Climate change threat package

Point ID: 9EG
Province: Mondul Kiri
Site description: Mondul Kiri - Upland area
Project: AAS1109 Mekong ARCC

At this site graphs have been developed for the following threats:

- Temperature (Maximum, Minimum Temperature and comfort zone)
- Precipitation
- Water availability
- Droughts
- Storms

Definitions

Typical year: The daily values (temp, rainfall etc) for a typical year is calculated as an average of that day over the 25 years of modelled data.

Onset of monsoon season: First month that a total of 200mm precipitation occurs.

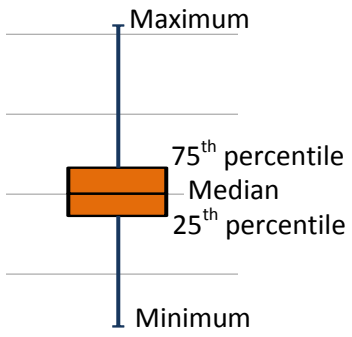
Drought: A month where the total precipitation is less than half the total PET.

Comfort zone: The range of precipitation or temperature that was experienced during 50% of the baseline around the mean. It can be assumed that the system is not stressed within this temperature and precipitation range.

Soil water availability: The water contained within the pore space of the soil matrix.

Legend

Note that the box and whisker graphs represent the following statistics:



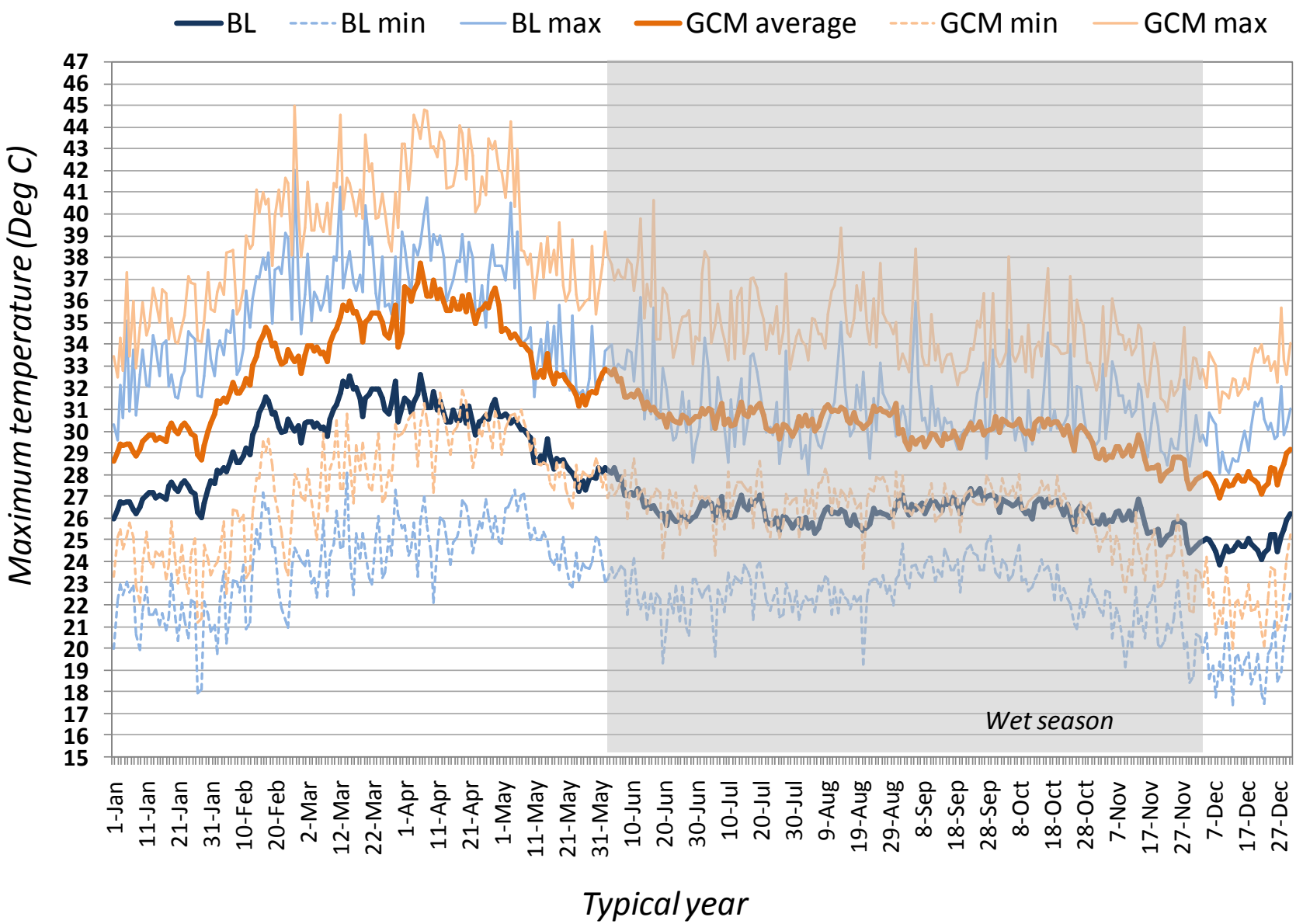
The following shading is used to mark the wet seasons and the comfort zone.

Wet season

Comfort zone

Mondul Kiri Upland Area – Maximum temperature

Figure 1



Mondul Kiri Upland Area – Maximum temperature

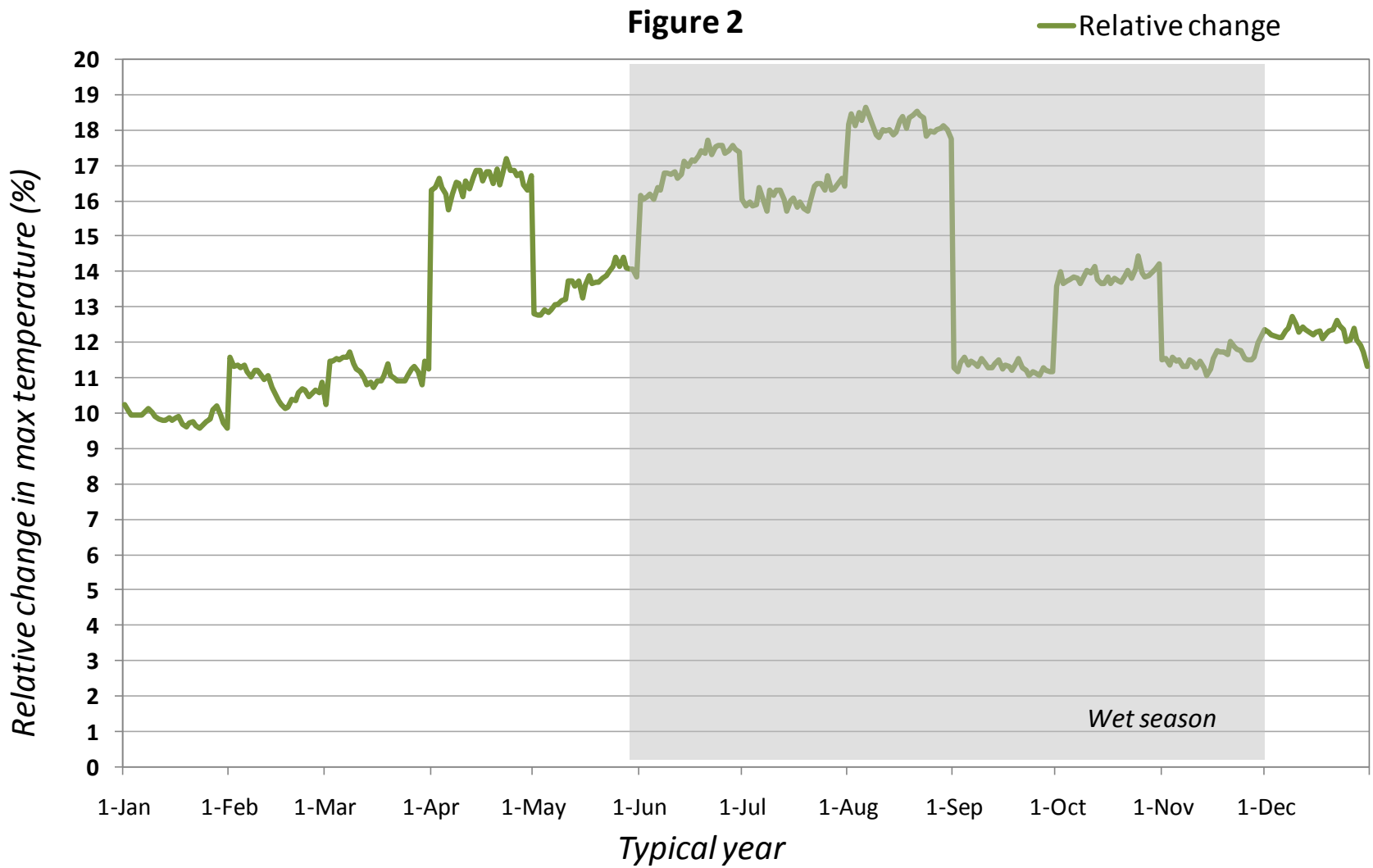
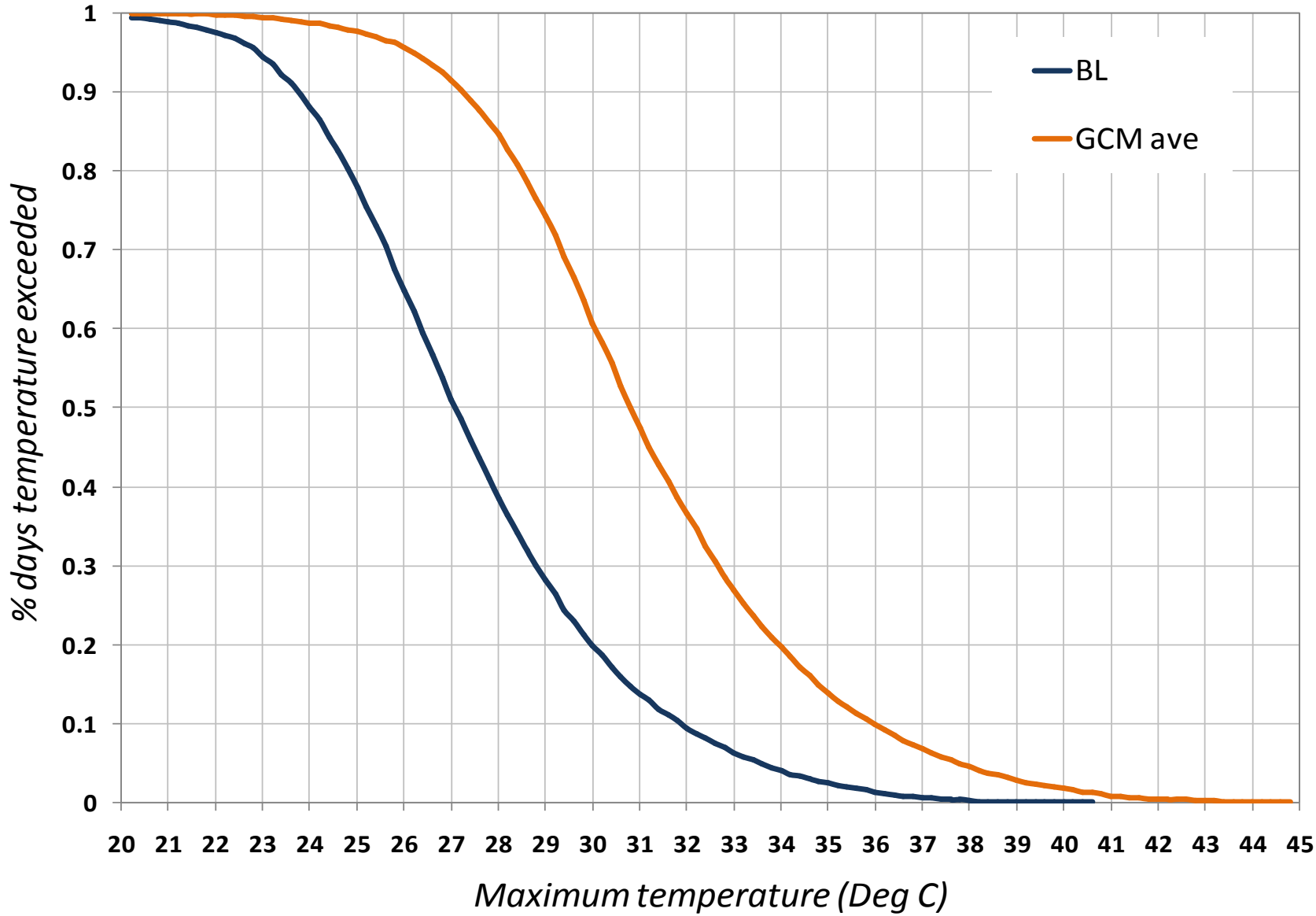
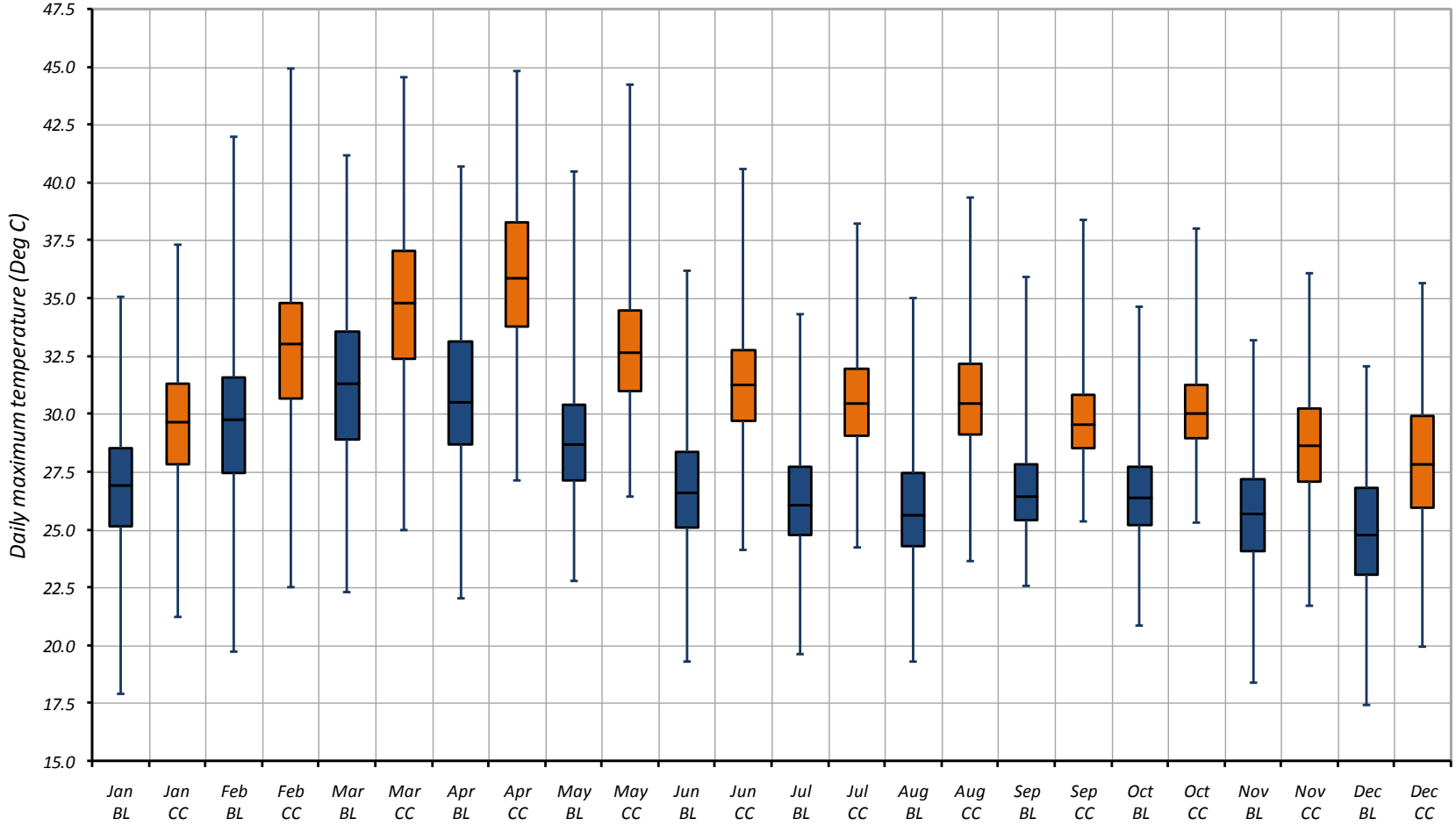


Figure 3


BL
GCM ave
% days temperature exceeded
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45
Maximum temperature (Deg C)

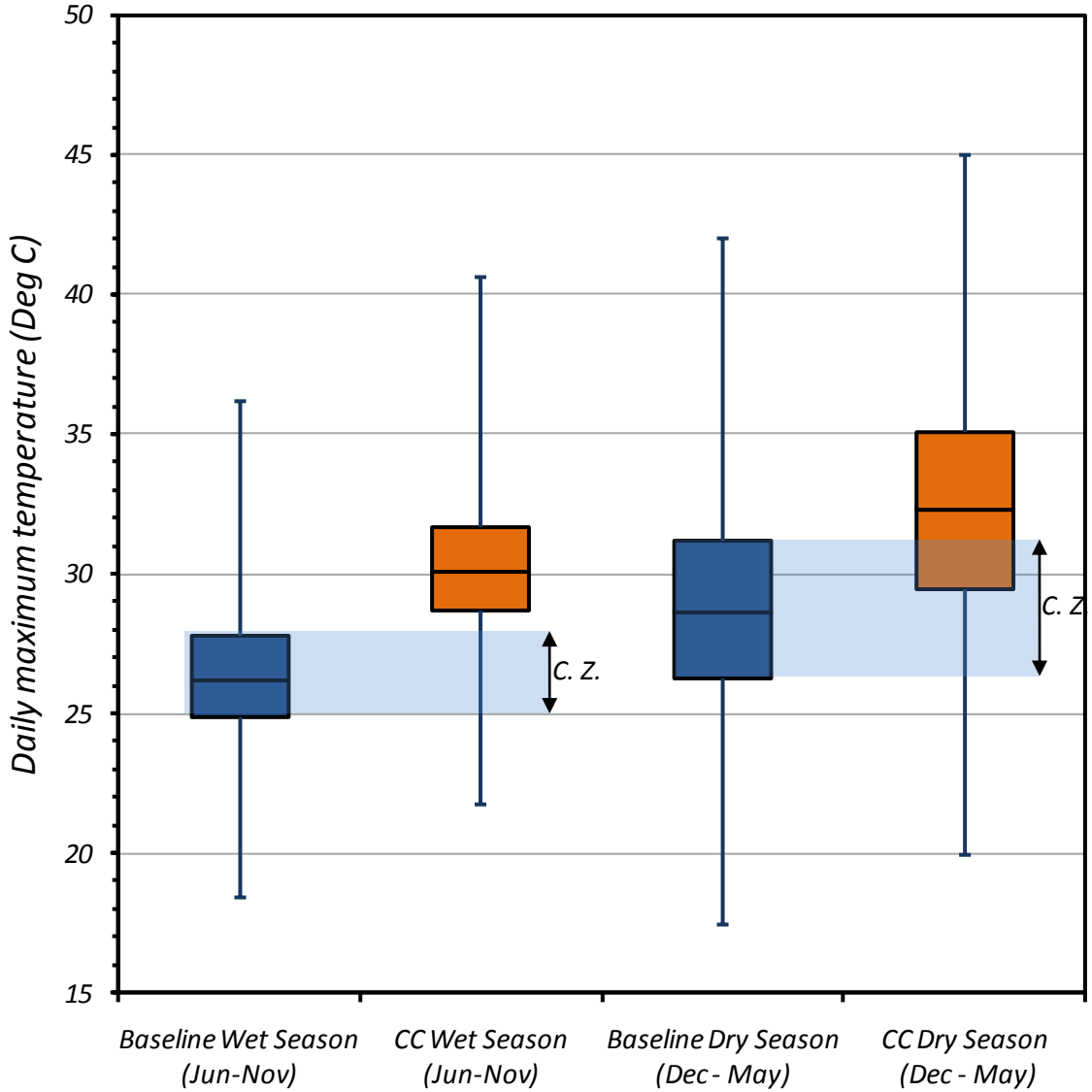
Mondul Kiri Upland Area – Maximum temperature

Figure 4



Mondul Kiri Upland Area – Maximum temperature

Figure 5



Mondul Kiri Upland Area – Maximum temperature

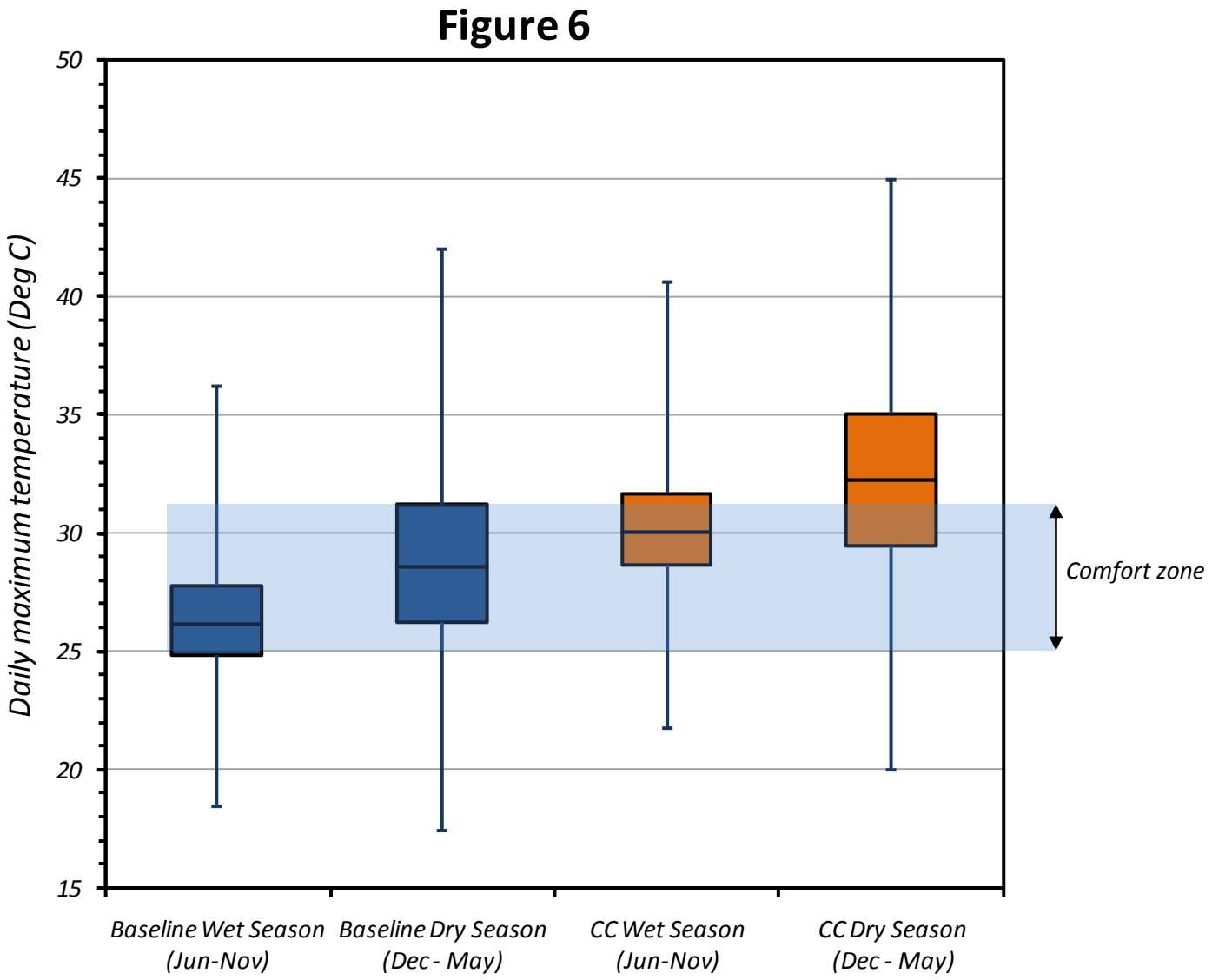
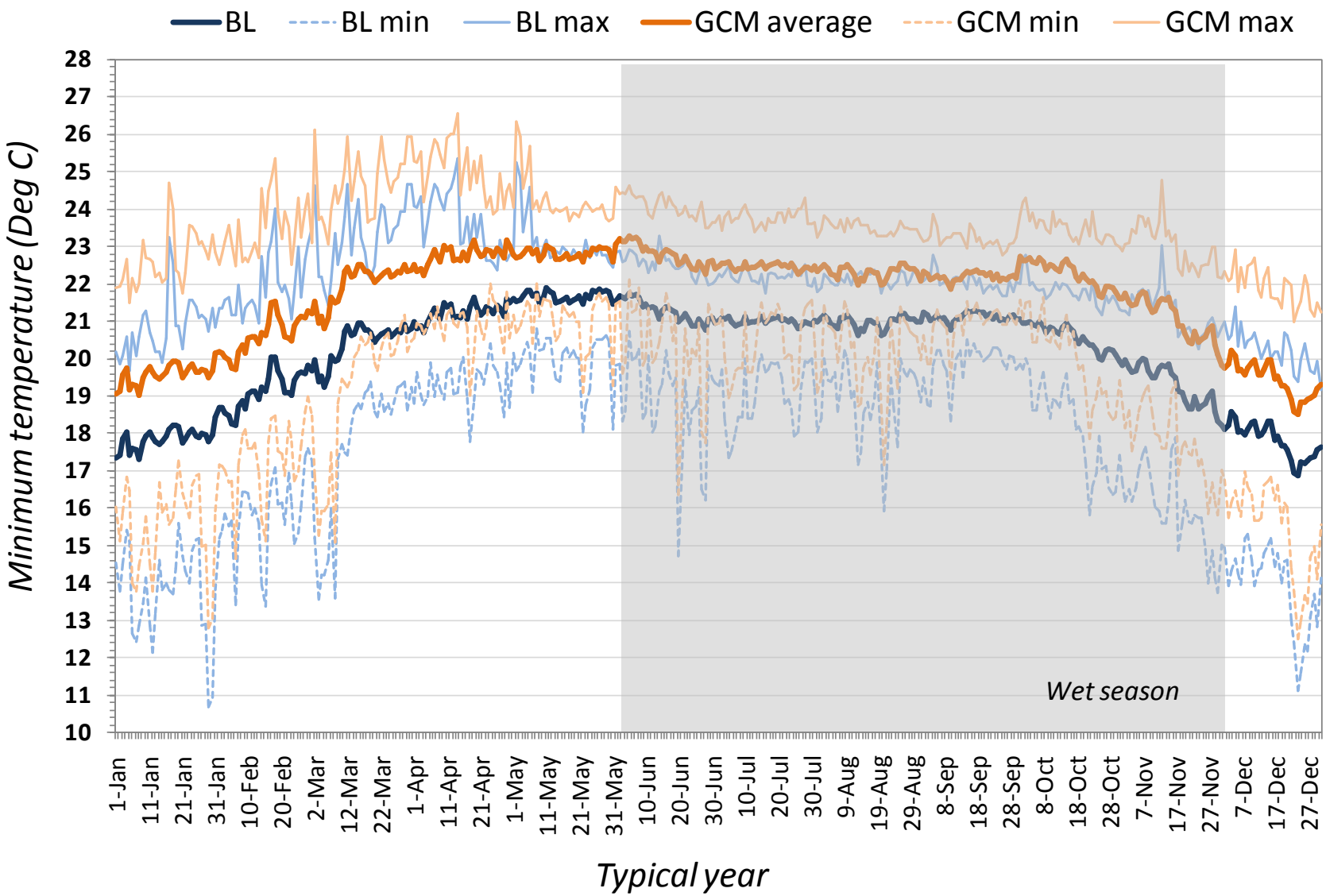
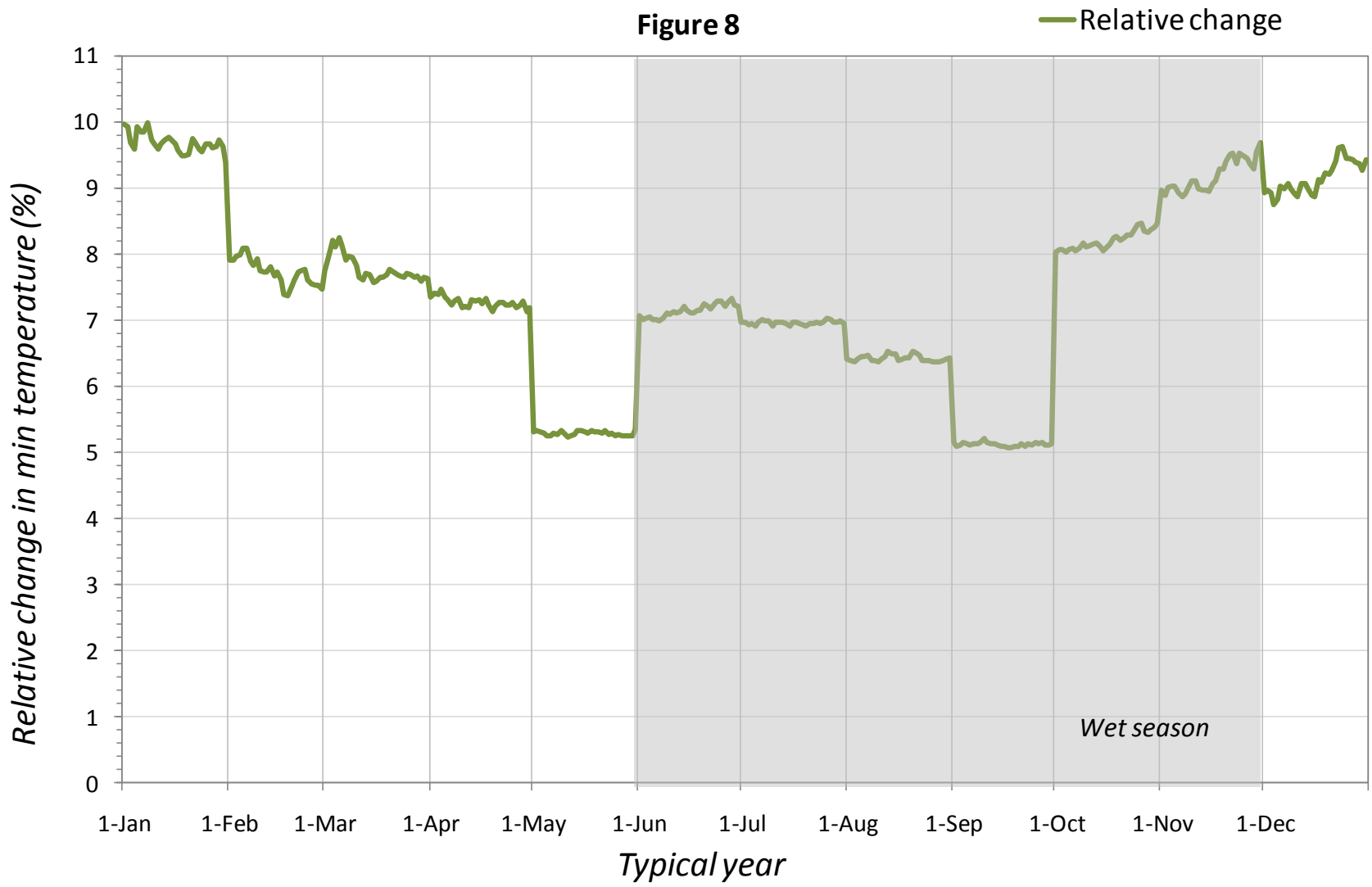


Figure 7


BL
BL min
BL max
GCM average
GCM min
GCM max
Minimum temperature (Deg C)
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
Wet season
1-Jan
11-Jan
21-Jan
31-Jan
10-Feb
20-Feb
2-Mar
12-Mar
22-Mar
1-Apr
11-Apr
21-Apr
1-May
11-May
21-May
31-May
10-Jun
20-Jun
30-Jun
10-Jul
20-Jul
30-Jul
9-Aug
19-Aug
29-Aug
8-Sep
18-Sep
28-Sep
8-Oct
18-Oct
28-Oct
7-Nov
17-Nov
27-Nov
7-Dec
17-Dec
27-Dec
Typical year

Mondul Kiri Upland Area – Minimum temperature



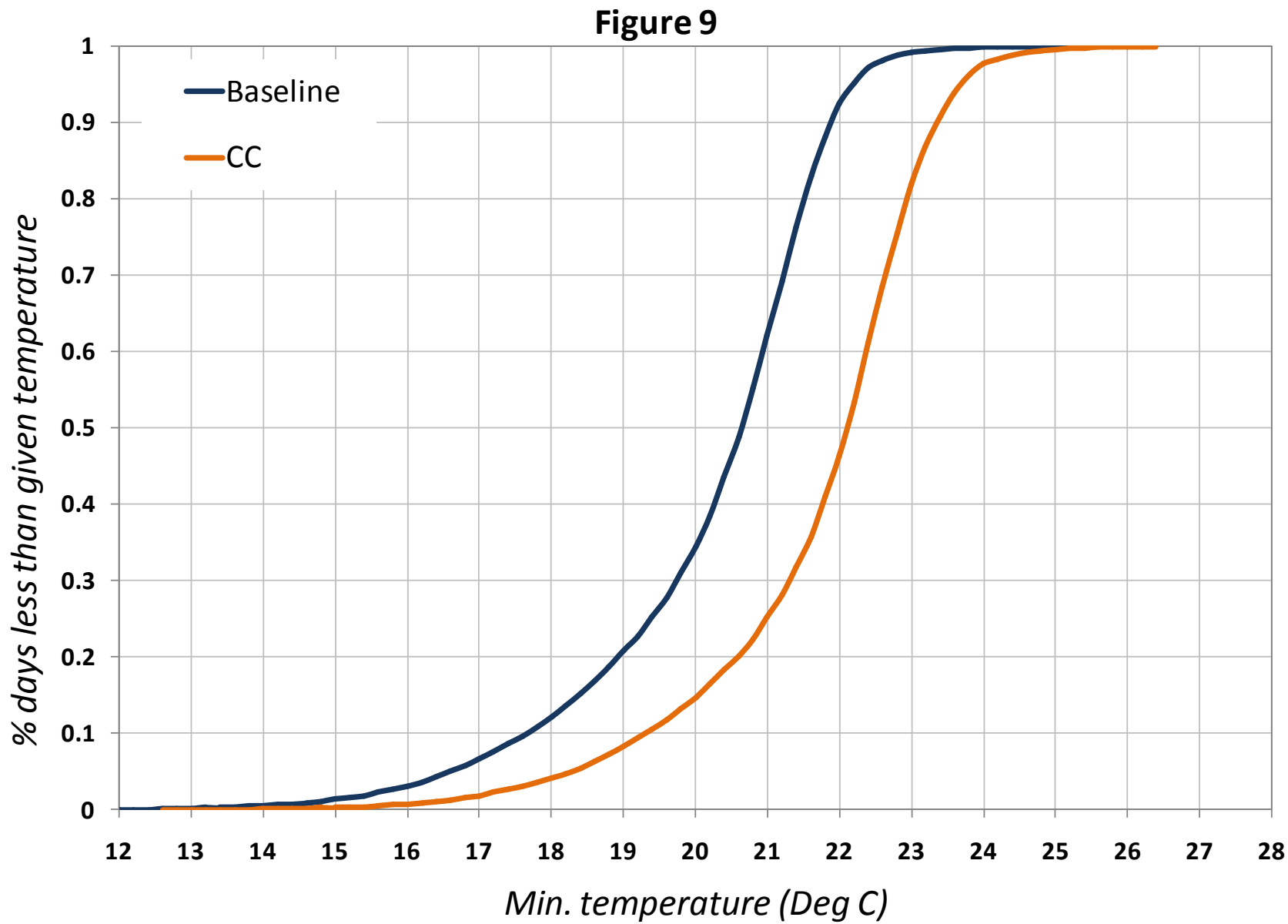
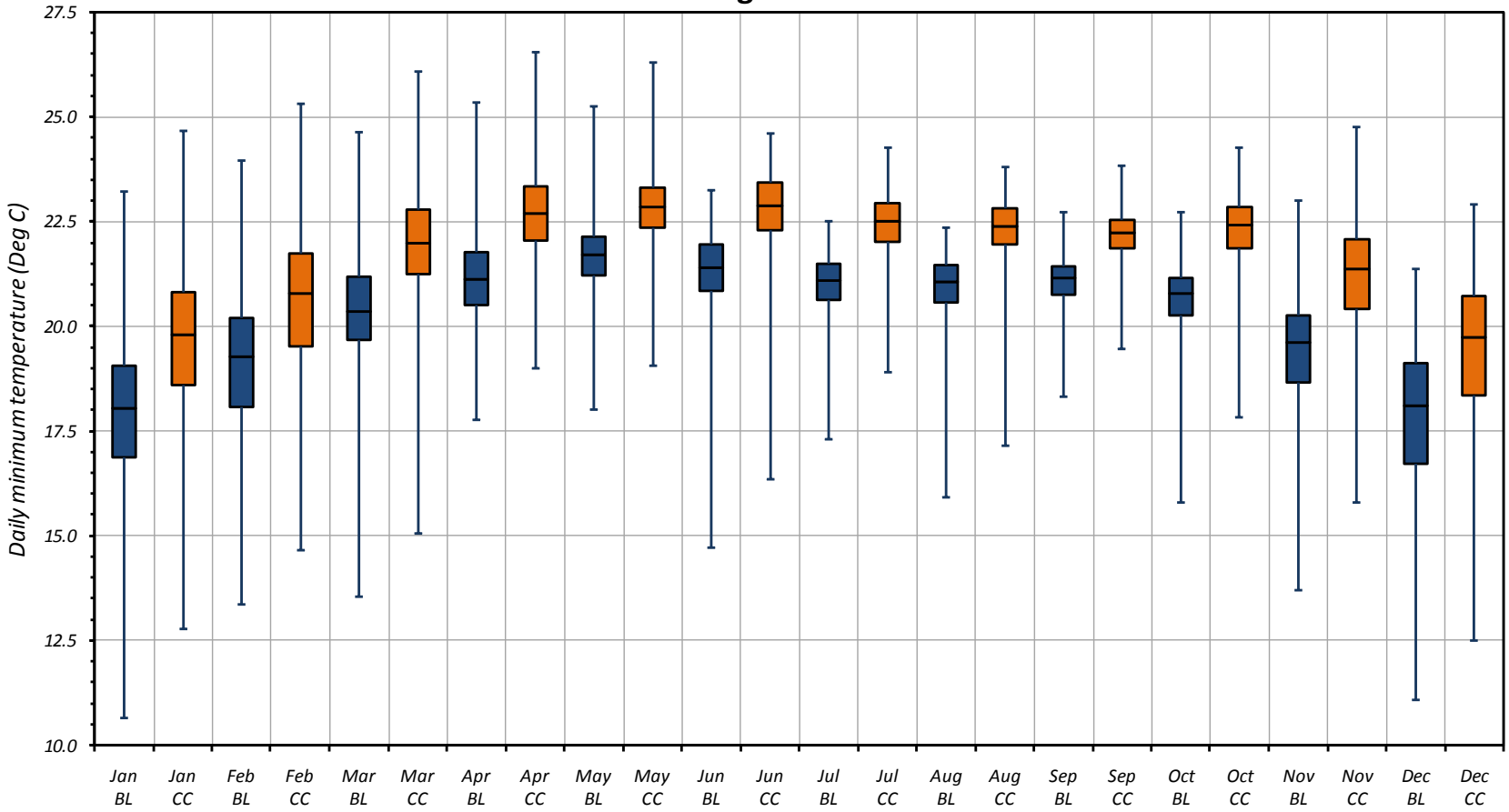


Figure 9
Baseline
CC
% days less than given temperature
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
Min. temperature (Deg C)

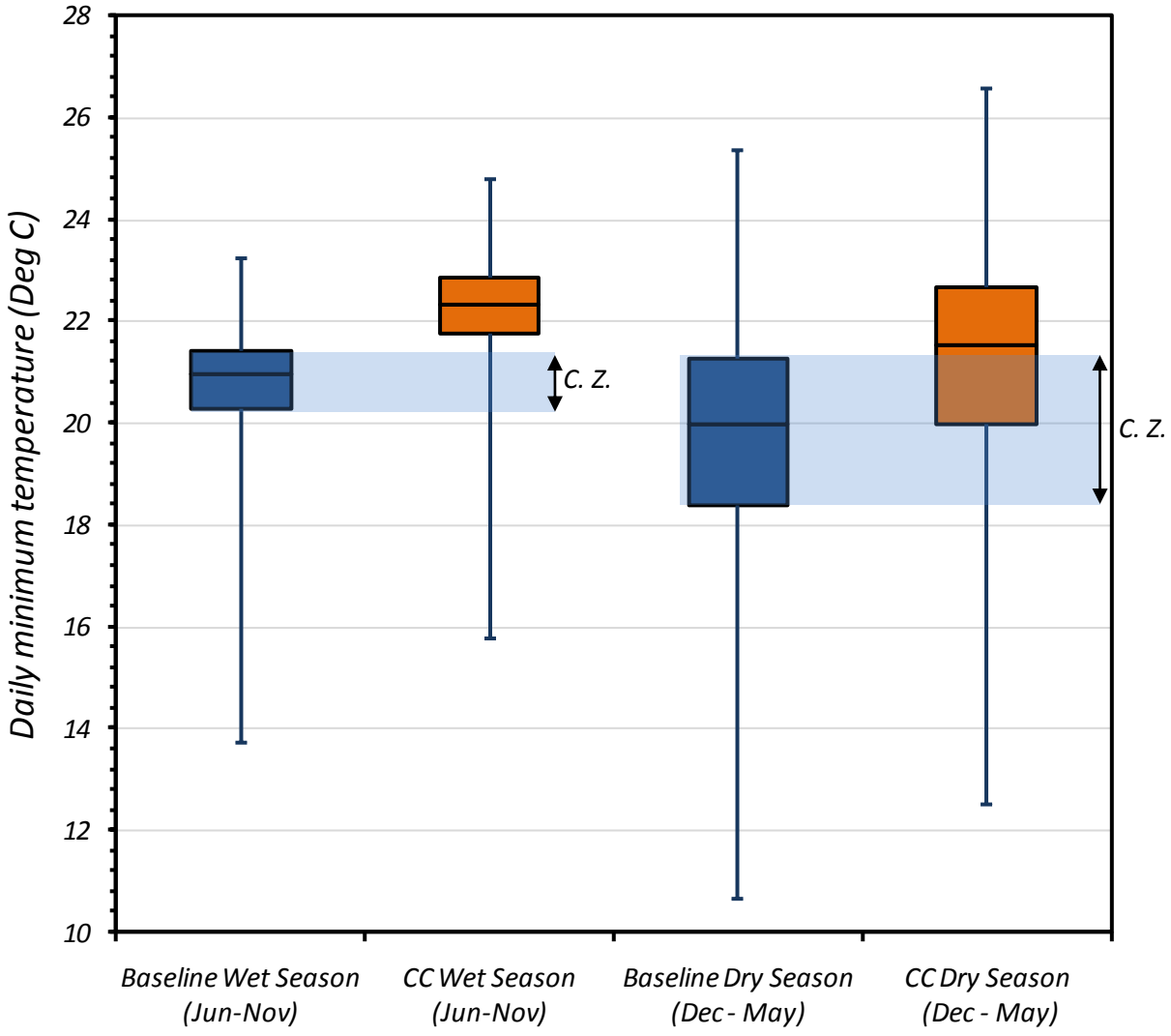
Mondul Kiri Upland Area – Minimum temperature

Figure 10

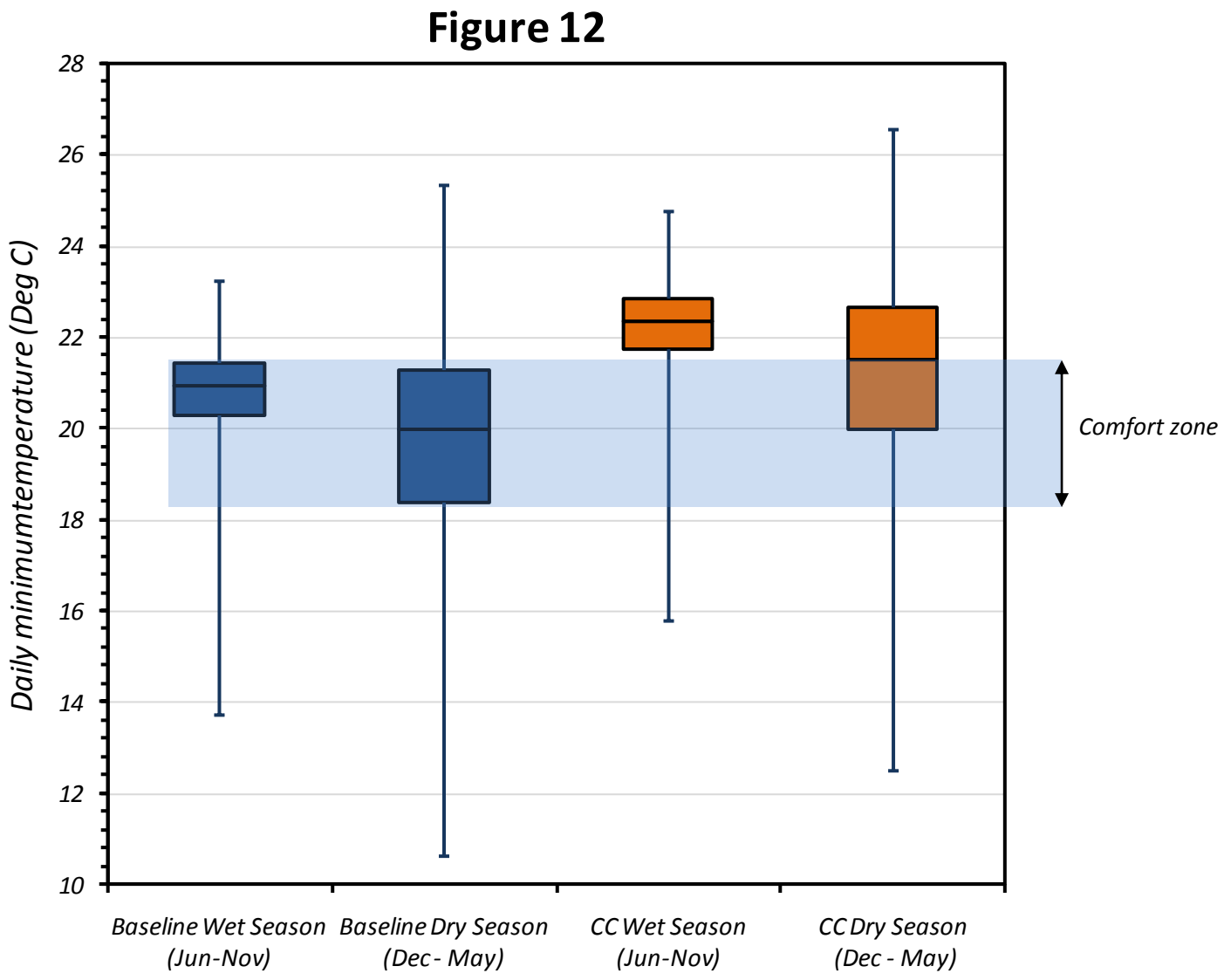


Mondul Kiri Upland Area – Minimum temperature

Figure 11

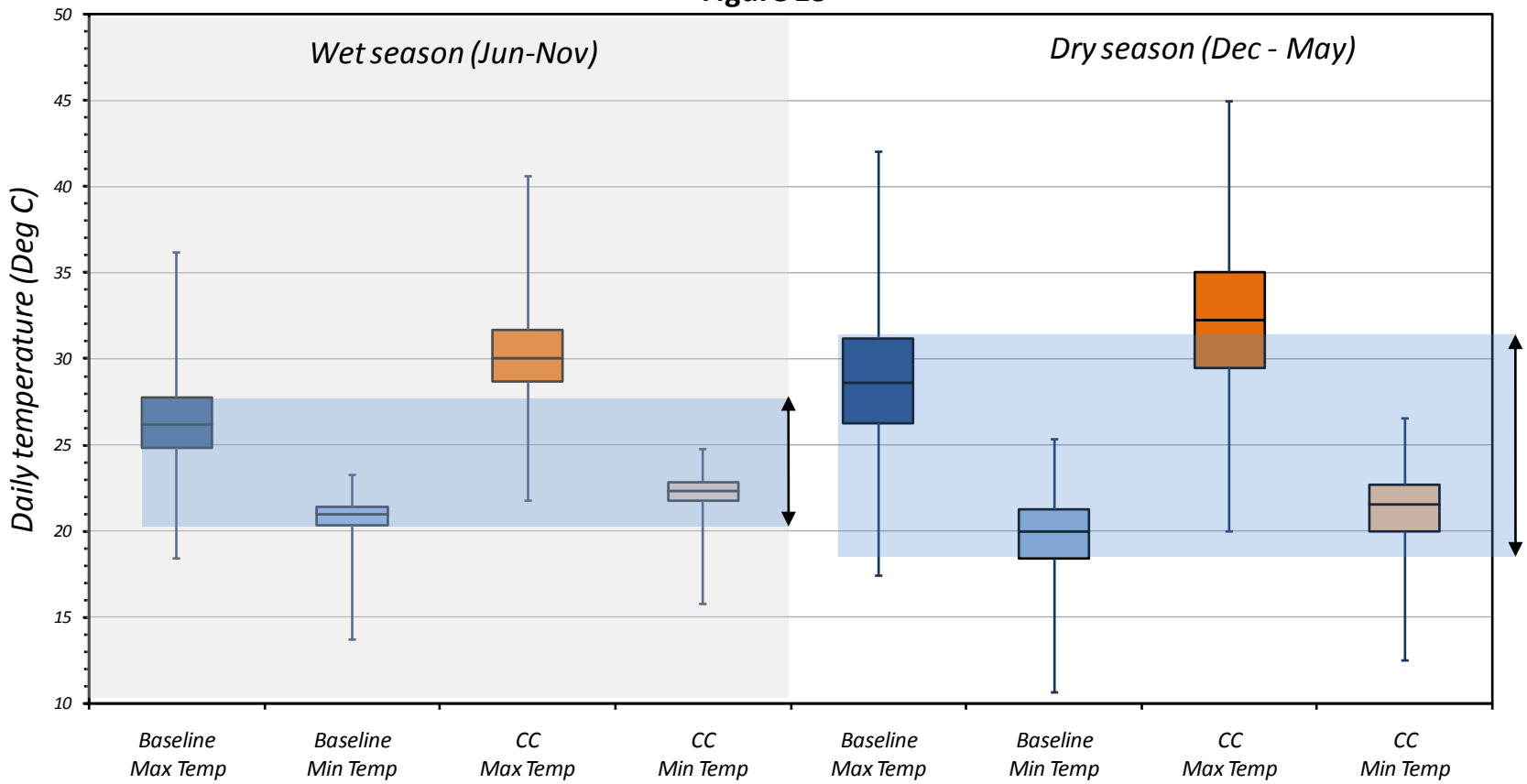


Mondul Kiri Upland Area – Minimum temperature

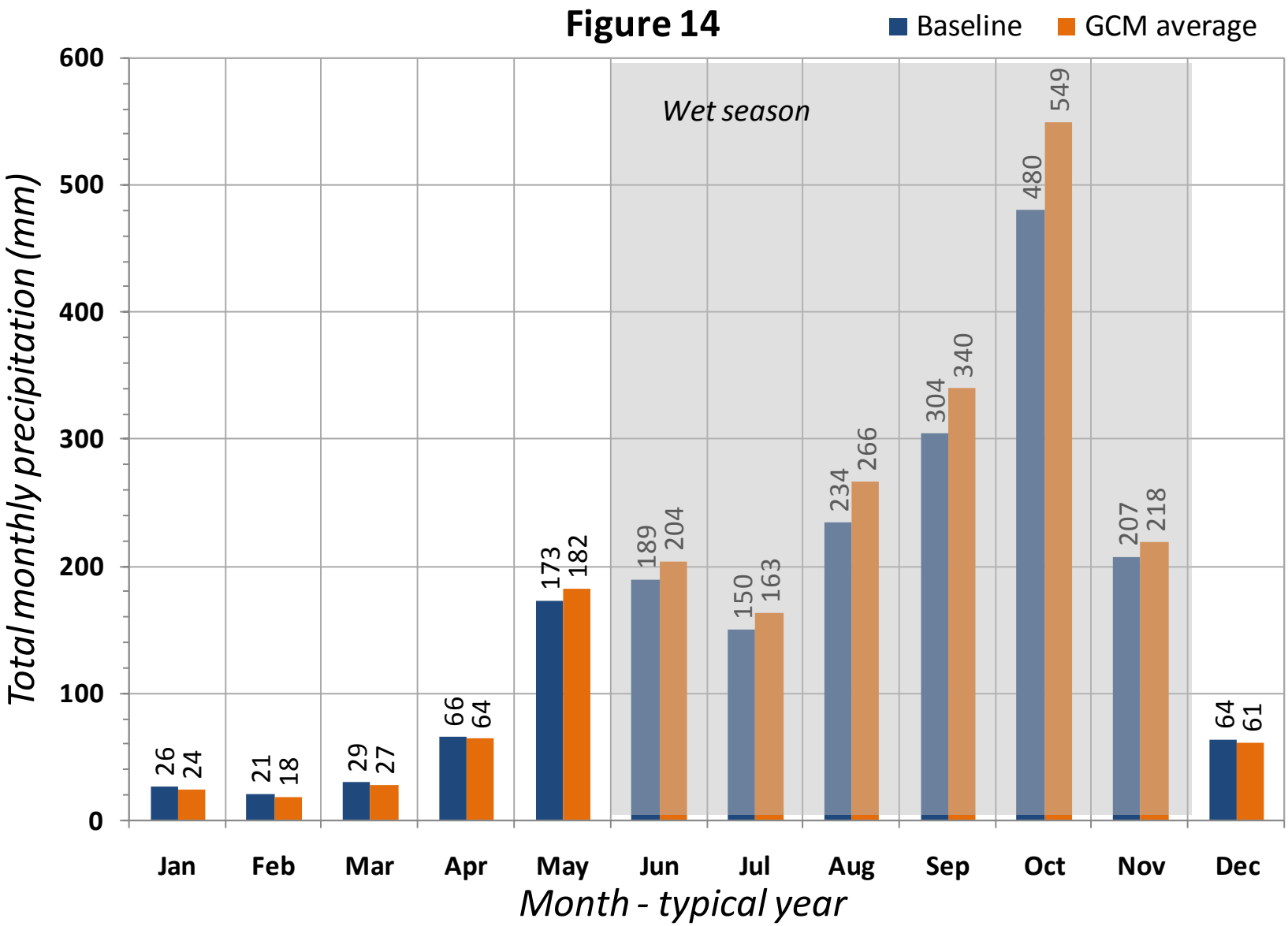


Mondul Kiri Upland Area – Temperature

Figure 13



Mondul Kiri Upland Area – Precipitation



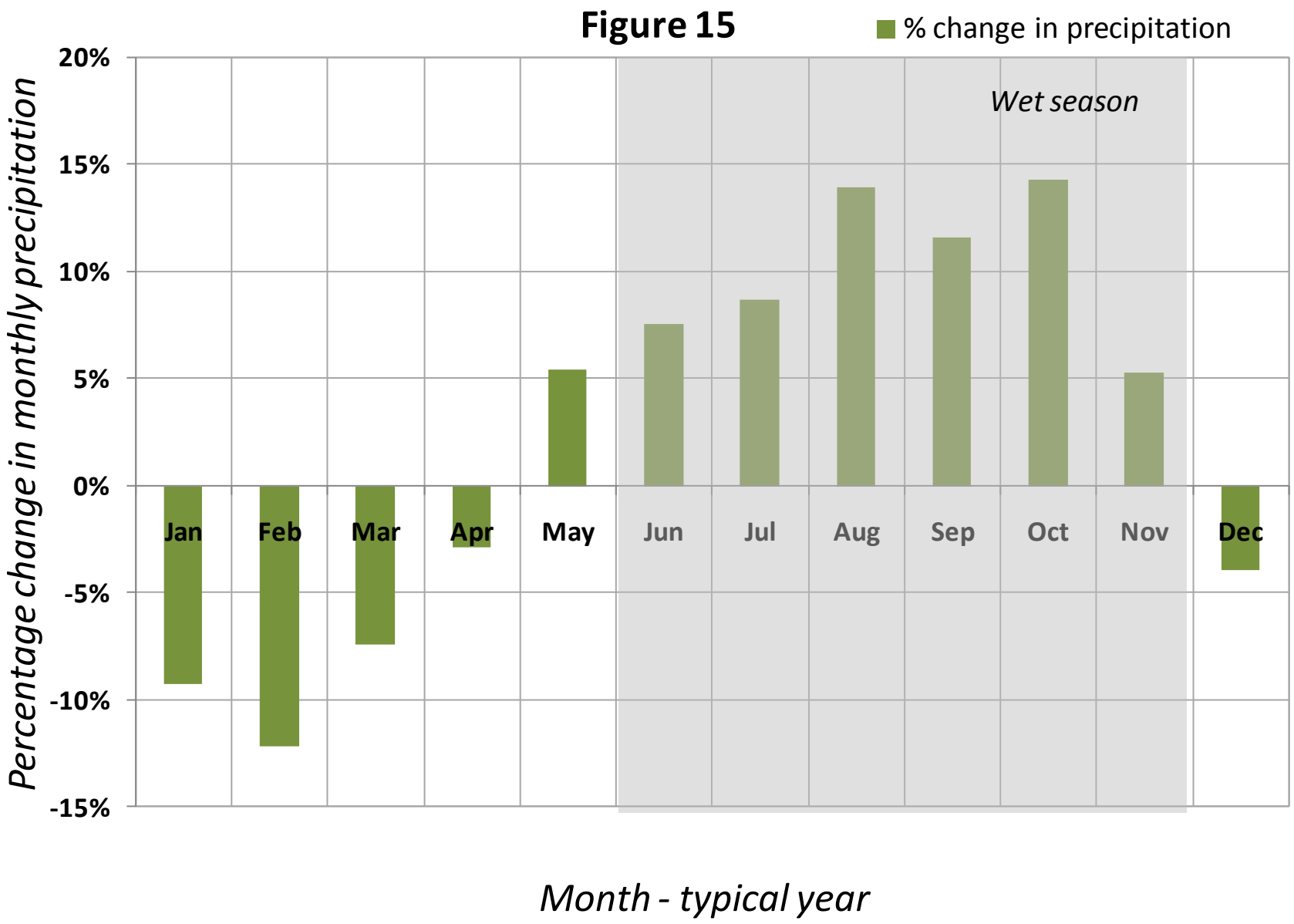
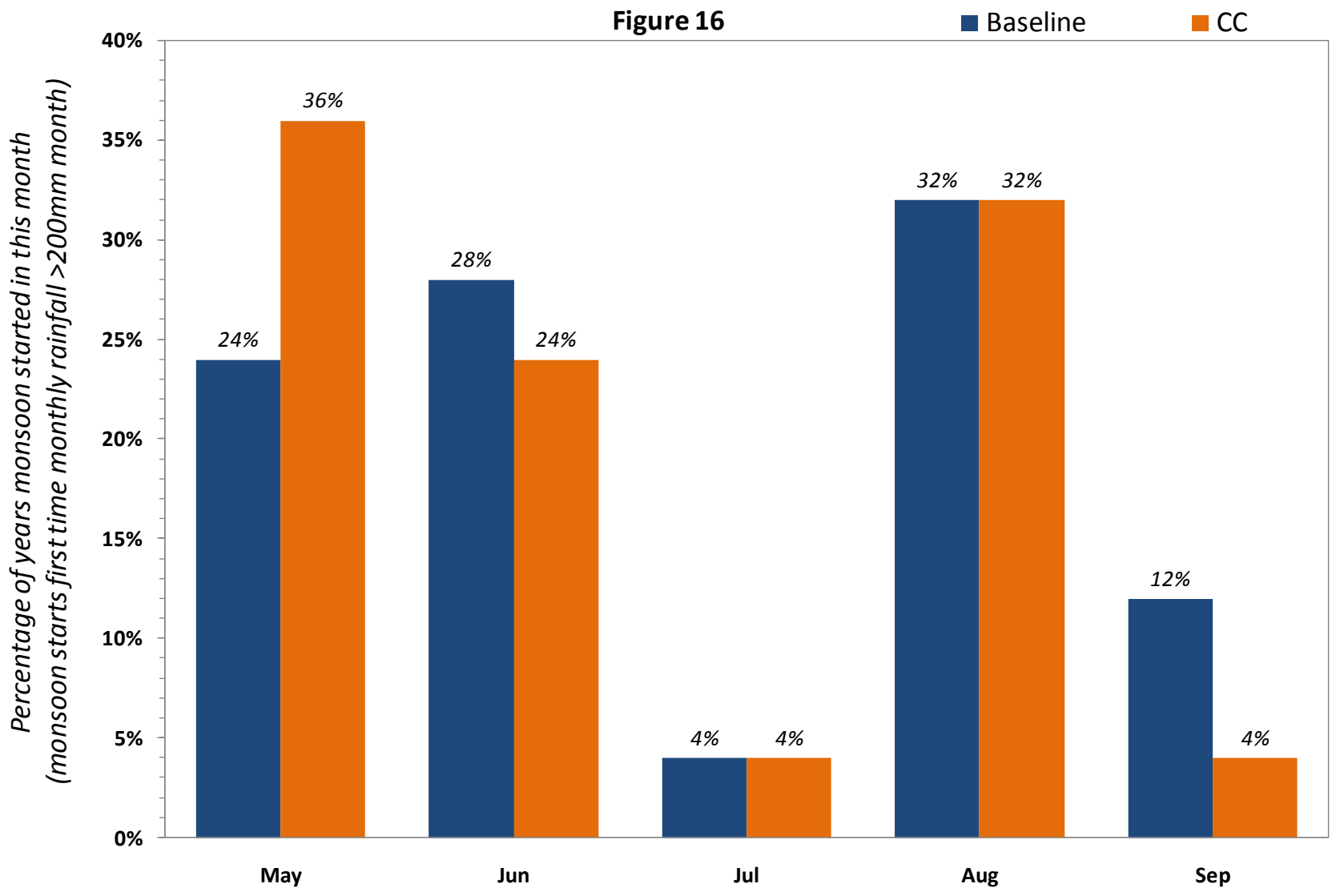


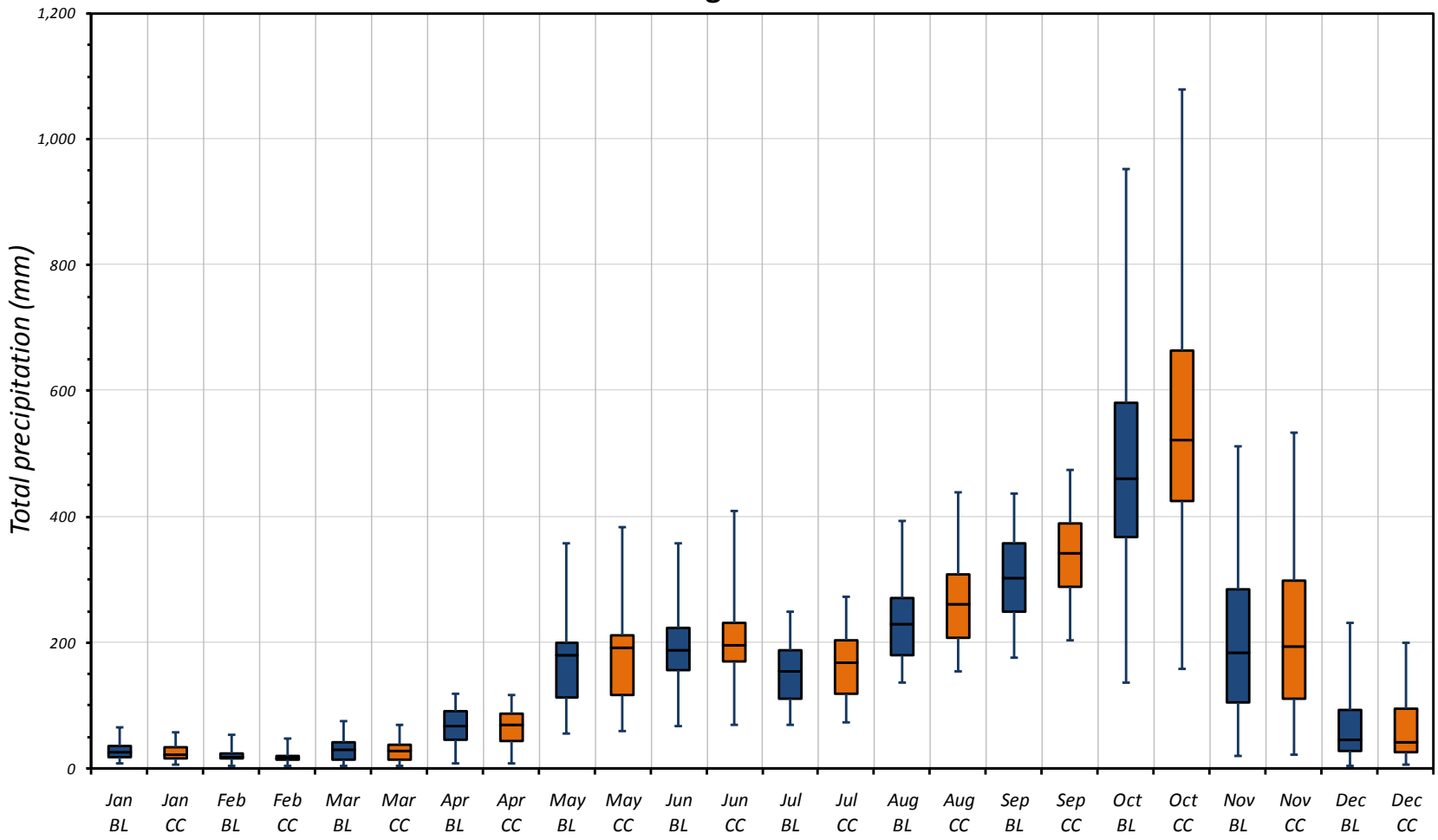
Figure 15
% change in precipitation
Wet season
20%
15%
10%
5%
0%
-5%
-10%
-15%
Percentage change in monthly precipitation
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month - typical year

Mondul Kiri Upland Area – Precipitation

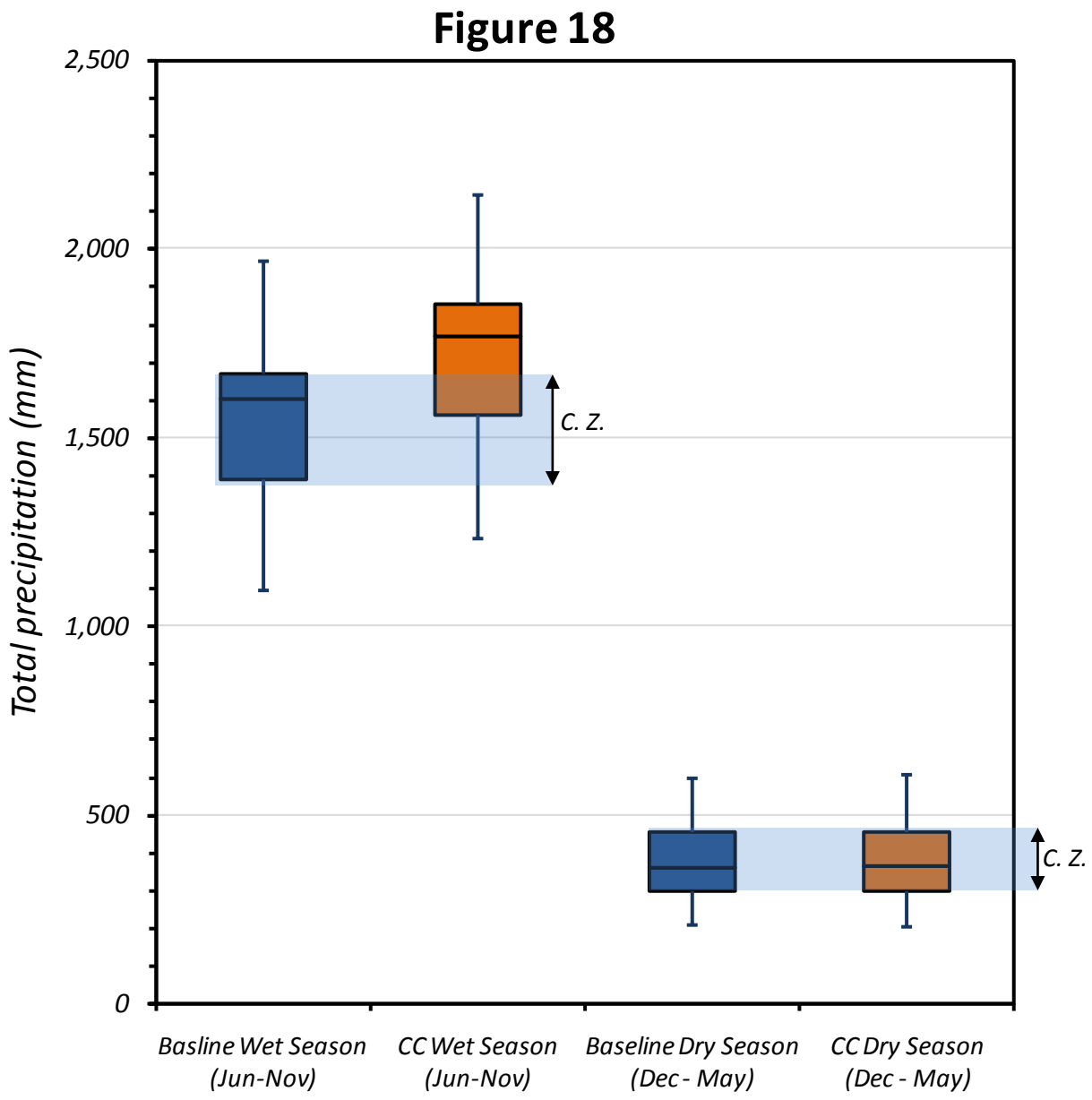


Mondul Kiri Upland Area – Precipitation

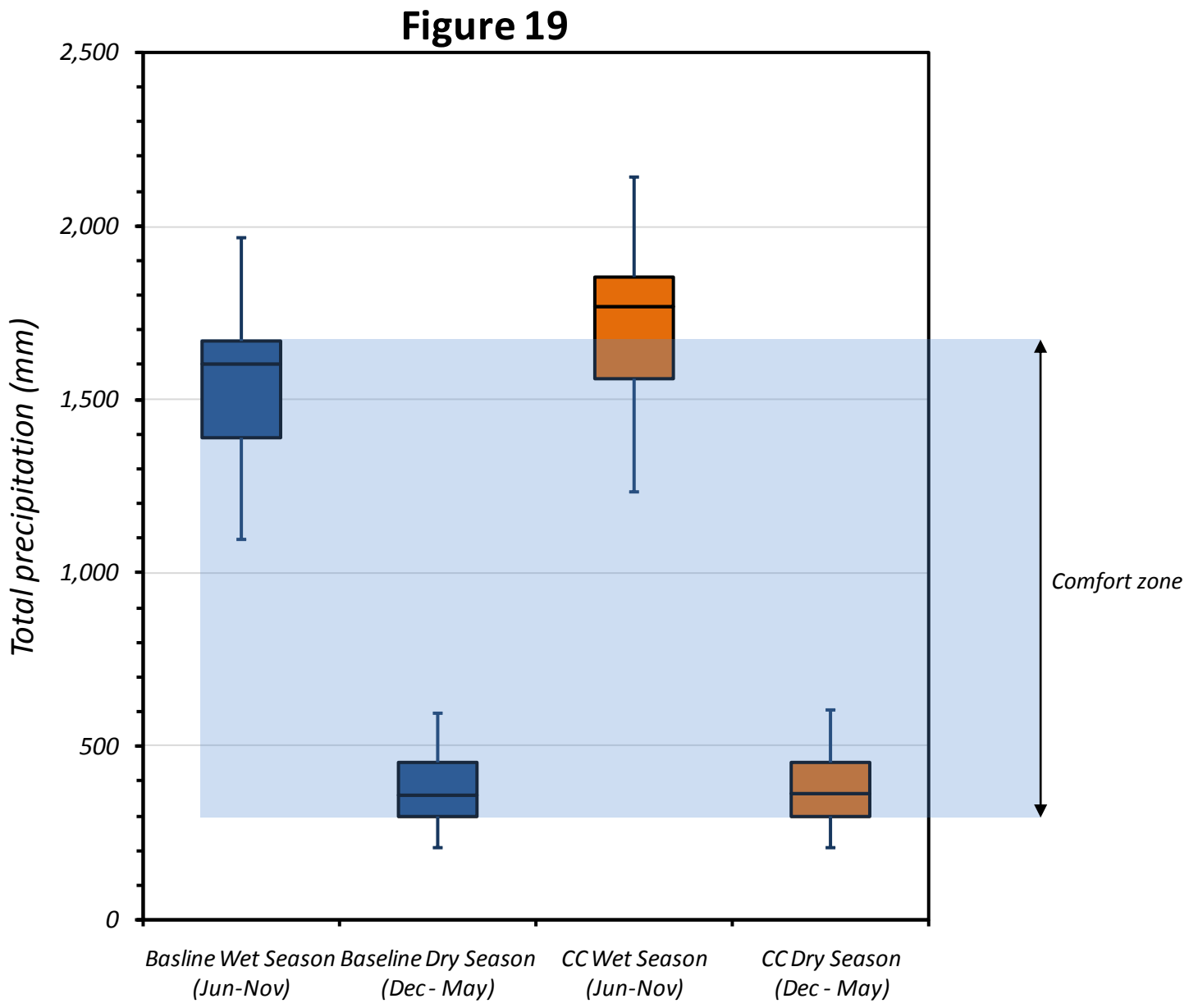
Figure 17



Mondul Kiri Upland Area – Precipitation



Mondul Kiri Upland Area – Precipitation



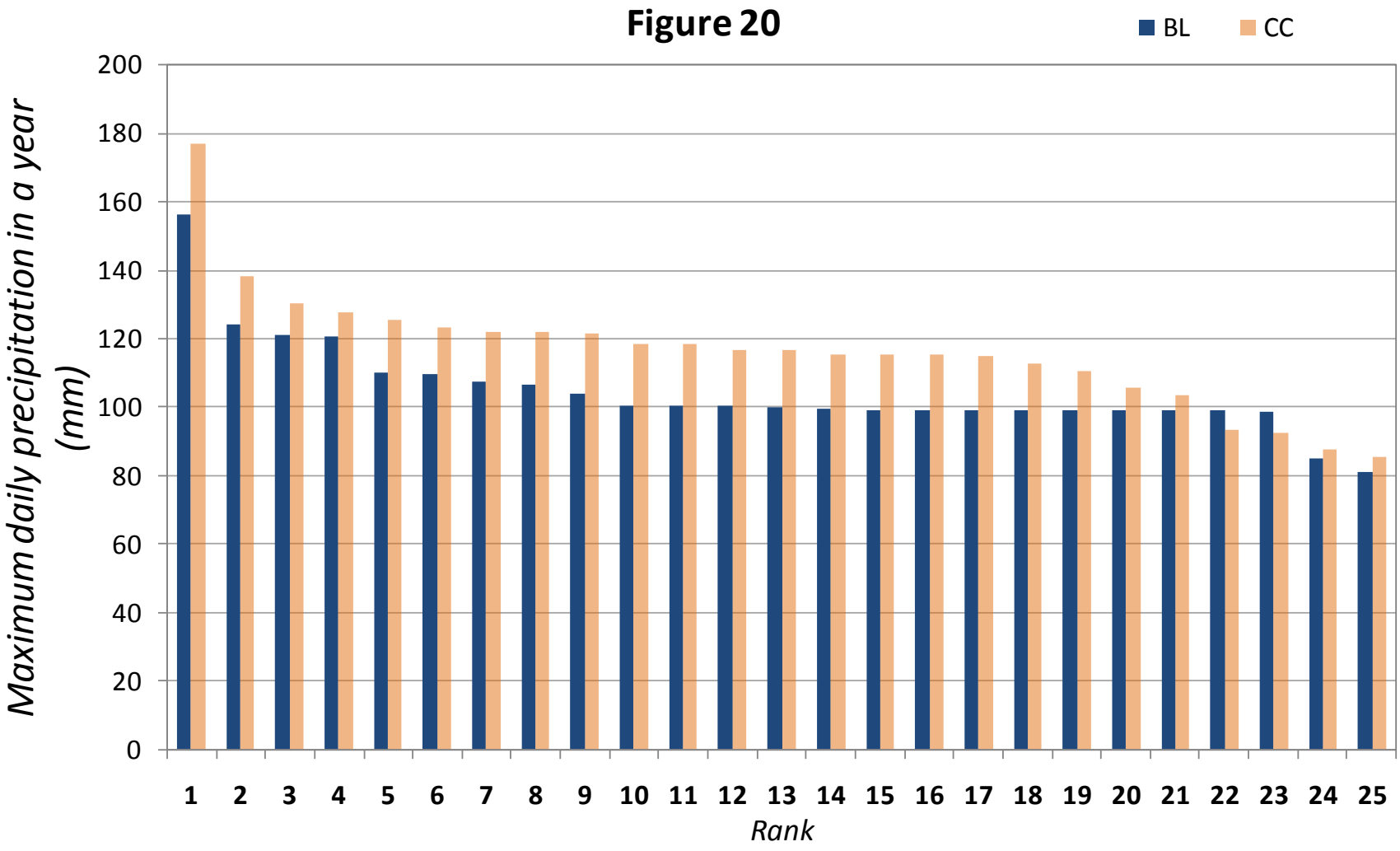
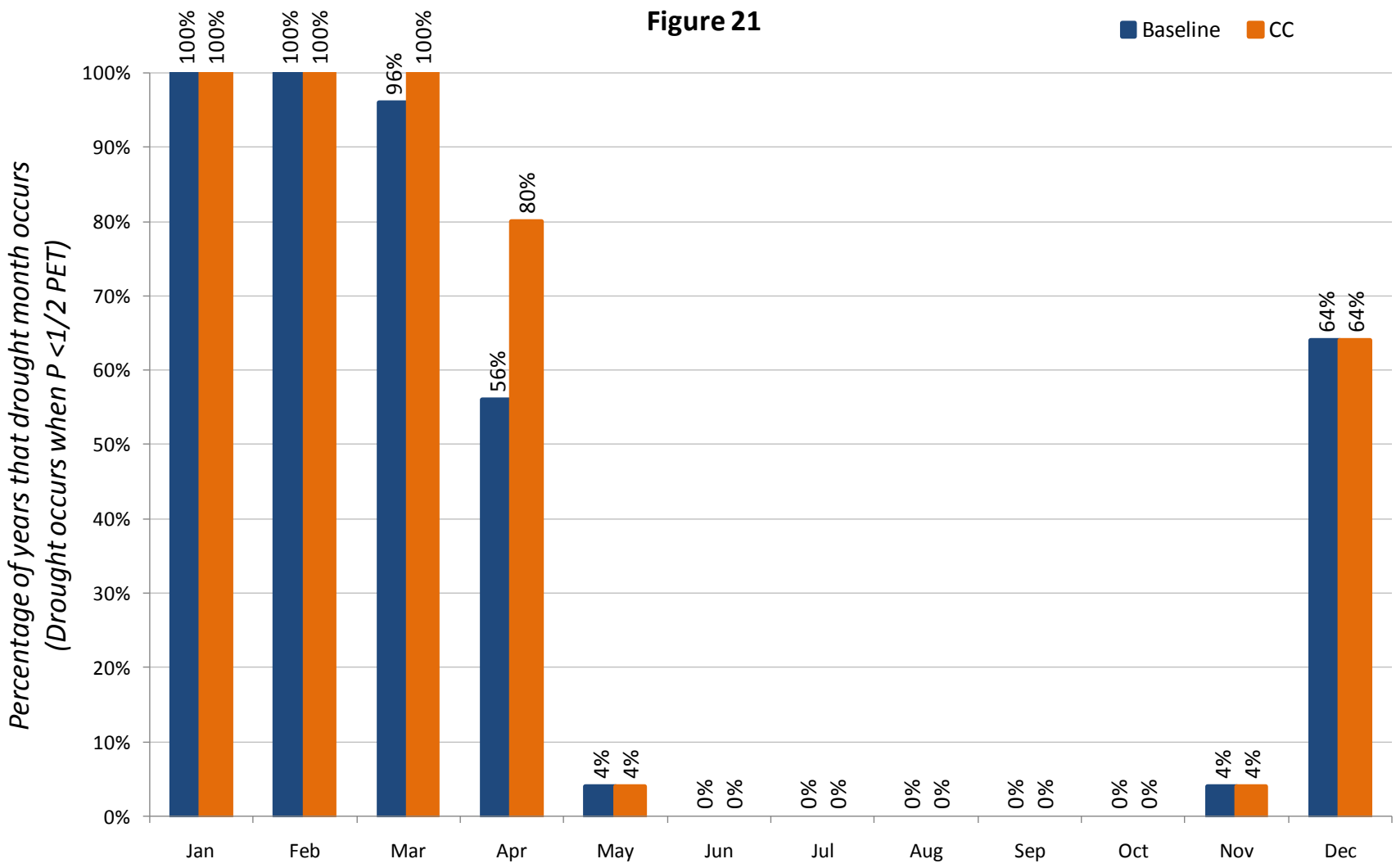


Figure 20
BL
CC
Maximum daily precipitation in a year (mm)
200
180
160
140
120
100
80
60
40
20
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
Rank

Mondul Kiri Upland Area – Drought



Mondul Kiri Upland Area – Water availability

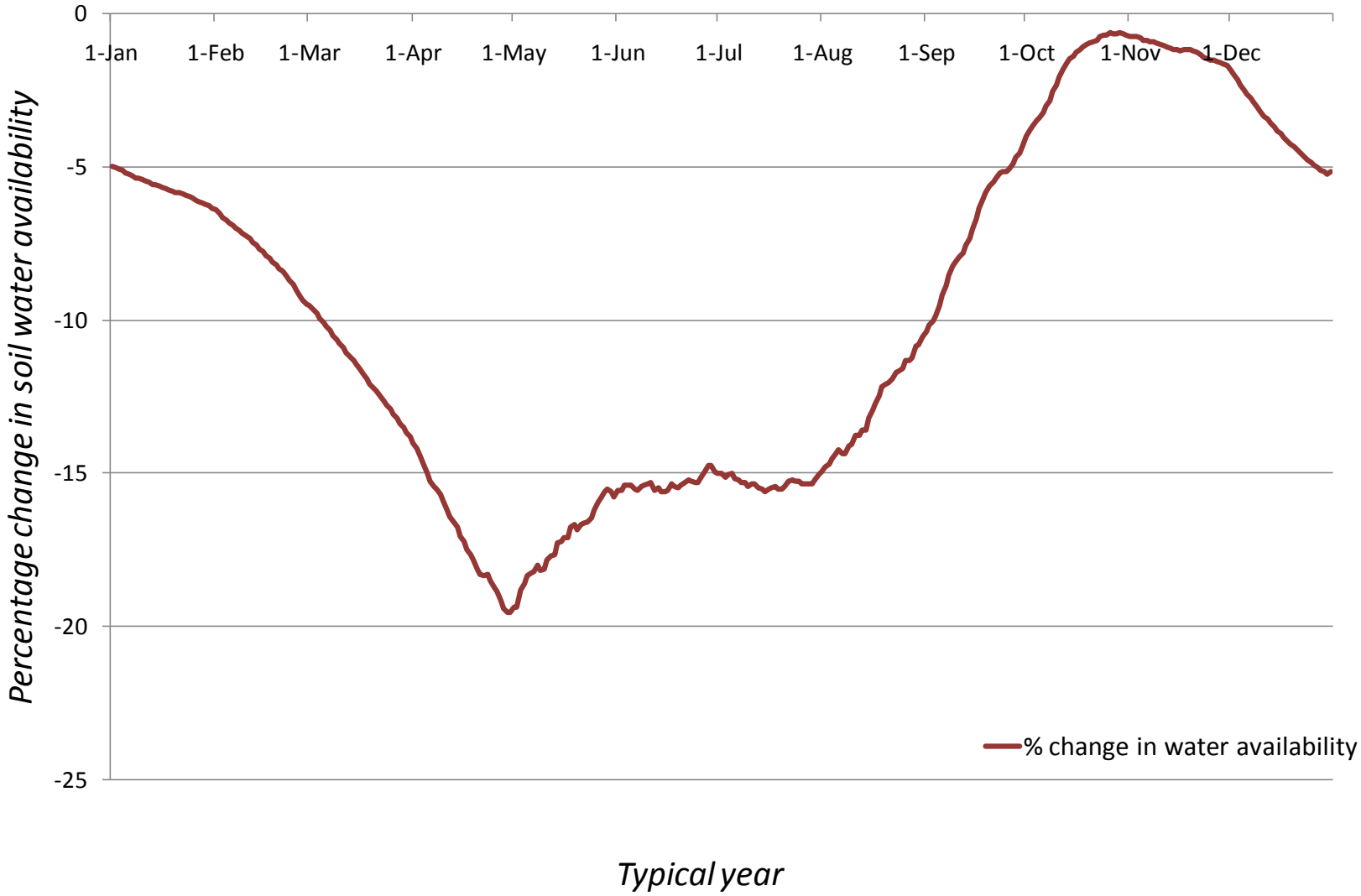



Figure 22