Issue No: 8
2010 - 2011

The Afghanistan Agrometeorological Seasonal Bulletin

Topics Crop Information Precipitation Temperature

Crop Stage 3

Adverse Factor 4

Crop Condition 5

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Table of Contents

Inside This Issue

S/N	Topic	Page
1	Summary of the Seasonal Bulletin (2010-2011)	1
2	Crop Condition (2010 - 2011) Season	2-5
3	Synthesis Situation Map (2010 - 2011) Season	6
4	Rainfall Season (2010 - 2011)	7
5	Length of Rainfall Season by Dekad (2010 - 2011) Season	8-11
6	Recoded Distribution of Rainfall (2010 - 2011) Season	12-13
7	Analysis of Recorded Rainfall by Region for the (2010 - 2011) Season	14 - 19
8	Total Snowy Days (2010 - 2011) Season	20
9	Afghanistan Snow Depth (2010 - 2011) Season	21
10	Snowfall Occurrence (2010 - 2011) Season	22-23
11	Temperature and It's Effect (2010 - 2011) Season	24
12	Recorded Frost Days (2010 - 2011) Season	25
14	Annexes	

Summary

- Rainfall season (2010 – 2011) normally started early in the Eastern region in 1st dekad of September 2010 and rainfall ended in the Eastern South eastern, and Capital regions in 3rd dekad of August 2011.
- Rainfall had significantly decreased during the rainfall season of (2010 - 2011) compared to the last season 2009 - 2010.
- The country experienced unusually dry spill from May 2011 up to August 2011.
- The highest amount of rainfall has been recorded in some parts of the Eastern region during the rainfall season of (2010 - 2011). Some parts of the Central, Southeastern and the North-western regions received moderate rainfalls. Low amount of rainfall occurred in the Northern and Western regions of the Central Highlands and Neighboring areas and most parts of the Southern region.
- Rainy days had a significant decrease during the rainfall season of (2010 - 2011) over the previous season (2009 - 2010).
- The snowfall started on the Central Highlands in October 2010 and continued up to April 2011 on the Central Highlands.
- In general snow depth and extent had a decrease in most parts of snow covered areas during the rainfall season (2010 - 2011) compared to the previous season (2009 - 2010).
- Snowy days had an increase during the rainfall season (2010 - 2011) over the previous season (2009 - 2010) all around the country.

Crop condition

Zone	Province	District	Station	Wheat	
				Crop Condition	Adverse Factor
Central	Kabul	Shakardara	Karizmir	Good (better than normal)	Not Existed
		Paghman	Paghman	Normal	Weeds
		Kabul	Darulaman	Good (better than normal)	Shortage of Inputs and Poor Rainfall
		Sarubi	Sarubi	Normal	Excessive Weeds
	Panjsher	Dara	Dara	Normal	Weeds, Poor Rainfall and Frost
		Dashtak	Dashtak	Normal	Not Existed
	Parwan	Syagerd	Syagerd	Normal	Poor Rainfall and Rust of Wheat
		Charikar	Charikar	Good (better than normal)	Shortage of Inputs and Poor Rainfall
	Kapisa	Mahmoodraqi	Mahmoodraqi	Normal	Excessive Weeds
		Kohistan	Kohistan	Good (better than normal)	Excessive Weeds
	Wardak	Chak	Chak	Normal	Poor Rainfall
		Jaghatoo	Jaghatoo	Normal	Poor Rainfall
	Bamyan	Bamyan	Bamyan	Normal	Shortage of Inputs, Frost and Poor Rainfall
		Yakawlang	Yakawlang	Poor	Frost and Poor Rainfall
		Panjab	Panjab	Normal	Pest and diseases
		Sheber	Sheber	Normal	Frost and Poor Rainfall
East	Noristan	Paroon	Paroon	Good (better than normal)	Not Existed
		Waigal	Waigal	Good (better than normal)	Not Existed
		Norgaram	Norgaram	Good (better than normal)	Not Existed
		Wama	Wama	Normal	Poor Rainfall
	Nangarhar	Agam	Agam	Normal	Poor Rainfall
		Batikot	Ghaziabad	Normal	Not Existed
		Jalalabad	Sheshembagh	Normal	Not Existed
		Jalalabad	Farm Jadeed	Normal	Not Existed
		Behsood	Behsood	Normal	Pest, diseases and Poor Rainfall
	Kunar	Asmar	Asmar	Normal	Poor Rainfall
		Asadabad	Asadabad	Normal	Not Existed
	Laghman	Mihtarlam	Mihtarlam	Normal	Poor Rainfall and Shortage of Inputs
North East	Takhar	Bangi	Bangi	Normal	Excessive Weeds and Poor Rainfall
		Taluqan	Taluqan	Normal	Not Existed
	Kunduz	Imam Sahib	Imam Sahib	Normal	Excessive Weeds and Late Planting
		Qaliazal	Aqtipa	Normal	Excessive Weeds and Late Planting
		Chardara	Chardara	Normal	Not Existed
		Khan Abad	Khan Abad	Normal	Late Planting
		Kunduz	Kunduz	Normal	Excessive Weeds and Late Planting
		Ali Abad	Ali Abad	Normal	Excessive Weeds and Late Planting
	Baghlan	Pulikhomri	Pozaishan	Normal	Late Planting
	Badakhshan	Faizabad	Faizabad	Normal	Excessive Weeds and Poor Rainfall
		Baharak	Baharak	Poor	Poor Rainfall
		Argo	Argo	Normal	Not Existed
		Ashkashem	Ashkashem	Normal	Poor Rainfall
		Khash	Khash	Normal	Excessive Weeds and Poor Rainfall

Crop condition

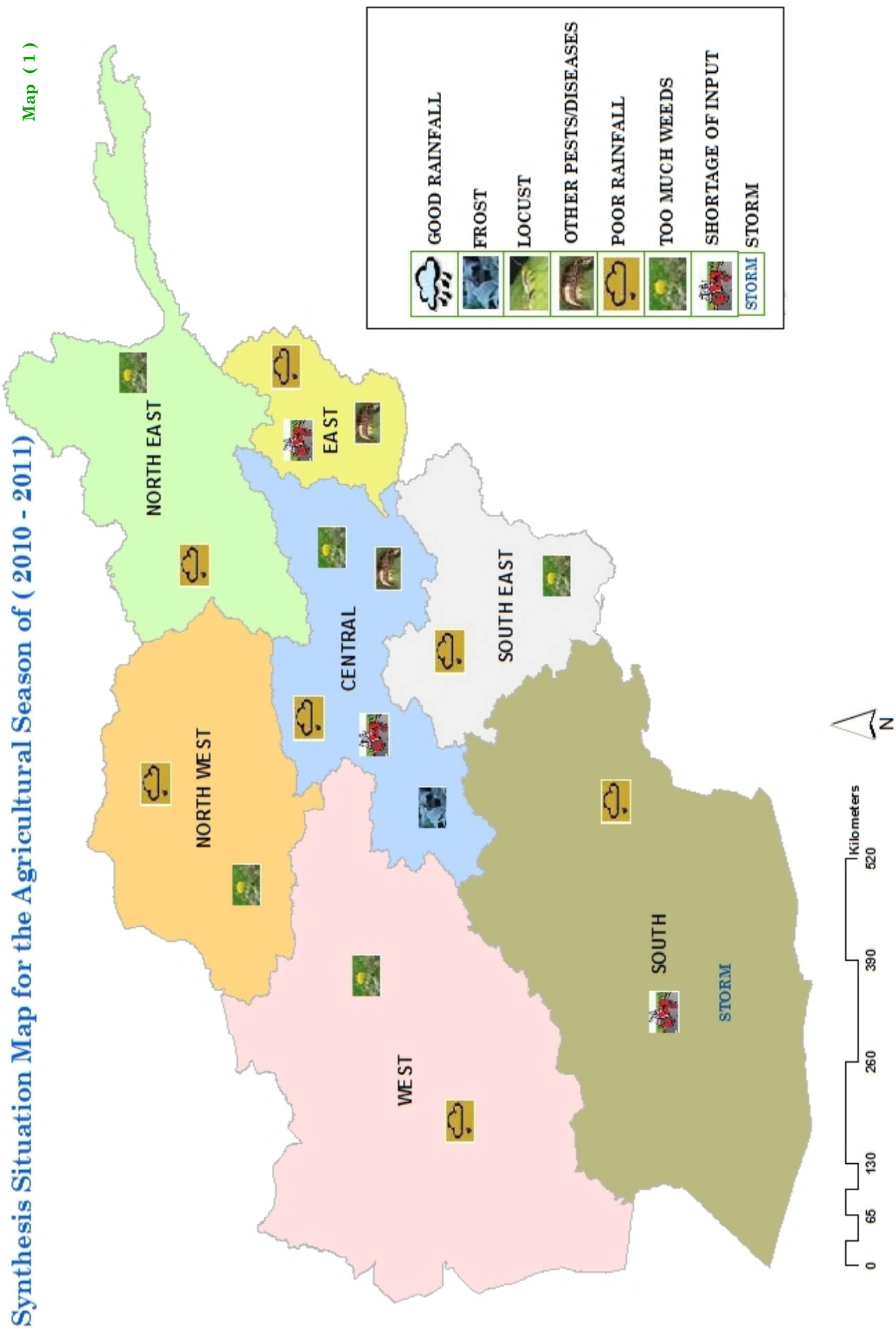
Zone	Province	District	Station	Wheat	
				Crop Condition	Adverse Factor
South East	Khost	Khost	Khost	Good (better than normal)	Poor Rainfall
		Khost	Shimal	Good (better than normal)	Excessive Weeds and Poor Rainfall
		Ali Sher	Ali Sher	Normal	Poor Rainfall
	Paktiya	Zormat	Rohani Baba	Good (better than normal)	Poor Rainfall
		Gardiz	Tera	Good (better than normal)	Poor Rainfall
	Paktika	Urgon	Urgon	Normal	Not Existed
		Sharana	Sharana	Normal	Not Existed
		Khairkot	Khairkot	Normal	Not Existed
	Ghazni	Muqur	Muqur	Normal	Poor Rainfall
		Andar	Bande Sardi	Normal	Poor Rainfall
South	Nimroz	Zaranj	Zaranj	Normal	Storm and Poor Rainfall
	Kandahar	Kandahar	Kandahar	Normal	Poor Rainfall
	Zabul	Qalat	Qalat	Normal	Excessive Weeds and Poor Rainfall
	Urozgan	Tarinkot	Tarinkot	Normal	Poor Rainfall
	Hilmand	Nad Ali	Nad Ali	Normal	Not Existed
		Greshk	Greshk	Good (better than normal)	Not Existed
		Nawa	Nawa	Good (better than normal)	Shortage of Inputs
		Lashkargah	Bolan	Normal	Not Existed
North West	Balkh	Dihdadi	Dihdadi	Normal	Not Existed
		Nahrishahi	Nahrishahi	Normal	Not Existed
	Jawzjan	Sheberghan	Sheberghan	Normal	Poor Rainfall
		Darzab	Darzab	Normal	Not Existed
	Saripul	Saripul	Saripul	Normal	Excessive Weeds
		Sozmaqala	Sozmaqala	Normal	Poor Rainfall
	Faryab	Maimana	Maimana	Normal	Excessive Weeds
		Andhoy	Andhoy	Normal	Poor Rainfall
	Samangan	Aibak	Aibak	Normal	Low Precipitation
		Dara Souf Bala	Dara Souf Bala	Normal	Poor Rainfall
		Sarbagh	Sar bagh	Normal	Excessive Weeds
West	Badghis	Qalainow	Qalainow	Normal	Poor Rainfall
		Muqur	Muqur	Normal	Poor Rainfall
	Ghor	Chaghcharan	Chaghcharan	Normal	Not Existed
	Hirat	Shindand	Shindand	Normal	Not Existed
		Zindajan	Zindajan	Normal	Not Existed
		Gwazara	Falahat	Normal	Not Existed
		Hirat	Farm Urdokhan	Normal	Not Existed
	Farah	Farah	Farah	Normal	Poor Rainfall

Crop Condition

Zone	Province	District	Station	Maize	
				Crop Condition	Adverse Factor
Central	Kabul	Sarubi	Sarubi	Normal	Weeds
	Panjsher	Dashtak	Dashtak	Normal	Not Existed
	Parwan	Charikar	Charikar	Good (better than normal)	Shortage of Inputs and Poor Rainfall
		Syagerd	Syagerd	Normal	Not Existed
	Kapisa	Mahmoodraqi	Mahmoodraqi	Normal	Weeds
		Kohistan	Kohistan	Good (better than normal)	Not Existed
East	Noristan	Paroon	Paroon	Good (better than normal)	Not Existed
		Waigal	Waigal	Normal	Poor Rainfall
		Do Ab	Do Ab	Normal	Poor Rainfall
		Norgaram	Norgaram	Normal	Not Existed
	Nangarhar	Agam	Agam	Normal	Poor Rainfall
		Batikot	Ghaziabad	Normal	Not Existed
		Jalalabad	Sheshembagh	Normal	Not Existed
		Jalalabad	Farm Jadeed	Good (better than normal)	Not Existed
	Kunar	Asmar	Asmar	Normal	Poor Rainfall
		Asadabad	Asadabad	Normal	Poor Rainfall
	Laghman	Mihtarlam	Mihtarlam	Good (better than normal)	Not Existed
		Qarghai	Qarghai	Good (better than normal)	Not Existed
North East	Takhar	Bangi	Bangi	Normal	Weeds
		Taluqan	Taluqan	Normal	Not Existed
	Kunduz	Imam Sahib	Imam Sahib	Good (better than normal)	Not Existed
		Qaliazal	Aqtipa	Good (better than normal)	Not Existed
		Ali Abad	Ali Abad	Good (better than normal)	Not Existed
		Kunduz	Kunduz	Normal	Poor Rainfall
	Baghlan	Pulikhomri	Pozaishan	Normal	Not Existed
		Doshy	Doshy	Normal	Not Existed
South East	Khost	Khost	Khost	Good (better than normal)	Not Existed
		Khost	Shimal	Good (better than normal)	Not Existed
		Ali Sher	Ali Sher	Good (better than normal)	Not Existed
	Paktya	Zormat	Rohani Baba	Normal	Not Existed
		Gardiz	Tera	Good (better than normal)	Not Existed
	Paktika	Urgon	Urgon	Normal	Not Existed
		Sharana	Sharana	Normal	Not Existed
		Khairkot	Khairkot	Normal	Not Existed
	Ghzni	Muqur	Muqur	Normal	Not Existed
South	Urozgan	Tarinkot	Tarinkot	Normal	Not Existed
	Hilmand	Nad Ali	Nad Ali	Normal	Not Existed
		Greshk	Greshk	Normal	Not Existed
		Nawa	Nawa	Normal	Not Existed
		Lashkargah	Bolan	Normal	Not Existed
North West	Balkh	Dihdadi	Dihdadi	Normal	Not Existed
	Faryab	Maimana	Maimana	Normal	Not Existed
	Samangan	Aibak	Aibak	Normal	Not Existed
		Dara Souf Bala	Dara Souf Bala	Poor	Poor Rainfall
West	Hirat	Shindand	Shindand	Normal	Not Existed
		Hirat	Zindajan	Pooor	Poor Rainfall
	Farah	Farah	Farah	Good (better than normal)	Not Existed

Crop Condition

Zone	Province	District	Station	Rice	
				Crop Condition	Adverse Factor
Central	Kabul	Sarubi	Sarubi	Normal	Weeds and Shortage of Inputs
East	Nangarhar	Agam	Agam	Normal	Cut worm
		Batikot	Ghaziabad	Normal	Not Existed
		Jalalabad	Sheshembagh	Normal	Not Existed
		Jalalabad	Farm Jadeed	Good (better than normal)	Pest and diseases
	Kunar	Asmar	Asmar	Normal	Poor Rainfall
		Asadabad	Asadabad	Normal	Poor Rainfall
	Laghman	Mihtarlam	Mihtarlam	Normal	Poor Rainfall and Shortage of Inputs
		Qarghai	Qarghai	Good (better than normal)	Not Existed
North East	Takhar	Bangi	Bangi	Normal	Weeds
		Taluqan	Taluqan	Normal	Not Existed
	Kunduz	Imam Sahib	Imam Sahib	Good (better than normal)	Not Existed
		Qaliazal	Aqtipa	Normal	Not Existed
		Ali abad	Ali abad	Good (better than normal)	Weeds
		Kunduz	Kunduz	Poor	Poor Rainfall
	Baghlan	Pulikhomri	Pozaishan	Good (better than normal)	Not Existed
		Doshy	Doshy	Normal	Poor Rainfall
South East	Khost	Khost	Khost	Normal	Not Existed
		Khost	Shimal	Normal	Not Existed
		Ali Sher	Ali Sher	Good (better than normal)	Not Existed
	Paktya	Zormat	Rohani Baba	Normal	Not Existed
		Gardiz	Tera	Normal	Not Existed
North West	Samangan	Aibak	Aibak	Normal	Not Existed
		Dara Souf Bala	Dara Souf Bala	Normal	Not Existed
South	Urozgan	Tirin kot	Tirin kot	Normal	Not Existed
West	Hirat	Shindand	Shindand	Normal	Poor Rainfall
		Hirat	Zindajan	Normal	Not Existed
		Gwazara	Falahat	Normal	Not Existed
		Hirat	Farm Urdokhan	Normal	Not Existed


Map (1)
Synthesis Situation Map for the Agricultural Season of (2010 - 2011)
GOOD RAINFALL
FROST
LOCUST
OTHER PESTS/DISEASES
POOR RAINFALL
TOO MUCH WEEDS
SHORTAGE OF INPUT
STORM
NORTH EAST
EAST
CENTRAL
SOUTH EAST
NORTH WEST
WEST
SOUTH
STORM
N
0
65
130
260
390
520
Kilometers

Rainfall Season (2010 – 2011)

Afghanistan is an arid to semi – arid country receiving very erratic rainfall over the year. Rainfall varies annually from 90 mm in Farah (west region) to 1024 mm in South Salang (Central region), where it occurs mostly in the winter months (December – end of February) as well as in April (during the tilling flowering of winter wheat).

In higher elevations precipitation falls in the form of snow which is critical for river flow and irrigation during the Spring and The Summer. Usually, March and April are the rainy months for western, Northern, Central Highlands, and Southern regions. Indian monsoon usually brings rain to the Eastern region, Southeastern, and some parts of Northeastern and Capital regions during the months of June, July and August. Normally, in Afghanistan the rainfall season starts from September and continues up to August. For the MAIL / USGS Agromet project, the starting rainfall season is based on a 10 mm threshold. This means a 10 mm or more of precipitation is considered a start of the rainfall season.

The rainfall season (2010 – 2011) started normally early in the Eastern region at 1st dekad of September 2010 and rainfall ended in the Eastern, Southeastern , and Capital regions in 3rd dekad of August 2011.

Rainfall Patren

Comparison of rainfall data for the rainfall season of (2009 – 2010) from September 2010 up to August 2011 with last season(2009 - 2010) (chart 1) shows a decrease of rainfall during the rainfall season (2010 - 2011) over the last season(2009 - 2010) across the country.

Rainfall had different situation in distribution in the regions of the country during the rainfall season of (2010 - 2011). As the map shows the highest amount of rainfall has been recorded in some parts of the Eastern region during the rainfall season of (2010 - 2011). Some parts of the Capital, in the Southeastern and the Northwestern regions received moderate rainfall. Low amount of rainfall occurred in t he Northern, and Western regions of the Central Highlands and Neighboring areas including most parts of the Southern region. The Southwestern region did not experience enough rainfall during the rainfall season (2010-2911) as in (Map 2).

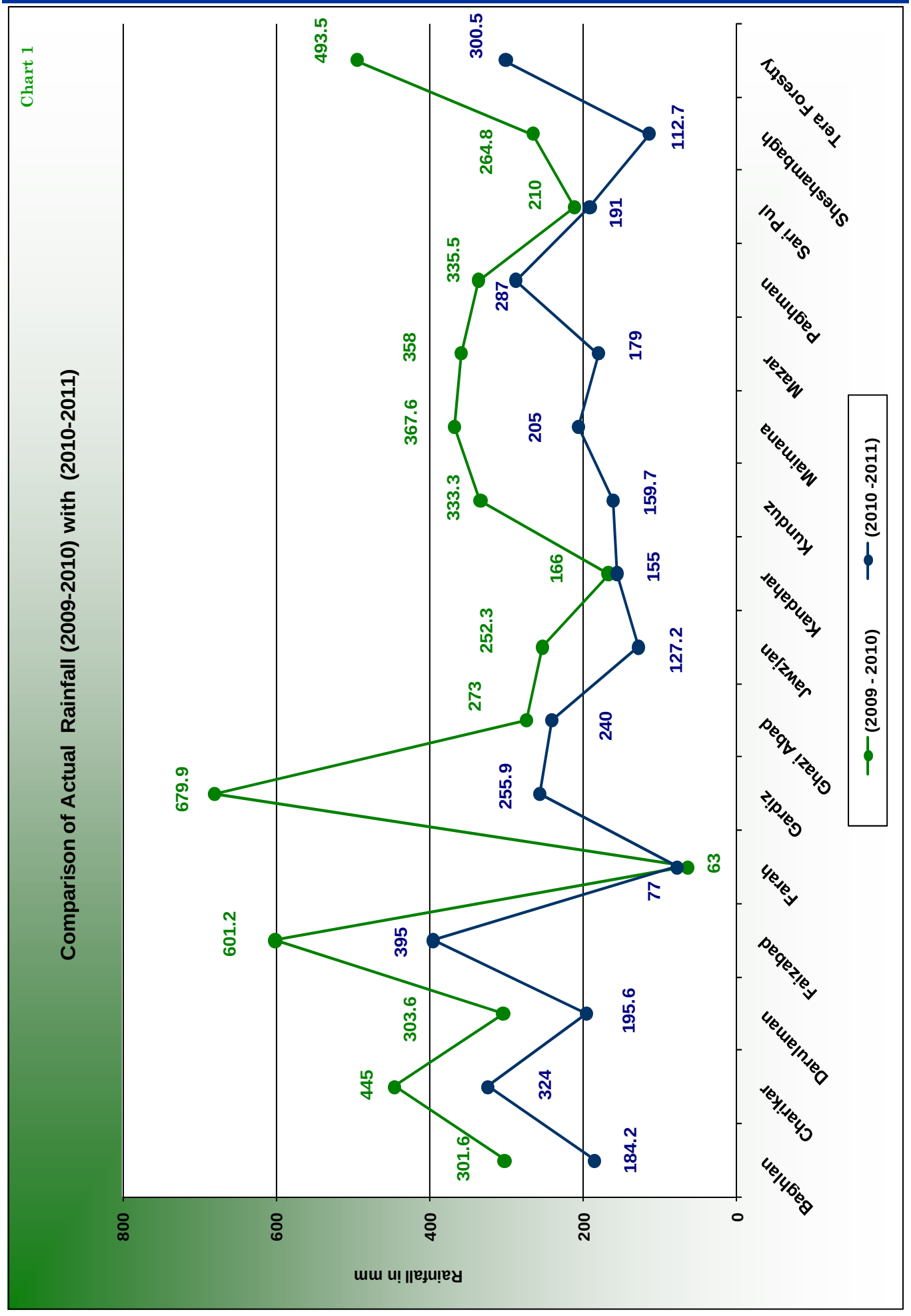
Dry spell:

Normally pressure systems are changing in September as is typical in this time of the year. And precipitations were moderate during Sep and October, however November and December are the wet months, but rainfall had a decrease compared to the same month of the last season (2009 - 2010) all over the country. The country experienced unusual dry spell from May 2011 up to August 2011, and rainfall had a decrease during above mentioned period compared the same period of the last season (2009 - 2010) around the country.

During January and February 2011 low pressure systems with adequate moisture tracked in to the country and brought precipitations in most parts, which resulted in heavy snow and rain, and snow pack increased in snow covered areas particularly in the Northeastern, Northwestern, CentralHighlands and the Capital regions, which would ease short – term dryness of the past period.

Typically the month of April 2010 was very wet month, and low pressure system tracked their way into the country and brought good precipitations and as a result most parts of the country received a lot of rainfall. Indian monsoon was not so active during the rainfall season (2010 - 2011) and resulted in light floods only. In general rainfall had a decrease during the rainfall season (2010 - 2011) compared to the previous season (2009 - 2010) all around the country.

Chart 1


Comparison of Actual Rainfall (2009-2010) with (2010-2011)
Rainfall in mm
800
600
400
200
0
(2009 - 2010)
(2010 -2011)
Baghlan
Charikar
Darulaman
Faizabad
Farah
Gardiz
Ghazi Abad
Jawzjan
Kandahar
Kunduz
Maimana
Mazar
Paghman
Sari Pul
Sheshambagh
Tera Forestry
679.9
601.2
445
301.6
303.6
395
273
252.3
255.9
166
333.3
367.6
358
335.5
287
205
240
155
159.7
179
191
210
264.8
493.5
300.5
112.7
63
77
195.6
324
184.2
127.2

Rainfall Pattern

The rainfall season of (2010 – 2011) started normally early in the Eastern region in the 1st dekad of September 2010 and rainfall ended in the Eastern, Southeastern, and Capital regions in the 3rd dekad of August 2011.

The start and ending of rainfall season in different regions is as follows:

In the Capital region rainfall started in the 3rd dekad of September 2010 and ended in the 3rd dekad of August 2011, for the Central Highlands rainfall started in the 2nd dekad of January 2011 and ended in the 13rd dekad of August 2010. while in the Eastern region it started in the 1st dekad of Sep 2010 and ended in the 3rd dekad of August 2011. For the Northeastern region rainfall started in the 1st dekad of January 2011 and ended in the 3rd dekad of June 2011. For the Northern region rainfall started in the 1st dekad of January 2011 and ended in the 2nd dekad of June 2011 as for the Southern region, it started in the 1st dekad of February 2011 and ended in the 2nd dekad of Aug 2011. In the Southeastern region rainfall started in the 3rd dekad of October 2010 and ended in the 3rd dekad of August 2011, and for the Western region it started in the 2nd dekad of January 2011 and ended by the 1st dekad of May 2011.

Length of Rainfall Season by dekad

The length of rainfall season in different parts of the country is as follows: 13 dekads for the Capital,12 dekads for Central Highlands, 18 dekads for the Eastern region, 13 dekads for the Northeastern region,12 dekads for the Northern regions,10 dekads for the Southern region, 17 dekads for the Southeastern region; and 10 dekads for the Western region

Afghanistan season (2010 - 2011)

No	Name of Station	Starting Dekad	Ending Dekad	Rainfall season Length/ dekad
		Central		
1	Badam bagh	1 st dekad of Feb	2nd dekad of Aug	**11**
2	Charikar	1st dekad of Feb	1st dekad of May	**10**
3	Darulaman	1st dekad of Nov	3rd dekad of Aug	**8**
4	Panjshir	1st dekad of Nov	3rd dekad of May	**12**
5	Gul Khana	3rd dekad of Sep	1st dekad of May	**9**
6	Jaghatoo	1st dekad of Feb	1st dekad of May	**9**
7	kabul	1st dekad of Feb	1st dekad of May	**12**
8	Kapisa Agri	3rd dekad of Sep	1st dekad of May	**13**
9	Kariz Mir	1st dekad of Feb	2nd dekad of April	**9**
10	Paghman	1st dekad of Feb	1st dekad of May	**9**
11	Qargha	1st dekad of Nov	2nd dekad of Aug	**10**
12	Sarobi	1st dekad of Nov	2nd dekad of April	**9**
13	Seya Gerd	2nd dekad of Feb	1st dekad of May	**11**

Length of Rainfall Season by dekad

Afghanistan season (2010 - 2011)

No	Name of Station	Starting Dekad	Ending Dekad	Rainfall season Length/ dekad
		Central		
14	Bamyan ARD	2nd dekad of Jan	1st dekad of May	**11**
15	Panjab	1st of dekad of Feb	3rd dekad of May	**10**
16	Yakawlang	2nd dekad of Jan	1st dekad of May	**12**
		East		
17	Agam			
18	Asmar	1st dekad of Sep	3rd dekad of Aug	**16**
19	Farm Jadeed	2nd dekad of Sep	2nd dekad of April	**7**
20	Ghazi Abad	1st dekad of Sep	3rd dekad of Aug	**12**
21	Jalalabad	2nd dekad of Sep	3rd dekad of Aug	**17**
22	Laghman	2nd dekad of Sep	3rd dekad of Aug	**18**
23	Mehtarlam	2nd dekad of Sep	3rd dekad of Aug	**12**
24	Sheshambagh	1st dekad of Sep	3rd dekad of Aug	**9**
		North East		
25	Chardara	2nd dekad of Jan	1st dekad of Apr	**11**
26	Aqtepa	2nd dekad of Jan	3rd dekad of Mar	**6**
27	Baghlan	2nd dekad of Jan	1st dekad of May	**12**
28	Baharak	1st dekad of Jan	1st dekad of May	**12**
29	Faizabad	2nd dekad of Jan	1st dekad of May	**12**
30	Imam Sahib	2nd dekad of Jan	3rd dekad of Mar	**12**
31	Kunduz ARF	2nd dekad of Jan	3rd dekad of Mar	**10**
32	Taluqan	2nd dekad of Jan	1st dekad of Apr	**11**
33	Aibak	2nd dekad of Jan	3rd dekad of June	**13**

Length of Rainfall Season by dekad

Afghanistan season (2010 - 2011)

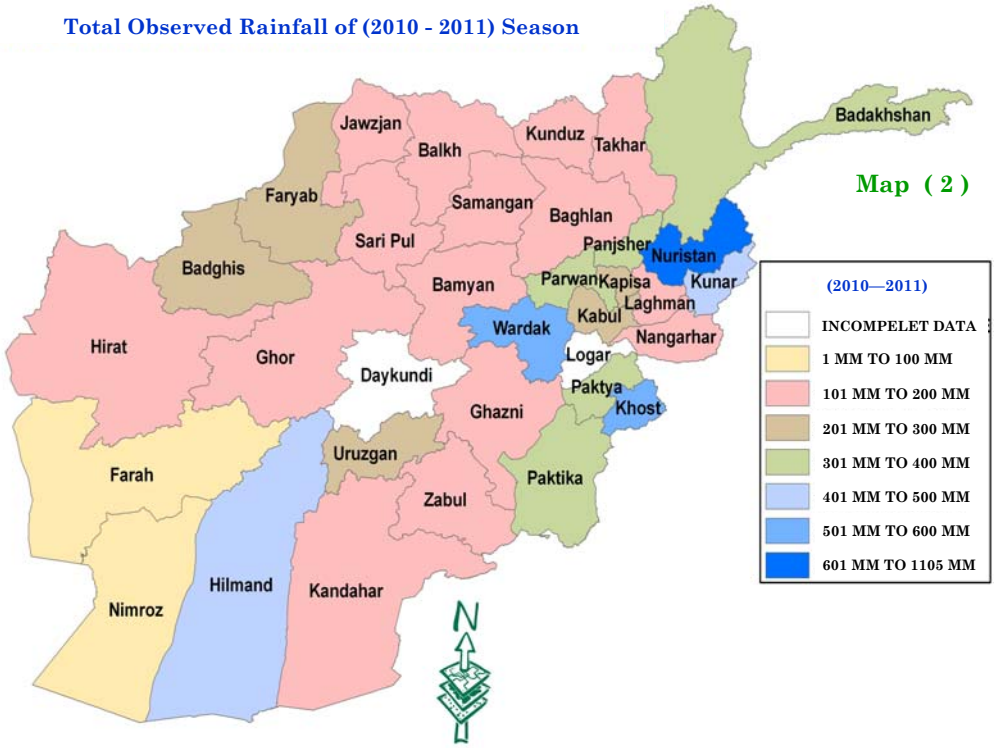
No	Name of Station	Starting Dekad	Ending Dekad	Rainfall season Length/ dekad
		North West		
34	Darzab	1st dekad of Jan	1st dekad of May	**12**
35	Jawzjan ARD	1st dekad of Feb	1st dekad of May	**11**
36	Maimana	2nd dekad of Jan	1st dekad of Apr	**10**
37	Mazar ARD	1st dekad of Feb	1st dekad of May	**11**
38	Sarbagh	2nd dekad of Jan	2nd dekad of June	**10**
39	Sari Pul	2nd dekad of Jan	1st dekad of May	**11**
40	Takhta Pul	2nd dekad of Feb	1st dekad of Apr	**9**
		South		
41	Greshk	1st dekad of Feb	1st dekad of April	**7**
42	Kandahar	1st dekad of Feb	1st dekad of Mar	**6**
43	Lashkargah	1st dekad of Feb	1st dekad of April	**5**
44	Nad Ali	1st dekad of Feb	1st dekad of April	**5**
45	Nawa Gorgin	1st dekad of Feb	1st dekad of April	**5**
46	Uruzgan ARD	1st dekad of Feb	1st dekad of April	**5**
47	Zabul	1st dekad of Feb	1st dekad of Mar	**4**
48	Zaranj	1st dekad of Feb	1st dekad of Mar	**4**
49	Gardiz	2nd dekad of Jan	2nd dekad of Aug	**10**
50	Ghazni Met	2nd dekad of Feb	2nd dekad of April	**7**
51	Sarday	1st dekad of Feb	2nd dekad of April	**12**
		South East		
52	Khost	1st dekad of Feb	3rd dekad of Aug	**17**
53	Moqur	1st dekad of Feb	1st dekad of April	**5**
54	Rohani Baba	3rd dekad of Oct	2nd dekad of Aug	**10**
55	Sharana	1st dekad of Feb	1st dekad of Jul	**10**
56	Tera Forestry	2nd dekad of Feb	3rd dekad of Aug	**12**
		West		
57	Cheghcharan	2nd dekad of Jan	1st dekad of May	**10**
58	Farah	1st dekad of Feb	1st dekad of April	**4**
59	Hirat	2nd dekad of Jan	3rd dekad of Mar	**6**
60	Moqur Badghis	2nd dekad of Jan	1st dekad of May	**9**
61	Qala-e-naw	2nd dekad of Jan	2nd dekad of April	**7**
62	Shindand	2nd dekad of Jan	2nd dekad of April	**6**
63	Zenda jan	2nd dekad of Feb	2nd dekad of April	**6**

Recorded Distribution of Rainfall (2010 – 2011)

Rainfall had different situation in distribution in the regions of the country during the rainfall season of (2010 - 2011). As the map (2) shows the highest amount of rainfall has been recorded in some parts of the Eastern region during the rainfall season (2010 - 2011). Some parts of the Capital, Southeastern and Northwestern regions received moderate rainfall.

Low amount of rainfall occurred in the Northern, and Western regions of the Central Highlands and Neighboring areas and most parts of the Southern region. The Southwestern region did not experience enough rainfall during the rainfall season (2010 - 2911) as in (Map 2).

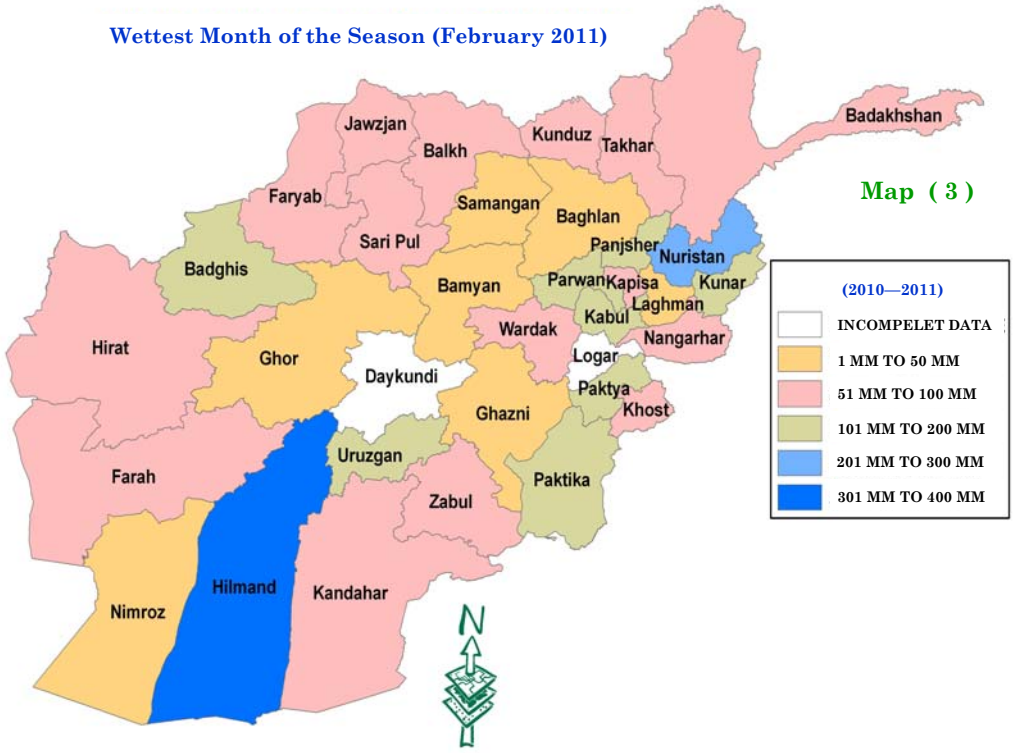
Total Observed Rainfall of (2010 - 2011) Season



Map (2)

The country experienced significant rainfall during February 2011 and the month of February was very wet month based on the recorded data which is shown on the map (3), The highest amount of rainfall has been recorded in some parts of the Eastern and Southern regions.

Wettest Month of the Season (February 2011)

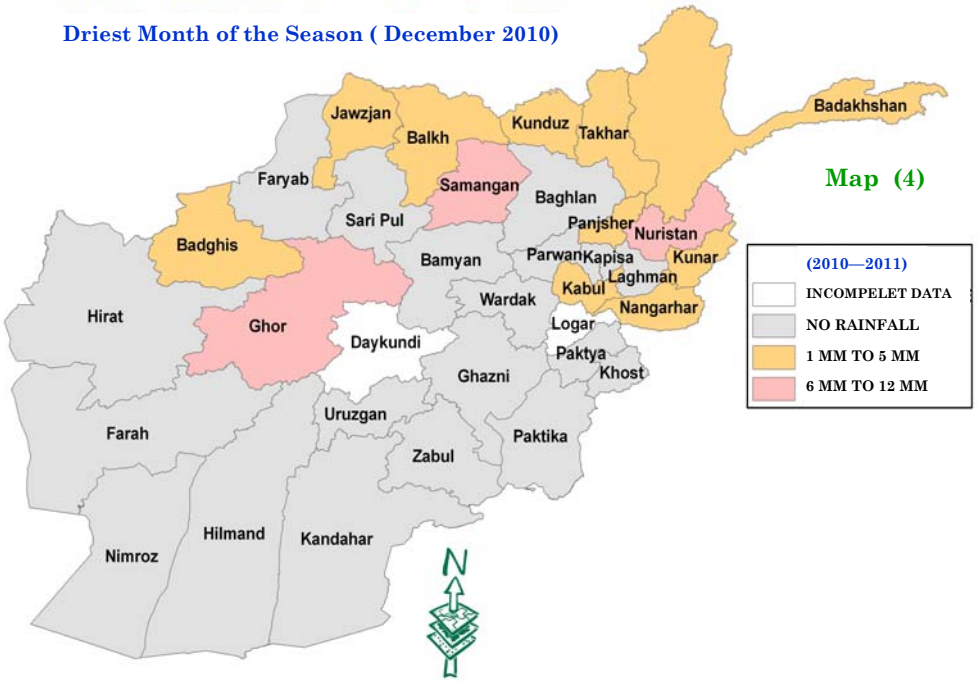


Map (3)

Recorded Distribution of Rainfall (2010 – 2011)

Based on the recorded rainfall the month of December 2010 was the driest month of the rainfall season of (2010 – 2011). However some parts of the country received light rainfall during December, in most parts of the country the seasonal dryness was continued. Map (4) shows distribution of rainfall during the month of December 2010.

Driest Month of the Season (December 2010)

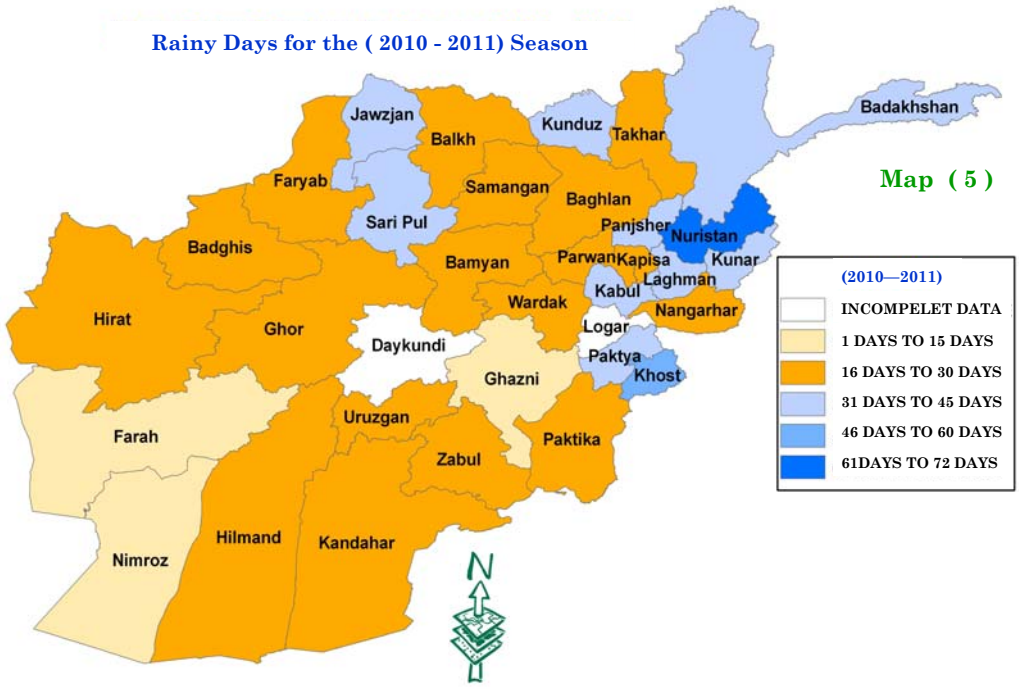


Map (4)

Rainy Days (2009 – 2010)

Comparison of rainy days for the (2010 - 2011) season with the (2009 - 2010) season shows significant decrease of rainy days during the rainfall season of (2010 - 2011) over the previous season of (2009 - 2010). Maximum number of rainy days has been recorded as 72 days in Paroon during the rainfall season of (2010 - 2011), and the minimum number of rainy days recorded was 11 days in Farah province (South western region). Figure (5) shows yearly number of rainy days for the rainfall season (2009 - 2010) across the country. Some parts in the Eastern, Southeastern , Capital ,and Northeastern regions experienced the most number of rainy days during the rainfall season of (2010 - 2011), but in most parts of the country rainy days occurred less frequently, while Southwestern and Southern regions of the country had the lowest occurrences of rainy days.

Rainy Days for the (2010 - 2011) Season



Map (5)

Central Region: Badam Bagh, Chack, Charikar, Darulaman, Panjshir, Gul Khana, Jabulsaraj, Jaghatoo, Kabul, Kapisa, Kariz Mir, Logar, Paghman, Qargha and Sarobi stations are located in this region. During the (2010 – 2011) season, average rainfall of this region was **210.2** mm. Moderate rainfall occurred in this region during the rainfall season of (2010– 2011). February, March, April and May were the wet months in this region with the maximum recorded value (more than 15 mm) of rainfall by dekad in mm is as follow:

Stations	2010				20211							
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Badambagh						50.3 mm 2nd dekad	15.5 mm 1st dekad	26 mm 2nd dekad	16 mm 1st dekad			
Chrikar						98 mm 1st dekad	43 mm 1st dekad	28 mm 1st dekad	15 mm 1st dekad			
Darulaman						50.8 mm 2nd dekad		36.1 mm1st dekad				
Panjshir	38 mm 2nd dekad		25 mm 1st dekad			41 mm 1st dekad	115 mm 3rd dekad	31.5 mm 2nd dekad	24 mm 1st dekad			
Gul Khana						41.1 mm 1st dekad	31 mm 1st dekad	33.3 mm 3rd dekad				
Jaghatoo						62 mm 1st dekad	19 mm 1st dekad	48 mm 1st dekad	46 mm 1st dekad			
Kabul						45.7 mm 1st dekad	22.5 mm 1st dekad	47.5 mm 3rd dekad	16.7 mm 1st dekad			
Kapisa						66 mm 1st dekad	26.5mm 1st dekad	26.2 mm 2nd dekad				
Kariz Mir						40 mm 1st dekad	25 mm 1st dekad	17mm 2nd dekad				
Paghman						58 mm 2nd dekad	21 mm 1st dekad	17 mm 2nd dekad				
Qargha						45 mm 1st dekad		29 mm 2nd dekad				
Sarobi			23 mm 1st dekad			42.5 mm 1st dekad	34.7 mm 1st dekad					

Central : Bamyan, Bamyan ARD, Panjab and Yakawlang stations are located in this region . During the (2010 – 2011) season, average rainfall of this region was : **290.9** mm The Central Highlands region experienced moderate rainfall and during the rainfall season (2010 - 2011). The maximum rainfall amount recorded by the dekad in mm was as follows:

Stations	2010				2011							
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Bamyan ARD							19 mm 3rd dekad	27 mm 1st dekad	20 mm 1st dekad			
Panjab			25 mm 1st dekad			22 mm 1st dekad		42 mm 1st dekad	15mm 3rd dekad			
Yakawlang							16 mm 3rd dekad	22 mm 1st dekad				

East Region: Agam, Asmar, Farm Jadeed, Ghazi Abad, Jalalabad, Laghman and Mehtarlam stations are located in this region During the 2010– 2011 season, average rainfall of this region was : **402.1** mm This region experienced significant rainfall during the rainfall season (2010 – 2011) in this region rainfall continued up to August 2011, the maximum rainfall which has been recorded by dekad in mm is as follow:

Stations	2010				2011							
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Agam	17 mm 2nd dekad					37 mm 1st dekad	18 mm 1st dekad	30 mm 1st dekad				
FormJaded							16.5 mm 1st dekad					
Ghazi Abad						35 mm 2nd dekad		34 mm 2nd dekad			20 mm 2nd dekad	33 mm 3rd dekad
Jalabad	16 mm 2nd dekad					21 mm 2nd dekad	17 mm 1st dekad					23 mm 3rd dekad
Laghman	31 mm 2nd dekad		18 mm 1st dekad		22 mm 2nd dekad	51 mm 2nd dekad	34 mm 1st dekad	30 mm 1st dekad				25 mm 3rd dekad
Mehtarlam						19 mm 2nd dekad	32 mm 1st dekad	23 mm 2nd dekad				21 mm 3rd dekad
Asmar	47 mm 1st dekad				18 mm 2nd dekad	94 mm 1st dekad	63 mm 1st dekad	31 mm 1st dekad		24 mm 2nd dekad	28 mm 3rd dekad	18mm 3rd dekad

North East Region: Chardara, Aqtepa, Baghlan, Baharak, Faizabad, Imam Sahib, Kunduz ARF, Taluqan and Aibak stations are located in this region During the (2010 – 2011) season, average rainfall of this region was : **176.1** mm. Rainfall had a significant decrease in the Northeastern region during the rainfall season of 2010- 2011 over the previous season (2010 - 2011). In this region rainfall started in January 2011 and continued up to June 2011. The maximum value of rainfall recorded in mm in different stations by dekad is listed below:

Stations	2010				2011							
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Chardara					21 mm 2nd dekad	24.3 mm 1st dekad	24 mm 1st dekad					
Aqtepa					48 mm 2nd dekad		16 mm 1st dekad					
Baghlan						21.2 mm 3rd dekad	32.4 mm 3rd dekad	37 mm 1st dekad	21.6 mm 1st dekad			
Baharak					17.1 mm 1st dekad		21 mm 3rd dekad	29 mm 1st dekad	44 mm 1st dekad			
Faizabad					46 mm 2nd dekad	36 mm 3rd dekad	36 mm 3rd dekad	45 mm 1st dekad	28 mm 1st dekad			
Imamsahib					21.7 mm 2nd dekad	21 mm 1st dekad	18.4 mm 1st dekad					
Kunduz					23.3 mm 2nd delad	23.8 mm 1st dekad	22 mm 1st dekad					
Taluqan					29 mm 2nd dekad	19 mm 2nd dekad	34 mm 1st dekad					
Aibak						19 mm 2nd dekad			36 mm 1st dekad	19 mm 2nd dekad		

North West Region Darzab, Jawzjan, Kolor or khuram, Maimana, Mazar, Mazarisharif, Sarbagh, Sari Pul, Sheberghan and Takhta Pul stations are located in this region. During the (2010 – 2011) season, average rainfall of this region is **220.3** mm. In This region rainfall had a decrease during the rainfall season of (2010 - 2011) over the previous season in (2009 - 2010).The maximum rainfall has been recorded in mm and is shown below:

Stations	2010				2011							
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Darzab						28.6 mm 2nd dekad	32.4 mm 3rd dekad	28.5 mm 1st dekad	24.4 mm 1st dekad			
Jawzjan ARD						18.5 mm 2nd dekad		15.1 mm 1st dekad	27 mm 1st dekad			
Maimana					16 mm 2nd dekad	30.5 mm 3rd dekad	49 mm 3rd dekad	27 mm 1st dekad				
Mazar ARD						42 mm 2nd dekad	40 mm 3rd dekad	36 mm 1st dekad	15 mm 1st dekad			
Sarbagh						22 mm 3rd dekad	32 mm 3rd dekad	23 mm 1st dekad	21 mm 1st dekad	15 mm d 2n dekad		
Sari Pul					19 mm 2nd dekad	37 mm 3rd dekad	23 mm 1st dekad					
Sheberghan												
Takhtapul						16 mm 2nd dekad						

South Region: Greshk, Kandahar, Lashkargah, Nad Ali. Nawa Gorgin, Uruzgan, Zabul, Zaranj, Gardiz, Ghazni Met and Sarday stations are located in this region. During the season (2010 - 2011) the average rainfall of this region was **329.9** mm. The rainfall had an increase in this region during the rainfall season (2010 - 2011) compared to the previous season (2009 - 2010). The maximum value of rainfall in mm by dekad in the region is as follow:

Stations	2010				2011							
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Greshk							16.6 mm 2nd dekad		34 mm 1st dekad			
Kandahar							52 mm 2nd dekad	48 mm 1st dekad				
Lashkargah						91.1 mm 1st dekad	93 mm 1st dekad	23 mm 1st dekad				
Nad Ali						96.9 mm 1st dekad	97 mm 1st dekad	29 mm 1st dekad				
Nawa Gorgin						16 mm 2nd dekad		30 mm 1st dekad				
Urazgan ARD						38.7 mm 2nd dekad	58 mm 1st dekad	17 mm 1st dekad				
Zabul						28 mm 2nd dekad	58 mm 1st dekad					
Zaranj						26 mm 1st dekad						
Gardiz							28.2 mm 1st dekad	59.9 mm 1st dekad				
Ghazni						36 mm 2nd dekad	17.3 mm 1st dekad		25.5 mm 1st dekad			
Sardy						18 mm 1st dekad		40 mm 2nd dekad				

South East Region: Khost, Moqur, Rohani Baba, Tera Forestry and Sharana stations are located in this region, The average rainfall of this region was **281.0** mm. In the Southeastern region rainfall had a significant decrease during the rainfall season (2010 - 2011) over the previous season (2009 - 2010). The maximum rainfall recorded in this region in mm by dekad is as follow:

Stations	2010				2011							
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Khost						32 mm 2nd dekad	22 mm 1st dekad	56 mm 1st dekad	15 mm 1st dekad	38 mm 3rd d ekad	108 mm 3rd dekad	63 mm 3rd dekad
Muqur						24 mm 2nd dekad		21 mm 1st dekad				
Rohani Baba						68 mm 1st dekad	17 mm 1st dekad	35 mm 1st dekad				16 mm 2nd dekad
Sharana						23 mm 1st dekad	26 mm 1st dekad	40.5 mm 1st dekad				
Tera Forestry						74 mm 1st dekad	36 mm 1st dekad	34 mm 1st dekad				

West Region: Cheghcharan, Farah, Hirat, Moqur Badghis, Qala-e-naw, Shindand and Zenda jan stations are located in this region, the yearly rainfall of this regions was **197.2** mm, thelowest amount of the rainfall recorded in this region during the rainfall season (2010 - 2011). Ranifall had significantly decreased in this region during the rainfall season of (2010 – 2011) over the previous season .The maximum rainfall recorded in this region in mm by dekad is as follow:

Stations	2010				2011							
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Cheghcheran								45 mm 1st dekad				
Farah												
Herat						25 mm 2nd dekad		15.5 mm 1st dekad				
Muqur Badghis					15 mm 2nd dekad	58 mm 1st dekad	35 mm 3rd dekad	22 mm 1st dekad	45 mm 1st dekad			
Qala – e – Naw						52 mm 1st dekad	45 mm 3rd dekad					
Shindand					19 mm 2nd dekad	40 mm 2nd 1st dekad						

Total Snow Days (2010 – 2011)

Snowy days had an increase during the rainfall season (2010 - 2011) over the previous season of (2009 - 2010) around the country, and snow packs developed in snow covered areas and as a result the snow depth also increased.

Maximum number of snowy days recorded in Mula Gulam was 29 snowy days, in Paroon 21 and in Kohmard 16 days, whereas the lowest number of snow days recorded in Mazar, Takhta Pul and Asmar was 1 during the rainfall season (2010-

Snow Days of the Season 2010- 2011 — Table (2)

Name	Region	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total Snowy Days
Badam bagh	Central	0	0	0	0	0	12	10	0	0	0	0	0	**22**
Chack		0	0	0	0	0	0	0	0	0	0	0	0	**0**
Charikar		0	0	0	0	1	36	8	0	0	0	0	0	**45**
Dara Panjsheer		0	0	0	0	16	135	0	0	0	0	0	0	**151**
Darulaman		0	0	0	0	0	59	16	0	0	0	0	0	**75**
Dashtak		0	0	0	0	19	20	5	0	0	0	0	0	**44**
Gul Khana		0	0	0	0	6	104	6	0	0	0	0	0	**116**
Jaghatoo		0	0	0	0	10	108	6	0	0	0	0	0	**124**
Kapisa Agri		0	0	0	0	5	14	10	0	0	0	0	0	**29**
Kariz Mir		0	0	0	0	3	101	5	0	0	0	0	0	**109**
Paghman		0	0	0	0	6	104	6	0	0	0	0	0	**116**
Qargha		0	0	0	0	0	33	25.5	0	0	0	0	0	**58.5**
Bamyan ARD		0	0	0	0	11.5	5	1.5	0	0	0	0	0	**18**
Panjab		0	0	0	0	44	105	0	0	0	0	0	0	**149**
Shebar		0	2	3	0	18	39	6.5	0	0	0	0	0	**68.5**
Yakawlang		0	0	0	7	17	33	46	0	0	0	0	0	**103**
Chardara	North East	0	0	0	0	7	7	0	0	0	0	0	0	**14**
Aaqtepa		0	0	0	0	7	0	0	0	0	0	0	0	**7**
Baharak		0	0	0	0	35	4	0	0	0	0	0	0	**39**
Faizabad		0	0	0	0	30	12	0	0	0	0	0	0	**42**
Kunduz ARD		0	0	0	0	7	7	0	0	0	0	0	0	**14**
Urgo		0	0	0	0	66	33	19	0	0	0	0	0	**118**
Aibak	North West	0	0	0	0	11	8	3	0	0	0	0	0	**22**
Dara-e-Soof		0	0	0	0	21	3	0	0	0	0	0	0	**24**
Darzab		0	0	0	0	12	29	11.5	0	0	0	0	0	**52.5**
Jawzjan ARD		0	0	0	0	2	12	0	0	0	0	0	0	**14**
Maimana		0	0	0	0	14	9.5	13	0	0	0	0	0	**36.5**
Sari Pul		0	0	0	0	2	35	5	0	0	0	0	0	**42**
Takhta Pul		0	0	0	0	10	0	0	0	0	0	0	0	**10**
Zabul	South	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Moqur	South East	0	0	0	0	0	40	14	0	0	0	0	0	**54**
Rohani Baba		0	0	0	0	0	63	6	0	0	0	0	0	**69**
Sharana		0	0	0	0	0	53	14.5	0	0	0	0	0	**67.5**
Tera Forestry		0	0	0	1	21	122	45	0	0	0	0	0	**189**
Cheghcharan	West	0	0	0	0	35.5	22	4	0	0	0	0	0	**61.5**
Muqur Badghis		0	0	0	0	20	12	24	0	0	0	0	0	**56**
Qala-e-naw		0	0	0	0	20	15	25	0	0	0	0	0	**60**

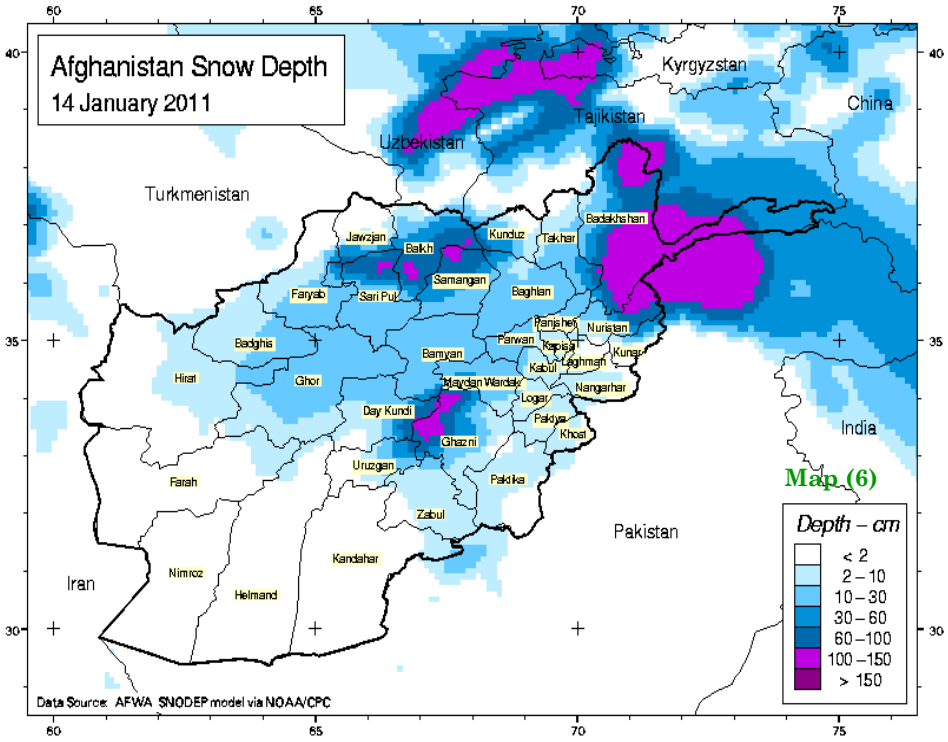
Afghanistan Snow Depth (2010 – 2011)

The snowfall started in the Central Highlands in October 2010 and continued up to April 2011 in the Central Highlands. At the begining of the rainfall season snow was light but during January and February 2011 it increased in the most parts.

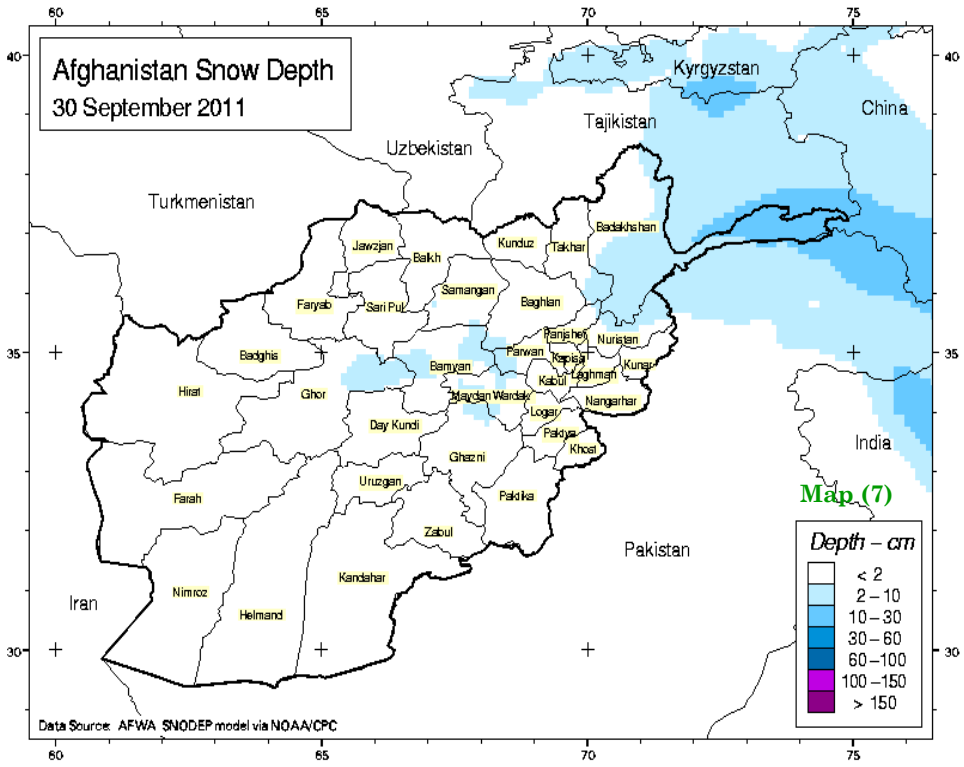
But snow extent and depth had a decrease in most parts of the snow covered areas during the rainfall season (2010 - 2011) compared to previous season of 2009- 2010).

In early January 2010 snow pack built up and increased the snow extent and depth particularly in the Central Highlands and Northeastern mountains (map 6).

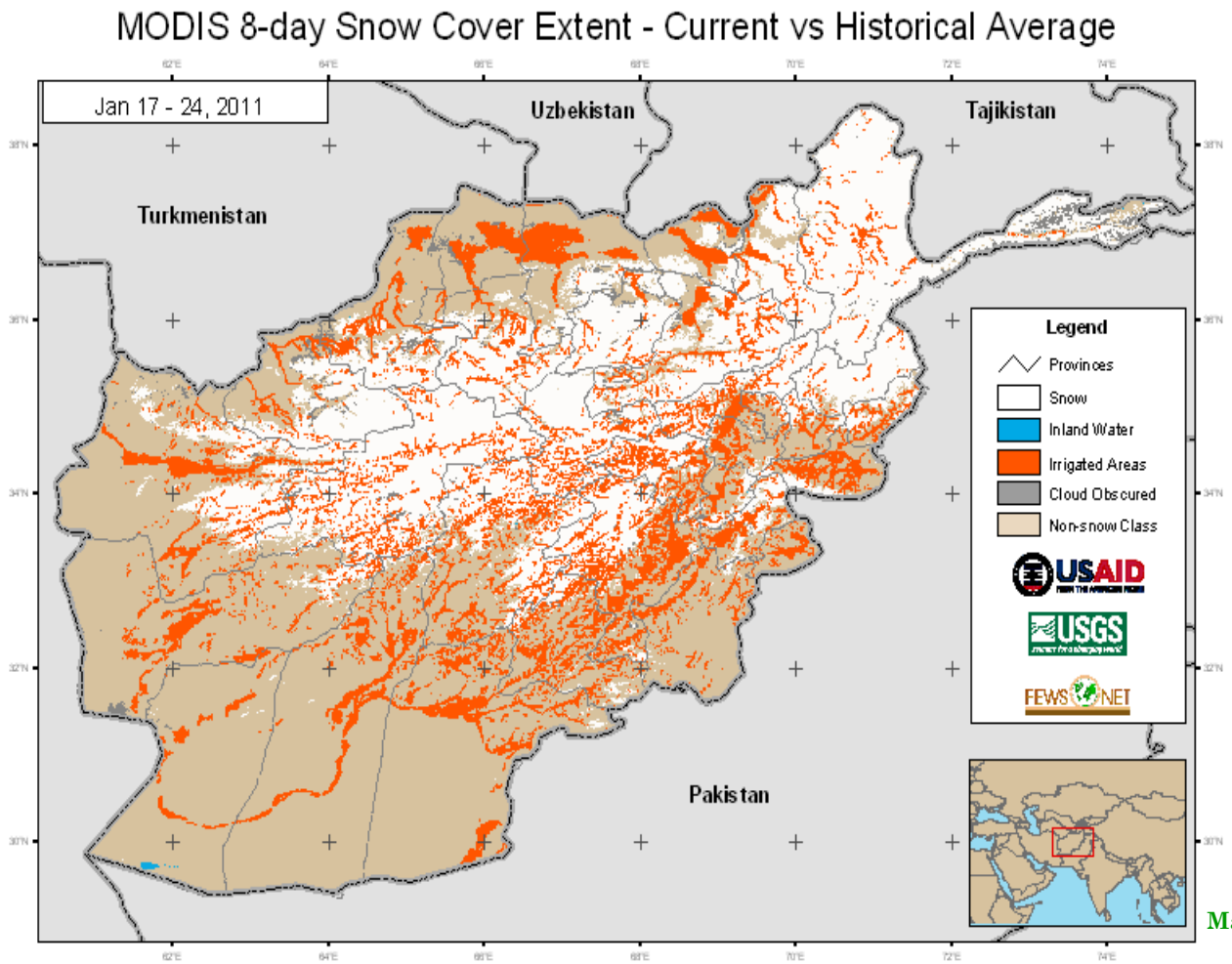
Map (7) shows snow pack now confined to the high elevations of the Northeast, as is typical for this time of the year, as map (7) shows the snow depth is 10 to 30 cm in the extreme portion of the Northeastern region.



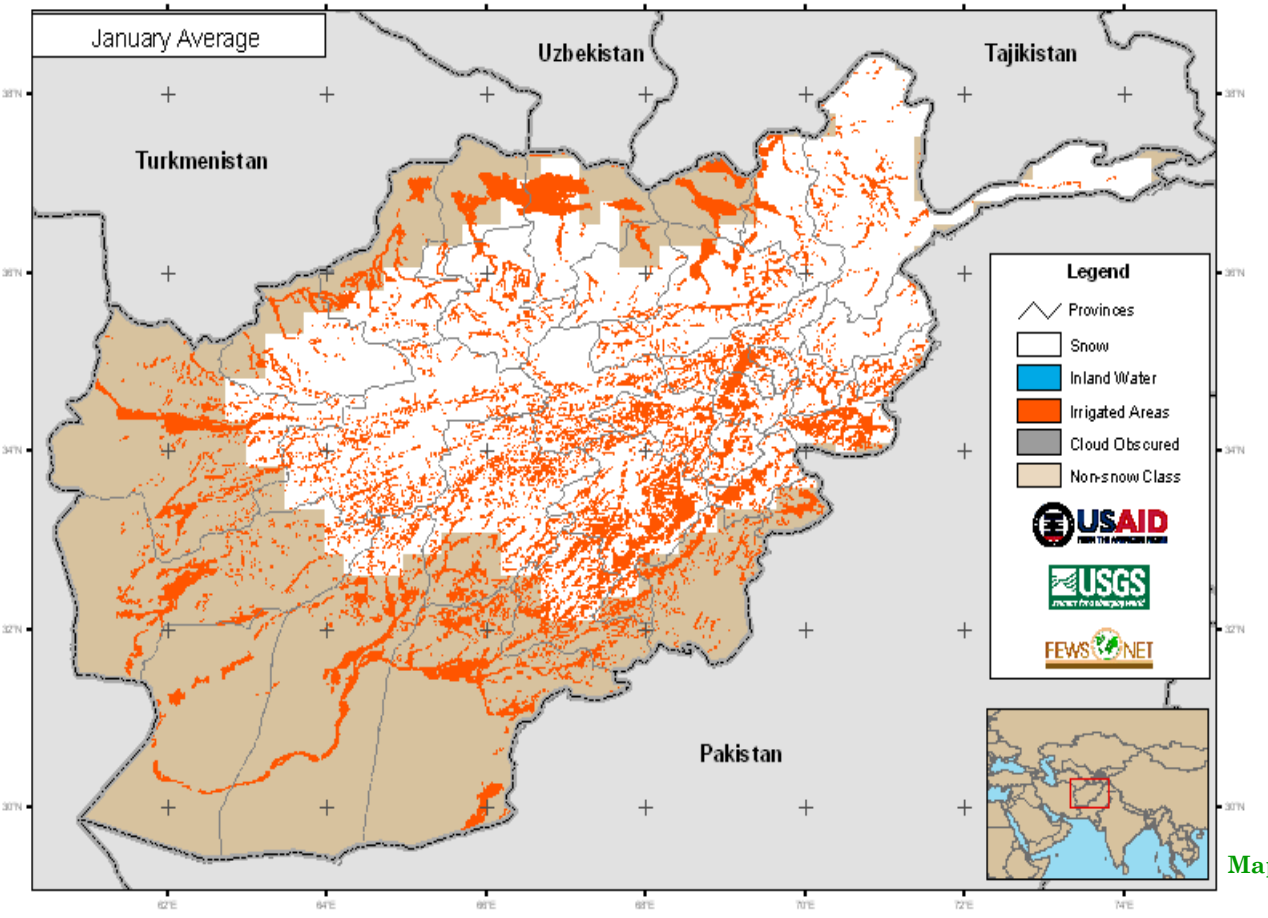
Map (6)



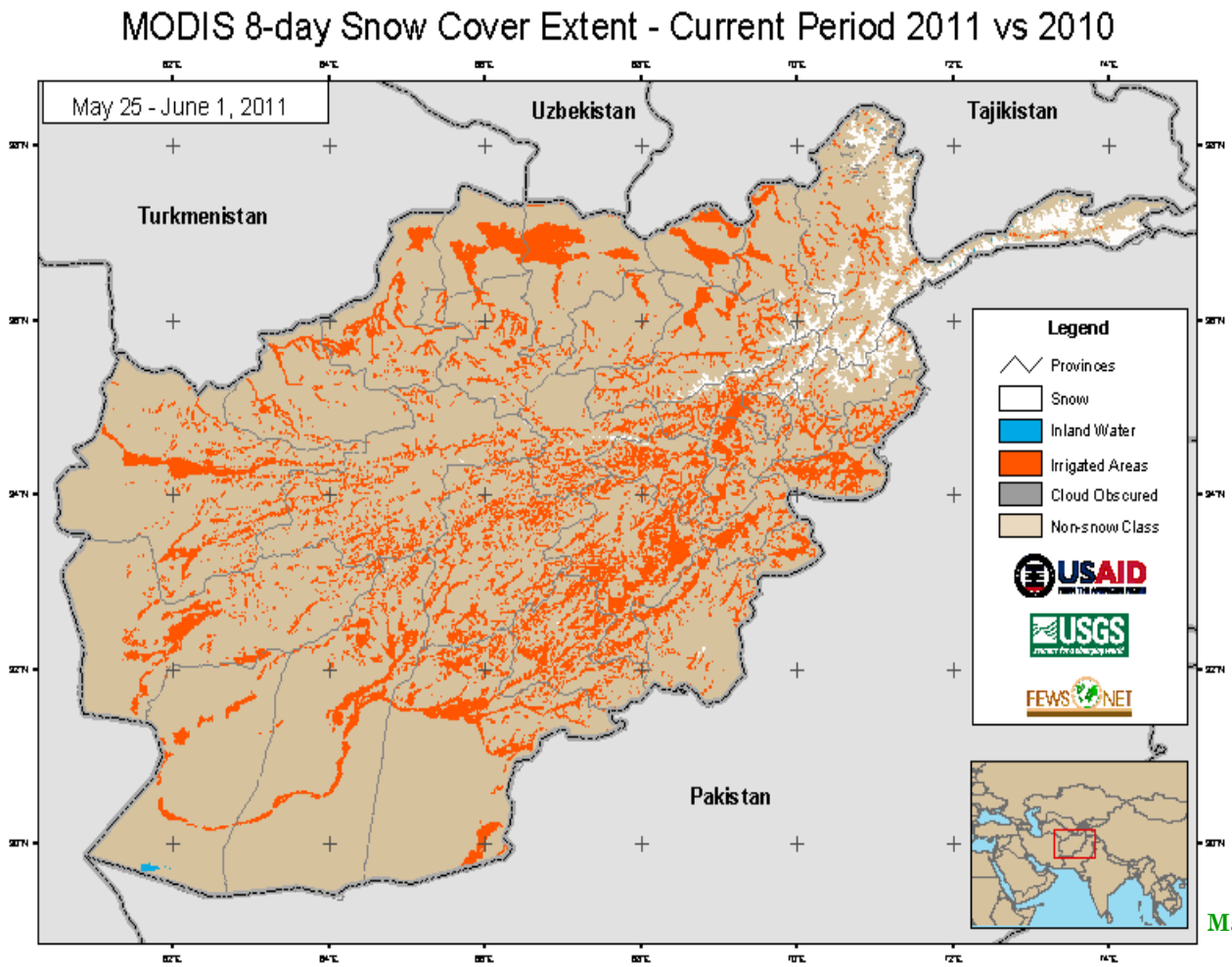
Map (7)


MODIS 8-day Snow Cover Extent - Current vs Historical Average
Jan 17 - 24, 2011
Uzbekistan
Tajikistan
Turkmenistan
Pakistan
Legend
Provinces
Snow
Inland Water
Irrigated Areas
Cloud Obscured
Non-snow Class
USAID
USGS
FEWS NET

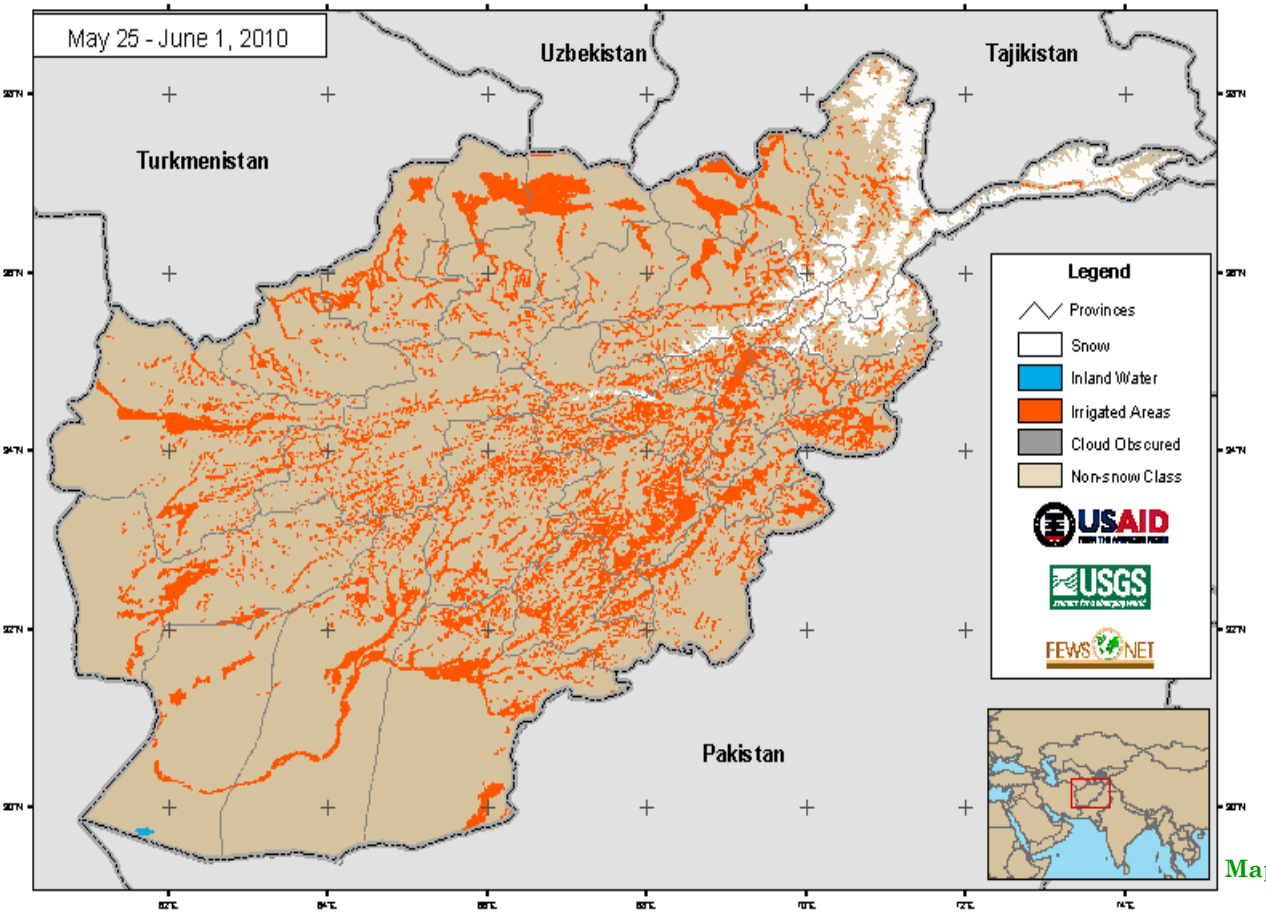
Map (8)


January Average
Uzbekistan
Tajikistan
Turkmenistan
Pakistan
Legend
Provinces
Snow
Inland Water
Irrigated Areas
Cloud Obscured
Non-snow Class
USAID
USGS
FEWS NET

Map (9)


MODIS 8-day Snow Cover Extent - Current Period 2011 vs 2010
May 25 - June 1, 2011
Uzbekistan
Tajikistan
Turkmenistan
Pakistan
Legend
Provinces
Snow
Inland Water
Irrigated Areas
Cloud Obscured
Non-snow Class
USAID
USGS
FEWS NET

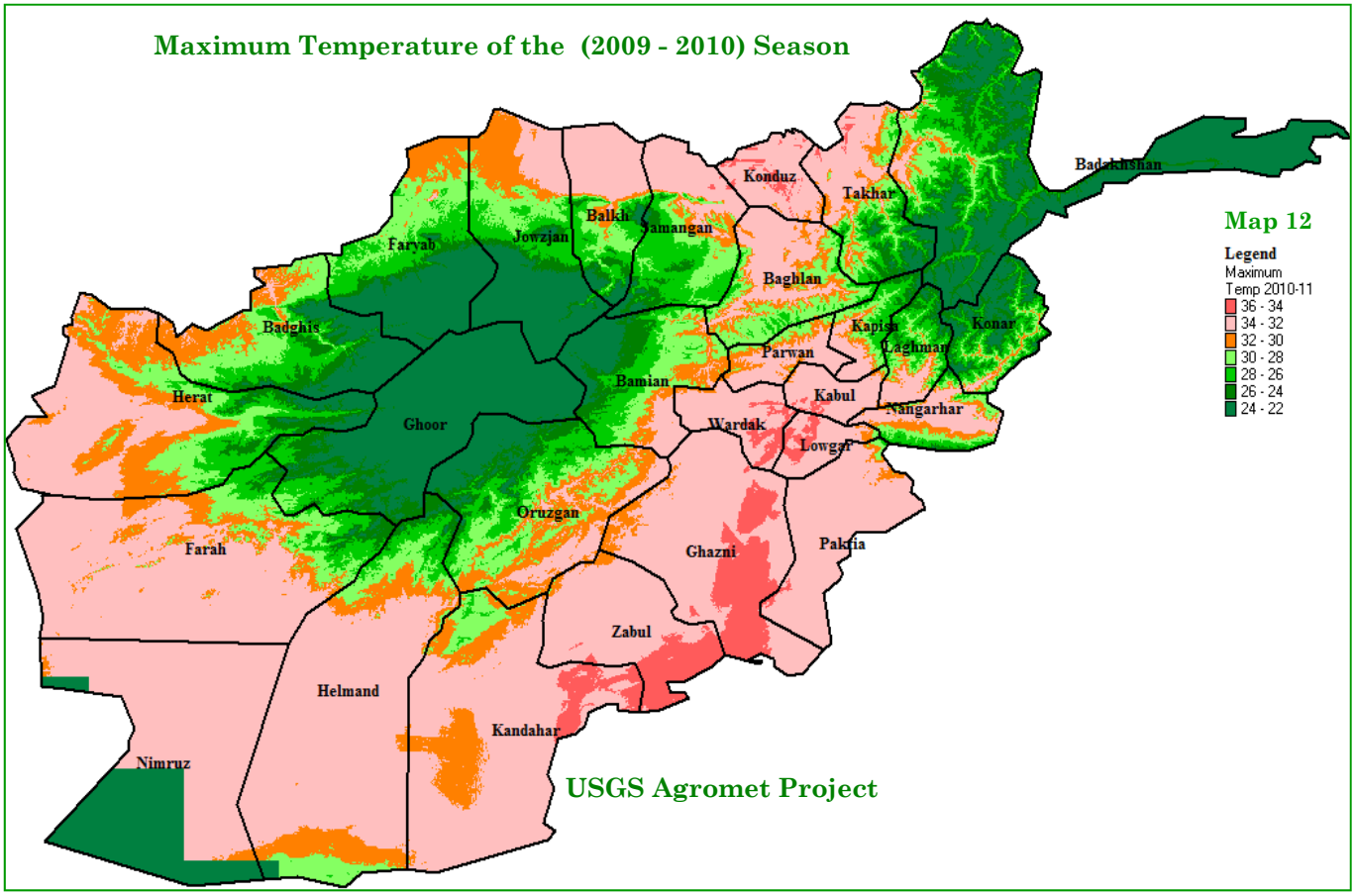
Map (10)


May 25 - June 1, 2010
Uzbekistan
Tajikistan
Turkmenistan
Pakistan
Legend
Provinces
Snow
Inland Water
Irrigated Areas
Cloud Obscured
Non-snow Class
USAID
USGS
FEWS NET

Map (11)

The temperature for the growing season of (2010 - 2011) had and increase over the last season (2009 - 2010) across the country. After the month of March 2011 temperature began to warm up and for a major period of the season the country experienced warmer temperatures than usual.

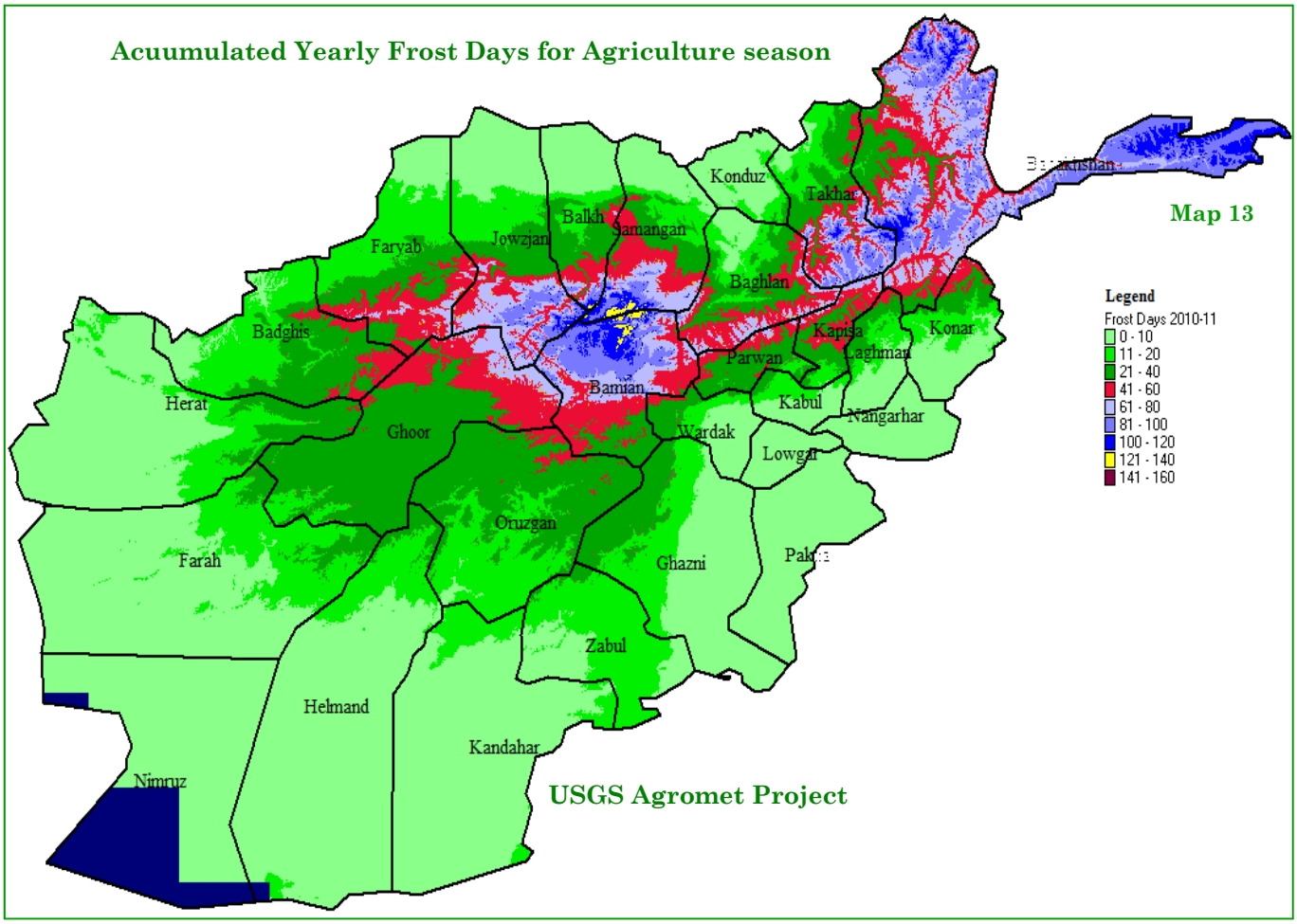
As Map (11) shows the Southwestern, Southern, some Southeastern and some parts in the Eastern regions experienced extreme hot weather during the growing season (2010 - 2011). The maximum degree of temperate recorded was 47 °C in Zaranj province (Southwest) during the growing season (2010 - 2011).



Frost Days Recorded

Based on the temperature recorded data frosty days had an increase during the Agricultural season of (2010 - 2011) compared to previous season (2000 - 2010) all around the country. Temperature dropped to a freezing point in September 2010 in the Central Highlands and continued up to April 2011 in the above mentioned region. As Map (12) shows the Central Highlands and neighboring areas, some parts of the Capital regions, and Northeastern region experienced the highest number of frosty days during the agricultural Season (2010 - 2011), and the Southern, Southwestern, andWestern regions recorded the lowest number of frosty days.

The maximum number of forsty days was recorded 146 in Bamyan, 122 in Gazni (Southeastern) region,111 in Kabul (Central) and 101 frosty days in Gardiz province. The minimum number of frosty days were 3 frost days in Jalalabad (Eastern region).



Map 13