



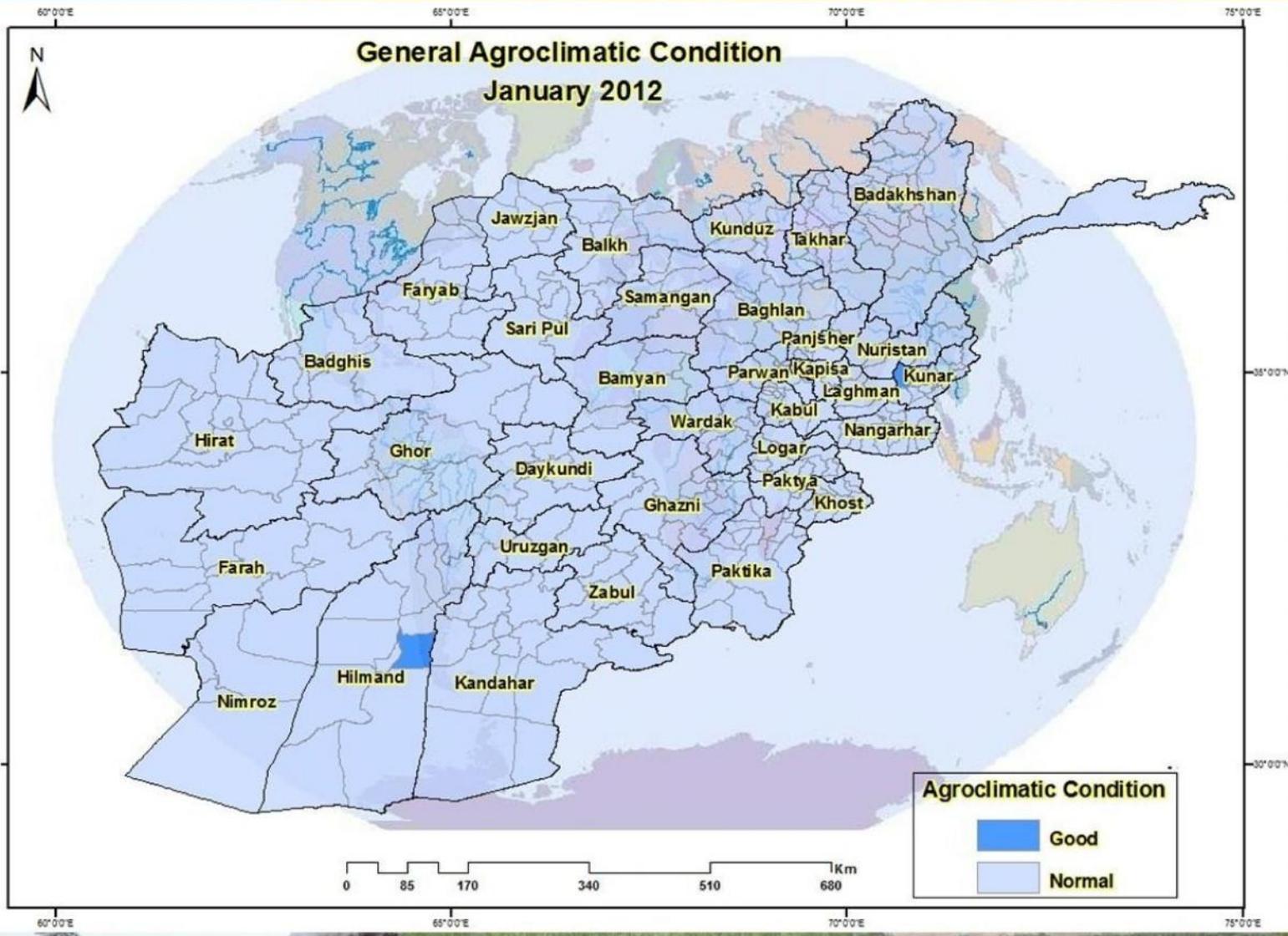
Agrometeorological Project

Issue No: 83

January: 2012

The Afghanistan Agrometeorological Monthly Bulletin

Topics Crop Information Precipitation Temperature NDVI



Snowfall

Crop Condition

2 Crop Stage 3



The Agromet Project of USGS, is working together with the Ministry of Agriculture, Irrigation and Livestock (MAIL) and the Afghan Meteorological Authority (AMA) of Ministry of Transport (MoT)

BULLETIN CONTENTS

Issue No: 83
January 2012

The Afghanistan's Agromet Monthly Bulletin is being Published on monthly Bases in Dari and English Languages.

Crop Information

Crop Stage, Crop Condition and Adverse Factor.....1-3

Crop Maps.....4

NDVI.....5

Rainfall Situation

Rainfall Situation.....6

Rainfall Graph7

Rainfall Data.....8

Rainy Days.....9

Snowfall Situation

Comparison of Snow Extent10-11

Snow Depth - January 2012.....12

Temperature

Average Temperature.....13

Maximum and Minimum Temperature.....14

Data Source:

Ministry of Agriculture , Irrigation and Livestock (MAIL), Agromet Project , Afghan Meteorological Authority (AMA), United States Geological Survey (USGS).

Summary

There is a very close relation between plants and climate, in fact the normal growth and normal life of the plants are connected to the meteorological parameters. In order to have a proper environment of our plant it is needed to have a full study of the environmental and meteorological situation of the plants in each respective area.

The weather of an area is much dependent to the elevation and other geographical situation of that area. We can say that the higher elevations are having much rainfall than the lower elevation, the accuracy of enough rainfall and snowfall from almost the beginning of the winter season occurrence is a good sign of having a good agricultural season which is a good news for all Afghans specially for our formers who are waiting

for having enough water for irrigating their agriculture fields for years.

A good agricultural season will lead our formers toward a good production. With the entire good precipitation in the country, still we had poor rainfall in some districts of the country for example Shimal and Khost districts of Khost province.

In these areas where we had poor rainfall, for a better germination of the planted seeds, the formers need to apply some irrigation to their wheat fields at the beginning of the season.

Mostly during the month of January 2012 the crops were in dormancy we have not received any report on adverse factor, so the plants were in normal condition.

Crop Stage, Crop Condition and Adverse Factor

Zone	Province	District	Station	Winter Wheat		
				Crop Stage	Crop Condition	Adverse Factor
Central	Kabul	Shakardara	Karizmir	Dormancy		
		Paghman	Paghman			
		Kabul	Darulaman			
		Surubi	Surubi			
	Panjsher	Dara	Dara	Emergence	Normal	Not Existed
		Dashtak	Dashtak	Emergence	Poor	Poor rainfall
		Dashtak	Dashtak	Emergence	Normal	Not Existed
	Parwan	Syagerd	Gorband	Emergence	Normal	Frost
		Charikar	Charikar	Dormancy		
	Kapisa	Mahmoodraqi	Mahmoodraqi			
		Kohistan	Kohistan			
		Syagerd	Syagerd			
	Wardak	Chak	Chak			
		Jaghatoo	Jaghatoo			
	Bamyan	Bamyan	Bamyan	Emergence	Normal	Not Existed
		Yakawlang	Yakawlang	Planting		
		Panjab	Panjab	Dormancy		
		Shebar	Shebar	Emergence	Normal	Not Existed
		Kohmard	Kohmard	Dormancy		
	Ghazni	Muqur	Muqur	Dormancy		
Andar		Bande Sardi				
Dikondy	Dasht	Dasht	Emergence	Normal	Not Existed	
	Khideer	Khideer	Emergence	Normal	Not Existed	

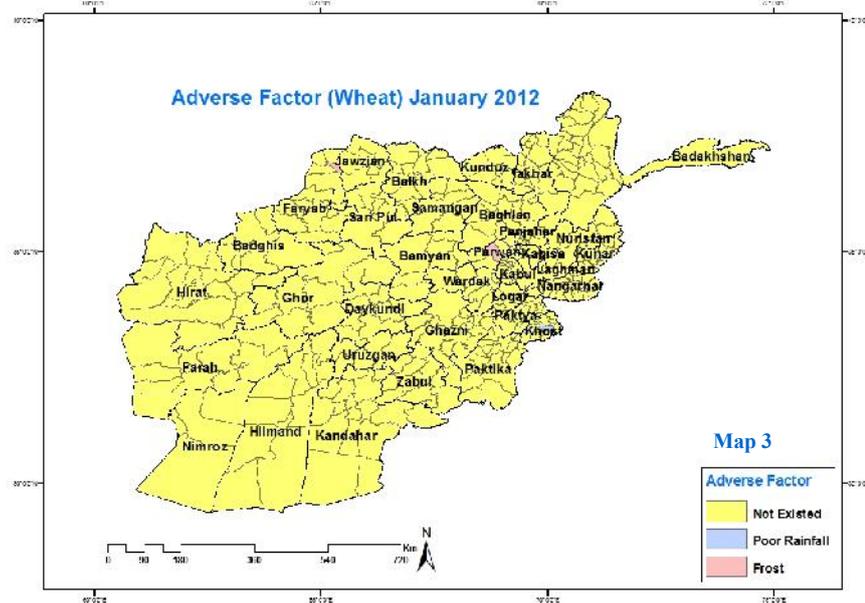
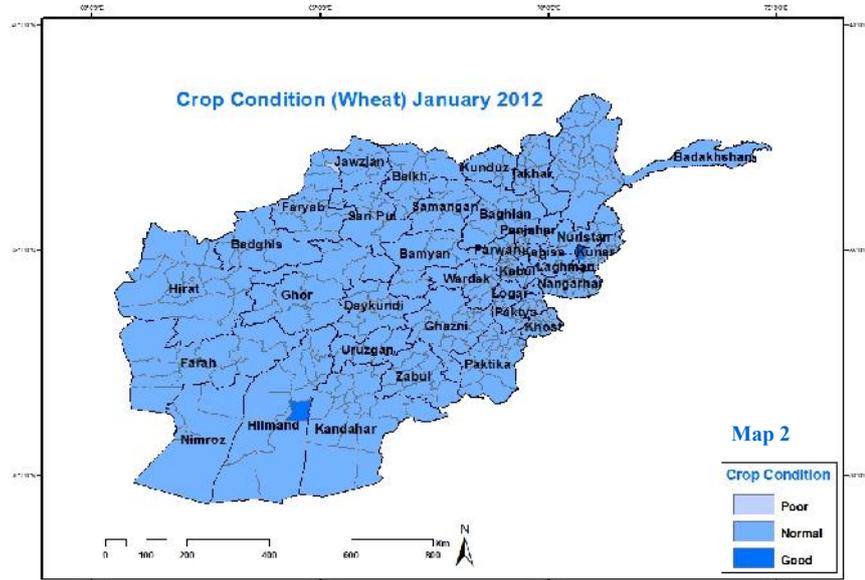
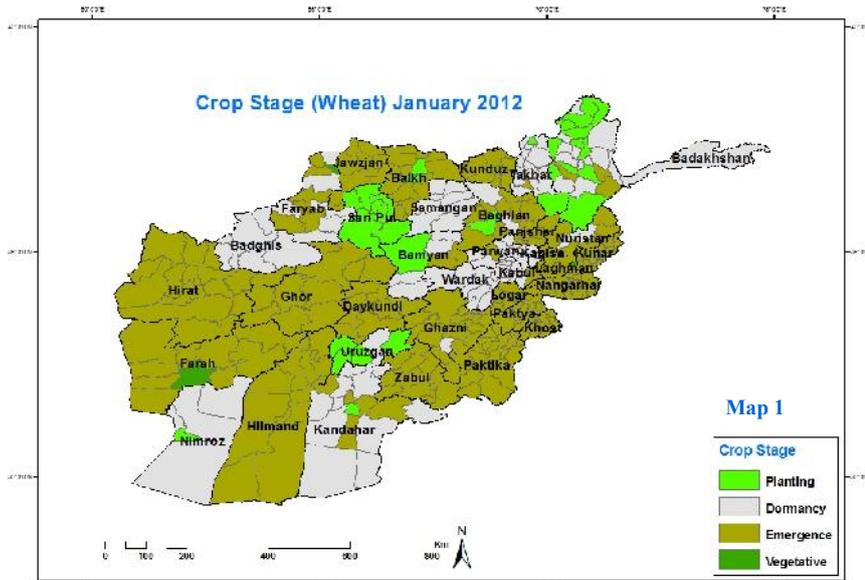
Crop Stage, Crop Condition and Adverse Factor

Zone	Province	District	Station	Winter Wheat		
				Crop Stage	Crop Condition	Adverse Factor
East	Nangarhar	Agam	Agam	Emergence	Normal	Not Existed
		Batikot	Ghaziabad	Emergence	Normal	Not Existed
		Jalalabad	Farm jaded	Vegetative	Normal	Not Existed
		Behsood	Behsood	Emergence	Normal	Not Existed
	Kunar	Asmar	Asmar	Emergence	Good	Not Existed
		Asad Abad	Asad Abad	Emergence	Normal	Not Existed
		Chawkay	Chawkay	Emergence	Normal	Not Existed
	Laghman	Mihtarlam	Mihtarlam	Emergence	Normal	Not Existed
		Qarghay	Qarghay	Emergence	Normal	Not Existed
		Alengar	Alengar	Emergence	Normal	Not Existed
	Noristan	Paroon	Paroon	Dormancy		
		Do Ab	Do Ab	Dormancy		
		Norgaram	Norgaram	Emergence	Normal	Not Existed
		Waigal	Waigal	Emergence	Normal	Not Existed
		Wama	Wama	Emergence	Poor	Poor rainfall
North East	Takhar	Bangi	Bangi	Dormancy		
		Taluqan	Taluqan			
		Rostaq	Rostaq			
	Kunduz	Imam Sahib	Imam Sahib	Emergence	Normal	Not Existed
		Qaliazal	Aqtipa	Emergence	Normal	Not Existed
		Khan Abad	Khan Abad	Emergence	Normal	Not Existed
		Kunduz	Kunduz	Emergence	Normal	Not Existed
		Archi	Archi	Emergence	Normal	Not Existed
		Chardara	Chardara	Emergence	Normal	Not Existed
		Ali Abad	Ali Abad	Emergence	Normal	Not Existed
	Baghlan	Pulikhomri	Pozaishan	Emergence	Normal	Not Existed
		Doshy	Doshy	Planting		
	Badakhshan	Argo	Argo	Dormancy		
		Baharak	Baharak			
		Ashkashm	Ashkashm			
Khash		Khash				
Faiz Abad		Faiz Abad				
South East	Khost	Khost	Khost	Emergence	Normal	Poor rainfall
		Khost	Shimal	Emergence	Normal	Poor rainfall
		Ali Sher	Ali Sher	Emergence	Normal	Not Existed
	Paktia	Zormat	Rohani Baba	Emergence	Normal	Not Existed
		Gardiz	Tera	Emergence	Normal	Not Existed
	Paktika	Urgon	Urgon	Emergence	Normal	Not Existed
		Sharana	Sharana	Emergence	Normal	Not Existed
		Khair kot	Khair Kot	Emergence	Normal	Not Existed

Crop Stage, Crop Condition and Adverse Factor

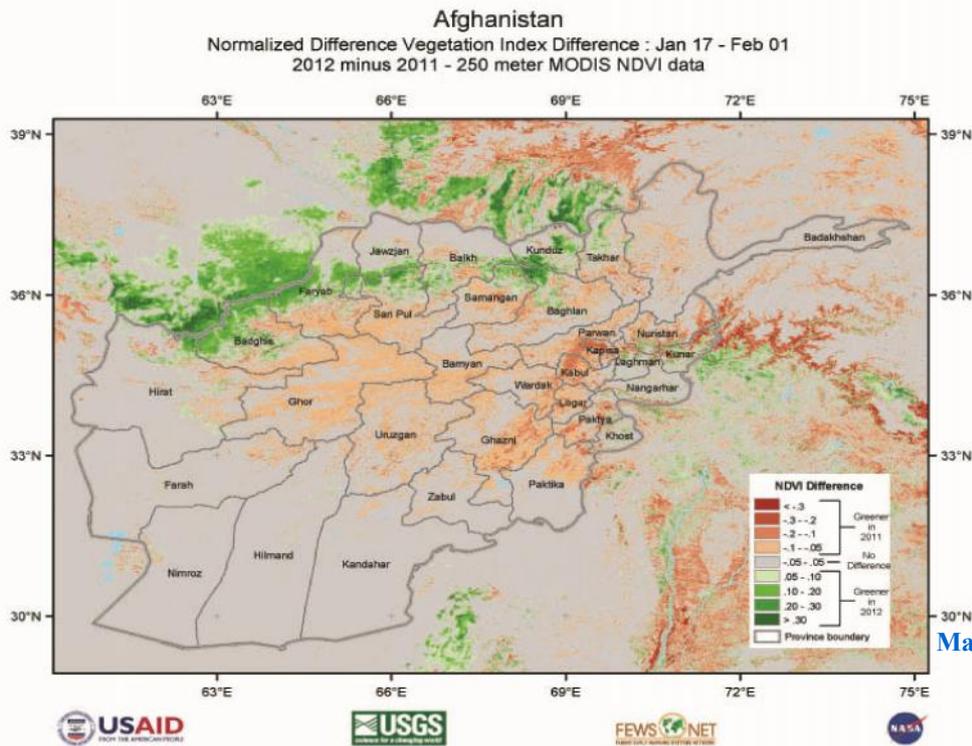
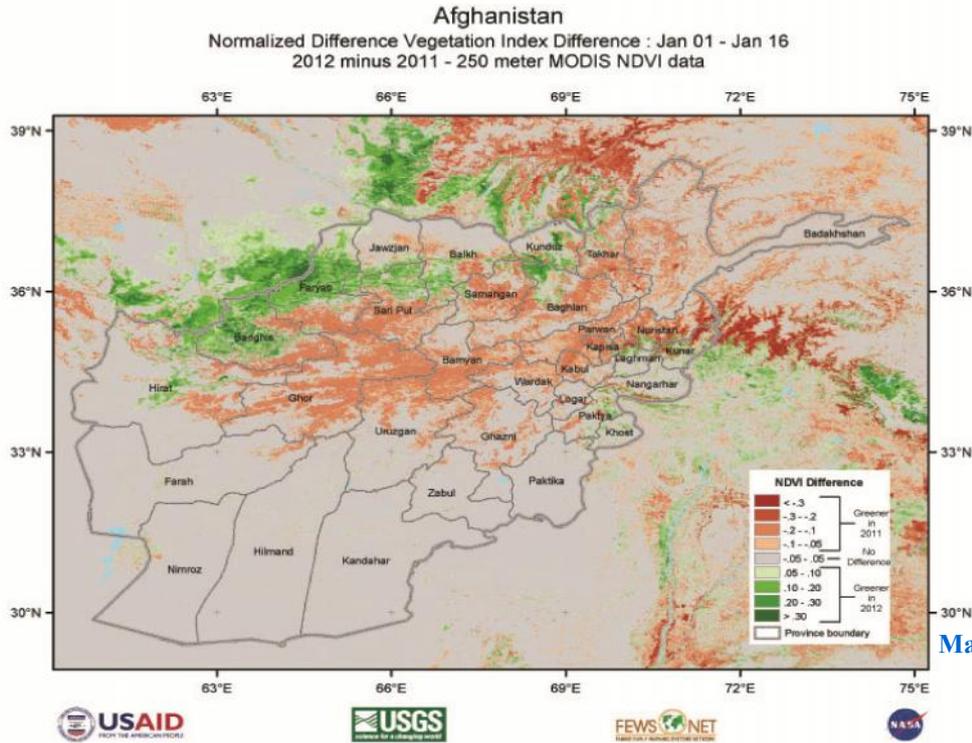
Zone	Province	District	Station	Winter Wheat		
				Crop Stage	Crop Condition	Adverse Factor
South	Nimroz	Zaranj	Zaranj	Planting		
	Kandahar	Kandahar	Kandahar			
		Kohkaran	Kohkaran	Emergence	Normal	Not Existed
	Zabul	Qalat	Qalat	Emergence	Normal	Not Existed
	Urozgan	Tirin Kot	Tirin Kot	Planting		
	Hilmand	Nad Ali	Nad Ali	Emergence	Normal	Not Existed
		Greshk	Greshk	Emergence	Normal	Not Existed
		Nawa	Nawa	Emergence	Normal	Not Existed
		Lashkargah	Bolan	Emergence	Good	Not Existed
	North	Balkh	Takhta pol	Dihdadi	Planting	
Nahrishahi			Nahrishahi			
Dawlat Abad			Dawlat Abad	Dormancy		
Jawzjan		Sheberghan	Sheberghan	Emergence	Normal	Not Existed
		Darzab	Darzab	Emergence	Normal	Not Existed
Saripul		Saripul	Saripul	Planting		
		Sozmaqala	Sozmaqala			
Faryab		Maimana	Maimana	Emergence	Normal	Not Existed
		Andkhoy	Andkhoy	Vegetative	Poor	Frost
		Garzeewan	Garzeewan	Dormancy		
Samangan		Aibak	Aibak			
		Dara Souf	Dara Souf			
	Sar bagh	Sarbagh				
North West	Badghis	Qalainow	Qalainow			
		Muqur	Muqur			
	Ghor	Chaghcharan	Chaghcharan	Emergence	Normal	Not Existed
		Dawlat yar	Dawlat yar	Emergence	Normal	Not Existed
	Hirat	Shindand	Shindand	Emergence	Normal	Not Existed
		Zindajan	Zindajan	Emergence	Normal	Not Existed
		Gwazara	Falahat	Emergence	Normal	Not Existed
		Hirat	Farm Urdokhan	Emergence	Normal	Not Existed
	Farah	Farah	Farah	Vegetative	Normal	Poor rainfall

Wheat Crop Stage, Condition and Adverse Factor Maps



Data Source: Agromet Network

Normalized Difference Vegetation Index (NDVI)



With using the remote sensed data, NDVI is a good tool to get a good picture of the vegetation index on the ground. If we compare the NDVI for the period of (January 1 – 16) and (January 17 – 1) January 2012 with the same period in 2011 (Maps 4 - 5) shows small increase of NDVI in the Northwestern region, and some parts in the Northern flat areas during the above mentioned period of January 2012 over the same period

of January 2011,, also a small decrease has been occurred in NDVI in the high elevation in the northeastern region, Hindokosh areas ,Central Highlands, Eastern region and the Western parts of the Central Highlands during the above mentioned period of time too. There is no change in NDV I in the rest parts of the country during the above mentioned period of January 2012 compared to the same period of January 2011.

Precipitation

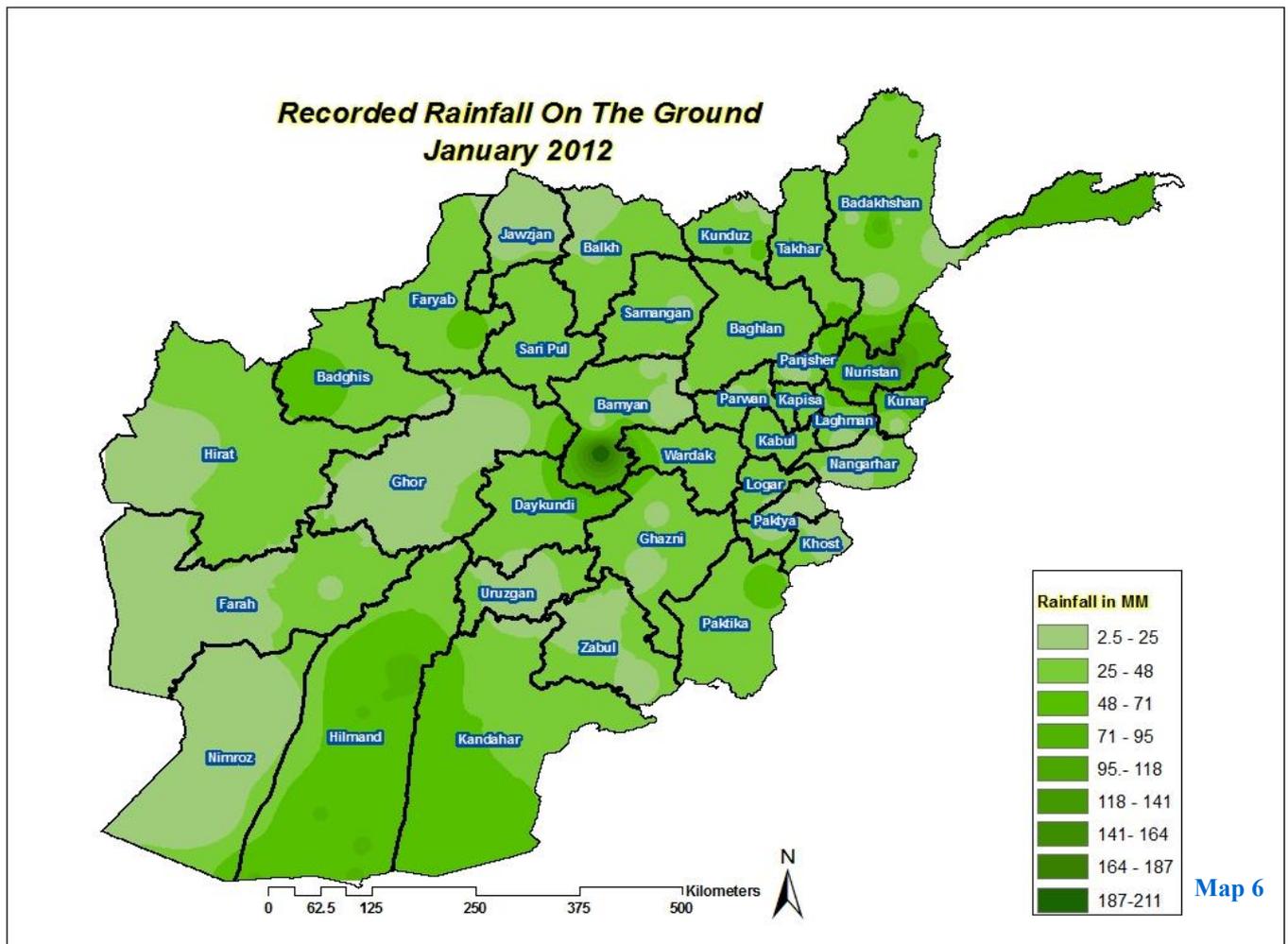
Low pressure systems passed over the country during the months of December 2011 and January 2012 which, resulted to good precipitations almost all over the country. The widespread precipitations during the month of January 2012 somehow could be useful in eliminating the dryness of past time.

As per the recorded precipitation data during the month of January 2012, in most parts of the country, this year rainfall had an increase during the month of January in comparison to the same of last year. The increase of rainfall during January 2012 over the same month in 2012 is shown in chart #1. The rainfall had an increase during the month of January 2012 over the same month of long term average.

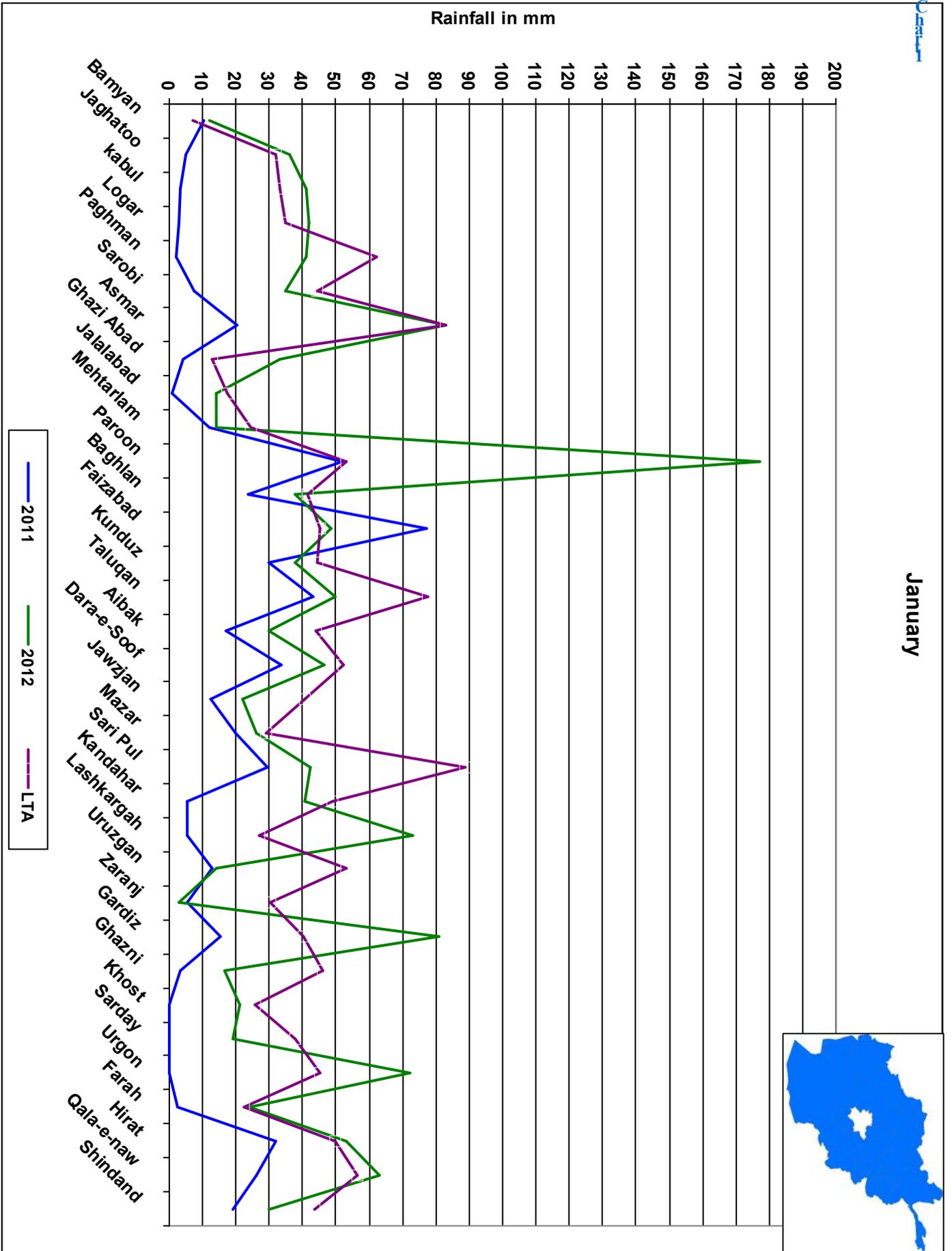
The difference between the rainfalls of January 2012 with the January of long term average is shown in the chart #1.

In order to give a good picture of the occurred rainfall during the month of January 2012 to our readers, we have put the rainfall data for the month of January 2012 on the Map #6 . You can see on this map that the rainfall was well distributed all over the country.

On this map it is clearly visible that most amount of rainfall has been occurred in some parts of the Eastern region and some parts of the Central Highlands. The Southern region has received good rainfall but, the rest parts of the country experienced less rainfall in comparison to the other regions of the country during the month of January 2012.



Rainfall Graphs for the Month of January 2012

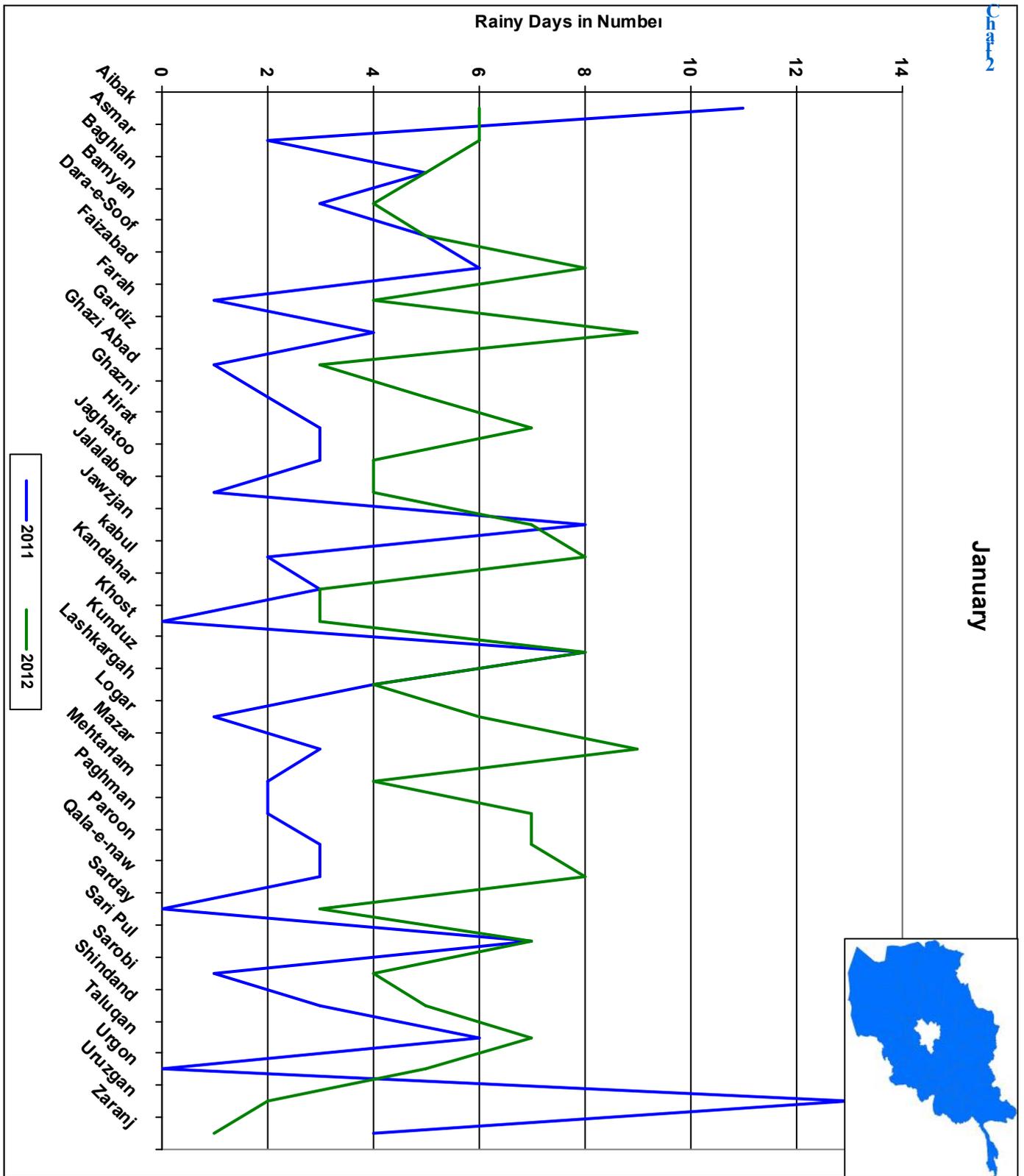


Rainfall for the Month of January 2012

Table 1

Stations	January			
	Rainfall in (mm)			
	2011	2012	LTA	Deviation
Bamyan	10.5	12	6.9	-5.1
Jaghato	5	36	32	-4
kabul	3.2	41	33.1	-7.9
Logar	2.8	41.9	34.8	-7.1
Paghman	2	41	62.1	21.1
Sarobi	7.3	35	44.4	9.4
Asmar	20.5	83	82.9	-0.1
Ghazi Abad	4	33	12.9	-20.1
Jalalabad	1	14	17.3	3.3
Mehtarlam	12	14	24.3	10.3
Paroon	52	177	53	-124
Baghlan	23.8	37.8	41.3	3.5
Faizabad	77	48.5	45.4	-3.1
Kunduz	29.9	37.6	44.2	6.6
Taluqan	43	50	77.8	27.8
Aibak	17	30	44.1	14.1
Dara-e-Soof	33.5	46.5	52.3	5.8
Jawzjan	12.5	21.8	40.8	19
Mazar	20	26.1	28.9	2.8
Sari Pul	29.5	42.5	89	46.5
Kandahar	5.5	40.5	49.1	8.6
Lashkargah	5.2	73.2	27	-46.2
Uruzgan	13	14	53.3	39.3
Zaranj	5.5	3	30.3	27.3
Gardiz	15.5	80.8	40.4	-40.4
Ghazni	3.2	16.7	46.1	-16.9
Khost	0	21	25.7	4.7
Sarday	0	19	37.8	18.8
Urgon	0	72	45.3	-26.7
Farah	2.5	24	22.2	-1.8
Hirat	32	53	49.6	-3.4
Qala-e-naw	26	63	56.6	-6.4
Shindand	19	30	43.4	13.4

Rainy Days for the Month of January 2012

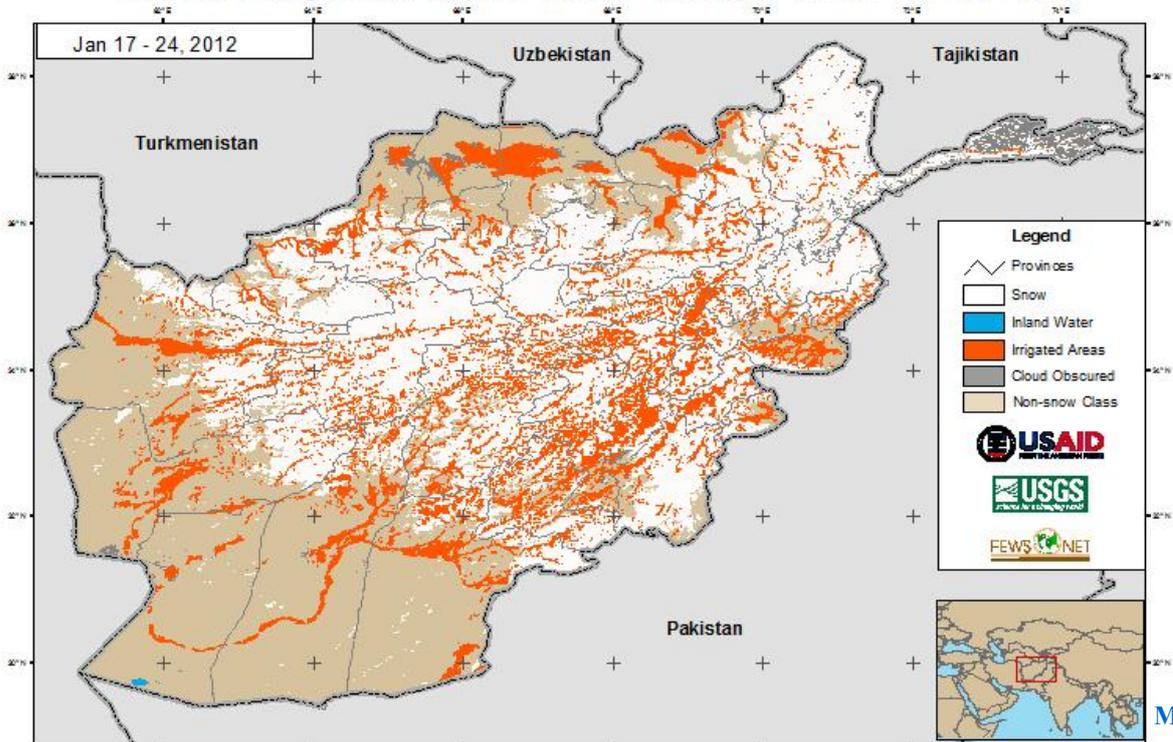


For Agriculture purpose if we study the rainfall, we can say that the number of rainy days is more important than the amount of rainfall for example, if we have 20 mm of rain in one day but later on next week we have 10 mm of rain in 4 days, very easily we can say that the 10 mm of rain in 4 days is more beneficial to the Agriculture rather

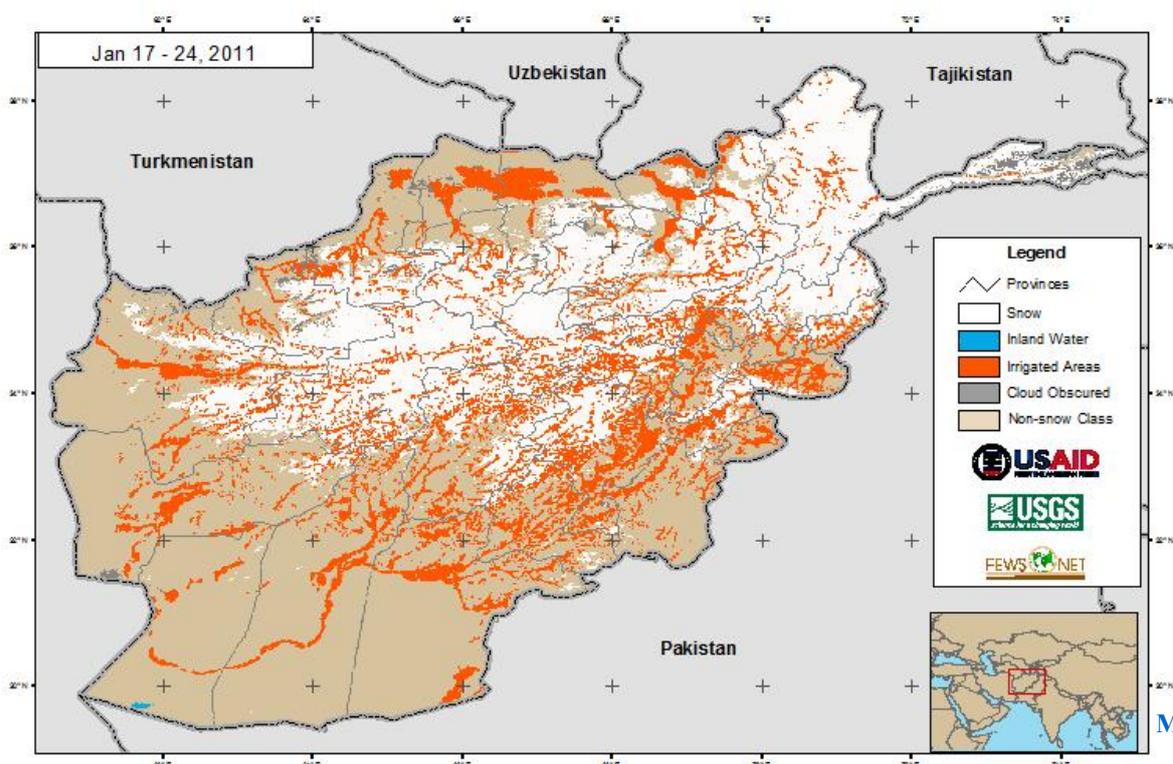
than the 20 mm of rain in one day. As per the recorded rainy days in the month of January 2012 with the same month in 2011 which is shown in chart 2, there is a significant increase of rainy days during the month of January 2012 over the same month of last year.

Comparison of Snow Extent

MODIS 8-day Snow Cover Extent - Current Period 2012 vs 2011



Map 7



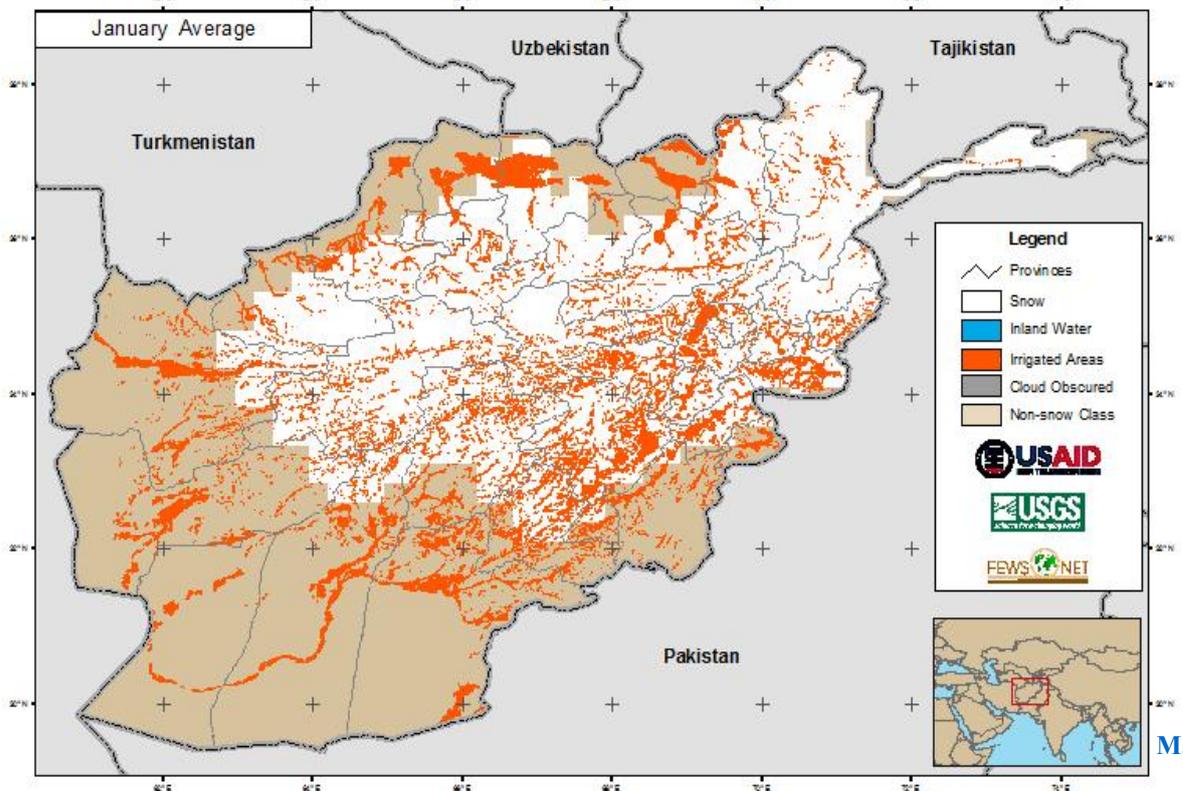
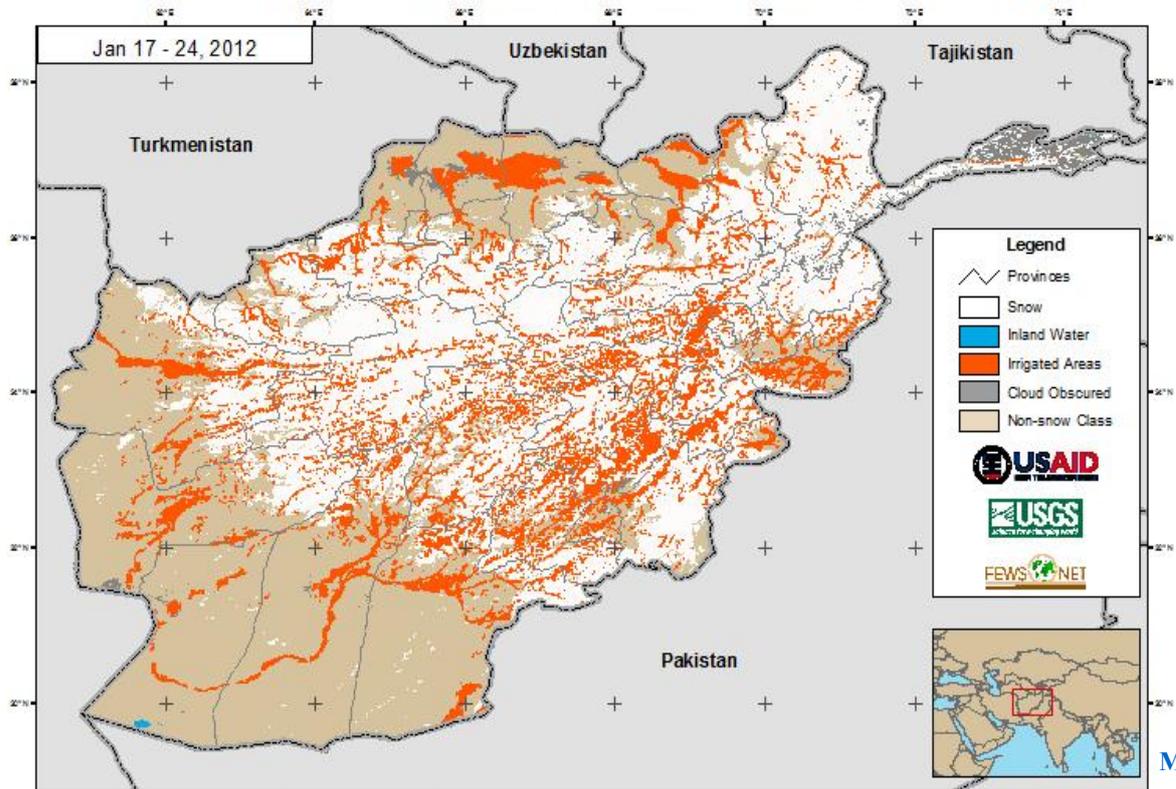
Map 8

As it is described under the rainfall topic, low pressure systems pushed adequate moisture to the country which resulted to occurrence of a lot of snow so, the snow extent increased in the mountainous areas and in higher elevations. Due to snowfalls in this month, the short-term dryness was somehow covered.

Comparison of snow extent for the period of (January 17 – 24) 2012 with the same period of last year (Map 7 - 8) shows an increase of snow extent during above mentioned period of January 2012 over the same period of last year of the month of January.

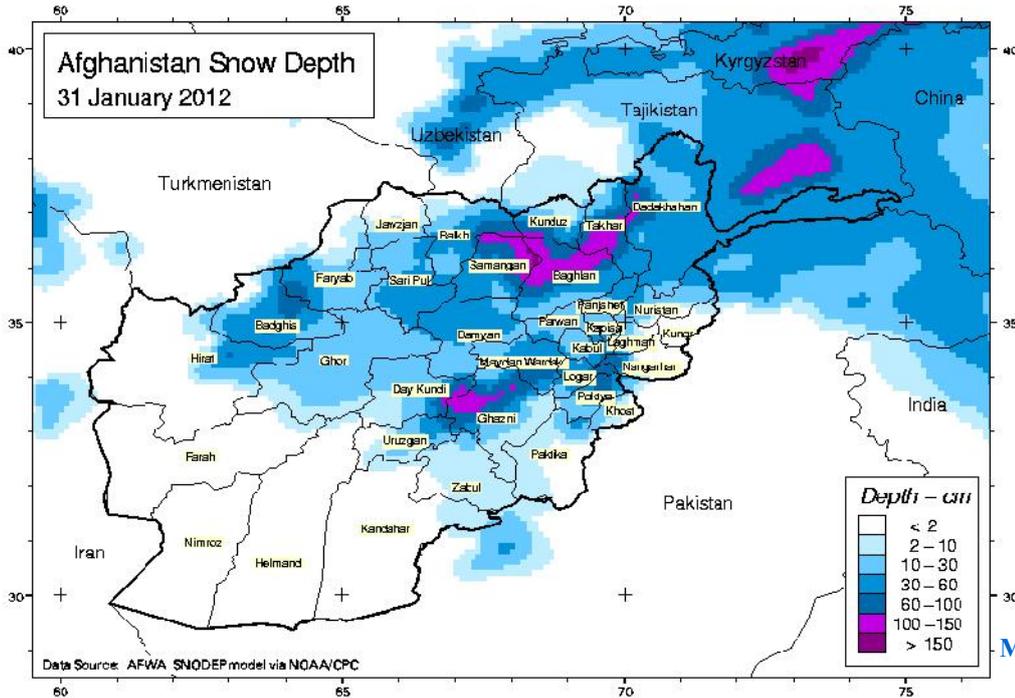
Comparison of Snow Extent

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



Comparison of snow extent for the month of January 2012 with the same month of long term average (Map 9 - 10) shows small decrease of snow extent during the month of January 2012 over the same month of long term average.

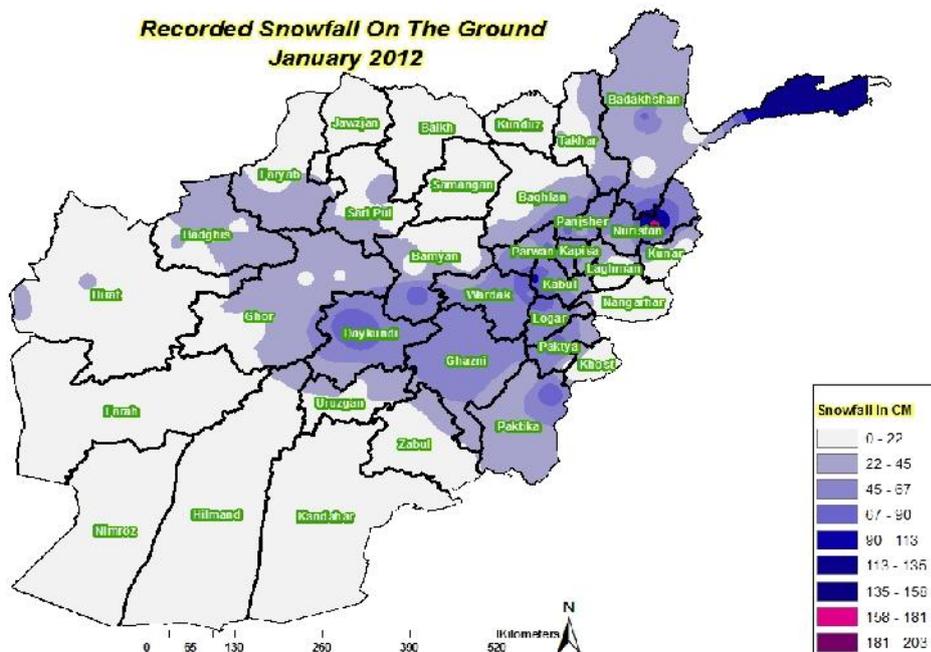
Afghanistan Snow Depth for month of January 2012



Map 11

Map (11) shows snow depth for the end of January 2012. over 100 to 150 cm in the Northern region, Northeastern As map (11) shows the snow depth has been recorded region and some parts of the Southeastern region.

Afghanistan ground observation Snow Depth for month of January 2012

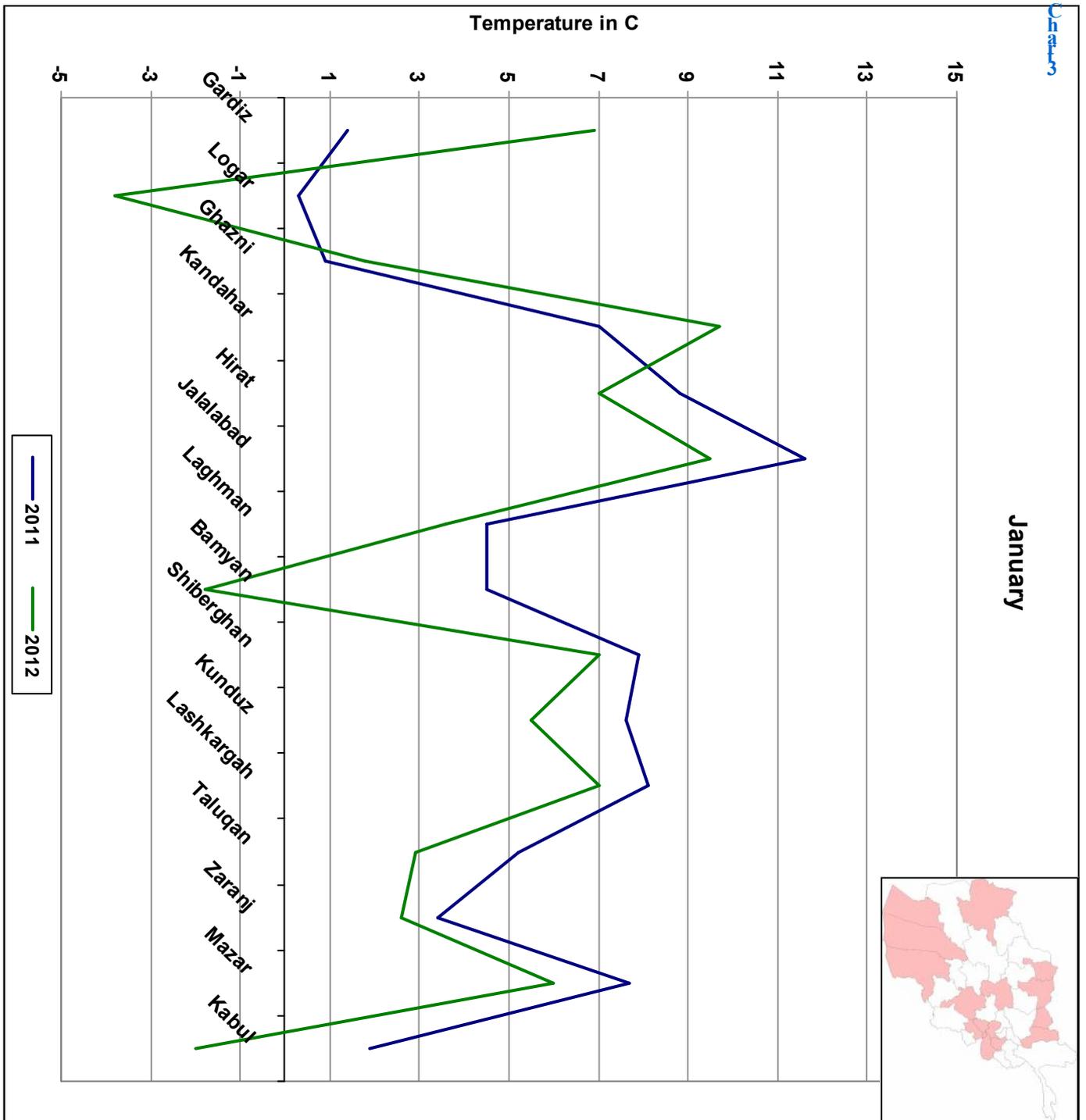


Map 12

In this bulletin we do have two types of information on snow which are the remote sensing and the recorded data on the ground , the ground data is mostly from the lower

During the month of January 2012, the most snow has been occurred in Nuristan, as it recorded between 181 cm and 203 cm. For more information on the ground recorded data please, see the Map #12.

Average Temperature for the Month of January 2012



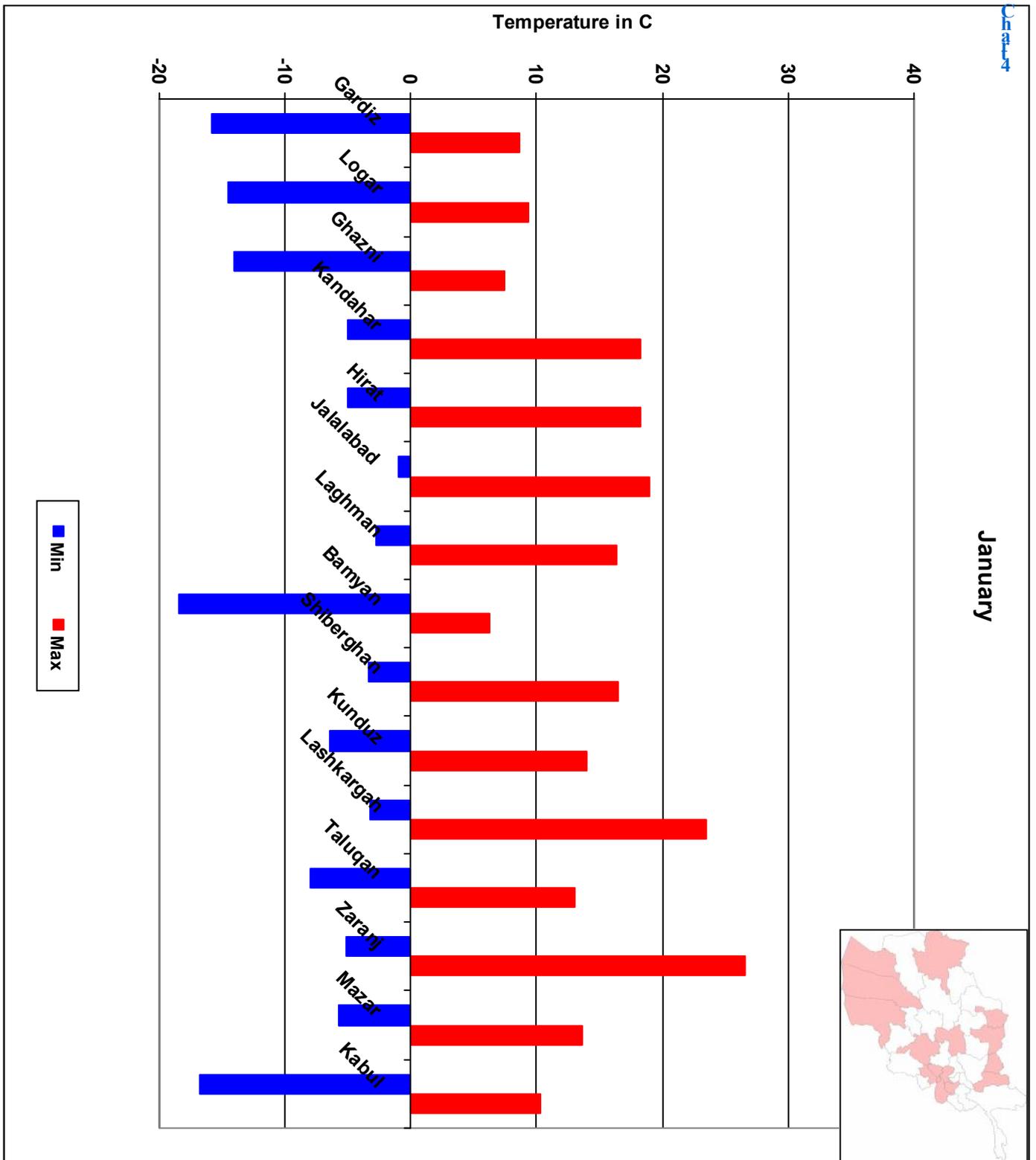
If we look to the temperature pattern in the past few months, we can say that temperature started to gradually decrease during the month of December 2011.

The gradually decreasing of the temperature continued to the month of January 2012. During the month of January 2012 most parts of the country experienced extreme cold weather, and the higher elevations of the Northeastern and Central Highlands were the coldest areas. If we see the recorded temperature data in a glance, we can say that the temperature was accompanied with the largest negative

temperature anomalies across the central highlands and Northeast Mountains of the country. The records are showing that the minimum temperature is recorded -25 degrees C° in the Central Highlands and -30 degrees C° in the Northeast Mountains.

If we compare the monthly average of temperature for the month of January 2012 with the same month in 2011 it shows a decrease of temperature during the month of January 2012 over the same month of last year all over the country which is shown in the chart 3 .

Temperature for the Month of January 2012



Zaranj with 26.6 C° was the warmest spot of the country during the month of January 2012

Based on the recorded data in the stations on the ground but Zaranj with 26.6 C° was the warmest spot of the country during this month which is shown in chart 4 . Bamyan with – 18.4 C° has experienced the coldest weather during the month of January 2012,

For more information please contact:

Name	Position	Cell	Email Address
Mohammad ishaq Noori	Director of AMA (Ministry of Transportation)	0799461756	lshaq_avi@yahoo.com
Gh.Rabbani Haqiqatpal	Director of Marketing, Economics &Statistic Divison (MAIL)	0700284879	rabani.haqiqatpal@gmail.com

You can download the Afghanistan's Agromet Bulletins from these site:

<http://afghanistan.cr.usgs.gov/documents.php?cat=1>

<http://bit.ly/cXzTo6>

www.mail.gov.af



Data Source: