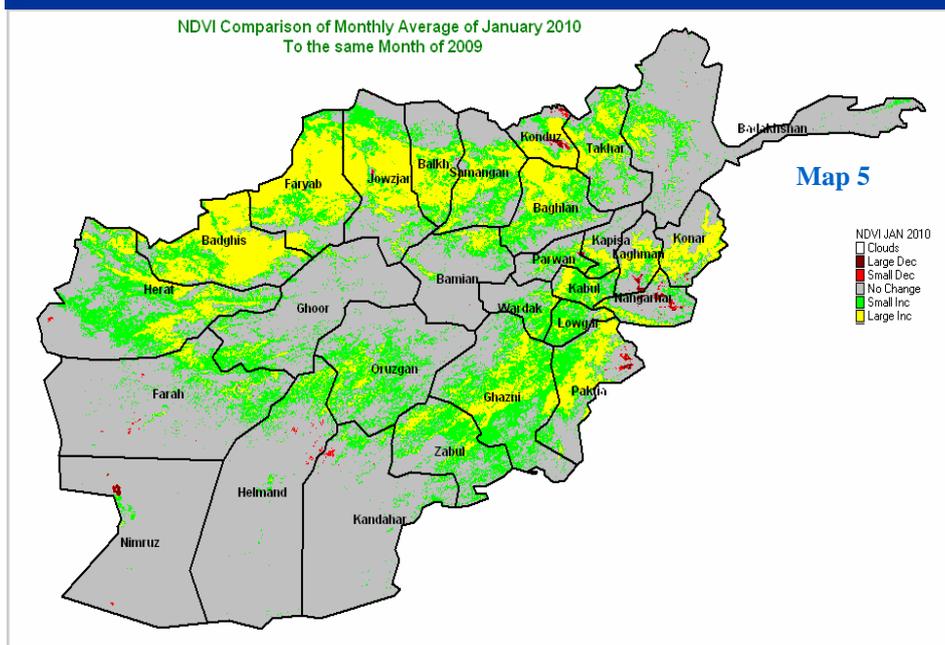


Bamyān with -15.4 C° experienced extreme cold weather during the month of January 2010

Chart (4) shows maximum and minimum temperatures for the month of January 2010 around the country, which Bamyān with - 15.4 C°

experienced extreme cold weather during January while Jalalabad with 24 C° was the warmest spot of the country .

Comparison of NDVI January 2010



Comparison of monthly average of NDVI for the month of January 2010 with the same month in 2009 (Map 5) shows large increase of NDVI in the Northern flat areas, Northwestern, some parts in the Northeastern region and some parts in the western region during the month of January 2010 compared to the same month of last year, and mostly small increase occurred in NDVI in Southeastern region, Capital region and limited area in the Central Highlands during January 2010 compared to January 2009.

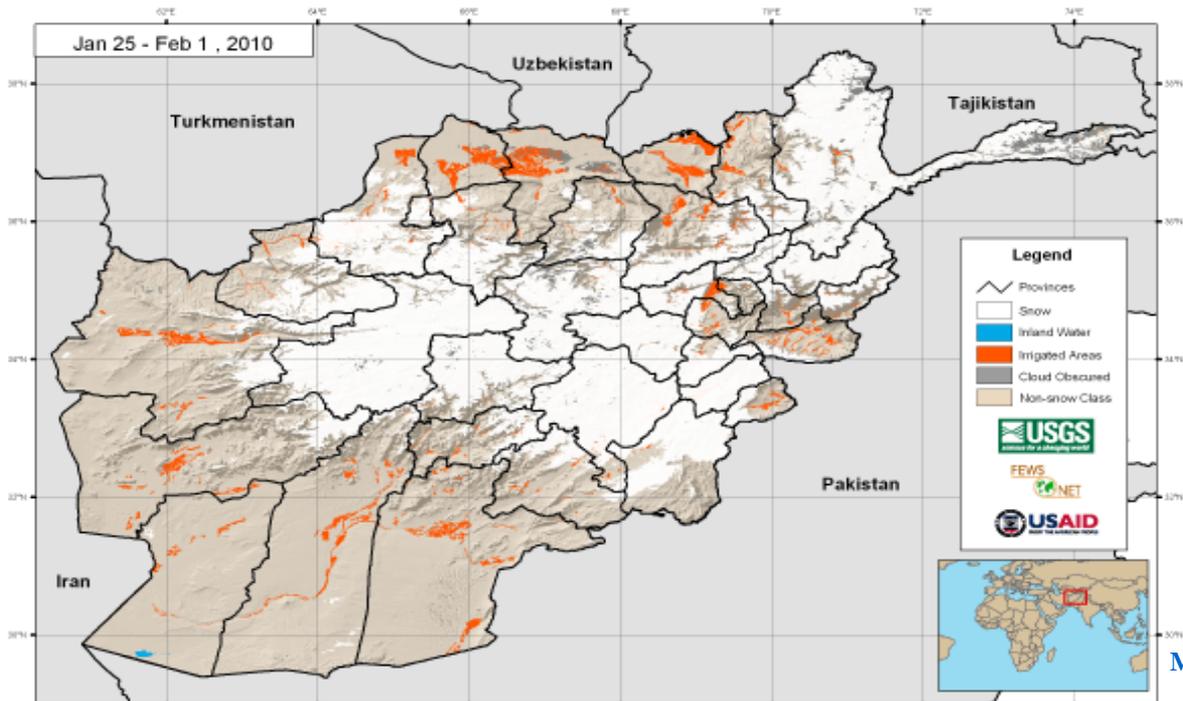
There is no change of NDVI in the remaining regions of the country during the month of January 2010 over the same month of last year.

Comparison of monthly average of NDVI for the month of January 2010 with the same month of long term average (Map 6) shows small decrease as separated in limited areas in Western parts of the central Highlands, Northeastern region, Capital and Southeastern region during the month of January 2010 compared to the same month of long term average. Small increase occurred in NDVI in some parts in the Western region during January 2010 over the same month of long term average too.

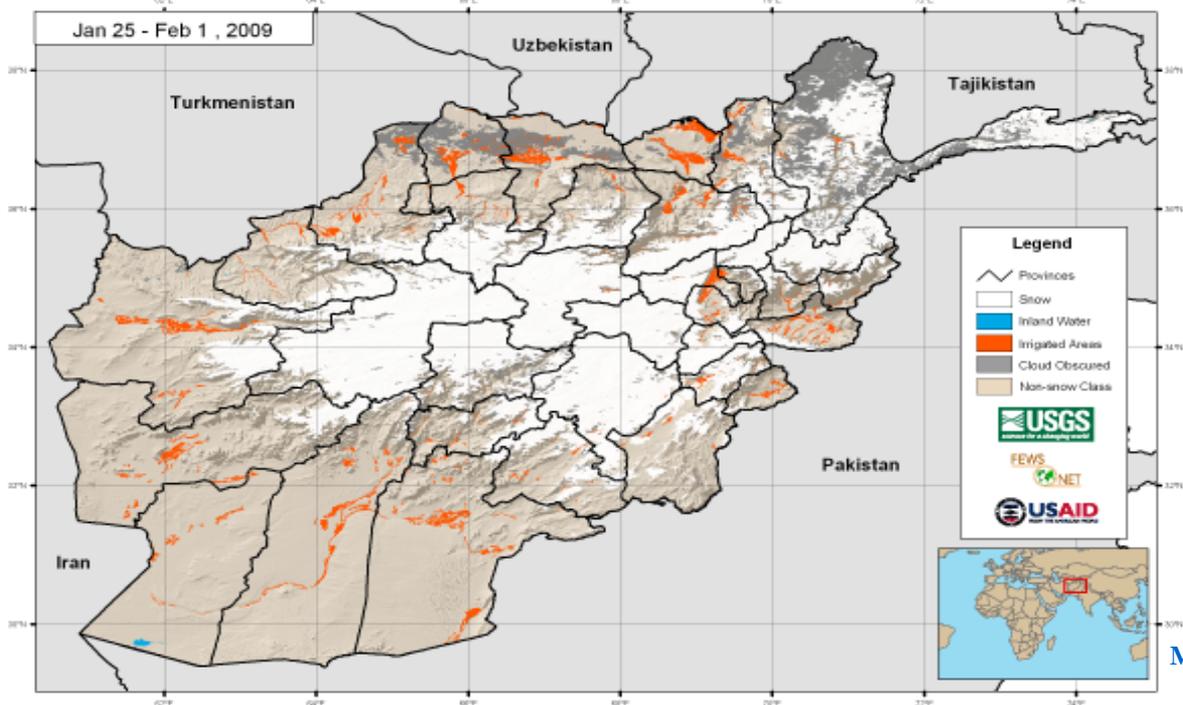
There is no change of NDVI in the remaining regions of the country during the month of January 2010 compared to the same month of long term

Comparison of Snow Extent

MODIS 8-day Snow Cover Extent - Current Period 2010 vs 2009



Map 7

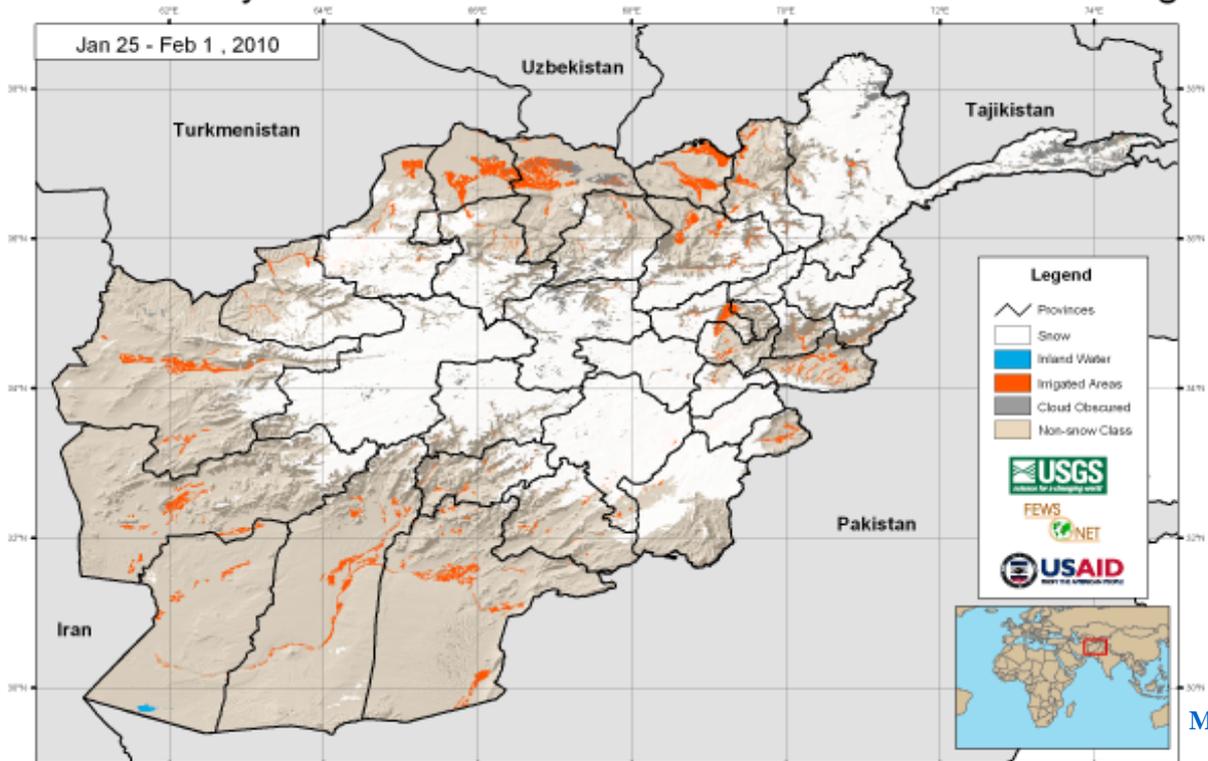


Map 8

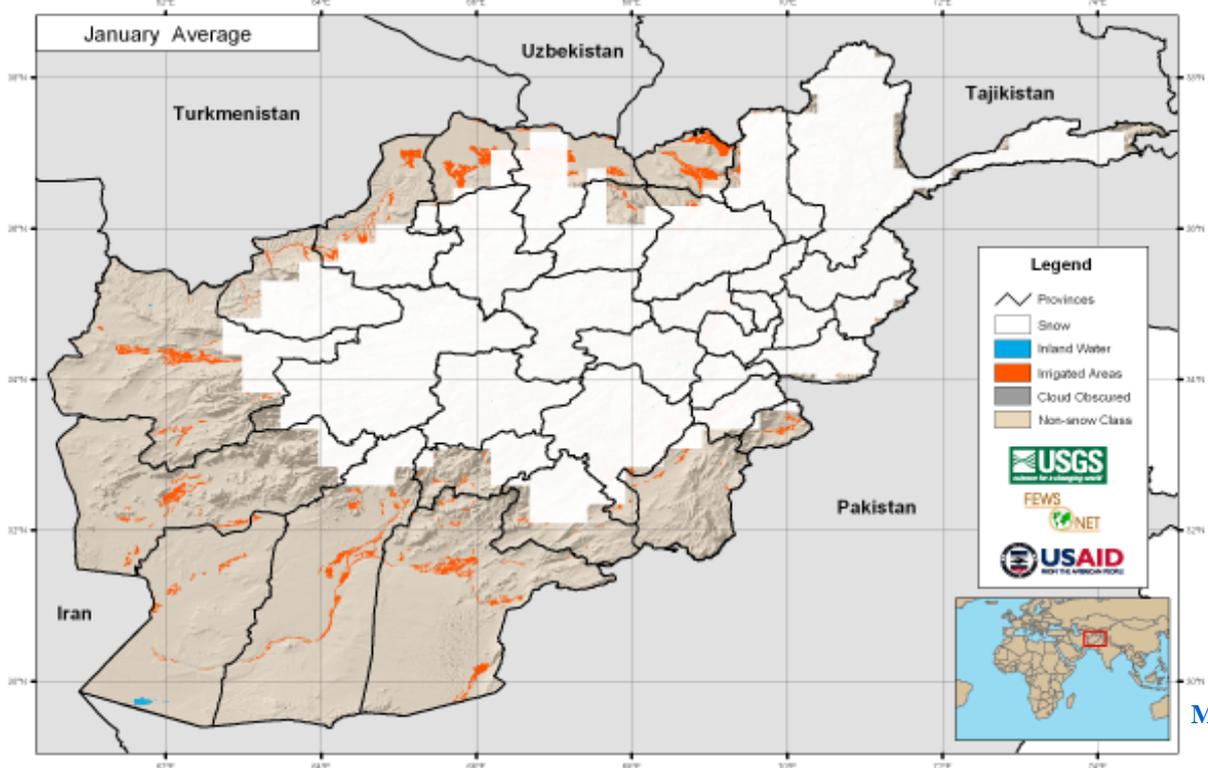
During December 2009 and mid of January mostly dry weather has dominated the country, and few low pressures systems moved across the country, but the low pressure system had very little moisture, resulting no increase in snow depth up to mid of January, but a low pressure system with adequate moisture in early January tracked in to the country in resulting snow pack increase in the

Central Highlands and the Northeastern high elevations. Comparison of snow extent for the period (Jan 25 – Feb 1) 2010 with the same period in 2009 (Map 7 - 8) shows an increase of snow extent in limited area in the Northeastern and Northwestern regions during above mentioned period of January 2010 compared to the same period of last year in snow coverage area.

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



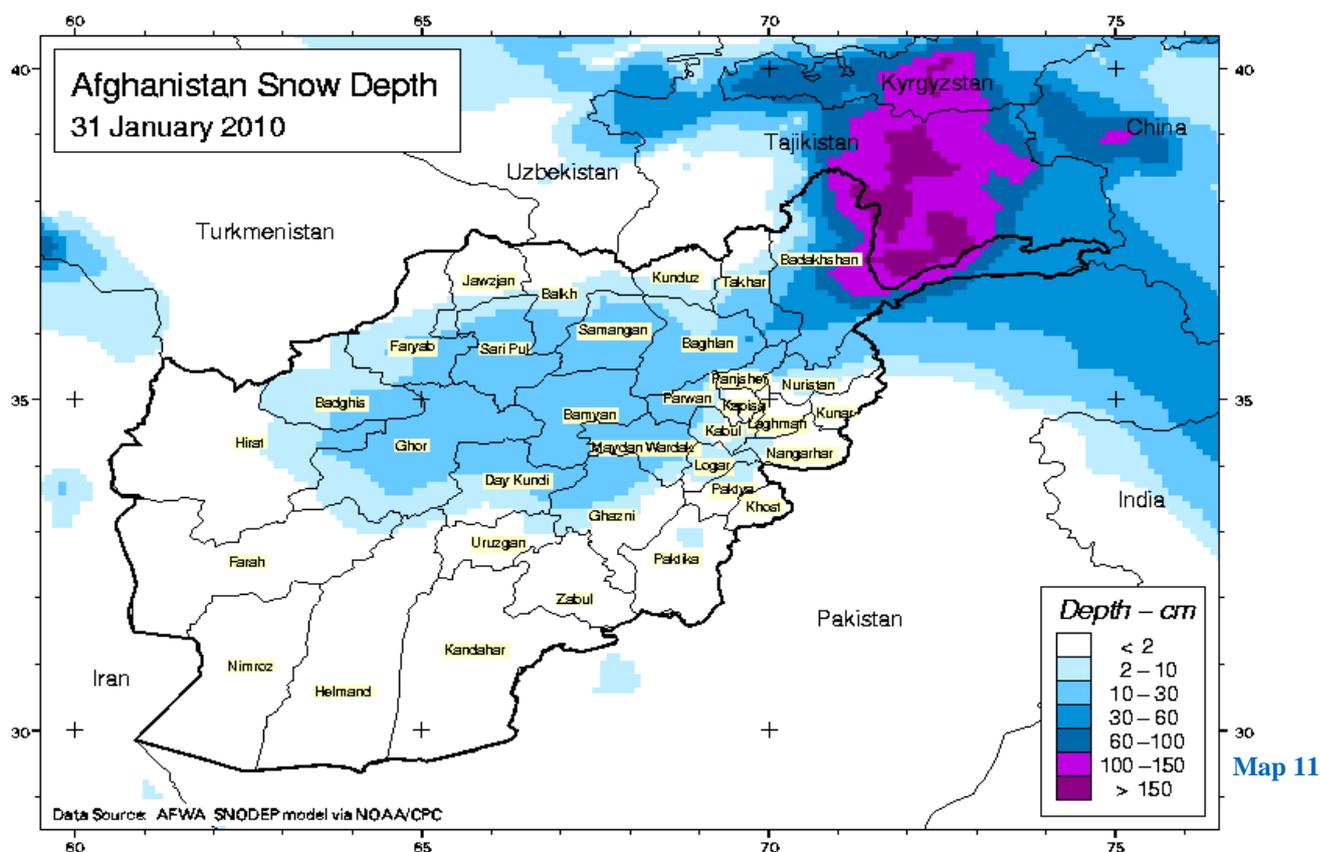
Map 9



Map 10

Comparison of snow extent for the month of January 2010 with the same month of long term average (Map 9 - 10) shows a decrease of snow extent in the Northeastern region, Northwestern, Southeastern and Central Highlands during the month of January 2010 compared to the same month of long term average.

Afghanistan Snow Depth for the of January 2010



Map (11) shows snow depth for the end of January 2010 in snow coverage area, the snow depth has been recorded 100 to 150 cm for the extreme portion of the Northeastern region and 10 – 30 cm for the Capital region, Central Highlands and neighboring areas.

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