

Annex 1:

Agromet Network Agromet Project Situation

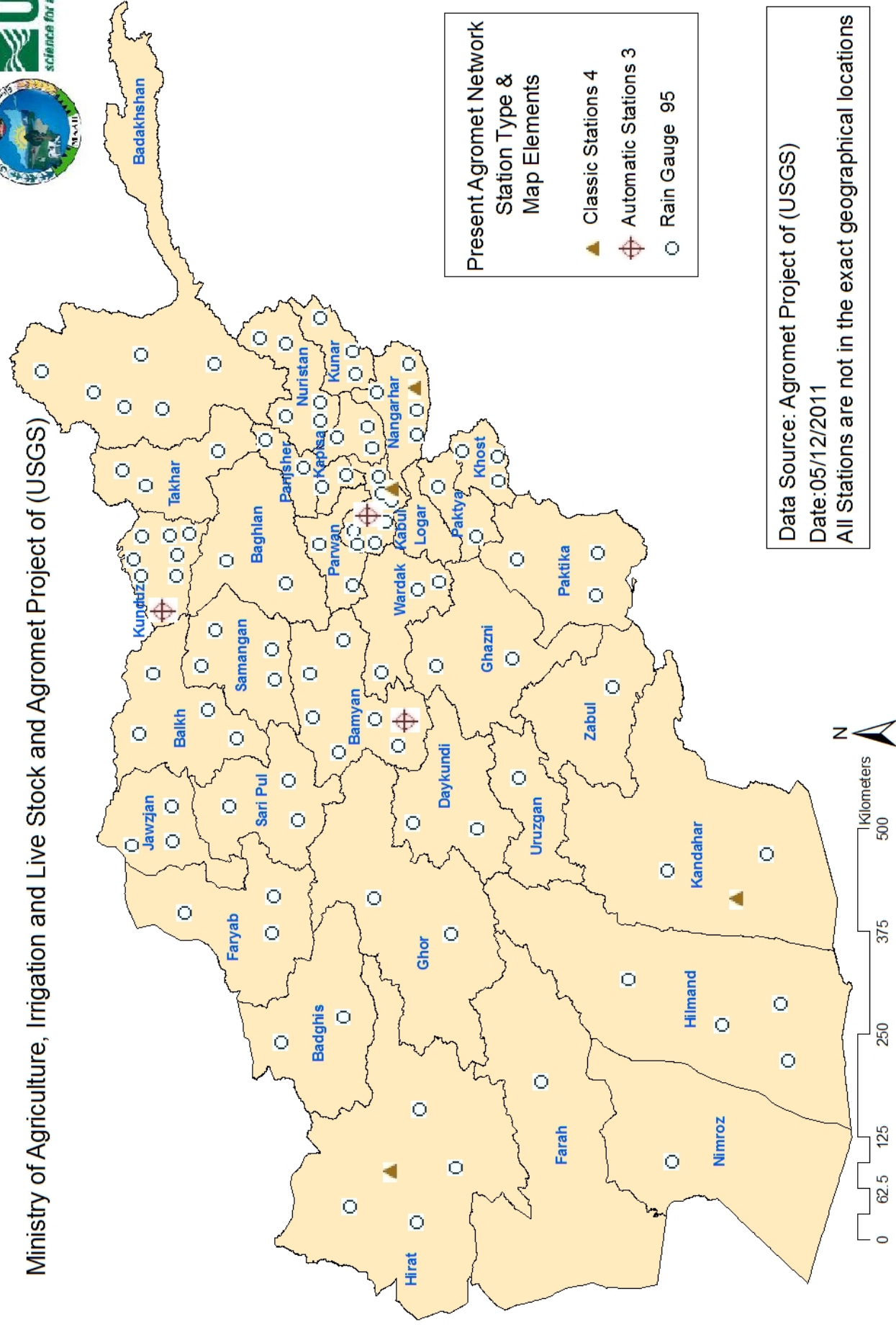
A: Weather Stations

B: Crop Monitoring

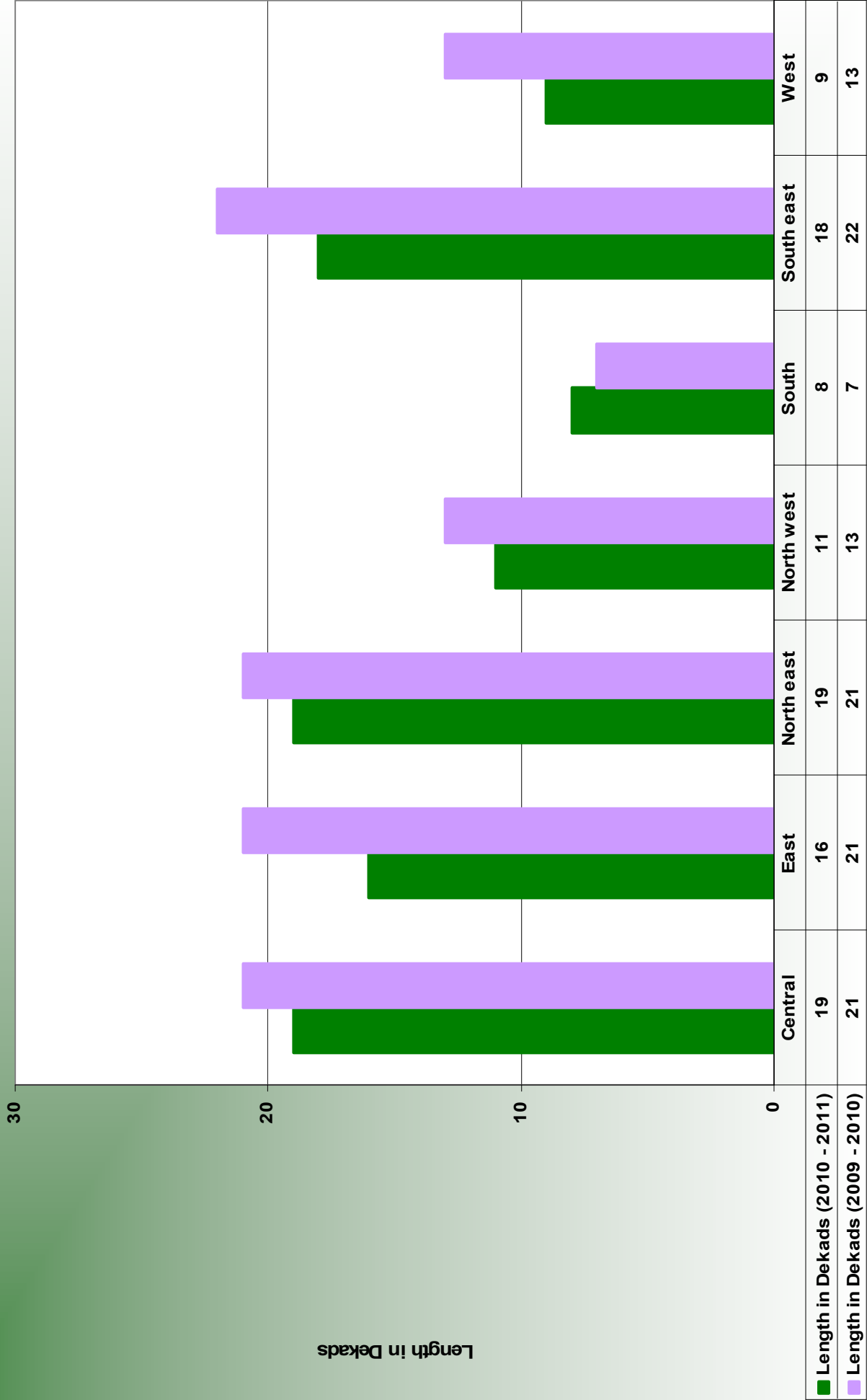
MAIL/USGS Agromet Project: Status as of September 2011

- 1) **MAIL/USGS** Agromet Project was established in Afghanistan 1st January 2004 to install a network of Agrometeorological stations and develop a complete Agromet services. To date, the Agromet Project has installed and is managing 102 sites. All 102 sites record rainfall and snowfall. In addition to rainfall and snowfall, 92 out of 102 report on crop (wheat, maize, rice and barley), pasture and grazing conditions twice a month. The information collected includes all adverse weather conditions, shortage of agricultural inputs, weeds, pests, diseases etc. Other recorded information includes crop phenological stages(land preparation), planting and harvesting dates, expected and actual The Agromet project receive data from 18 classic station from AMA which consist 8 meteorological parameter and publish on its monthly bulletins. providing observations three times a day.
- 2) The Agromet project has developed an Agrometeorological database and information system. Information in the data base includes data from past 7 years (taken from 102 stations), historical data from 1942 to 1993 (depending on sites) with up to 29 weather parameters. The data base heart was built using the “Agrometshell” which includes around 20 Agrometeorological applications fully integrated into the database.
- 3) Agromet Project has trained 260 observers, including people from different Government and Non Government Organizations, although some of the ministry national Agromet counterpart had been sent to abroad for getting knowledge in the Agromet field.
- 4) Agromet Project has some 102 Observers paid through incentives, Four national MAIL/AMA counterpart and 3 USGS Agro meteorological staff.
- 5) Agromet Project currently prepares weekly reports, monthly Agromet bulletins and Seasonal Bulletins based on Ground and Satellites observation., water balance model and rainfall probabilities and so on, with updated Agrometeorological situation analysis and graphs, maps etc. the bulletin is transmitted to key players in English and dari, the Agromet project has also produced papers for technical meeting, press releases and special newswatches throughout the agricultural year.
- 6) The Agromet project is working closely with the united States Geological Survey (USGS), regular data and analysis are also transmitted regularly to over 1150 local and international users around the country and outside the country as well.
- 7) In general, the Agromet Project provides timely information and data related to the impact of climate on agriculture and food security to the decision makers in the government and to the aid community.

Ministry of Agriculture, Irrigation and Live Stock and Agromet Project of (USGS)

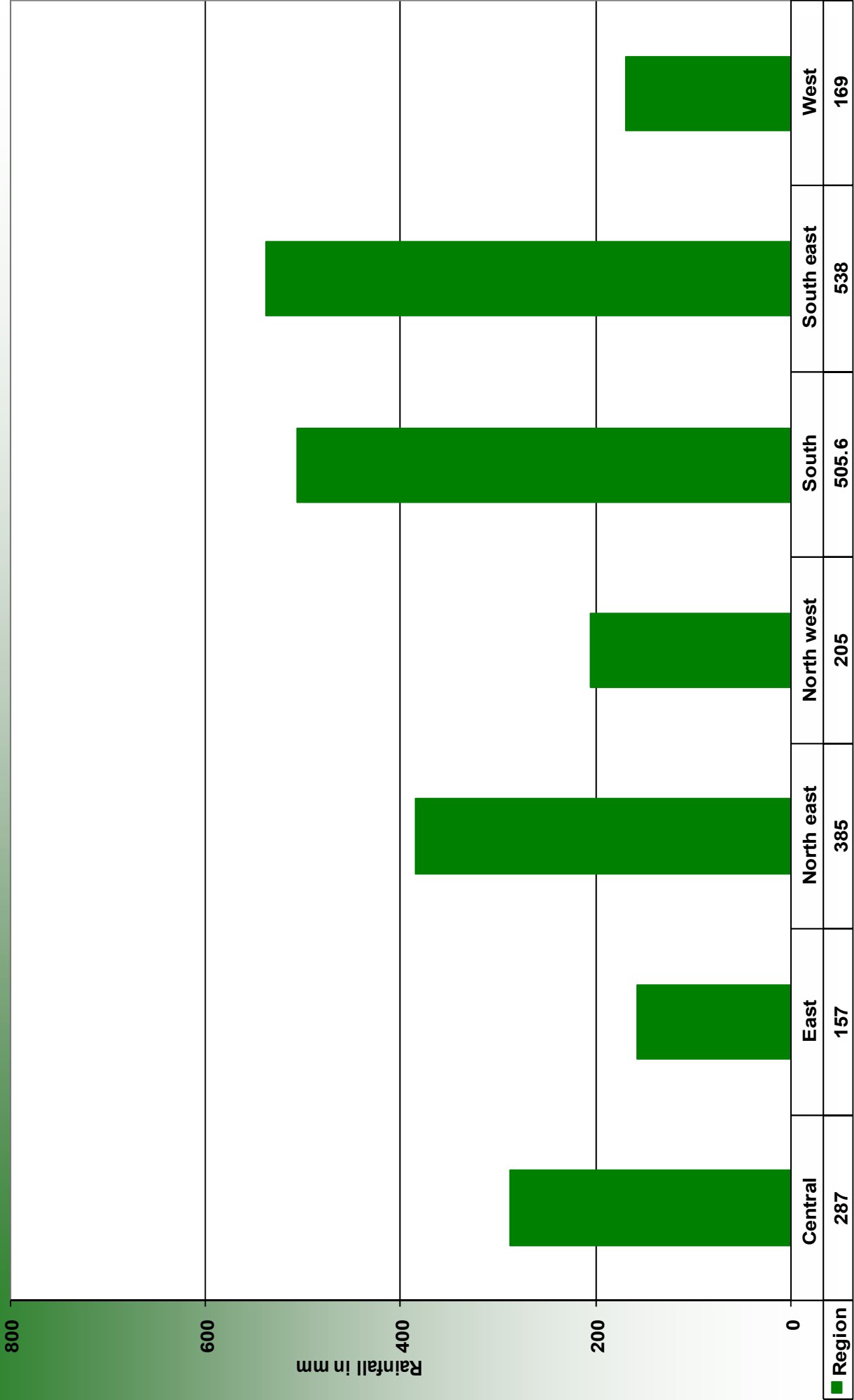


Length of Rainfall Season in Dekads by Region (2010 - 2011) Compared to (2009 - 2010)

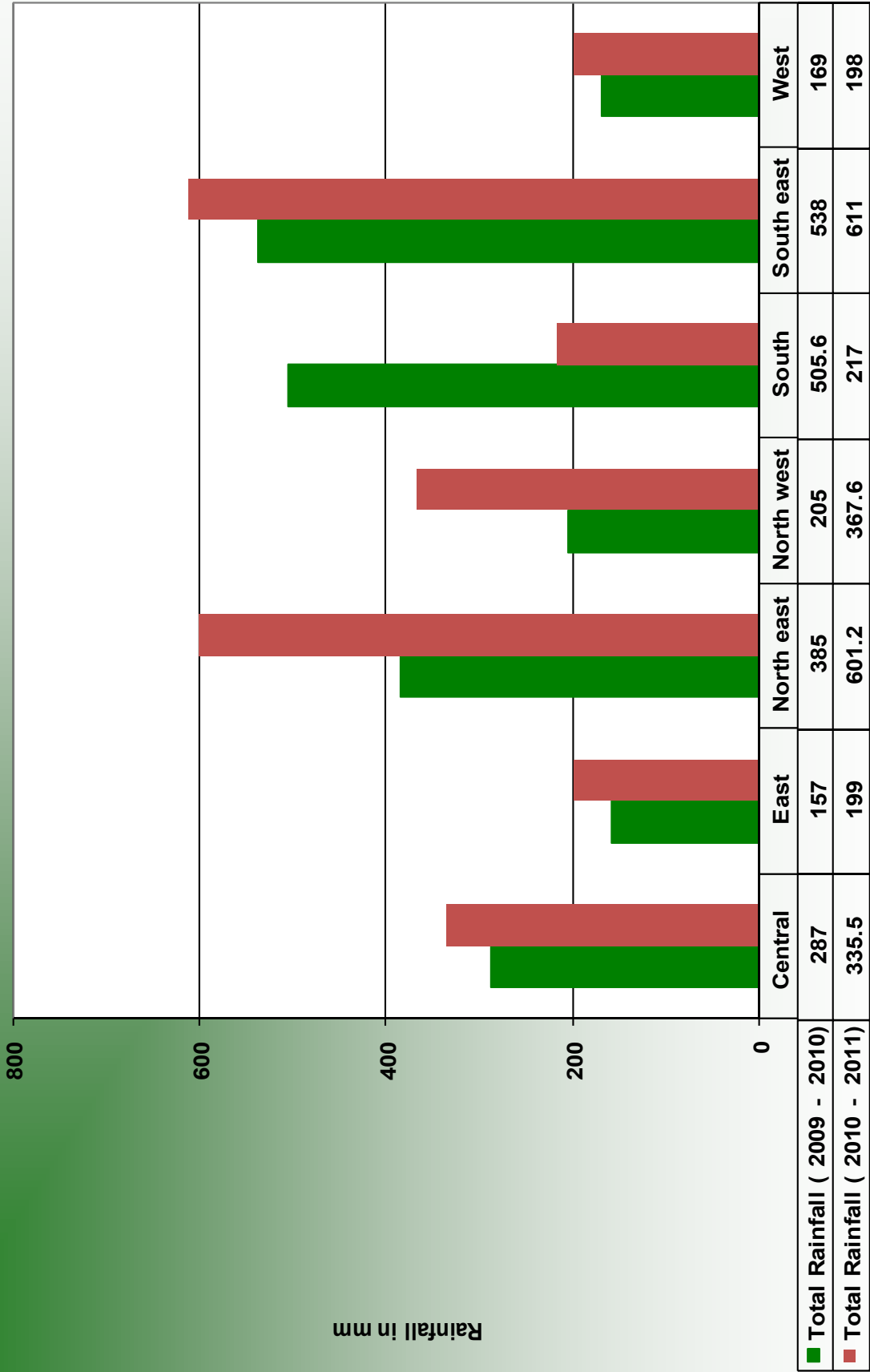


Average recorded Rainfall (mm) By Regions (2010 - 2011) Season													
Region	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Yearly
Central	27	0	0	1	5	118	35	61	10	0	4	26	287
East	16	0	13	4	1	34	33	28	1	2	0	25	157
North east	15	0	0	4	77	74	78	103	29	15	0	0	395
North west	0	8	3	4	33.3	60.5	50.3	45	32	3	0	0	239.1
South	0	0	0	0	5.2	370.9	97	32.5	0	0	0	0	505.6
South east	0	0	3	0	0	79	22	89	23	74	132	116	538
West	0	0	0	0	26	80.5	34.3	7	15.2	0	0	0	163
Minimum	0	0	0	0	0	34	22	7	0	0	0	0	157
Maximum	27	8	13	4	77	370.9	97	103	32	74	132	116	538
Average	8.3	1.1	2.7	1.9	21.1	116.7	49.9	52.2	15.7	13.4	19.4	23.9	326.4

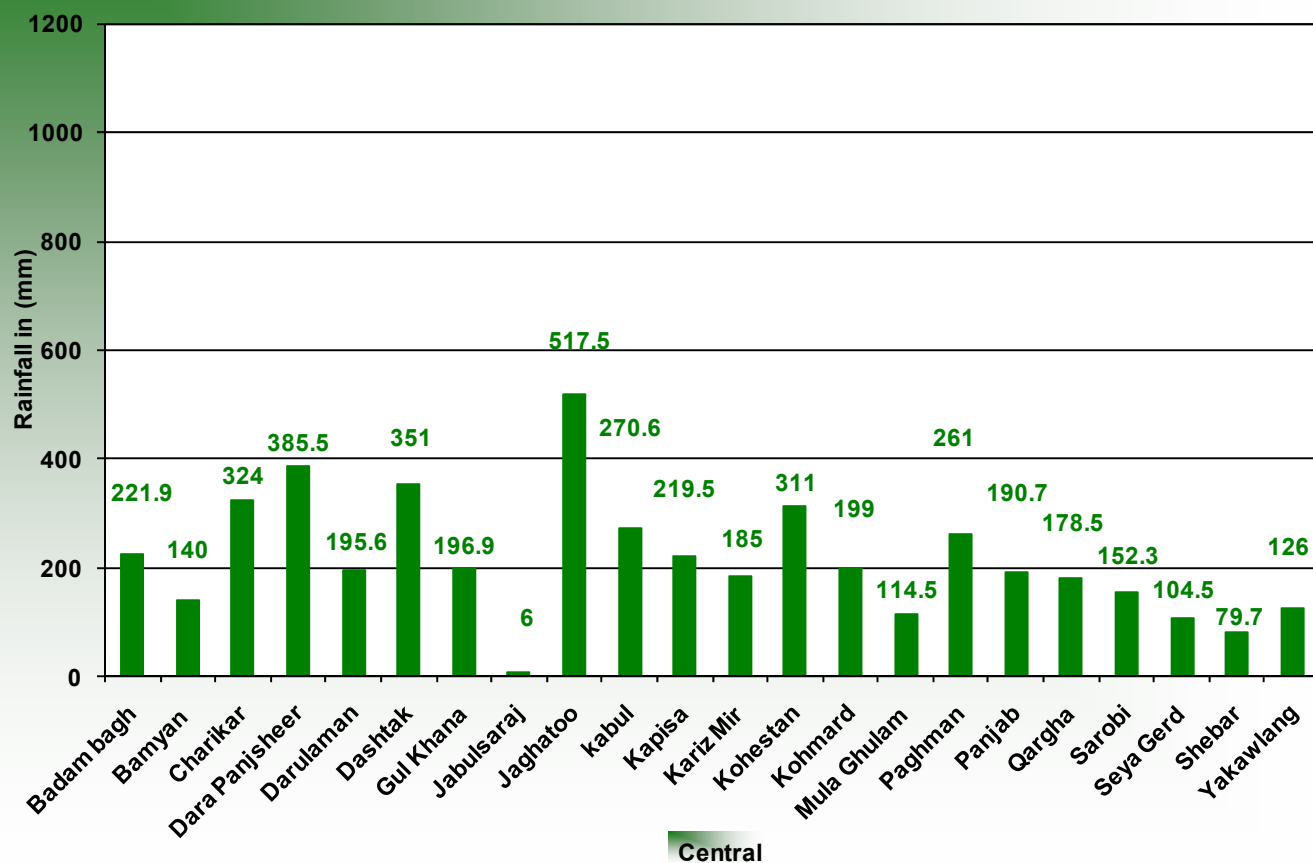
Accumulated Yearly Rainfall By Region (2010 - 2011)



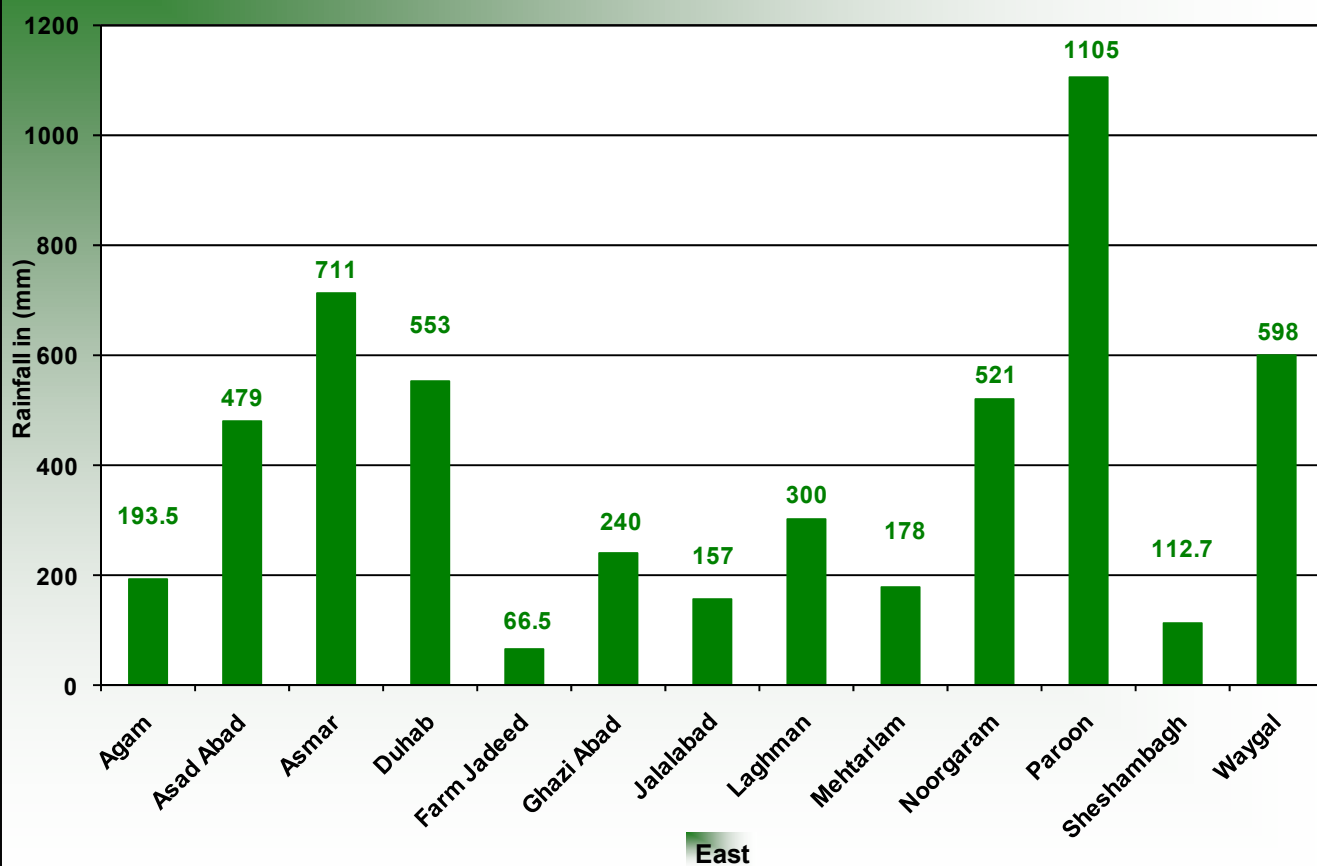
Accumulated Yearly Rainfall By Region in MM (2010 - 2011)



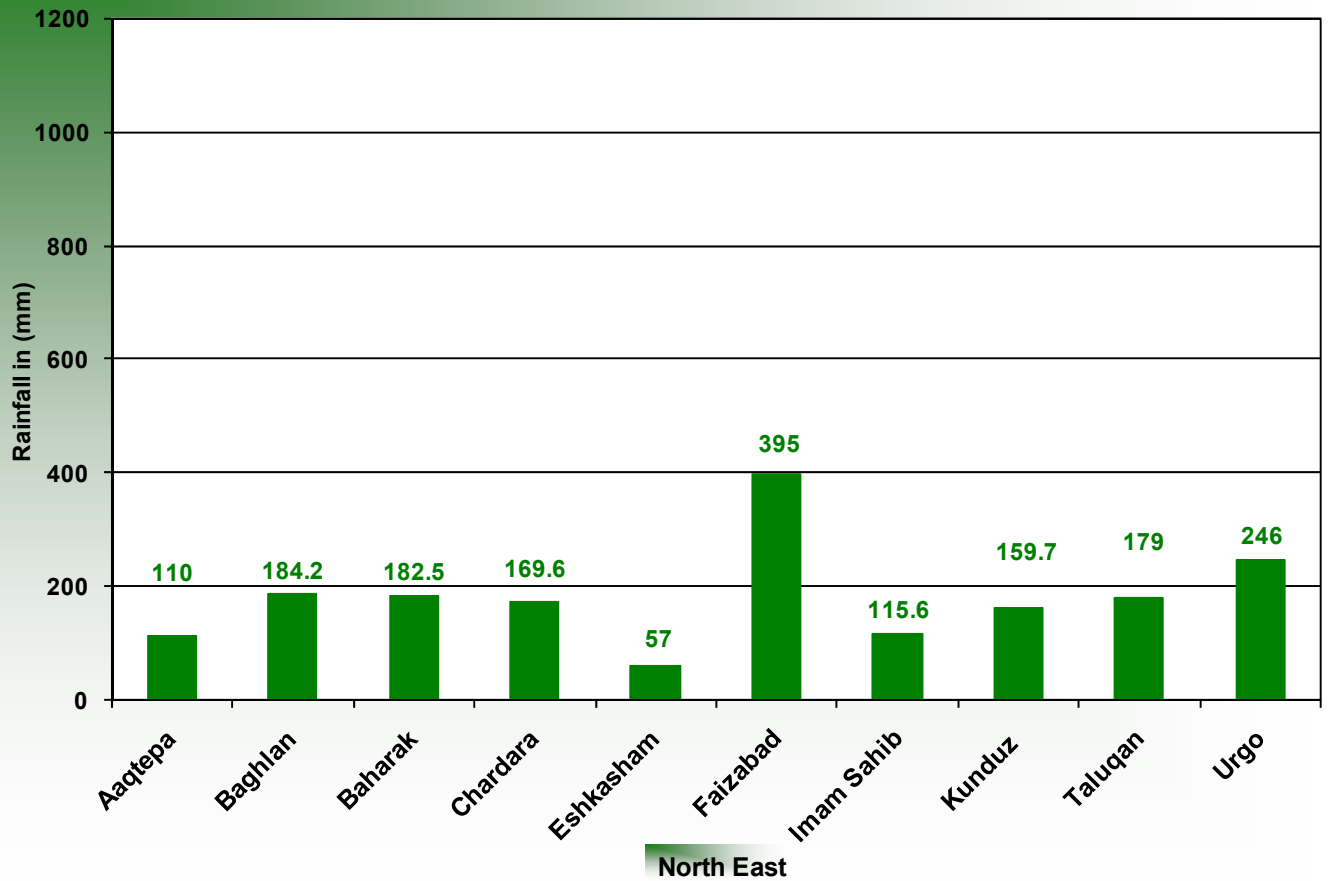
Accumulated Yearly Rainfall By Region in mm 2010 / 2011



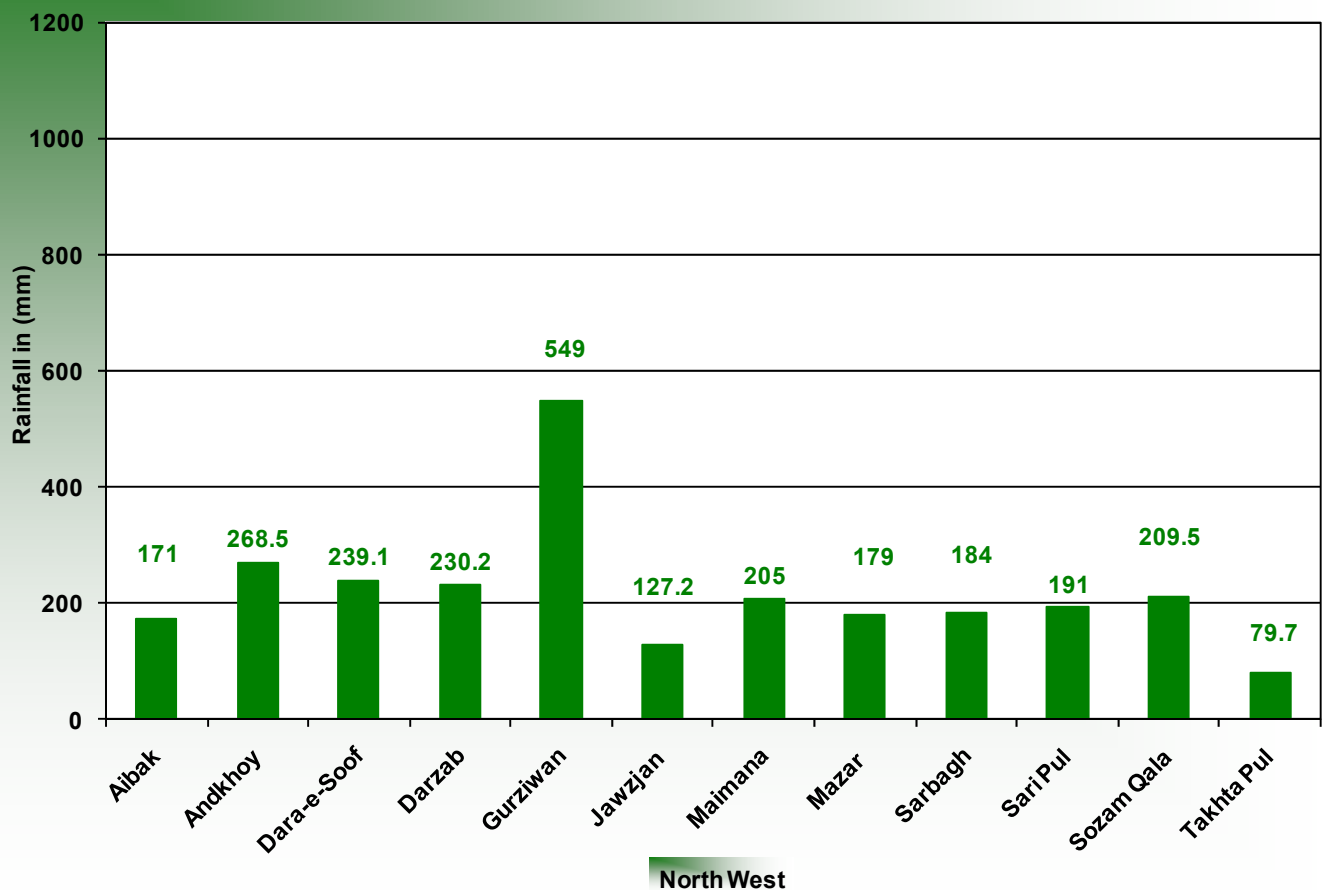
Accumulated Yearly Rainfall By Region in mm 2010 / 2011



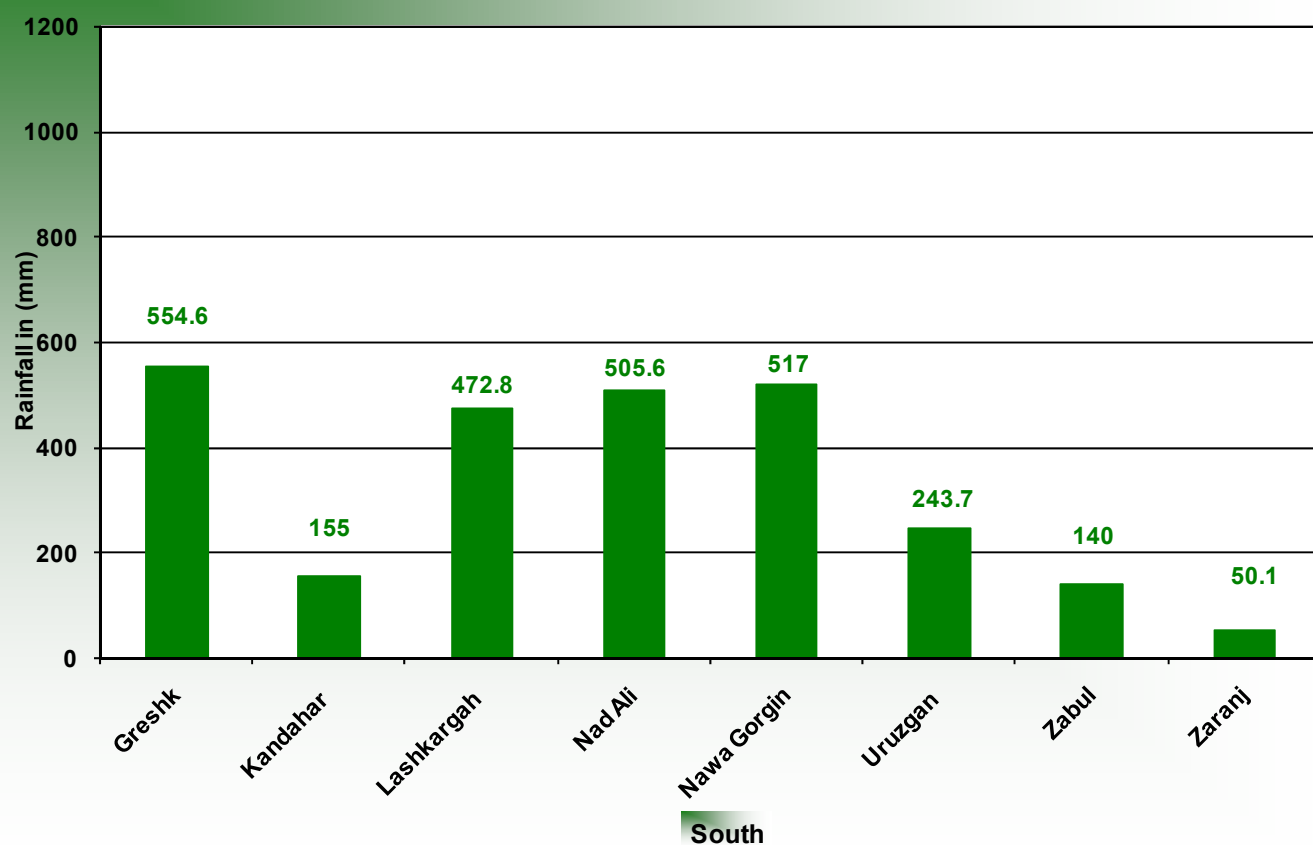
Accumulated Yearly Rainfall By Region in mm 2010 / 2011



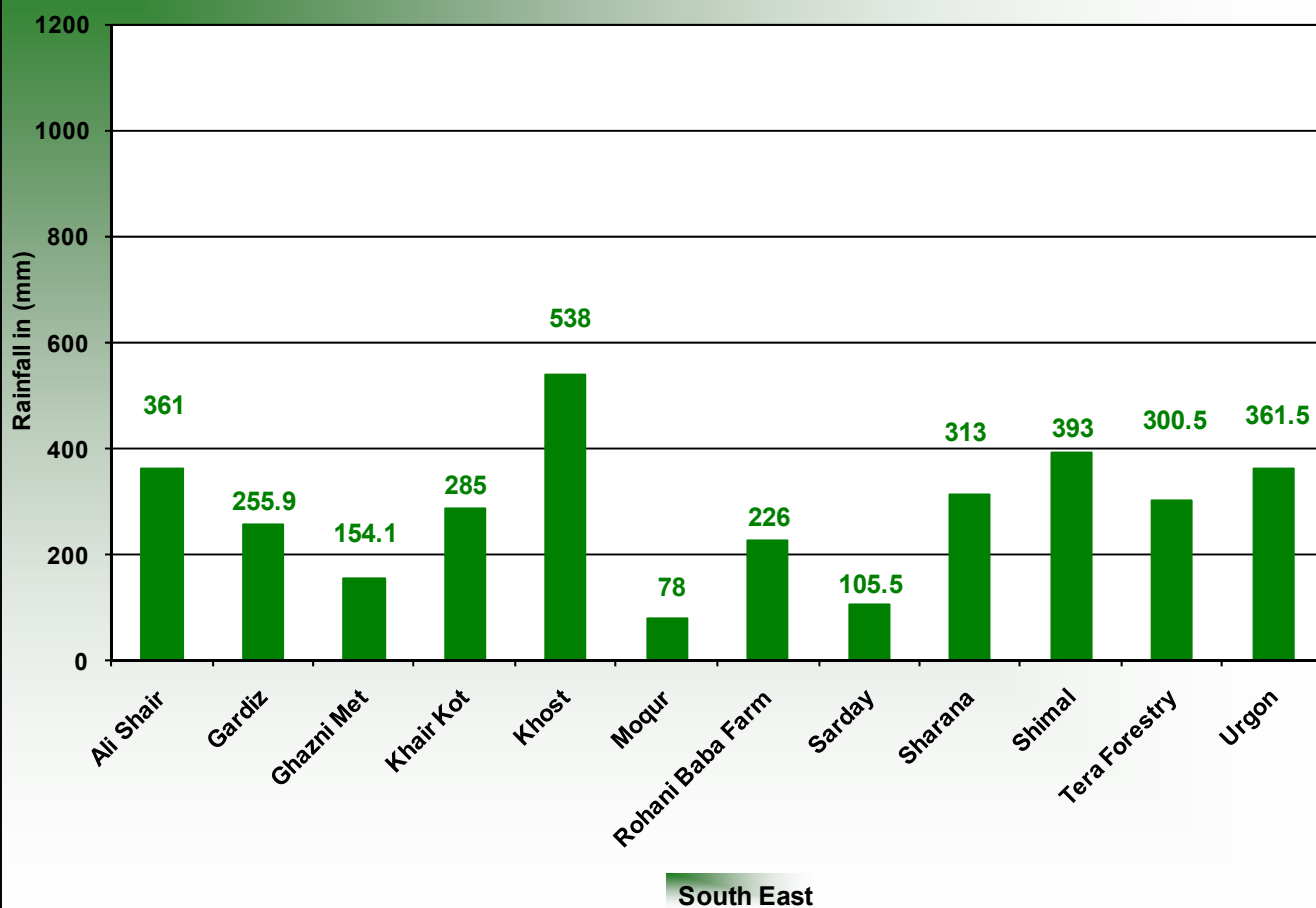
Accumulated Yearly Rainfall By Region in mm 2010 / 2011



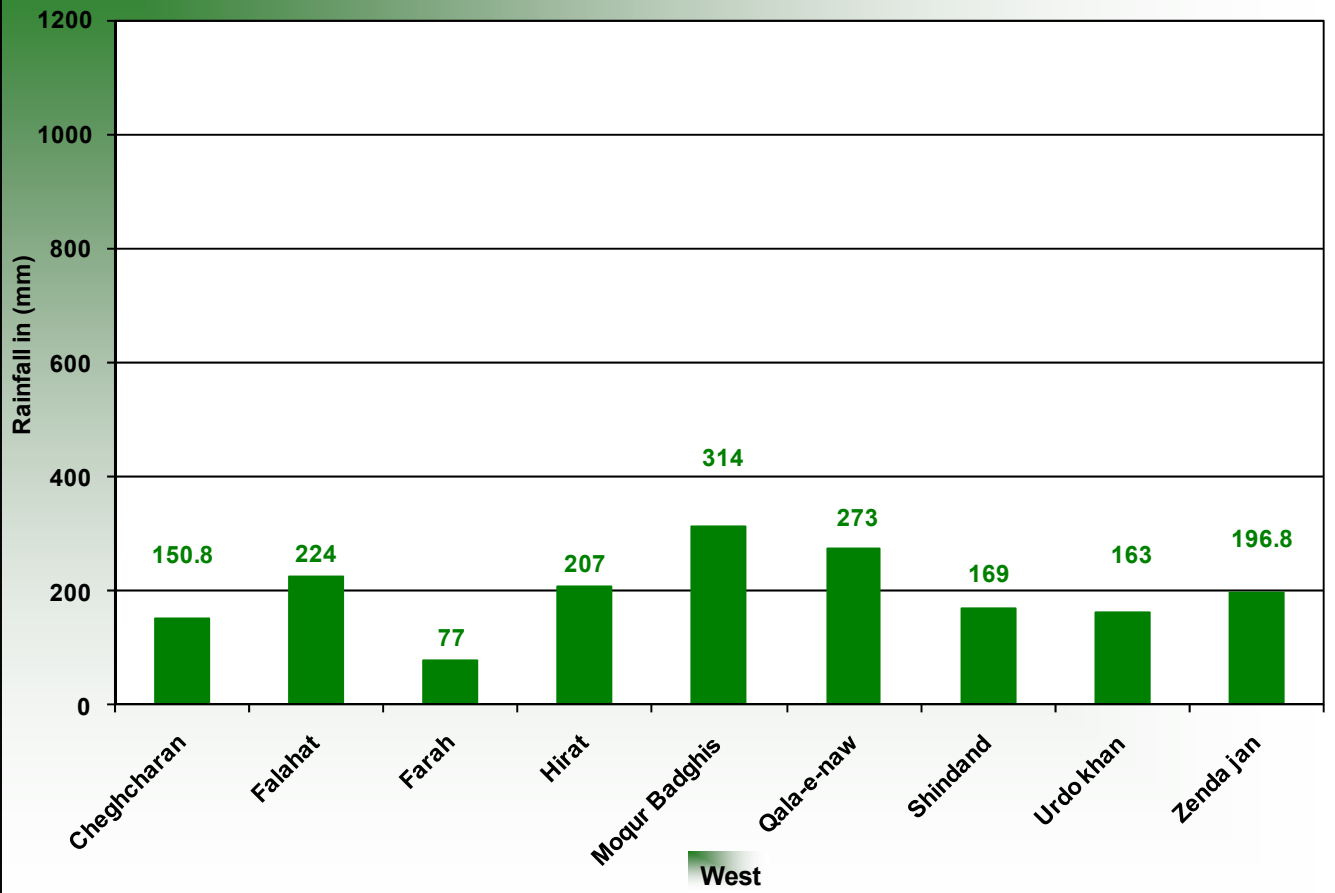
Accumulated Yearly Rainfall By Region in mm 2010 / 2011



Accumulated Yearly Rainfall By Region in mm 2010 / 2011



Accumulated Yearly Rainfall By Region in mm 2010 / 2011

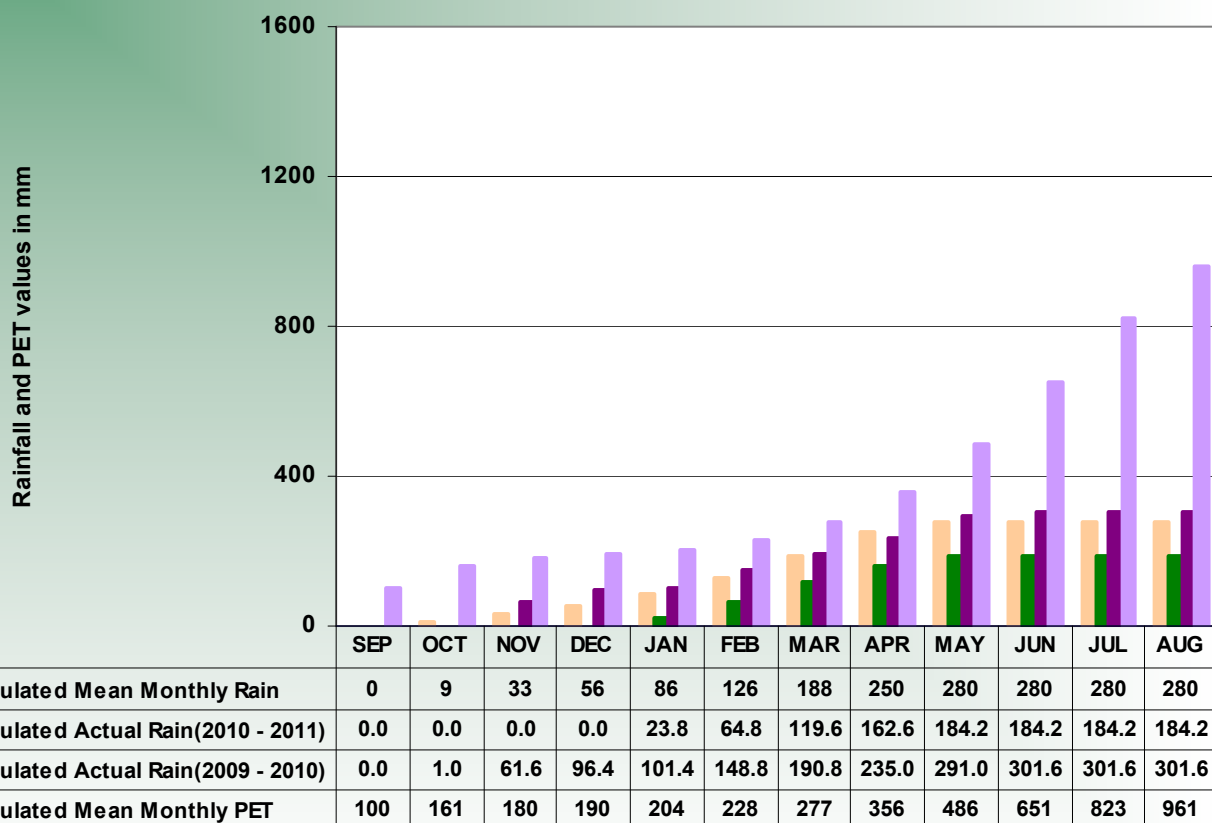


Accumulated Rainfall (mm)
For the Season (2010 - 2011)

Compared with:

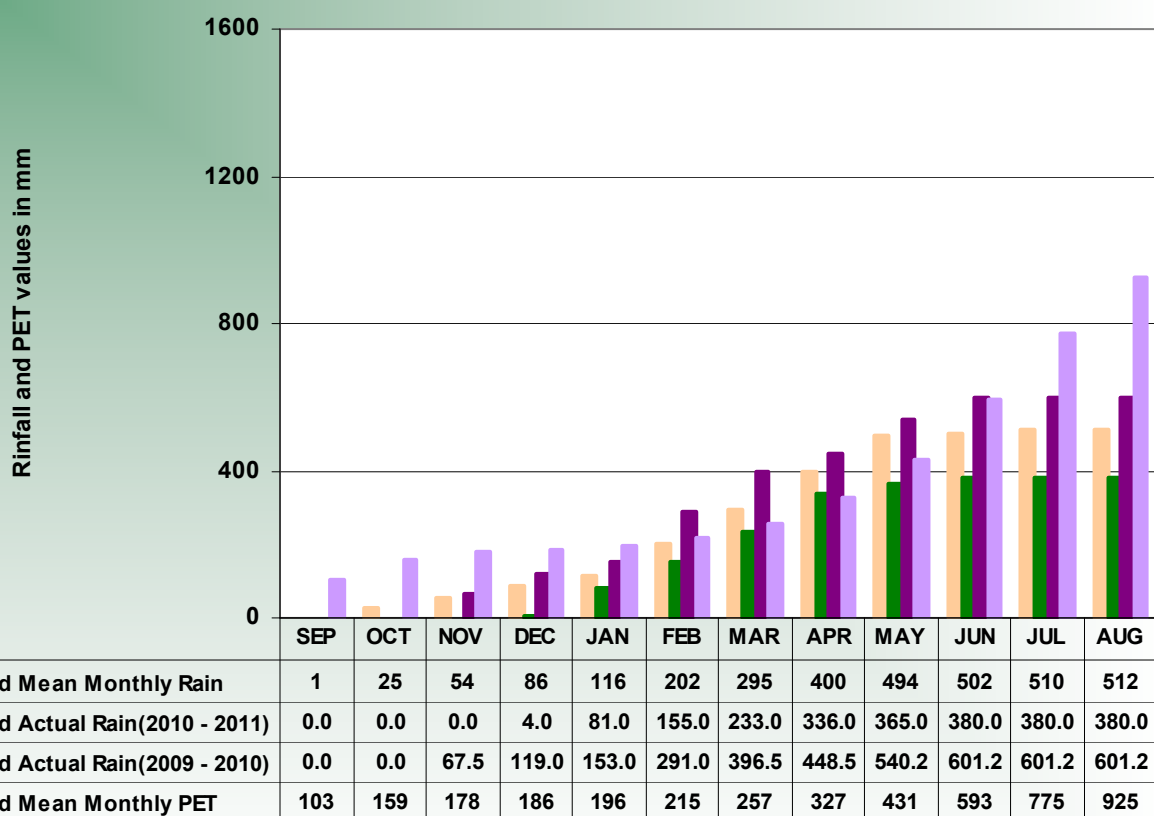
- Last Year
- Potential Evapotranspiration (PET)
- Long Term Average

Baghlan: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (North East)



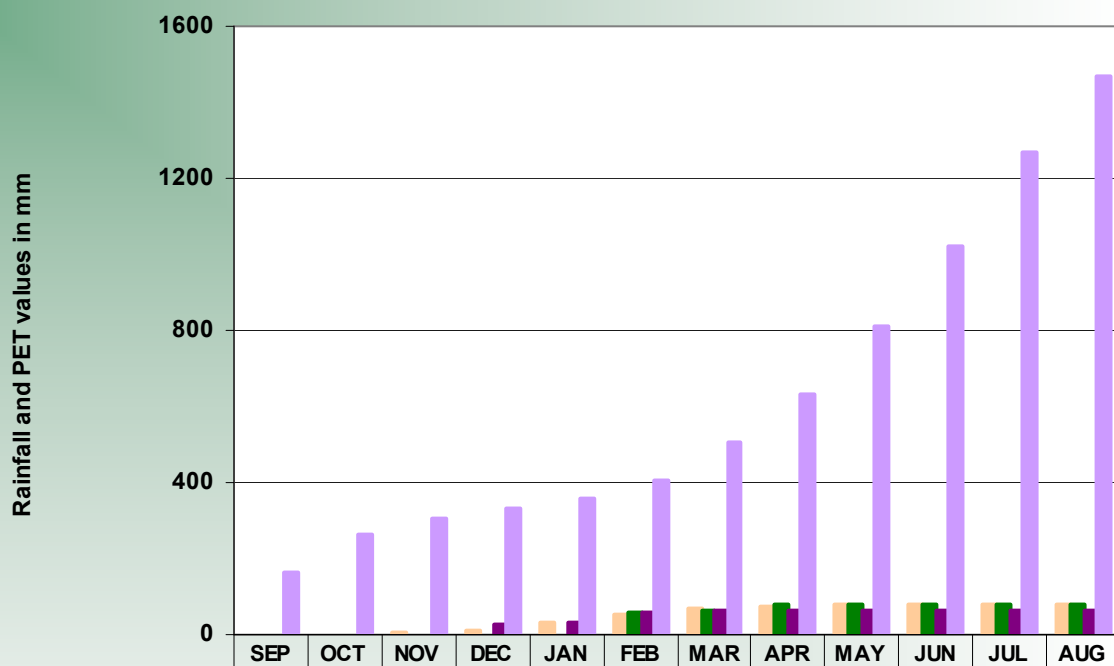
Months (Rainfall Season 2010-2011)

Faiz Abad: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (North East)



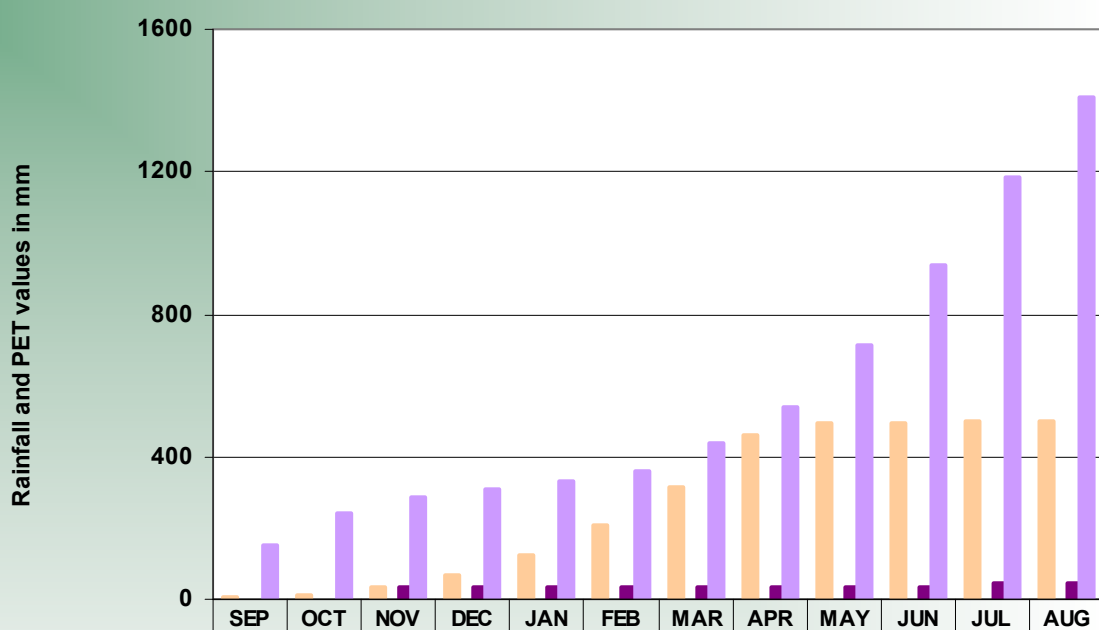
Months (Rainfall Season 2010-2011)

Farah: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (West)



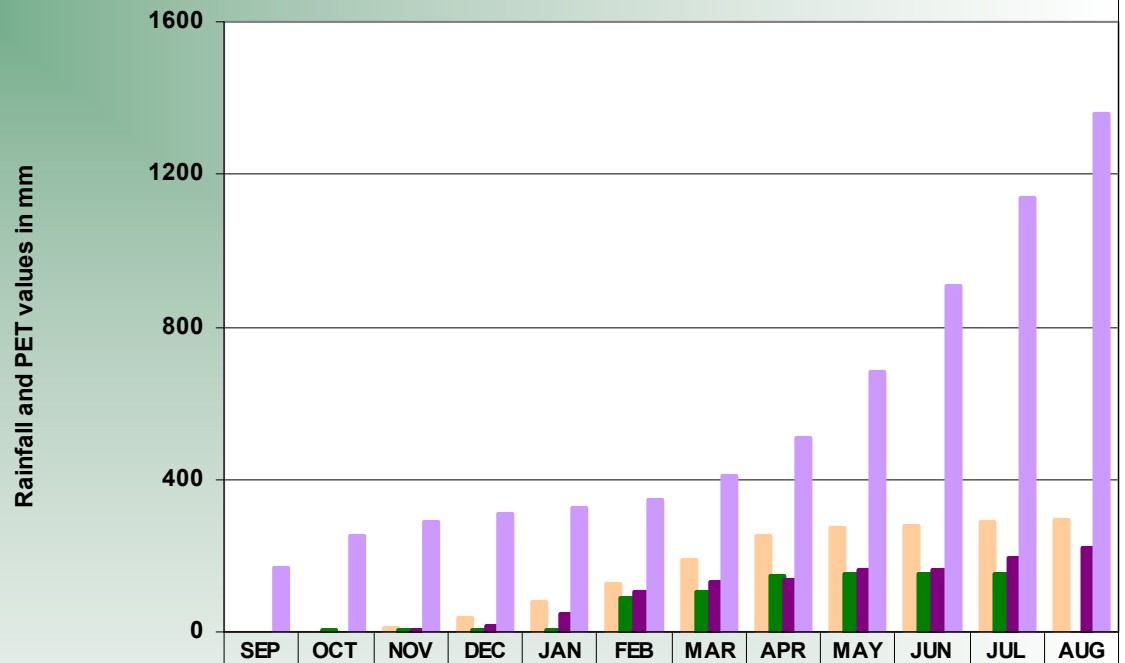
Months (Rainfall Season 2010-2011)

Jabul Seraj: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (Central)



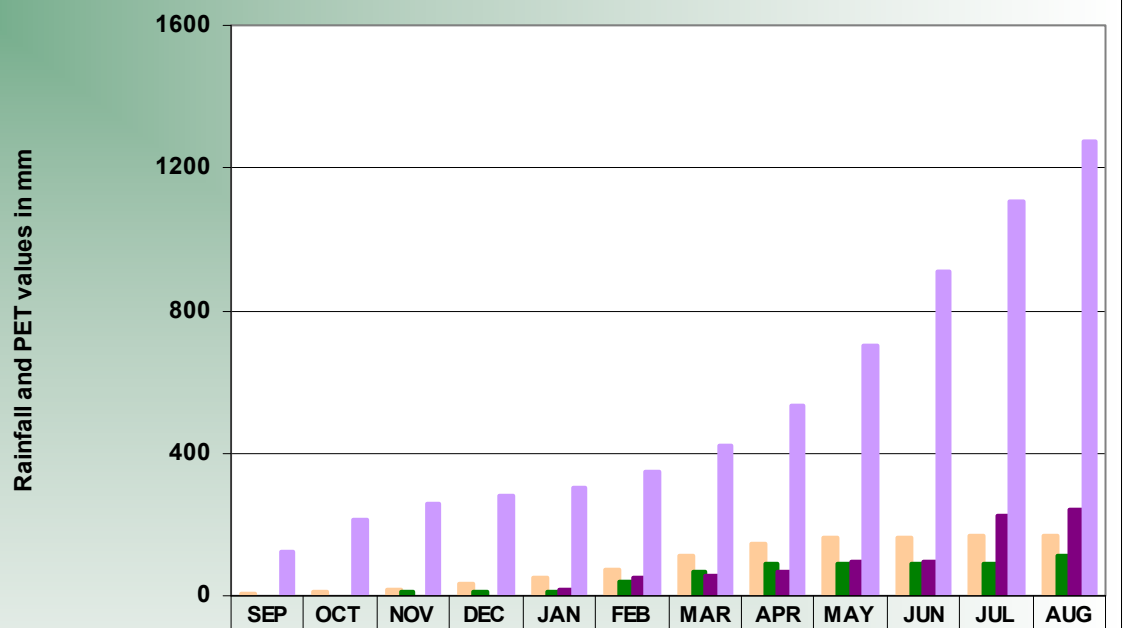
Months (Rainfall Season 2010-2011)

Ghazni: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (South East)



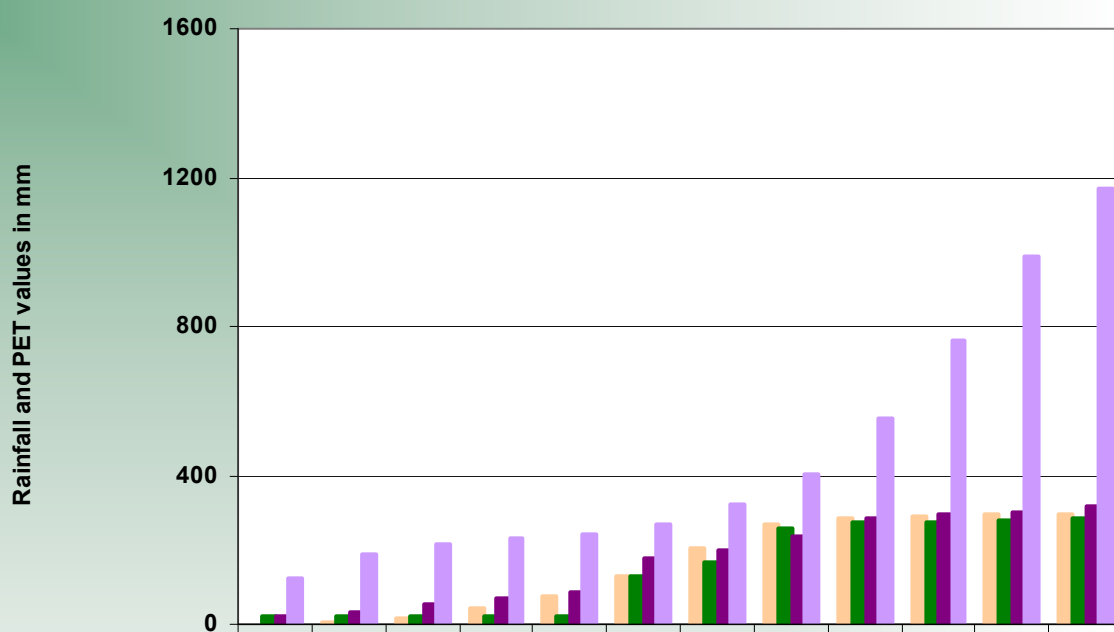
Months (Rainfall Season 2010-2011)

Jala Abad: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (East)



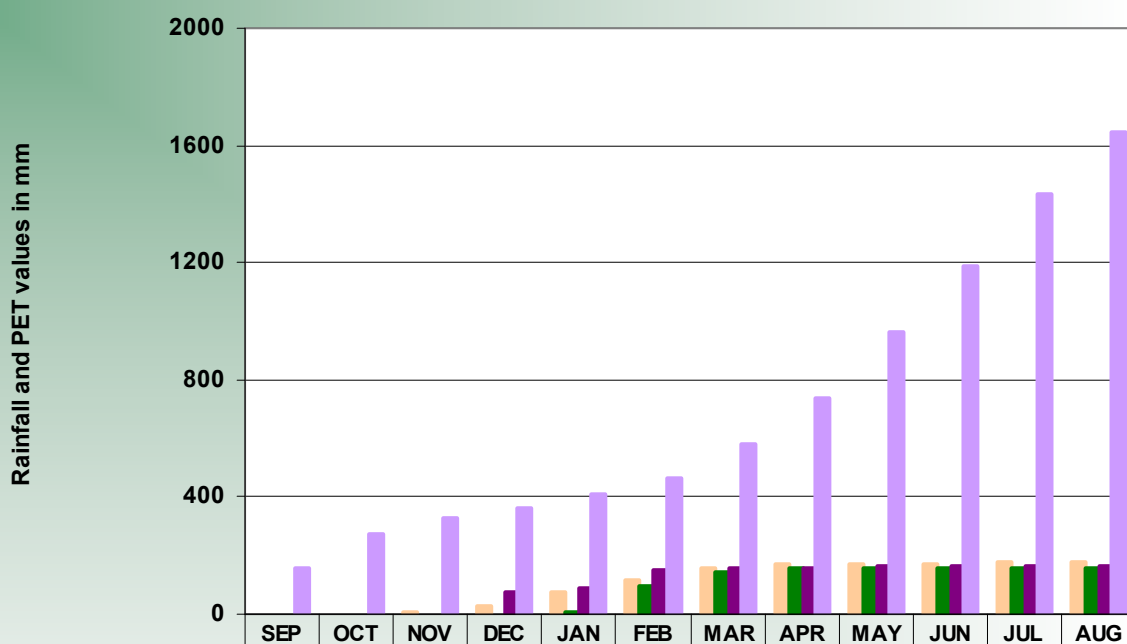
Months (Rainfall Season 2010-2011)

Kabul: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (Central)



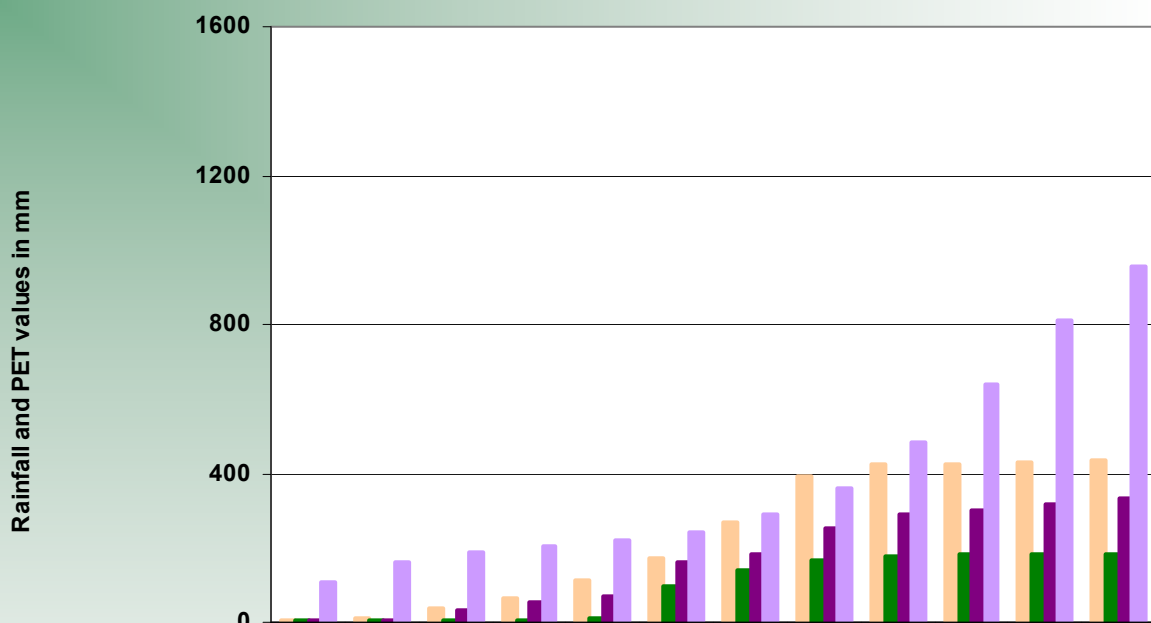
Months (Rainfall Season 2010-2011)

Kandahar: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (South)



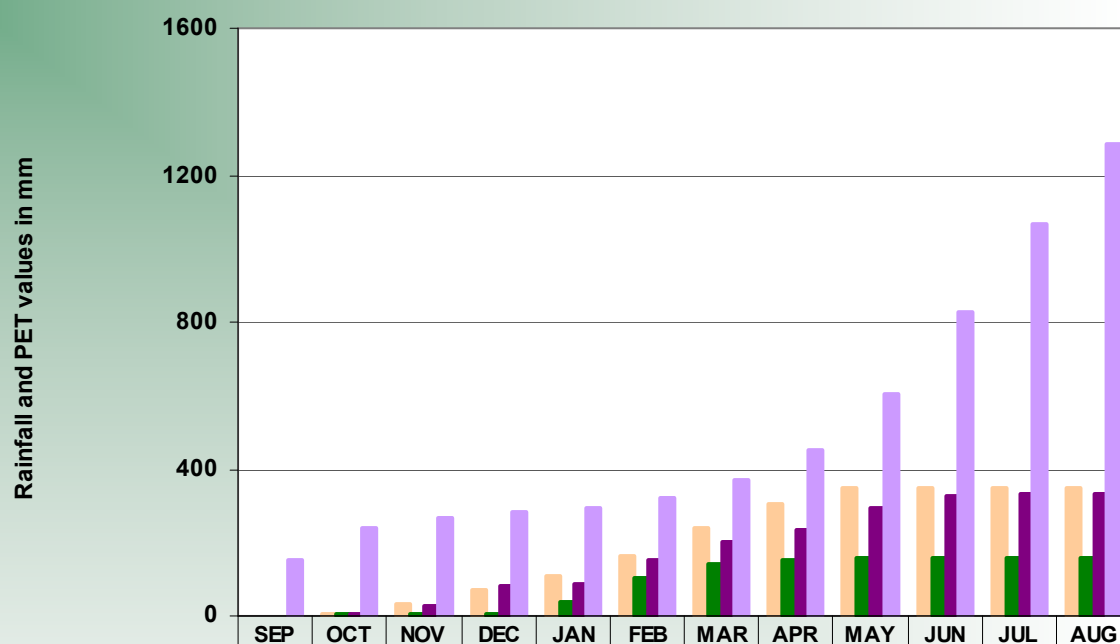
Months (Rainfall Season 2010-2011)

Kariz Mir: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (Central)



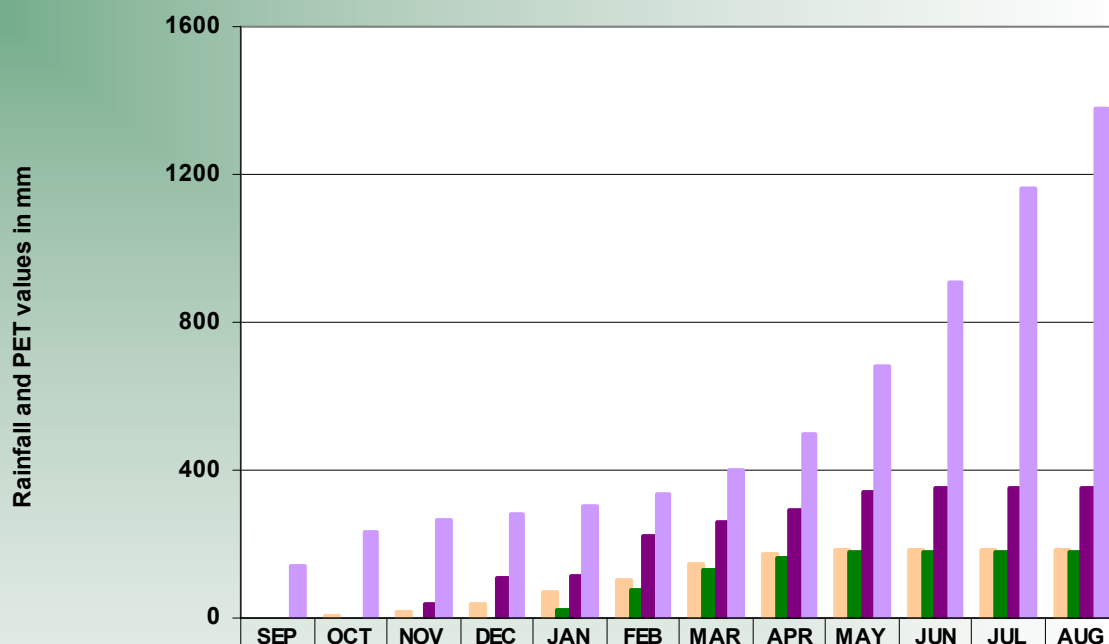
Months (Rainfall Season 2010-2011)

Kunduz: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (North East)



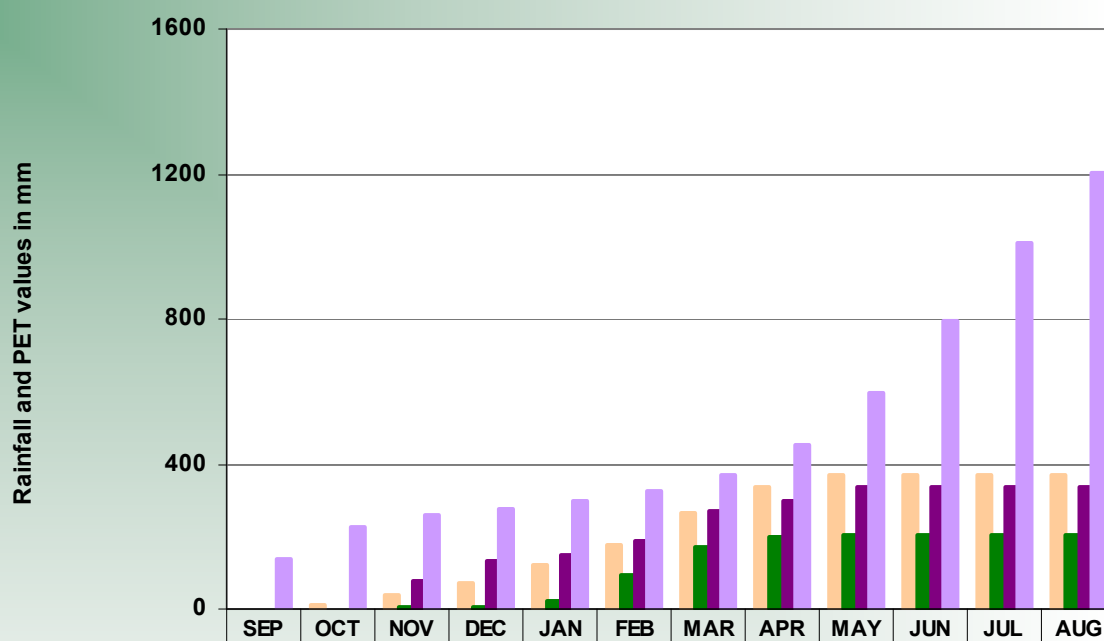
Months (Rainfall Season 2010-2011)

Mazar: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (North West)



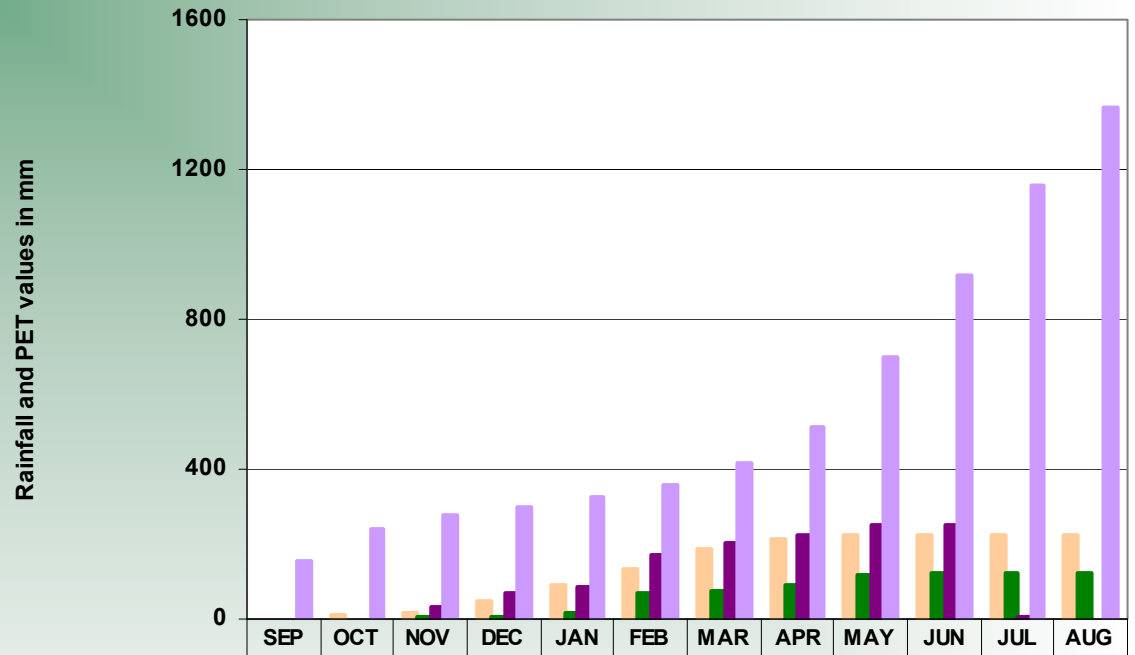
Months (Rainfall Season 2010-2011)

Maimana: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (North West)



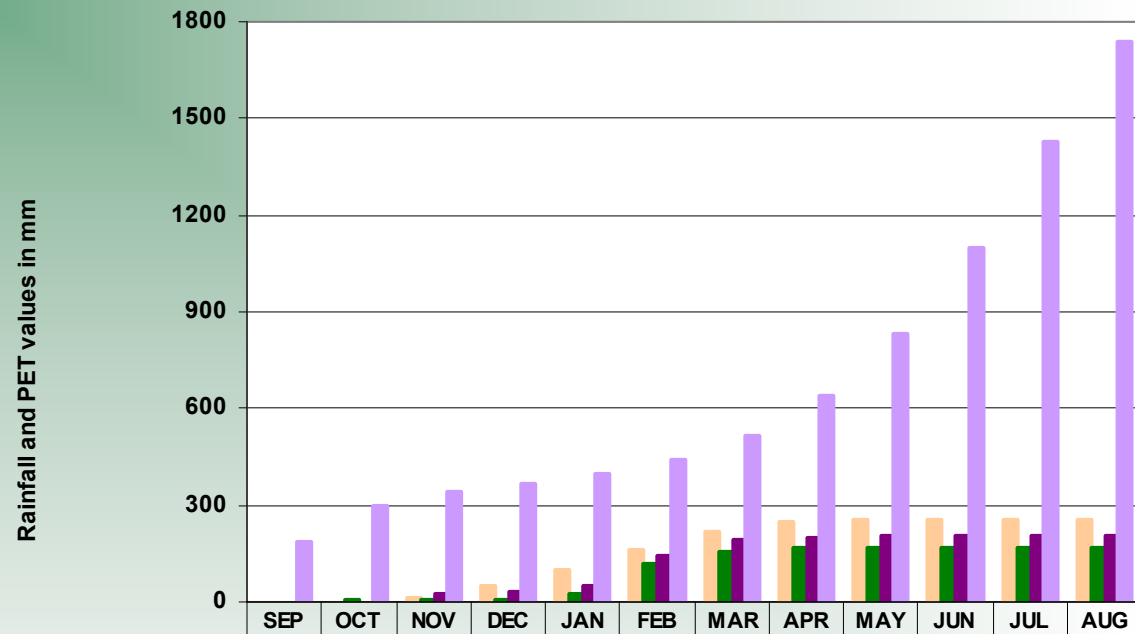
Months (Rainfall Season 2010-2011)

Sheberghan: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (North West)



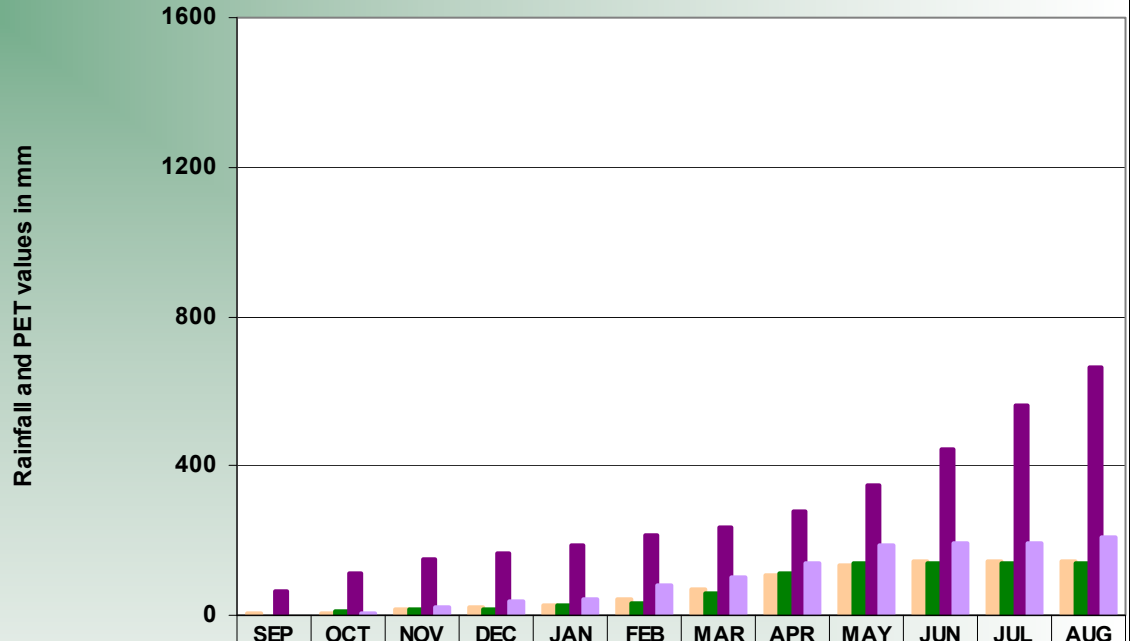
Months (Rainfall Season 2010-2011)

Hirat: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (West)



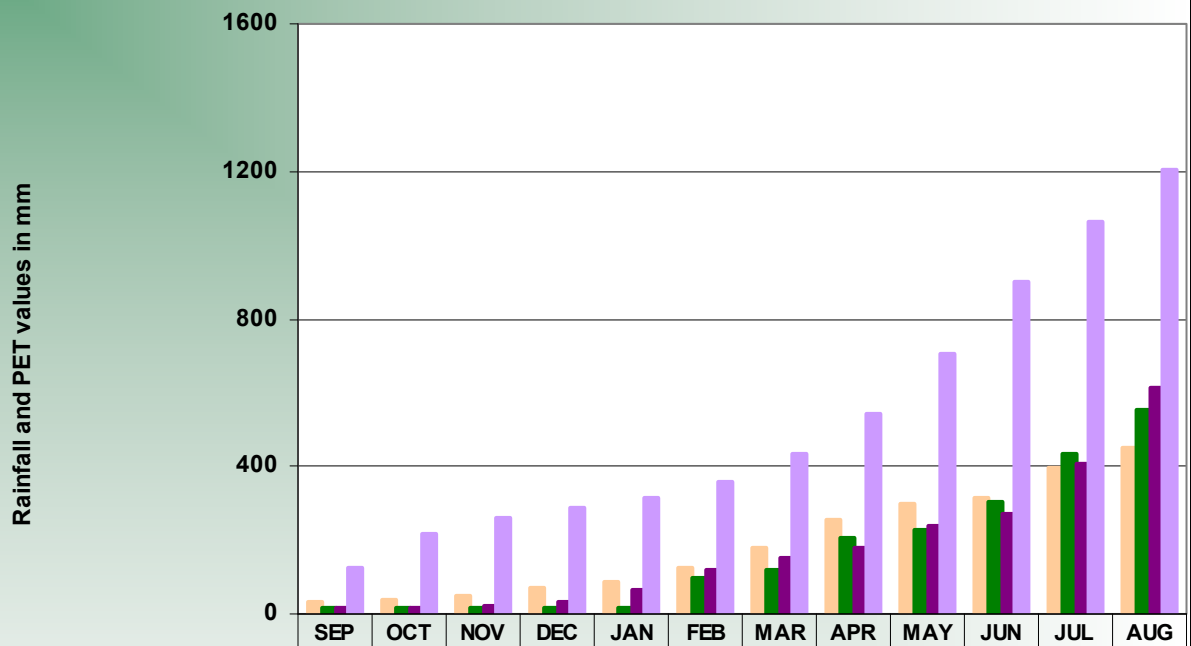
Months (Rainfall Season 2010-2011)

Bamyan: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (Central)



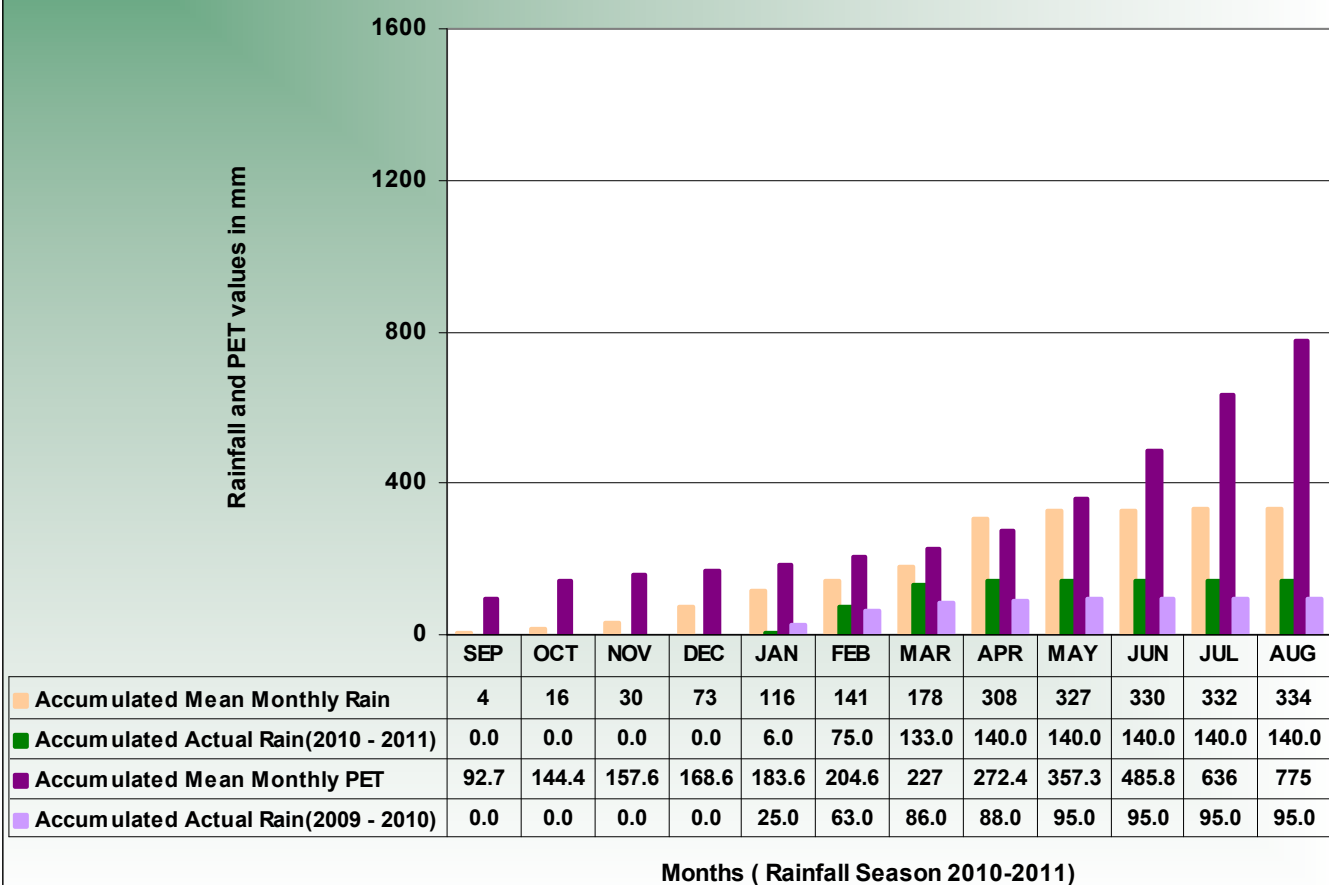
Months (Rainfall Season 2010-2011)

Khost: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (South East)

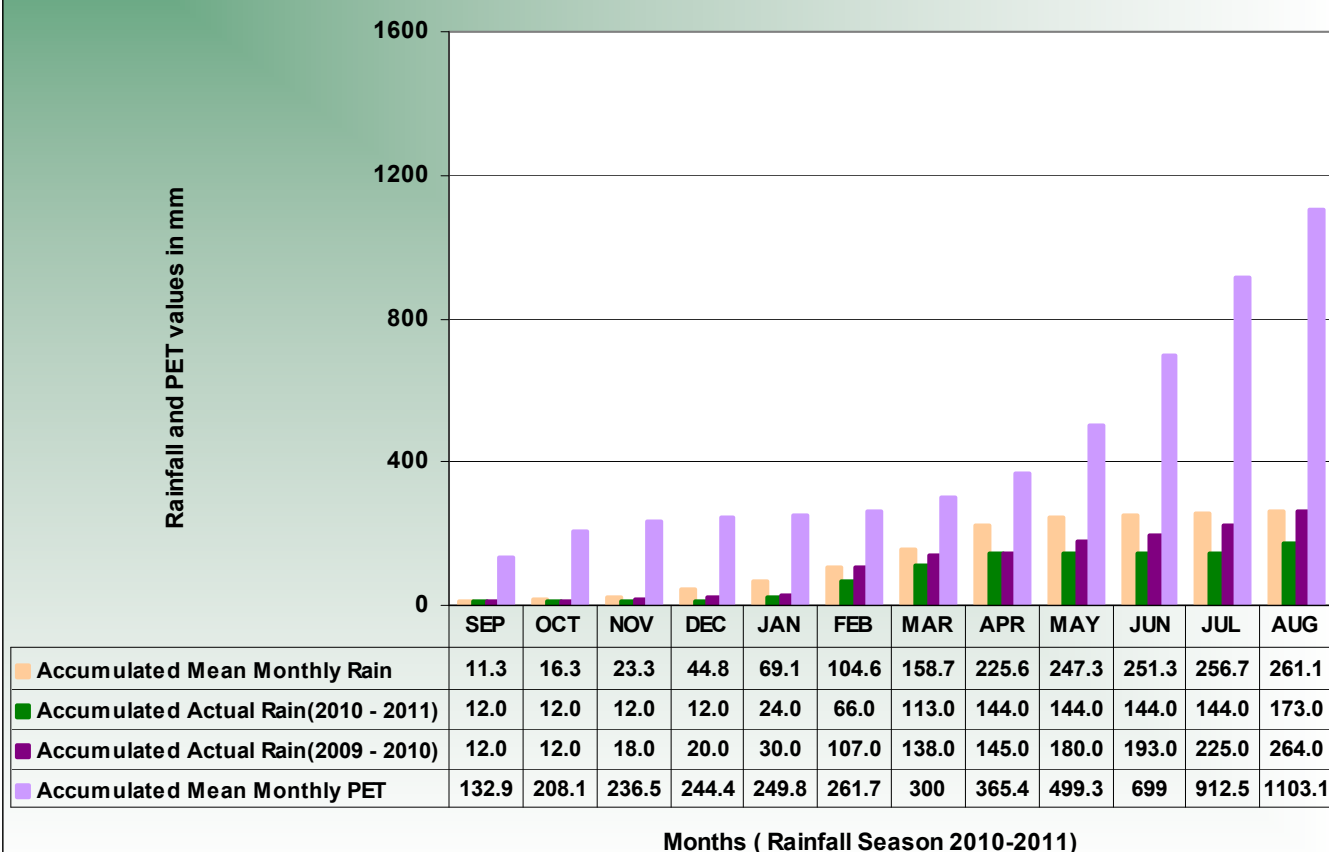


Months (Rainfall Season 2010-2011)

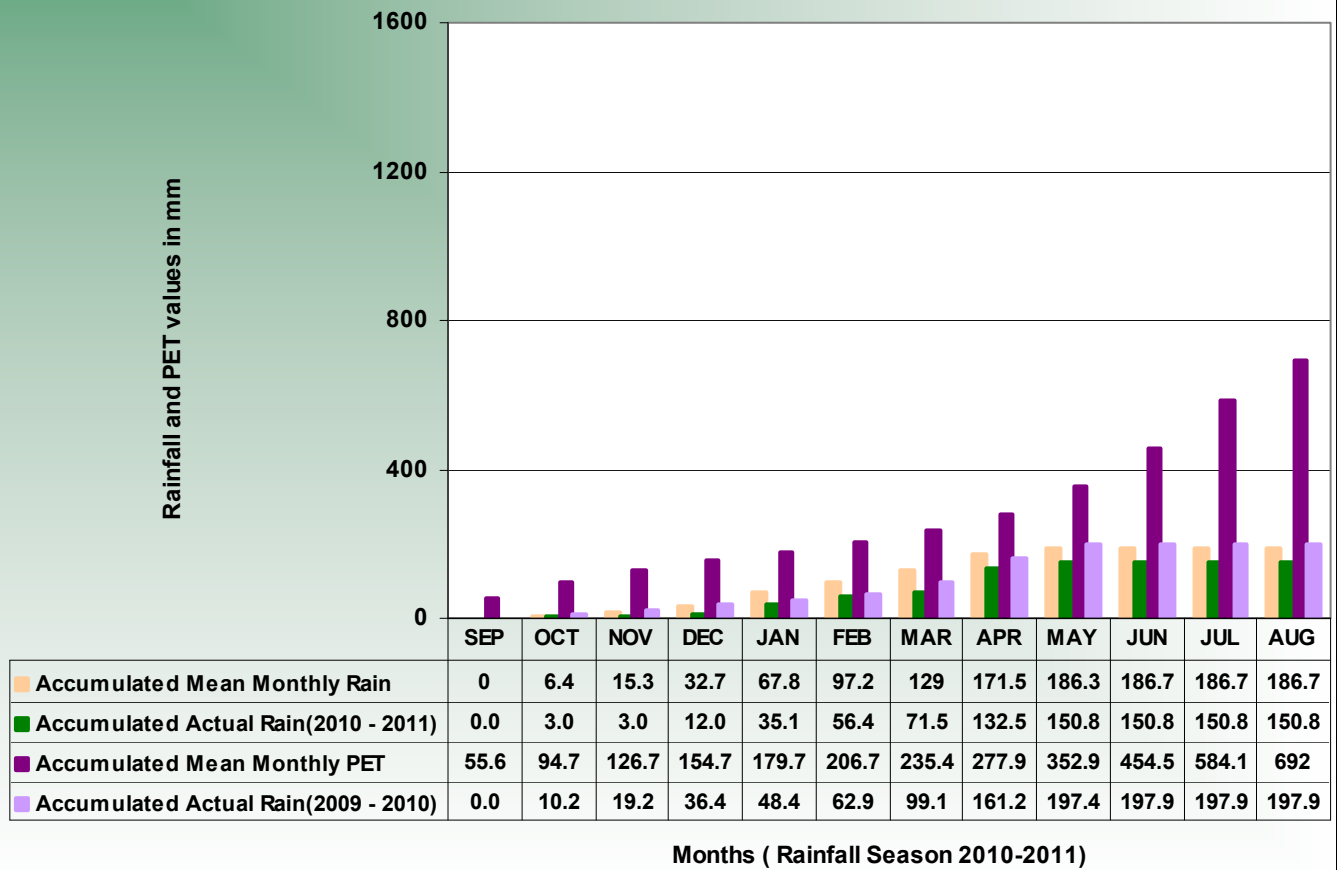
Qalat: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (South West)



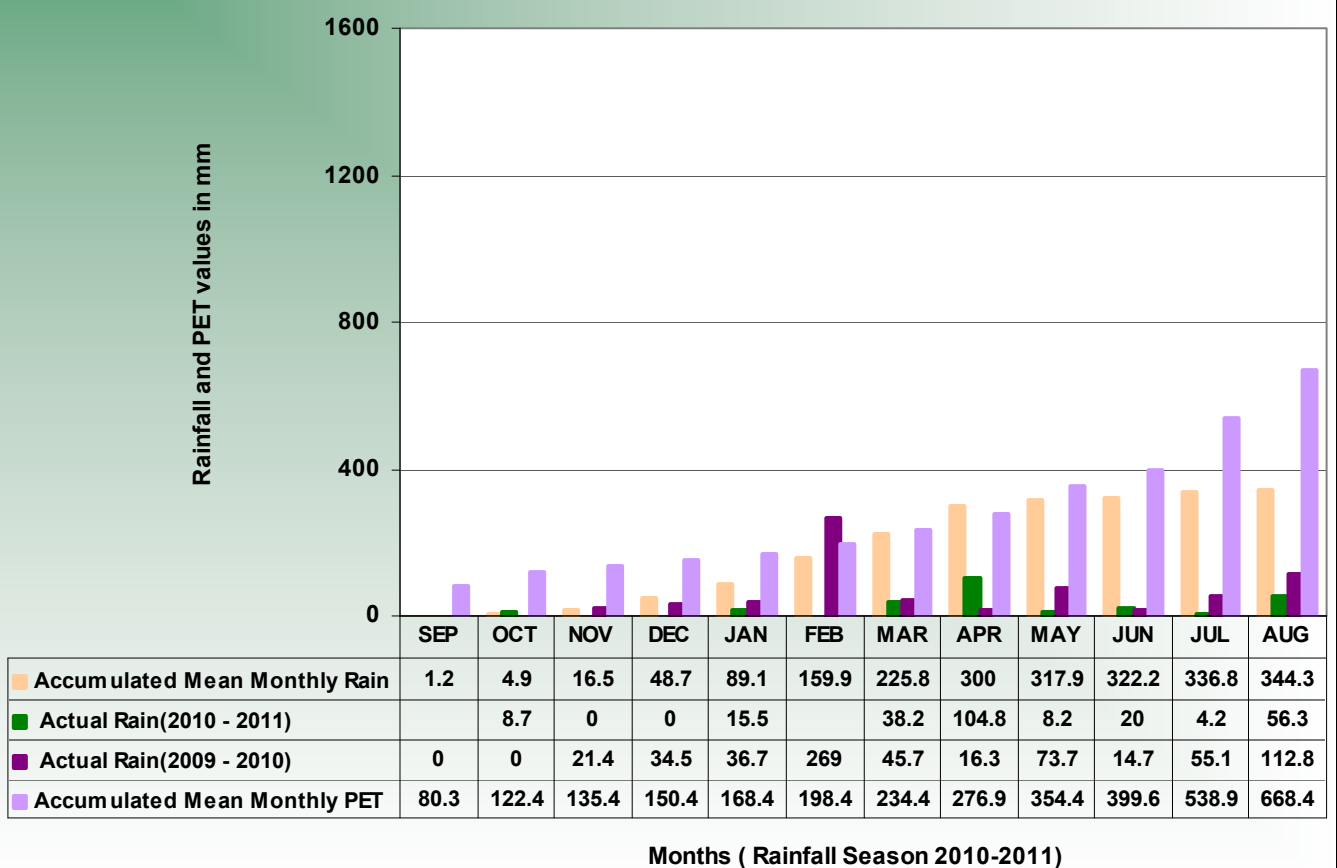
Laghman: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (East)



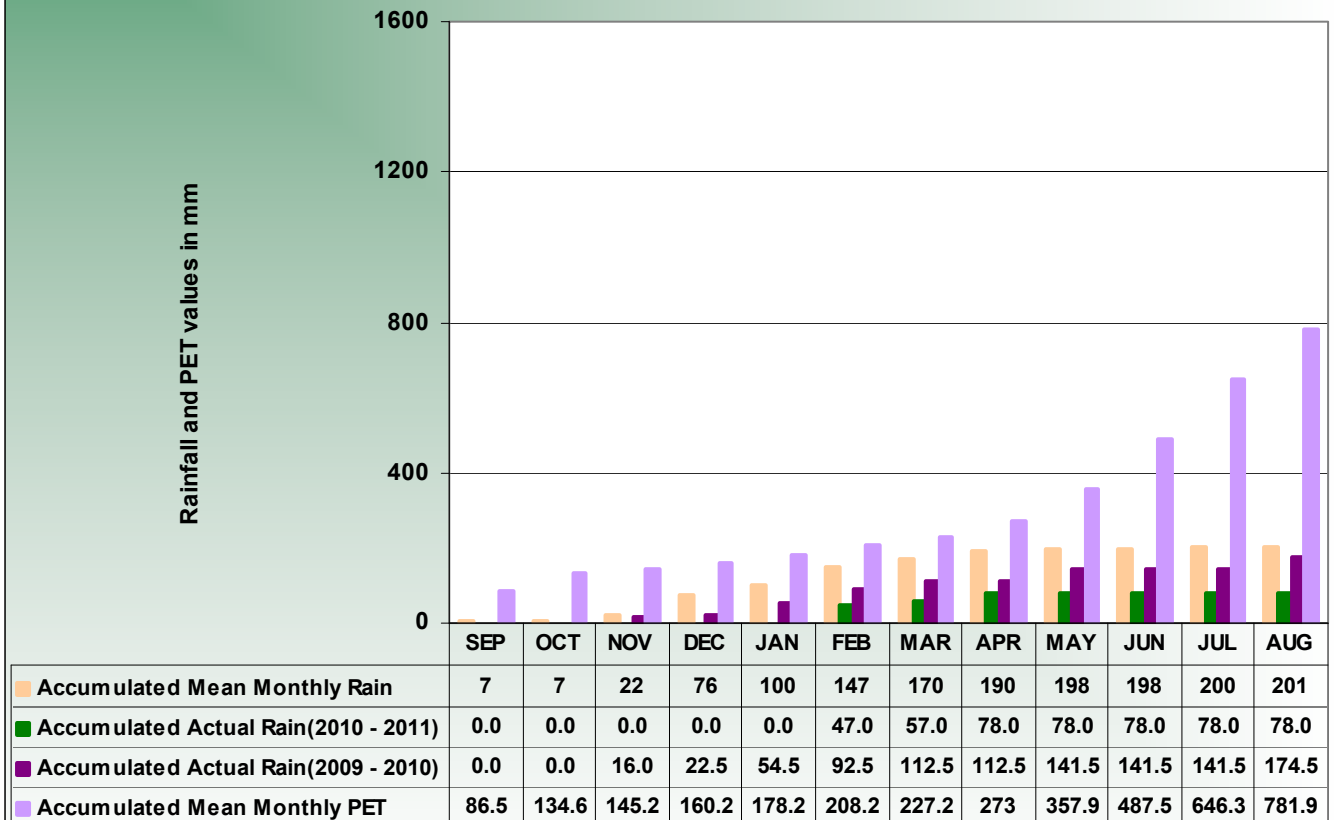
Cheghcharan: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (West)



Gardiz: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (South East)

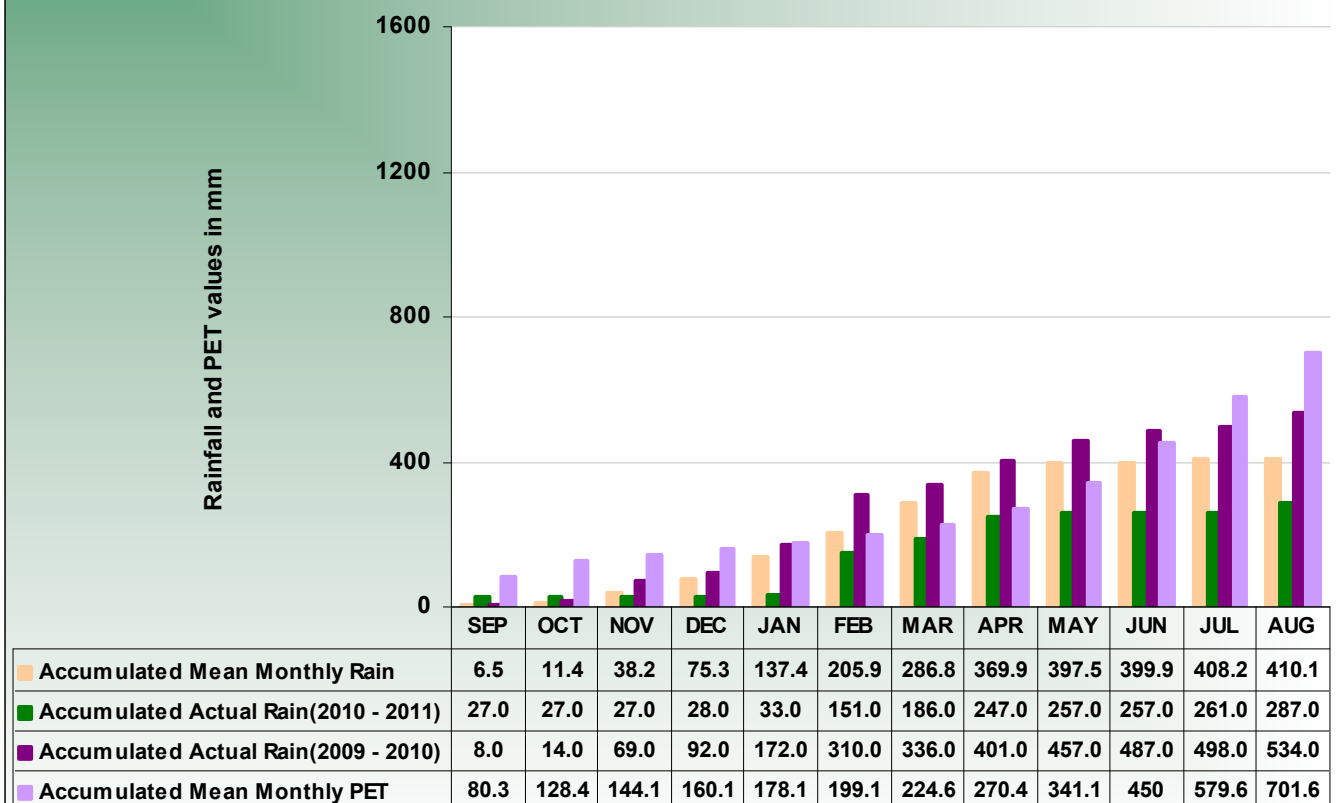


Muqer: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (South East)



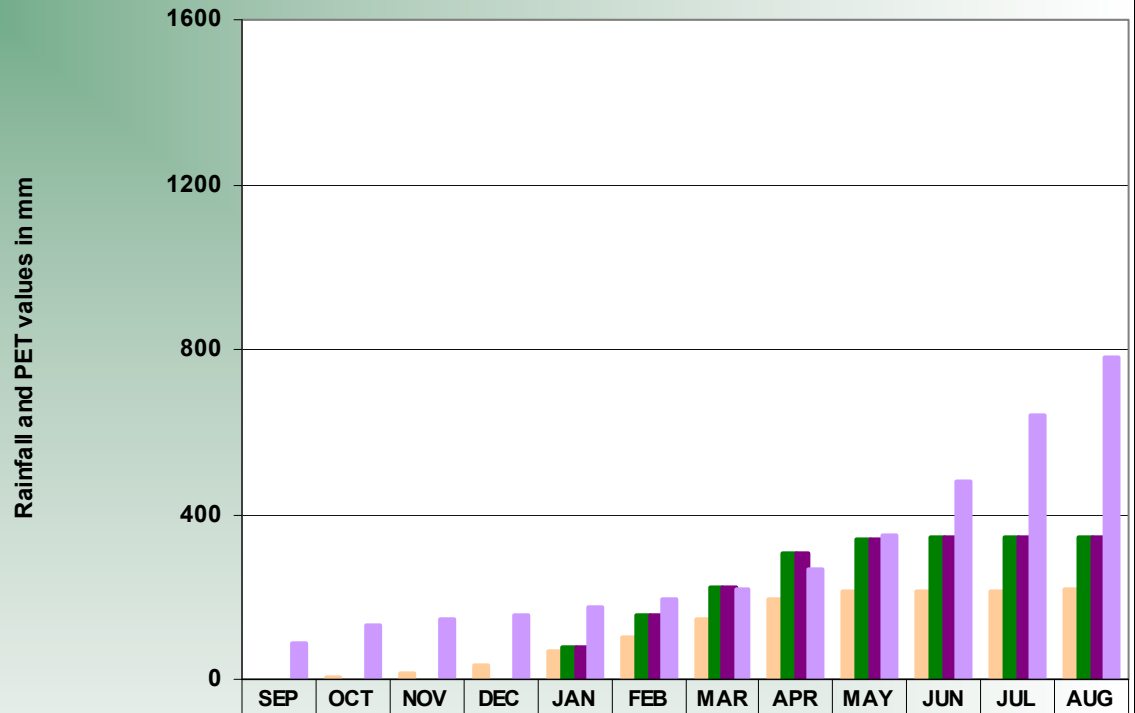
Months (Rainfall Season 2010-2011)

Paghman: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (Central)



Months (Rainfall Season 2010-2011)

Logar: Comparison of Accumulatd Mean Rain, Acc. Actual Rain (2010 - 2011) and Accumulated PET (Central)

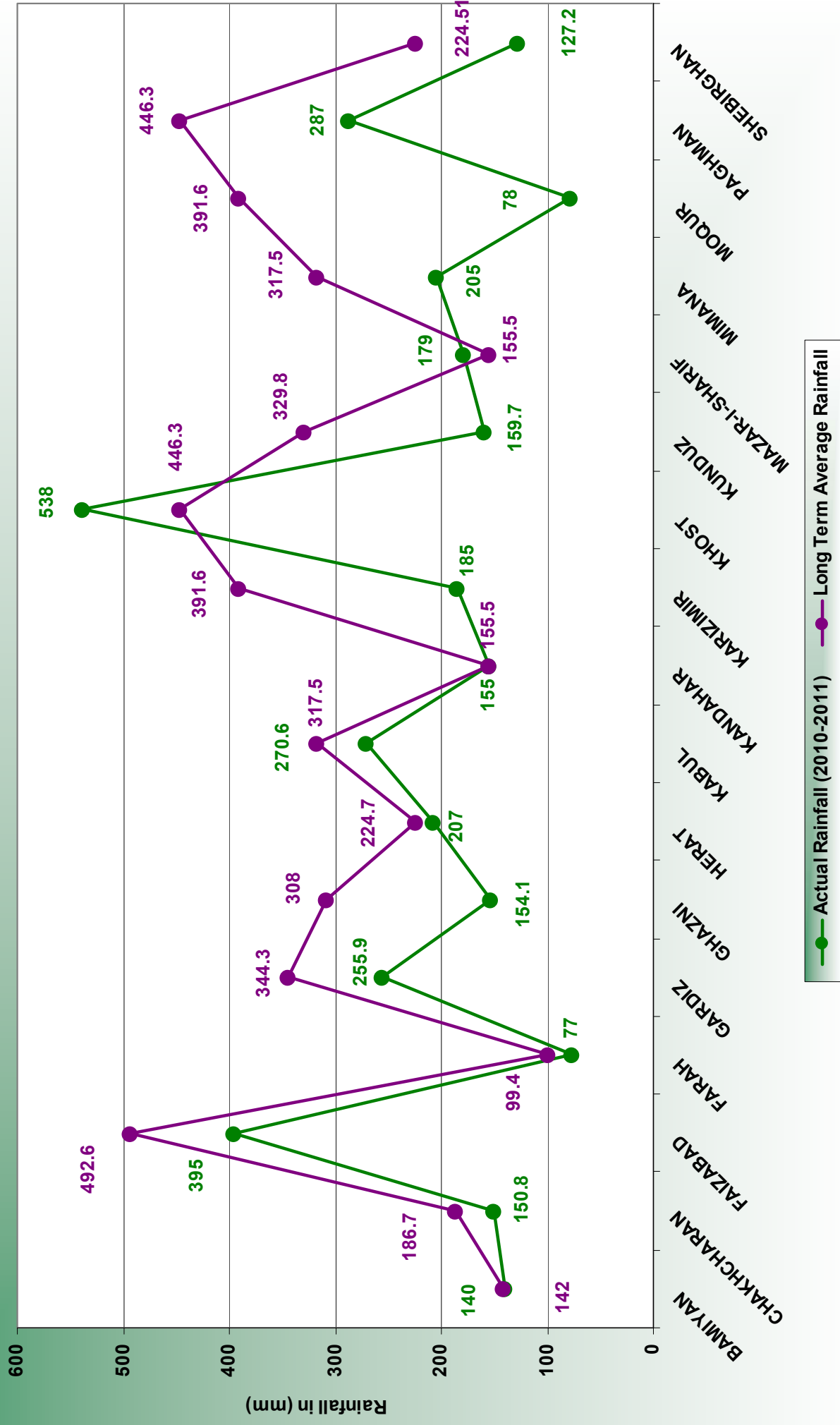


	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
Accumulated Mean Monthly Rain	0.4	3.2	14.8	31.6	66.4	101.3	145.6	194.2	211.8	213.5	215	217
Accumulated Actual Rain(2010 - 2011)	0.0	0.0	0.0	0.0	80.0	153.0	224.4	307.4	337.0	341.9	341.9	341.9
Accumulated Actual Rain(2009 - 2010)	0.0	0.0	0.0	0.0	80.0	153.0	224.4	307.4	337.0	341.9	341.9	341.9
Accumulated Mean Monthly PET	86.5	131.6	144.7	155.7	173.7	193.7	216.1	268.4	350.2	479.8	638.6	782.4

Months (Rainfall Season 2010-2011)

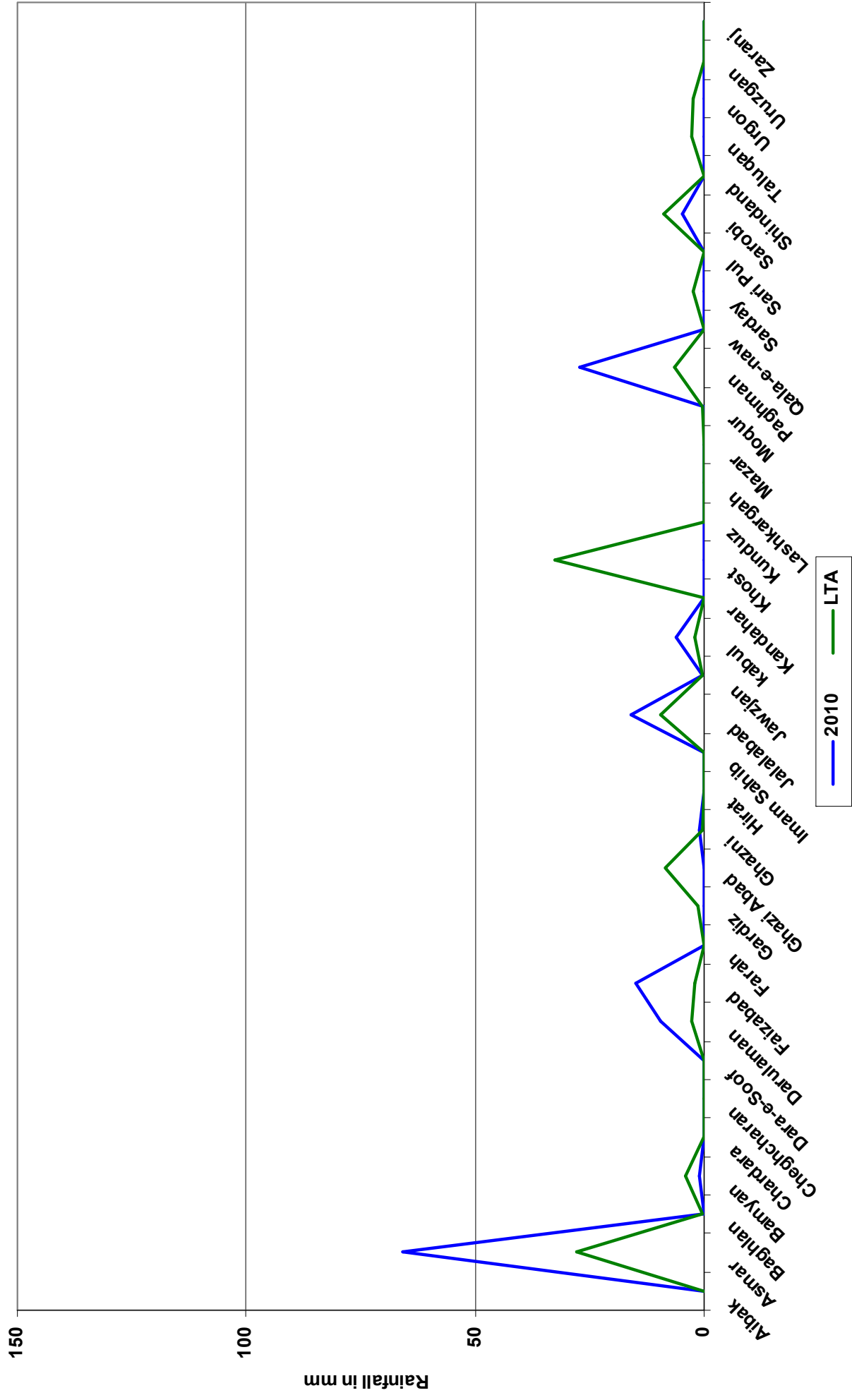
Seasonal Rainfall (mm) (2010- 2011)
Compared to
Long-Term Average

Comparison of Actual Yearly Rainfall (2010 - 2011) with Long Term Average

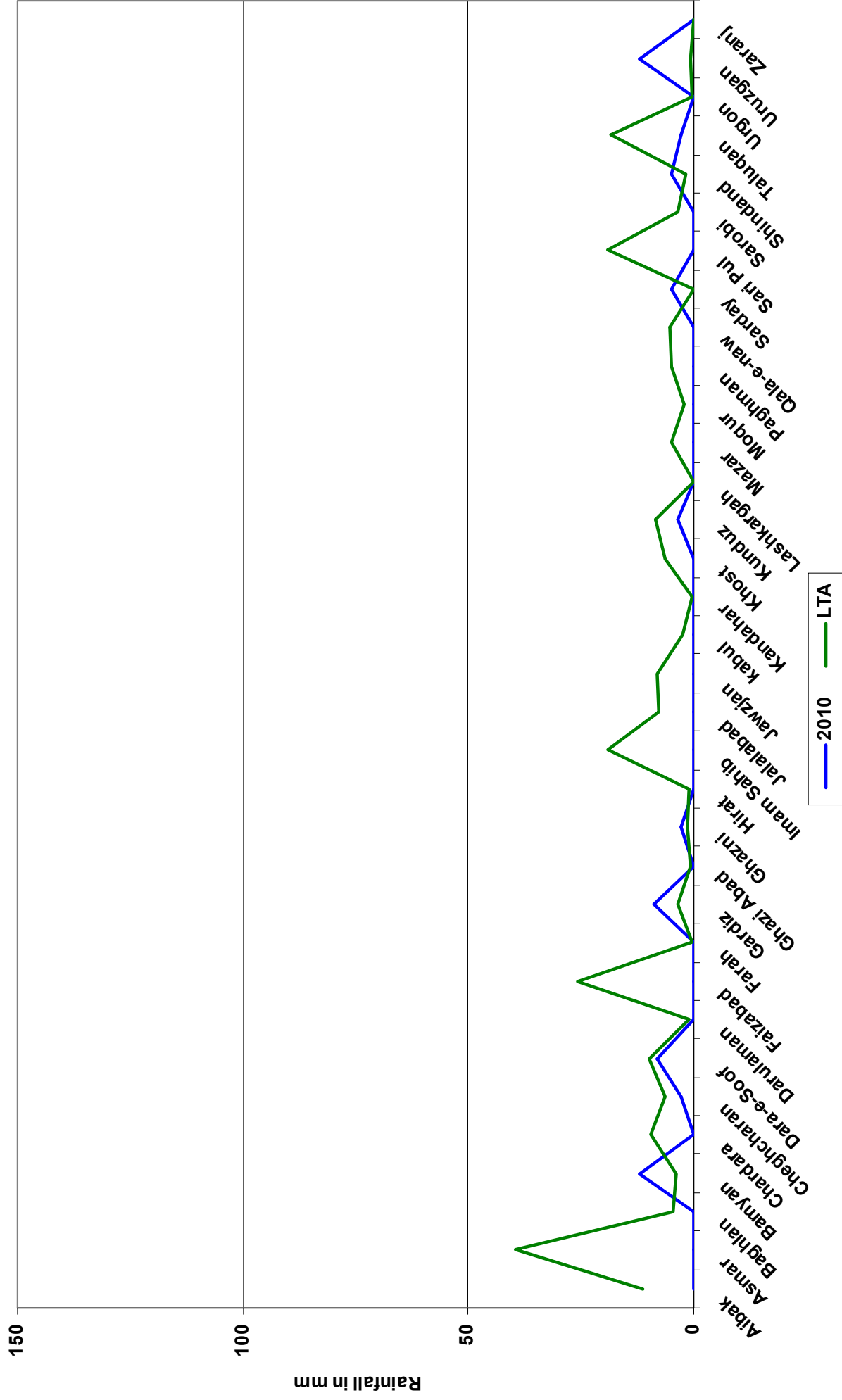


Monthly Rainfall Comparison
With
Long Term Average

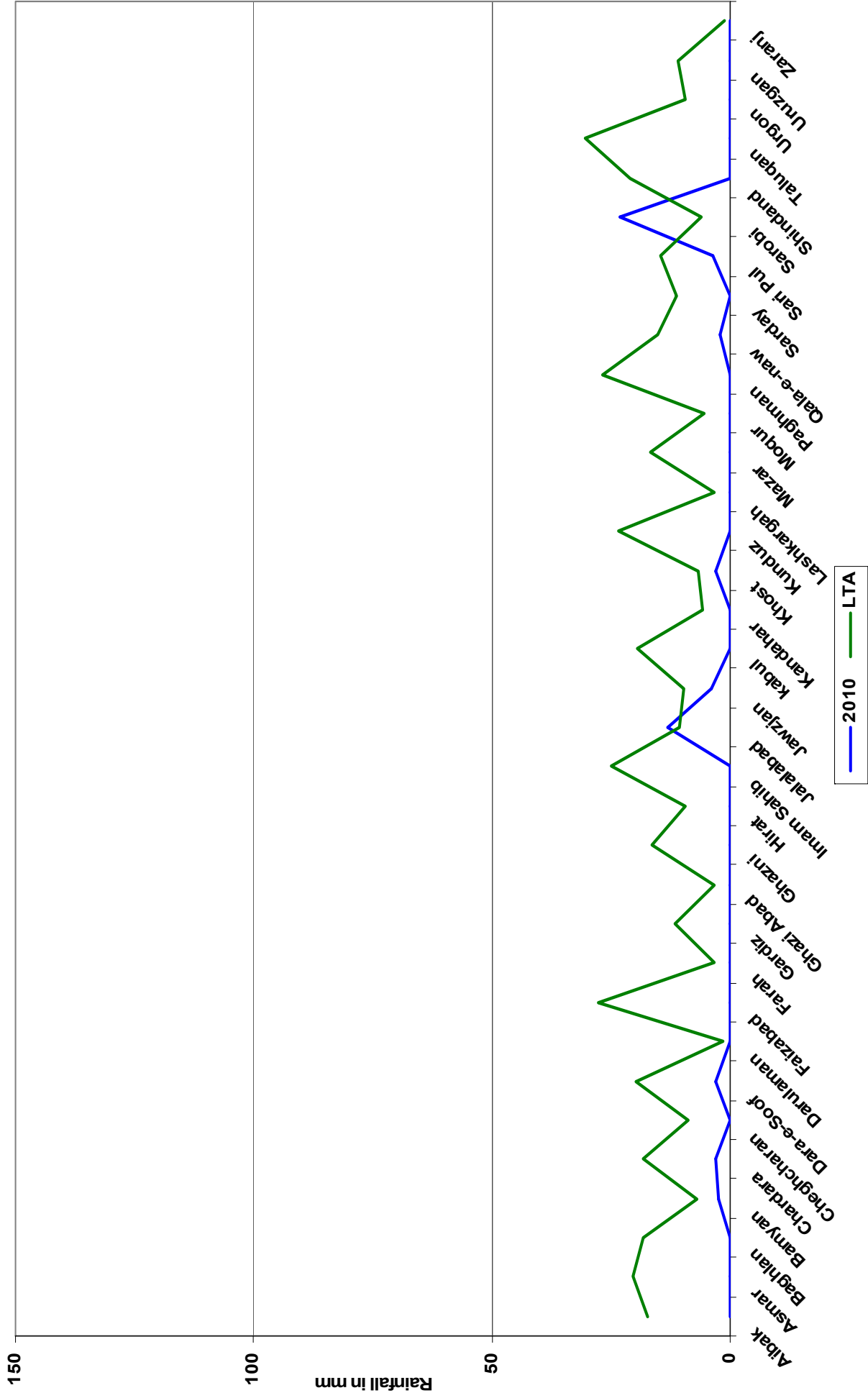
September



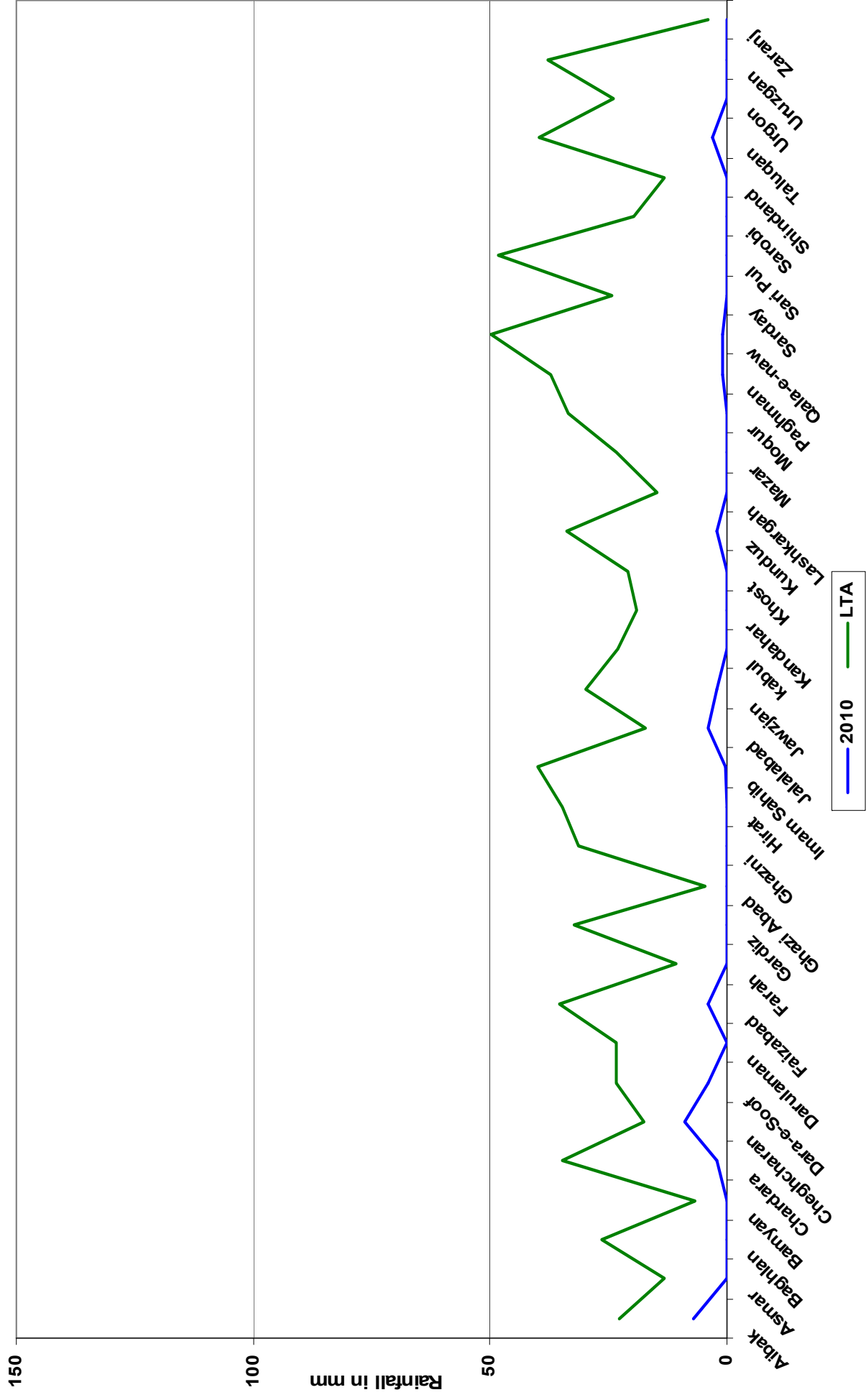
October



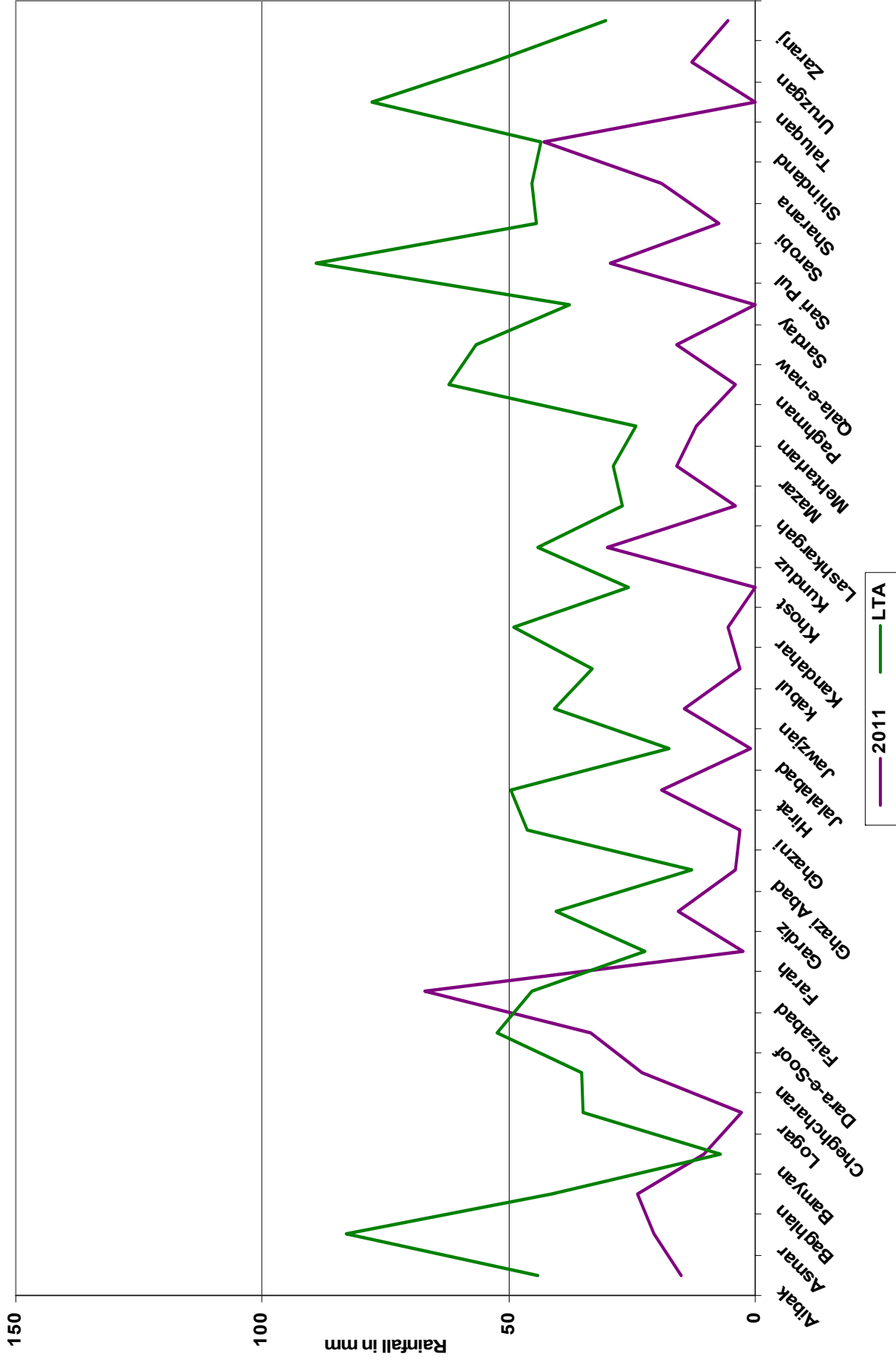
November



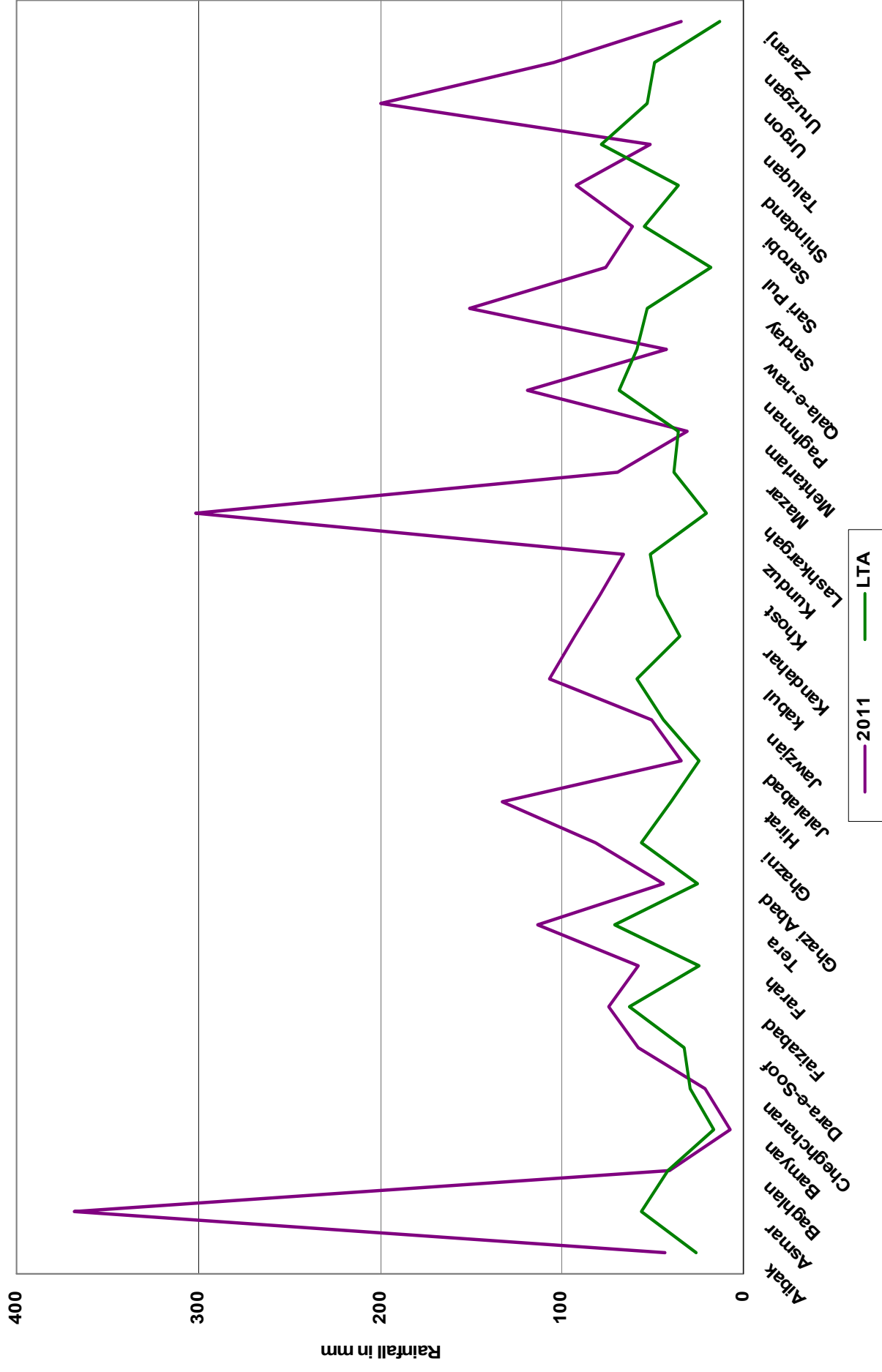
December



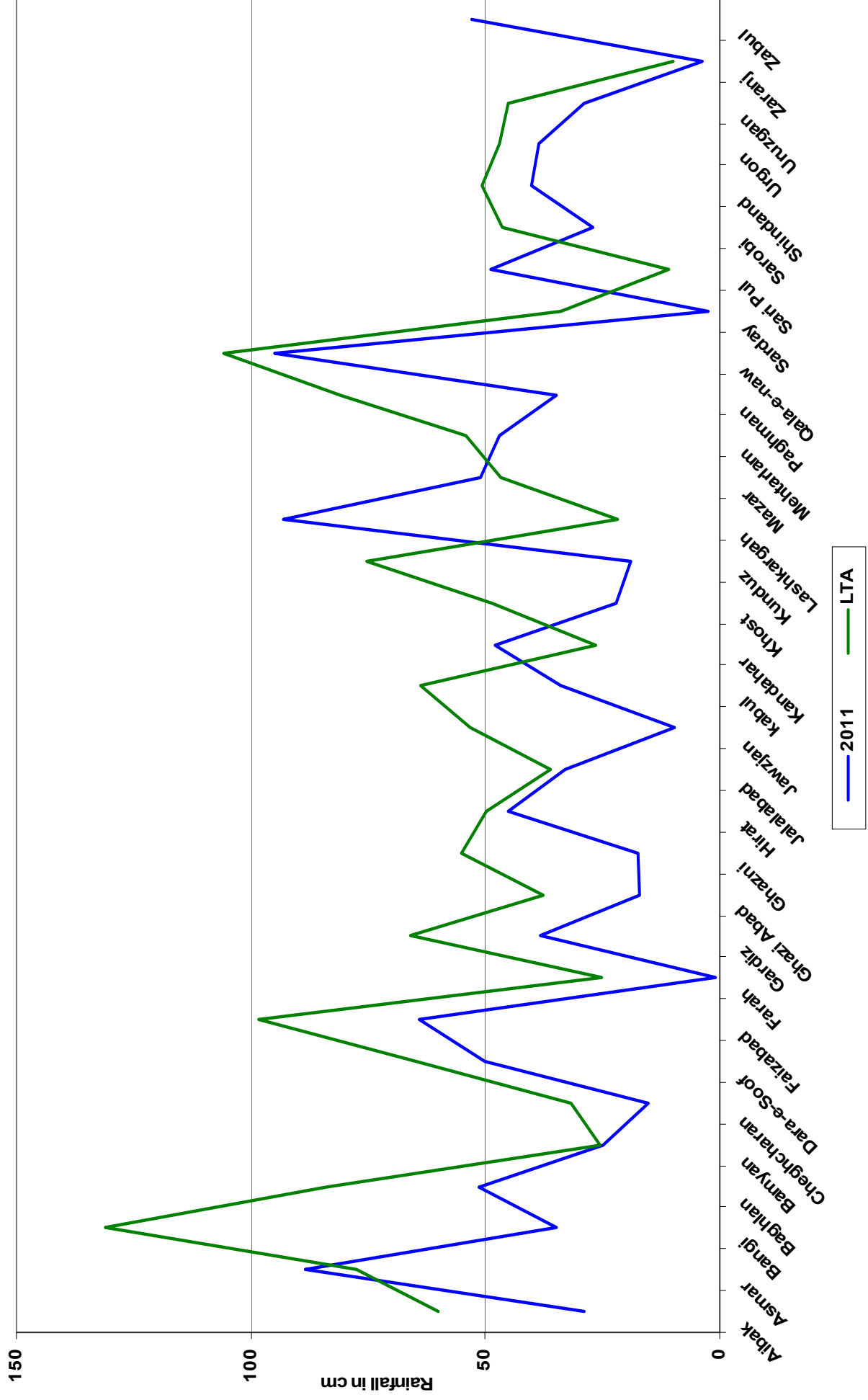
January



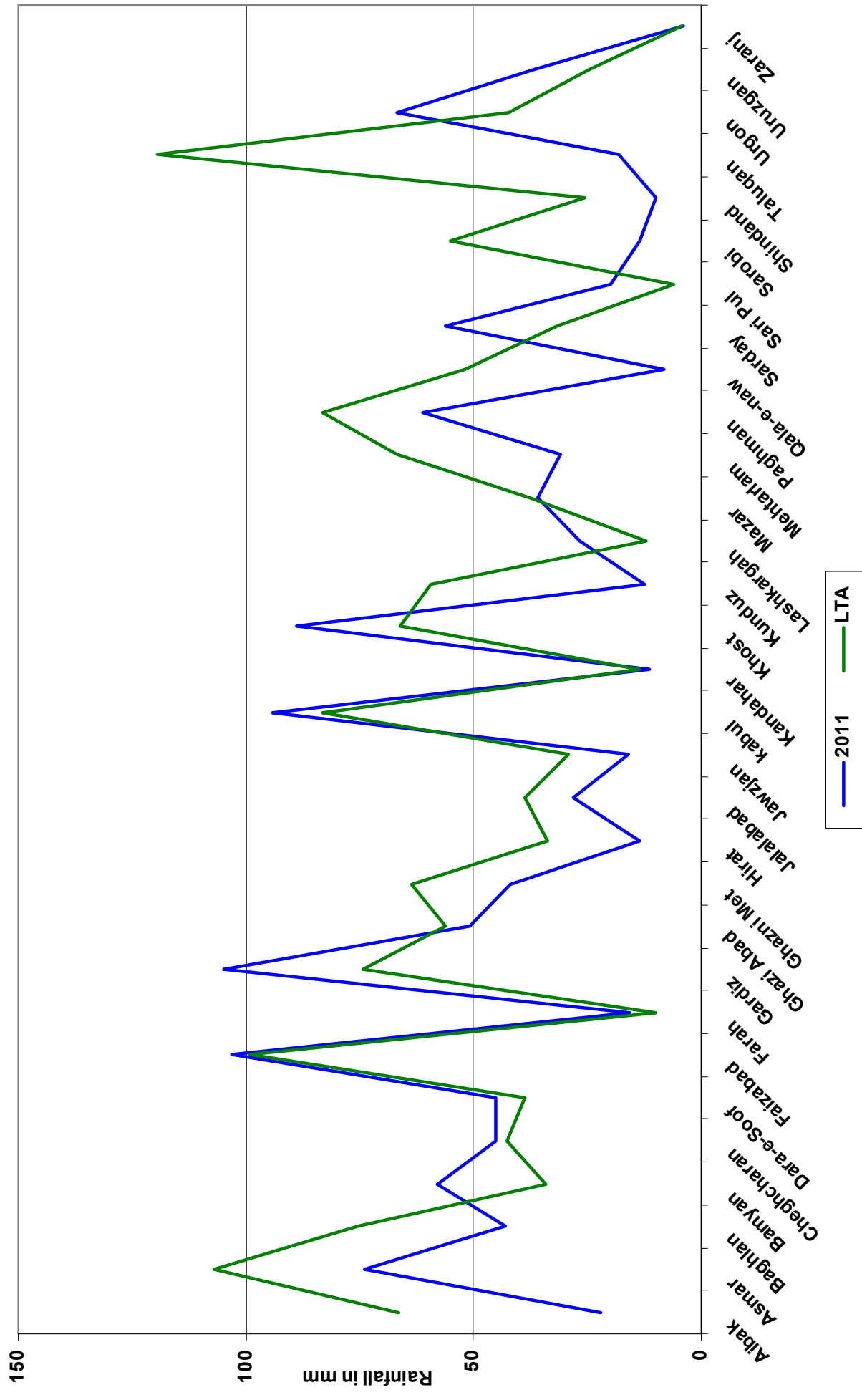
February



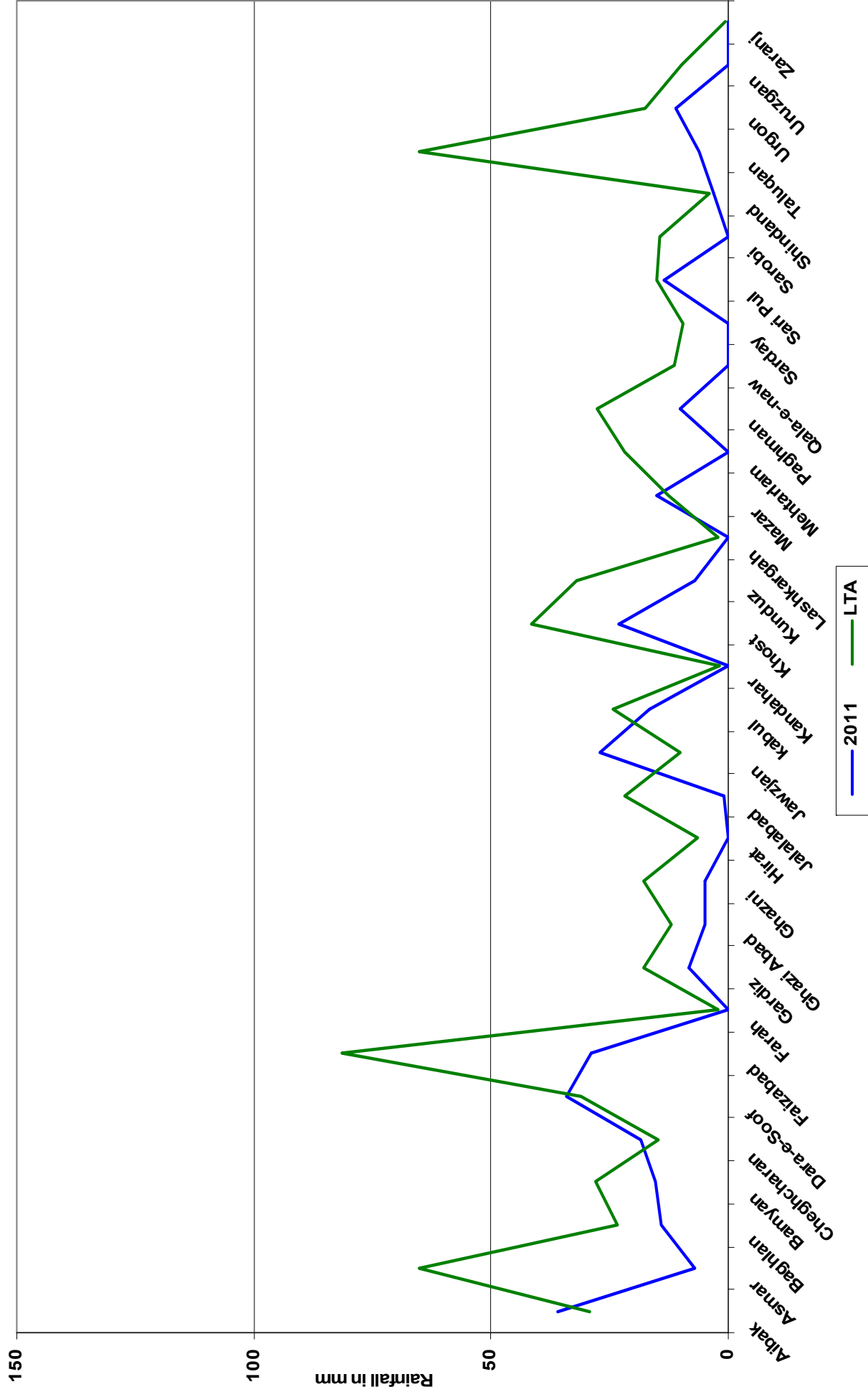
March



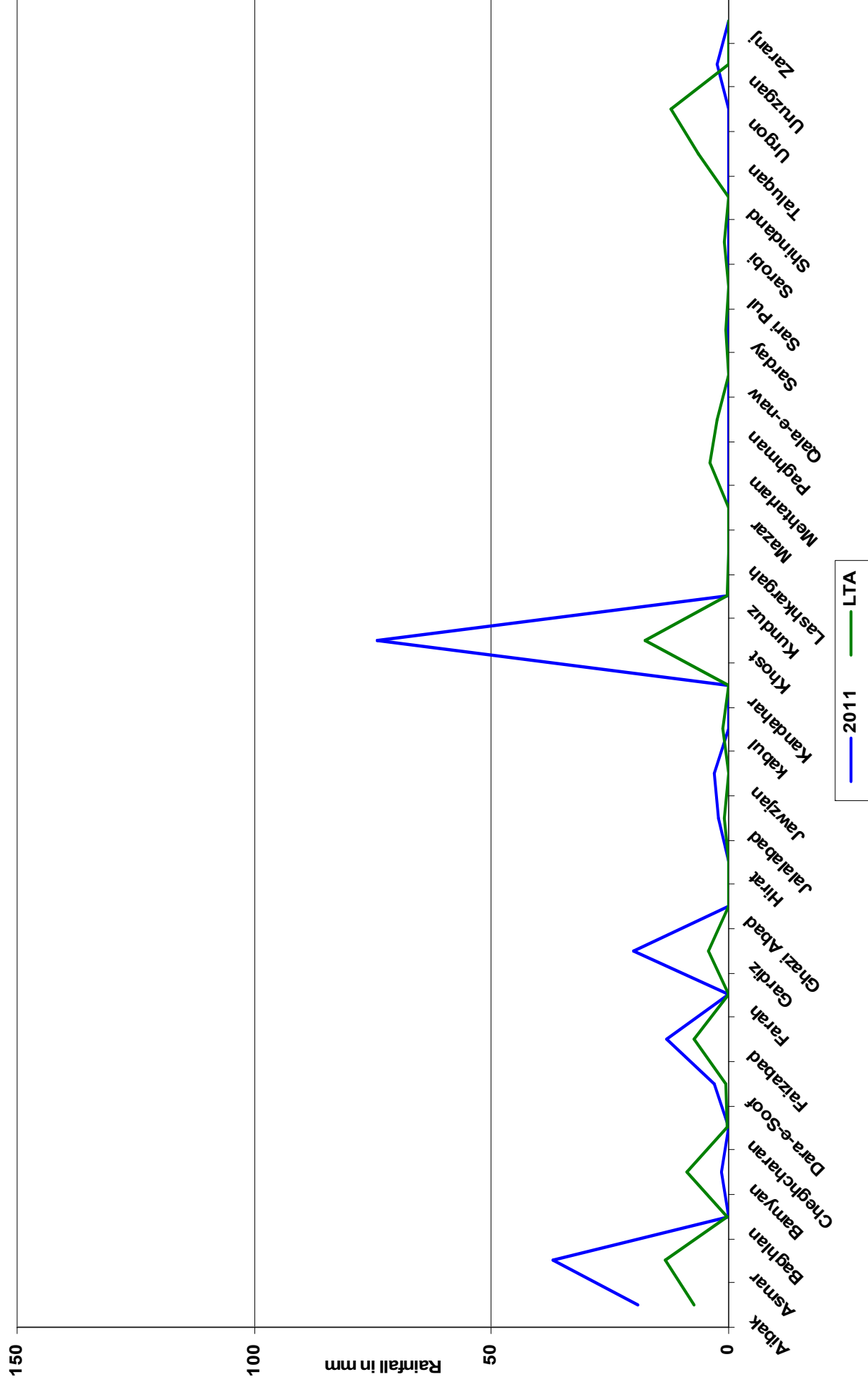
April



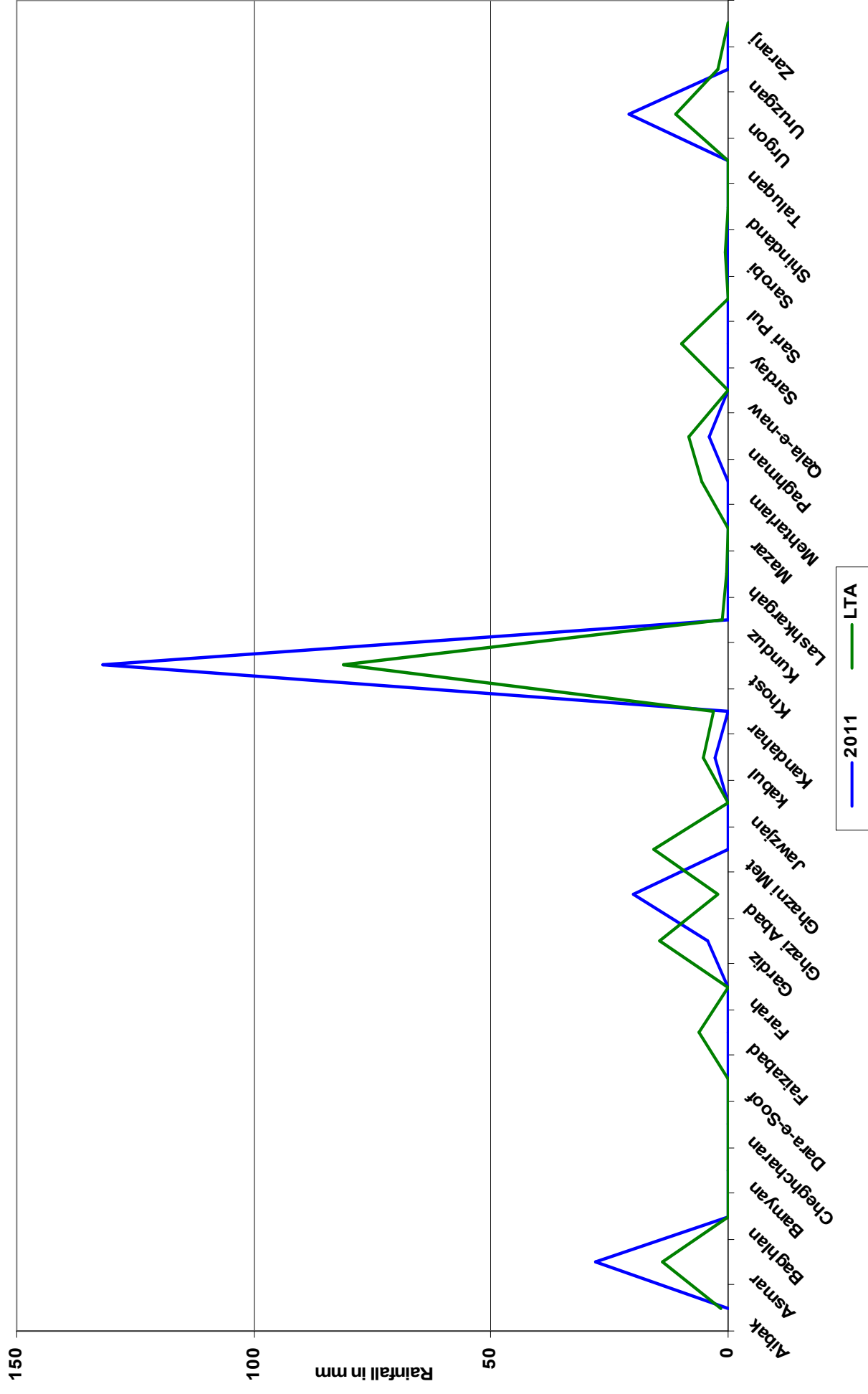
May



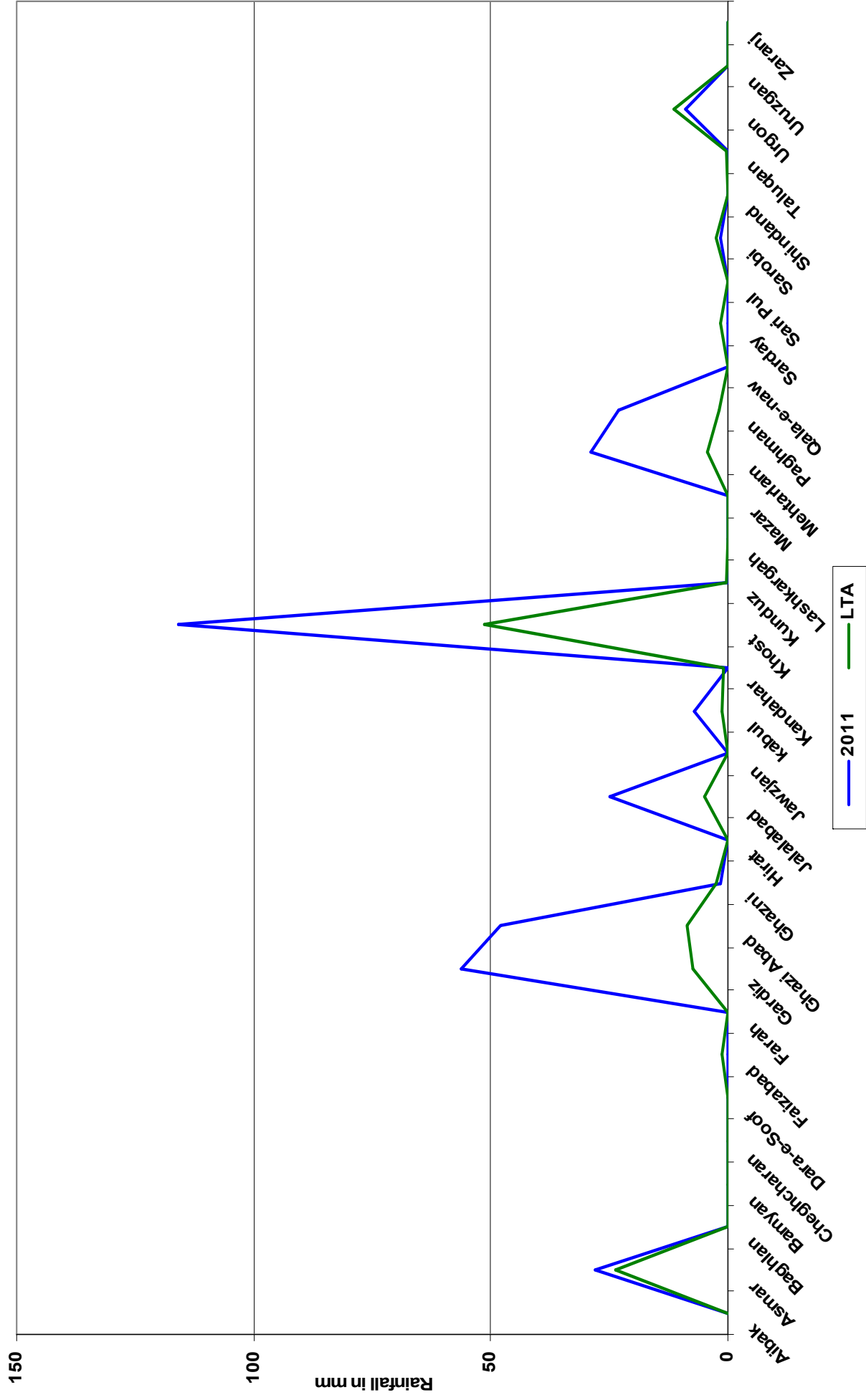
June



July



August

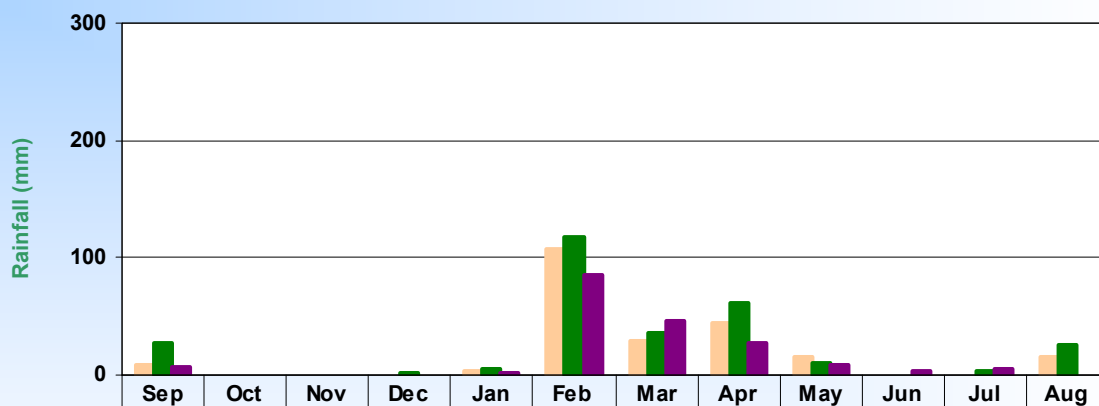


**Dekadal Rainfall (mm) Graphs for
Season (2010-2011)
By Region**

Dekadal Rainfall Graphs by Region

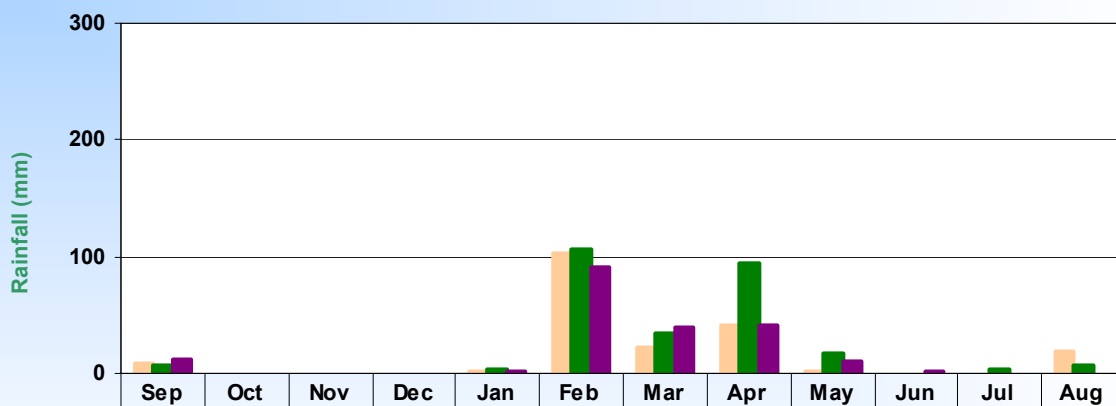
Capital Region

Kabul Monthly Rainfall (2010/2011)



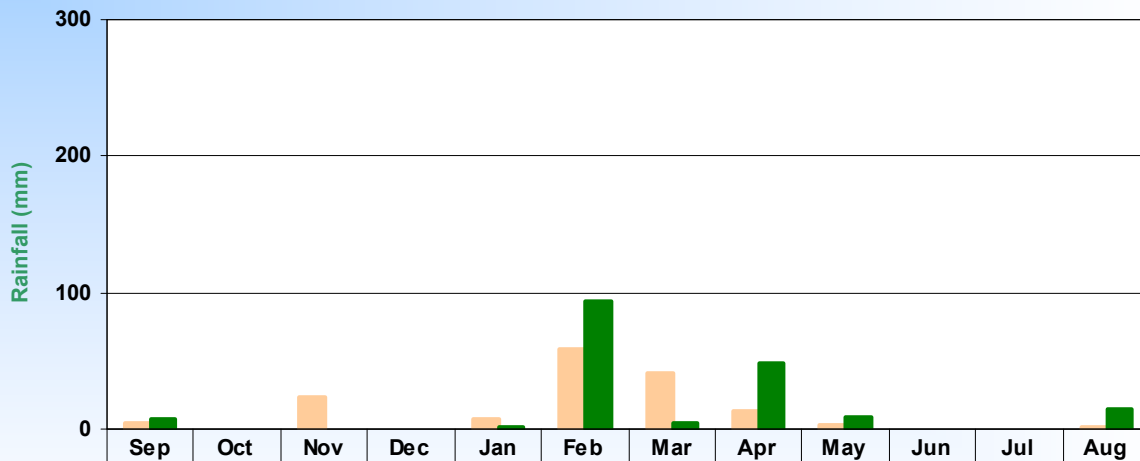
Badam bagh (Kabul)	9	0	0	0	2.9	106.8	28.7	43.5	16	0	0	15
Paghman (Kabul)	27	0	0	1	5	118	35	61	10	0	4	26
Kariz Mir (Kabul)	7	0	0	0	2	85	46	28	8	4	5	

Kabul Monthly Rainfall (2010/2011)



Darulaman (Kabul)	9.4	0	0	0	1	102.5	21.8	40.5	1	0	0	19.4
Kabul (Airport)	6.2	0	0	0	3.2	106.6	33.8	94.2	16.7	0	2.7	7.2
Gul Khana (Kabul)	11.8	0	0	0	1	90.5	40.1	40.9	10.8	1.8	0	0

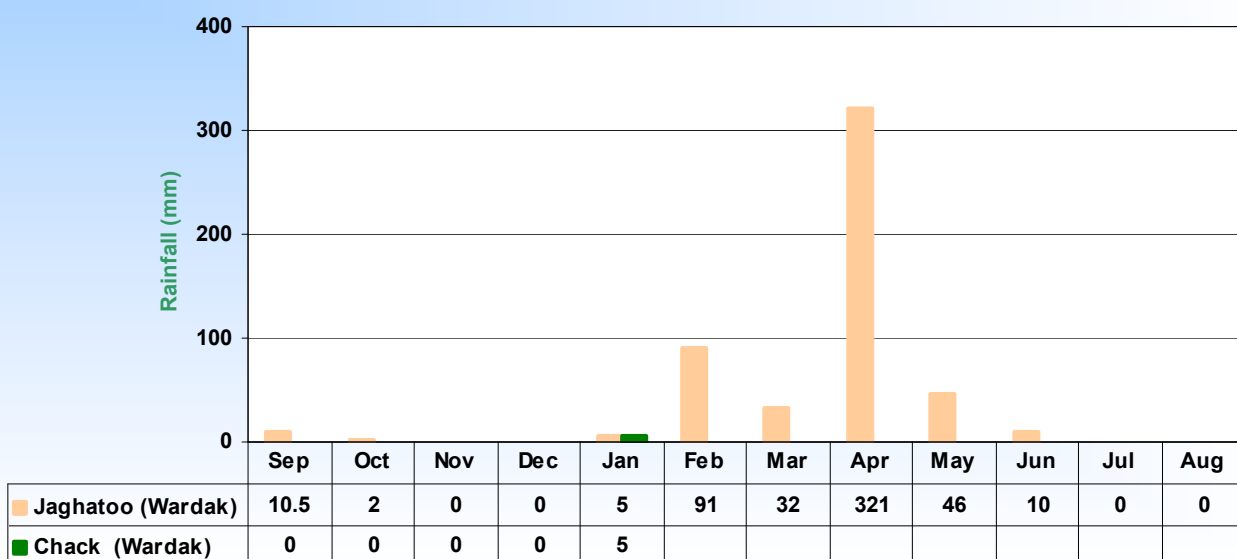
Kabul Monthly Rainfall (2010/2011)



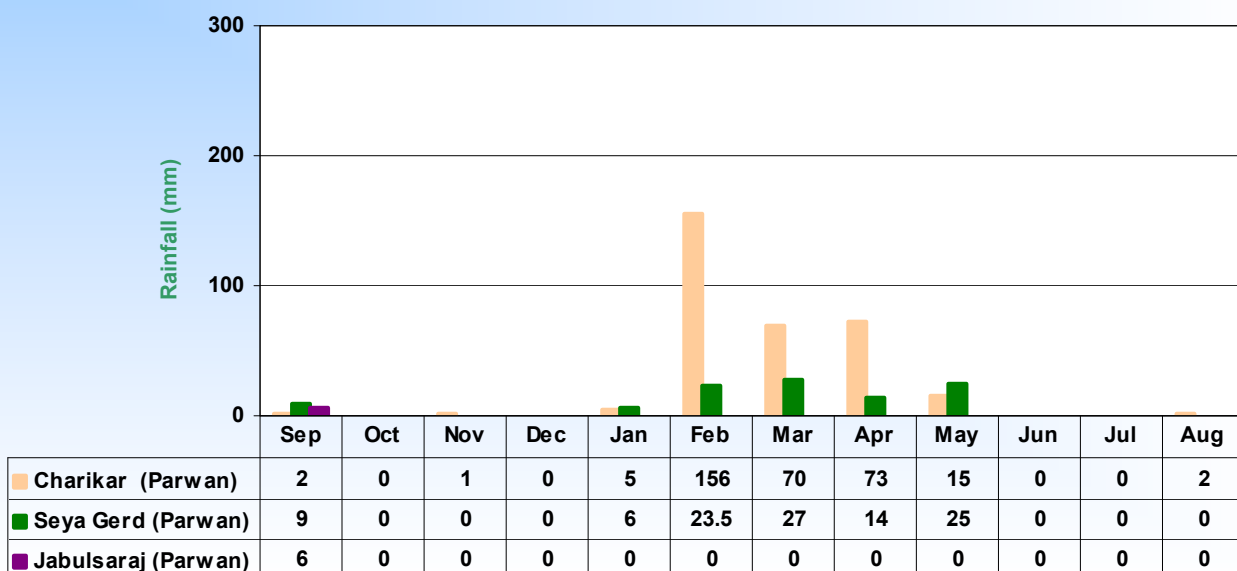
Sarobi (Kabul)	4.6	0	23	0	7.3	58.8	40.7	13.5	3	0	0	1.4
Qargha (Kabul)	7	0	0	0	1.5	93.5	4	48	9	0.5	0	15

Capital Region

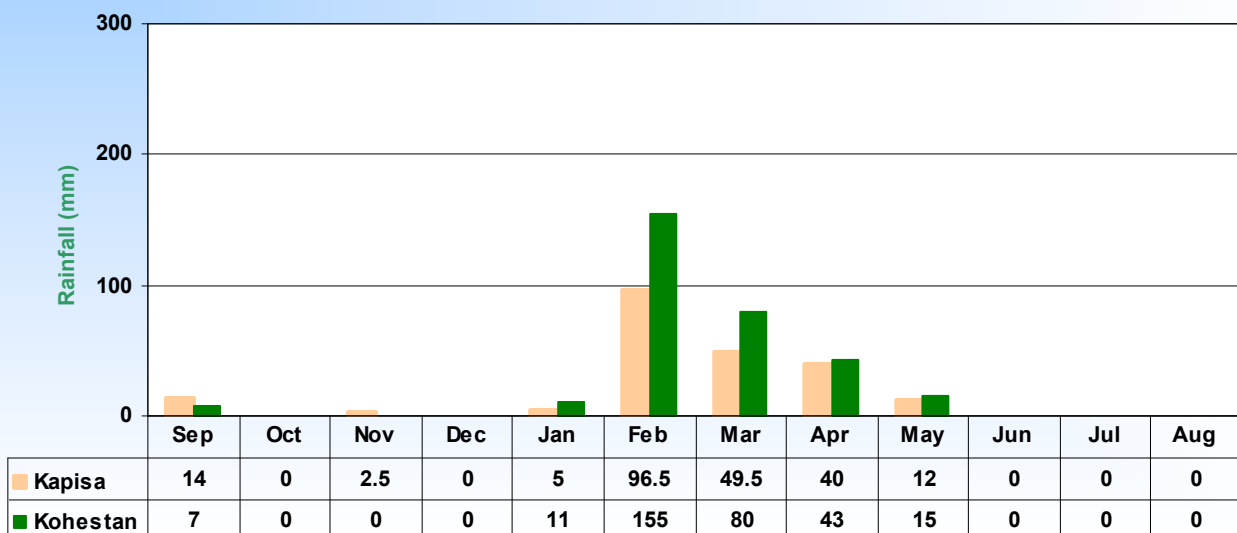
Wardak Monthly Rainfall (2010/2011)



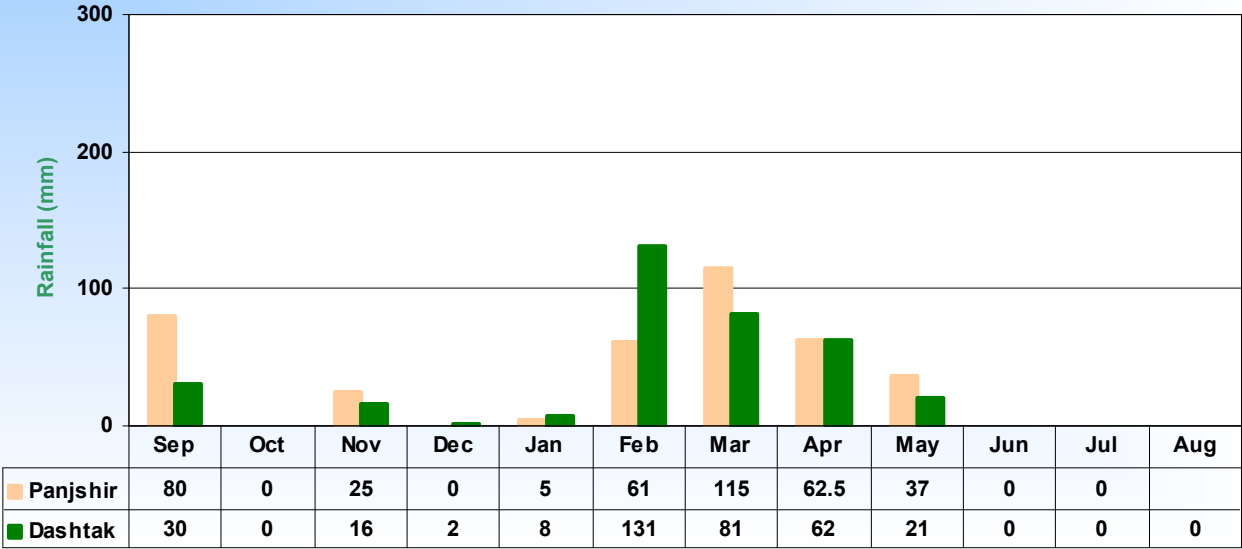
Parwan Monthly Rainfall (2010/2011)



Kapisa Monthly Rainfall (2010/2011)

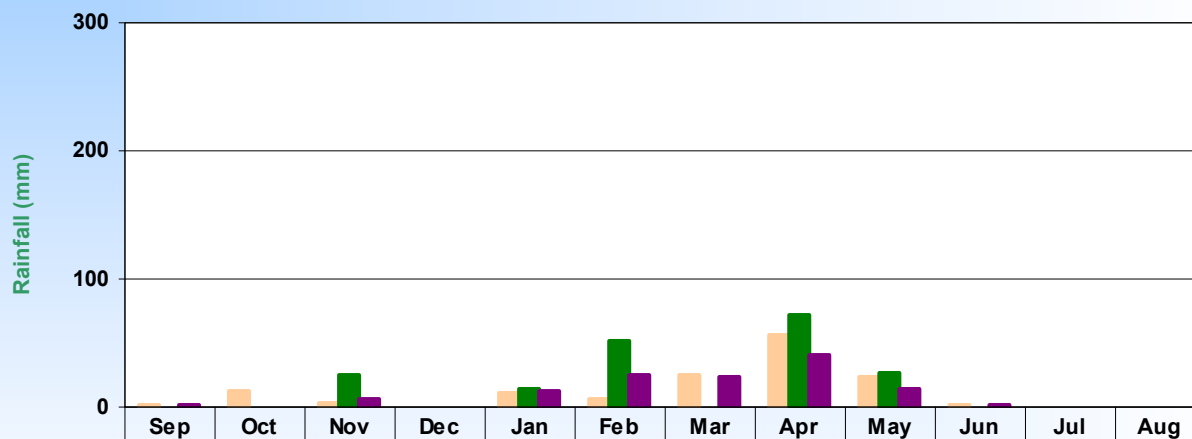


Panjshir Monthly Rainfall (2010/2011)



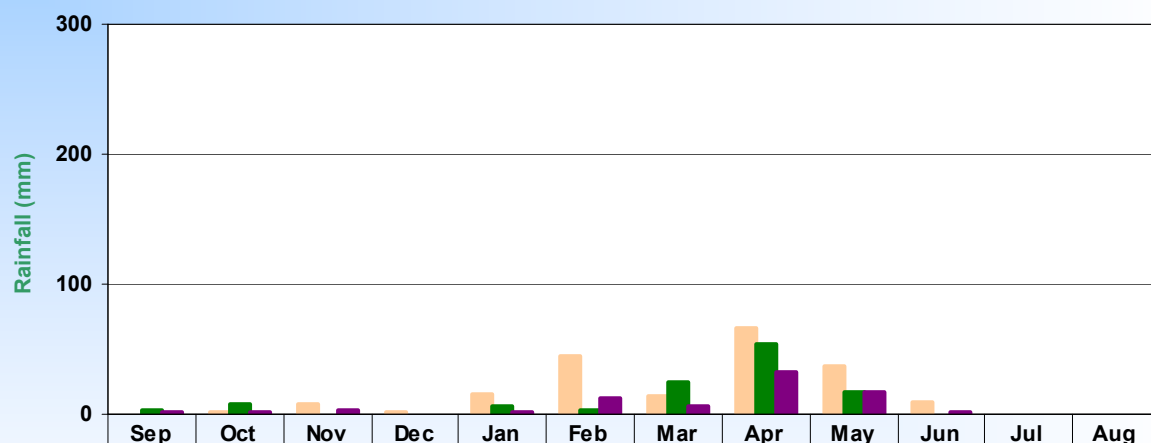
Central Highland Region

Bamyan Monthly Rainfall (2010/2011)



	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Bamyan	1	12	2.5	0	10.5	7	25	57	23.5	1.5	0	0
Panjab	0	0	25	0	14.7	52	0	72	27	0	0	0
Yakawlang	2	0	7	0	12	25	23	41	14	2	0	0

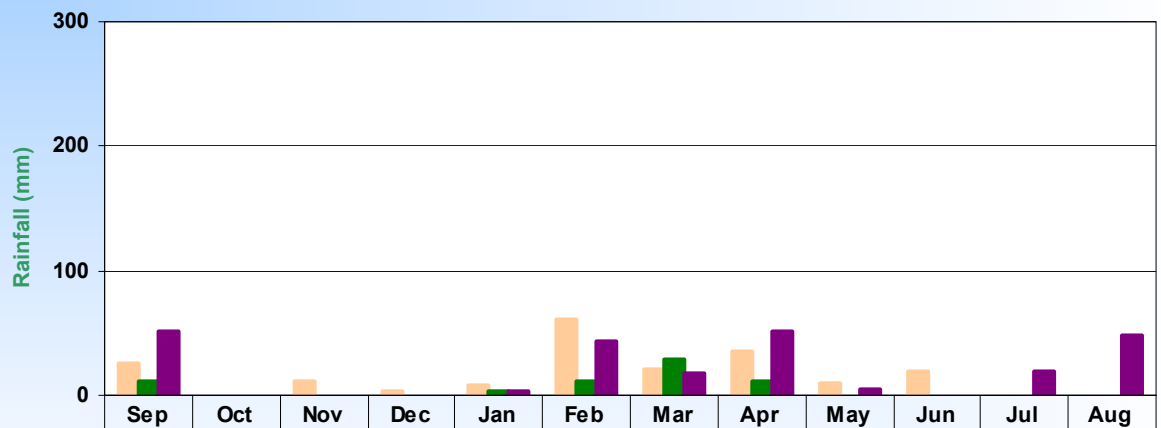
Bamyan Monthly Rainfall (2010/2011)



	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Kohmard	0	2	8	2	15	45	14	66	37	10	0	0
Mula Ghulam	3	7	0	0	6	3	24.5	54	17	0	0	0
Shebar	2	2	3.5	0	2	13	6.4	31.8	16.5	2	0	0.5

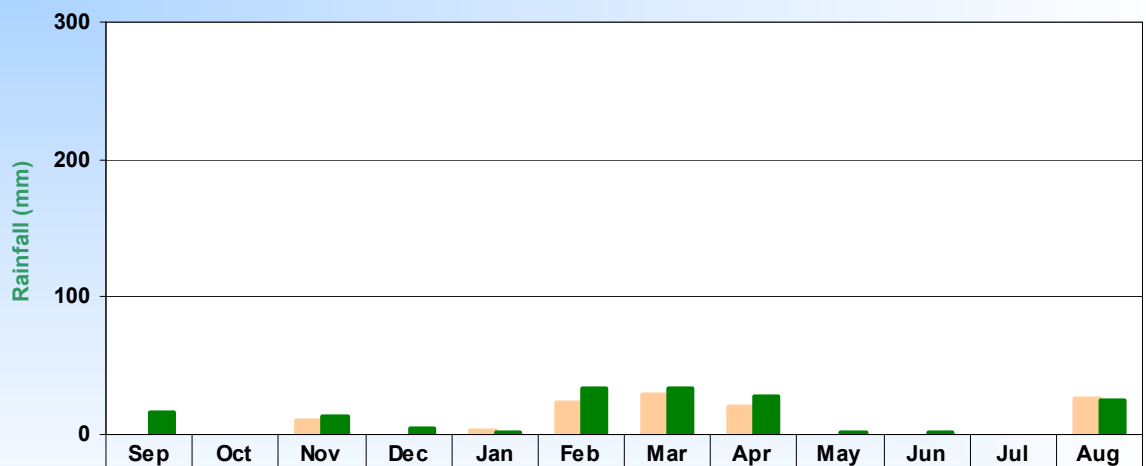
Eastern Region

Nangarhar Monthly Rainfall (2010/2011)



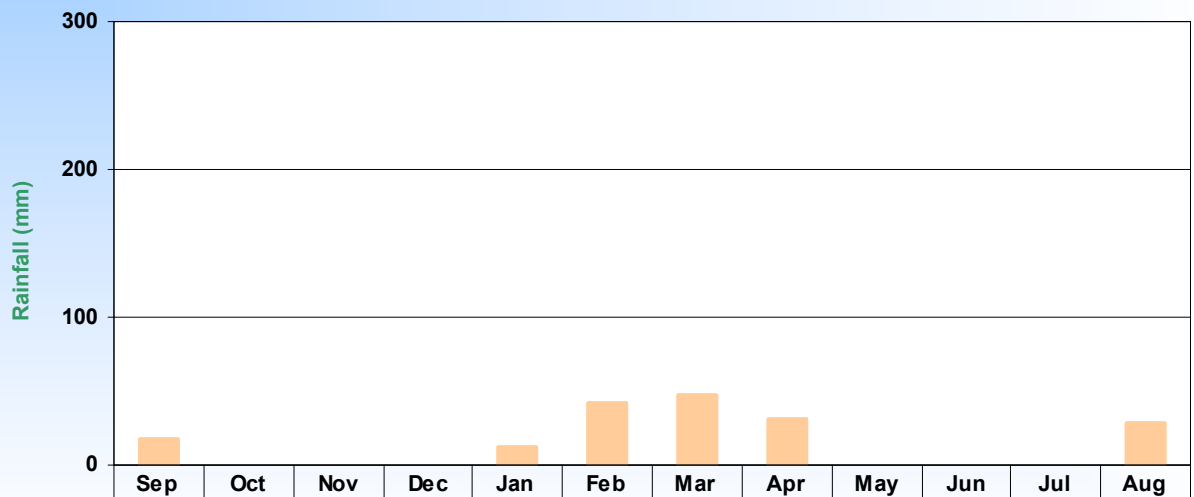
Agam	25	0	11	4	8	61.5	21	35	9	19	0	0
Farm Jadeed	10.5	0	0	0	3	11.5	29.5	12	0	0	0	0
Ghazi Abad	51	0	0	0	4	44	17	51	5	0	20	48

Nangarhar Monthly Rainfall (2010/2011)



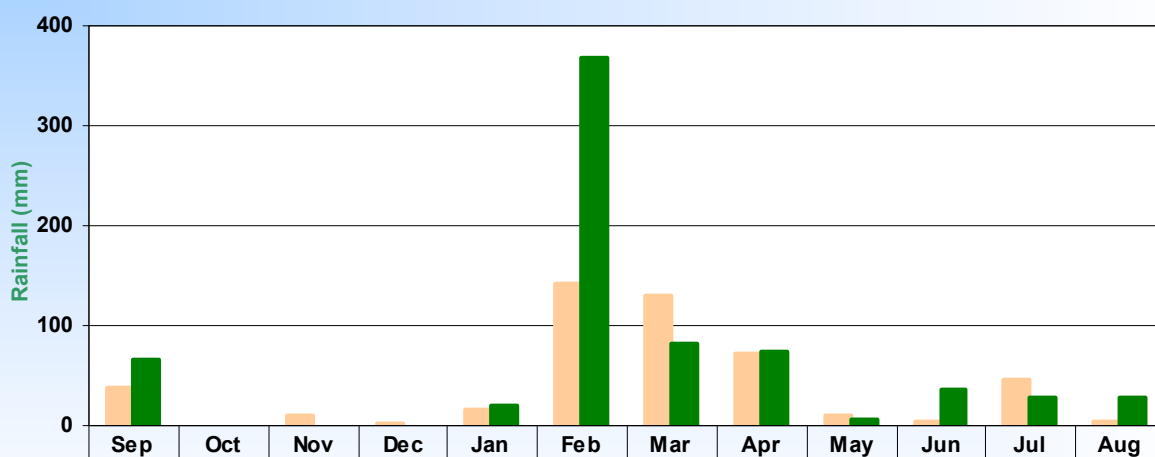
Sheshambagh	0	0	10.7	0	2.5	23.5	29.5	21	0	0	0	25.5
Jalalabad	16	0	13	4	1	34	33	28	1	2	0	25

Laghman Monthly Rainfall (2010/2011)



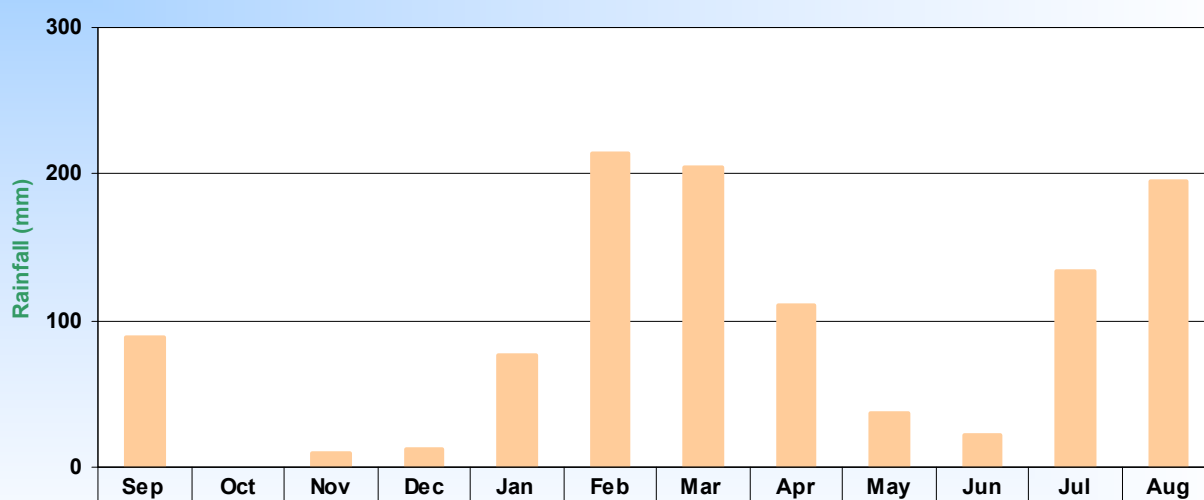
Mehtarlam	17	0	0	0	12	42	47	31	0	0	0	29
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Kunar Monthly Rainfall (2010/2011)



Asad Abad	39	0	10	1.5	16.5	142	131	73	10	5	46	5
Asmar	66	0	0	0	20.5	368	82.5	74	7	37	28	28

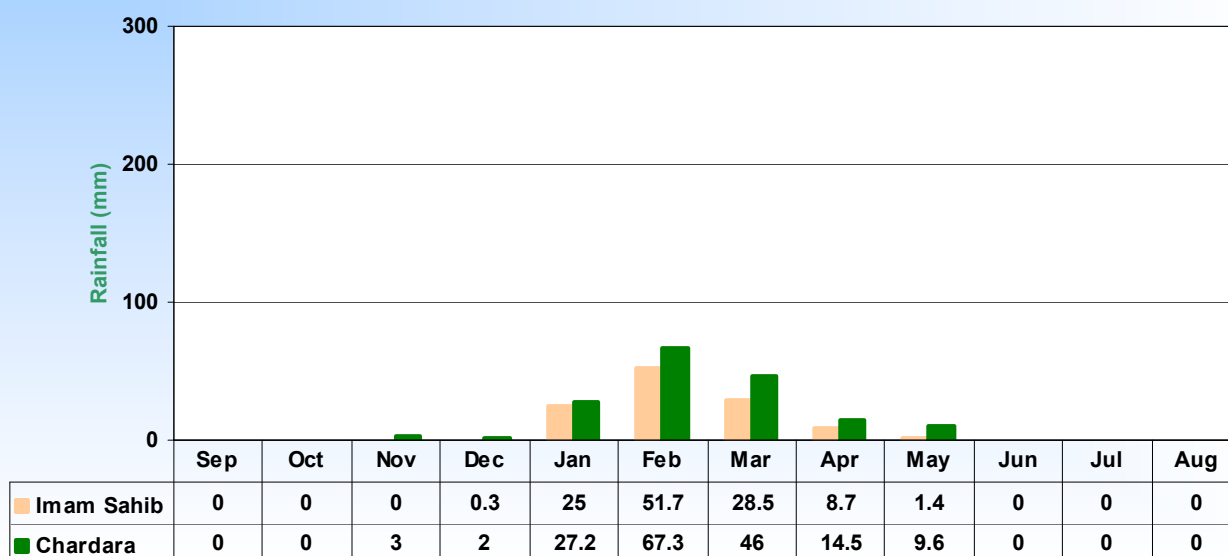
Nooristan Monthly Rainfall (2010/2011)



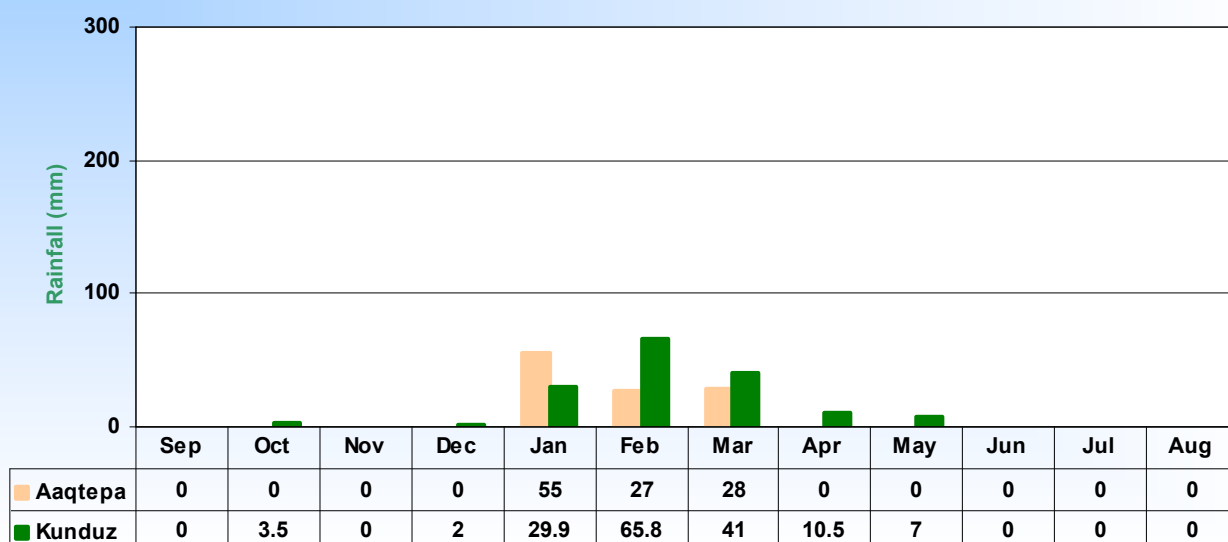
Paroon	89	0	10	12	77	214	204	111	37	22	134	195
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North East Region

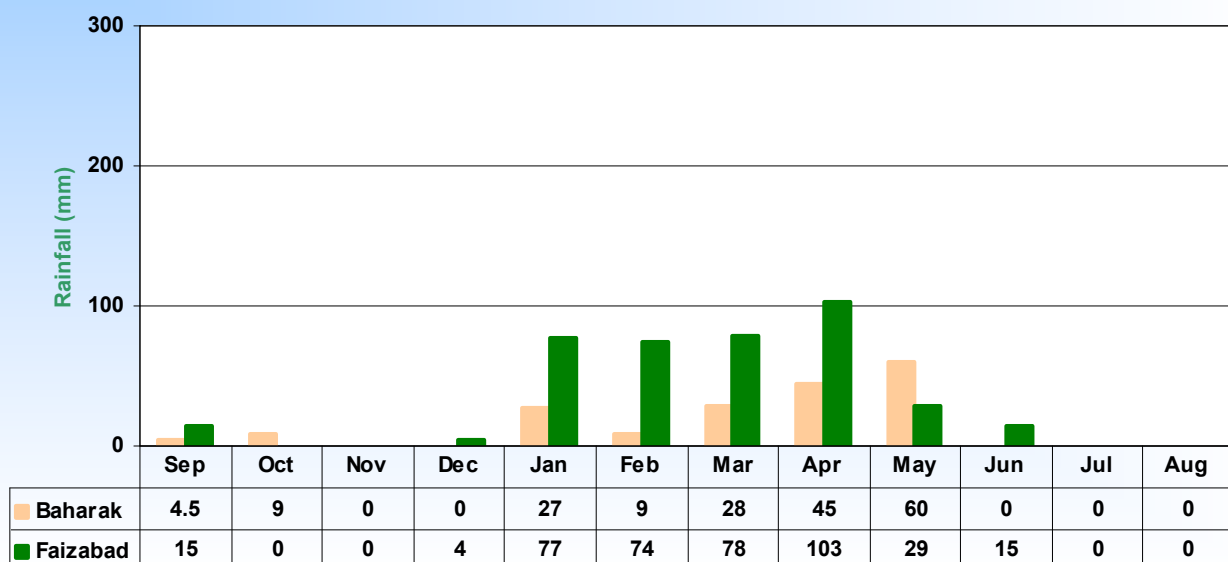
Kunduz Monthly Rainfall (2010/2011)



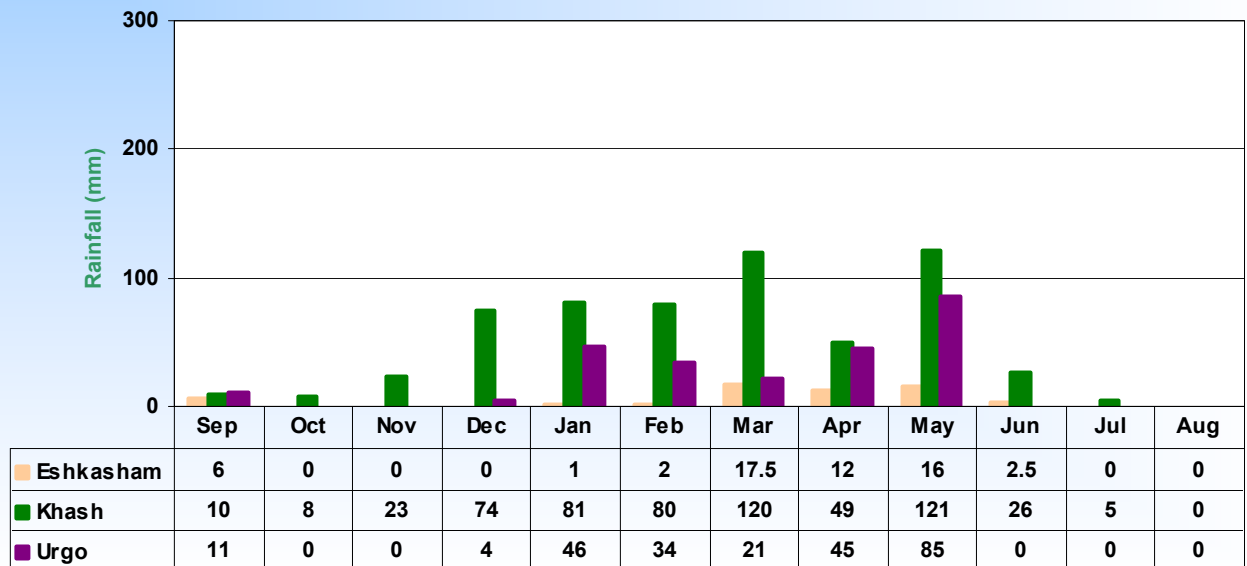
Kunduz Monthly Rainfall (2010/2011)



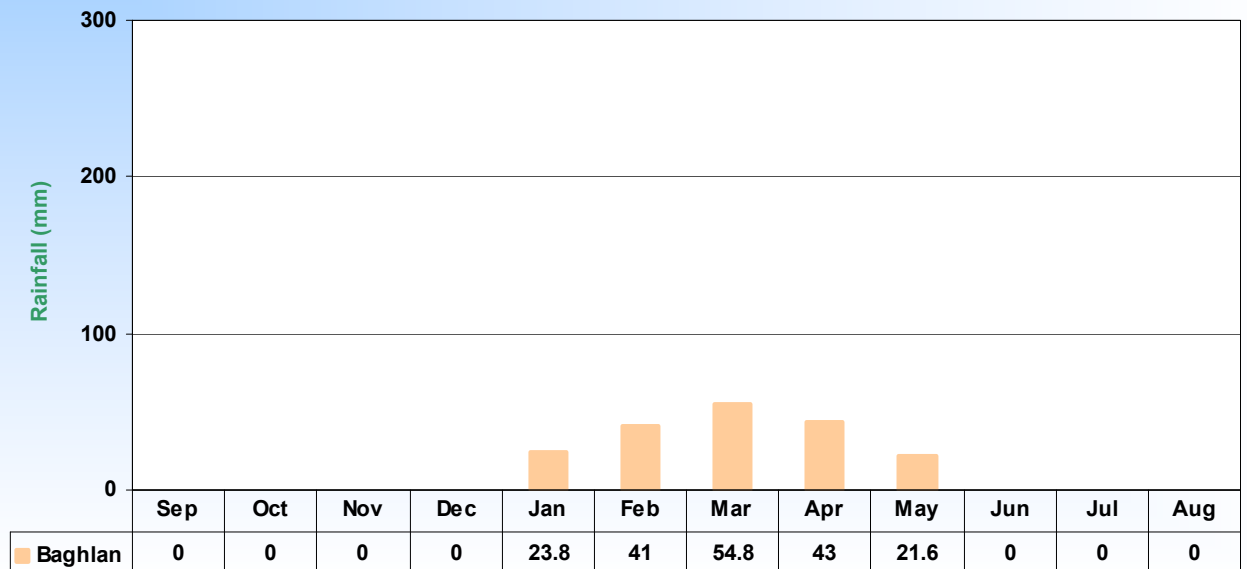
Badakhshan Monthly Rainfall (2010/2011)



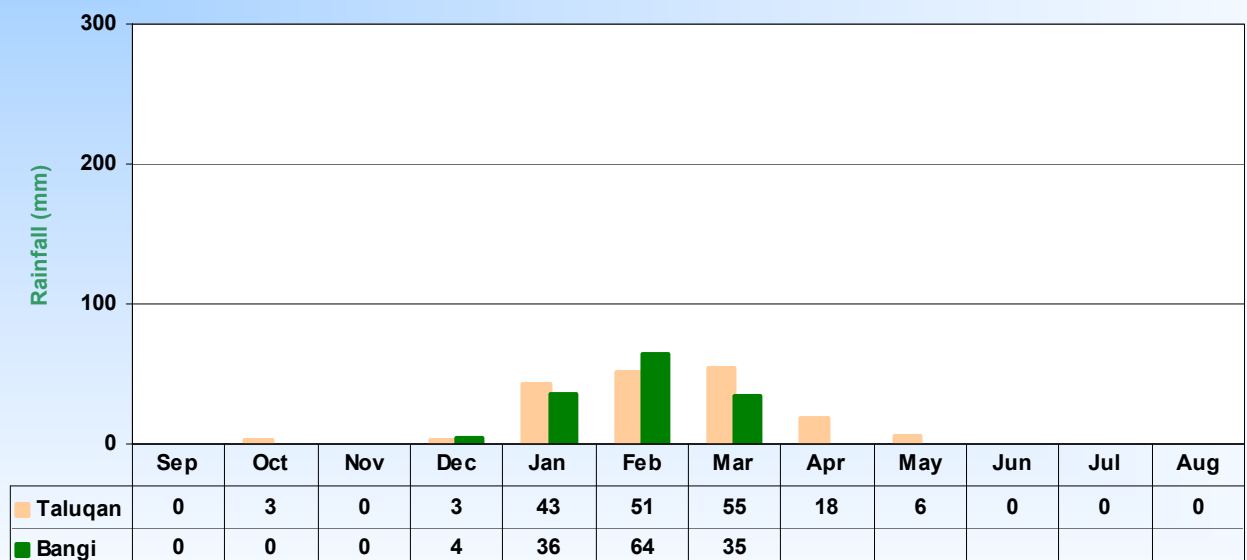
Badakhshan Monthly Rainfall (2010/2011)



Baghlan Monthly Rainfall (2010/2011)

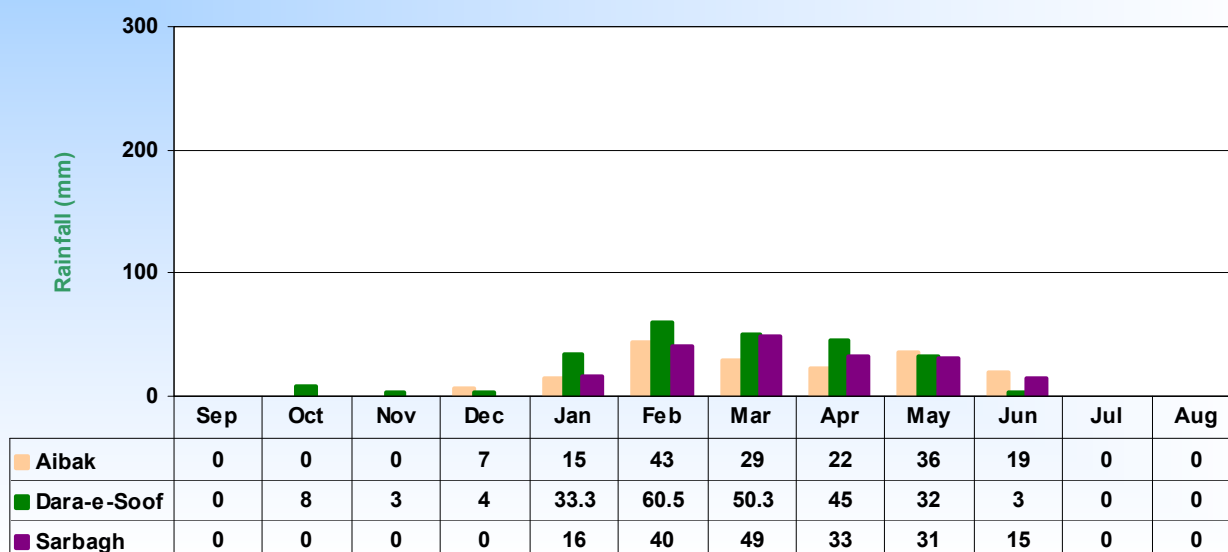


Takhar Monthly Rainfall (2010/2011)

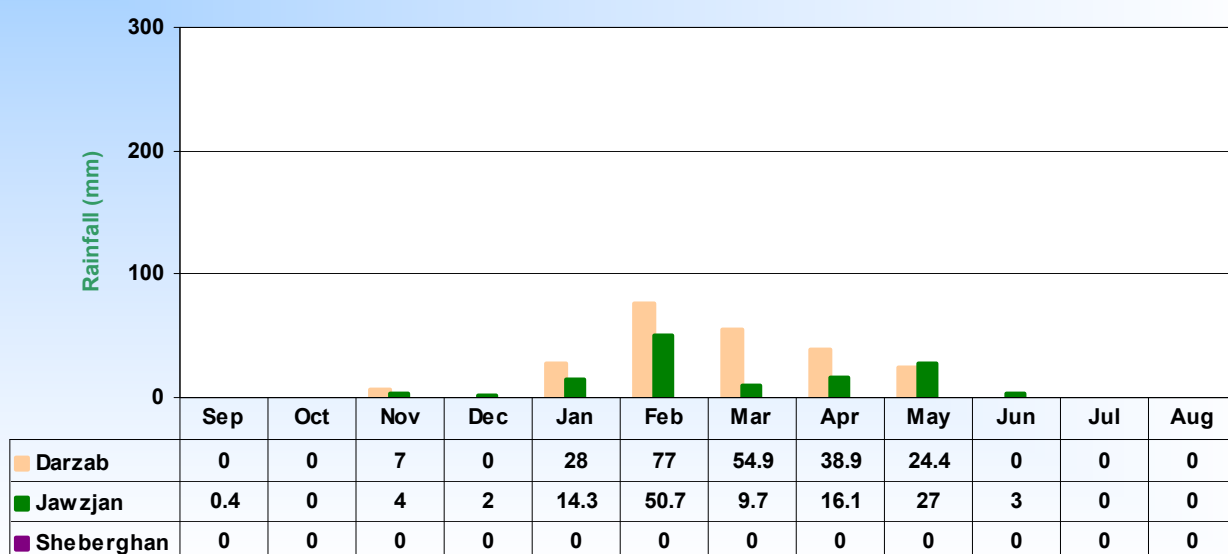


Northern Region

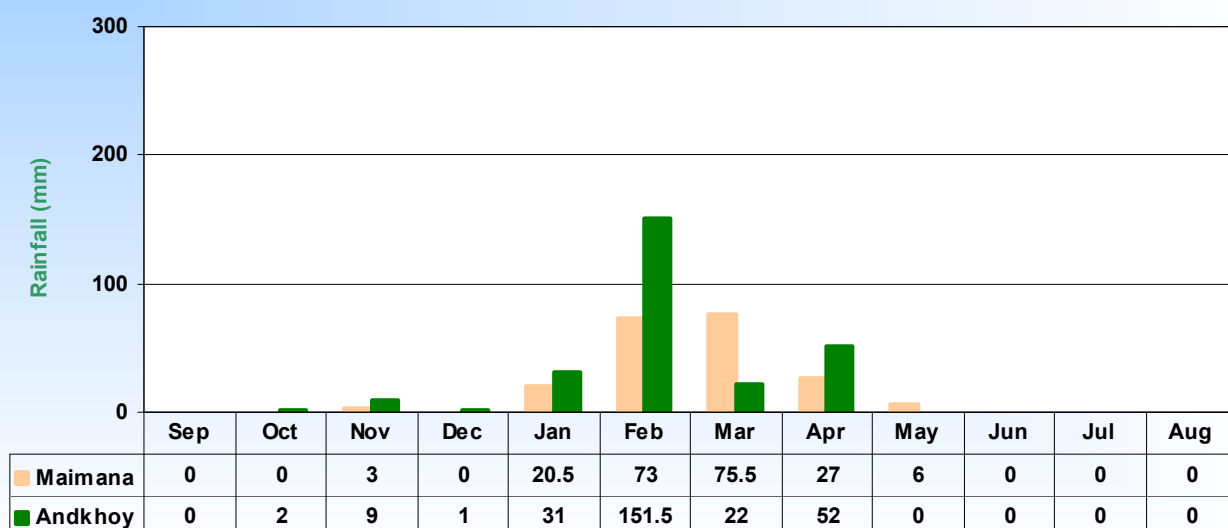
Samangan Monthly Rainfall (2010/2011)



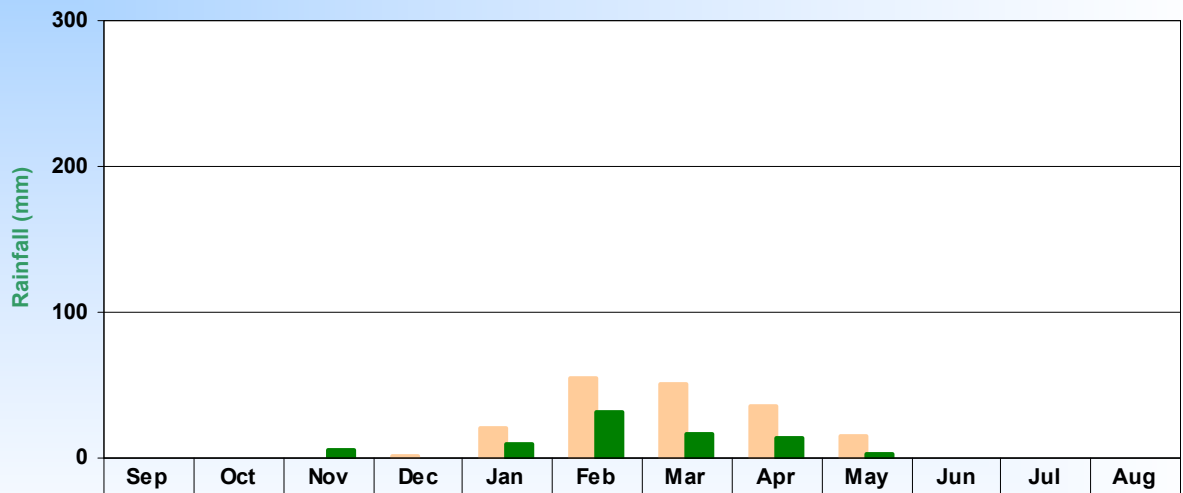
Jawzjan Monthly Rainfall (2010/2011)



Faryab Monthly Rainfall (2010/2011)

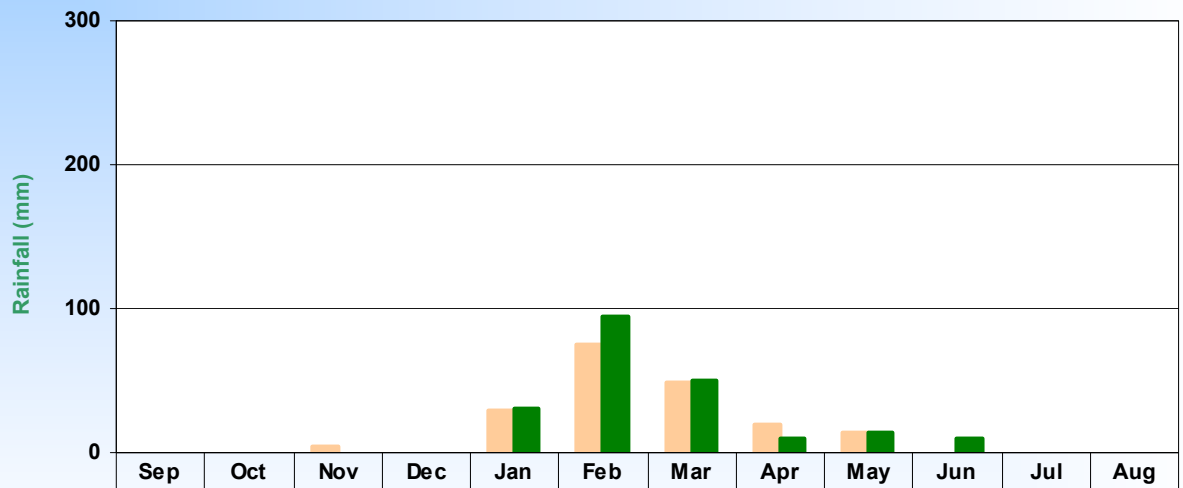


Balkh Monthly Rainfall (2010/2011)



	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Mazar	0	0	0	2	20	55	51	36	15	0	0	0
Takhta Pul	0	0	6	0	9	31	17	14	2.7	0	0	0

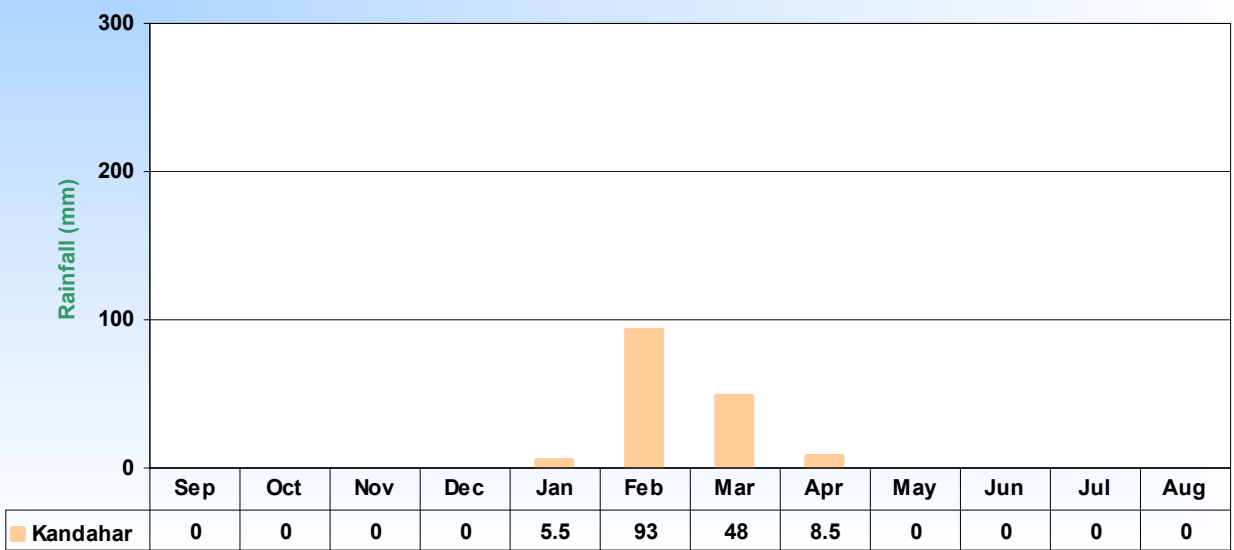
Sari Pul Monthly Rainfall (2010/2011)



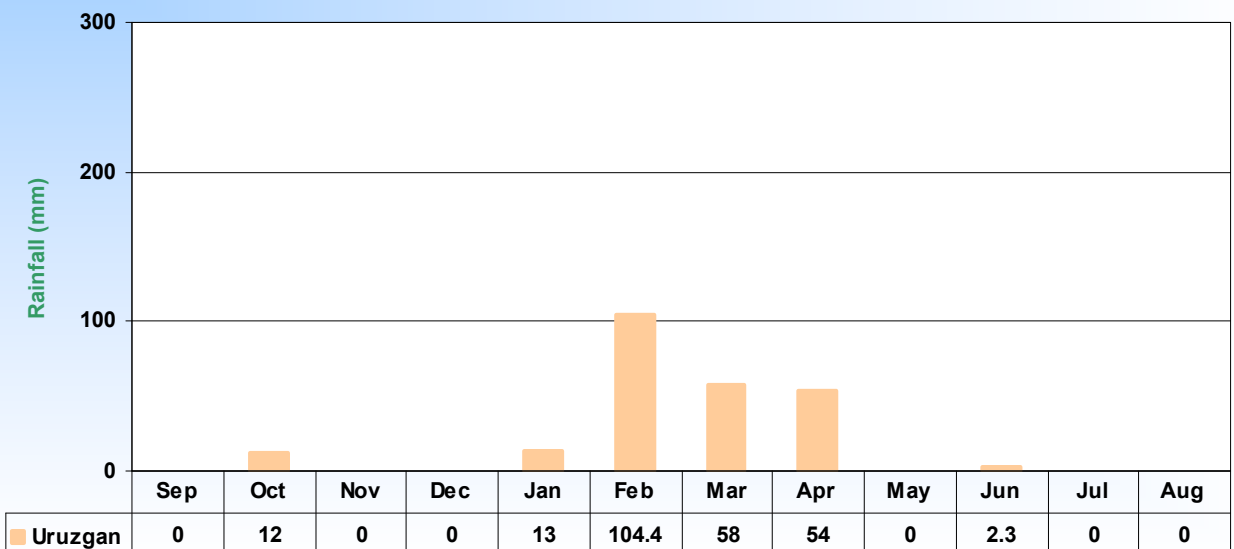
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Sari Pul	0	0	3.5	0	29.5	75.5	49	20	13.5	0	0	0
Sozam Qala	0	0	0	0	30	95	50	10	14.5	10	0	0

Southern Region

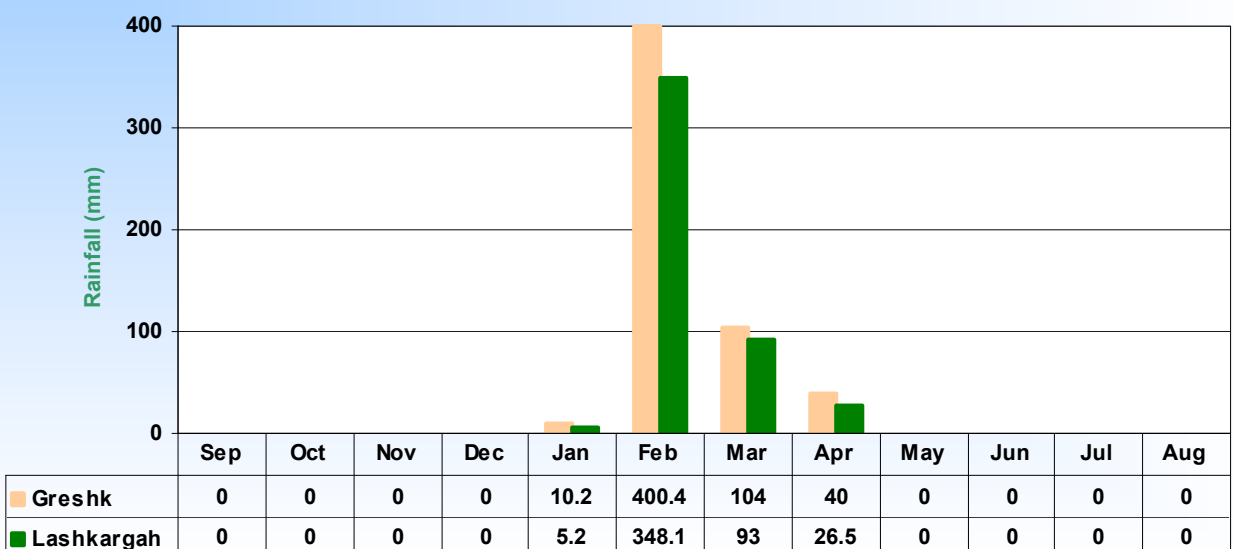
Kandahar Monthly Rainfall (2010/2011)



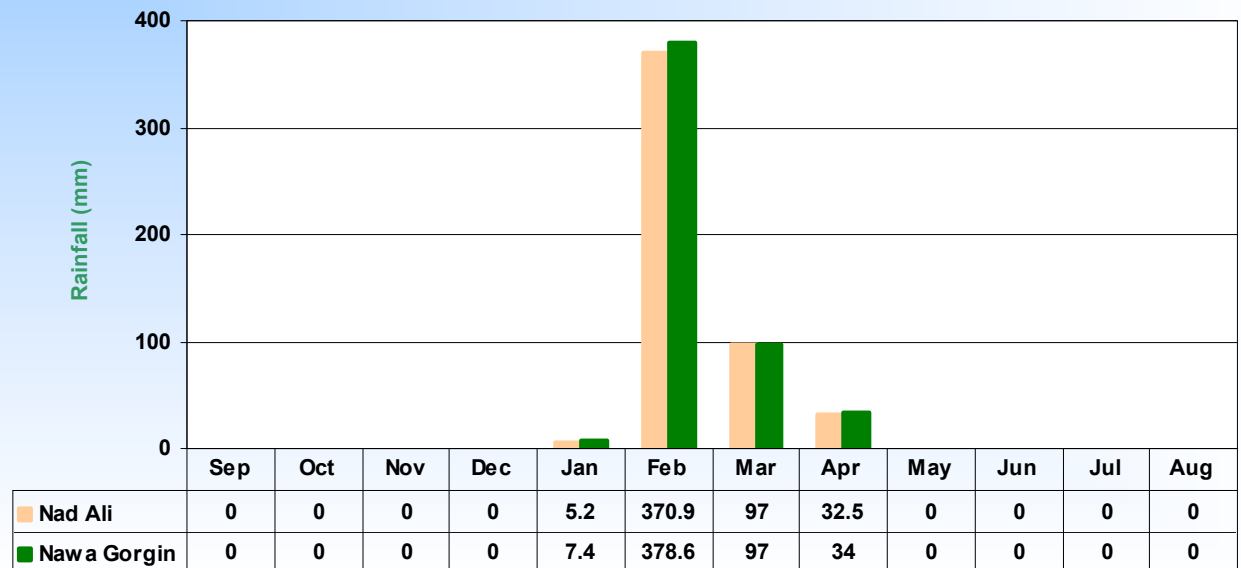
Uruzgan Monthly Rainfall (2010/2011)



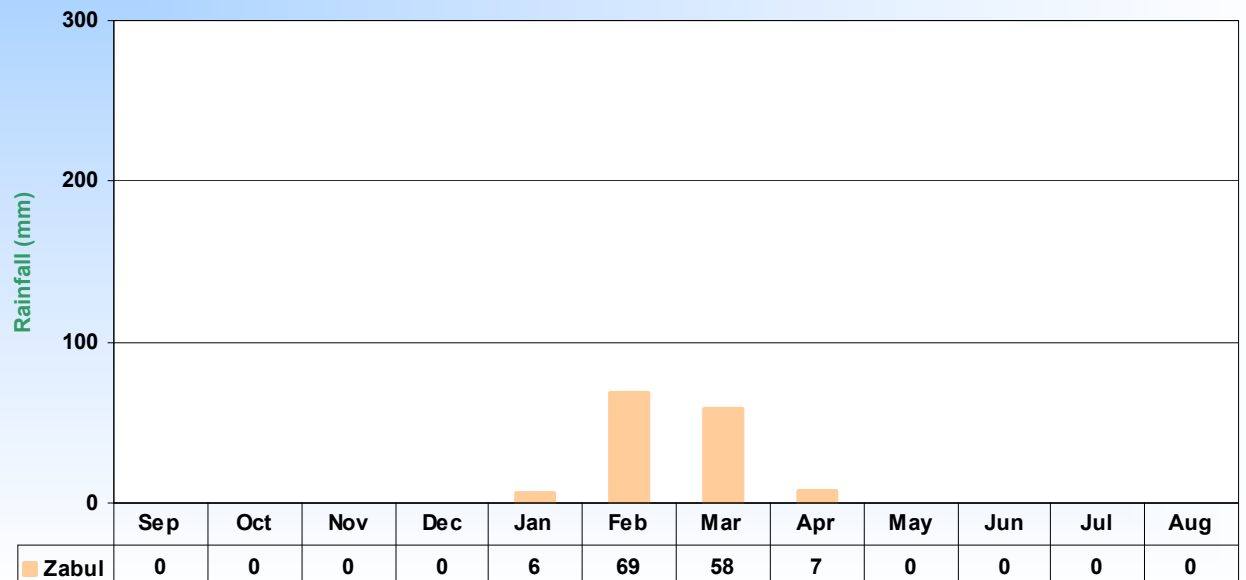
Hilmand Monthly Rainfall (2010/2011)



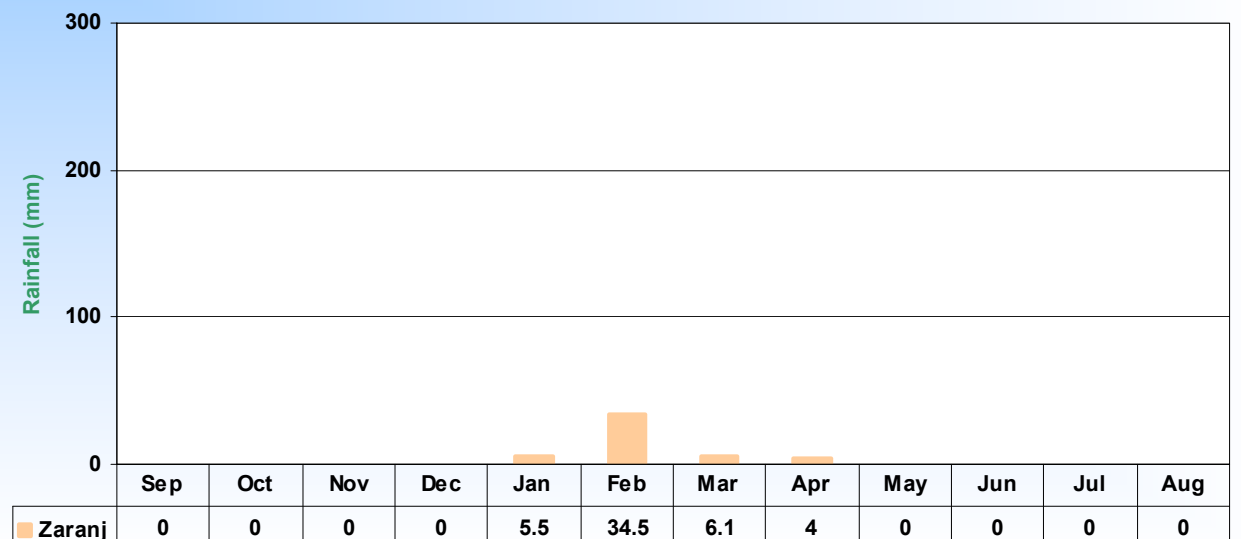
Hilmand Monthly Rainfall (2010/2011)



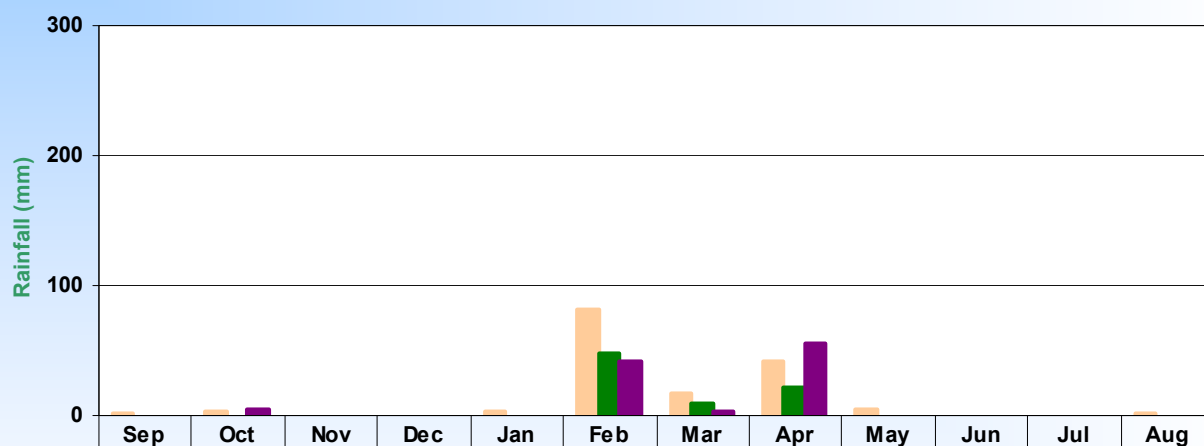
Zabul Monthly Rainfall (2010/2011)



Nimroz Monthly Rainfall (2010/2011)



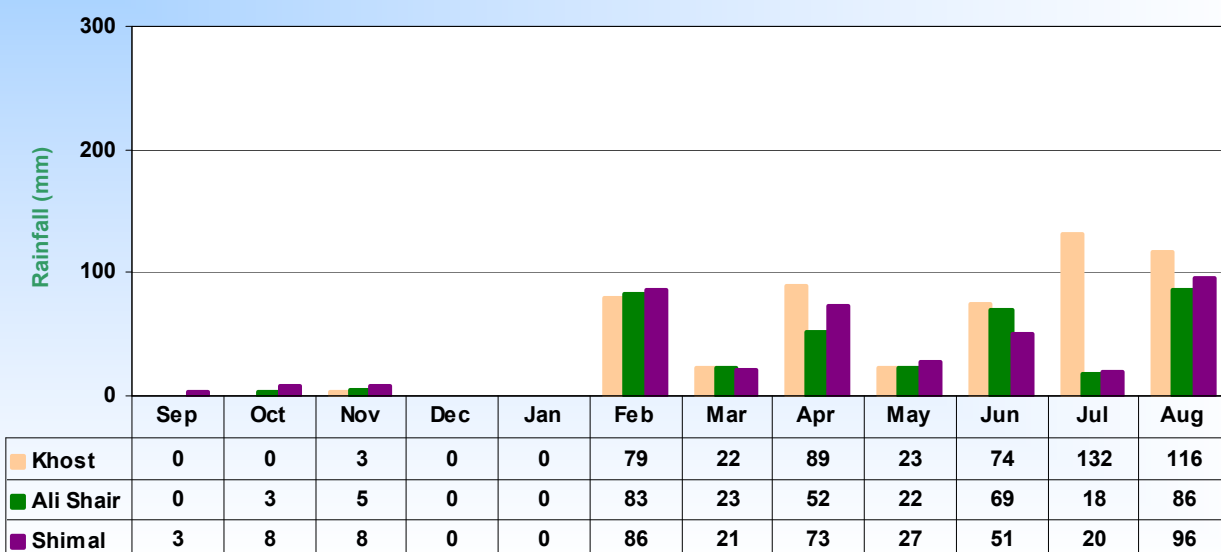
Ghazni Monthly Rainfall (2010/2011)



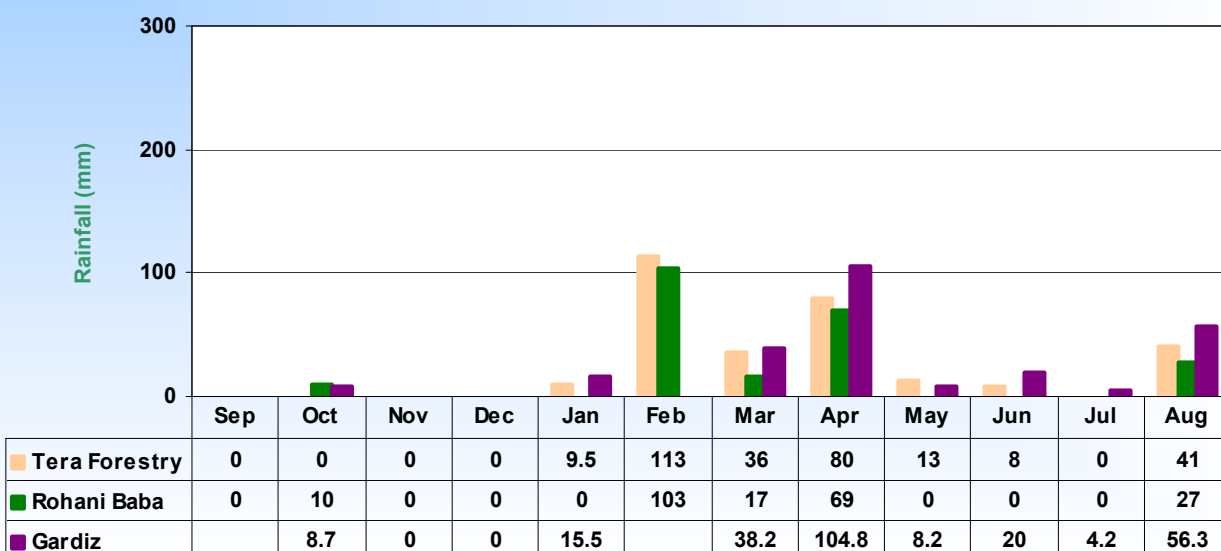
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Ghazni	1	2.8	0	0	3.2	81.3	17.3	42	5	0	0	1.5
Moqur	0	0	0	0	0	47	10	21	0	0	0	0
Sarday	0	5	0	0	0	42	2.5	56	0	0	0	0

South East Region

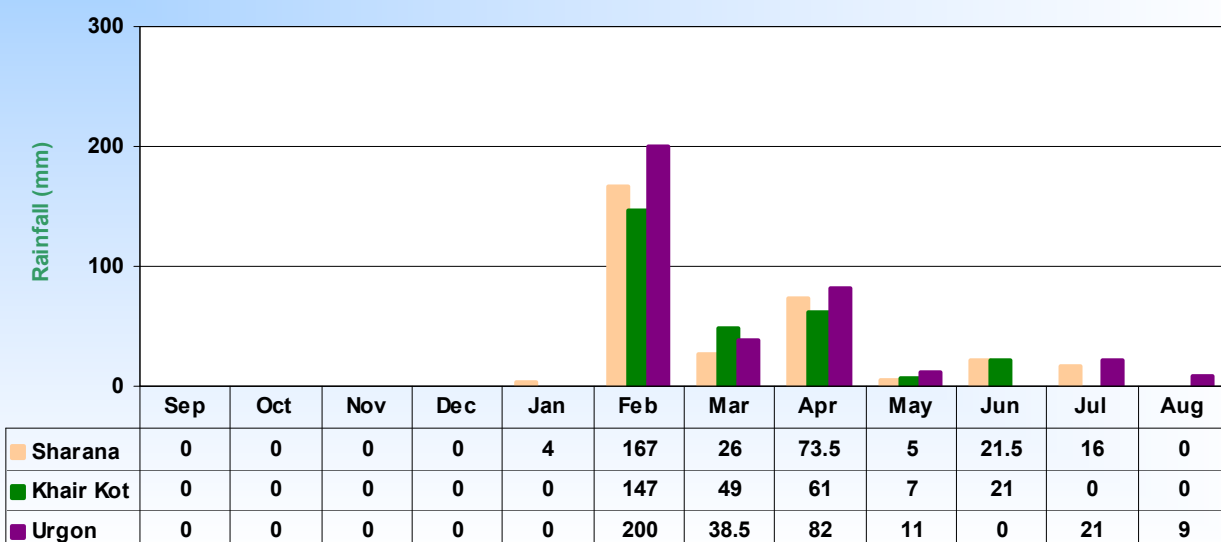
Khost Monthly Rainfall (2010/2011)



Paktya Monthly Rainfall (2010/2011)

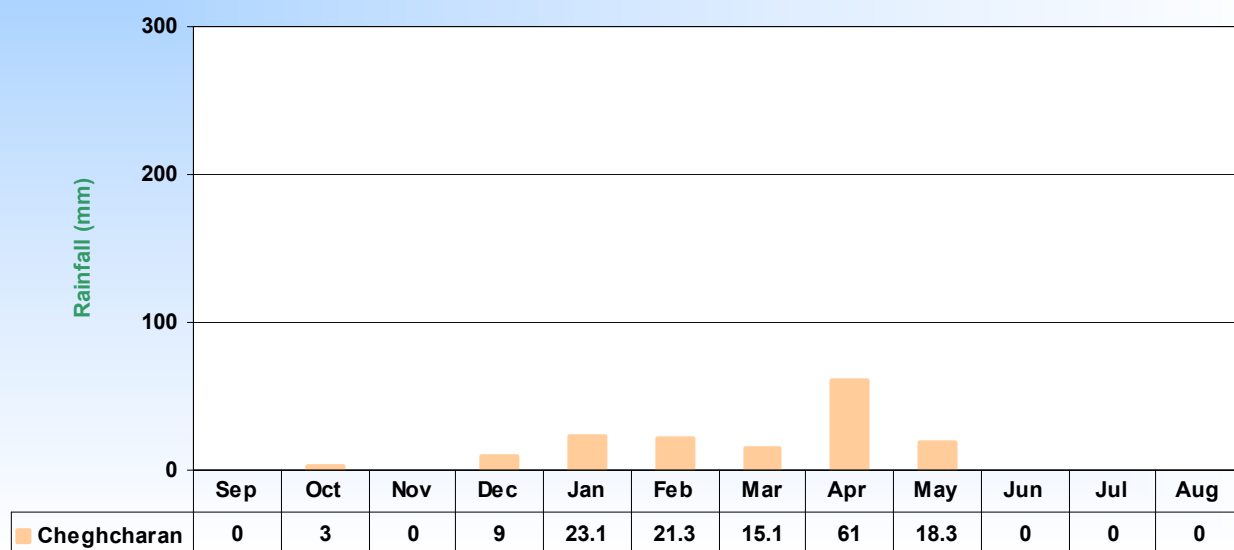


Paktika Monthly Rainfall (2010/2011)

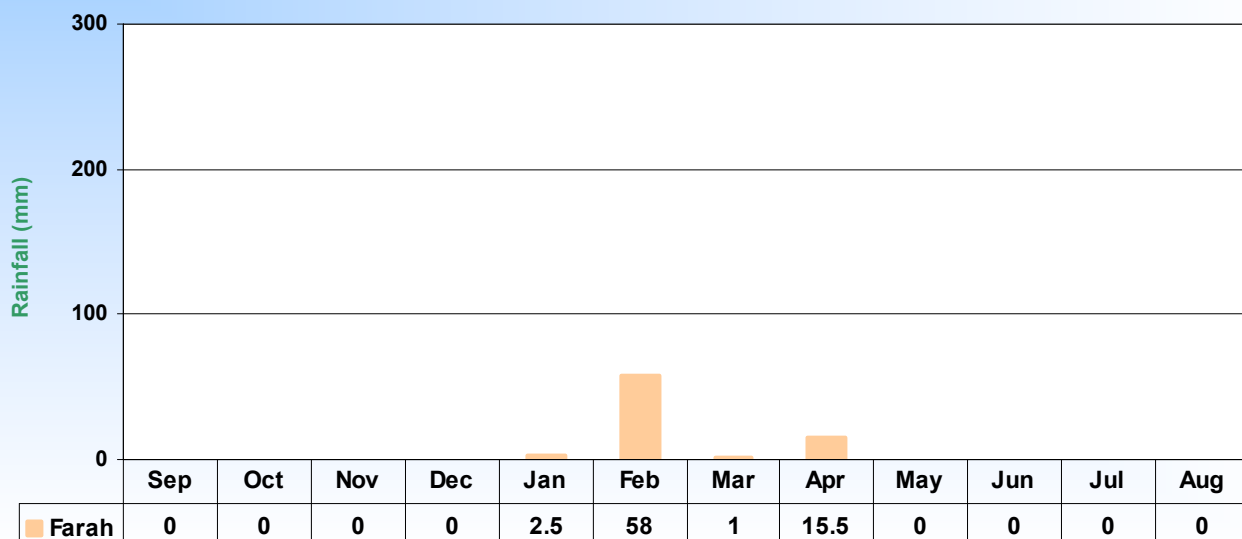


Western Region

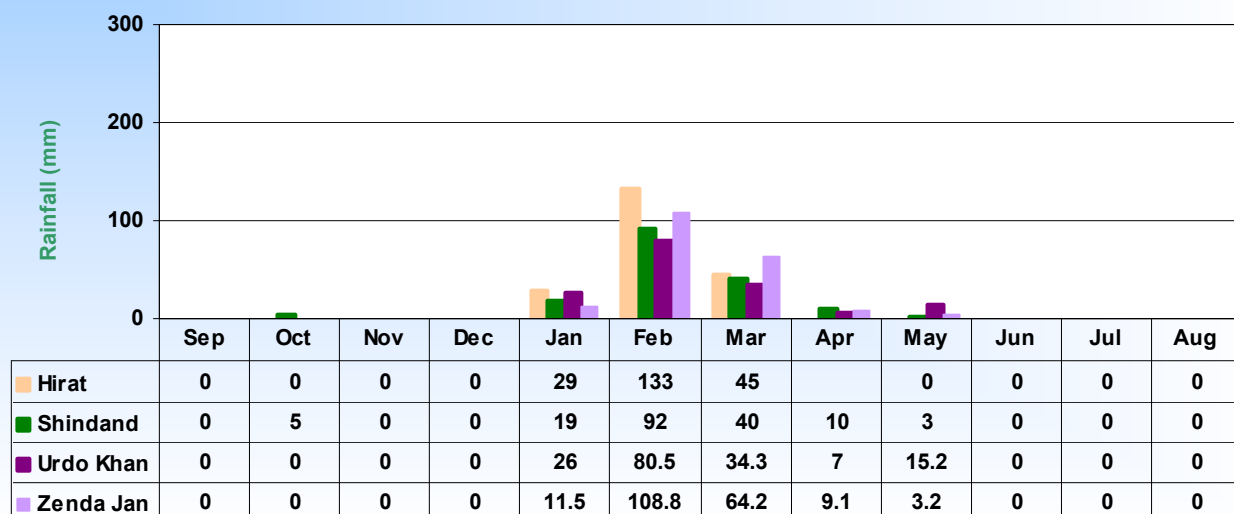
Ghor Monthly Rainfall (2010/2011)



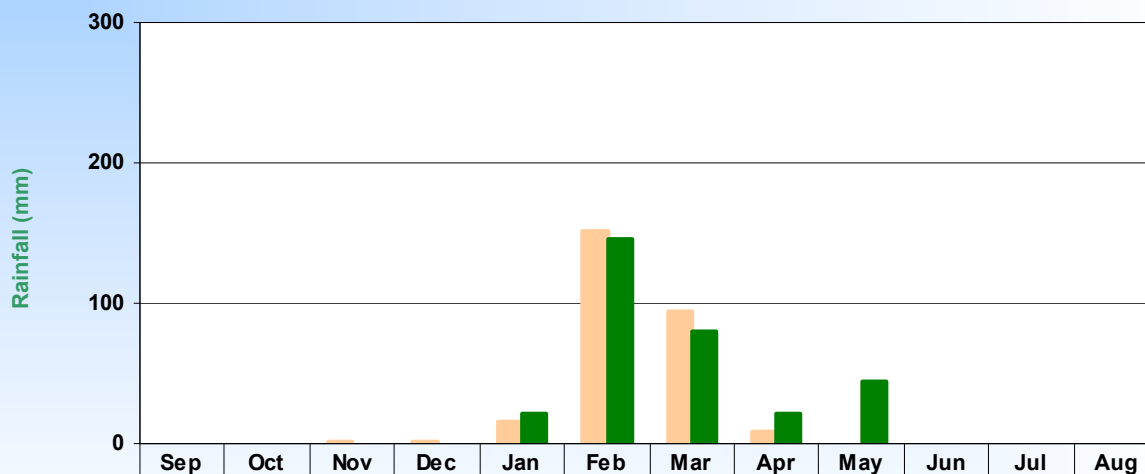
Farah Monthly Rainfall (2010/2011)



Hirat Monthly Rainfall (2010/2011)



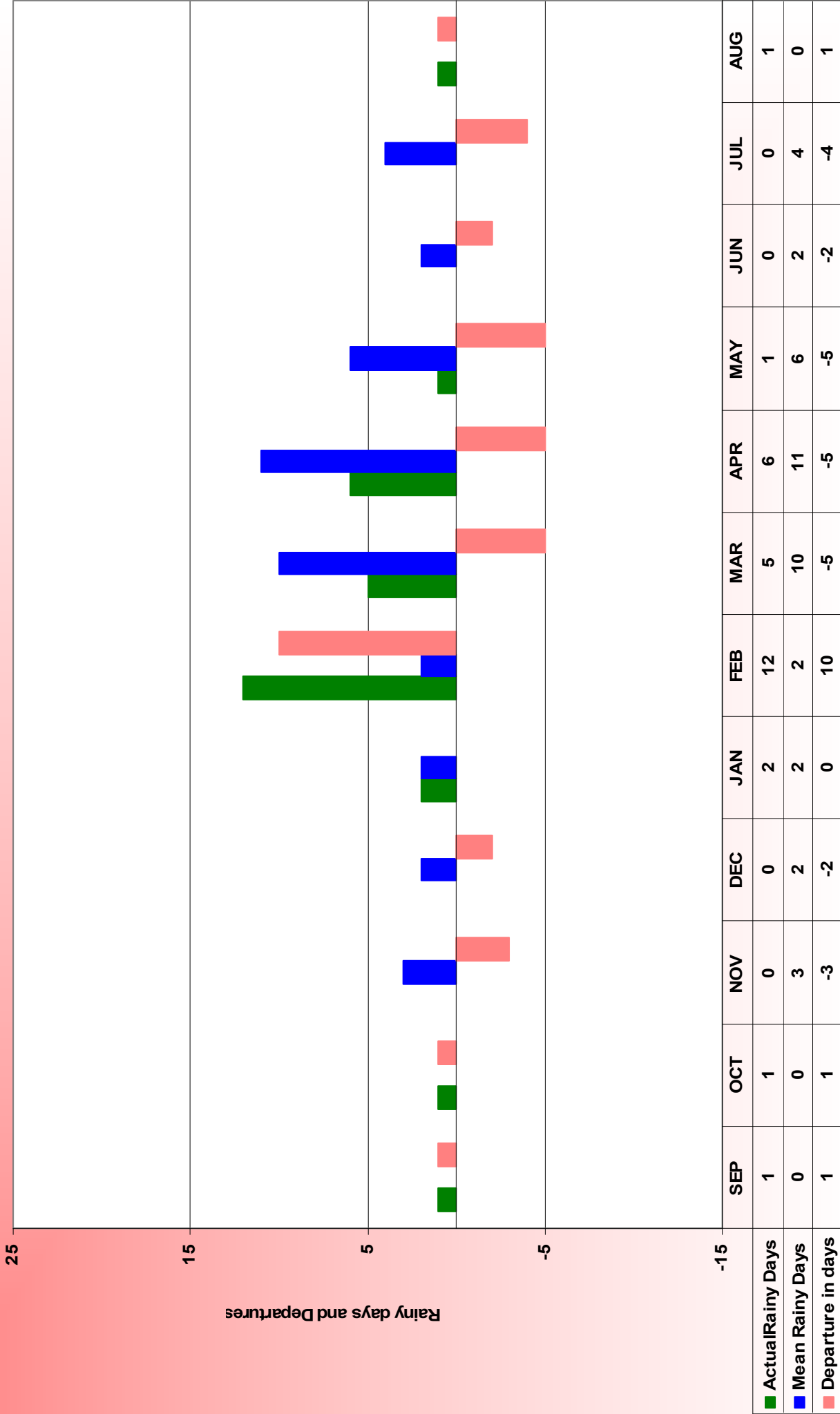
Badghis Monthly Rainfall (2010/2011)



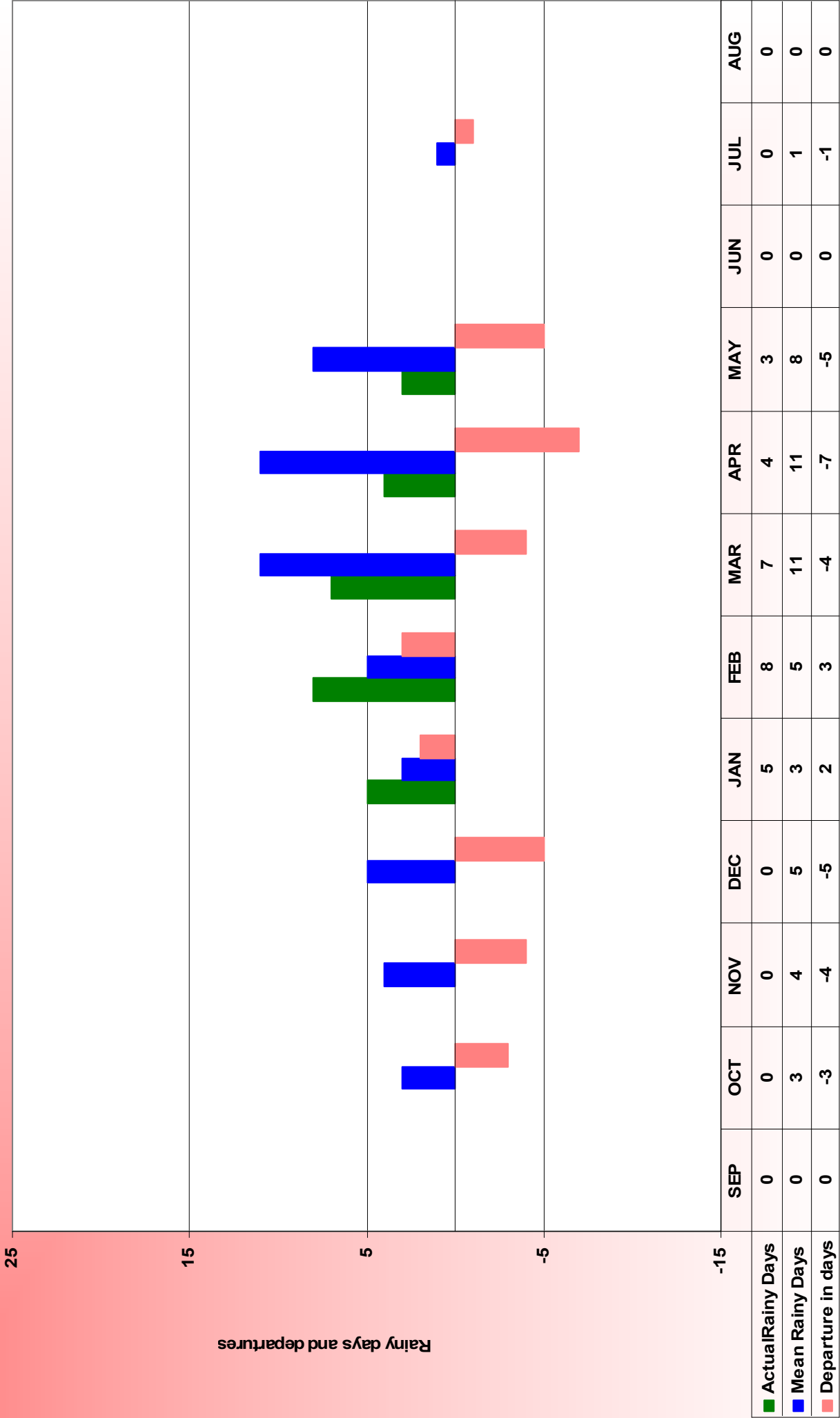
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Qala-e-naw	0	0	2	1	16	151	95	8	0	0	0	0
Moqur Badghis	0	0	0	0	21	146	80	22	45	0	0	0

Rainy Days
Compared with
Long Term Average and Departure
Season (2010- 2011)

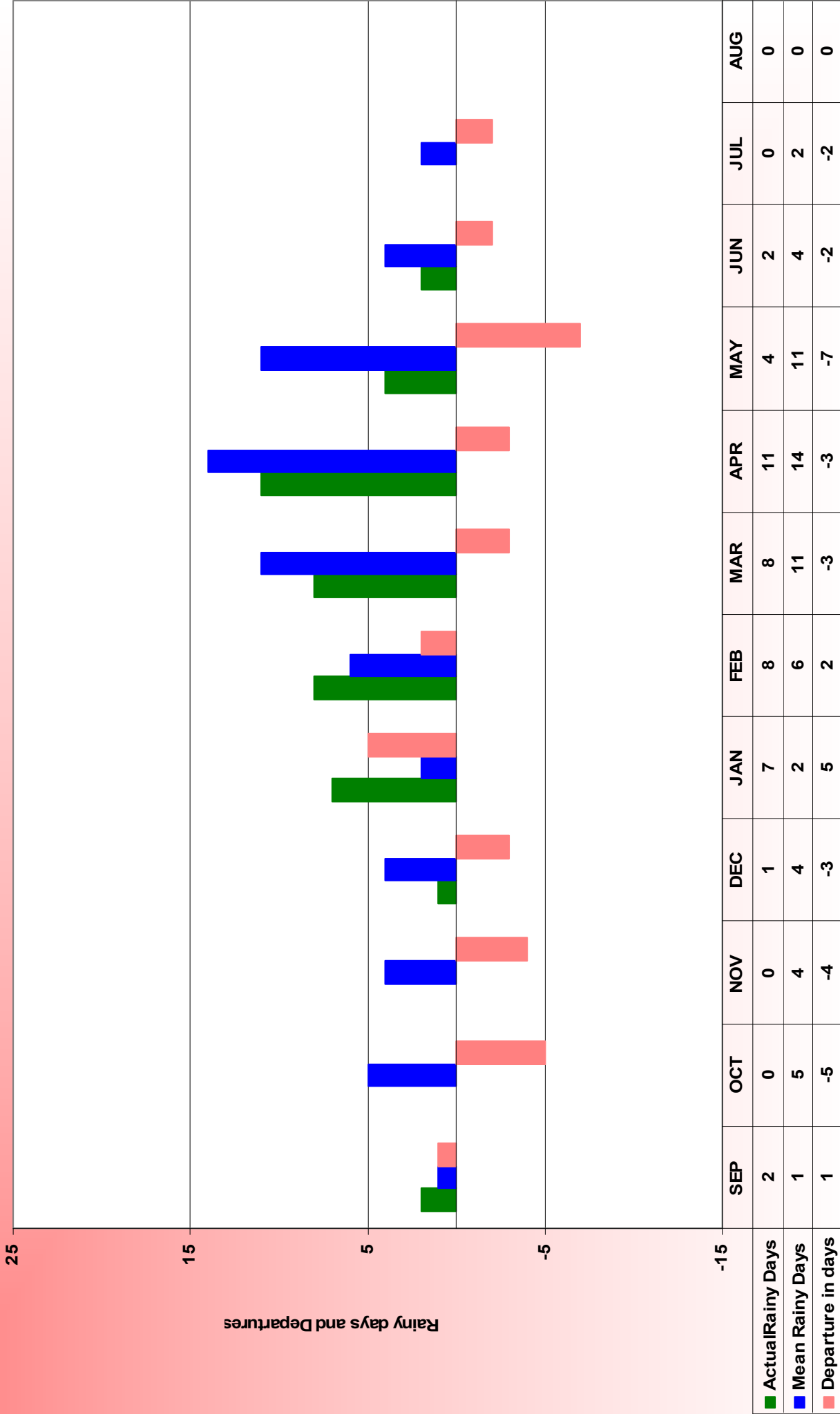
Ghazni Rainy Days Season (2010 - 2011) Compared to the Long-Term Average and Departures



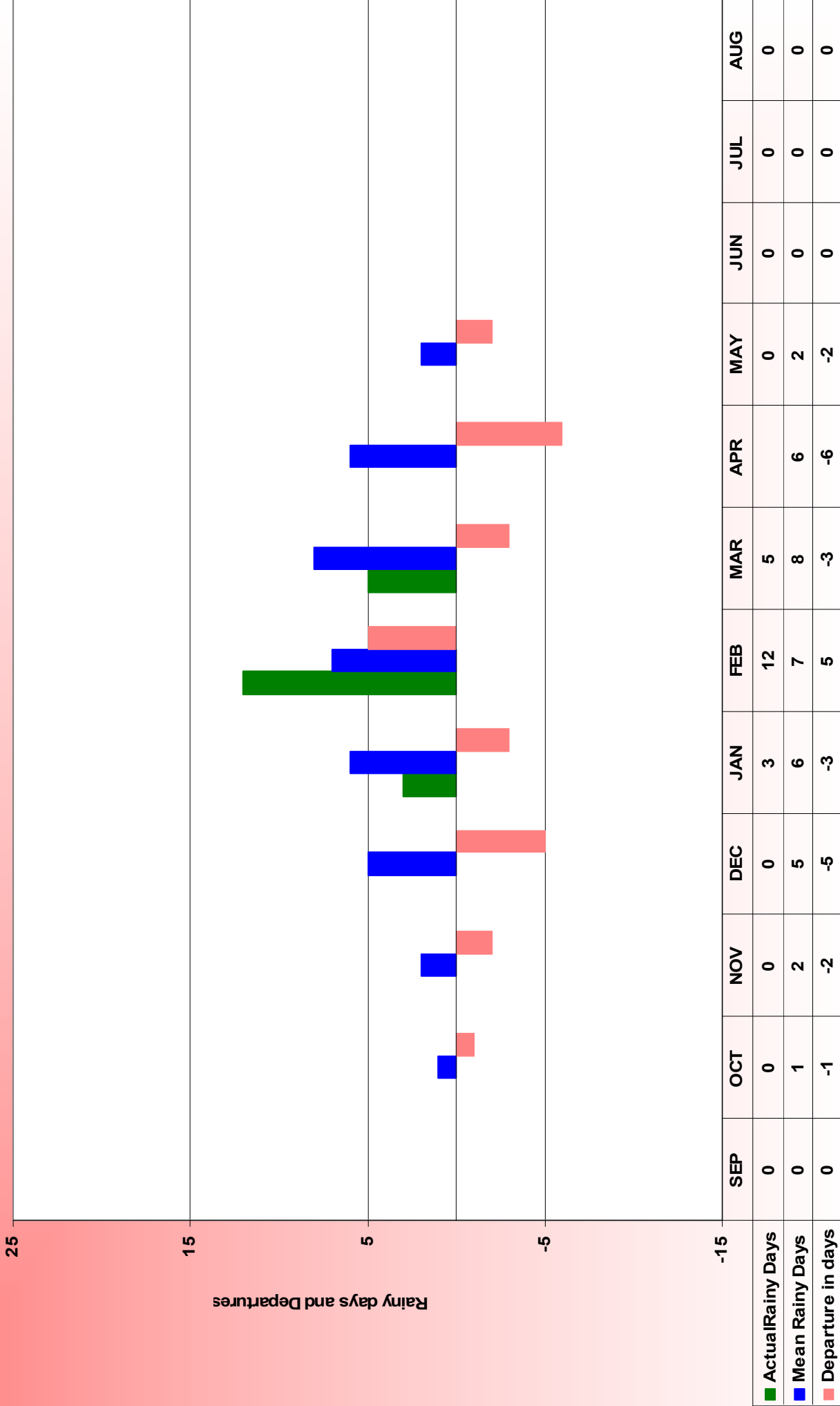
Baghlan Rainy Days Season (2010 - 2011) Compared to the Long-Term Average and Departure



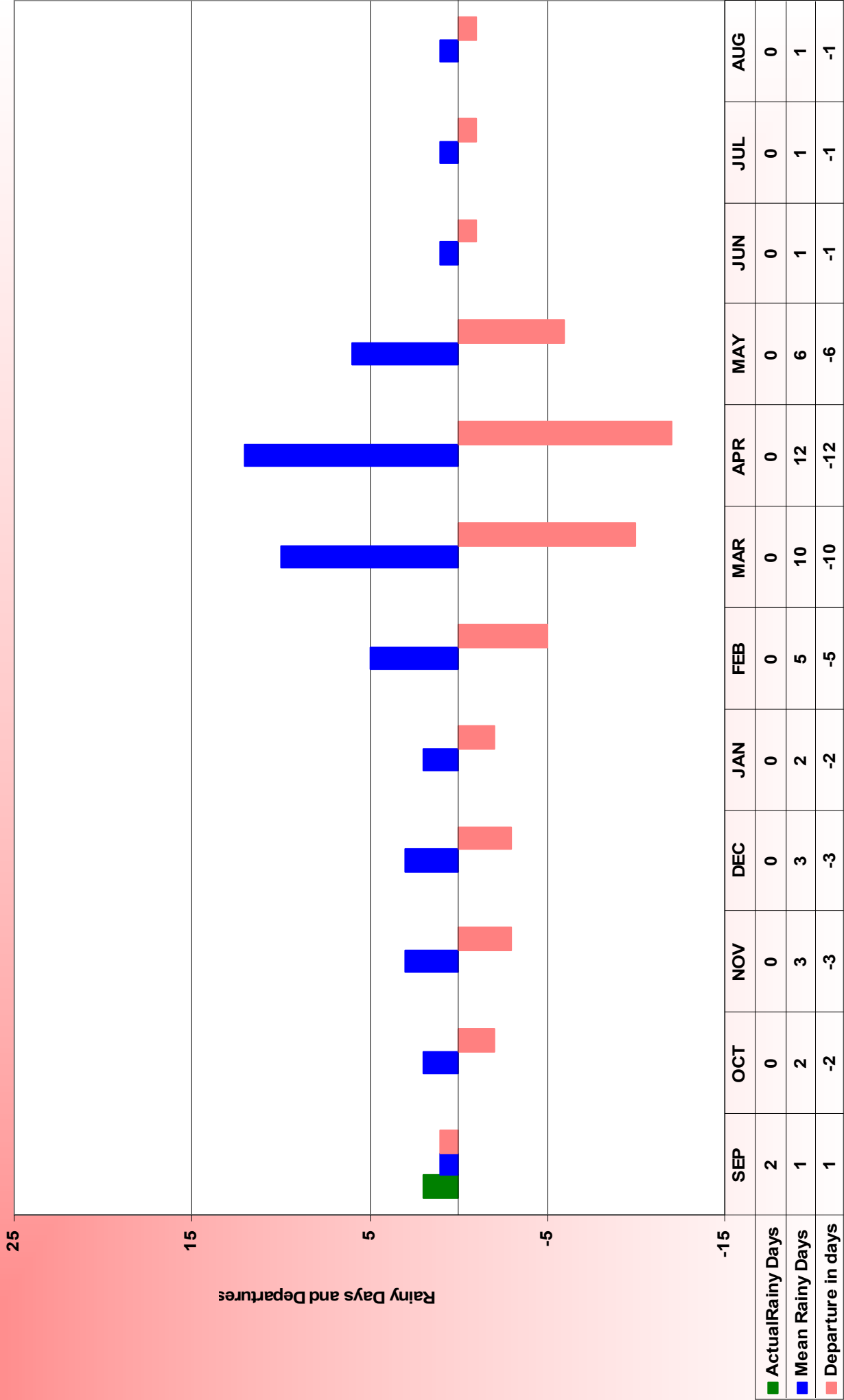
Faizabad Rainy Days Season (2010 - 2011) Compared to the Long-Term Average and Departure



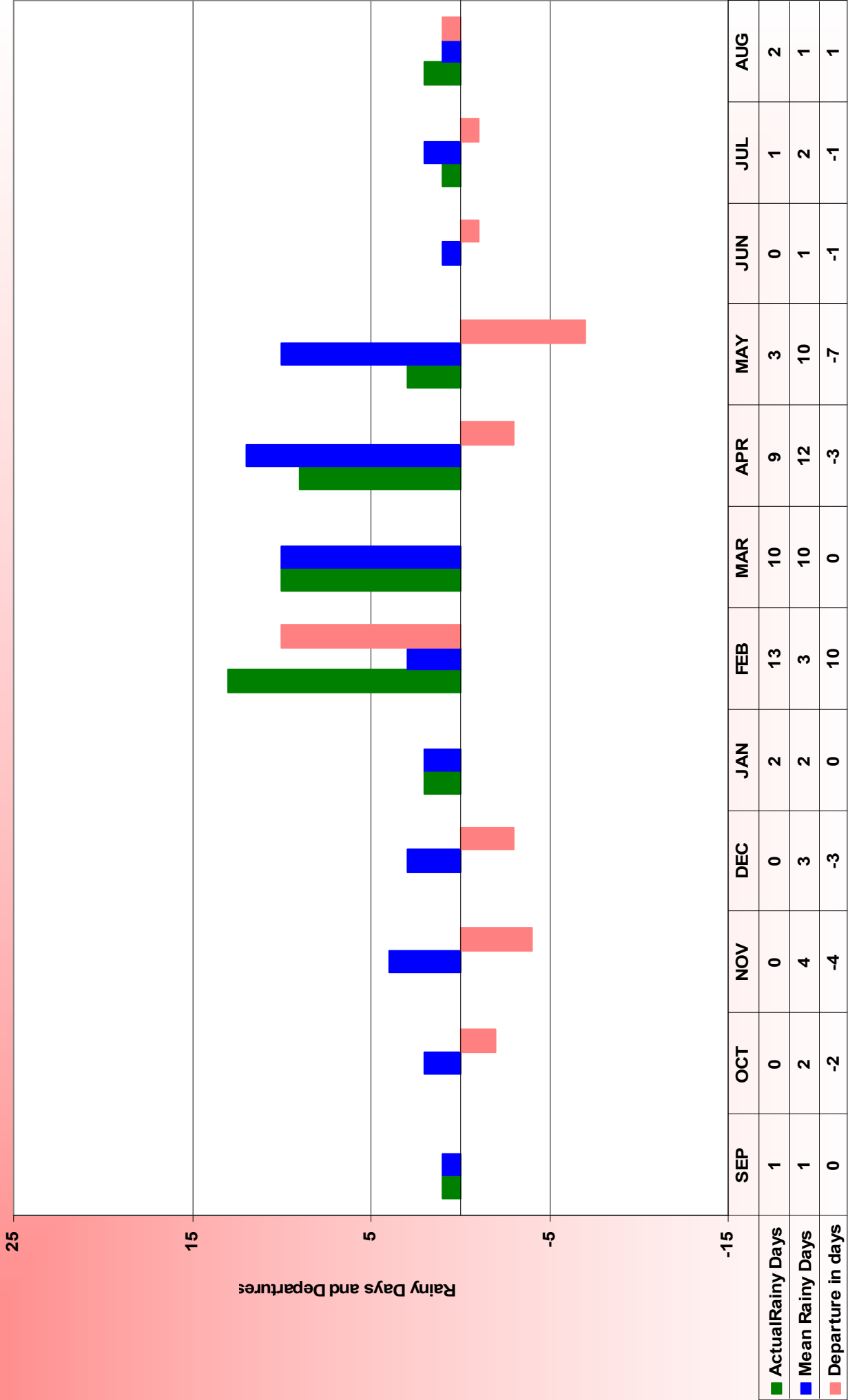
Hirat Rainy Days Season (2010 - 2011) Compared to the Long-Term Average and Departure



Jabulseraj Rainy Days Season (2010 - 2011) Compared to the Long-Term Average and Departure



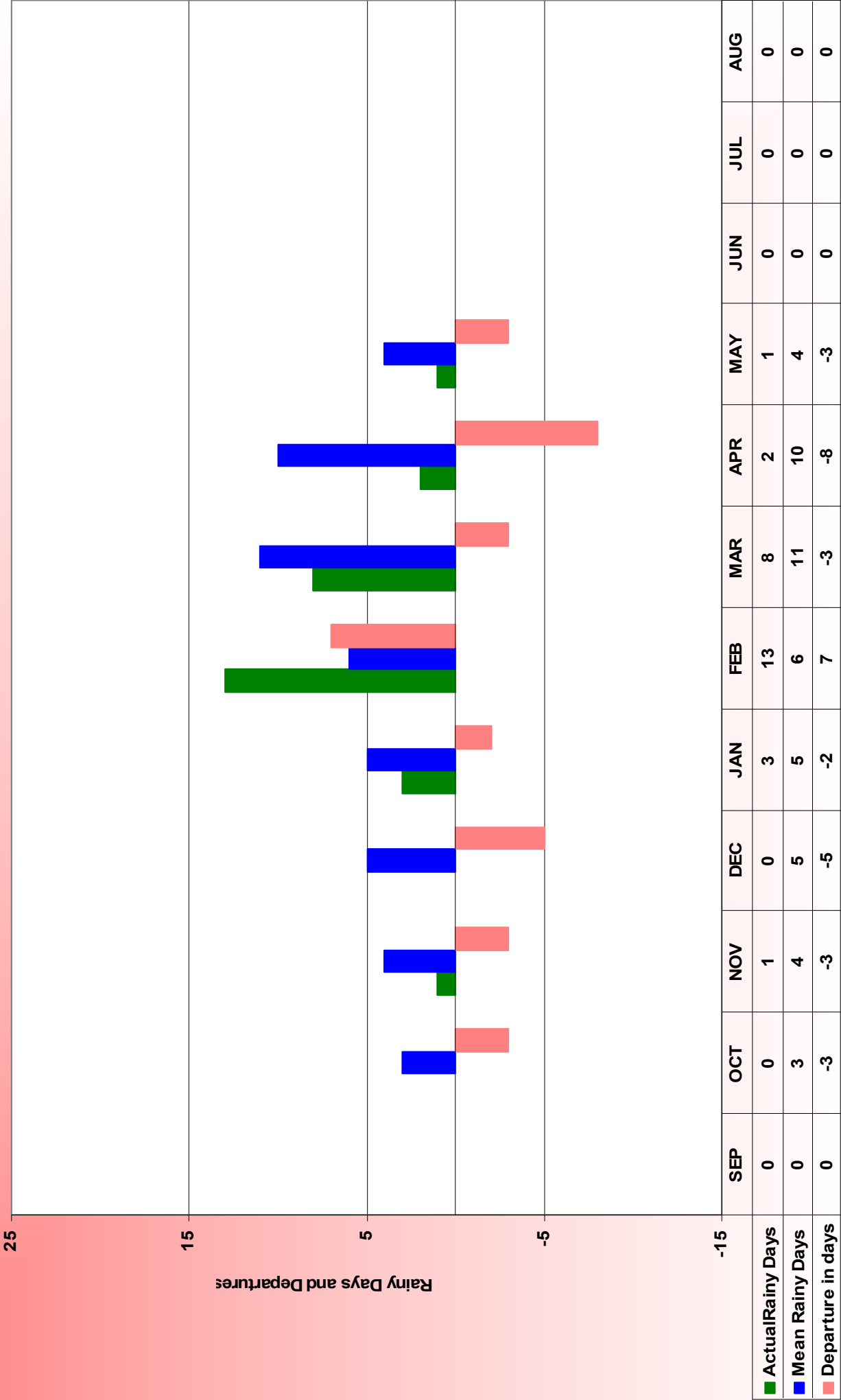
Kabul Rainy Days Season (2010 - 2011) Comparison to the Long-Term Average and Departure



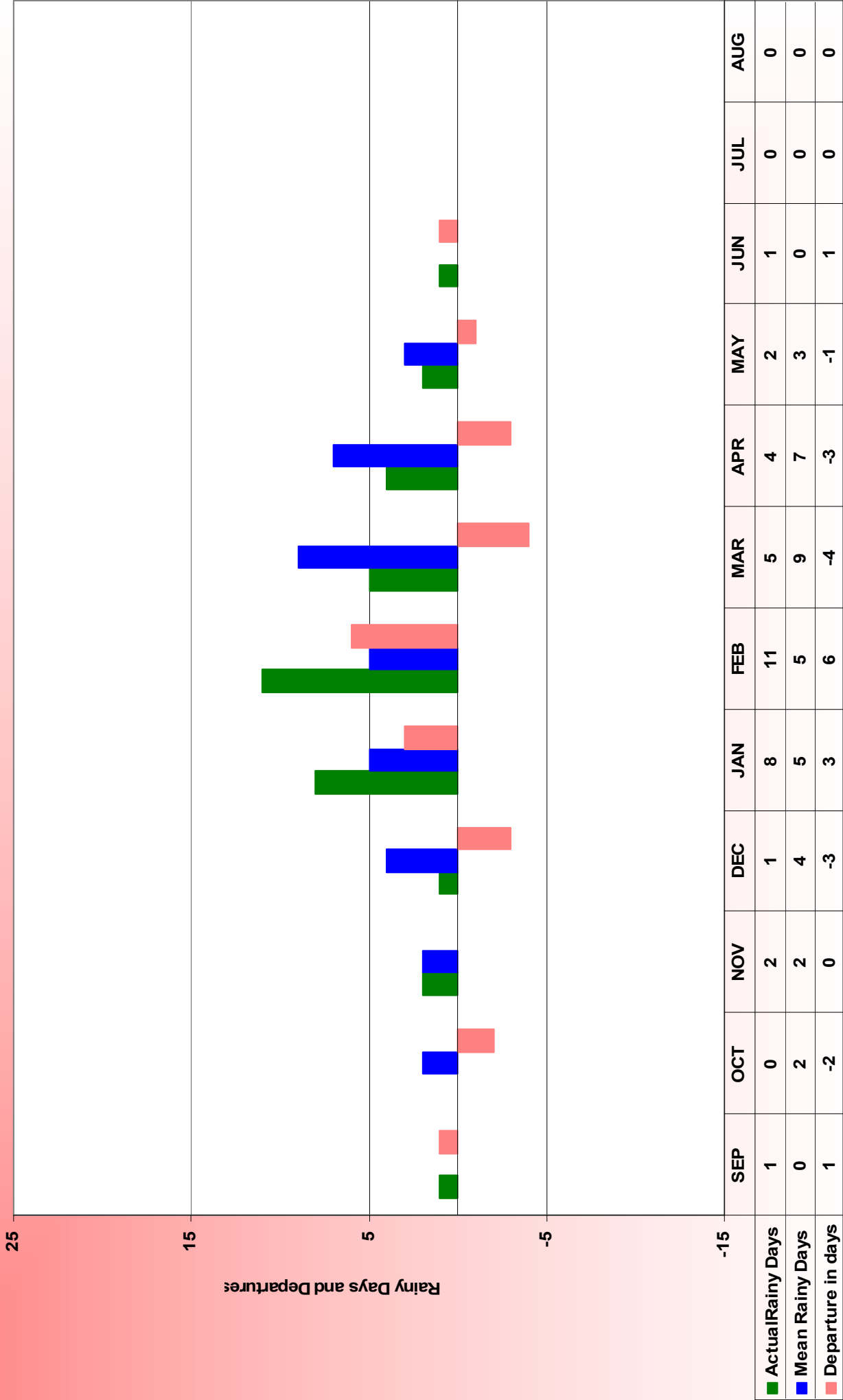
Mazarisharif Rainy Days Season (2010 - 2011) Compared to the Long-Term Average and Departure



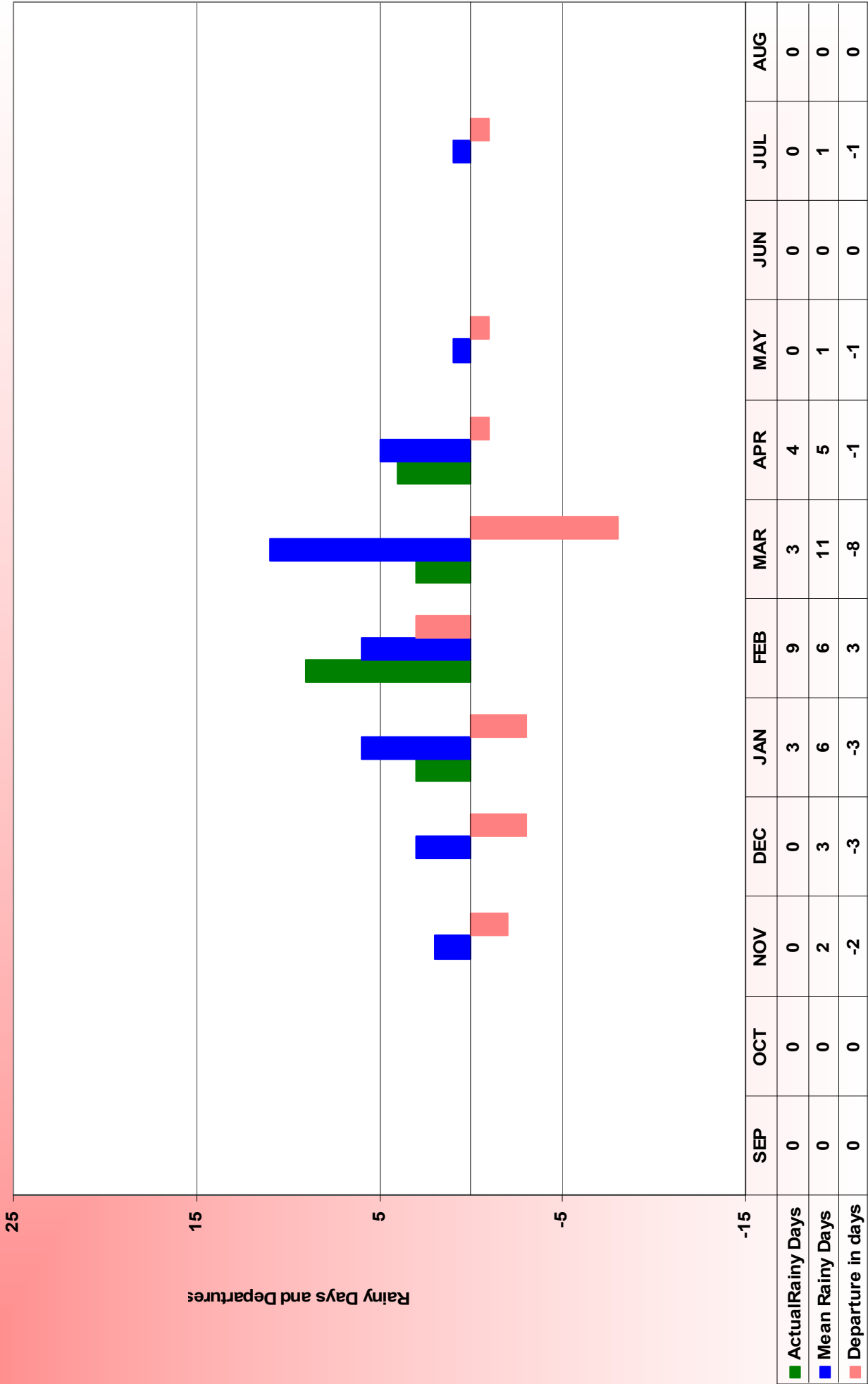
Miamana Rainy Days Season (2010 - 2011) Compared to the Long-Term Average and Departure



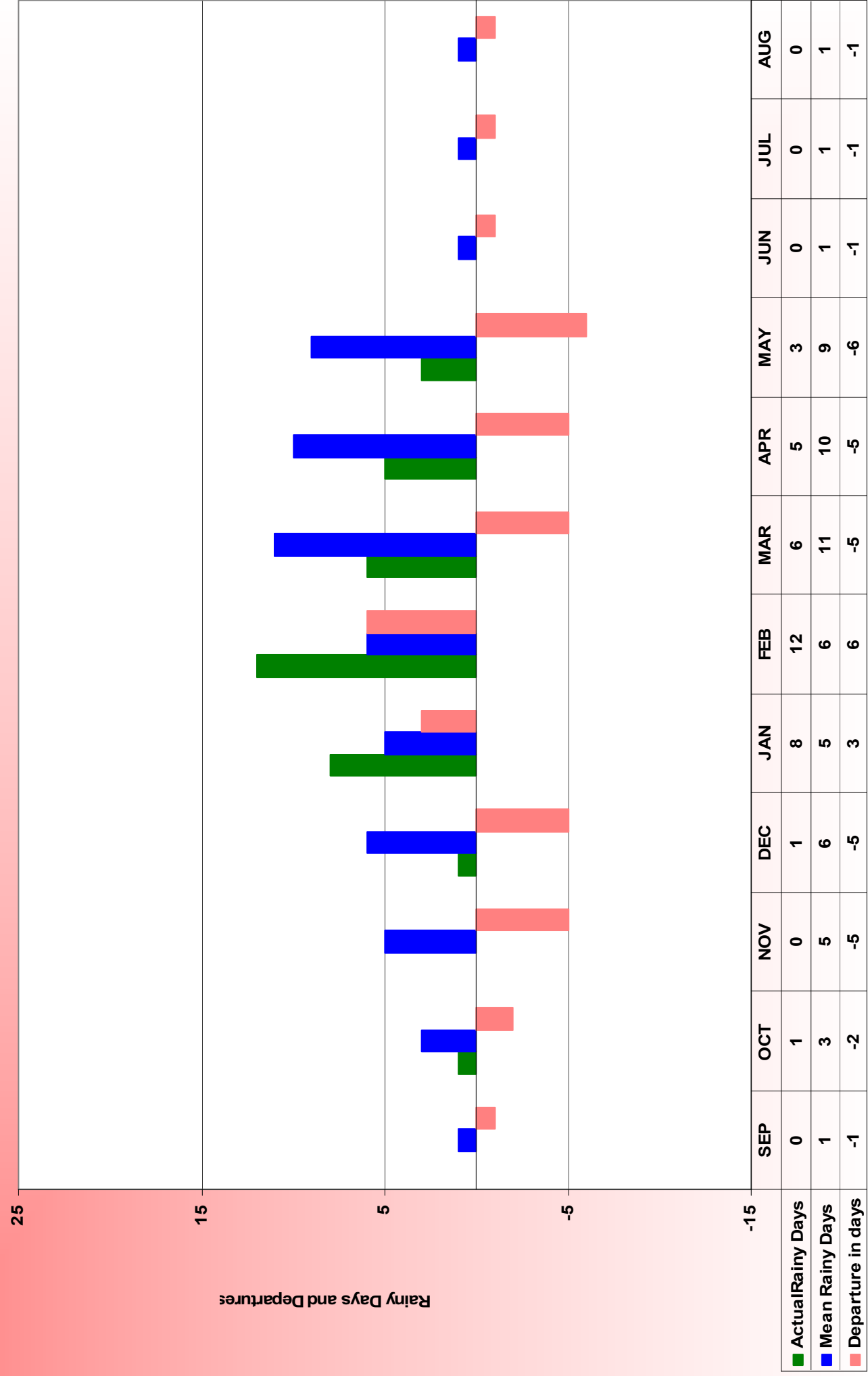
Jawzjan Rainy Days Season (2010 - 2011) Compared to the Long-Term Average and Departure



Kandahar Rainy Days Season (2010 - 2011) Compared to the Long-Term Average and Departure

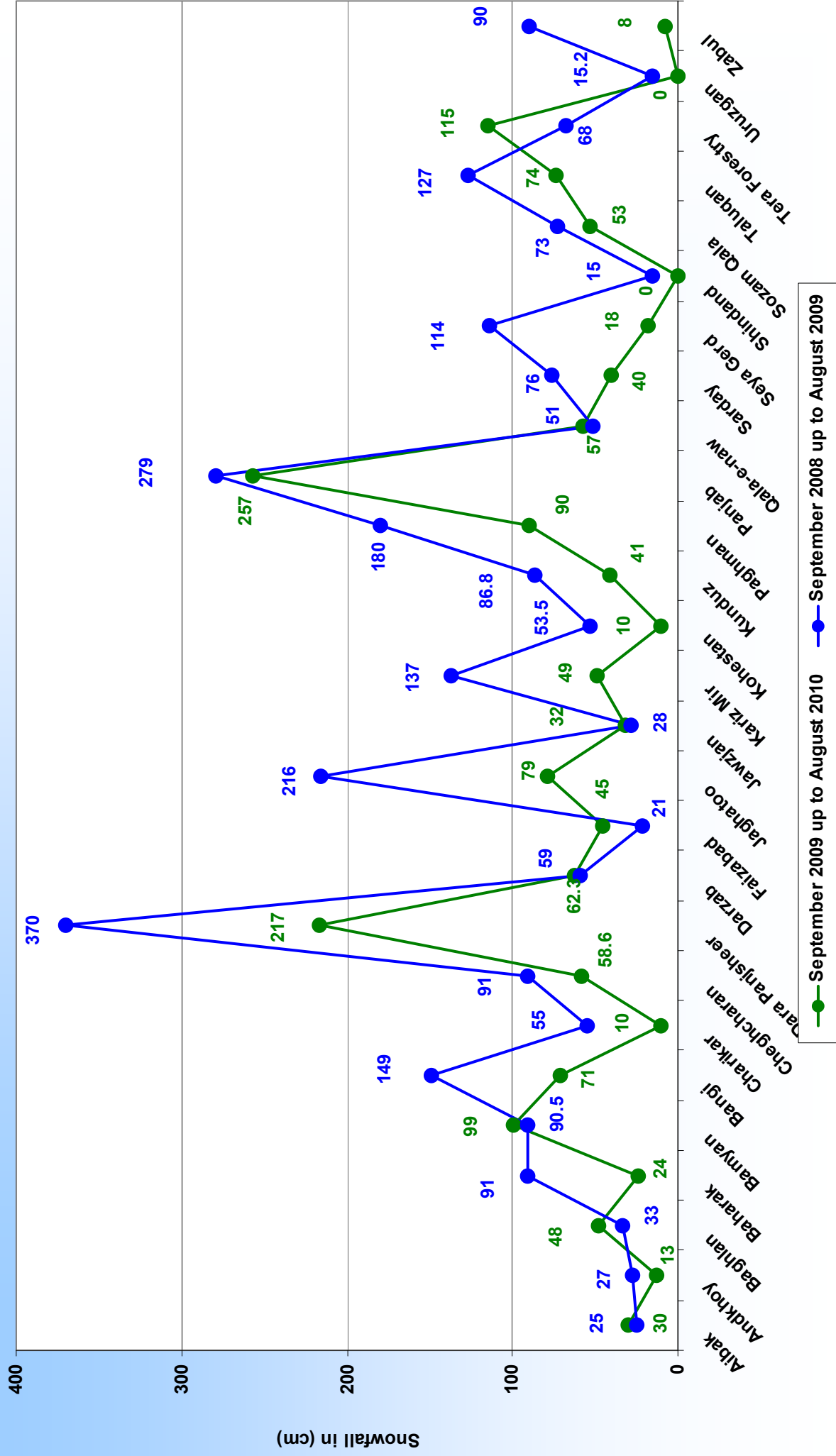


Kunduz Rainy Days Season (2010 - 2011) Compared to the Long-Term Average and Departure



Snowfall (cm) Current Year
Compared with
Last Year
Agricultural Season (2010- 2011)

Comparison of Snowfall (cm) (2009 - 2010) with (2008 - 2009)



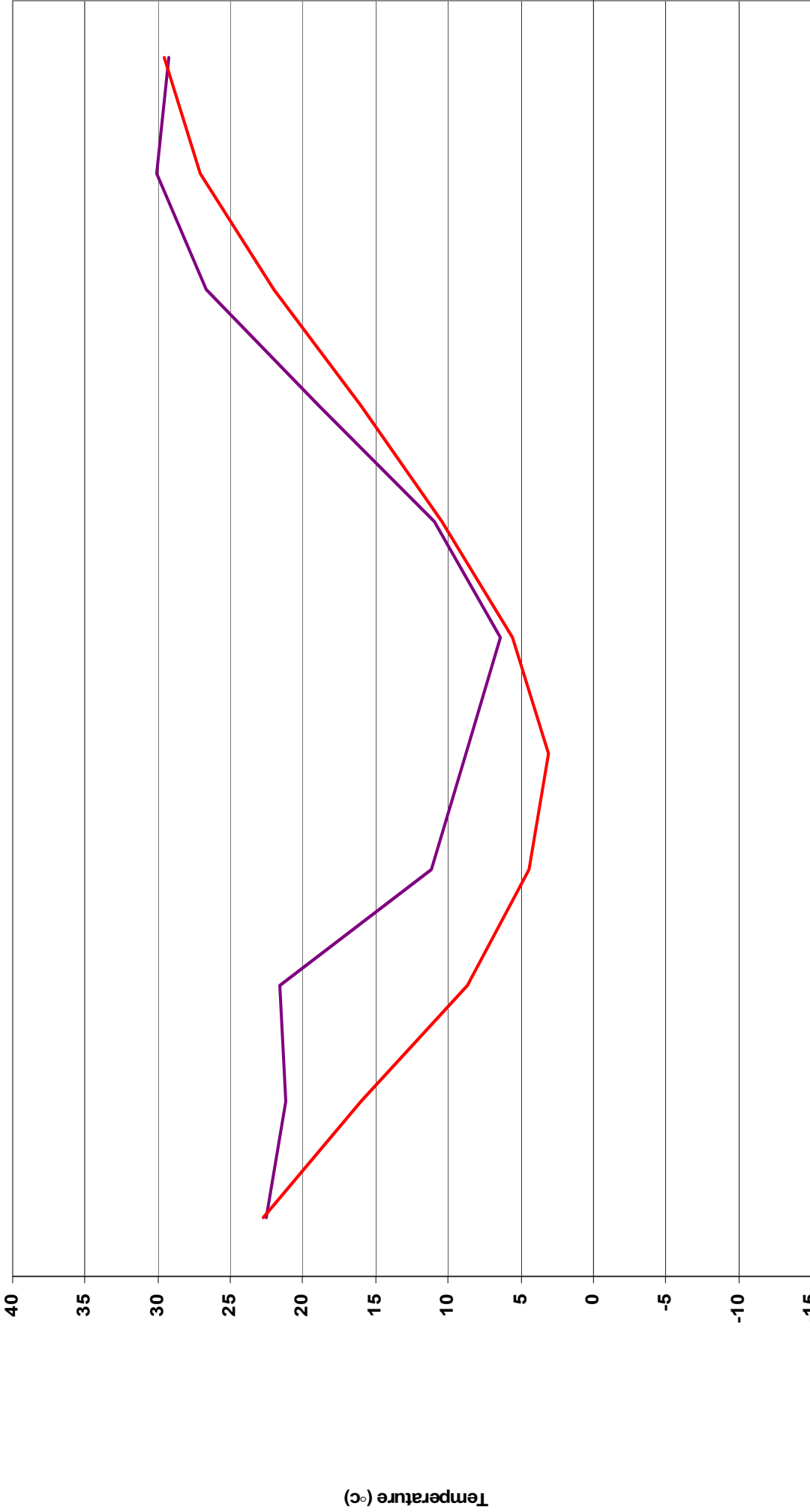
Average Temperature (2010-2011)
Compared with
Long Term Average

Kabul Average Temperature (2010 - 2011) Compared to the Long Term Average



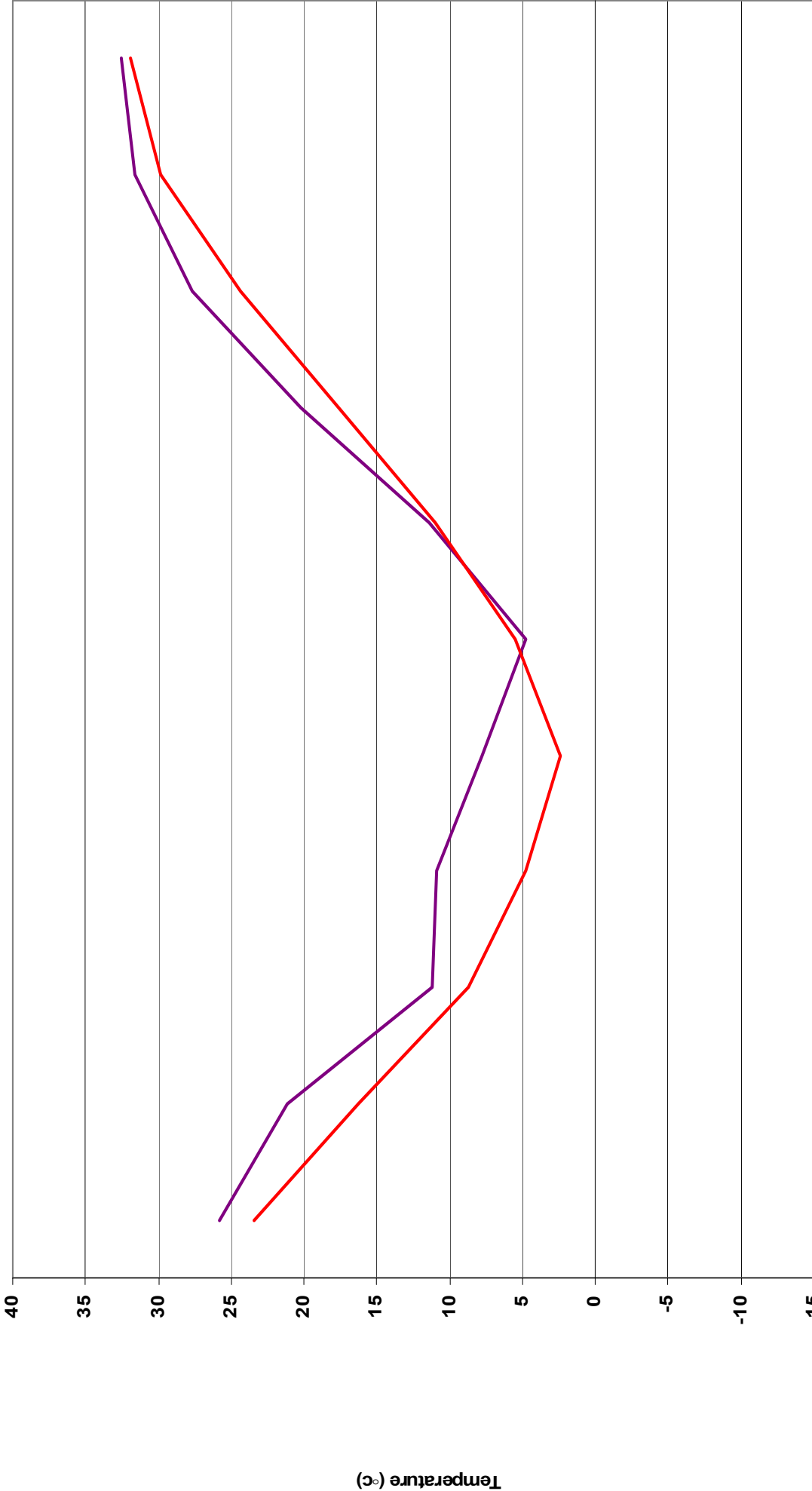
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Avg.(2010 - 2011)	19.3	15.2	8.7	3.9	1.9	2.9	10.4	13.6	21.7	30.0	25.6
Long Term Avg	19.5	12.9	5.6	0.4	-2.6	-1	6.6	12.2	16.9	22.5	24.8

Hirat Average Temperature (2010 - 2011) Compared to the Long Term Average



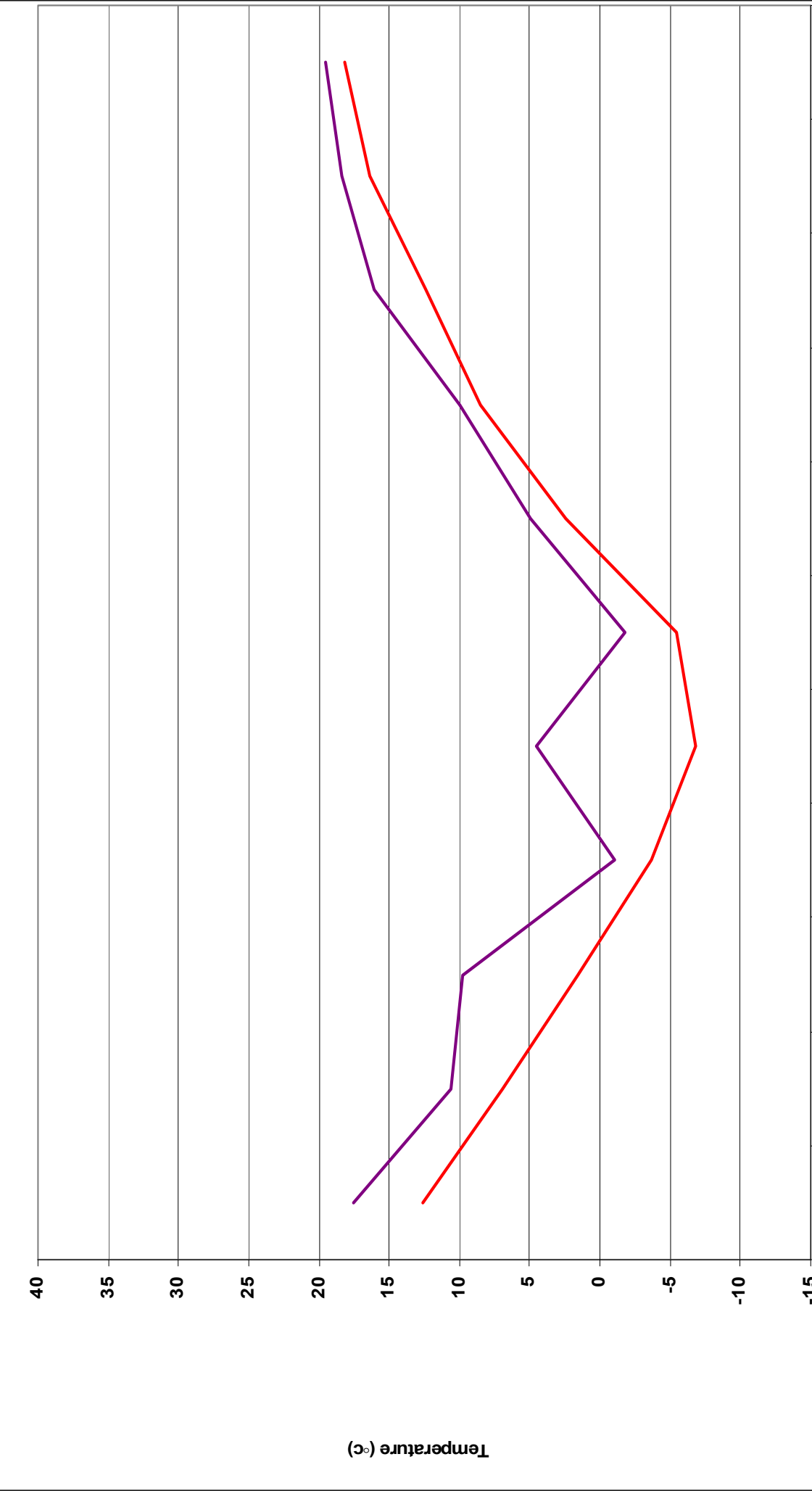
Temperature (°C)

Mazar-i-Sharif Average Temperature (2010 - 2011) Compared to the Long Term Average



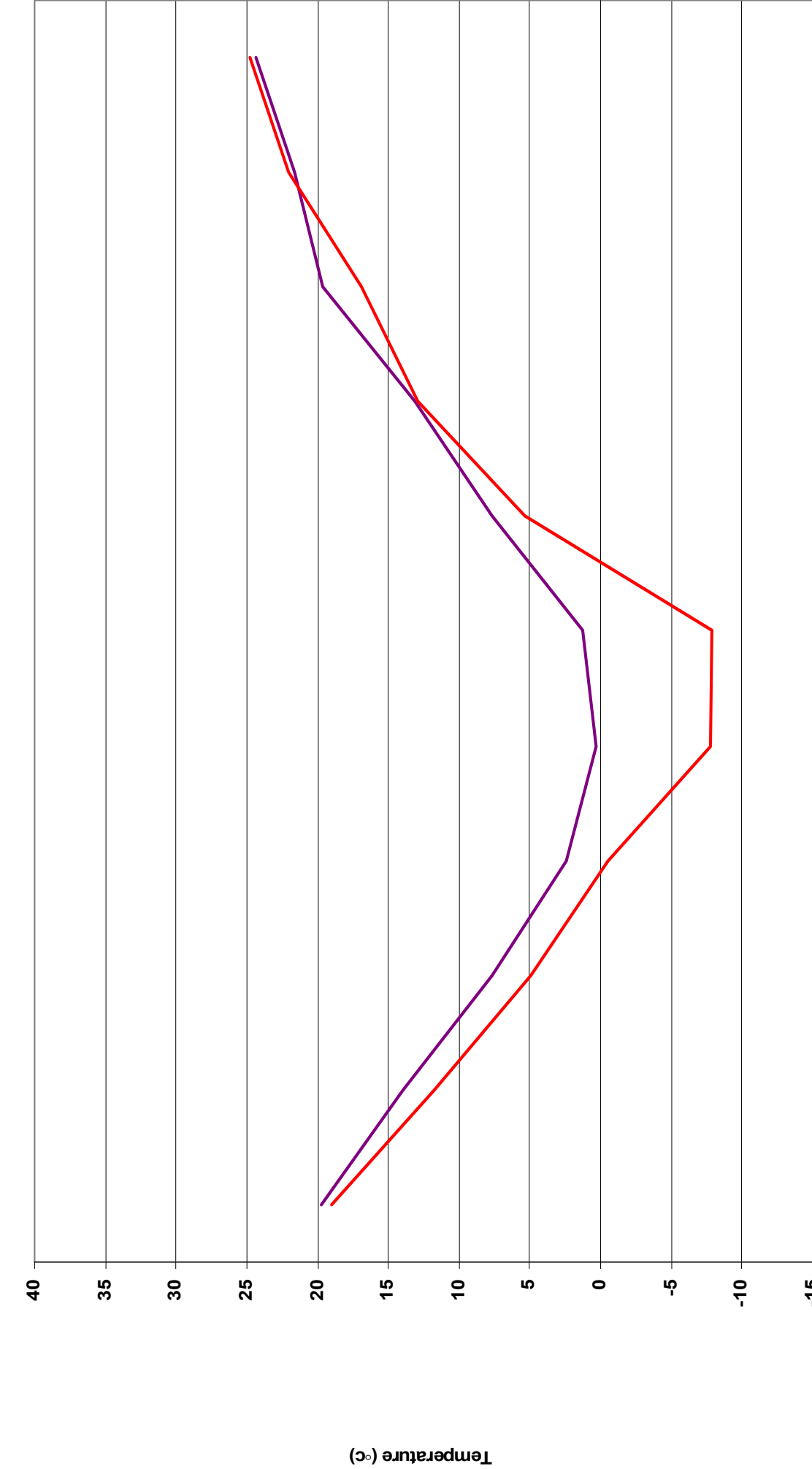
Temperature (°C)

Bamyan Average Temperature (2010 - 2011) Compared to the Long Term Average



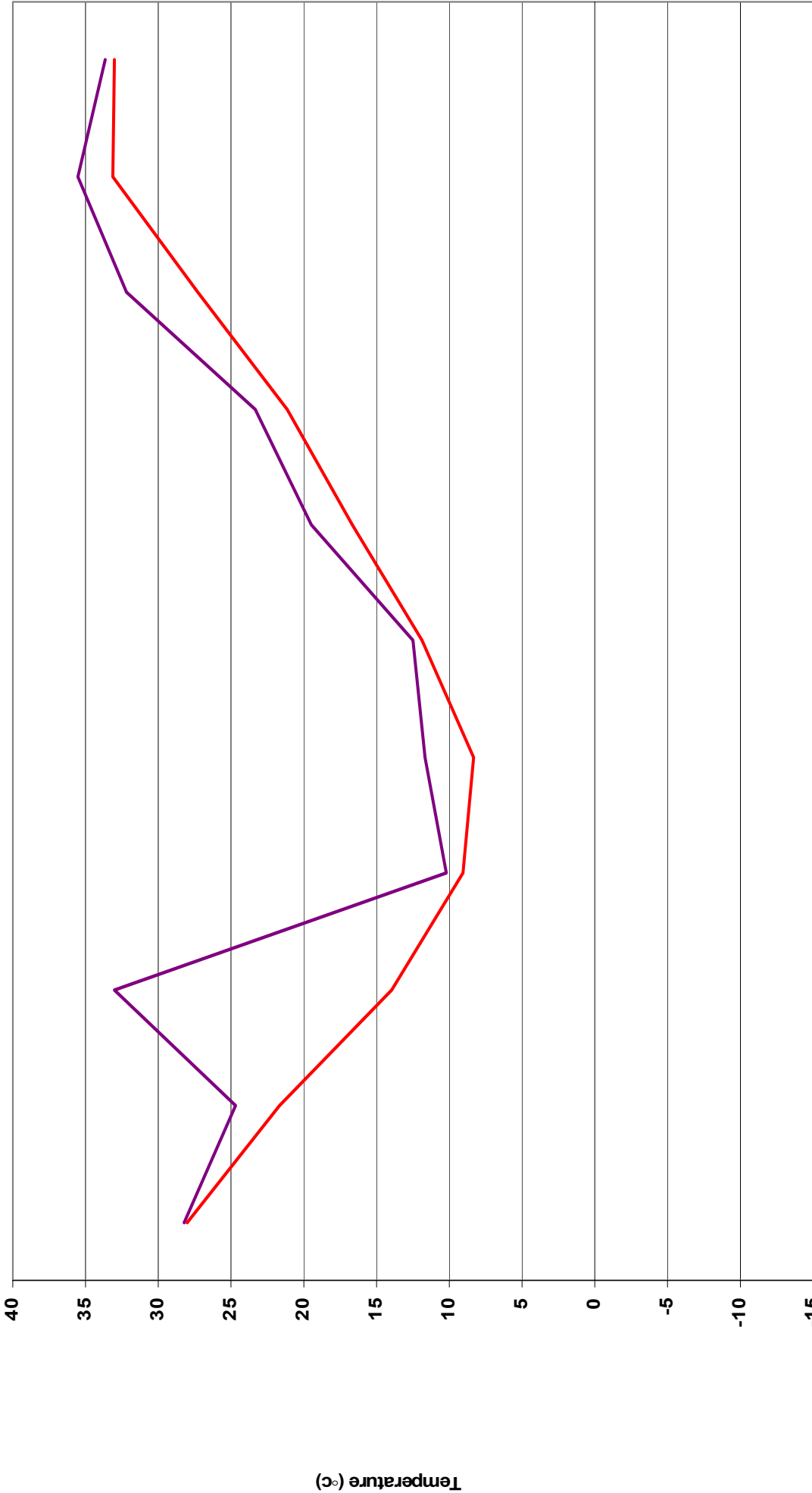
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Avg.(2010 - 2011)	17.5	10.6	9.7	-1	4.5	-1.7	4.9	10	16.1	18.3	19.5
Long Term Avg	12.6	6.9	1.6	-3.7	-6.8	-5.4	2.4	8.5	12.4	16.4	18.2

Logar Average Temperature (2010 - 2011) Compared to the Long Term Average



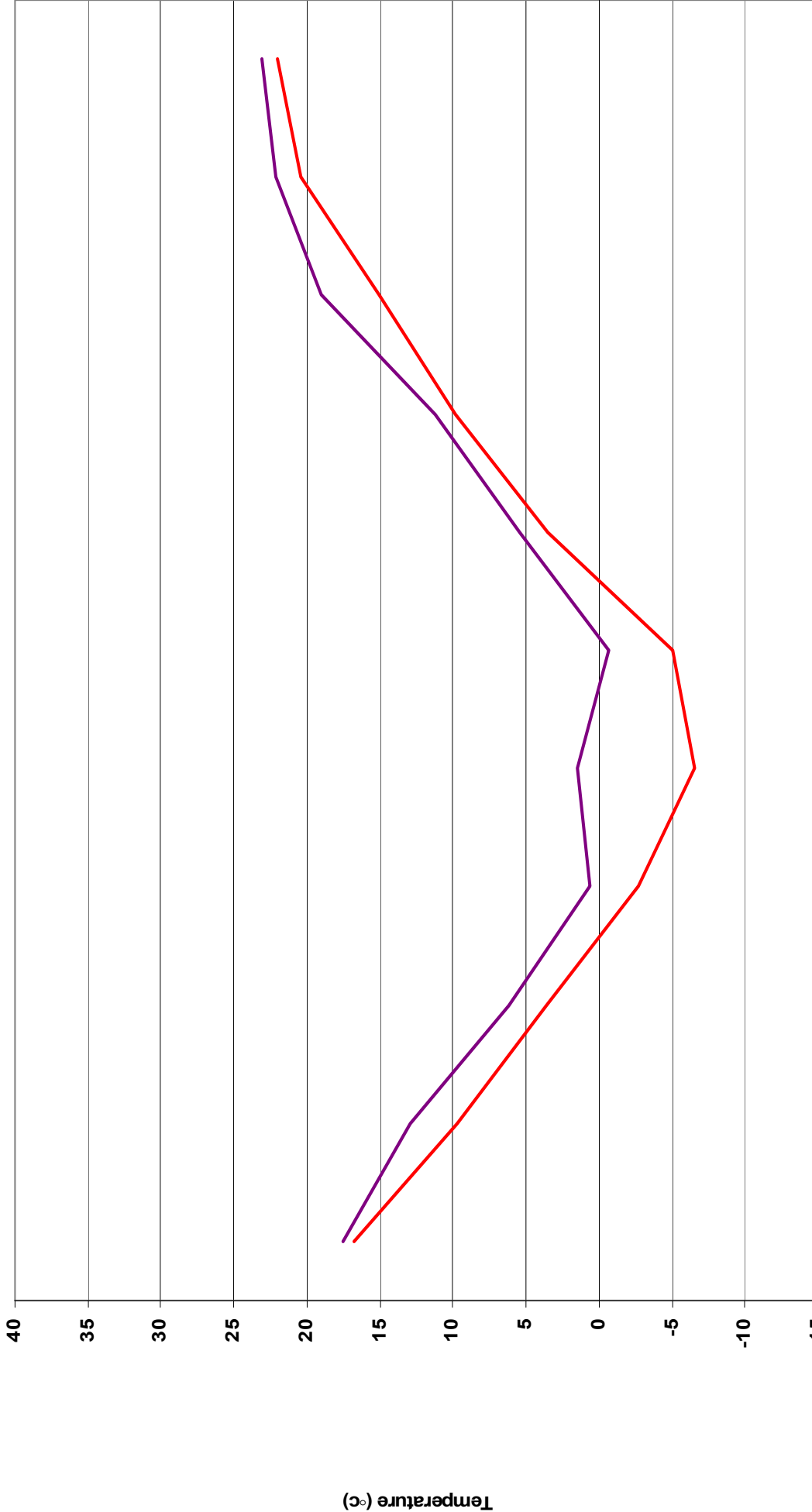
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Avg.(2010 - 2011)	19.7	14	7.7	2.4	0.3	1.3	7.7	13.1	19.6	21.6	24.4
Long Term Avg	19	11.8	4.9	-0.5	-7.8	-7.9	5.4	12.9	16.9	22.1	24.8

Jalalabad Average Temperature (2010 - 2011) Compared to the Long Term Average



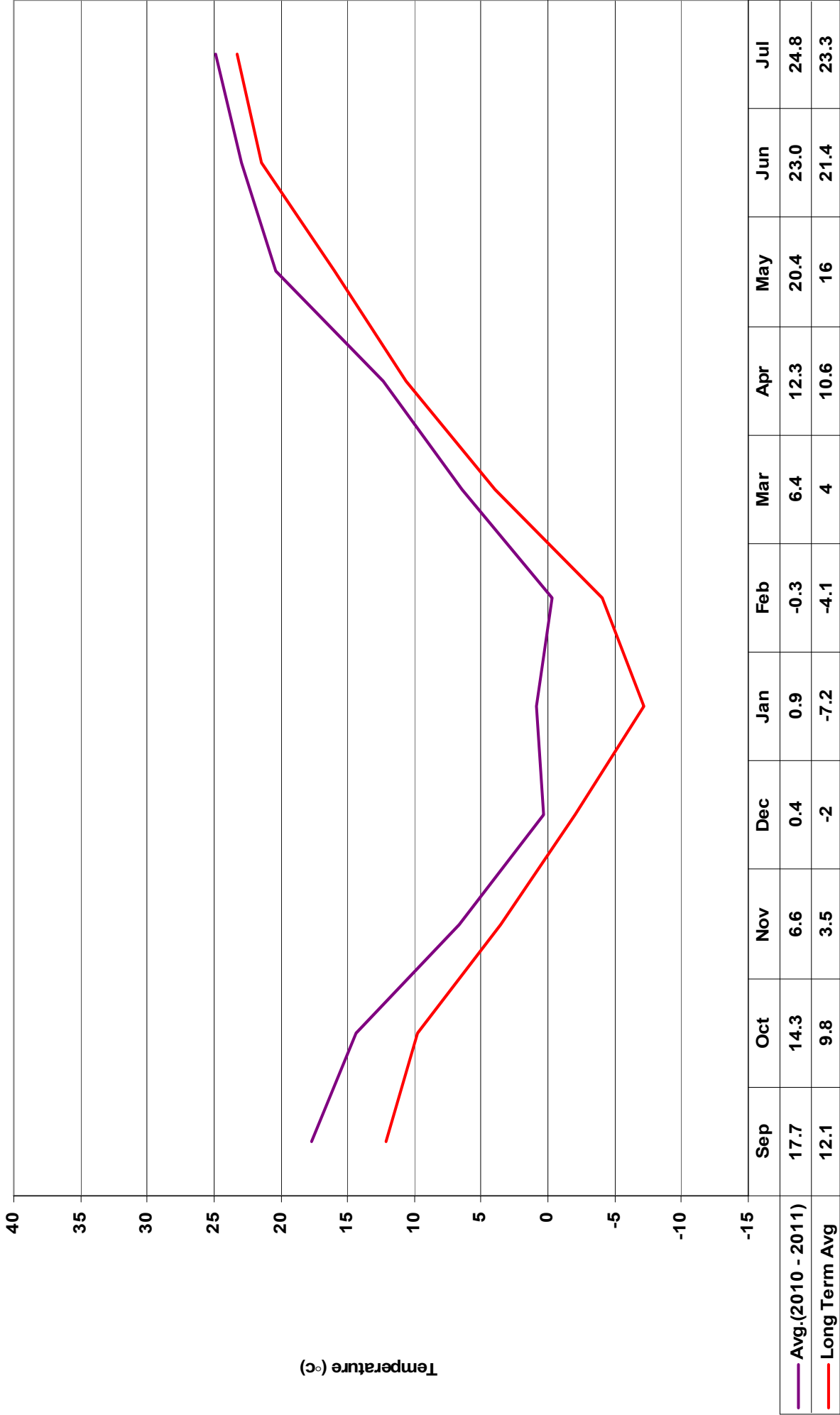
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Avg.(2010 - 2011)	28.2	24.7	33	10.2	11.7	12.5	19.5	23.3	32.2	35.5	33.6
Long Term Avg	28	21.7	14	9.1	8.3	11.9	16.7	21.1	27.3	33.1	33

Gardiz Average Temperature (2010 - 2011) Compared to the Long Term Average

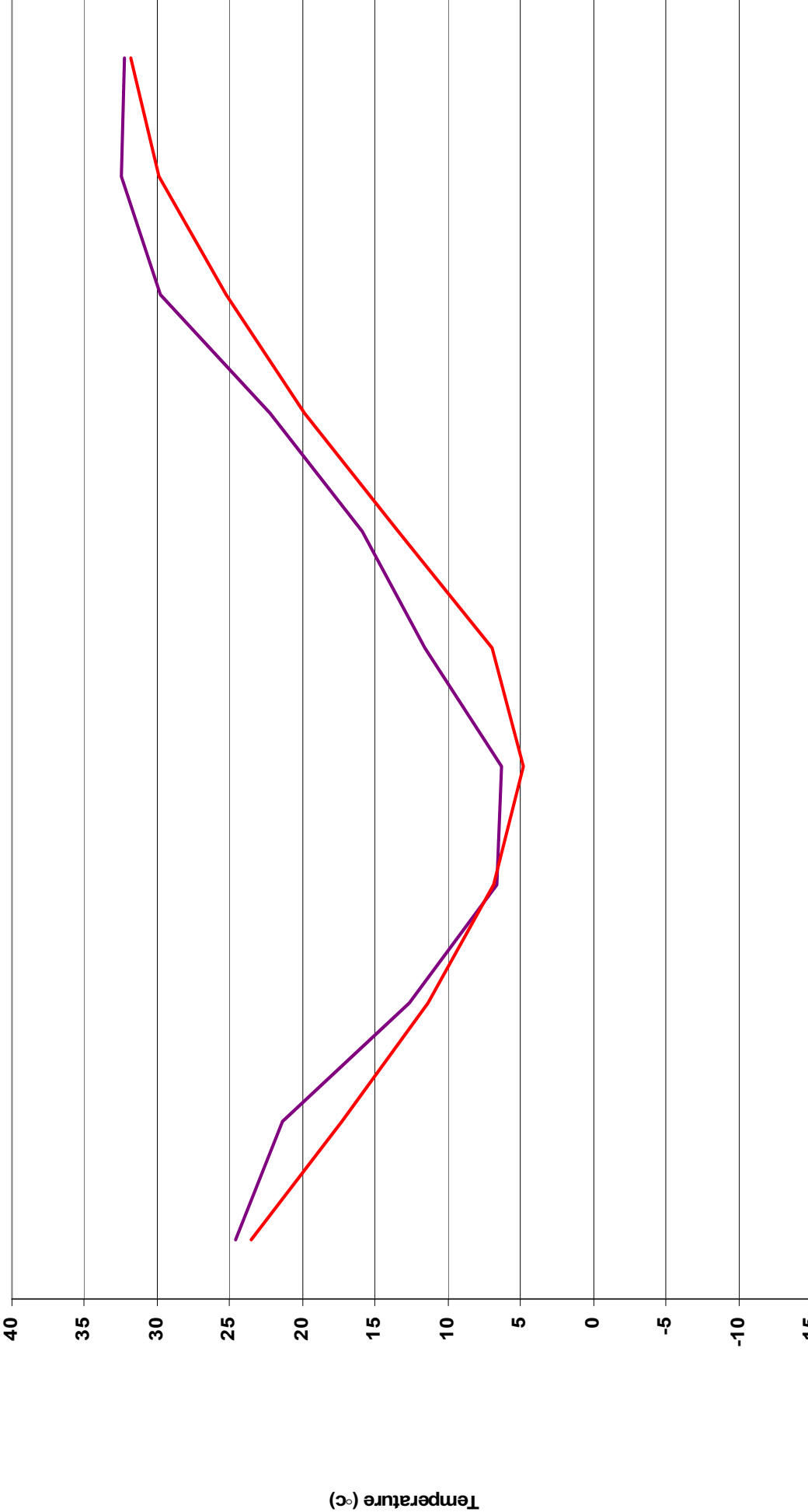


	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Avg.(2010 - 2011)	17.6	12.9	6.2	0.6	1.5	-0.7	5.5	11.2	19.0	22.1	23.1
Long Term Avg	16.8	9.7	3.6	-2.7	-6.5	-5.1	3.5	9.8	15.1	20.4	22

Ghazni Average Temperature (2010 - 2011) Compared to the Long Term Average

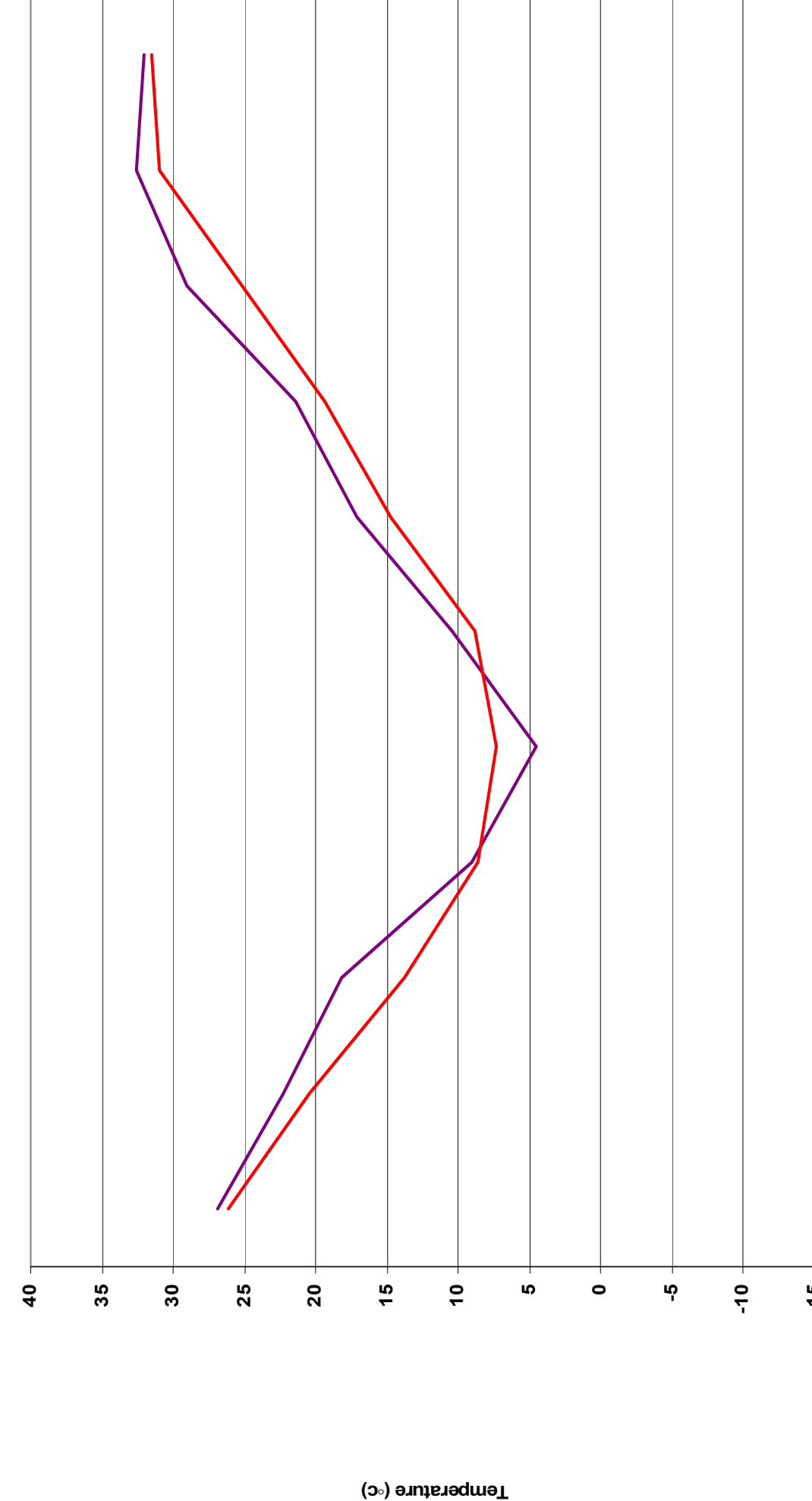


Kandahar Average Temperature (2010 - 2011) Compared to the Long Term Average



Avg.(2010 - 2011)	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
	24.7	21.3	12.7	6.6	6.4	11.5	15.8	22.3	29.7	32.5	32.2
Long Term Avg	23.5	17.3	11.4	6.8	4.8	7	13.4	19.9	25.3	29.9	31.8

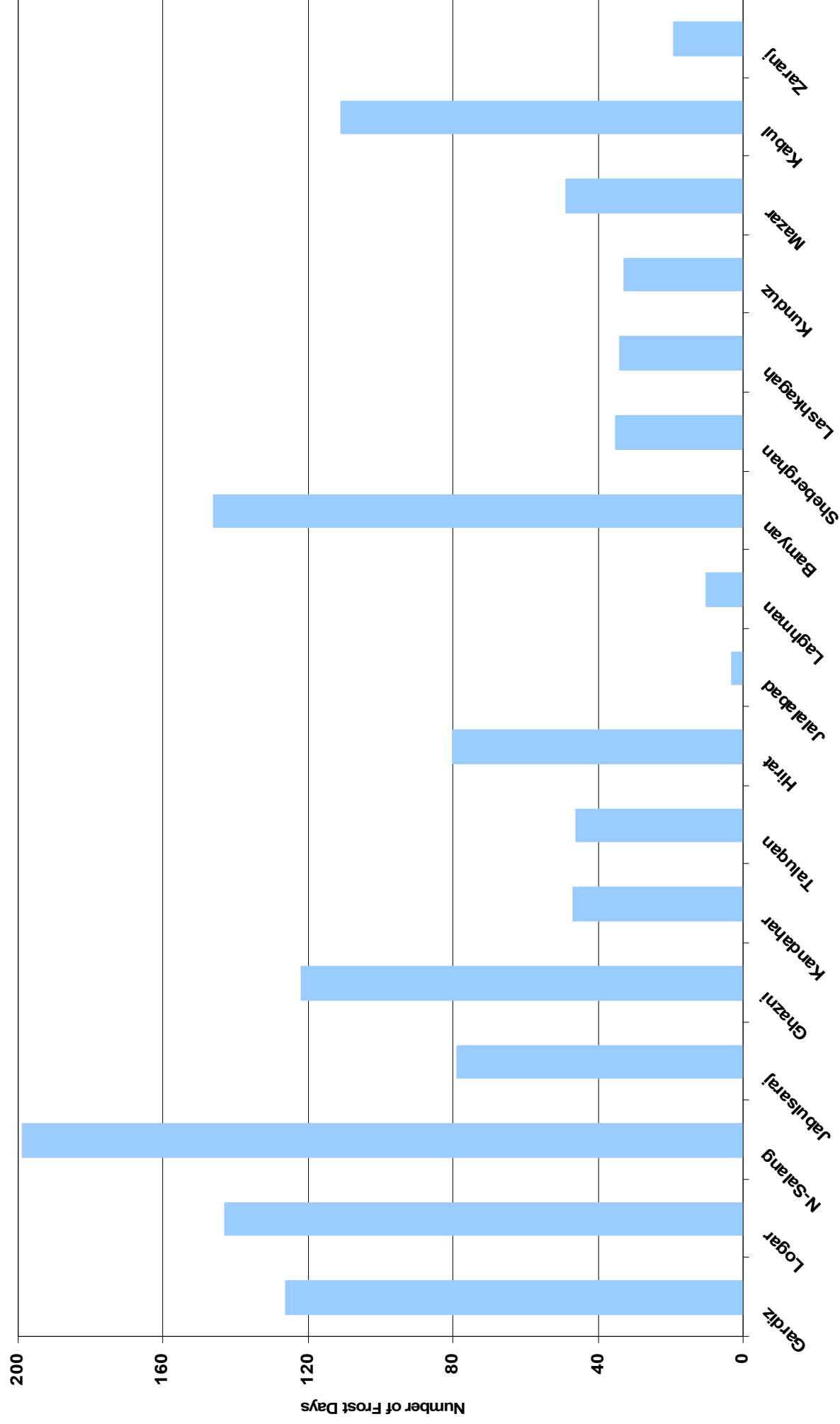
Laghman Average Temperature (2010 - 2011) Compared to the Long Term Average



	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Avg.(2010 - 2011)	26.9	22.3	18.2	9.1	4.5	10.4	17.1	21.4	29.1	32.6	32.0
Long Term Avg	26.1	20.5	13.8	8.6	7.3	8.9	14.8	19.4	25.2	31	31.5

Frost Days
Compared with
Last Year and Long Term Average
Agricultural Season (2010 - 2011)

Afghanistan - Yearly Number of Frost Days (2010 - 2011)



Number of Free Frost Days in Afghanistan (2010 - 2011)

