



Government of Nepal  
Ministry of Forest and Environment  
Department of Environment  
Babarmahal, Kathmandu

# Air quality status of Nepal 2016-2020

Volume XIV

Nepalgunj air quality monitoring station



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# 1. Nepalgunj Air Quality Monitoring Station

- Address: Banke, Nepalgunj
- Location: 28.05275 latitude, 81.6222 longitude is possible with map
- Surrounding of the station
  - East: Ramlila Ground Marga pitched road
  - West: District Administration Office Building
  - North: Administration Compound
  - South: Nepal Bank Limited Building
- Establish year: 2018 (207)
- Brief introduction of the instruments installed in the station
  1. PM instrument- GRIMM
  2. Met sensor luffth WS 700
  3. Data logging and data transmission and power backup system

## 2. Air quality status of Nepalgunj

### 2.1 Air quality status, 2018

#### 2.1.1 Annual average of PM<sub>1</sub>, PM<sub>2.5</sub>, PM<sub>10</sub> and TSP

The annual average of PM<sub>1</sub>, PM<sub>2.5</sub>, PM<sub>10</sub> and TSP for the Nepalgunj station in 2018 has been calculated as shown below.

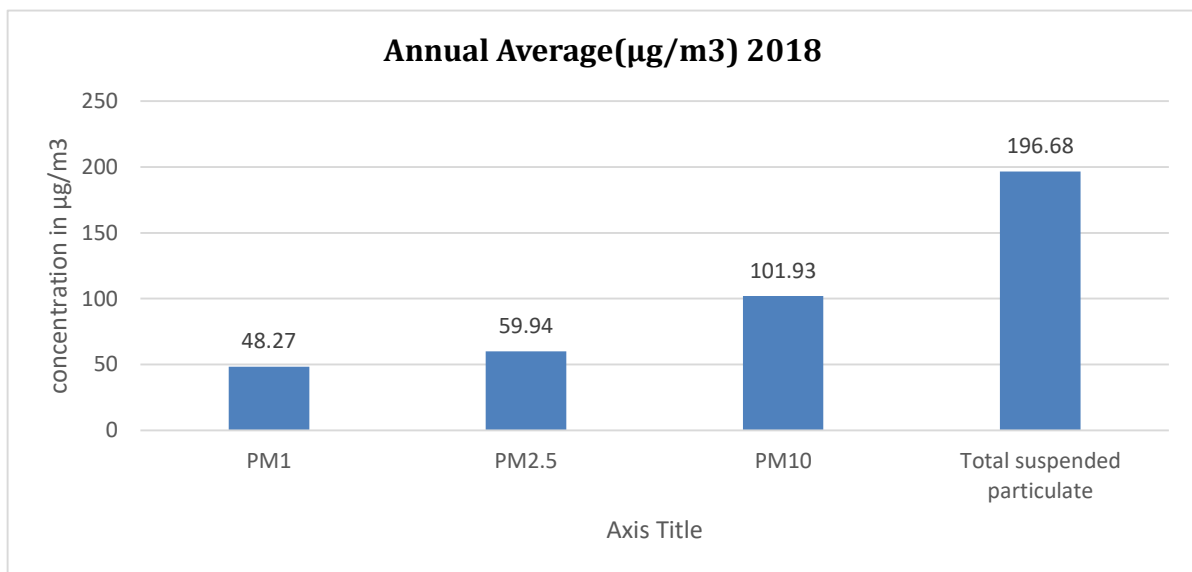


Figure 1: Annual average of PM<sub>1</sub>, PM<sub>2.5</sub>, PM<sub>10</sub> and TSP in 2018



## 2.1.2 Temporal variation of PM<sub>1</sub>

### Annual average of PM<sub>1</sub>

The annual average of PM<sub>1</sub> at Nepalgunj station for the year 2018 was observed to be 48.27  $\mu\text{g}/\text{m}^3$  in 2018. Histogram of hourly average PM<sub>1</sub> is shown below.

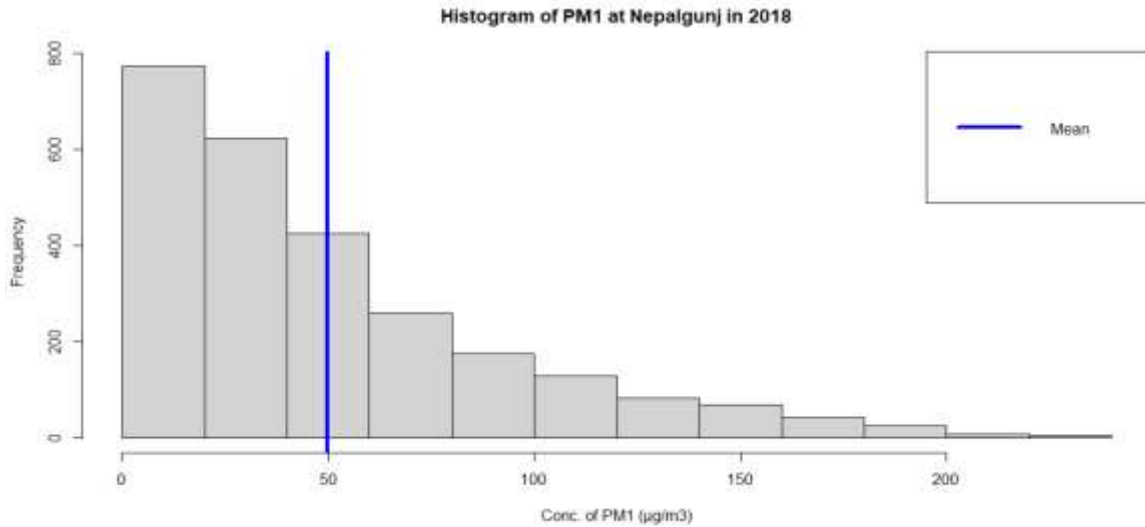


Figure 2 : Histogram for the ambient concentration of PM<sub>1</sub>

### Daily average of PM<sub>1</sub>

Daily average of PM<sub>1</sub> was found to be high during December and low during August.

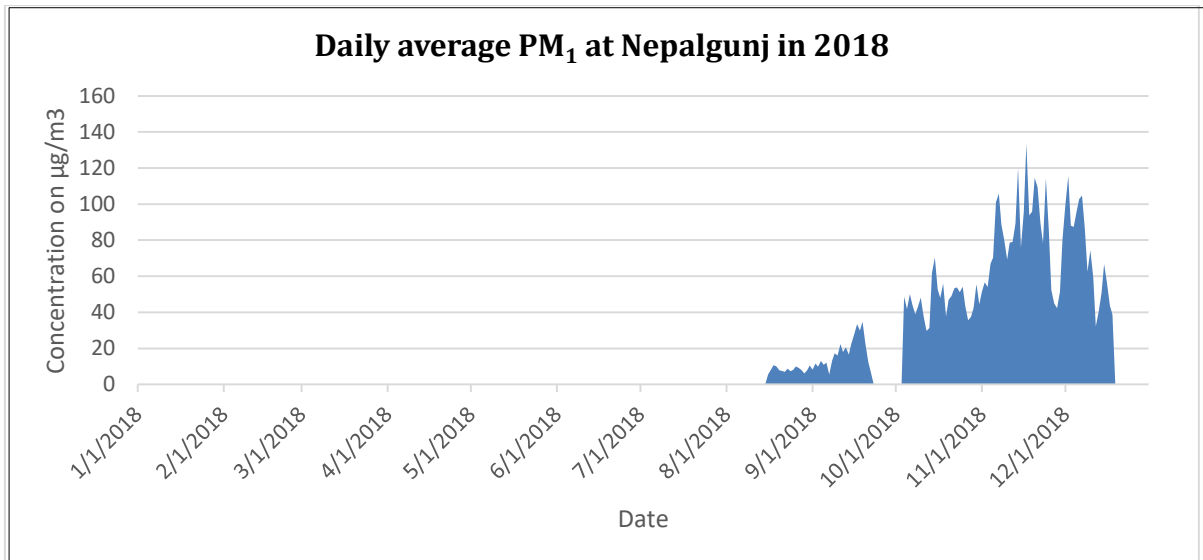


Figure 3: Daily average of PM<sub>1</sub>

### Monthly average of PM<sub>1</sub>

The highest and the lowest concentration of PM<sub>1</sub> was found during November (82.29  $\mu\text{g}/\text{m}^3$ ) and August (7.36  $\mu\text{g}/\text{m}^3$ ) respectively.

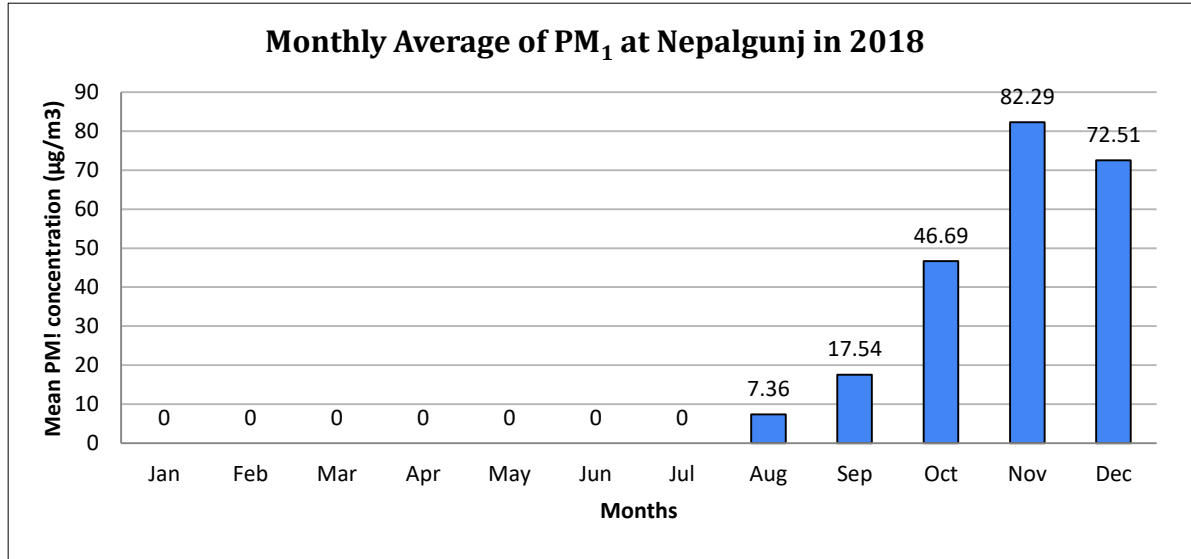


Figure 4: Monthly average of PM<sub>1</sub>

### Monthly variation of PM<sub>1</sub>

Variation in concentration of PM<sub>1</sub> was found more during November and low during August.

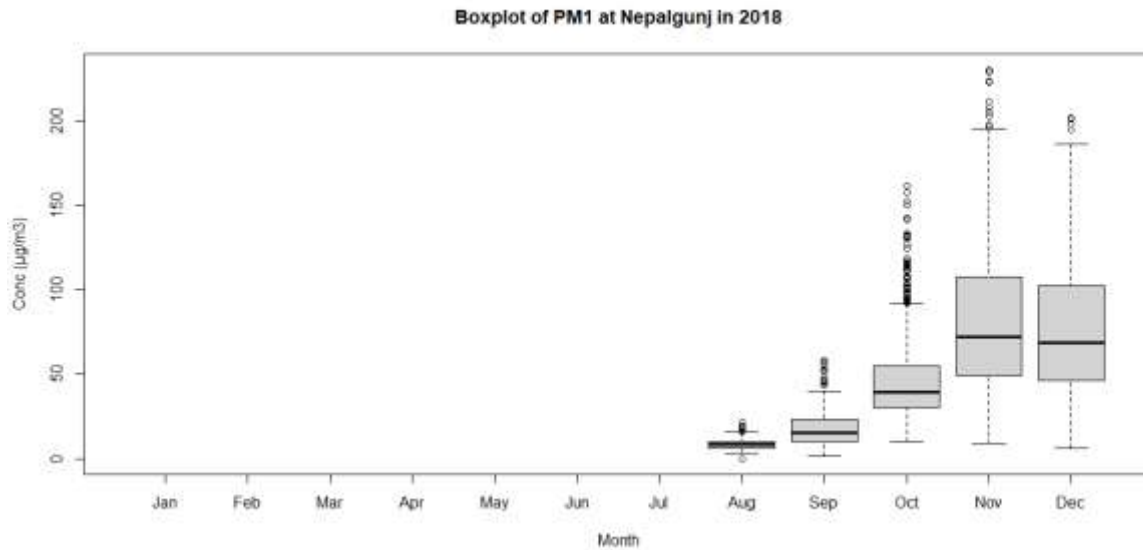


Figure 5: Monthly Variation of PM<sub>1</sub> in 2018

### Diurnal variation of average concentration of PM<sub>1</sub>

The diurnal variation of average PM<sub>1</sub> concentration can be shown in the figure below. The variation in PM<sub>1</sub> concentration was high at 7 pm and low during 12 to 1 pm.

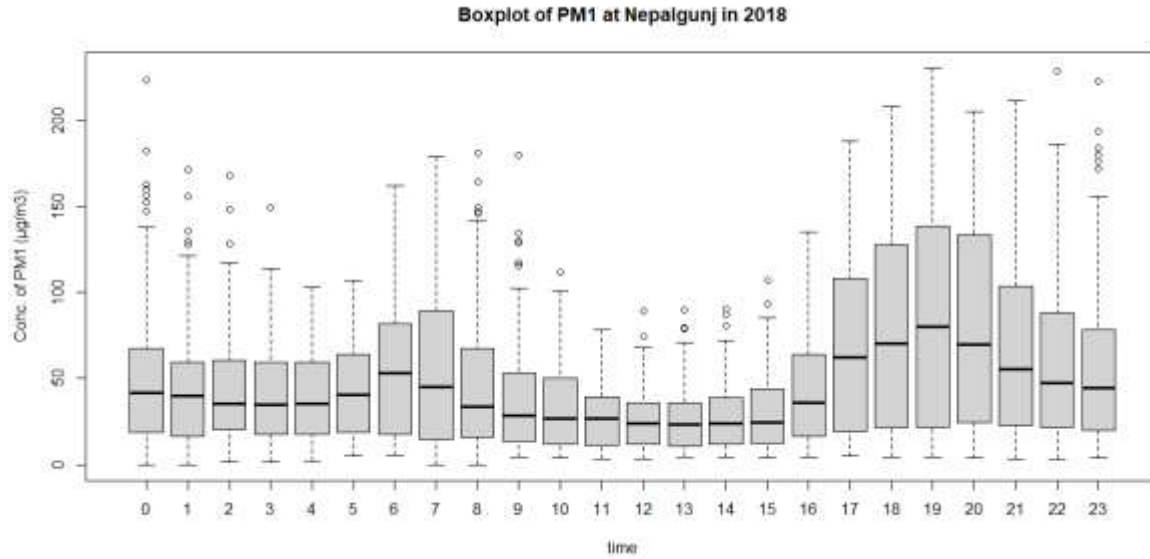


Figure 6: Diurnal variation of average PM<sub>1</sub> concentration

### 2.1.3 Temporal variation of PM<sub>2.5</sub>

#### Annual Average of PM<sub>2.5</sub>

The annual average of PM<sub>2.5</sub> at Nepalgunj station was found to be 59.94 µg/m<sup>3</sup> in 2018. Histogram of hourly average PM<sub>1</sub> is shown in the figure below.

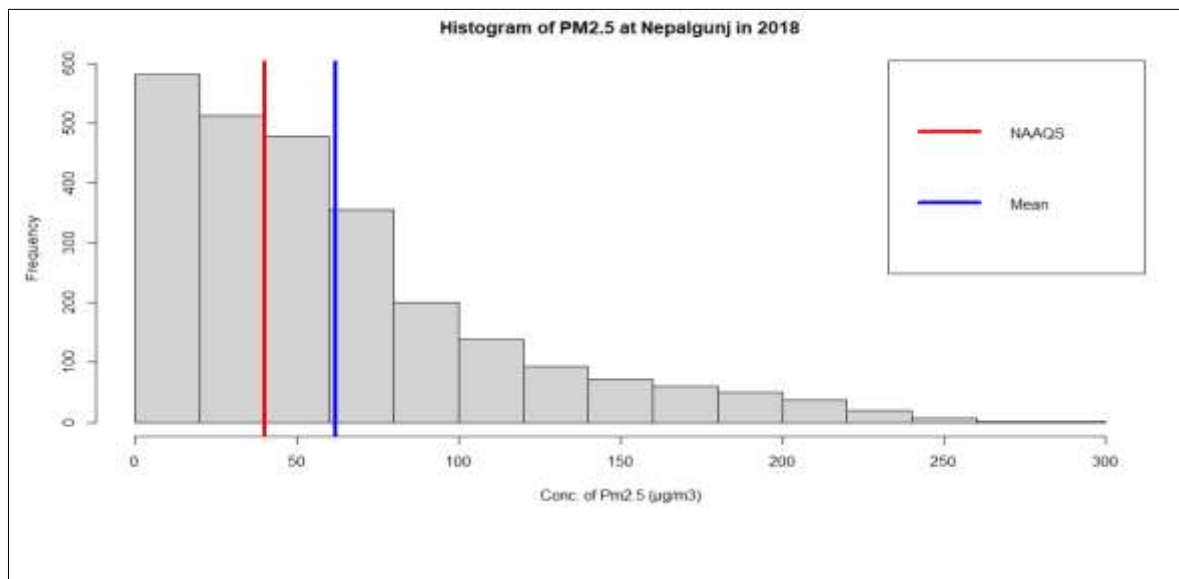


Figure 7: Histogram for the ambient concentration of PM<sub>2.5</sub>

**Daily Average of PM<sub>2.5</sub>**

Daily average concentration of PM<sub>2.5</sub> was found to be high during December and was found low during September.

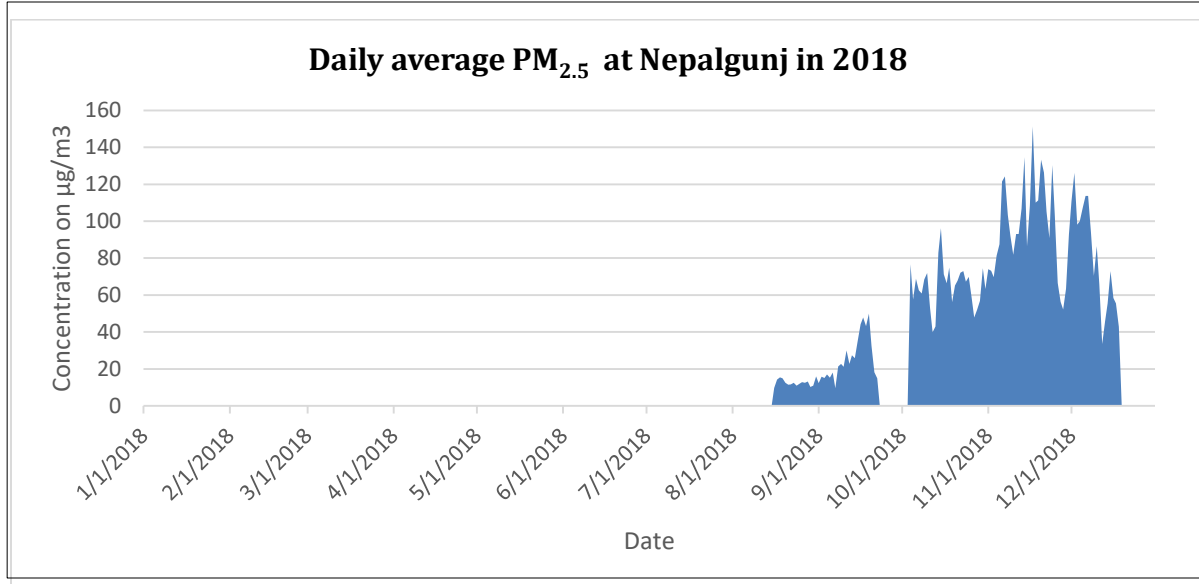


Figure 8: Daily average of PM<sub>2.5</sub> in 2018

**Monthly Average of PM<sub>2.5</sub>**

The highest and the lowest concentration of PM<sub>2.5</sub> was found during November (98.69 µg/m<sup>3</sup>) and August (11.82 µg/m<sup>3</sup>) respectively.

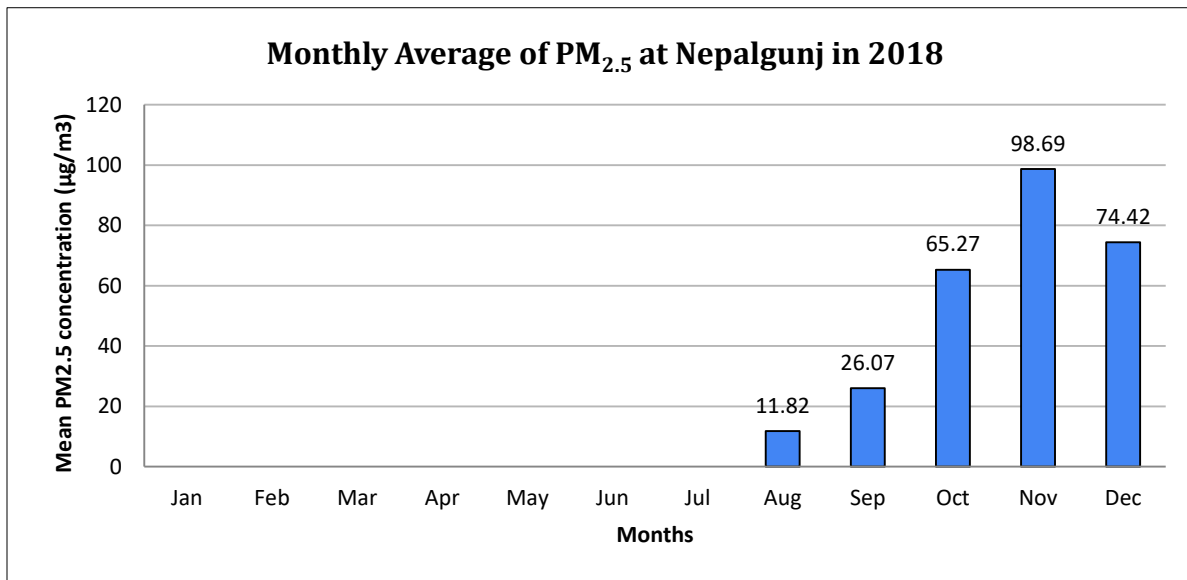


Figure 9: Monthly average of PM<sub>2.5</sub>

### Monthly variation of PM<sub>2.5</sub>

Variation in concentration of PM<sub>2.5</sub> was found more during November and low during August.

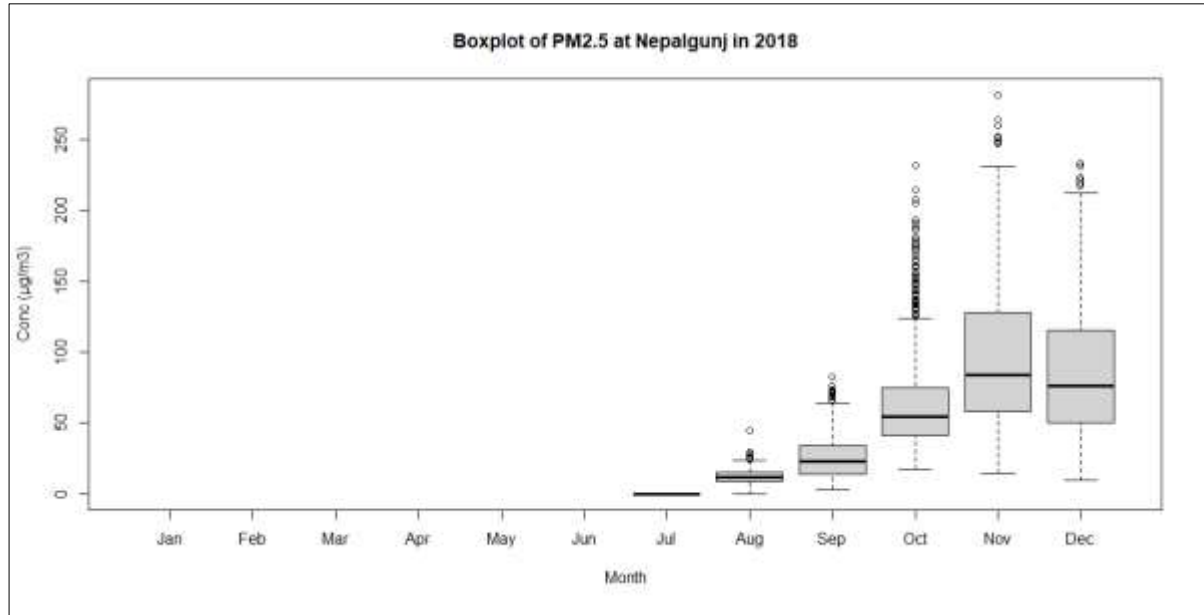


Figure 10: Monthly Variation of PM<sub>2.5</sub>

### Diurnal Variation of average PM<sub>2.5</sub> concentration

The diurnal variation of average PM<sub>2.5</sub> concentrations can be shown in the figure below. The variation in PM<sub>2.5</sub> concentrations was high at around 7 pm and low during 12 to 1 pm.

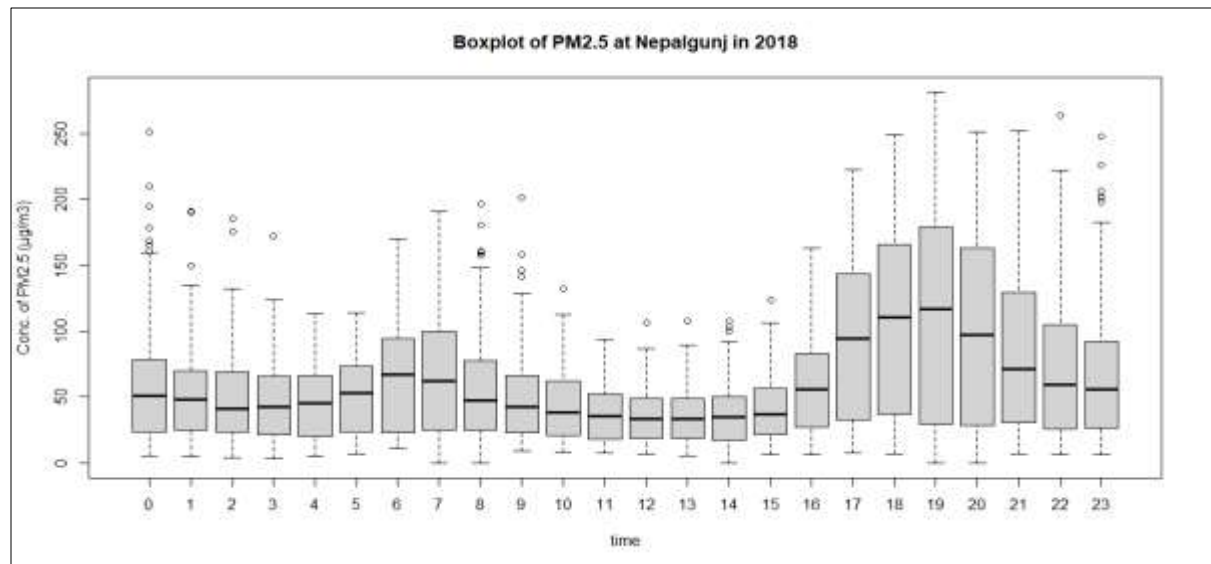


Figure 11: Diurnal variation of average PM<sub>2.5</sub> concentration

### Compliance Status of PM<sub>2.5</sub>

The total days of PM<sub>2.5</sub> monitored in the year 2018 counts 116 only, of which 78 days exceed the NAAQS guideline.

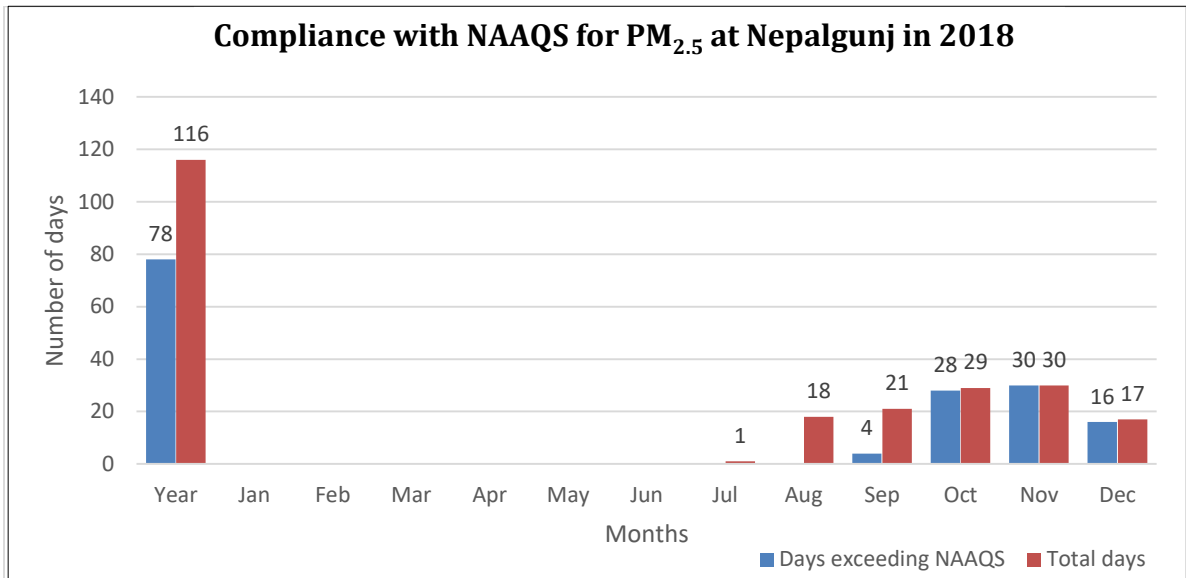


Figure 12: Compliance status of PM<sub>2.5</sub>

#### 2.1.4 Temporal variation of PM<sub>10</sub>

##### Annual Average of PM<sub>10</sub>

The annual average of PM<sub>10</sub> at Nepalgunj station was found to be 101.93 µg/m<sup>3</sup> in 2018. Histogram of hourly average PM<sub>10</sub> is shown in the figure below.

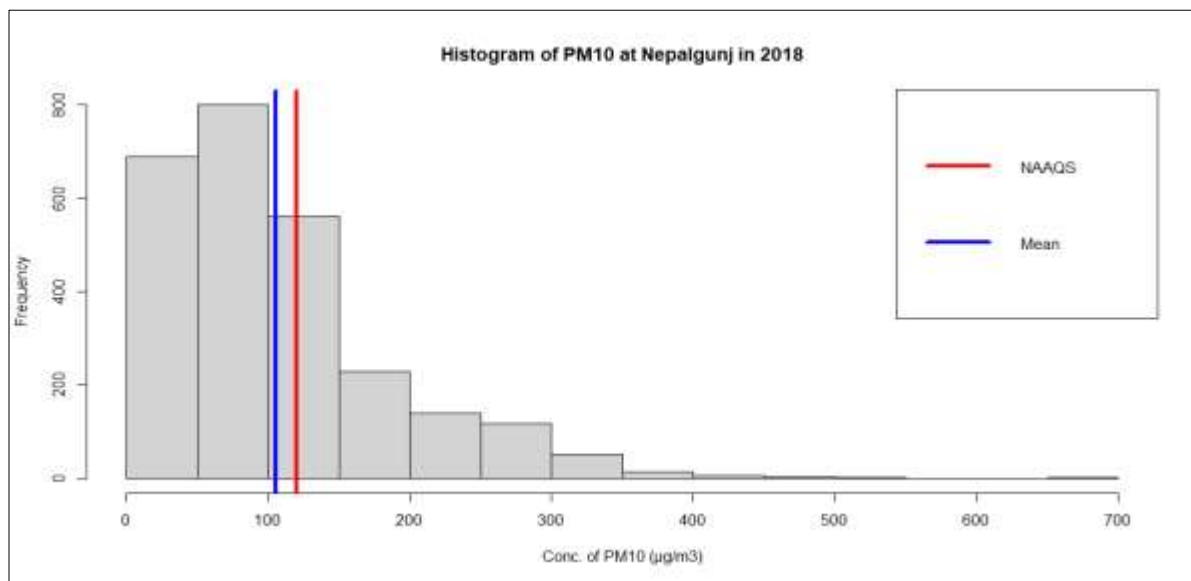


Figure 13: Histogram for the ambient concentration of PM<sub>10</sub>

### Daily Average of PM<sub>10</sub>

Daily average concentration of PM<sub>10</sub> was found to be high during December and was found low during August.

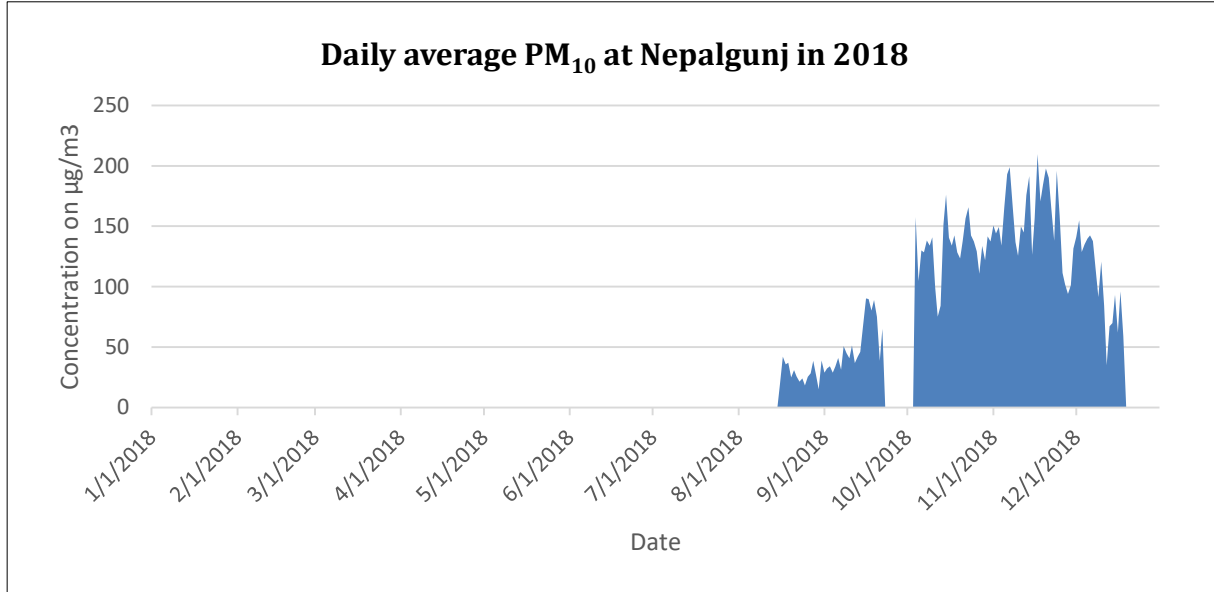


Figure 14: Daily average of PM<sub>10</sub>

### Monthly Average of PM<sub>10</sub>

The highest and the lowest concentration of PM<sub>10</sub> was found during November (155.34 µg/m<sup>3</sup>) and August (26.57 µg/m<sup>3</sup>) respectively.

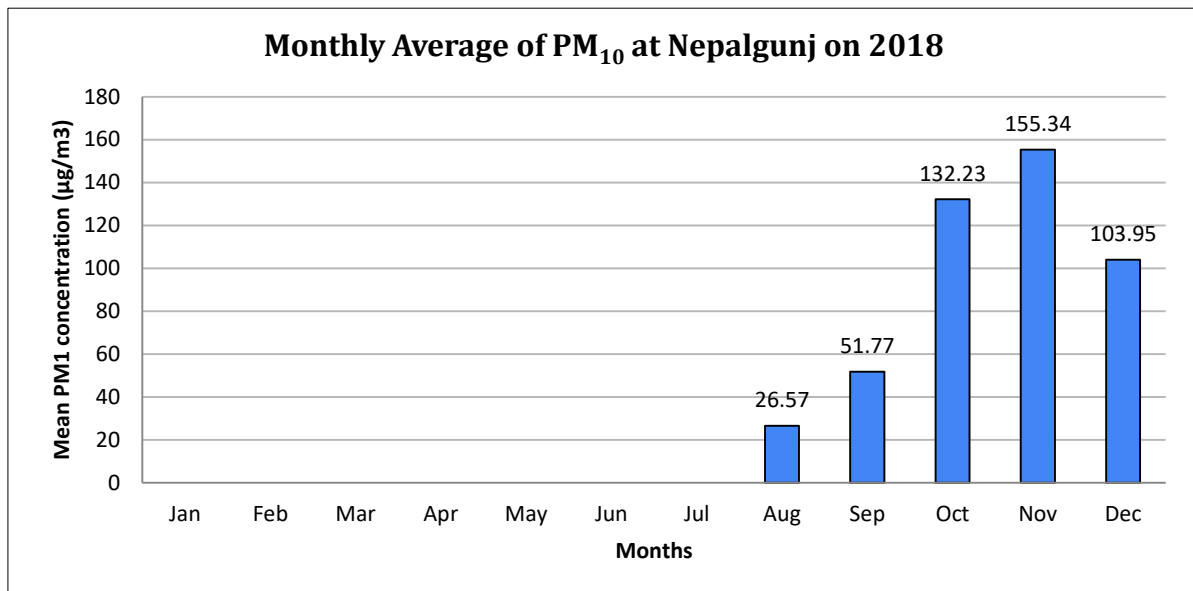


Figure 15: Monthly average of PM<sub>10</sub>

### Monthly variation of PM<sub>10</sub>

Variation in concentration of PM<sub>10</sub> was found more during November and low during August.

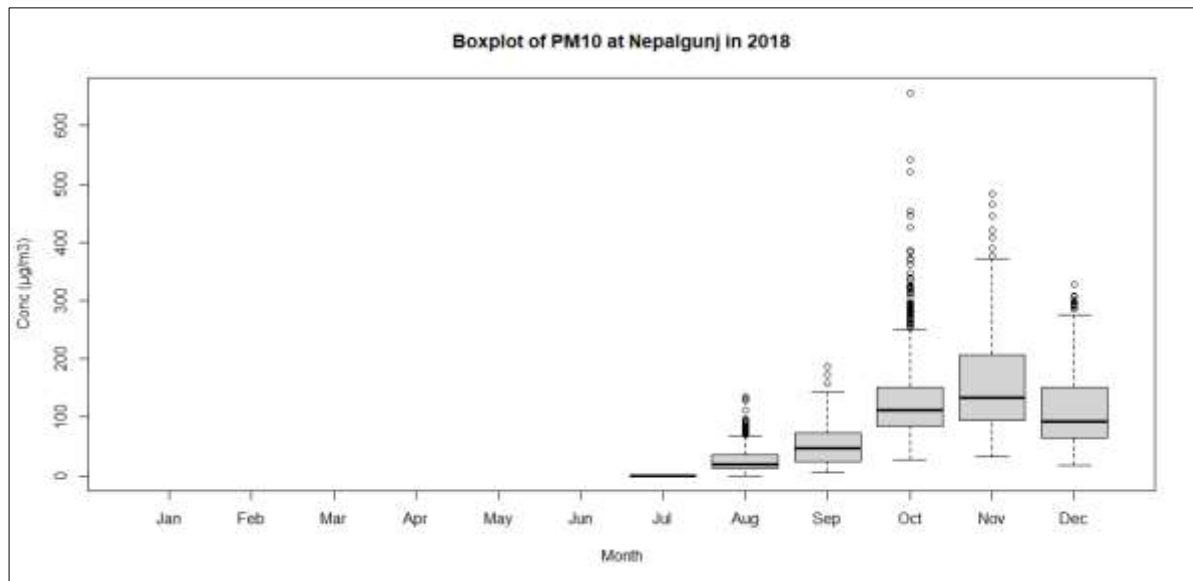


Figure 16: Monthly Variation of PM<sub>10</sub>

### Diurnal Variation of average PM<sub>10</sub> concentration

The diurnal variation of average PM<sub>10</sub> concentrations can be shown in the figure below. The variation in PM<sub>10</sub> concentration was found to be high at around 5 pm and low at 2 to 3 am.

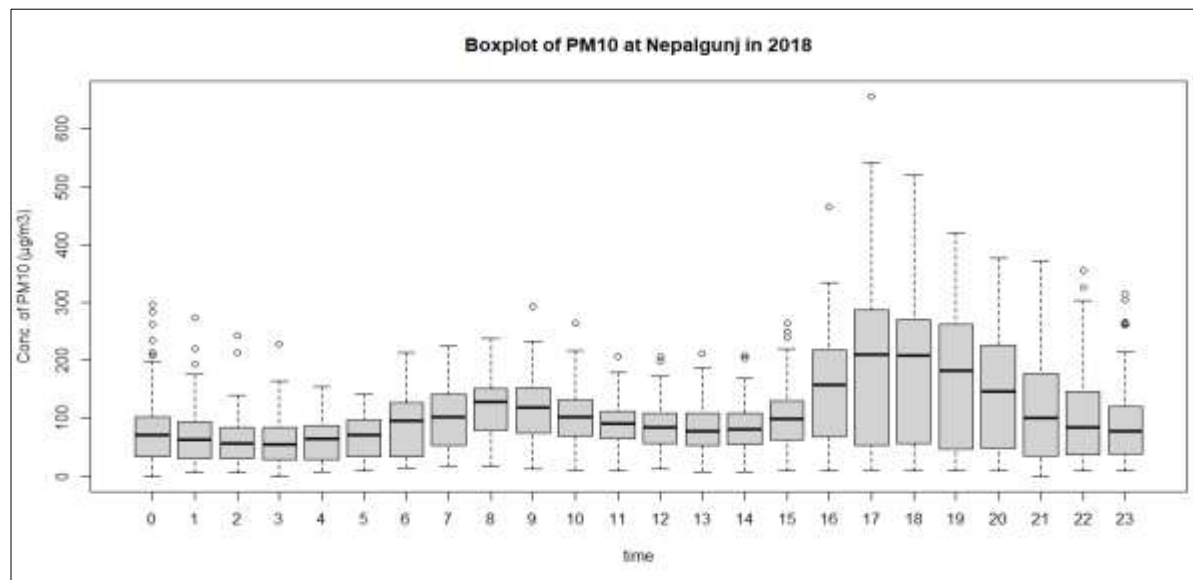


Figure 17: Diurnal variation of average PM<sub>10</sub> concentration

### Compliance Status of PM<sub>10</sub>

The total days of PM<sub>10</sub> monitored in the year 2018 counts 116, of which 57 days exceed the NAAQS guideline.



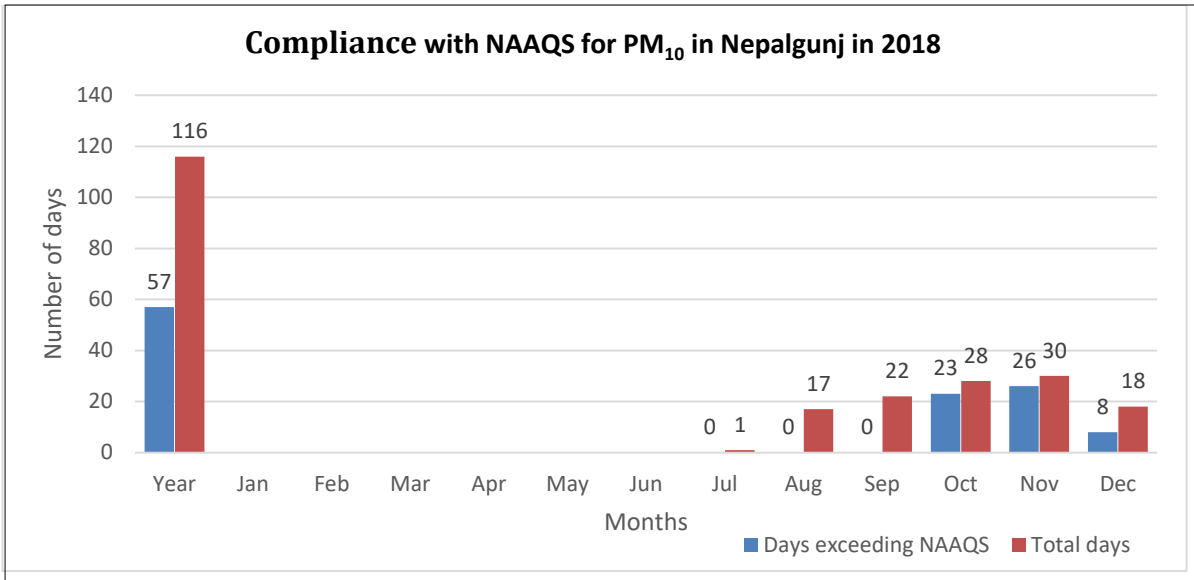


Figure 18: Compliance status of PM<sub>10</sub>

### 2.1.5 Temporal variation of TSP

#### Annual Average of TSP

The annual average of TSP at Nepalgunj station was found to be 196.68  $\mu\text{g}/\text{m}^3$  in 2018. Histogram of hourly average TSP is shown in the figure below.

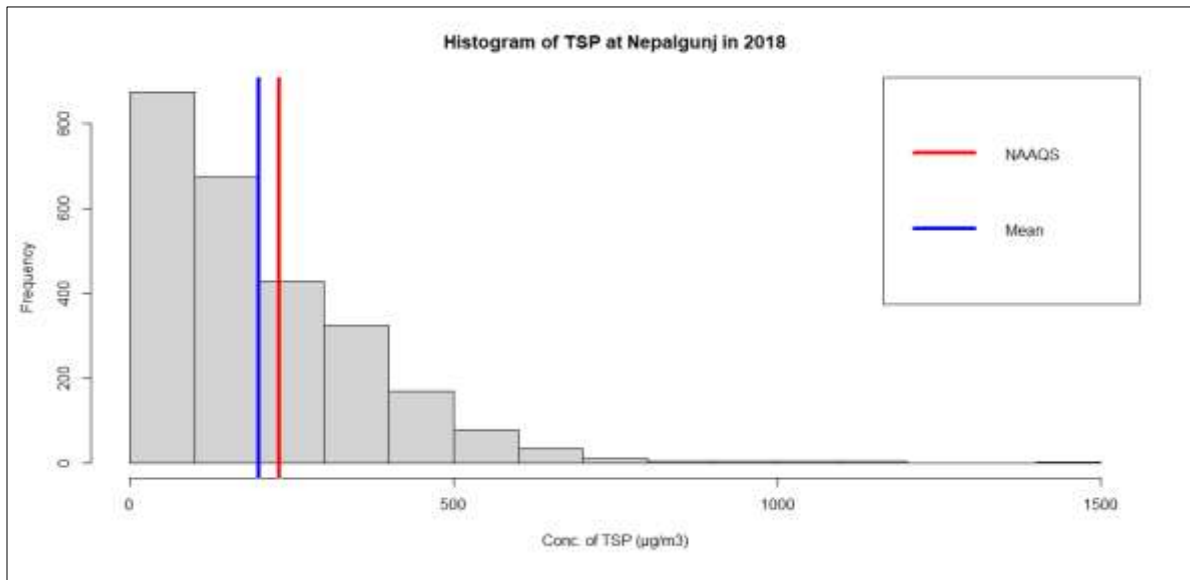


Figure 19: Histogram for the ambient concentration of TSP

#### Daily Average of TSP

Daily average concentration of TSP was found to be high during December and was found low during August.

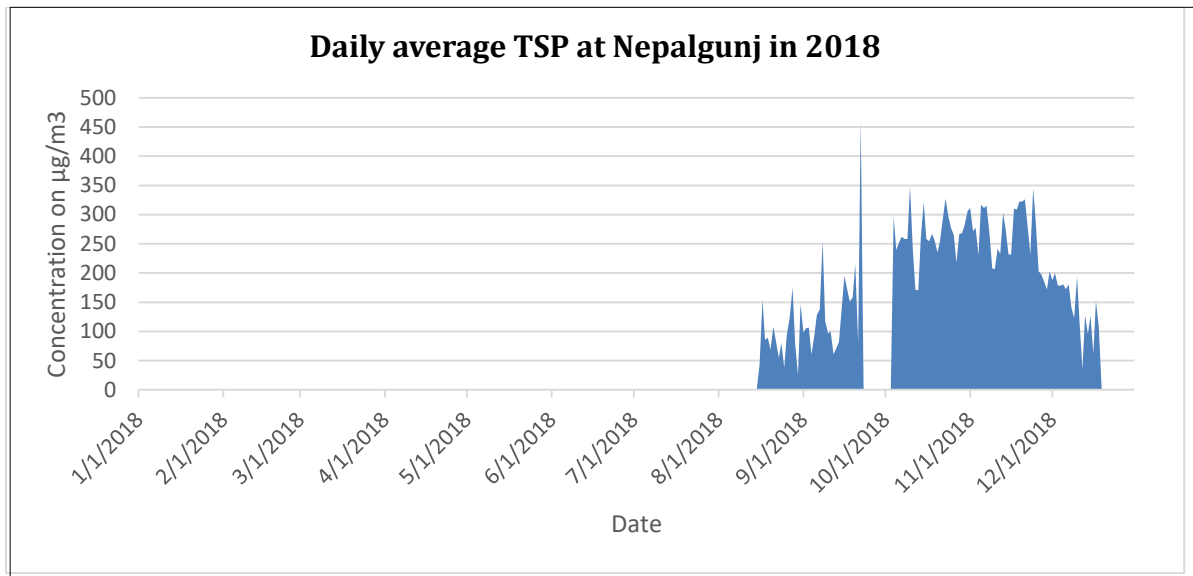


Figure 20: Daily average of TSP in 2018

**Monthly Average of TSP**

The highest and the lowest concentration of TSP was found during October (266.16 µg/m³) and August (91.12 µg/m³) respectively.

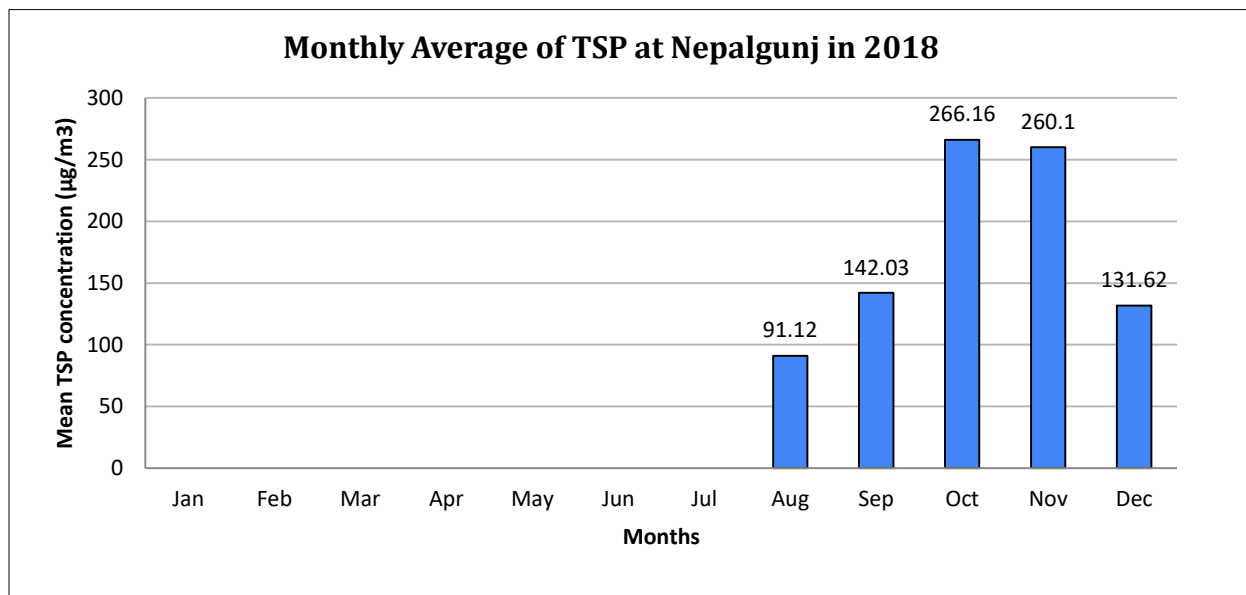


Figure 21: Monthly average of TSP

**Monthly variation of TSP**

Variation in concentration of TSP was found more during November and low during August.

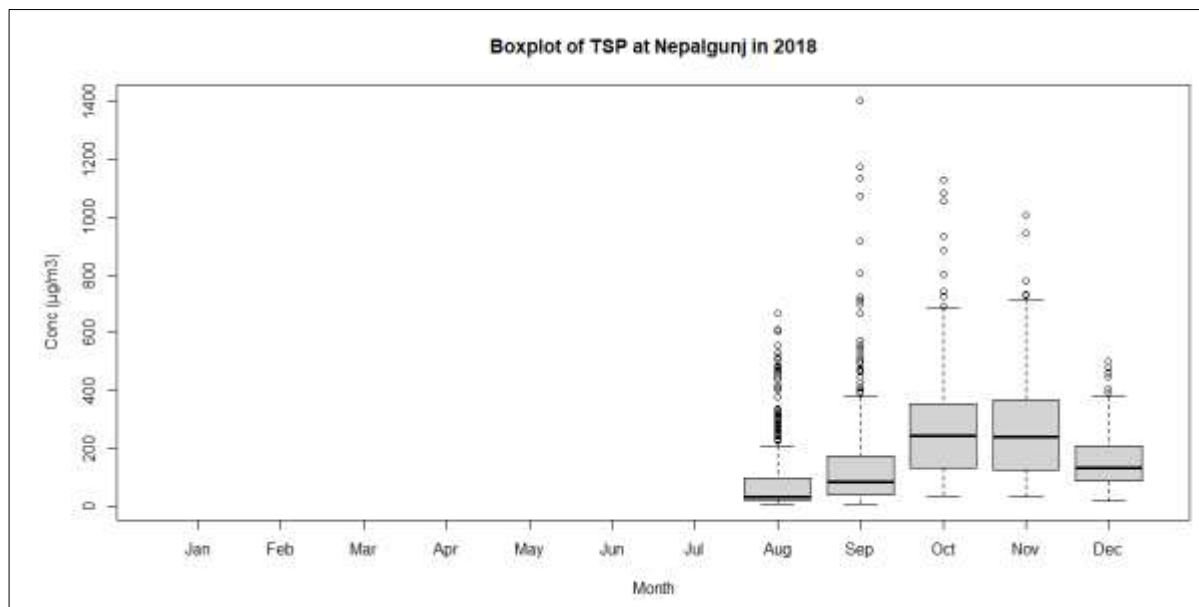


Figure 22: Monthly Variation of TSP

### Diurnal Variation of average TSP concentration

The diurnal variation of average TSP concentrations can be shown in the figure below. The variation in TSP concentration was high at 5 pm and low 2 to 3 am.

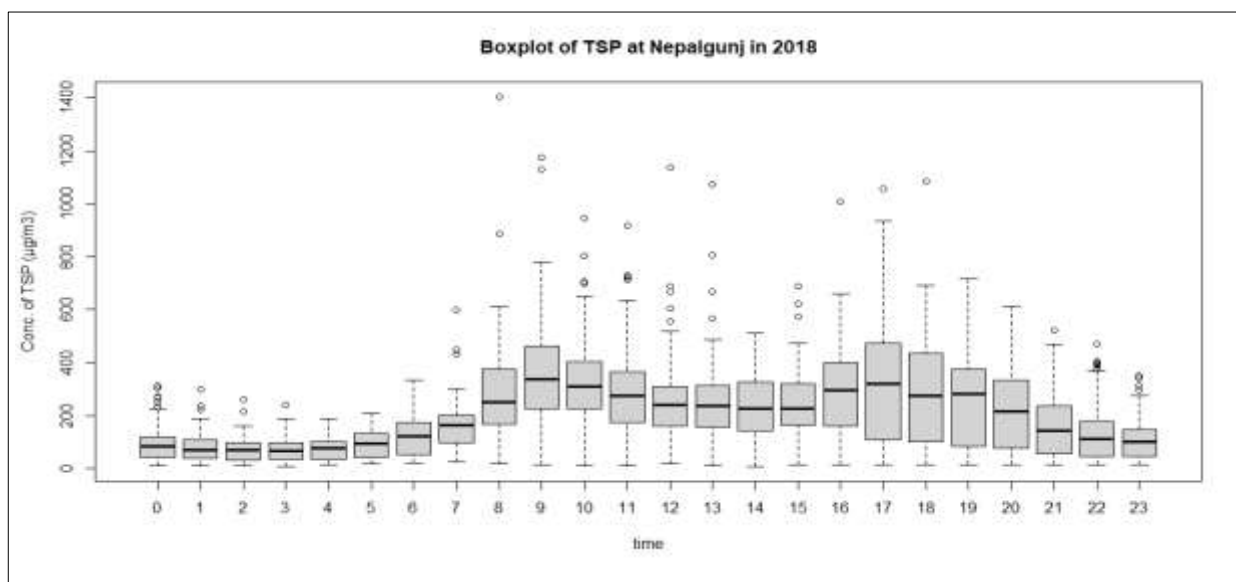


Figure 23: Diurnal variation of average TSP concentration

### Compliance Status of TSP

The total days of TSP monitored in the year 2018 counts 114 only, of which 50 days exceeded the NAAQS guideline.

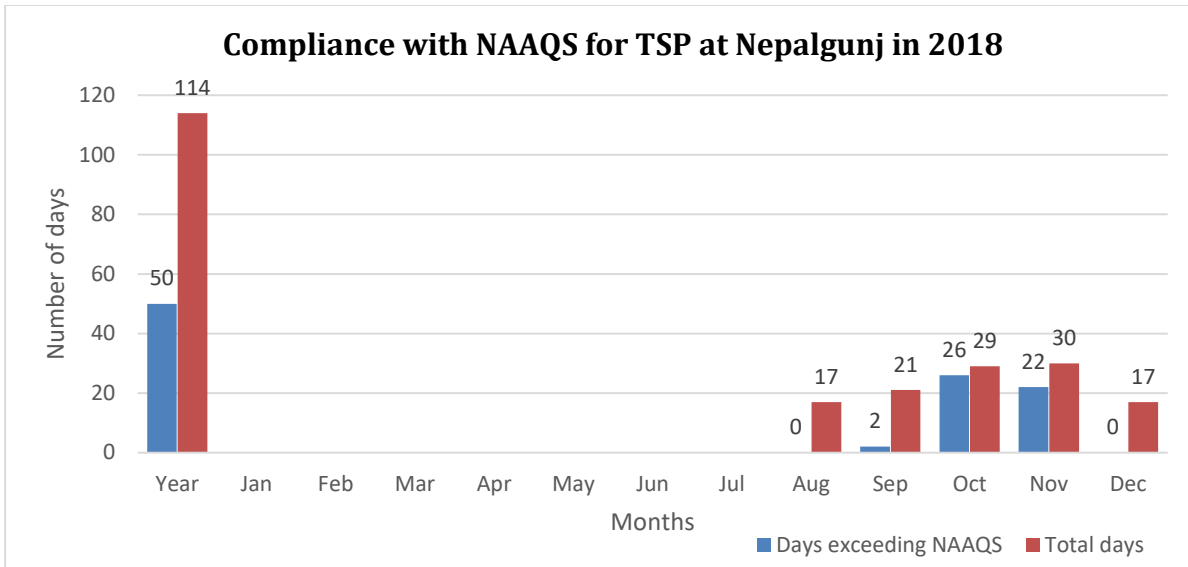


Figure 24: Compliance status of TSP

## 2.2 Air quality status, 2019

### 2.2.1 Annual average of PM<sub>1</sub>, PM<sub>2.5</sub>, PM<sub>10</sub> and TSP

The annual average of PM<sub>1</sub>, PM<sub>2.5</sub>, PM<sub>10</sub> and TSP for the Nepalgunj station in 2019 was calculated as shown in the figure below.

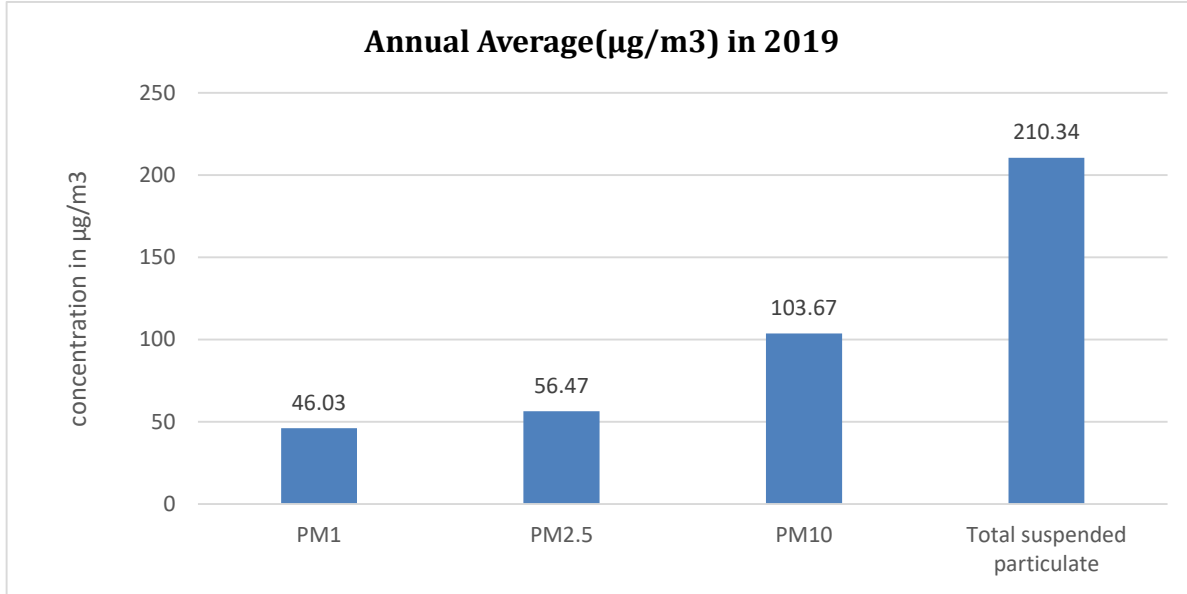


Figure 25: Annual average of PM<sub>1</sub>, PM<sub>2.5</sub>, PM<sub>10</sub> and TSP in 2019

### 2.2.2 Temporal variation of PM<sub>1</sub>

Annual average of PM<sub>1</sub>

The annual PM<sub>1</sub> average for Nepalgunj station was observed to be 46.03 µg/m<sup>3</sup> in 2019. Histogram of hourly average PM<sub>1</sub> is shown in the figure below.

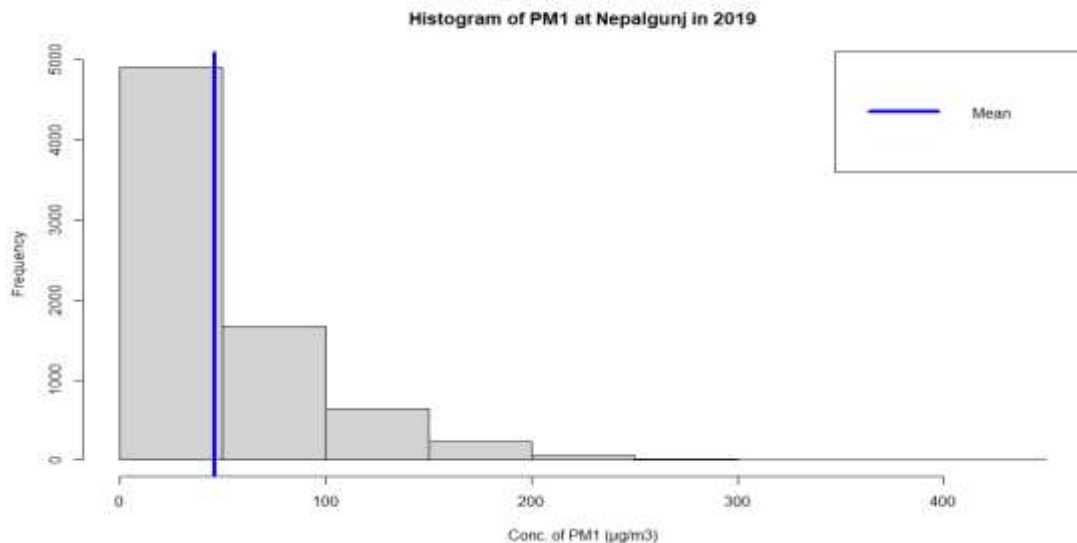


Figure 26 : Histogram for the ambient concentration of PM<sub>1</sub>

### Daily average of PM<sub>1</sub>

Daily average concentration of PM<sub>1</sub> was found to be high during November and low during August and September as shown in the figure below.

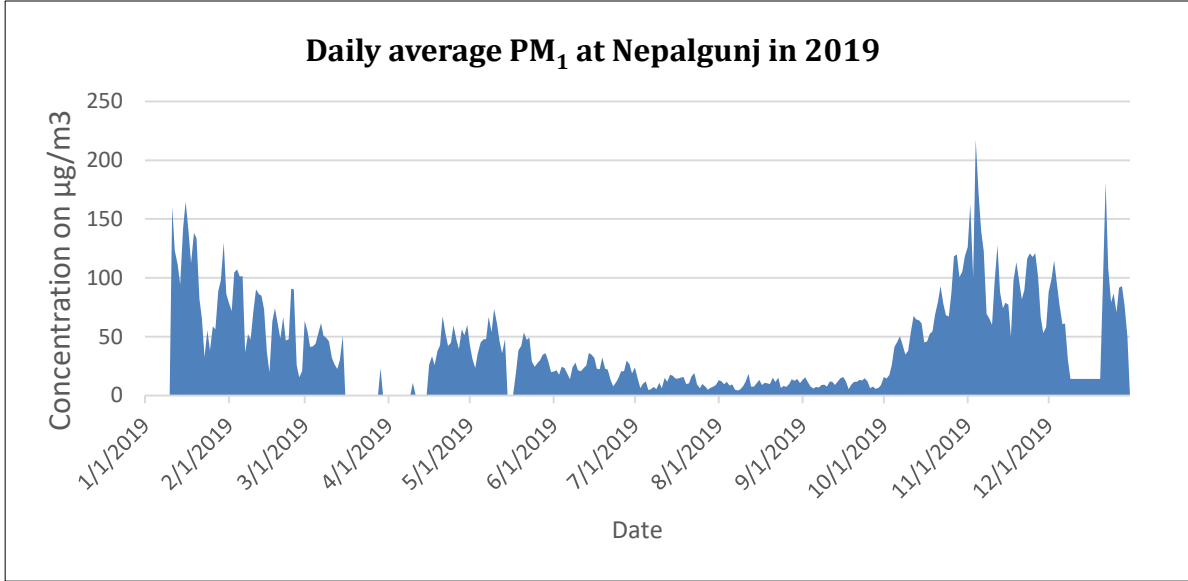


Figure 27: Daily average of PM<sub>1</sub>

### Monthly average of PM<sub>1</sub>

The highest and the lowest concentration of PM<sub>1</sub> was found during November (102.17 µg/m<sup>3</sup>) and September (10.18 µg/m<sup>3</sup>) respectively.

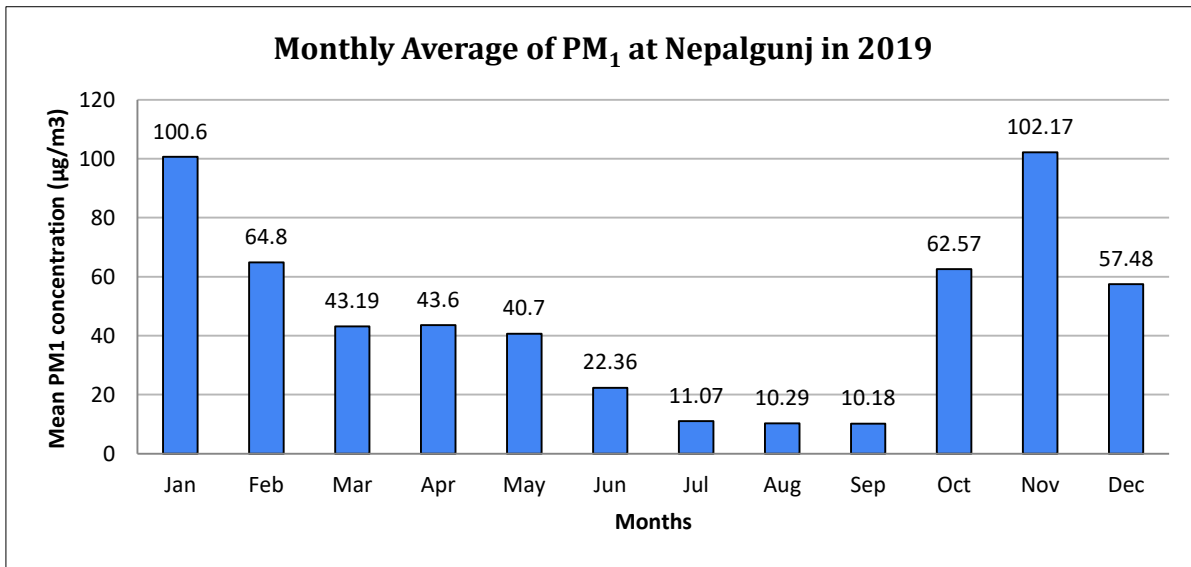


Figure 28: Monthly average of PM<sub>1</sub>

### Monthly variation of PM<sub>1</sub>

Variation in concentration of PM<sub>1</sub> was found more in November and low in August and September.

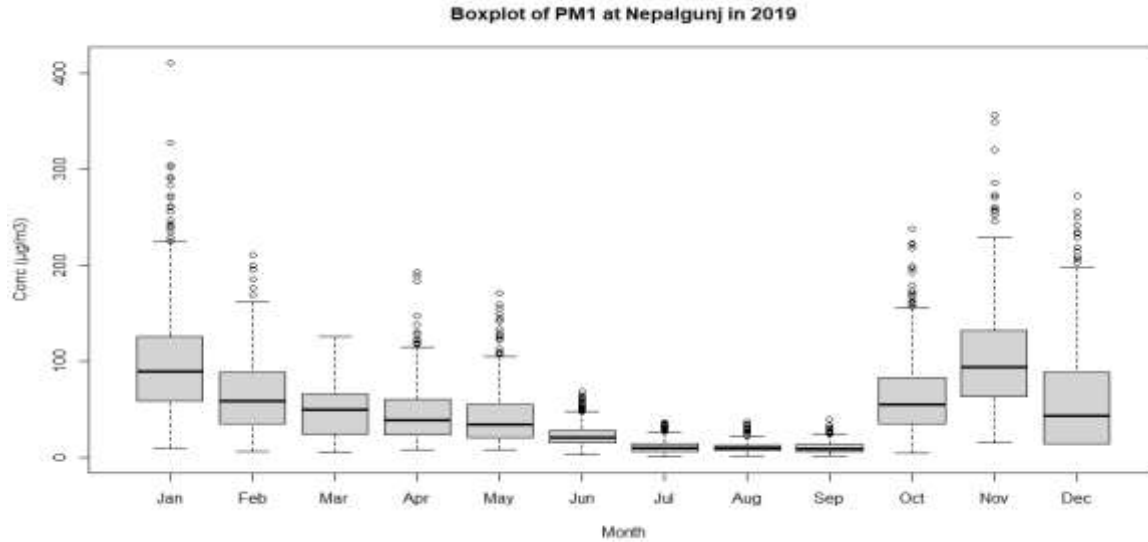


Figure 29: Monthly Variation of PM<sub>1</sub>

### Seasonal variation of PM<sub>1</sub>

Ambient concentration of average PM<sub>1</sub> with four seasons, namely, pre-monsoon (March-May), monsoon (June-September), post-monsoon (October-November) and winter (December-February) can be shown in the figure below. The highest concentration of PM<sub>1</sub> was found in the winter season ( $77.78 \mu\text{g}/\text{m}^3$ ) and the lowest was found in monsoon season ( $14.57 \mu\text{g}/\text{m}^3$ ).

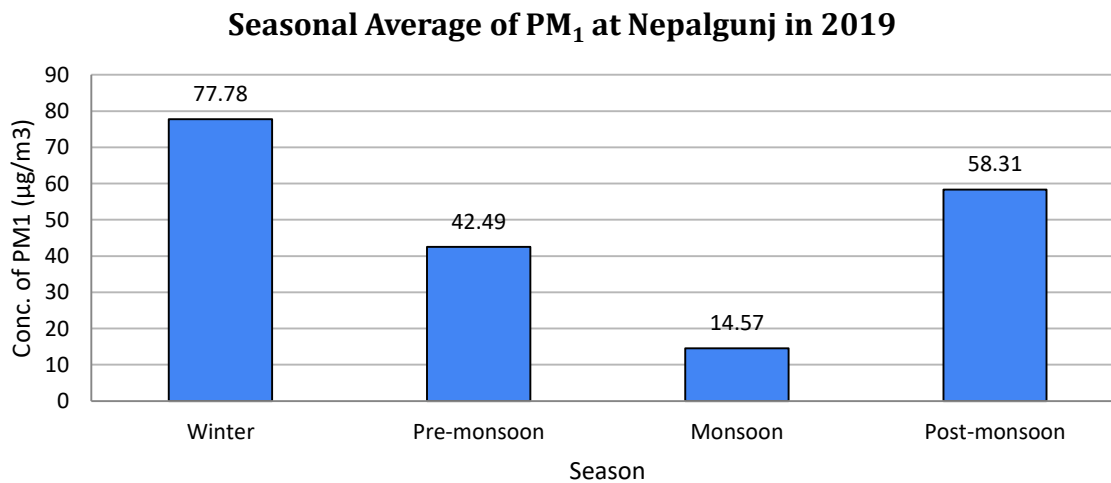


Figure 30: Seasonal variation of PM<sub>1</sub>

### Diurnal variation of average concentration of PM<sub>1</sub>

The diurnal variation of average PM<sub>1</sub> concentration can be shown in the figure below. The variation in PM<sub>1</sub> concentration was high at around 7 pm and low during 1 to 2 pm.

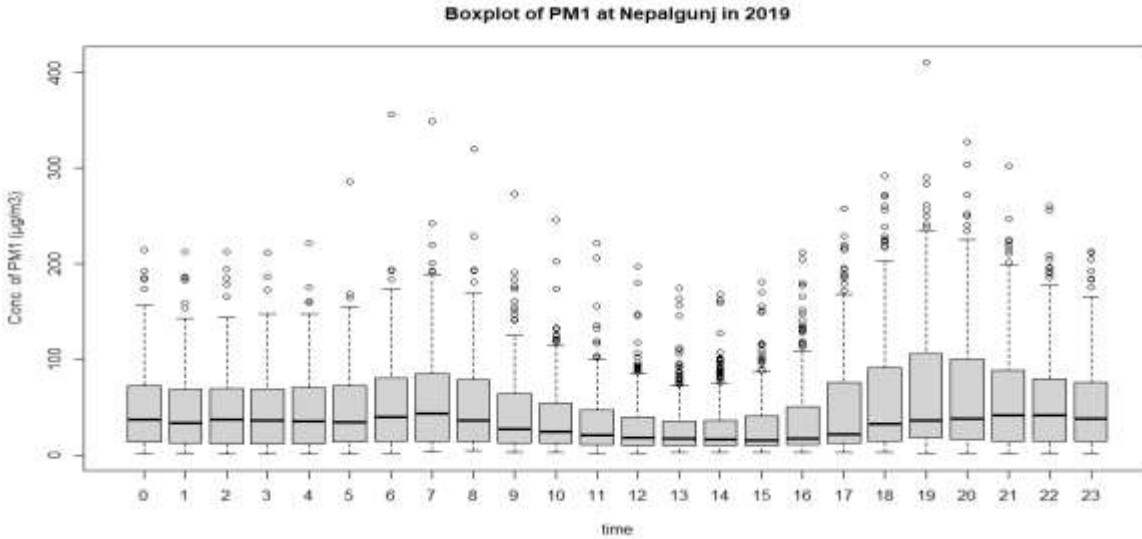


Figure 31: Diurnal variation of average PM<sub>1</sub> concentration

### 2.2.3 Temporal variation of PM<sub>2.5</sub>

#### Annual Average of PM<sub>2.5</sub>

The annual average of PM<sub>2.5</sub> at Nepalgunj station was found to be 56.47 µg/m<sup>3</sup> in 2019. Histogram of hourly average PM<sub>2.5</sub> is shown in the figure below.

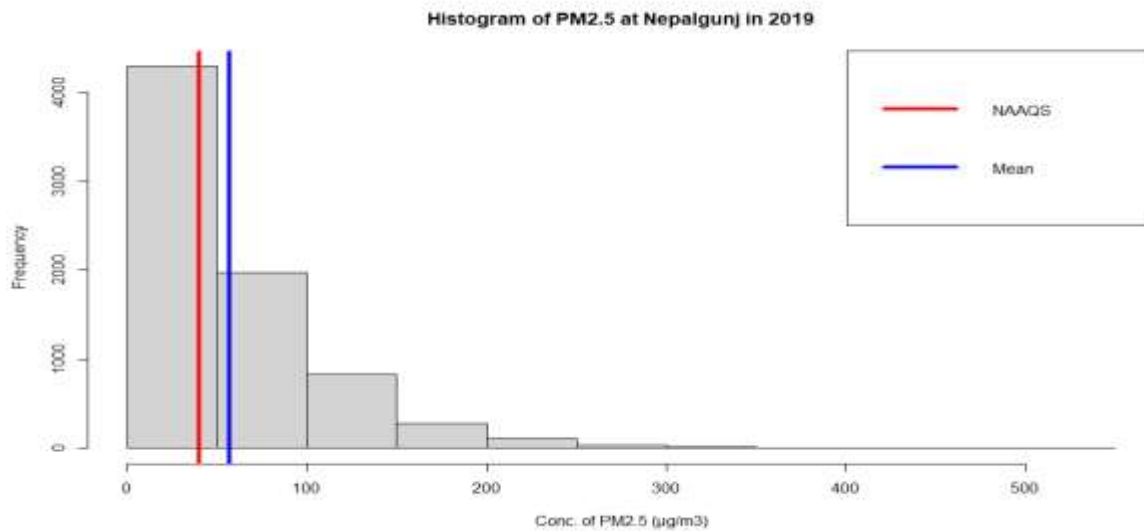


Figure 32 : Histogram for the ambient concentration of PM<sub>2.5</sub>



### Daily Average of PM<sub>2.5</sub>

Daily average concentration of PM<sub>2.5</sub> was high during November and was found low during August.

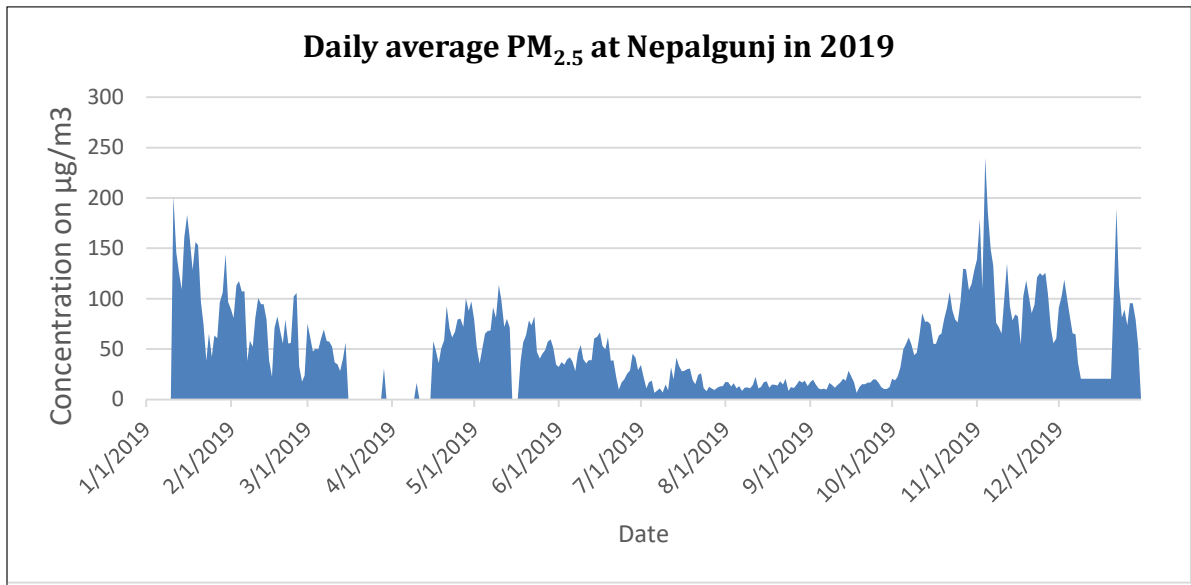


Figure 33: Daily average of PM<sub>2.5</sub> in 2019

### Monthly Average of PM<sub>2.5</sub>

The highest and the lowest concentration of PM<sub>2.5</sub> was found during January (114.83 µg/m<sup>3</sup>) and August (14.42 µg/m<sup>3</sup>) respectively.

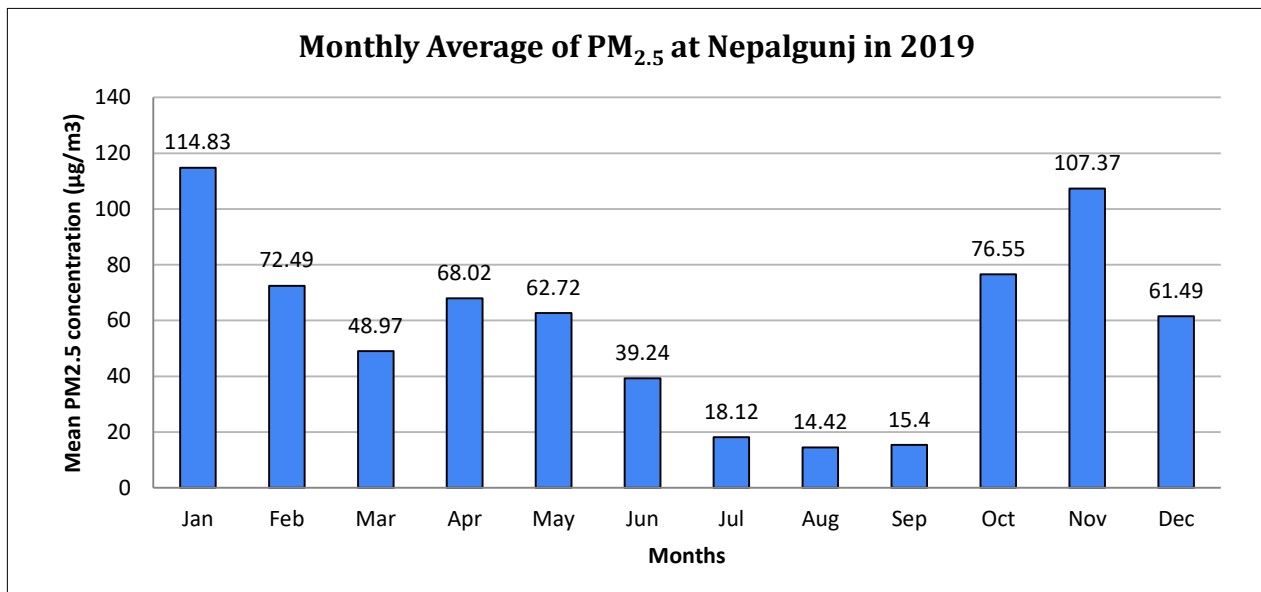


Figure 34: Monthly average of PM<sub>2.5</sub>

## Monthly variation of PM<sub>2.5</sub>

Variation in concentration of PM<sub>2.5</sub> was found more during November and low during August and September.

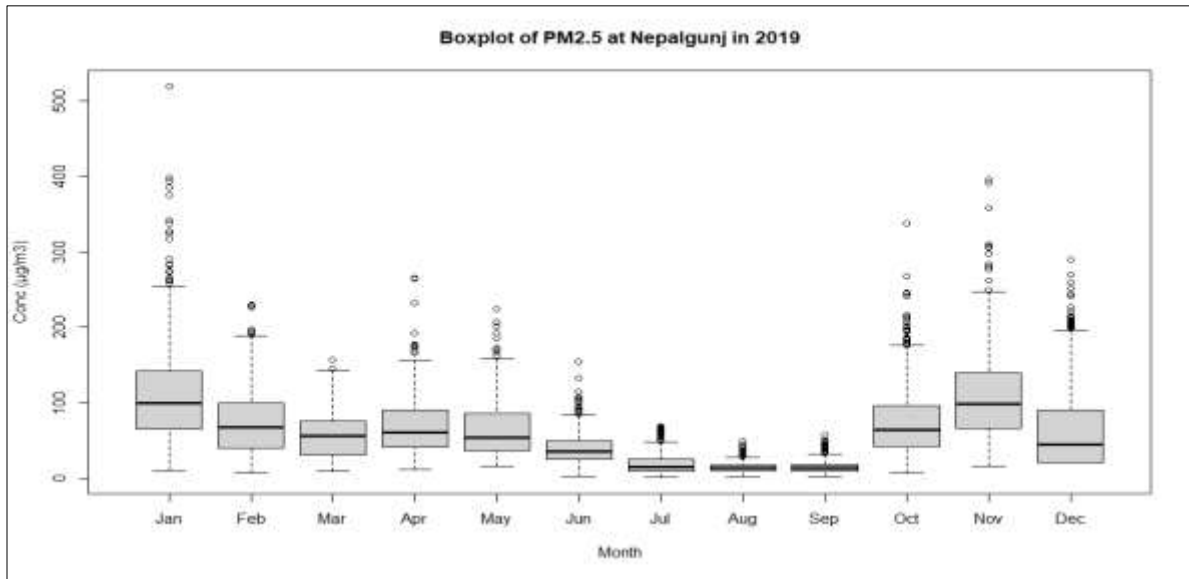


Figure 35: Monthly Variation of PM<sub>2.5</sub>

## Seasonal Variation of Average PM<sub>2.5</sub> concentration

Ambient concentration of average PM<sub>2.5</sub> during pre-monsoon (March-May), monsoon (June-September), post-monsoon (October-November) and winter (December-February) can be shown in the figure below. The highest concentration of PM<sub>2.5</sub> was found during winter (87.56 µg/m<sup>3</sup>) and the lowest concentration was found during monsoon (23.93 µg/m<sup>3</sup>).

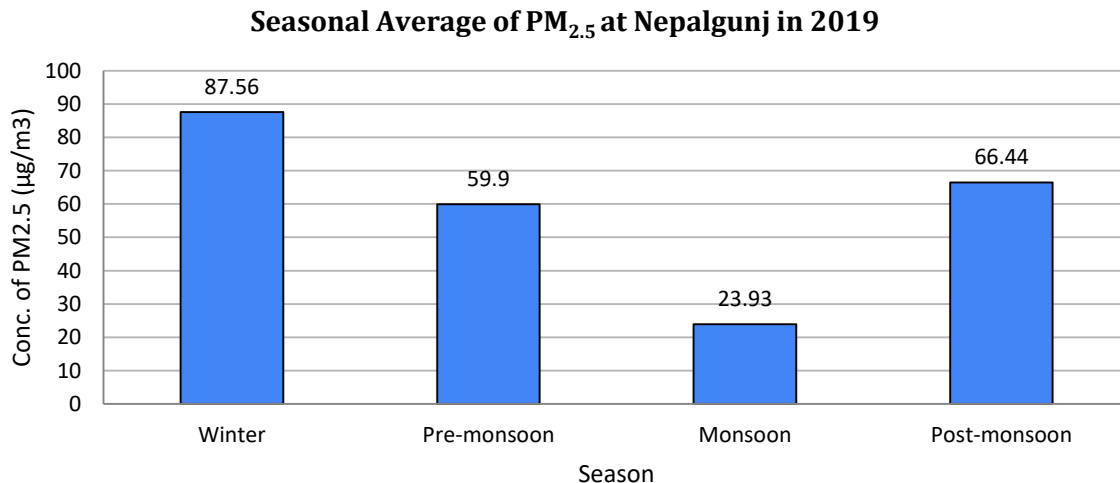


Figure 36: Seasonal variation of PM<sub>2.5</sub>

### Diurnal Variation of average PM<sub>2.5</sub> concentration

The diurnal variation of average PM<sub>2.5</sub> concentrations can be shown in the figure below. The variation in PM<sub>2.5</sub> concentrations was found to be high at around 7 pm and low at 1 to 2 pm.

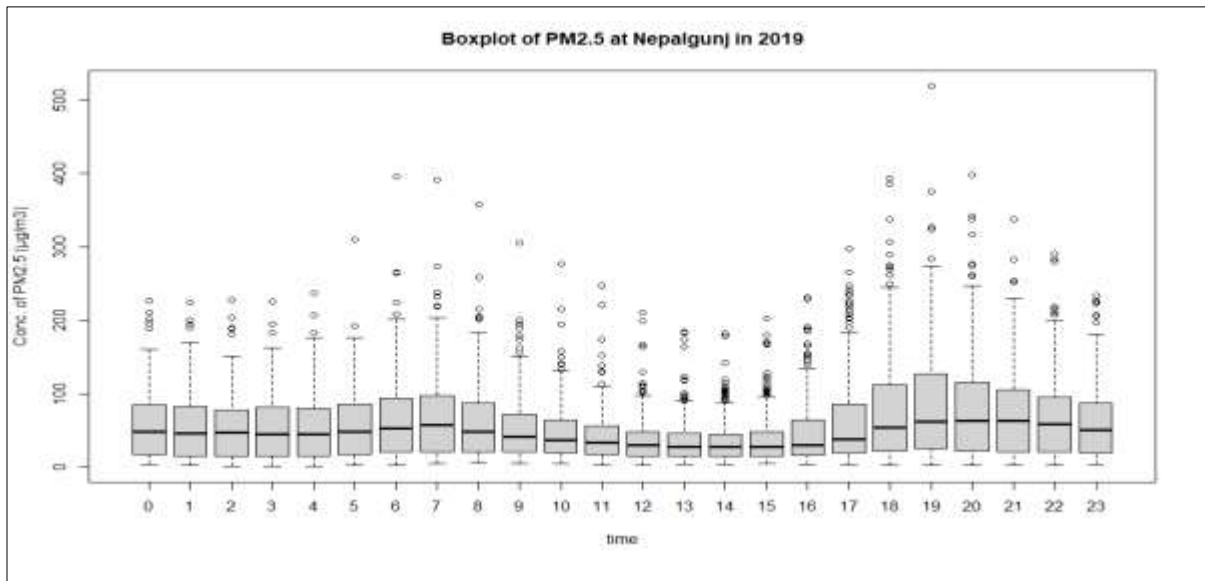


Figure 37: Diurnal variation of average PM<sub>2.5</sub> concentration

### Compliance Status of PM<sub>2.5</sub>

The total days of PM<sub>2.5</sub> monitored in the year 2019 counts 322 only, of which 179 days exceeded the NAAQS guideline.

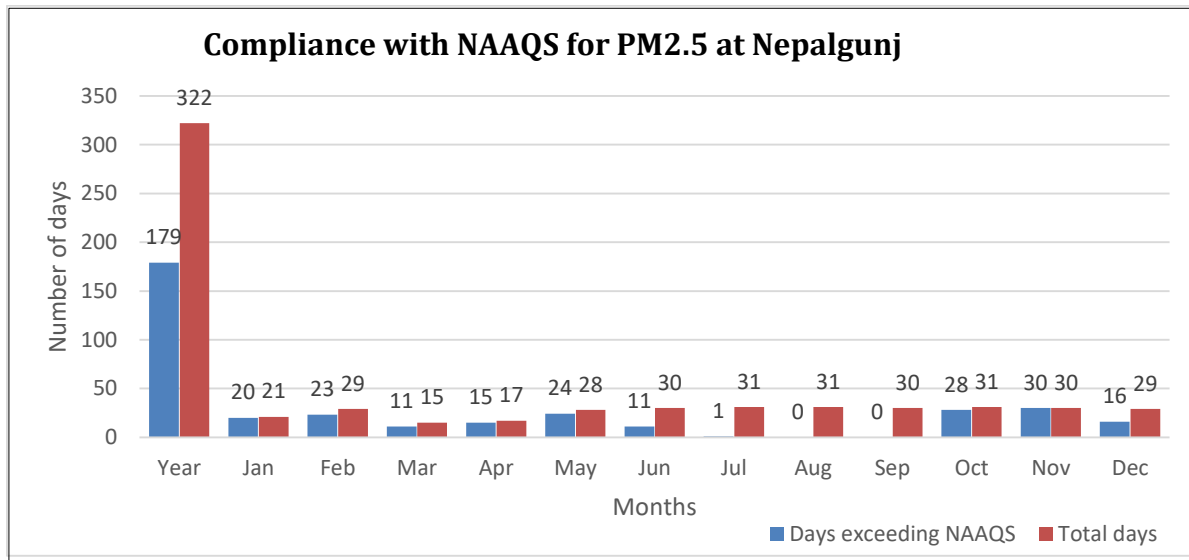


Figure 38: Compliance status of PM<sub>2.5</sub>

## 2.2.4 Temporal variation of PM<sub>10</sub>

### Annual Average of PM<sub>10</sub>

The annual average of PM<sub>10</sub> at Nepalgunj station was found to be 103.67 µg/m<sup>3</sup> in 2019. Histogram of hourly average PM<sub>10</sub> is shown in the figure below.

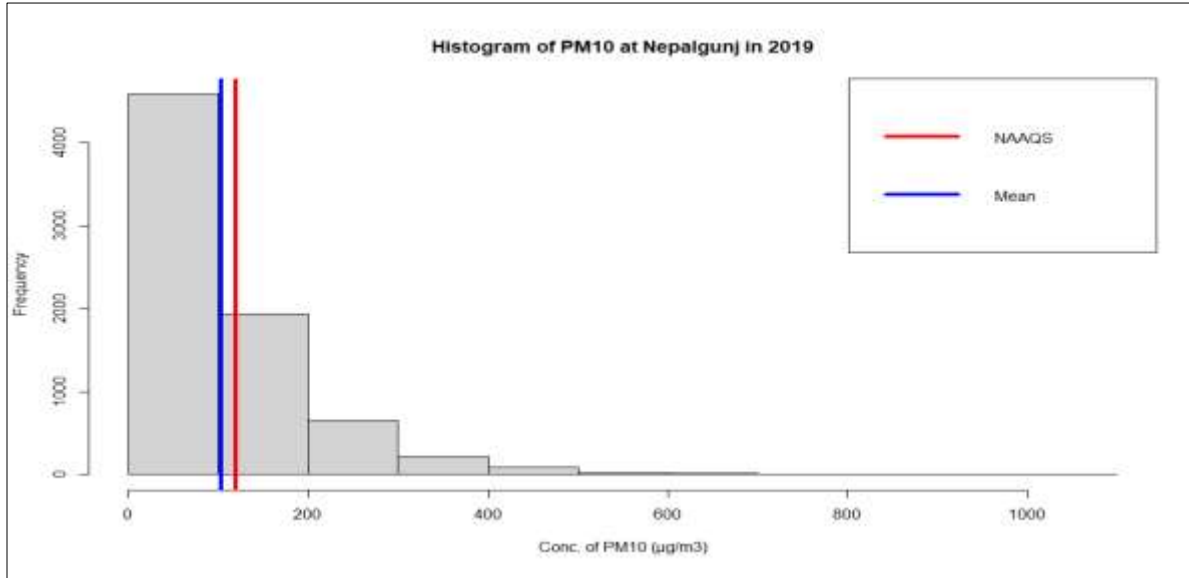


Figure 39: Histogram for the ambient concentration of PM<sub>10</sub>

### Daily Average of PM<sub>10</sub>

Daily average concentration of PM<sub>10</sub> was high during April and May and was found low during August.

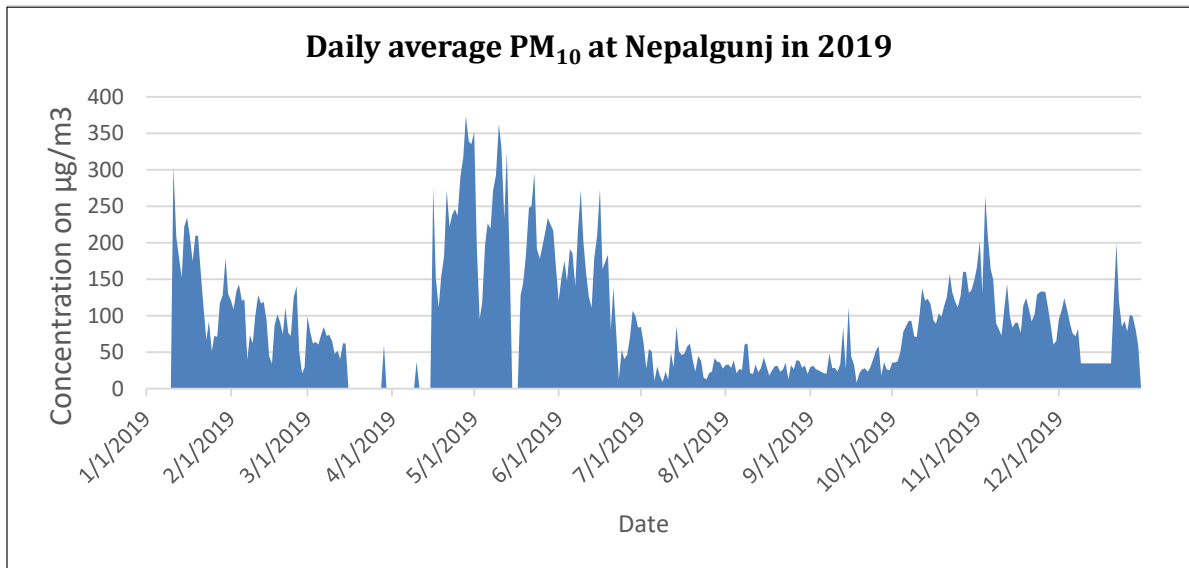


Figure 40: Daily average of PM<sub>10</sub>

### Monthly Average of PM<sub>10</sub>

The highest and the lowest concentration of PM<sub>10</sub> was found during April (236.4 µg/m<sup>3</sup>) and August (30.71 µg/m<sup>3</sup>) respectively.

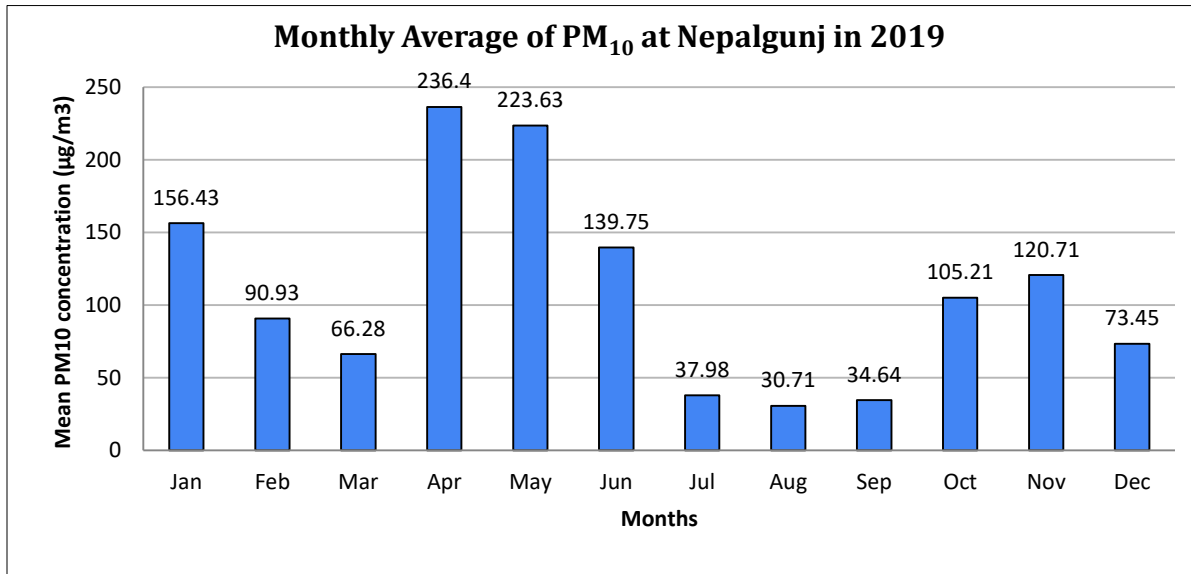


Figure 41: Monthly average of PM<sub>10</sub>

### Monthly variation of PM<sub>10</sub>

Variation in concentration of PM<sub>10</sub> was found more during April and low during August and September.

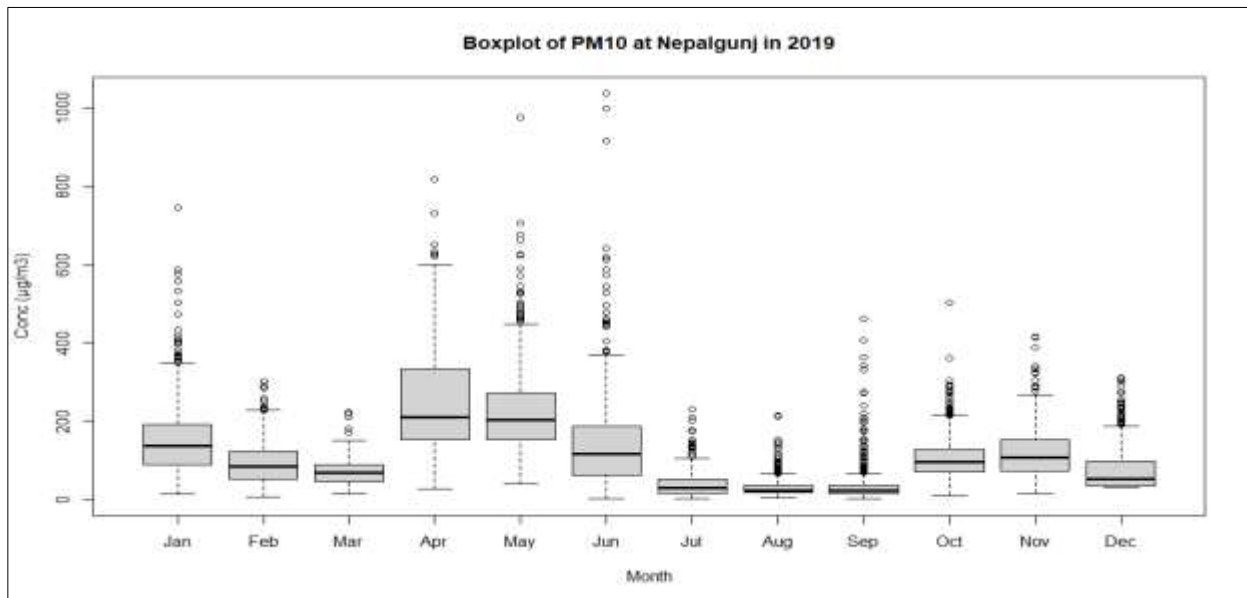


Figure 42: Monthly Variation of PM<sub>10</sub>

### Seasonal Variation of Average PM<sub>10</sub> concentration

Ambient concentration of average PM<sub>10</sub> during pre-monsoon (March-May), monsoon (June-September), post-monsoon (October-November) and winter (December-February) can be shown in the figure below. The highest concentration of PM<sub>10</sub> was found during pre-monsoon (175.44  $\mu\text{g}/\text{m}^3$ ) and the lowest concentration was found during monsoon (69.48  $\mu\text{g}/\text{m}^3$ ).

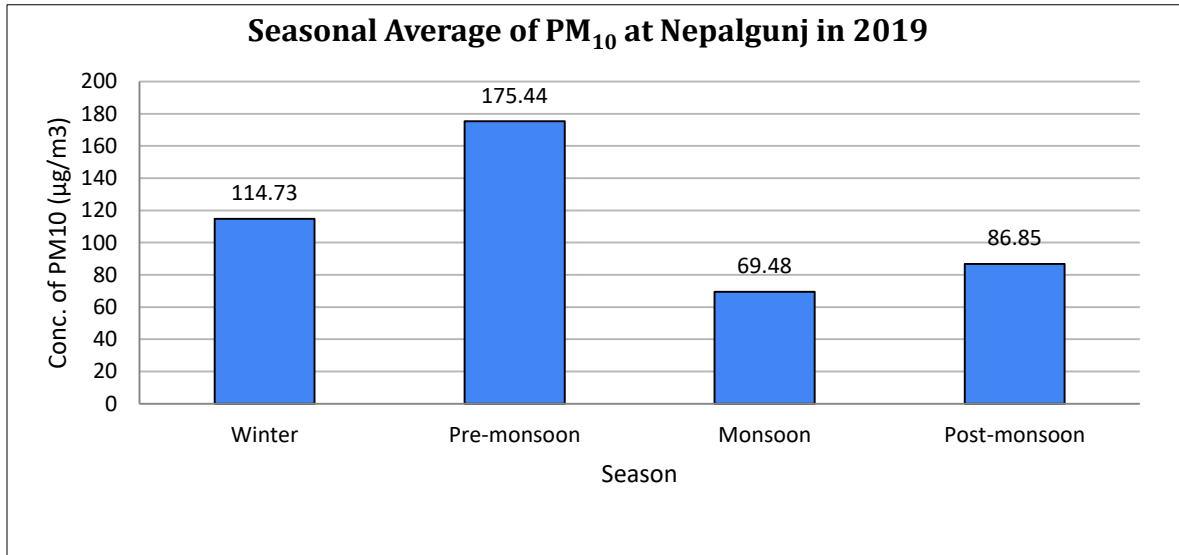


Figure 43: Seasonal variation of PM<sub>10</sub>

### Diurnal Variation of average PM<sub>10</sub> concentration

The diurnal variation of average PM<sub>10</sub> concentrations can be shown in the figure below. The variation in PM<sub>10</sub> concentration was high at around 6 to 7 pm and low at 1 to 2 pm.

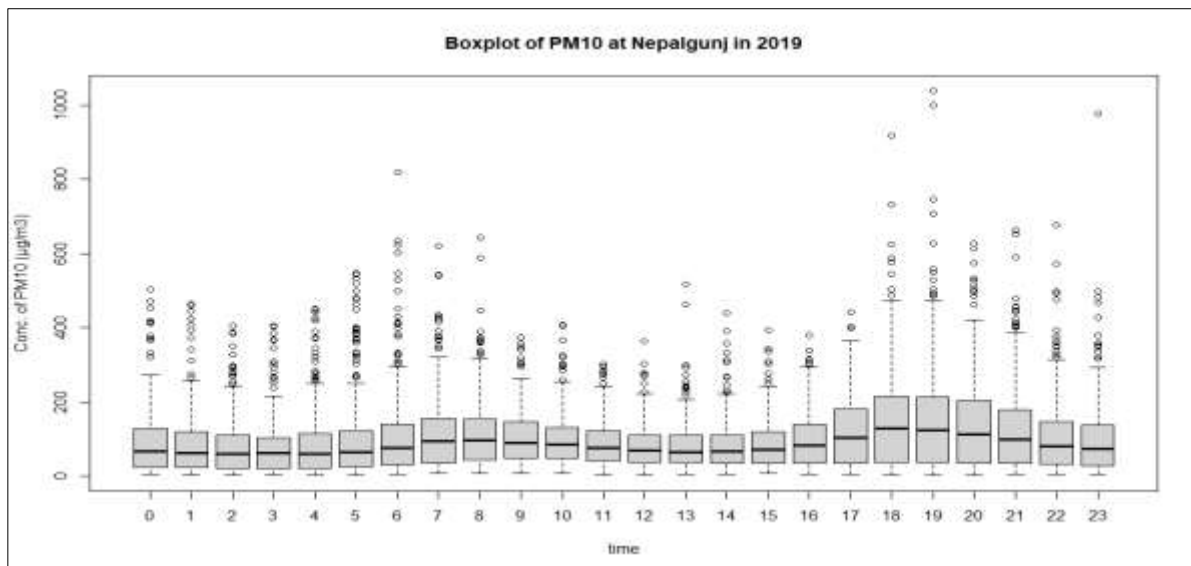


Figure 44: Diurnal variation of average PM<sub>10</sub> concentration

## Compliance Status of PM<sub>10</sub>

The total days of PM<sub>10</sub> monitored in the year 2019 counts 322 days, of which 108 days exceeded the NAAQS guideline.

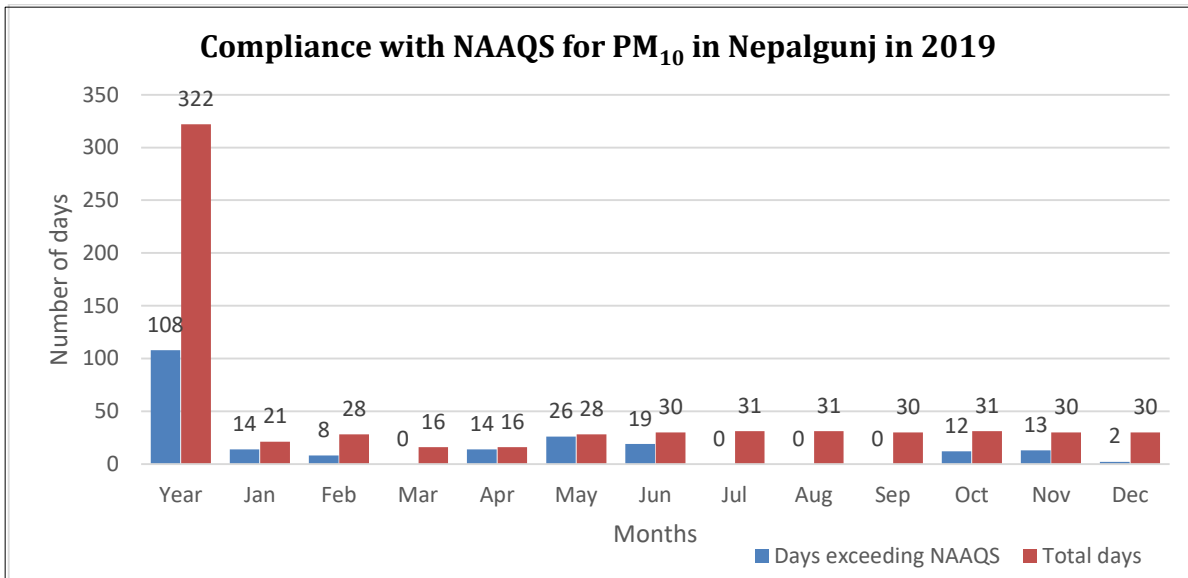


Figure 45: Compliance status of PM<sub>10</sub>

### 2.2.5 Temporal variation of TSP

#### Annual Average of TSP

The annual average of TSP at Nepalgunj station was found to be 210.34  $\mu\text{g}/\text{m}^3$  in 2019. Histogram of hourly average TSP is shown in the figure below.

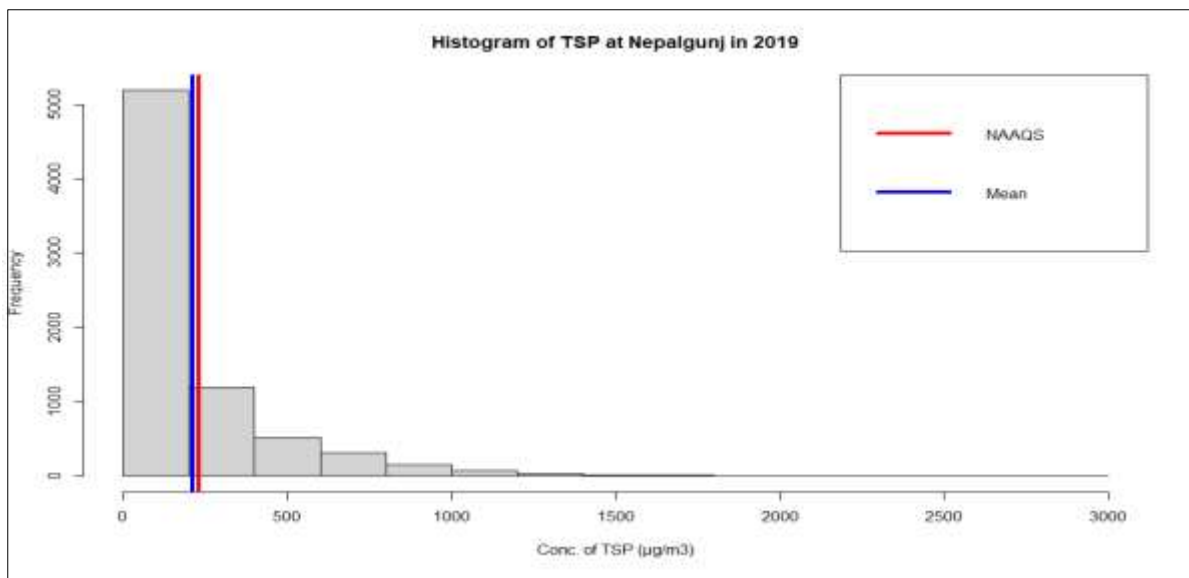


Figure 46: Histogram for the ambient concentration of TSP

### Daily Average of TSP

Daily average concentration of TSP was high during May and was found low during August and September.

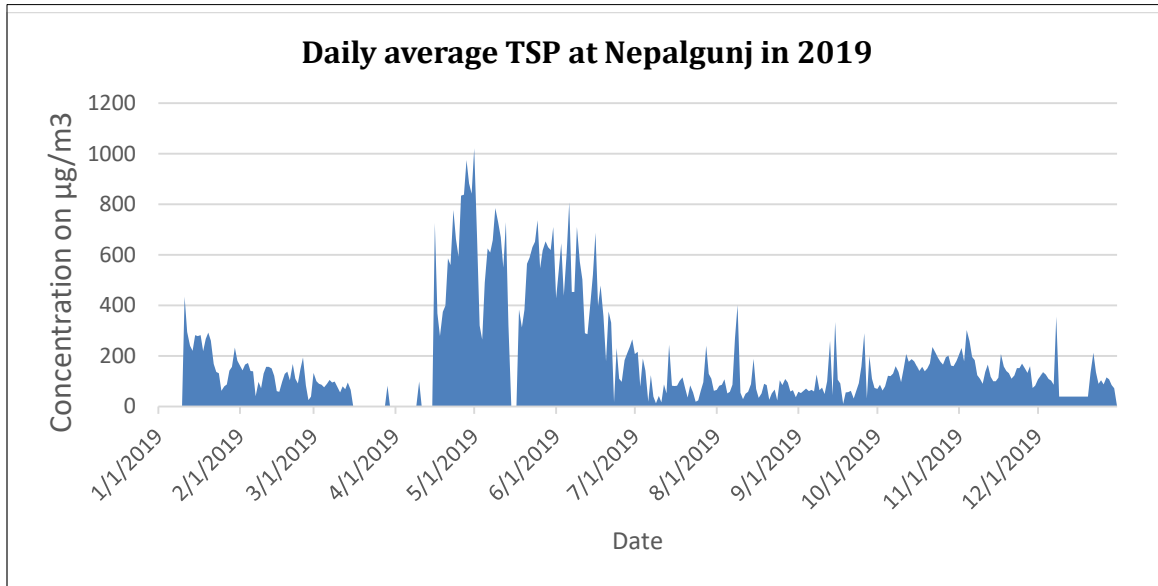


Figure 47: Daily average of TSP in 2019

### Monthly Average of TSP

The highest and the lowest concentration of TSP was found in April (635.99 µg/m³) and March (84.04 µg/m³) respectively.

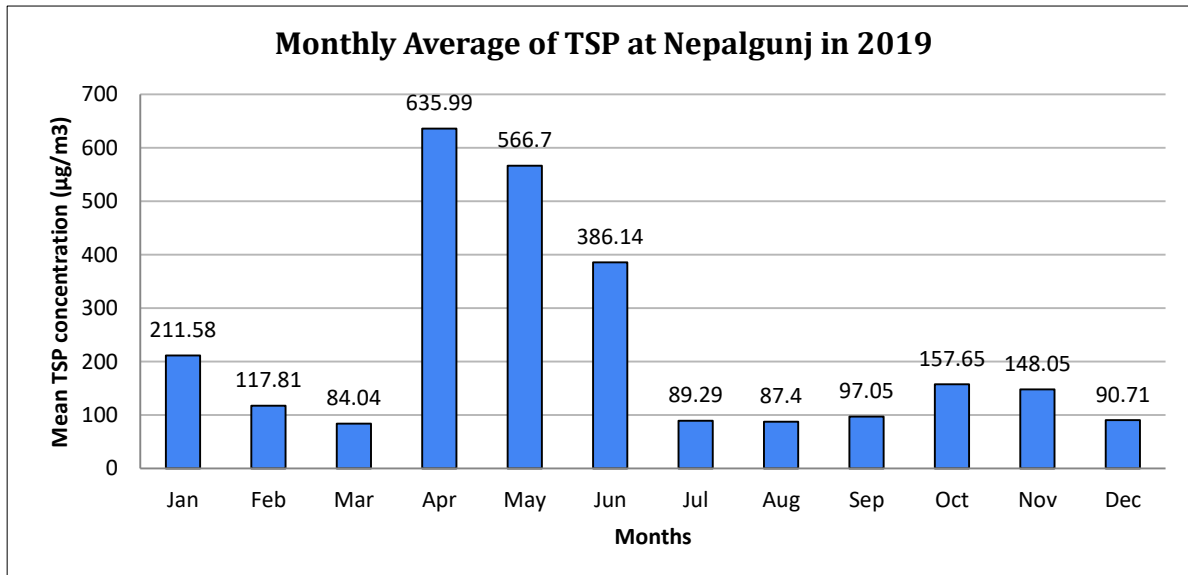


Figure 48: Monthly average of TSP

### Monthly variation of TSP



Variation in concentration of TSP was found more during April and low during August and September.

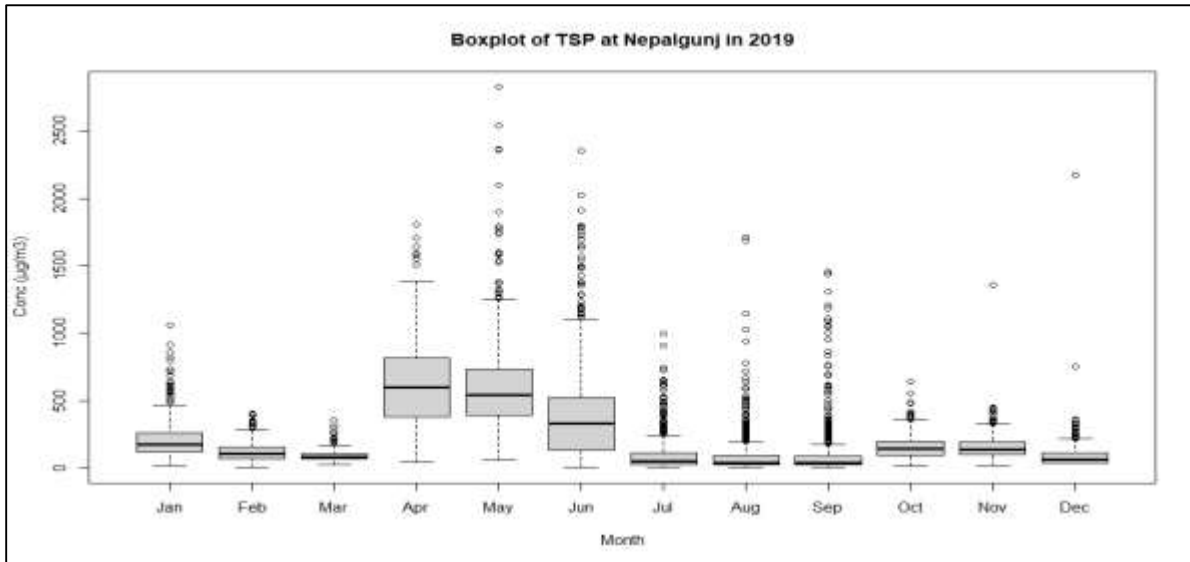


Figure 49: Monthly Variation of TSP

### Seasonal Variation of Average TSP concentration

Ambient concentration of average TSP during pre-monsoon (March-May), monsoon (June-September), post-monsoon (October-November) and winter (December-February) can be shown in the figure below. The highest concentration of TSP was found during pre-monsoon ( $428.91 \mu\text{g}/\text{m}^3$ ) and the lowest concentration was found during monsoon ( $134.25 \mu\text{g}/\text{m}^3$ ).

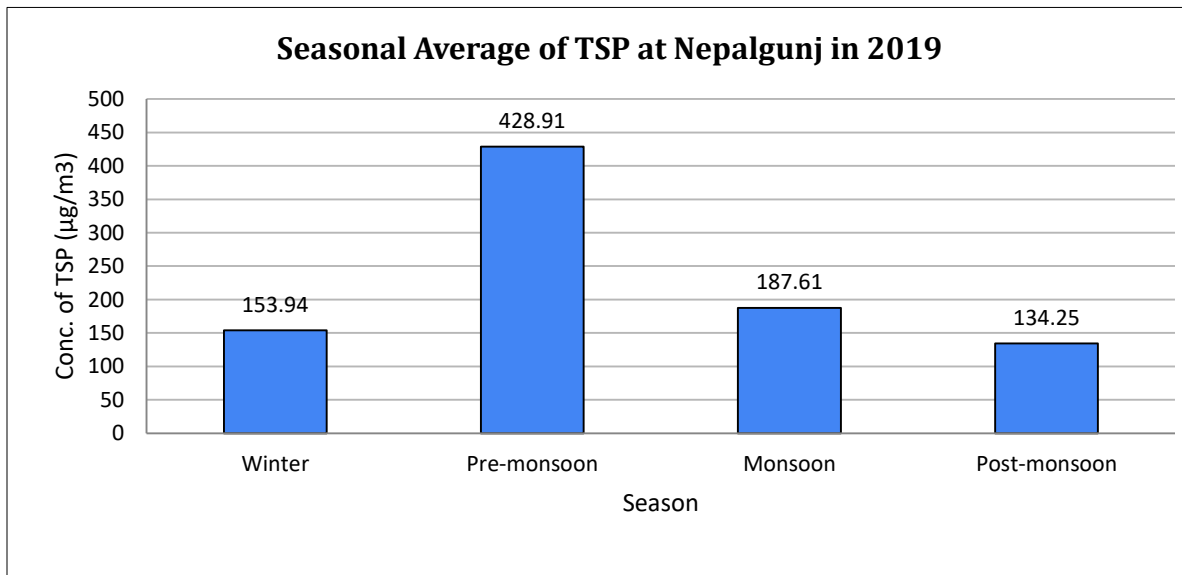


Figure 50: Seasonal variation of TSP

### Diurnal Variation of average TSP concentration

The diurnal variation of average TSP concentrations can be shown in the figure below. The variation in TSP has remained almost constant throughout the time. However, the concentration was slightly high at 6 pm and low at 2 to 4 am.

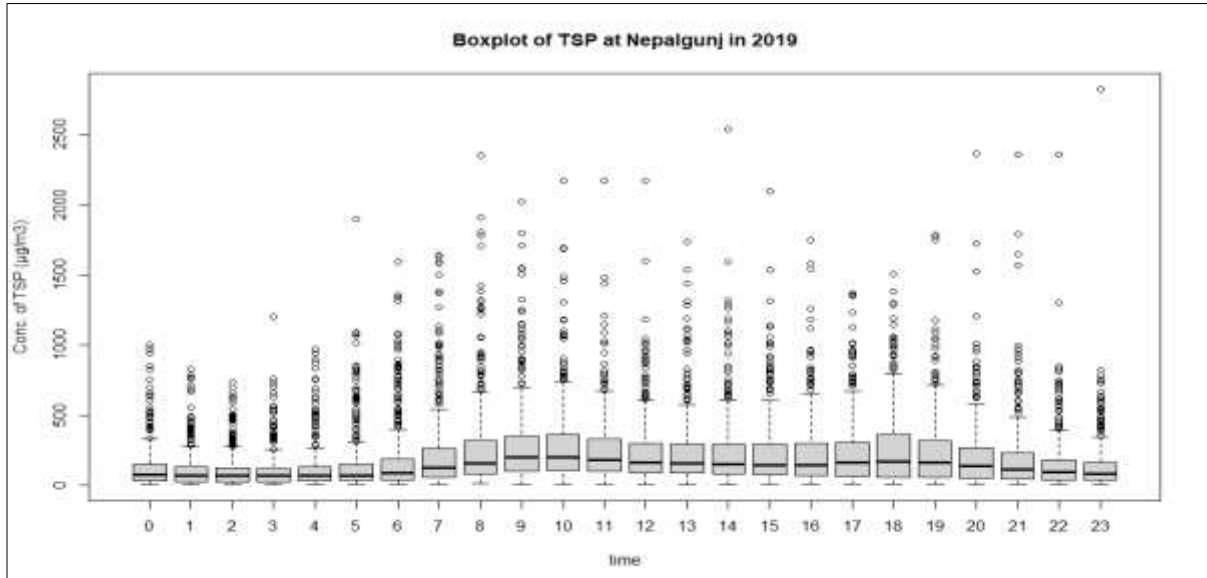


Figure 51: Diurnal variation of average TSP concentration

### Compliance Status of TSP

The total days of TSP monitored in the year 2019 counts 322, of which 89 days exceeded the NAAQS guideline.

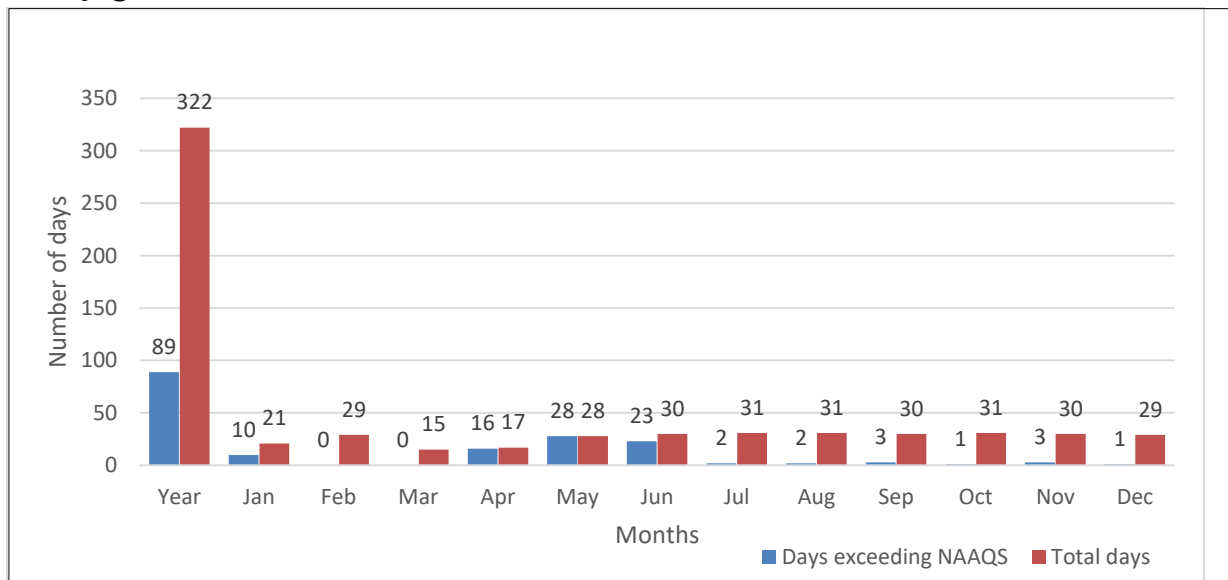


Figure 52: Compliance status of TSP

## 2.3 Air quality status, 2020

### 2.3.1 Annual average of PM<sub>1</sub>, PM<sub>2.5</sub>, PM<sub>10</sub> and TSP

The annual average of PM<sub>1</sub>, PM<sub>2.5</sub>, PM<sub>10</sub> and TSP for the Nepalgunj station was calculated as shown in the figure below.

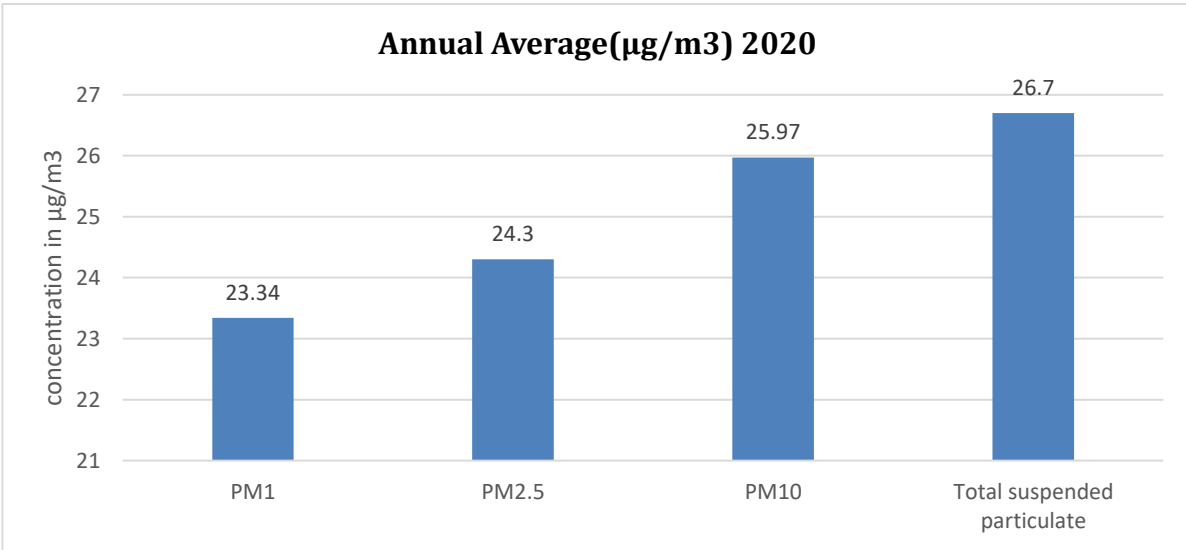


Figure 53: Annual average of PM<sub>1</sub>, PM<sub>2.5</sub>, PM<sub>10</sub> and TSP in 2020

### 2.3.2 Temporal variation of PM<sub>1</sub>

#### Annual average of PM<sub>1</sub>

The annual PM<sub>1</sub> average for Nepalgunj station for the year was found to be 23.34 µg/m<sup>3</sup> in 2020. Histogram of the hourly average PM<sub>1</sub> is shown in the figure below.

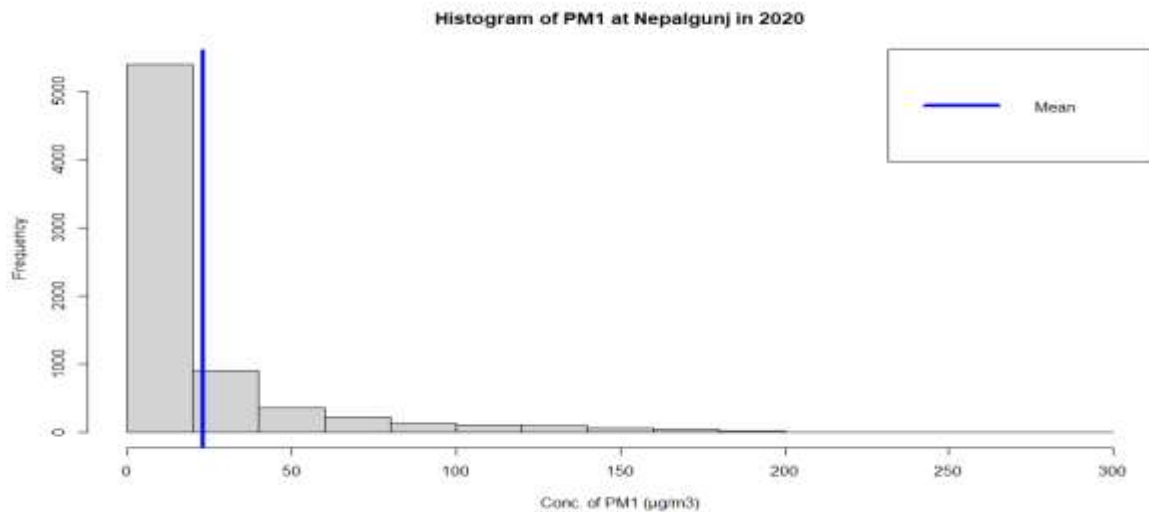


Figure 54 : Histogram for the ambient concentration of PM<sub>1</sub>

### Daily average of PM<sub>1</sub>

Daily average concentration of PM<sub>1</sub> was found to be high during December and low during June and July as shown in the figure below.

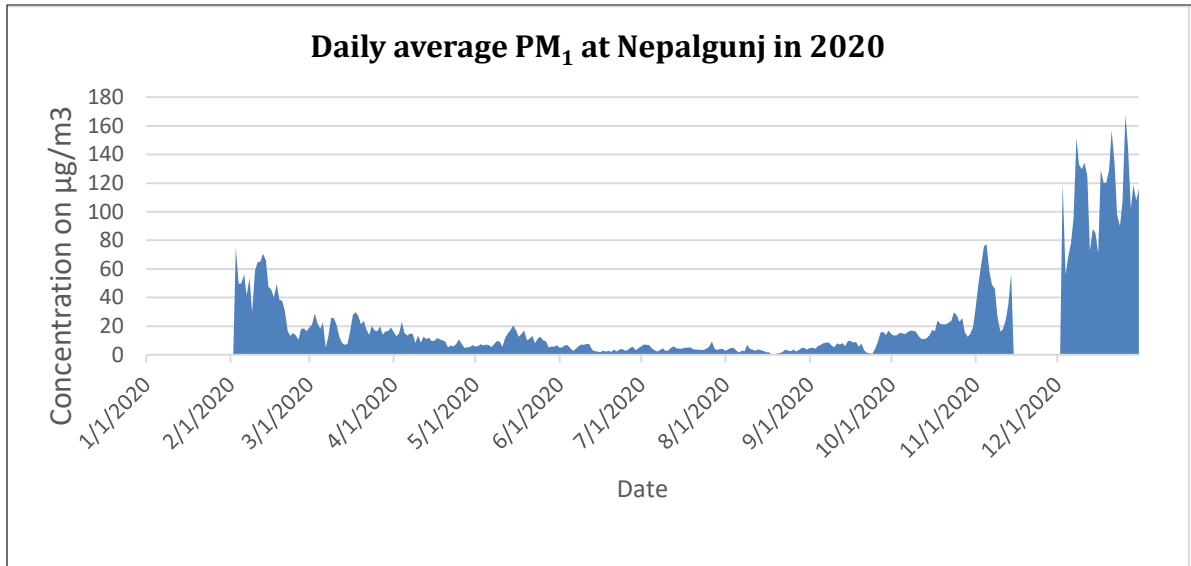


Figure 55: Daily average of PM<sub>1</sub>

### Monthly average of PM<sub>1</sub>

The highest and the lowest concentration of PM<sub>1</sub> was found during December (112.09 µg/m<sup>3</sup>) and August (3.16 µg/m<sup>3</sup>) respectively.

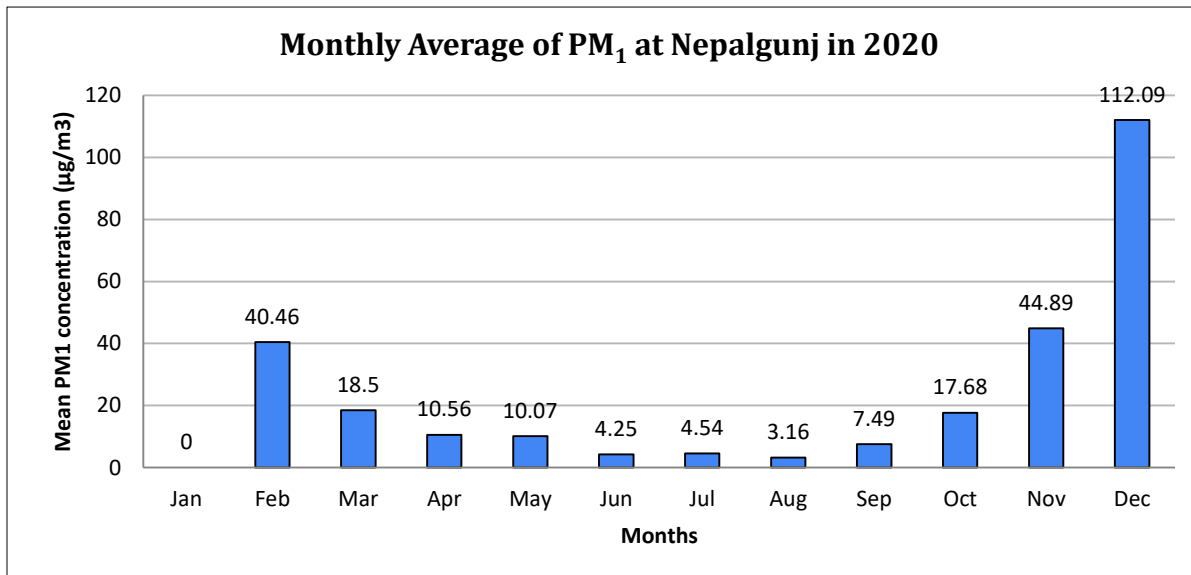


Figure 56: Monthly average of PM<sub>1</sub>

### Monthly variation of PM<sub>1</sub>

Variation in concentration of PM<sub>1</sub> was found to be more in December and low in June and July.

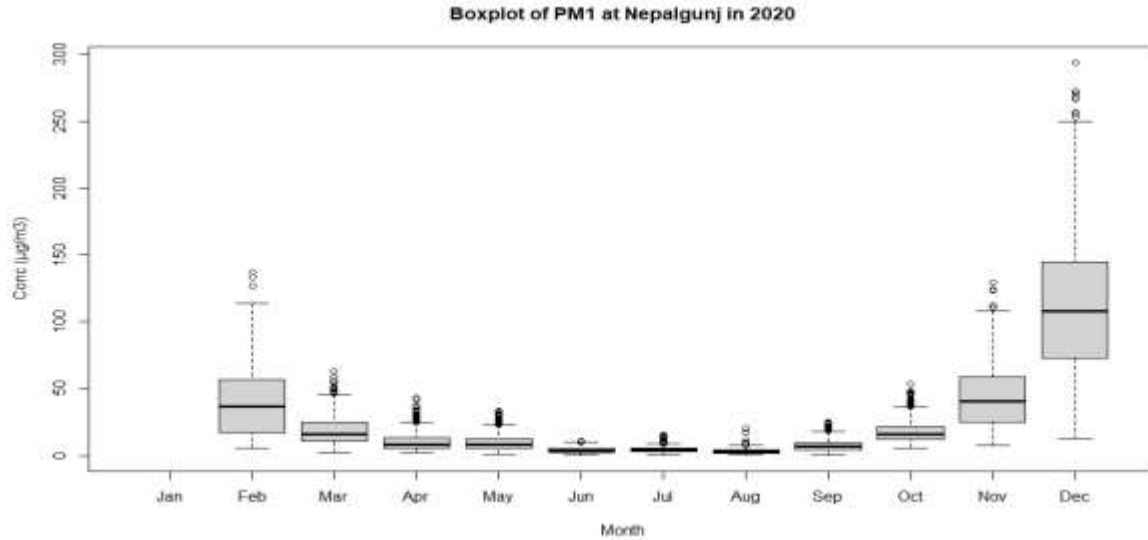


Figure 57: Monthly Variation of PM<sub>1</sub>

### Seasonal variation of PM<sub>1</sub>

Ambient concentration of average PM<sub>1</sub> for pre-monsoon (March-May) monsoon (June-September) and post-monsoon (October-November) can be shown in the figure below. The highest concentration of PM<sub>1</sub> was found during post monsoon (23.35 µg/m<sup>3</sup>) and the lowest concentration was found during monsoon (3.98 µg/m<sup>3</sup>).

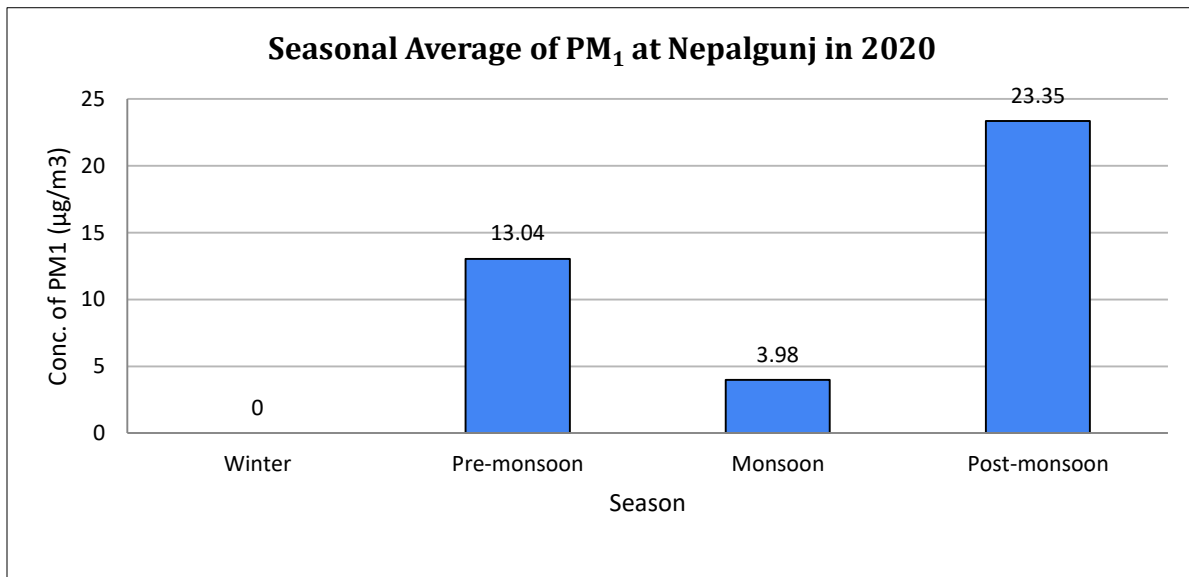


Figure 58: Seasonal variation of PM<sub>1</sub>

## Diurnal variation of average concentration of PM<sub>1</sub>

The diurnal variation of average PM<sub>1</sub> concentration can be shown in the figure below. The variation in PM<sub>1</sub> concentration was almost same with slightly high variation at 9 pm and low at 2 pm.

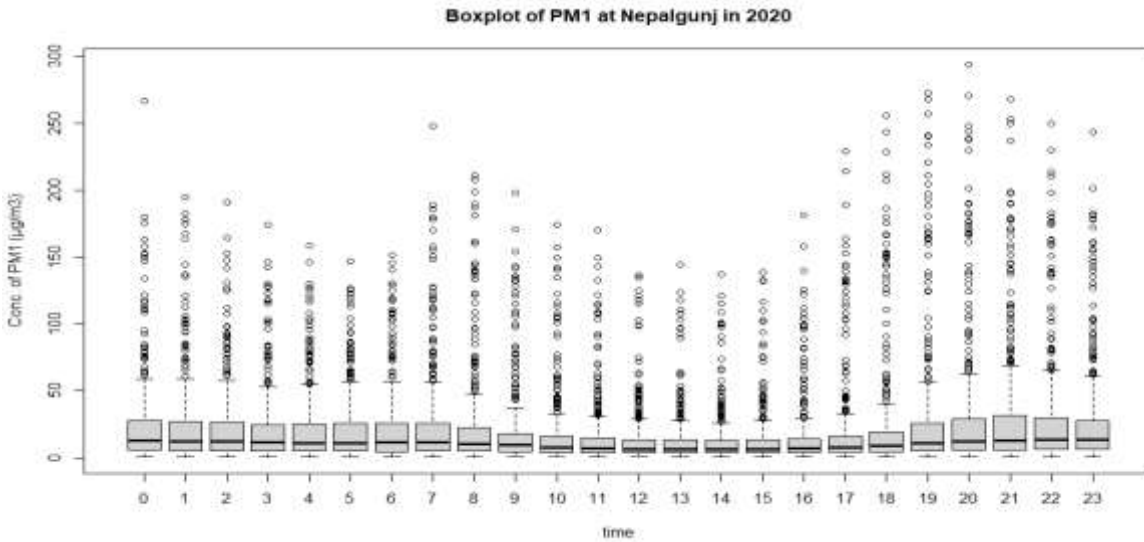


Figure 59: Diurnal variation of average PM<sub>1</sub> concentration

### 2.3.3 Temporal variation of PM<sub>2.5</sub>

#### Annual Average of PM<sub>2.5</sub>

The annual average PM<sub>2.5</sub> for Nepalgunj station was found to be 24.3 µg/m<sup>3</sup> in 2020. Histogram for hourly average PM<sub>2.5</sub> is shown in the figure below.

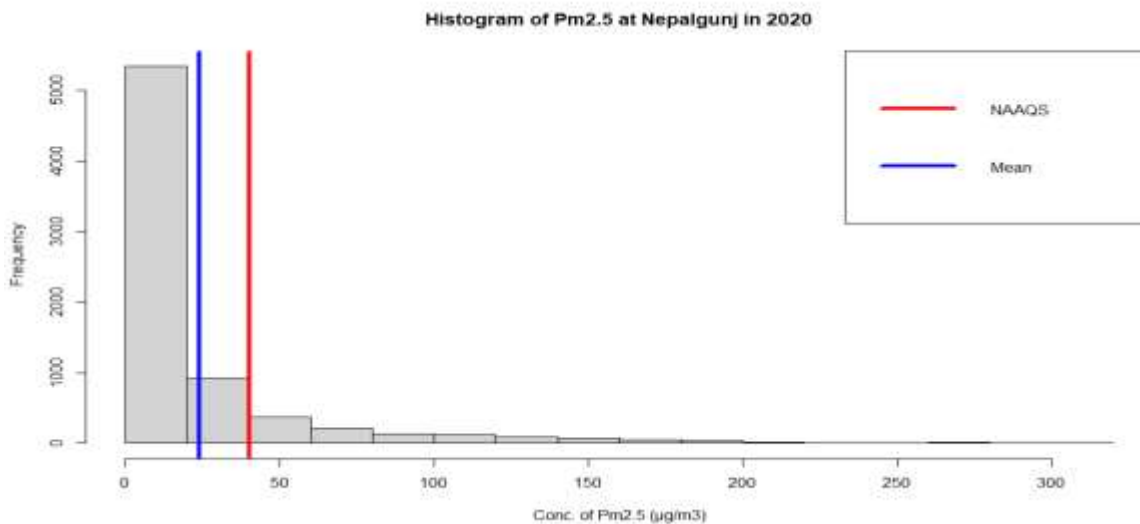


Figure 60 : Histogram for the ambient concentration of PM<sub>2.5</sub>

### Daily Average of PM<sub>2.5</sub>

Daily average concentration of PM<sub>2.5</sub> was found to be high during December and was found low during July and August.

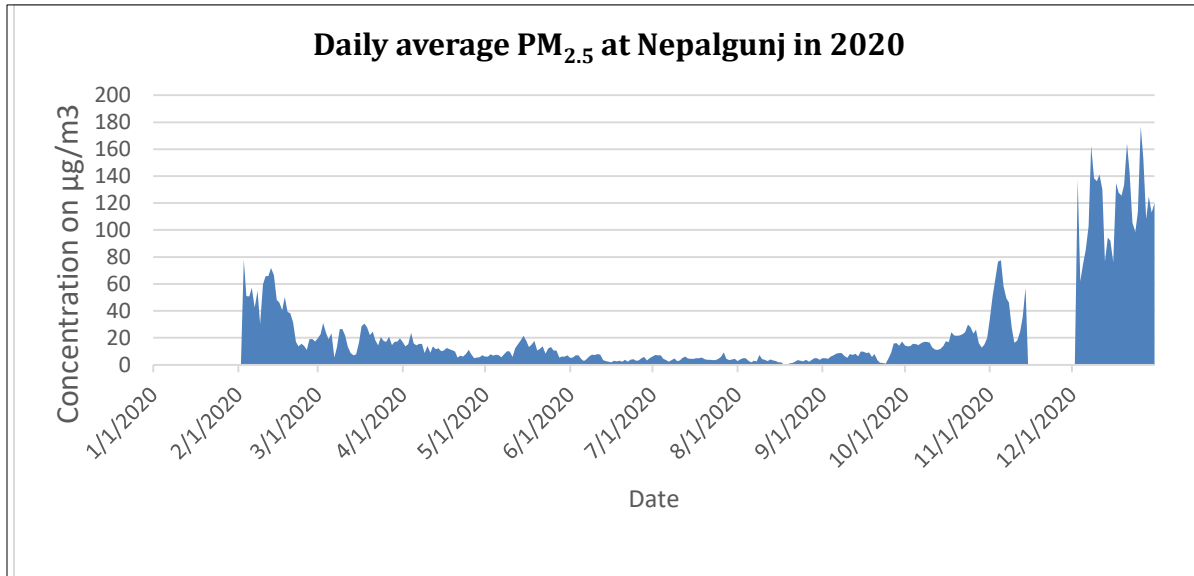


Figure 61: Daily average of PM<sub>2.5</sub> in 2020

### Monthly Average of PM<sub>2.5</sub>

The highest and the lowest concentration of PM<sub>2.5</sub> was found during December (119.02 µg/m<sup>3</sup>) and August (3.25 µg/m<sup>3</sup>) respectively.

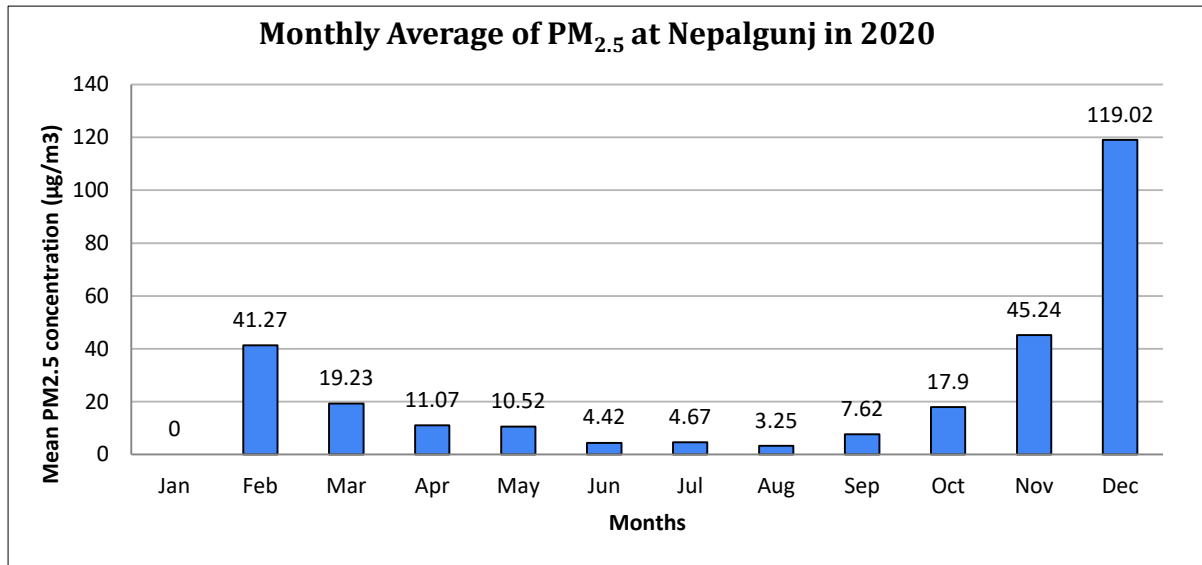


Figure 62: Monthly average of PM<sub>2.5</sub>

### Monthly variation of PM<sub>2.5</sub>

Variation in concentration of PM<sub>2.5</sub> was found more during December and low during August.

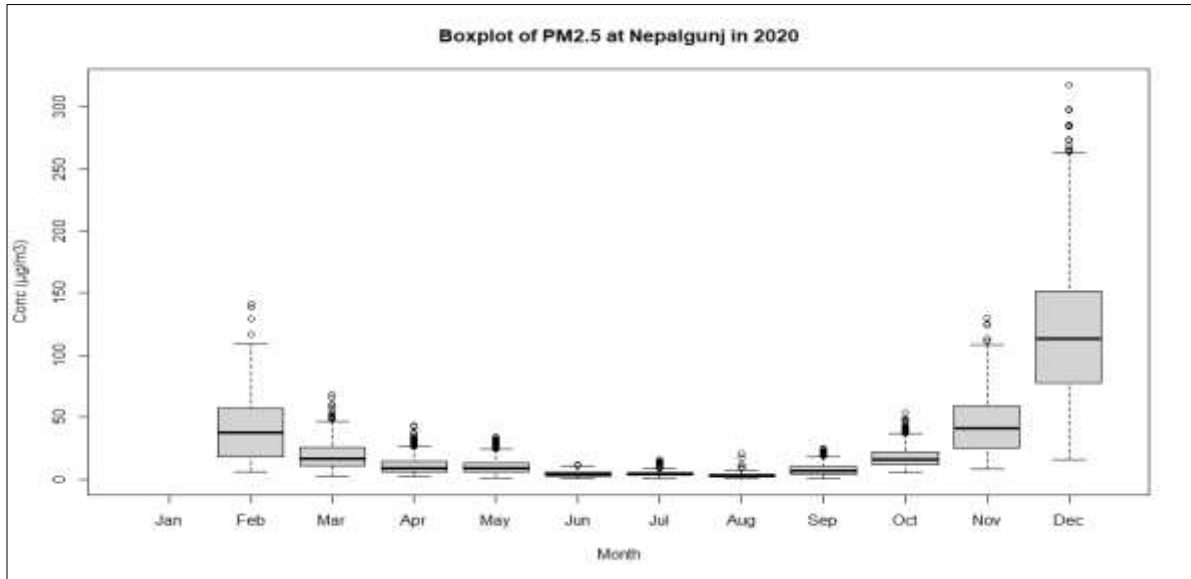


Figure 63: Monthly Variation of PM<sub>2.5</sub>

### Seasonal Variation of Average PM<sub>2.5</sub> concentration

Ambient concentration of average PM<sub>2.5</sub> during pre-monsoon (March-May), monsoon (June-September) and post-monsoon (October-November) can be shown in the figure below. The highest concentration of PM<sub>2.5</sub> was found during post monsoon (23.59 µg/m<sup>3</sup>) and the lowest concentration was found during monsoon (4.11 µg/m<sup>3</sup>).

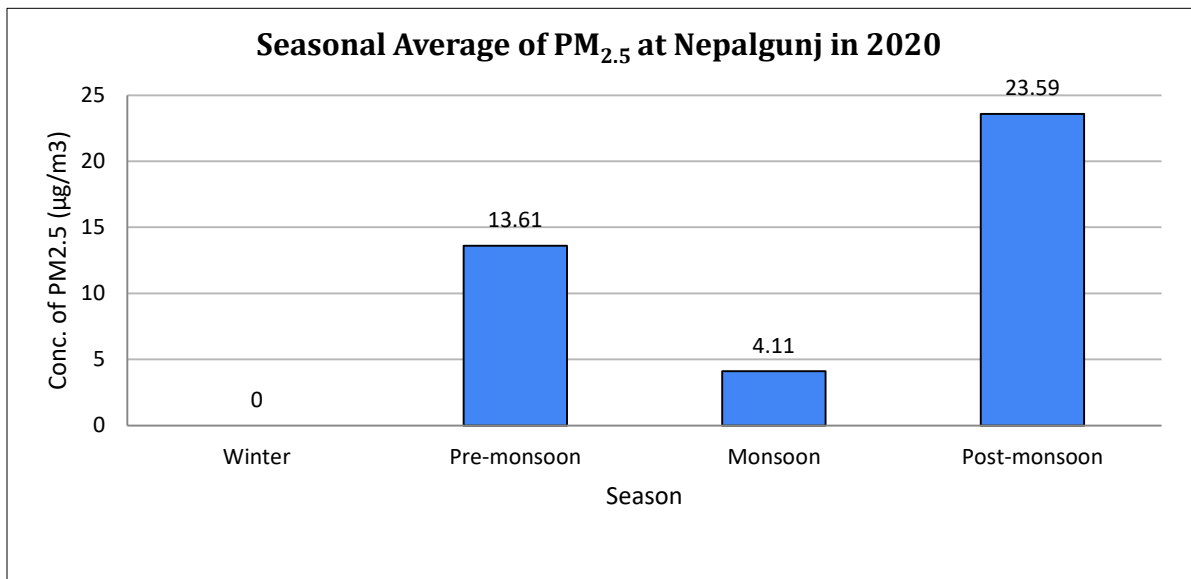


Figure 64: Seasonal variation of PM<sub>2.5</sub>



### Diurnal Variation of average PM<sub>2.5</sub> concentration

The diurnal variation of average PM<sub>2.5</sub> concentrations can be shown in the figure below. The variation in PM<sub>2.5</sub> concentrations was slightly high at around 9 pm and low at 2 to 3 pm.

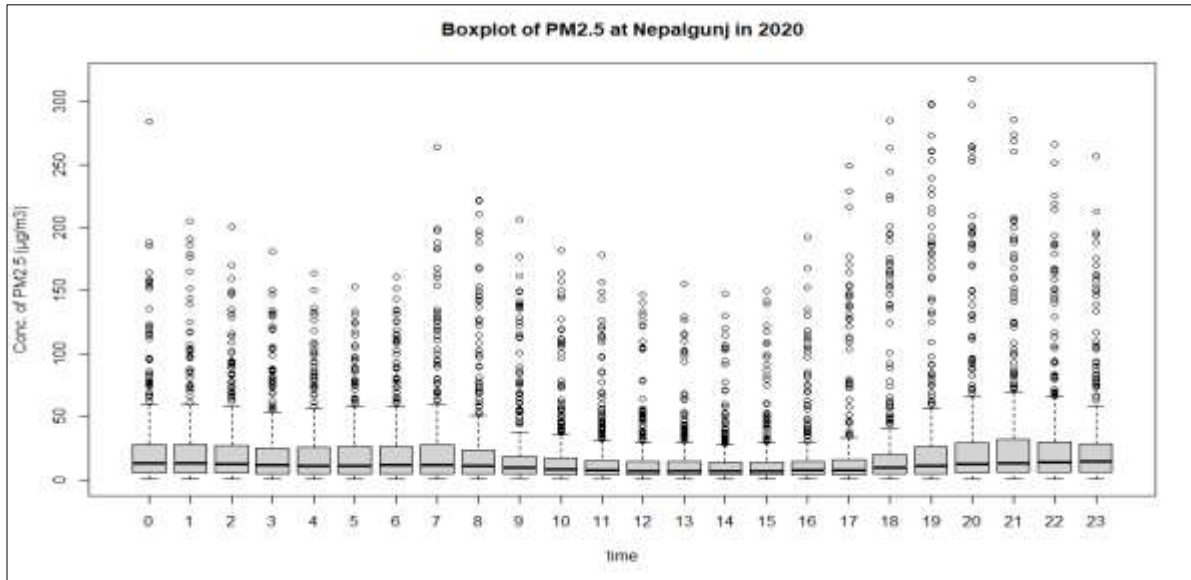


Figure 65: Diurnal variation of average PM<sub>2.5</sub> concentration

### Compliance Status of PM<sub>2.5</sub>

The total days of PM<sub>2.5</sub> monitored in the year 2020 counts 312 only, of which 51 days exceed the NAAQS guideline.

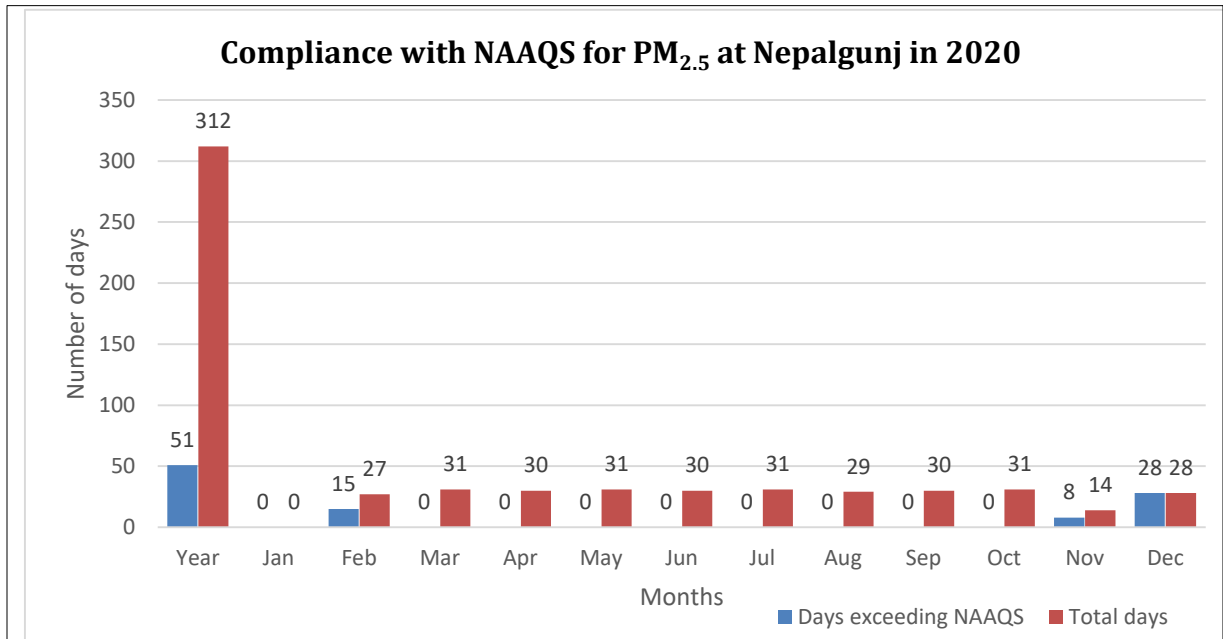


Figure 66: Compliance status of PM<sub>2.5</sub>

### 2.3.4 Temporal variation of PM<sub>10</sub>

#### Annual Average of PM<sub>10</sub>

The annual average PM<sub>10</sub> for Nepalgunj station was found to be 25.97  $\mu\text{g}/\text{m}^3$  in 2020. Histogram of hourly average PM<sub>10</sub> is shown in the figure below.

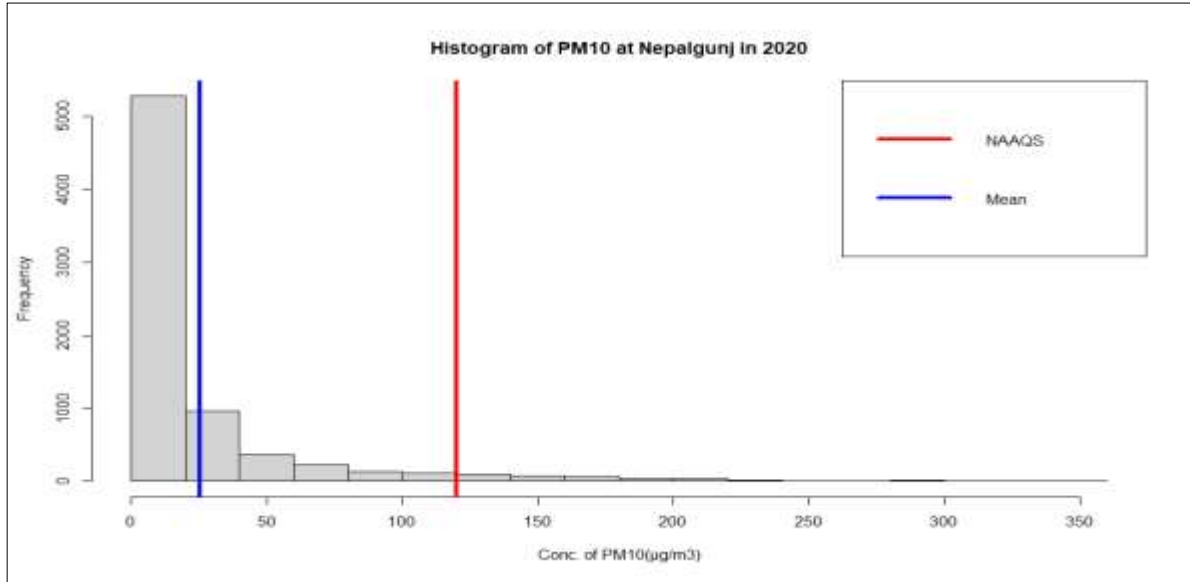


Figure 67: Histogram for the ambient concentration of PM<sub>10</sub>

#### Daily Average of PM<sub>10</sub>

Daily average concentration of PM<sub>10</sub> was found to be high during December and was found low during July.

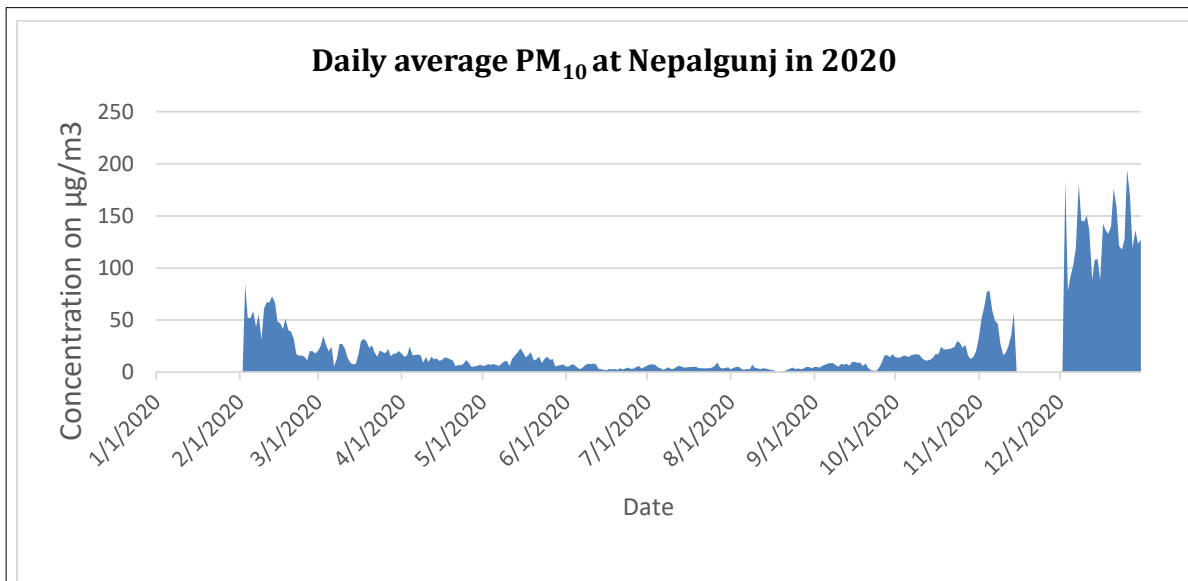


Figure 68: Daily average of PM<sub>10</sub>

### Monthly Average of PM<sub>10</sub>

The highest and the lowest concentration of PM<sub>10</sub> was found during December (132.64  $\mu\text{g}/\text{m}^3$ ) and August (3.37  $\mu\text{g}/\text{m}^3$ ) respectively.

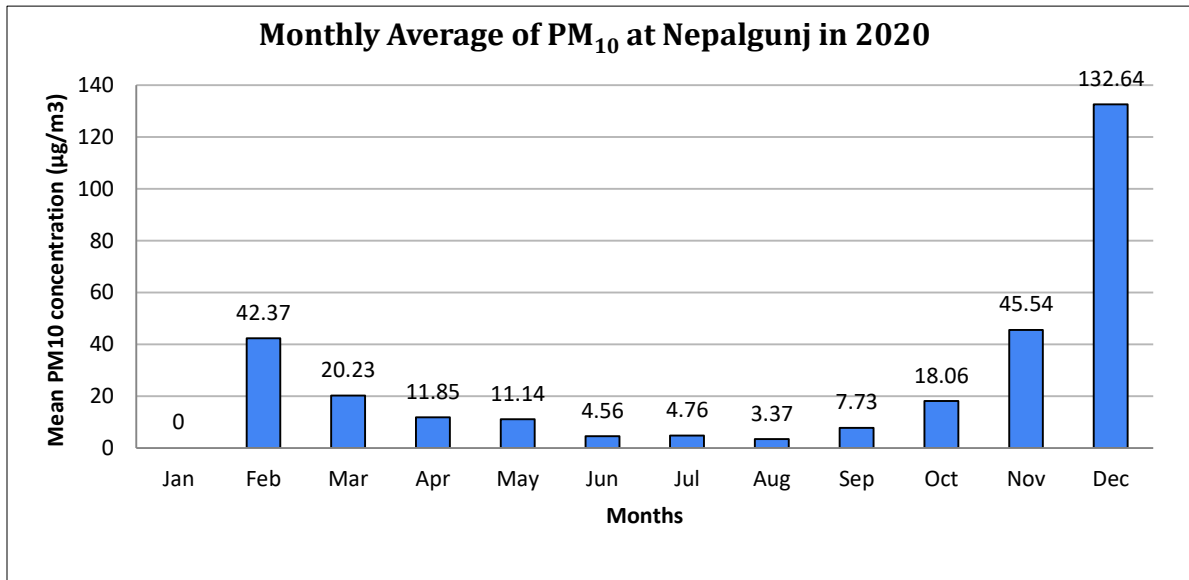


Figure 69: Monthly average of PM<sub>10</sub>

### Monthly variation of PM<sub>10</sub>

Variation in concentration of PM<sub>10</sub> was found more during December and low during July and August.

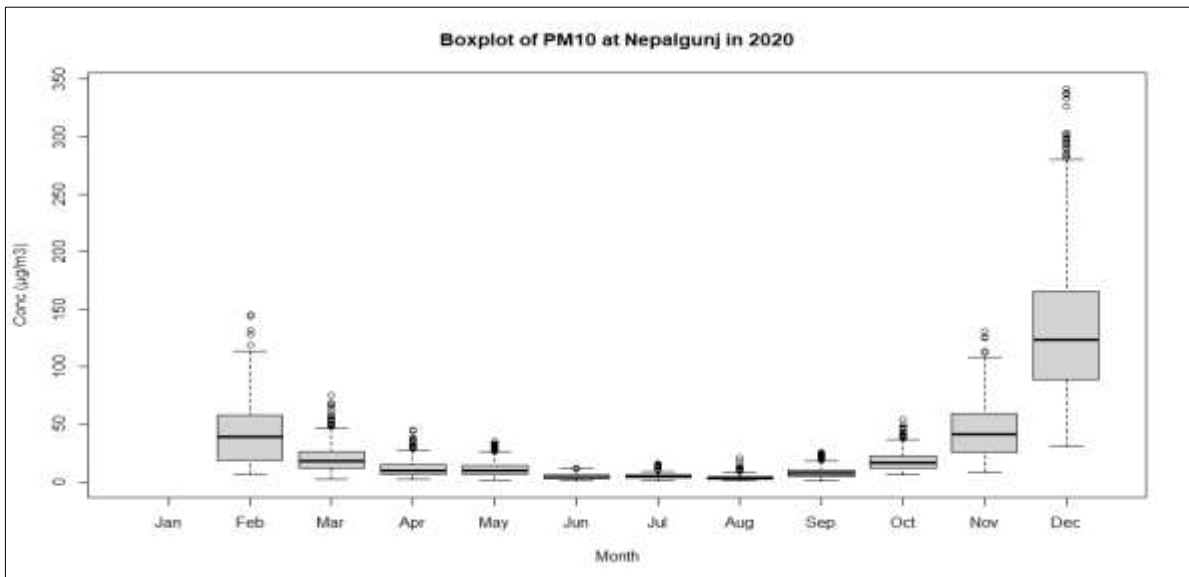


Figure 70: Monthly Variation of PM<sub>10</sub>

### Seasonal Variation of Average PM<sub>10</sub> concentration

Ambient concentration of average PM<sub>10</sub> during pre-monsoon (March-May), monsoon (June-September) and post monsoon (October–November) can be shown in the figure below. The highest concentration of PM<sub>10</sub> was found during post monsoon (23.78 µg/m<sup>3</sup>) and the lowest concentration was found during monsoon (4.23 µg/m<sup>3</sup>).

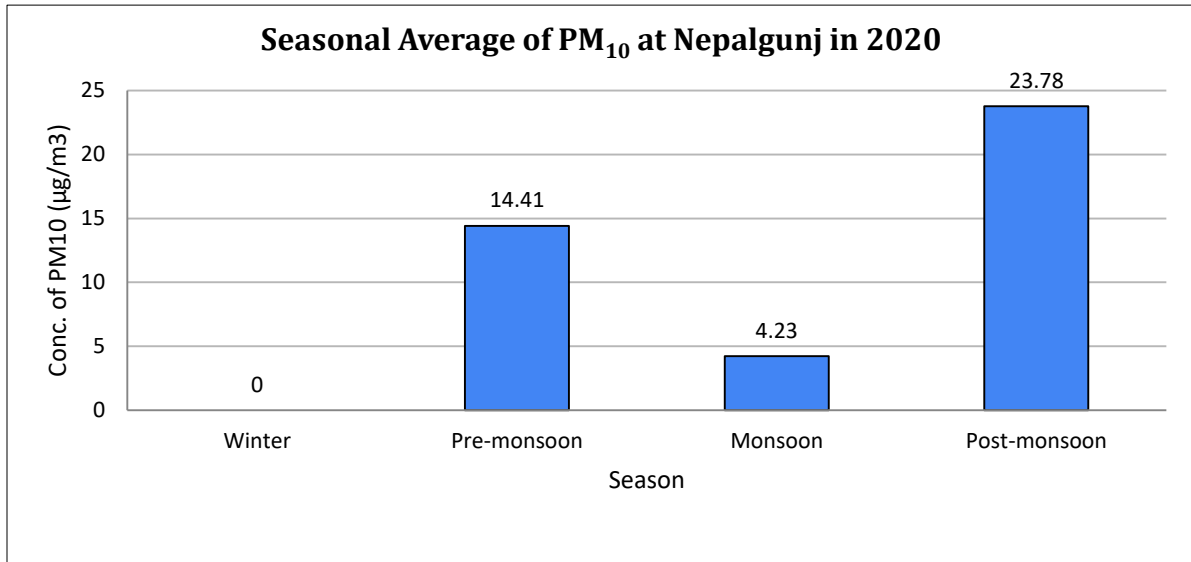


Figure 71: Seasonal variation of PM<sub>10</sub>

### Diurnal Variation of average PM<sub>10</sub> concentration

The diurnal variation of average PM<sub>10</sub> concentrations can be shown in the figure below. The variation in PM<sub>10</sub> concentration was slightly high at around 9 pm and low at 1 to 3 pm.

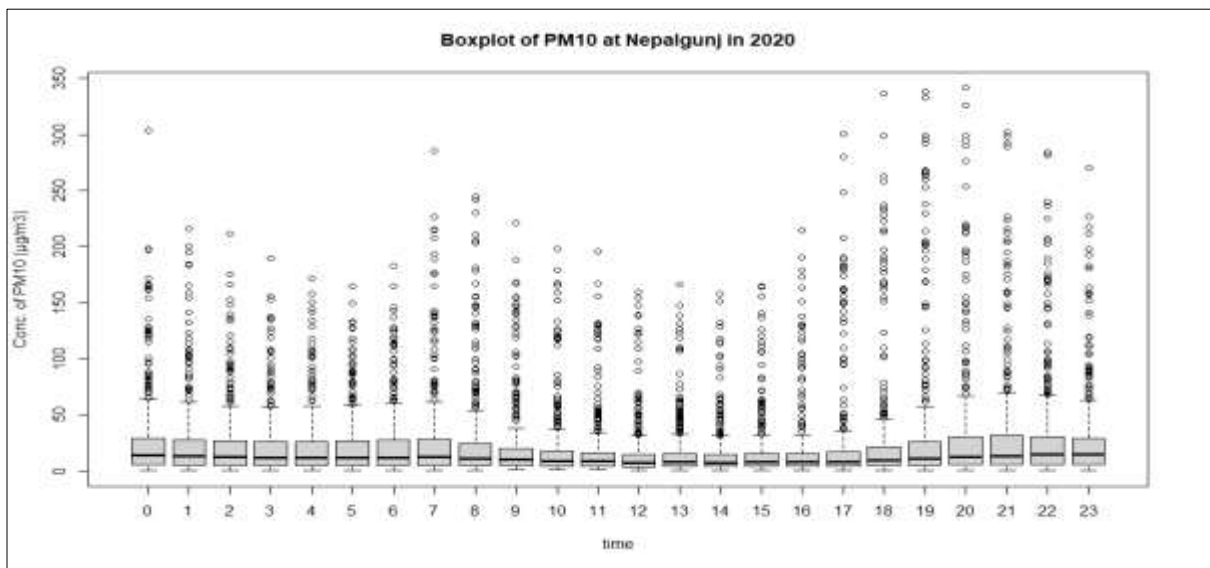


Figure 72: Diurnal variation of average PM<sub>10</sub> concentration

### Compliance Status of PM<sub>10</sub>

The total days of PM<sub>10</sub> monitored in the year 2020 counts 312 days, of which 18 days exceed the NAAQS guideline.

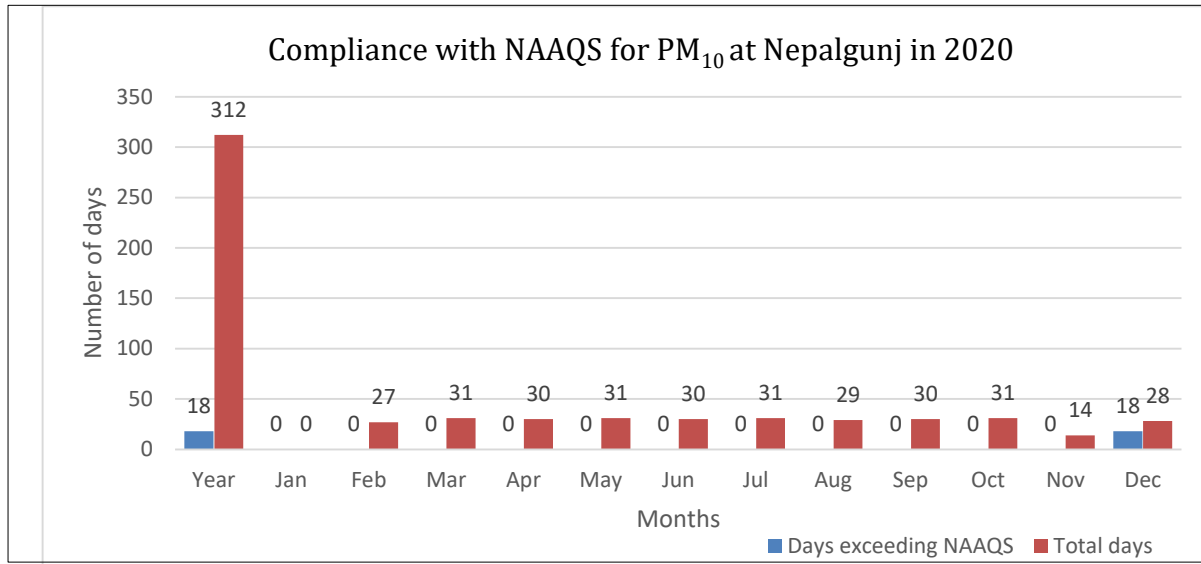


Figure 73: Compliance status of PM<sub>10</sub>

### 2.3.5 Temporal variation of TSP

#### Annual Average of TSP

The annual average TSP of Nepalgunj station was found to be 26.7 µg/m<sup>3</sup> in 2020. Histogram of hourly average TSP is shown in the figure below.

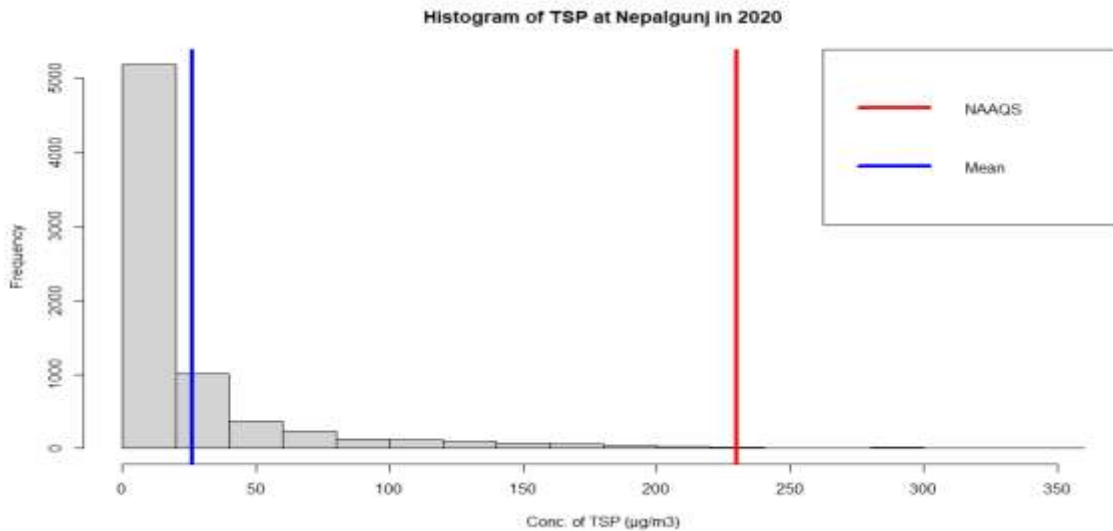


Figure 74: Histogram for the ambient concentration of TSP

### Daily Average of TSP

Daily average concentration of TSP was found to be high during December and was found low during July and August.

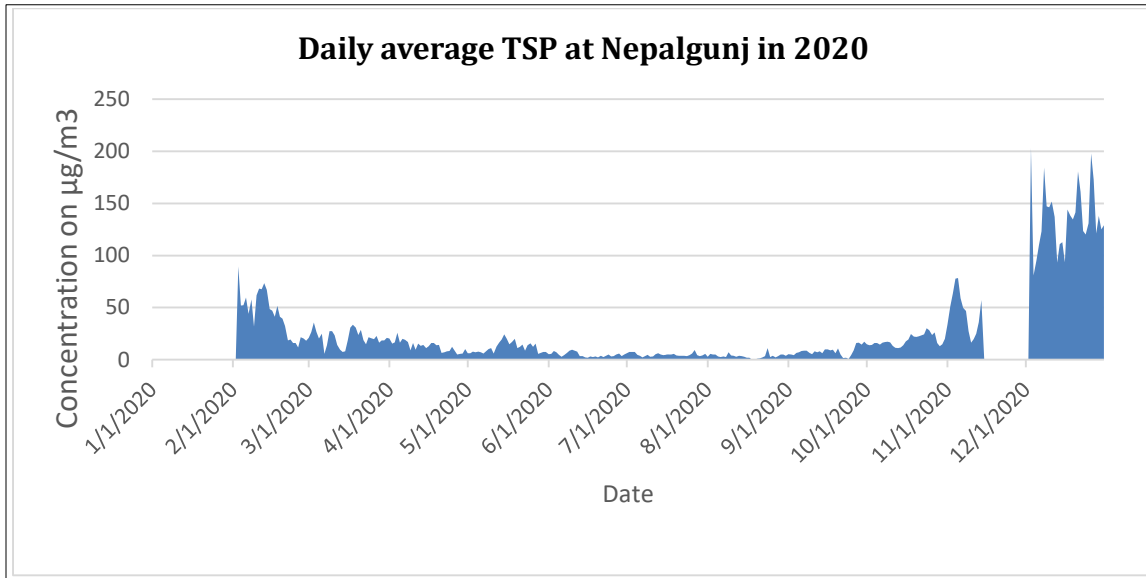


Figure 75: Daily average of TSP

### Monthly Average of TSP

The highest and the lowest concentration of TSP was found in December (136.14 µg/m³) and August (3.65 µg/m³) respectively.

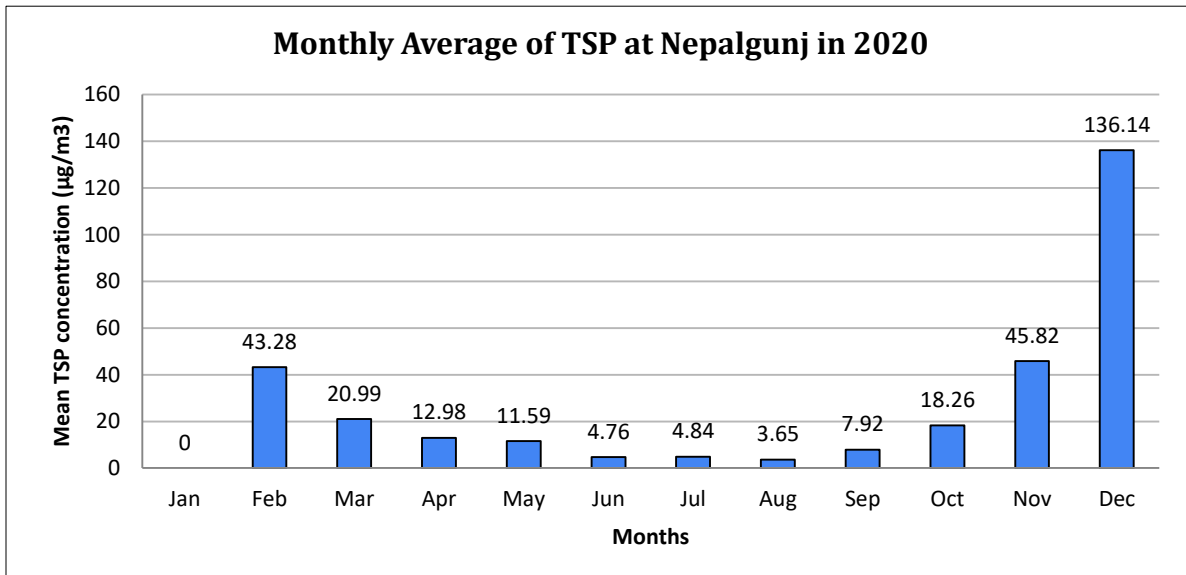


Figure 76: Monthly average of TSP

## Monthly variation of TSP

Variation in concentration of TSP was found more during December and low during July and August.

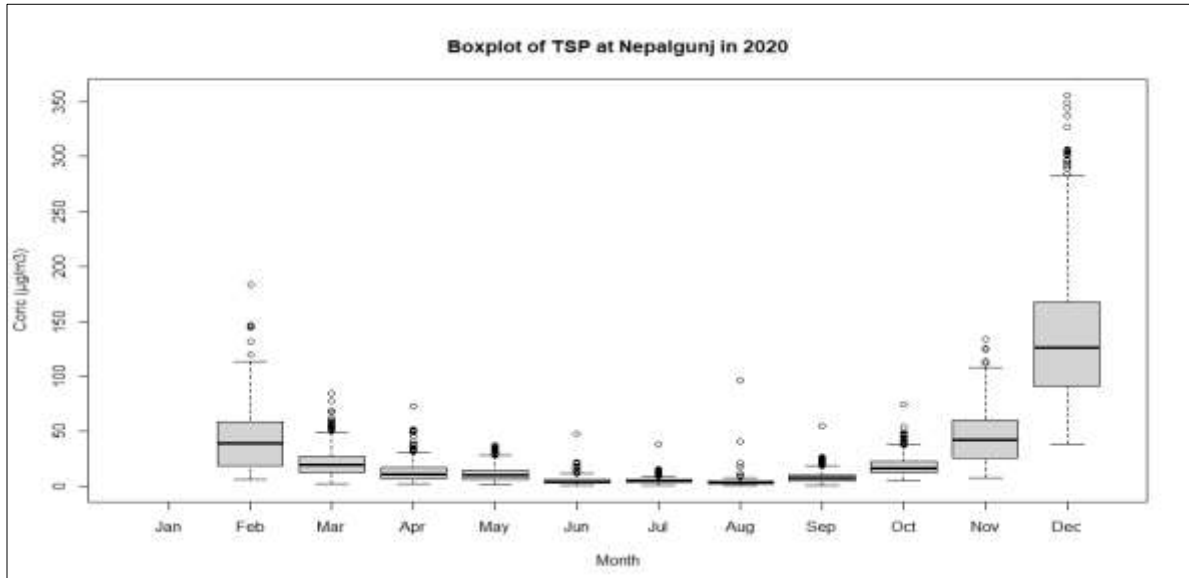


Figure 77: Monthly Variation of TSP

## Seasonal Variation of Average TSP concentration

Ambient concentration of average TSP during pre-monsoon (March-May), monsoon (June-September) and post-monsoon (October-November) can be shown in the figure below. The highest concentration of TSP was found during post-monsoon ( $24 \mu\text{g}/\text{m}^3$ ) and the lowest concentration was found during monsoon ( $4.41 \mu\text{g}/\text{m}^3$ ).

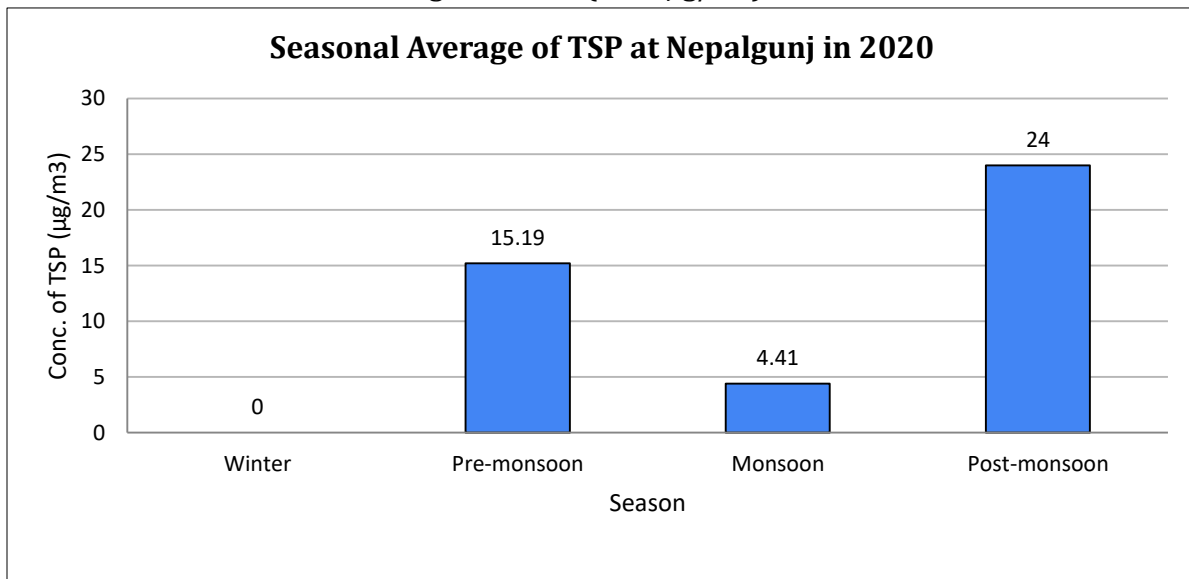


Figure 78: Seasonal variation of TSP

### Diurnal Variation of average TSP concentration

The diurnal variation of average TSP concentrations can be shown in the figure below. The variation in TSP has remained almost constant throughout the time. However, the concentration was slightly high at 1 to 2 pm and low at 2 to 4 am.

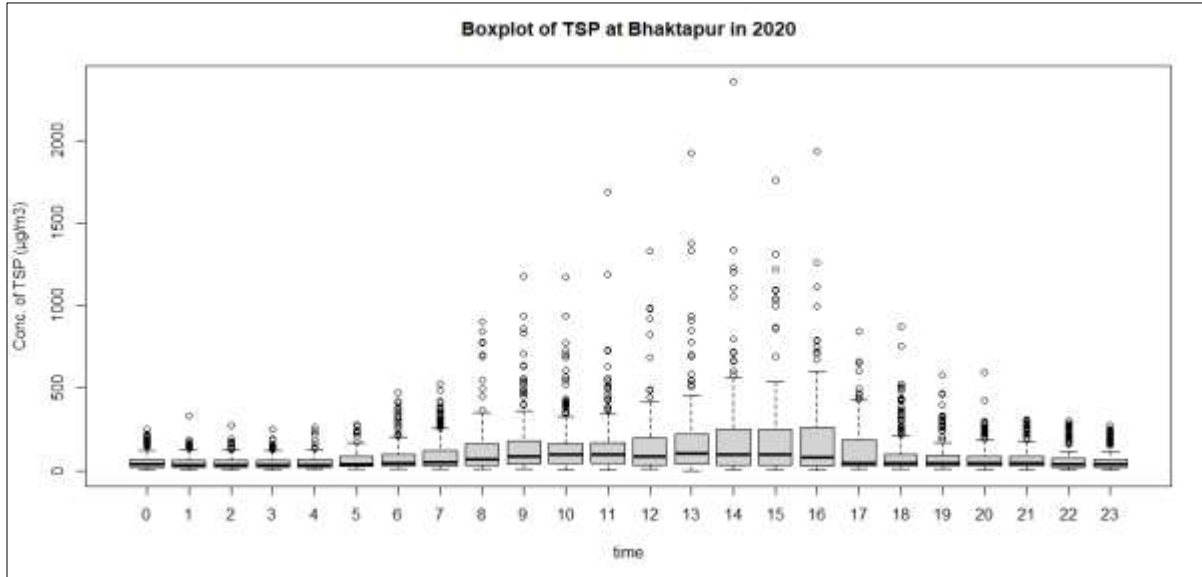


Figure 79: Diurnal variation of average TSP concentration

### Compliance Status of TSP

The total days of TSP monitored in the year 2018 counts 213, of which 40 days exceed the NAAQS guideline.

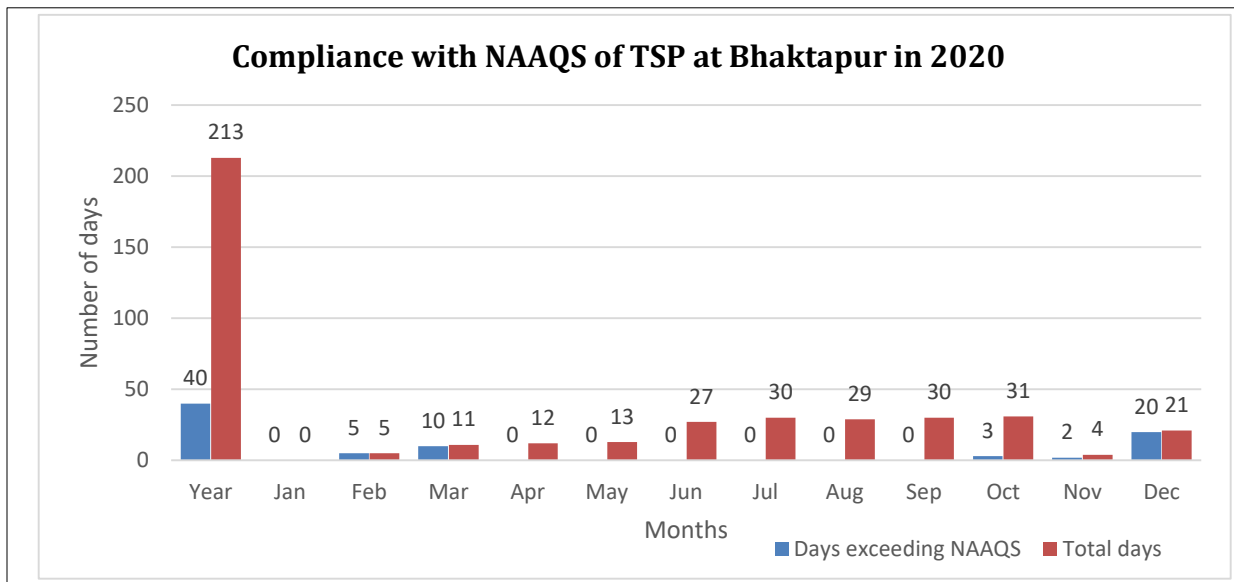


Figure 80: Compliance status of TSP



## Annex

### PM<sub>1</sub> daily average for Nepalgunj station

2018	PM1daily	2019	PM1 daily	2020	PM1 daily
1/1/2018		1/1/2019		1/1/2020	
1/2/2018		1/2/2019		1/2/2020	
1/3/2018		1/3/2019		1/3/2020	
1/4/2018		1/4/2019		1/4/2020	
1/5/2018		1/5/2019		1/5/2020	
1/6/2018		1/6/2019		1/6/2020	
1/7/2018		1/7/2019		1/7/2020	
1/8/2018		1/8/2019		1/8/2020	
1/9/2018		1/9/2019		1/9/2020	
1/10/2018		1/10/2019		1/10/2020	
1/11/2018		1/11/2019	160.7656	1/11/2020	
1/12/2018		1/12/2019	123.2939	1/12/2020	
1/13/2018		1/13/2019	111.5806	1/13/2020	
1/14/2018		1/14/2019	94.44611	1/14/2020	
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2/3/2018	2/3/2019	104.774	2/3/2020	75.00213
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2/6/2018	2/6/2019	101.3535	2/6/2020	56.08576
2/7/2018	2/7/2019	36.68299	2/7/2020	41.51417
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9/1/2018	8.23	9/1/2019	13.16889	8/31/2020	3.496528
9/2/2018	11.65096	9/2/2019	15.54625	9/1/2020	4.742986
9/3/2018	9.904028	9/3/2019	11.22951	9/2/2020	4.811806
9/4/2018	13.05417	9/4/2019	7.43625	9/3/2020	4.261458
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10/7/2018	44.00105	10/7/2019	50.34903	10/6/2020	14.36917
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10/11/2018	37.61885	10/11/2019	53.65007	10/10/2020	16.15674
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10/13/2018	31.24764	10/13/2019	64.69597	10/12/2020	11.25611
10/14/2018	61.7984	10/14/2019	63.90438	10/13/2020	10.90563
10/15/2018	70.33713	10/15/2019	61.20208	10/14/2020	11.63986
10/16/2018	52.51708	10/16/2019	45.13583	10/15/2020	13.71549
10/17/2018	48.03425	10/17/2019	45.9357	10/16/2020	17.21766
10/18/2018	55.93301	10/18/2019	52.18458	10/17/2020	16.55499
10/19/2018	37.59799	10/19/2019	54.7382	10/18/2020	23.83396
10/20/2018	46.91771	10/20/2019	68.85681	10/19/2020	21.52319
10/21/2018	49.01364	10/21/2019	79.7334	10/20/2020	21.29514
10/22/2018	53.31576	10/22/2019	93.0084	10/21/2020	21.25222

10/23/2018	53.84295	10/23/2019	77.6234	10/22/2020	22.42924
10/24/2018	51.16889	10/24/2019	68.10872	10/23/2020	23.75187
10/25/2018	54.23617	10/25/2019	67.2415	10/24/2020	29.42465
10/26/2018	43.56111	10/26/2019	87.2921	10/25/2020	27.65424
10/27/2018	35.62125	10/27/2019	118.3731	10/26/2020	22.96924
10/28/2018	37.5314	10/28/2019	119.9673	10/27/2020	25.79528
10/29/2018	42.29965	10/29/2019	100.5476	10/28/2020	15.86319
10/30/2018	55.61758	10/30/2019	105.2638	10/29/2020	12.43083
10/31/2018	44.5014	10/31/2019	118.2037	10/30/2020	14.61806
11/1/2018	51.27611	11/1/2019	126.2809	10/31/2020	19.5075
11/2/2018	56.74715	11/2/2019	162.6253	11/1/2020	32.95451
11/3/2018	53.99375	11/3/2019	100.4274	11/2/2020	50.14361
11/4/2018	66.89396	11/4/2019	217.6946	11/3/2020	62.4509
11/5/2018	70.39326	11/5/2019	171.6877	11/4/2020	75.90618
11/6/2018	101.0361	11/6/2019	139.9951	11/5/2020	77.12333
11/7/2018	105.7923	11/7/2019	123.0266	11/6/2020	58.2216
11/8/2018	88.51729	11/8/2019	69.32813	11/7/2020	48.8959
11/9/2018	79.97465	11/9/2019	65.7875	11/8/2020	46.03646
11/10/2018	69.27354	11/10/2019	60.15465	11/9/2020	27.00674
11/11/2018	78.69854	11/11/2019	96.49063	11/10/2020	16.25528
11/12/2018	79.06187	11/12/2019	127.7669	11/11/2020	17.70486
11/13/2018	89.22551	11/13/2019	87.84827	11/12/2020	24.33604
11/14/2018	120.0434	11/14/2019	74.27368	11/13/2020	34.8134
11/15/2018	75.77528	11/15/2019	78.9382	11/14/2020	56.64208
11/16/2018	95.70007	11/16/2019	77.32861	11/15/2020	
11/17/2018	133.4117	11/17/2019	49.92757	11/16/2020	
11/18/2018	93.68646	11/18/2019	97.67368	11/17/2020	
11/19/2018	95.90778	11/19/2019	113.4965	11/18/2020	
11/20/2018	114.4235	11/20/2019	98.67458	11/19/2020	
11/21/2018	109.3624	11/21/2019	81.82597	11/20/2020	

11/22/2018	89.41047	11/22/2019	89.59965	11/21/2020	
11/23/2018	78.27614	11/23/2019	116.3692	11/22/2020	
11/24/2018	114.2467	11/24/2019	120.6197	11/23/2020	
11/25/2018	86.15704	11/25/2019	117.745	11/24/2020	
11/26/2018	52.32963	11/26/2019	120.9939	11/25/2020	
11/27/2018	44.95361	11/27/2019	100.5893	11/26/2020	
11/28/2018	42.27142	11/28/2019	66.77924	11/27/2020	
11/29/2018	51.32679	11/29/2019	53.07438	11/28/2020	
11/30/2018	80.53205	11/30/2019	58.12445	11/29/2020	
12/1/2018	99.67626	12/1/2019	88.1791	11/30/2020	
12/2/2018	115.634	12/2/2019	99.30764	12/1/2020	
12/3/2018	87.98233	12/3/2019	114.6648	12/2/2020	
12/4/2018	87.26681	12/4/2019	94.41486	12/3/2020	119.918
12/5/2018	95.95785	12/5/2019	76.64535	12/4/2020	55.72972
12/6/2018	102.8152	12/6/2019	60.63701	12/5/2020	68.26563
12/7/2018	104.6648	12/7/2019	61.04891	12/6/2020	77.98562
12/8/2018	85.78753	12/8/2019	30.46833	12/7/2020	95.54715
12/9/2018	62.59483	12/9/2019	14.2	12/8/2020	151.6193
12/10/2018	74.45106	12/10/2019	14.2	12/9/2020	132.9438
12/11/2018	59.48323	12/11/2019	14.2	12/10/2020	129.8092
12/12/2018	32.18763	12/12/2019	14.2	12/11/2020	134.2433
12/13/2018	40.33383	12/13/2019	14.2	12/12/2020	125.0919
12/14/2018	50.86204	12/14/2019	14.2	12/13/2020	72.42431
12/15/2018	66.83875	12/15/2019	14.2	12/14/2020	87.9275
12/16/2018	56.17433	12/16/2019	14.2	12/15/2020	85.42326
12/17/2018	43.73123	12/17/2019	14.2	12/16/2020	71.2118
12/18/2018	38.75263	12/18/2019	14.2	12/17/2020	129.3419
12/19/2018		12/19/2019	14.2	12/18/2020	120.0602
12/20/2018		12/20/2019	14.2	12/19/2020	120.2224
12/21/2018		12/21/2019	90.07426	12/20/2020	129.1443

12/22/2018	12/22/2019	181.4563	12/21/2020	156.7711
12/23/2018	12/23/2019	108.6255	12/22/2020	134.235
12/24/2018	12/24/2019	79.21938	12/23/2020	97.84775
12/25/2018	12/25/2019	86.63125	12/24/2020	89.85285
12/26/2018	12/26/2019	70.73604	12/25/2020	106.9421
12/27/2018	12/27/2019	91.58306	12/26/2020	167.7007
12/28/2018	12/28/2019	92.8634	12/27/2020	145.58
12/29/2018	12/29/2019	77.04882	12/28/2020	102.2374
12/30/2018	12/30/2019	50.27688	12/29/2020	118.5476
12/31/2018	12/31/2019		12/30/2020	107.8847
			12/31/2020	115.9913

#### PM<sub>2.5</sub> daily average for Nepalgunj station

2018	PM2.5 daily	2019	PM2.5 daily	2020	PM2.5 daily
1/1/2018		1/1/2019		1/1/2020	
1/2/2018		1/2/2019		1/2/2020	
1/3/2018		1/3/2019		1/3/2020	
1/4/2018		1/4/2019		1/4/2020	
1/5/2018		1/5/2019		1/5/2020	
1/6/2018		1/6/2019		1/6/2020	
1/7/2018		1/7/2019		1/7/2020	
1/8/2018		1/8/2019		1/8/2020	
1/9/2018		1/9/2019		1/9/2020	

1/10/2018	1/10/2019		1/10/2020
1/11/2018	1/11/2019	201.7894	1/11/2020
1/12/2018	1/12/2019	145.9938	1/12/2020
1/13/2018	1/13/2019	127.1095	1/13/2020
1/14/2018	1/14/2019	109.069	1/14/2020
1/15/2018	1/15/2019	160.7324	1/15/2020
1/16/2018	1/16/2019	183.1772	1/16/2020
1/17/2018	1/17/2019	160.0444	1/17/2020
1/18/2018	1/18/2019	128.6318	1/18/2020
1/19/2018	1/19/2019	156.2905	1/19/2020
1/20/2018	1/20/2019	153.2752	1/20/2020
1/21/2018	1/21/2019	96.68479	1/21/2020
1/22/2018	1/22/2019	74.85667	1/22/2020
1/23/2018	1/23/2019	38.37535	1/23/2020
1/24/2018	1/24/2019	65.21807	1/24/2020
1/25/2018	1/25/2019	42.13646	1/25/2020
1/26/2018	1/26/2019	63.27389	1/26/2020
1/27/2018	1/27/2019	60.84528	1/27/2020
1/28/2018	1/28/2019	96.42146	1/28/2020

1/29/2018	1/29/2019	106.1399	1/29/2020	
1/30/2018	1/30/2019	144.4389	1/30/2020	
1/31/2018	1/31/2019	96.82979	1/31/2020	
2/1/2018	2/1/2019	89.52715	2/1/2020	
2/2/2018	2/2/2019	80.87681	2/2/2020	
2/3/2018	2/3/2019	113.1769	2/3/2020	77.90184
2/4/2018	2/4/2019	117.4607	2/4/2020	50.84035
2/5/2018	2/5/2019	107.1032	2/5/2020	50.7916
2/6/2018	2/6/2019	107.4984	2/6/2020	57.22208
2/7/2018	2/7/2019	38.1575	2/7/2020	42.36146
2/8/2018	2/8/2019	58.26195	2/8/2020	54.76333
2/9/2018	2/9/2019	52.31993	2/9/2020	30.36583
2/10/2018	2/10/2019	80.98194	2/10/2020	59.75972
2/11/2018	2/11/2019	100.5615	2/11/2020	65.71417
2/12/2018	2/12/2019	94.50833	2/12/2020	65.94646
2/13/2018	2/13/2019	94.60132	2/13/2020	71.72326
2/14/2018	2/14/2019	79.35299	2/14/2020	66.50153
2/15/2018	2/15/2019	38.96764	2/15/2020	48.14889
2/16/2018	2/16/2019	22.51875	2/16/2020	46.13285

2/17/2018	2/17/2019	71.13264	2/17/2020	40.60472
2/18/2018	2/18/2019	82.37382	2/18/2020	50.28208
2/19/2018	2/19/2019	69.23271	2/19/2020	39.16056
2/20/2018	2/20/2019	55.40021	2/20/2020	38.27125
2/21/2018	2/21/2019	79.32549	2/21/2020	31.48563
2/22/2018	2/22/2019	55.4566	2/22/2020	16.94688
2/23/2018	2/23/2019	55.99965	2/23/2020	13.69194
2/24/2018	2/24/2019	102.2225	2/24/2020	15.54424
2/25/2018	2/25/2019	105.6431	2/25/2020	14.0341
2/26/2018	2/26/2019	32.79174	2/26/2020	10.96556
2/27/2018	2/27/2019	17.83076	2/27/2020	18.92667
2/28/2018	2/28/2019	23.72069	2/28/2020	19.00375
3/1/2018	3/1/2019	75.25035	2/29/2020	17.11118
3/2/2018	3/2/2019	62.31347	3/1/2020	19.68306
3/3/2018	3/3/2019	47.55694	3/2/2020	22.5775
3/4/2018	3/4/2019	50.49771	3/3/2020	31.04139
3/5/2018	3/5/2019	49.70778	3/4/2020	23.58521
3/6/2018	3/6/2019	59.80333	3/5/2020	18.92688
3/7/2018	3/7/2019	69.38389	3/6/2020	23.29375



3/8/2018	3/8/2019	57.89375	3/7/2020	5.362083
3/9/2018	3/9/2019	57.27424	3/8/2020	13.05083
3/10/2018	3/10/2019	52.34311	3/9/2020	26.37438
3/11/2018	3/11/2019	36.86435	3/10/2020	26.39701
3/12/2018	3/12/2019	34.9773	3/11/2020	21.54722
3/13/2018	3/13/2019	28.04393	3/12/2020	13.47688
3/14/2018	3/14/2019	40.39062	3/13/2020	8.590764
3/15/2018	3/15/2019	56.41333	3/14/2020	7.101806
3/16/2018	3/16/2019		3/15/2020	7.818889
3/17/2018	3/17/2019		3/16/2020	16.61771
3/18/2018	3/18/2019		3/17/2020	28.72681
3/19/2018	3/19/2019		3/18/2020	30.49618
3/20/2018	3/20/2019		3/19/2020	27.99826
3/21/2018	3/21/2019		3/20/2020	22.02104
3/22/2018	3/22/2019		3/21/2020	24.535
3/23/2018	3/23/2019		3/22/2020	18.12715
3/24/2018	3/24/2019		3/23/2020	14.27007
3/25/2018	3/25/2019		3/24/2020	20.59861
3/26/2018	3/26/2019		3/25/2020	17.72715

3/27/2018	3/27/2019		3/26/2020	16.95368
3/28/2018	3/28/2019		3/27/2020	20.76889
3/29/2018	3/29/2019	31.05454	3/28/2020	14.64243
3/30/2018	3/30/2019		3/29/2020	17.00021
3/31/2018	3/31/2019		3/30/2020	17.17743
4/1/2018	4/1/2019		3/31/2020	19.52271
4/2/2018	4/2/2019		4/1/2020	16.6784
4/3/2018	4/3/2019		4/2/2020	13.75917
4/4/2018	4/4/2019		4/3/2020	15.33486
4/5/2018	4/5/2019		4/4/2020	23.5634
4/6/2018	4/6/2019		4/5/2020	15.7341
4/7/2018	4/7/2019		4/6/2020	14.29104
4/8/2018	4/8/2019		4/7/2020	15.48986
4/9/2018	4/9/2019		4/8/2020	15.21035
4/10/2018	4/10/2019	16.45319	4/9/2020	8.617431
4/11/2018	4/11/2019		4/10/2020	13.84132
4/12/2018	4/12/2019		4/11/2020	8.912153
4/13/2018	4/13/2019		4/12/2020	13.55153
4/14/2018	4/14/2019		4/13/2020	11.4334

4/15/2018	4/15/2019		4/14/2020	12.32681
4/16/2018	4/16/2019	57.83194	4/15/2020	10.0725
4/17/2018	4/17/2019	48.82382	4/16/2020	10.55153
4/18/2018	4/18/2019	36.05097	4/17/2020	12.4909
4/19/2018	4/19/2019	50.79944	4/18/2020	11.50174
4/20/2018	4/20/2019	58.62208	4/19/2020	10.88889
4/21/2018	4/21/2019	92.57417	4/20/2020	9.93102
4/22/2018	4/22/2019	70.35438	4/21/2020	5.333109
4/23/2018	4/23/2019	61.52583	4/22/2020	6.682153
4/24/2018	4/24/2019	67.24257	4/23/2020	6.07503
4/25/2018	4/25/2019	79.36806	4/24/2020	8.009444
4/26/2018	4/26/2019	80.30403	4/25/2020	11.11361
4/27/2018	4/27/2019	72.10958	4/26/2020	7.790417
4/28/2018	4/28/2019	100.1171	4/27/2020	4.975486
4/29/2018	4/29/2019	87.94	4/28/2020	5.365625
4/30/2018	4/30/2019	97.45528	4/29/2020	5.585278
5/1/2018	5/1/2019	78.83542	4/30/2020	6.945903
5/2/2018	5/2/2019	51.63771	5/1/2020	5.980972
5/3/2018	5/3/2019	35.34854	5/2/2020	6.172569

5/4/2018	5/4/2019	50.0265	5/3/2020	7.630347
5/5/2018	5/5/2019	65.45674	5/4/2020	6.793264
5/6/2018	5/6/2019	67.76188	5/5/2020	7.459583
5/7/2018	5/7/2019	68.46465	5/6/2020	6.961389
5/8/2018	5/8/2019	91.44591	5/7/2020	5.503125
5/9/2018	5/9/2019	80.84757	5/8/2020	7.843403
5/10/2018	5/10/2019	113.7433	5/9/2020	9.980695
5/11/2018	5/11/2019	98.26611	5/10/2020	9.881806
5/12/2018	5/12/2019	72.14347	5/11/2020	5.885278
5/13/2018	5/13/2019	80.0159	5/12/2020	12.26042
5/14/2018	5/14/2019	71.48683	5/13/2020	15.31785
5/15/2018	5/15/2019		5/14/2020	18.03646
5/16/2018	5/16/2019		5/15/2020	21.48583
5/17/2018	5/17/2019		5/16/2020	17.75771
5/18/2018	5/18/2019	37.91346	5/17/2020	13.26778
5/19/2018	5/19/2019	56.43445	5/18/2020	15.115
5/20/2018	5/20/2019	63.594	5/19/2020	17.80049
5/21/2018	5/21/2019	78.50394	5/20/2020	10.60007
5/22/2018	5/22/2019	73.56529	5/21/2020	11.67347

5/23/2018	5/23/2019	82.3257	5/22/2020	13.69125
5/24/2018	5/24/2019	47.34856	5/23/2020	8.310695
5/25/2018	5/25/2019	40.58771	5/24/2020	11.9591
5/26/2018	5/26/2019	45.38542	5/25/2020	13.28528
5/27/2018	5/27/2019	49.07878	5/26/2020	10.5925
5/28/2018	5/28/2019	57.26306	5/27/2020	10.49639
5/29/2018	5/29/2019	59.55667	5/28/2020	5.291875
5/30/2018	5/30/2019	51.25806	5/29/2020	6.119583
5/31/2018	5/31/2019	34.57396	5/30/2020	5.991875
6/1/2018	6/1/2019	32.14896	5/31/2020	7.047014
6/2/2018	6/2/2019	37.16097	6/1/2020	5.082014
6/3/2018	6/3/2019	34.63181	6/2/2020	5.375347
6/4/2018	6/4/2019	39.46681	6/3/2020	7.031944
6/5/2018	6/5/2019	41.82951	6/4/2020	6.898819
6/6/2018	6/6/2019	37.77634	6/5/2020	4.497986
6/7/2018	6/7/2019	28.15639	6/6/2020	2.827986
6/8/2018	6/8/2019	46.49111	6/7/2020	4.268611
6/9/2018	6/9/2019	53.99375	6/8/2020	6.242986
6/10/2018	6/10/2019	39.95465	6/9/2020	7.539028

6/11/2018	6/11/2019	35.69799	6/10/2020	7.260625
6/12/2018	6/12/2019	38.82736	6/11/2020	7.849861
6/13/2018	6/13/2019	38.965	6/12/2020	7.593611
6/14/2018	6/14/2019	60.50952	6/13/2020	3.420278
6/15/2018	6/15/2019	62.08202	6/14/2020	2.668333
6/16/2018	6/16/2019	66.56271	6/15/2020	2.237083
6/17/2018	6/17/2019	52.86958	6/16/2020	1.851736
6/18/2018	6/18/2019	49.75408	6/17/2020	3.078889
6/19/2018	6/19/2019	61.89188	6/18/2020	2.452569
6/20/2018	6/20/2019	38.39445	6/19/2020	2.937361
6/21/2018	6/21/2019	39.01931	6/20/2020	2.210625
6/22/2018	6/22/2019	21.80625	6/21/2020	3.782824
6/23/2018	6/23/2019	9.859236	6/22/2020	2.350903
6/24/2018	6/24/2019	17.18674	6/23/2020	3.693542
6/25/2018	6/25/2019	19.83236	6/24/2020	4.164722
6/26/2018	6/26/2019	25.65493	6/25/2020	3.026667
6/27/2018	6/27/2019	28.86785	6/26/2020	3.24125
6/28/2018	6/28/2019	45.24354	6/27/2020	4.976945
6/29/2018	6/29/2019	41.56208	6/28/2020	5.820208

6/30/2018	6/30/2019	29.02972	6/29/2020	3.264028
7/1/2018	7/1/2019	34.05576	6/30/2020	4.923681
7/2/2018	7/2/2019	22.85118	7/1/2020	6.034167
7/3/2018	7/3/2019	10.91174	7/2/2020	7.352917
7/4/2018	7/4/2019	17.17583	7/3/2020	7.115694
7/5/2018	7/5/2019	18.70354	7/4/2020	6.931181
7/6/2018	7/6/2019	6.683264	7/5/2020	4.410833
7/7/2018	7/7/2019	8.786042	7/6/2020	3.452639
7/8/2018	7/8/2019	10.94944	7/7/2020	2.244236
7/9/2018	7/9/2019	6.726875	7/8/2020	3.455556
7/10/2018	7/10/2019	14.82576	7/9/2020	4.549792
7/11/2018	7/11/2019	8.991181	7/10/2020	2.686458
7/12/2018	7/12/2019	32.01035	7/11/2020	3.224792
7/13/2018	7/13/2019	19.76764	7/12/2020	5.052153
7/14/2018	7/14/2019	41.56479	7/13/2020	5.954514
7/15/2018	7/15/2019	33.15125	7/14/2020	4.693542
7/16/2018	7/16/2019	27.81556	7/15/2020	4.374792
7/17/2018	7/17/2019	28.31854	7/16/2020	4.381667
7/18/2018	7/18/2019	30.19965	7/17/2020	4.941667

7/19/2018		7/19/2019	30.59132	7/18/2020	4.908542
7/20/2018		7/20/2019	18.82181	7/19/2020	5.276319
7/21/2018		7/21/2019	15.11618	7/20/2020	4.114861
7/22/2018		7/22/2019	24.33194	7/21/2020	3.654792
7/23/2018		7/23/2019	25.98894	7/22/2020	3.603889
7/24/2018		7/24/2019	11.47681	7/23/2020	3.513194
7/25/2018		7/25/2019	8.116458	7/24/2020	3.518542
7/26/2018		7/26/2019	12.53396	7/25/2020	4.401736
7/27/2018	0	7/27/2019	10.71375	7/26/2020	5.711667
7/28/2018		7/28/2019	9.561181	7/27/2020	9.225208
7/29/2018		7/29/2019	11.5666	7/28/2020	4.375903
7/30/2018		7/30/2019	13.04694	7/29/2020	3.335069
7/31/2018		7/31/2019	13.14632	7/30/2020	4.01375
8/1/2018		8/1/2019	17.28938	7/31/2020	4.373542
8/2/2018		8/2/2019	16.90551	8/1/2020	2.736736
8/3/2018		8/3/2019	12.79063	8/2/2020	3.961875
8/4/2018		8/4/2019	15.98313	8/3/2020	4.859931
8/5/2018		8/5/2019	11.07458	8/4/2020	4.829792
8/6/2018		8/6/2019	13.33501	8/5/2020	3.061385



8/7/2018		8/7/2019	8.362917	8/6/2020	1.850347
8/8/2018		8/8/2019	11.5716	8/7/2020	3.078333
8/9/2018		8/9/2019	11.81799	8/8/2020	2.574931
8/10/2018		8/10/2019	11.11708	8/9/2020	7.152153
8/11/2018		8/11/2019	14.54235	8/10/2020	4.125417
8/12/2018		8/12/2019	22.45986	8/11/2020	3.606944
8/13/2018	0	8/13/2019	11.0766	8/12/2020	2.69125
8/14/2018		8/14/2019	12.26354	8/13/2020	3.814375
8/15/2018		8/15/2019	17.07806	8/14/2020	3.289306
8/16/2018	9.766079	8/16/2019	17.92264	8/15/2020	2.786042
8/17/2018	14.2718	8/17/2019	11.68271	8/16/2020	1.856042
8/18/2018	15.36368	8/18/2019	14.69944	8/17/2020	1.764826
8/19/2018	14.93995	8/19/2019	14.37215	8/18/2020	
8/20/2018	12.49687	8/20/2019	13.95826	8/19/2020	
8/21/2018	11.39156	8/21/2019	17.90458	8/20/2020	1.048195
8/22/2018	11.68633	8/22/2019	14.96007	8/21/2020	1.199574
8/23/2018	12.49653	8/23/2019	20.38403	8/22/2020	2.148681
8/24/2018	10.98424	8/24/2019	8.61625	8/23/2020	3.520833
8/25/2018	11.90283	8/25/2019	12.40986	8/24/2020	3.029722

8/26/2018	12.78195	8/26/2019	11.23979	8/25/2020	2.606667
8/27/2018	12.48642	8/27/2019	14.5625	8/26/2020	3.720833
8/28/2018	13.12972	8/28/2019	18.58493	8/27/2020	2.223264
8/29/2018	10.17621	8/29/2019	16.78653	8/28/2020	3.364444
8/30/2018	10.83567	8/30/2019	18.61181	8/29/2020	4.895556
8/31/2018	15.90116	8/31/2019	13.13299	8/30/2020	4.817708
9/1/2018	12.21215	9/1/2019	16.89583	8/31/2020	3.691319
9/2/2018	15.83241	9/2/2019	19.53646	9/1/2020	4.945903
9/3/2018	15.085	9/3/2019	15.15333	9/2/2020	4.921736
9/4/2018	16.95903	9/4/2019	10.9866	9/3/2020	4.356944
9/5/2018	15.24389	9/5/2019	10.02486	9/4/2020	6.047153
9/6/2018	18.08876	9/6/2019	10.5816	9/5/2020	7.034028
9/7/2018	9.497471	9/7/2019	9.810139	9/6/2020	8.23625
9/8/2018	21.34951	9/8/2019	16.40637	9/7/2020	8.574514
9/9/2018	22.67167	9/9/2019	14.2517	9/8/2020	8.620486
9/10/2018	21.09389	9/10/2019	11.70319	9/9/2020	6.530578
9/11/2018	29.91592	9/11/2019	14.35285	9/10/2020	5.131165
9/12/2018	22.6669	9/12/2019	16.83532	9/11/2020	8.045208
9/13/2018	27.30695	9/13/2019	20.64189	9/12/2020	7.157778

9/14/2018	25.89215	9/14/2019	18.60035	9/13/2020	8.090139
9/15/2018	35.20681	9/15/2019	28.40924	9/14/2020	6.22
9/16/2018	44.20189	9/16/2019	23.03056	9/15/2020	9.849236
9/17/2018	47.90409	9/17/2019	17.15708	9/16/2020	9.65245
9/18/2018	43.0865	9/18/2019	6.699306	9/17/2020	8.730833
9/19/2018	49.89122	9/19/2019	12.19778	9/18/2020	9.222292
9/20/2018	32.6031	9/20/2019	15.10236	9/19/2020	5.824931
9/21/2018	18.13013	9/21/2019	15.1859	9/20/2020	8.073472
9/22/2018	14.92158	9/22/2019	16.56715	9/21/2020	3.495556
9/23/2018		9/23/2019	16.63969	9/22/2020	1.426667
9/24/2018		9/24/2019	19.77889	9/23/2020	1.409236
9/25/2018		9/25/2019	19.94854	9/24/2020	0.782581
9/26/2018		9/26/2019	16.30493	9/25/2020	4.370278
9/27/2018		9/27/2019	12.37833	9/26/2020	8.792361
9/28/2018		9/28/2019	10.39419	9/27/2020	15.76264
9/29/2018		9/29/2019	10.30208	9/28/2020	16.13903
9/30/2018		9/30/2019	12.32896	9/29/2020	14.18281
10/1/2018		10/1/2019	20.64104	9/30/2020	17.12341
10/2/2018		10/2/2019	19.02326	10/1/2020	14.46604

10/3/2018		10/3/2019	22.28729	10/2/2020	13.57681
10/4/2018	76.67059	10/4/2019	31.97861	10/3/2020	13.9109
10/5/2018	57.49499	10/5/2019	49.75195	10/4/2020	15.53972
10/6/2018	68.87204	10/6/2019	54.99722	10/5/2020	15.32813
10/7/2018	62.5965	10/7/2019	61.42201	10/6/2020	14.53215
10/8/2018	60.85965	10/8/2019	54.87771	10/7/2020	16.14625
10/9/2018	68.37672	10/9/2019	43.98063	10/8/2020	16.93542
10/10/2018	71.8559	10/10/2019	46.26549	10/9/2020	16.97875
10/11/2018	53.1154	10/11/2019	64.97306	10/10/2020	16.39458
10/12/2018	39.80785	10/12/2019	85.74563	10/11/2020	13.04507
10/13/2018	42.99444	10/13/2019	77.13181	10/12/2020	11.38882
10/14/2018	82.83694	10/14/2019	77.28201	10/13/2020	11.08396
10/15/2018	96.22866	10/15/2019	74.64875	10/14/2020	11.77944
10/16/2018	71.19165	10/16/2019	55.24764	10/15/2020	13.86493
10/17/2018	66.32776	10/17/2019	55.28861	10/16/2020	17.41186
10/18/2018	74.81998	10/18/2019	63.44854	10/17/2020	16.79101
10/19/2018	56.13465	10/19/2019	65.48563	10/18/2020	24.10729
10/20/2018	65.23007	10/20/2019	80.26576	10/19/2020	21.73694
10/21/2018	67.79002	10/21/2019	90.37257	10/20/2020	21.54056

10/22/2018	72.10278	10/22/2019	106.7594	10/21/2020	21.62667
10/23/2018	72.98651	10/23/2019	88.88375	10/22/2020	22.74847
10/24/2018	67.29694	10/24/2019	79.40584	10/23/2020	24.00521
10/25/2018	69.89041	10/25/2019	76.53609	10/24/2020	29.7375
10/26/2018	58.58708	10/26/2019	98.04658	10/25/2020	27.86694
10/27/2018	47.91556	10/27/2019	129.6799	10/26/2020	23.21118
10/28/2018	52.06533	10/28/2019	129.1631	10/27/2020	26.02833
10/29/2018	56.91222	10/29/2019	108.3939	10/28/2020	15.99187
10/30/2018	74.46766	10/30/2019	114.2733	10/29/2020	12.60799
10/31/2018	63.28175	10/31/2019	128.5315	10/30/2020	14.80243
11/1/2018	74.02743	11/1/2019	138.8747	10/31/2020	19.86542
11/2/2018	73.20465	11/2/2019	179.077	11/1/2020	33.29104
11/3/2018	69.75618	11/3/2019	109.5564	11/2/2020	50.58986
11/4/2018	81.28979	11/4/2019	240.0043	11/3/2020	62.92576
11/5/2018	87.4977	11/5/2019	186.5247	11/4/2020	76.49243
11/6/2018	121.5591	11/6/2019	149.3355	11/5/2020	77.6225
11/7/2018	124.3212	11/7/2019	133.039	11/6/2020	58.52344
11/8/2018	103.4394	11/8/2019	76.04188	11/7/2020	49.18847
11/9/2018	92.22097	11/9/2019	71.91715	11/8/2020	46.26243

11/10/2018	81.81951	11/10/2019	65.29097	11/9/2020	27.17521
11/11/2018	93.05687	11/11/2019	102.0715	11/10/2020	16.38076
11/12/2018	93.06194	11/12/2019	134.9996	11/11/2020	18.005
11/13/2018	106.7256	11/13/2019	92.7416	11/12/2020	24.64264
11/14/2018	134.6658	11/14/2019	78.24903	11/13/2020	35.18049
11/15/2018	86.38764	11/15/2019	84.5241	11/14/2020	57.0486
11/16/2018	108.5751	11/16/2019	82.49903	11/15/2020	
11/17/2018	151.329	11/17/2019	54.37479	11/16/2020	
11/18/2018	110.13	11/18/2019	102.612	11/17/2020	
11/19/2018	111.3474	11/19/2019	118.0152	11/18/2020	
11/20/2018	133.2076	11/20/2019	102.9628	11/19/2020	
11/21/2018	126.3285	11/21/2019	85.76833	11/20/2020	
11/22/2018	105.2552	11/22/2019	94.11083	11/21/2020	
11/23/2018	90.75128	11/23/2019	121.1992	11/22/2020	
11/24/2018	130.3638	11/24/2019	125.3408	11/23/2020	
11/25/2018	102.7746	11/25/2019	122.8327	11/24/2020	
11/26/2018	66.55402	11/26/2019	125.5472	11/25/2020	
11/27/2018	56.26943	11/27/2019	104.3642	11/26/2020	
11/28/2018	52.11873	11/28/2019	70.61695	11/27/2020	

11/29/2018	63.454	11/29/2019	55.84597	11/28/2020	
11/30/2018	92.66755	11/30/2019	60.50215	11/29/2020	
12/1/2018	110.6755	12/1/2019	91.02702	11/30/2020	
12/2/2018	126.1869	12/2/2019	102.7674	12/1/2020	
12/3/2018	98.09265	12/3/2019	119.0856	12/2/2020	
12/4/2018	99.99986	12/4/2019	99.65306	12/3/2020	137.2822
12/5/2018	107.1192	12/5/2019	81.335	12/4/2020	61.77826
12/6/2018	113.7234	12/6/2019	65.71882	12/5/2020	75.19097
12/7/2018	113.7339	12/7/2019	64.76265	12/6/2020	85.22917
12/8/2018	93.6036	12/8/2019	36.09438	12/7/2020	102.8046
12/9/2018	70.4309	12/9/2019	20.6	12/8/2020	162.5262
12/10/2018	86.54064	12/10/2019	20.6	12/9/2020	138.3053
12/11/2018	65.86072	12/11/2019	20.6	12/10/2020	136.2666
12/12/2018	33.44785	12/12/2019	20.6	12/11/2020	141.2299
12/13/2018	45.75717	12/13/2019	20.6	12/12/2020	129.9991
12/14/2018	55.48671	12/14/2019	20.6	12/13/2020	76.58243
12/15/2018	73.01944	12/15/2019	20.6	12/14/2020	94.32076
12/16/2018	58.32689	12/16/2019	20.6	12/15/2020	92.03007
12/17/2018	55.38476	12/17/2019	20.6	12/16/2020	76.04715

12/18/2018	42.89169	12/18/2019	20.6	12/17/2020	134.6566
12/19/2018		12/19/2019	20.6	12/18/2020	127.5335
12/20/2018		12/20/2019	20.6	12/19/2020	125.5421
12/21/2018		12/21/2019	97.27989	12/20/2020	133.6696
12/22/2018		12/22/2019	189.2634	12/21/2020	164.1999
12/23/2018		12/23/2019	112.9251	12/22/2020	143.1064
12/24/2018		12/24/2019	81.27569	12/23/2020	105.5713
12/25/2018		12/25/2019	89.17604	12/24/2020	98.55514
12/26/2018		12/26/2019	73.71854	12/25/2020	113.4862
12/27/2018		12/27/2019	95.46347	12/26/2020	176.7365
12/28/2018		12/28/2019	95.35965	12/27/2020	152.9974
12/29/2018		12/29/2019	78.84937	12/28/2020	107.9581
12/30/2018		12/30/2019	53.15404	12/29/2020	124.8945
12/31/2018		12/31/2019		12/30/2020	112.9779
				12/31/2020	120.1125

PM<sub>10</sub> daily average for Nepalgunj station

2018	PM10daily	2019	PM10 daily	2020	PM10 daily
1/1/2018		1/1/2019		1/1/2020	



1/2/2018	1/1/2019		1/2/2020
1/3/2018	1/2/2019		1/3/2020
1/4/2018	1/3/2019		1/4/2020
1/5/2018	1/4/2019		1/5/2020
1/6/2018	1/5/2019		1/6/2020
1/7/2018	1/6/2019		1/7/2020
1/8/2018	1/7/2019		1/8/2020
1/9/2018	1/8/2019		1/9/2020
1/10/2018	1/9/2019		1/10/2020
1/11/2018	1/10/2019		1/11/2020
1/12/2018	1/11/2019	304.5344	1/12/2020
1/13/2018	1/12/2019	208.4526	1/13/2020
1/14/2018	1/13/2019	181.2037	1/14/2020
1/15/2018	1/14/2019	152.1107	1/15/2020
1/16/2018	1/15/2019	222.2146	1/16/2020
1/17/2018	1/16/2019	234.2606	1/17/2020
1/18/2018	1/17/2019	210.6654	1/18/2020
1/19/2018	1/18/2019	174.5218	1/19/2020
1/20/2018	1/19/2019	210.0655	1/20/2020

1/21/2018	1/20/2019	209.1569	1/21/2020	
1/22/2018	1/21/2019	156.3349	1/22/2020	
1/23/2018	1/22/2019	112.4207	1/23/2020	
1/24/2018	1/23/2019	66.80236	1/24/2020	
1/25/2018	1/24/2019	92.8544	1/25/2020	
1/26/2018	1/25/2019	51.30743	1/26/2020	
1/27/2018	1/26/2019	72.38521	1/27/2020	
1/28/2018	1/27/2019	71.17306	1/28/2020	
1/29/2018	1/28/2019	116.9053	1/29/2020	
1/30/2018	1/29/2019	128.2184	1/30/2020	
1/31/2018	1/30/2019	178.9896	1/31/2020	
2/1/2018	1/31/2019	130.4557	2/1/2020	
2/2/2018	2/1/2019	120.8684	2/2/2020	
2/3/2018	2/2/2019	108.9444	2/3/2020	84.59862
2/4/2018	2/3/2019	133.6615	2/4/2020	51.91674
2/5/2018	2/4/2019	142.8662	2/5/2020	52.05264
2/6/2018	2/5/2019	120.8654	2/6/2020	58.60924
2/7/2018	2/6/2019	121.9399	2/7/2020	43.19958
2/8/2018	2/7/2019	39.58799	2/8/2020	55.75764

2/9/2018	2/8/2019	73.20118	2/9/2020	31.16562
2/10/2018	2/9/2019	62.30222	2/10/2020	60.86424
2/11/2018	2/10/2019	100.6753	2/11/2020	66.9525
2/12/2018	2/11/2019	128.172	2/12/2020	67.09694
2/13/2018	2/12/2019	116.6169	2/13/2020	72.69556
2/14/2018	2/13/2019	119.5539	2/14/2020	66.86153
2/15/2018	2/14/2019	94.42924	2/15/2020	48.56139
2/16/2018	2/15/2019	45.22104	2/16/2020	46.74312
2/17/2018	2/16/2019	34.30229	2/17/2020	41.11549
2/18/2018	2/17/2019	86.47535	2/18/2020	51.21514
2/19/2018	2/18/2019	101.674	2/19/2020	40.1409
2/20/2018	2/19/2019	91.72236	2/20/2020	39.11146
2/21/2018	2/20/2019	74.62667	2/21/2020	32.00674
2/22/2018	2/21/2019	111.1261	2/22/2020	17.13917
2/23/2018	2/22/2019	76.44556	2/23/2020	15.66785
2/24/2018	2/23/2019	72.50924	2/24/2020	15.87993
2/25/2018	2/24/2019	125.4673	2/25/2020	14.77896
2/26/2018	2/25/2019	140.3751	2/26/2020	11.39
2/27/2018	2/26/2019	51.70917	2/27/2020	20.4234

2/28/2018	2/27/2019	21.0791	2/28/2020	20.11625
3/1/2018	2/28/2019	29.63312	2/29/2020	17.98104
3/2/2018	3/1/2019	99.31292	3/1/2020	20.65076
3/3/2018	3/2/2019	79.18944	3/2/2020	25.2175
3/4/2018	3/3/2019	62.19389	3/3/2020	34.76854
3/5/2018	3/4/2019	64.34444	3/4/2020	25.83778
3/6/2018	3/5/2019	60.87056	3/5/2020	20.05868
3/7/2018	3/6/2019	72.95562	3/6/2020	24.40382
3/8/2018	3/7/2019	84.92472	3/7/2020	5.50875
3/9/2018	3/8/2019	72.69861	3/8/2020	13.68389
3/10/2018	3/9/2019	73.99493	3/9/2020	27.13472
3/11/2018	3/10/2019	65.32048	3/10/2020	27.05271
3/12/2018	3/11/2019	47.31065	3/11/2020	22.48326
3/13/2018	3/12/2019	52.18389	3/12/2020	13.90188
3/14/2018	3/13/2019	40.55218	3/13/2020	8.913611
3/15/2018	3/14/2019	62.2933	3/14/2020	7.332292
3/16/2018	3/15/2019	62.11417	3/15/2020	8.057708
3/17/2018	3/16/2019		3/16/2020	17.28694
3/18/2018	3/17/2019		3/17/2020	29.82333

3/19/2018	3/18/2019		3/18/2020	31.94215
3/20/2018	3/19/2019		3/19/2020	29.60333
3/21/2018	3/20/2019		3/20/2020	23.16417
3/22/2018	3/21/2019		3/21/2020	25.73389
3/23/2018	3/22/2019		3/22/2020	18.51306
3/24/2018	3/23/2019		3/23/2020	14.63444
3/25/2018	3/24/2019		3/24/2020	21.04653
3/26/2018	3/25/2019		3/25/2020	18.98688
3/27/2018	3/26/2019		3/26/2020	18.12444
3/28/2018	3/27/2019		3/27/2020	22.01701
3/29/2018	3/28/2019		3/28/2020	15.14632
3/30/2018	3/29/2019	60.29091	3/29/2020	17.75625
3/31/2018	3/30/2019		3/30/2020	17.98521
4/1/2018	3/31/2019		3/31/2020	20.30889
4/2/2018	4/1/2019		4/1/2020	17.70611
4/3/2018	4/2/2019		4/2/2020	14.71535
4/4/2018	4/3/2019		4/3/2020	15.85153
4/5/2018	4/4/2019		4/4/2020	24.44847
4/6/2018	4/5/2019		4/5/2020	16.17833

4/7/2018	4/6/2019		4/6/2020	16.24764
4/8/2018	4/7/2019		4/7/2020	16.79514
4/9/2018	4/8/2019		4/8/2020	16.31979
4/10/2018	4/9/2019		4/9/2020	8.923542
4/11/2018	4/10/2019	37.07584	4/10/2020	14.32576
4/12/2018	4/11/2019		4/11/2020	9.526389
4/13/2018	4/12/2019		4/12/2020	14.62924
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4/15/2018	4/14/2019		4/14/2020	13.26229
4/16/2018	4/15/2019		4/15/2020	10.76007
4/17/2018	4/16/2019	275.2584	4/16/2020	11.71243
4/18/2018	4/17/2019	152.1929	4/17/2020	14.00361
4/19/2018	4/18/2019	111.5016	4/18/2020	13.44861
4/20/2018	4/19/2019	153.9551	4/19/2020	12.16069
4/21/2018	4/20/2019	181.9592	4/20/2020	11.16841
4/22/2018	4/21/2019	271.5582	4/21/2020	5.746772
4/23/2018	4/22/2019	221.934	4/22/2020	6.903264
4/24/2018	4/23/2019	238.1324	4/23/2020	6.544906
4/25/2018	4/24/2019	246.1791	4/24/2020	8.387197

4/26/2018	4/25/2019	236.7038	4/25/2020	11.76597
4/27/2018	4/26/2019	290.6282	4/26/2020	8.222361
4/28/2018	4/27/2019	317.4278	4/27/2020	5.059722
4/29/2018	4/28/2019	373.8346	4/28/2020	5.453472
4/30/2018	4/29/2019	339.1427	4/29/2020	5.764514
5/1/2018	4/30/2019	334.8997	4/30/2020	7.214306
5/2/2018	5/1/2019	351.7859	5/1/2020	6.061389
5/3/2018	5/2/2019	197.2879	5/2/2020	6.255208
5/4/2018	5/3/2019	95.4207	5/3/2020	7.807778
5/5/2018	5/4/2019	118.6272	5/4/2020	7.00625
5/6/2018	5/5/2019	197.2477	5/5/2020	7.600417
5/7/2018	5/6/2019	226.7192	5/6/2020	7.039583
5/8/2018	5/7/2019	219.1751	5/7/2020	5.703264
5/9/2018	5/8/2019	271.5578	5/8/2020	7.986389
5/10/2018	5/9/2019	292.5333	5/9/2020	10.23215
5/11/2018	5/10/2019	362.5586	5/10/2020	10.84528
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5/13/2018	5/12/2019	232.9958	5/12/2020	12.54535
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5/18/2018	5/17/2019		5/17/2020	14.07354
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5/20/2018	5/19/2019	144.9095	5/19/2020	19.21736
5/21/2018	5/20/2019	185.1001	5/20/2020	11.13312
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5/23/2018	5/22/2019	250.0662	5/22/2020	14.71986
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5/26/2018	5/25/2019	178.1444	5/25/2020	14.67146
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5/29/2018	5/28/2019	234.1088	5/28/2020	5.456528
5/30/2018	5/29/2019	224.5452	5/29/2020	6.265278
5/31/2018	5/30/2019	216.8863	5/30/2020	6.701458
6/1/2018	5/31/2019	163.1713	5/31/2020	7.39243
6/2/2018	6/1/2019	120.7615	6/1/2020	5.195625



6/3/2018	6/2/2019	153.2024	6/2/2020	5.575347
6/4/2018	6/3/2019	175.1919	6/3/2020	7.380486
6/5/2018	6/4/2019	147.3926	6/4/2020	6.985208
6/6/2018	6/5/2019	191.2524	6/5/2020	4.546667
6/7/2018	6/6/2019	186.0983	6/6/2020	2.889236
6/8/2018	6/7/2019	140.5899	6/7/2020	4.349653
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6/10/2018	6/9/2019	271.7477	6/9/2020	8.054306
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6/16/2018	6/15/2019	209.2648	6/15/2020	2.285139
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6/19/2018	6/18/2019	174.8212	6/18/2020	2.539931
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6/24/2018	6/23/2019	12.79563	6/23/2020	3.784792
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6/28/2018	6/27/2019	71.3584	6/27/2020	5.031319
6/29/2018	6/28/2019	106.7031	6/28/2020	5.949236
6/30/2018	6/29/2019	100.0213	6/29/2020	3.310833
7/1/2018	6/30/2019	83.8457	6/30/2020	5.010833
7/2/2018	7/1/2019	84.60125	7/1/2020	6.153264
7/3/2018	7/2/2019	63.6684	7/2/2020	7.489097
7/4/2018	7/3/2019	27.55618	7/3/2020	7.292569
7/5/2018	7/4/2019	54.59521	7/4/2020	7.1875
7/6/2018	7/5/2019	50.54757	7/5/2020	4.512708
7/7/2018	7/6/2019	10.60618	7/6/2020	3.637708
7/8/2018	7/7/2019	30.56583	7/7/2020	2.262847
7/9/2018	7/8/2019	18.22007	7/8/2020	3.481875
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8/3/2018		8/2/2019	33.38378	8/2/2020	4.166458
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8/5/2018		8/4/2019	39.18729	8/4/2020	4.908333
8/6/2018		8/5/2019	21.0141	8/5/2020	3.093657
8/7/2018		8/6/2019	26.98568	8/6/2020	2.16625
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8/9/2018		8/8/2019	60.5609	8/8/2020	2.601736
8/10/2018		8/9/2019	61.82292	8/9/2020	7.187083
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8/14/2018		8/13/2019	23.05486	8/13/2020	3.833542
8/15/2018		8/14/2019	28.25729	8/14/2020	3.307569
8/16/2018	19.14487	8/15/2019	43.05792	8/15/2020	2.801875
8/17/2018	42.09407	8/16/2019	30.10854	8/16/2020	1.869444

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8/19/2018	37.03355	8/18/2019	25.13958	8/18/2020	
8/20/2018	24.74947	8/19/2019	30.72924	8/19/2020	
8/21/2018	31.02115	8/20/2019	31.49278	8/20/2020	1.067161
8/22/2018	25.54614	8/21/2019	23.58785	8/21/2020	1.232084
8/23/2018	21.46958	8/22/2019	26.5425	8/22/2020	2.182292
8/24/2018	24.08105	8/23/2019	35.71868	8/23/2020	3.534514
8/25/2018	18.30137	8/24/2019	13.07465	8/24/2020	4.182292
8/26/2018	25.34284	8/25/2019	32.11465	8/25/2020	2.656319
8/27/2018	28.353	8/26/2019	26.70979	8/26/2020	3.786528
8/28/2018	38.50563	8/27/2019	39.00618	8/27/2020	2.757222
8/29/2018	26.35855	8/28/2019	38.45813	8/28/2020	3.411042
8/30/2018	15.16416	8/29/2019	28.58764	8/29/2020	5.019931
8/31/2018	38.76203	8/30/2019	32.18403	8/30/2020	4.923542
9/1/2018	28.74451	8/31/2019	20.53111	8/31/2020	3.839028
9/2/2018	32.27816	9/1/2019	29.46188	9/1/2020	5.087083
9/3/2018	34.01618	9/2/2019	31.75785	9/2/2020	4.974236
9/4/2018	28.85313	9/3/2019	27.48097	9/3/2020	4.426319
9/5/2018	33.77549	9/4/2019	25.12181	9/4/2020	6.106597

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9/7/2018	31.19164	9/6/2019	21.1425	9/6/2020	8.349097
9/8/2018	50.89222	9/7/2019	20.89215	9/7/2020	8.679236
9/9/2018	44.88299	9/8/2019	48.3789	9/8/2020	8.694653
9/10/2018	40.79015	9/9/2019	28.15316	9/9/2020	6.57856
9/11/2018	51.33994	9/10/2019	28.68462	9/10/2020	5.17825
9/12/2018	36.75521	9/11/2019	23.95549	9/11/2020	8.101875
9/13/2018	41.94351	9/12/2019	33.83313	9/12/2020	7.200556
9/14/2018	46.10116	9/13/2019	83.84687	9/13/2020	8.158472
9/15/2018	68.26597	9/14/2019	26.94153	9/14/2020	6.251458
9/16/2018	90.31723	9/15/2019	111.8171	9/15/2020	9.937708
9/17/2018	89.72952	9/16/2019	44.28979	9/16/2020	9.738165
9/18/2018	80.23094	9/17/2019	33.06132	9/17/2020	8.85125
9/19/2018	88.84591	9/18/2019	8.682917	9/18/2020	9.355625
9/20/2018	75.22349	9/19/2019	21.52847	9/19/2020	5.962847
9/21/2018	38.516	9/20/2019	26.67799	9/20/2020	8.258958
9/22/2018	65.21007	9/21/2019	28.16694	9/21/2020	4.033681
9/23/2018		9/22/2019	23.4025	9/22/2020	1.462778
9/24/2018		9/23/2019	29.73292	9/23/2020	1.547292

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10/4/2018	157.4711	10/3/2019	37.52736	10/3/2020	14.13889
10/5/2018	104.4667	10/4/2019	51.01465	10/4/2020	15.79299
10/6/2018	129.9786	10/5/2019	78.2366	10/5/2020	15.5784
10/7/2018	128.2837	10/6/2019	85.10181	10/6/2020	14.59292
10/8/2018	138.1903	10/7/2019	93.0466	10/7/2020	16.23667
10/9/2018	133.8702	10/8/2019	93.17375	10/8/2020	17.03757
10/10/2018	140.8437	10/9/2019	72.28958	10/9/2020	17.12049
10/11/2018	99.52492	10/10/2019	70.63521	10/10/2020	16.5534
10/12/2018	75.03747	10/11/2019	102.1072	10/11/2020	13.12833
10/13/2018	84.22104	10/12/2019	137.6863	10/12/2020	11.44187

10/14/2018	151.7128	10/13/2019	120.8476	10/13/2020	11.18944
10/15/2018	176.0716	10/14/2019	123.441	10/14/2020	11.85201
10/16/2018	140.4676	10/15/2019	116.4753	10/15/2020	13.97451
10/17/2018	133.9061	10/16/2019	93.7725	10/16/2020	17.56844
10/18/2018	142.4139	10/17/2019	89.12111	10/17/2020	16.95109
10/19/2018	128.501	10/18/2019	103.7517	10/18/2020	24.30347
10/20/2018	123.4604	10/19/2019	98.1957	10/19/2020	21.90986
10/21/2018	137.6863	10/20/2019	114.2077	10/20/2020	21.74243
10/22/2018	156.3827	10/21/2019	125.9374	10/21/2020	22.05729
10/23/2018	165.7468	10/22/2019	156.9782	10/22/2020	22.98049
10/24/2018	142.4047	10/23/2019	132.2967	10/23/2020	24.18535
10/25/2018	137.4039	10/24/2019	119.6126	10/24/2020	29.95438
10/26/2018	129.0693	10/25/2019	111.376	10/25/2020	27.99986
10/27/2018	110.5658	10/26/2019	127.2075	10/26/2020	23.44507
10/28/2018	133.702	10/27/2019	160.5742	10/27/2020	26.14896
10/29/2018	121.8978	10/28/2019	159.759	10/28/2020	16.05069
10/30/2018	141.6813	10/29/2019	131.3763	10/29/2020	12.71153
10/31/2018	137.5308	10/30/2019	134.9794	10/30/2020	14.88451
11/1/2018	150.5906	10/31/2019	149.0175	10/31/2020	20.04667



11/2/2018	144.0873	11/1/2019	166.756	11/1/2020	33.51715
11/3/2018	149.276	11/2/2019	202.23	11/2/2020	50.94847
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11/5/2018	165.4843	11/4/2019	263.8492	11/4/2020	77.11729
11/6/2018	193.121	11/5/2019	209.6676	11/5/2020	78.10819
11/7/2018	198.8513	11/6/2019	164.0946	11/6/2020	58.70308
11/8/2018	167.4294	11/7/2019	149.3263	11/7/2020	49.46431
11/9/2018	136.9703	11/8/2019	89.87778	11/8/2020	46.46931
11/10/2018	125.5379	11/9/2019	82.06972	11/9/2020	27.26493
11/11/2018	149.9825	11/10/2019	72.98604	11/10/2020	16.4334
11/12/2018	144.7137	11/11/2019	111.4163	11/11/2020	18.72604
11/13/2018	175.7806	11/12/2019	143.3019	11/12/2020	24.8134
11/14/2018	191.4365	11/13/2019	99.18521	11/13/2020	35.43799
11/15/2018	126.2014	11/14/2019	84.07882	11/14/2020	57.18447
11/16/2018	156.7732	11/15/2019	90.63986	11/15/2020	
11/17/2018	209.7878	11/16/2019	90.32202	11/16/2020	
11/18/2018	170.642	11/17/2019	76.39458	11/17/2020	
11/19/2018	184.3894	11/18/2019	114.2122	11/18/2020	
11/20/2018	197.7575	11/19/2019	124.3544	11/19/2020	

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11/22/2018	164.643	11/21/2019	92.14215	11/21/2020	
11/23/2018	137.9028	11/22/2019	101.8233	11/22/2020	
11/24/2018	195.8233	11/23/2019	128.9482	11/23/2020	
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12/2/2018	154.8353	12/1/2019	95.43785	12/1/2020	
12/3/2018	128.5919	12/2/2019	108.0312	12/2/2020	
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12/5/2018	139.6647	12/4/2019	107.968	12/4/2020	77.74153
12/6/2018	142.5593	12/5/2019	89.17757	12/5/2020	91.68938
12/7/2018	137.7473	12/6/2019	76.17945	12/6/2020	102.9277
12/8/2018	112.9694	12/7/2019	71.96874	12/7/2020	119.1051
12/9/2018	91.22371	12/8/2019	81.96826	12/8/2020	180.6537

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12/15/2018	93.12097	12/14/2019	34.8	12/14/2020	107.7892
12/16/2018	61.95667	12/15/2019	34.8	12/15/2020	108.5024
12/17/2018	96.12091	12/16/2019	34.8	12/16/2020	88.56111
12/18/2018	58.94171	12/17/2019	34.8	12/17/2020	142.6551
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12/24/2018		12/23/2019	119.1081	12/23/2020	120.9746
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12/26/2018		12/25/2019	92.99132	12/25/2020	127.2215
12/27/2018		12/26/2019	78.79493	12/26/2020	194.3493
12/28/2018		12/27/2019	101.6301	12/27/2020	169.2469

12/29/2018	12/28/2019	99.3609	12/28/2020	119.2887
12/30/2018	12/29/2019	81.11118	12/29/2020	136.213
12/31/2018	12/30/2019	59.36402	12/30/2020	123.0549
			12/31/2020	127.1438

### TSP daily average for Nepalgunj station

2018	TSP daily	2019	TSP daily	2020	TSP daily
1/1/2018		1/1/2019		1/1/2020	
1/2/2018		1/2/2019		1/2/2020	
1/3/2018		1/3/2019		1/3/2020	
1/4/2018		1/4/2019		1/4/2020	
1/5/2018		1/5/2019		1/5/2020	
1/6/2018		1/6/2019		1/6/2020	
1/7/2018		1/7/2019		1/7/2020	
1/8/2018		1/8/2019		1/8/2020	
1/9/2018		1/9/2019		1/9/2020	
1/10/2018		1/10/2019		1/10/2020	
1/11/2018		1/11/2019	434.0681	1/11/2020	
1/12/2018		1/12/2019	294.3228	1/12/2020	

1/13/2018	1/13/2019	240.503	1/13/2020
1/14/2018	1/14/2019	219.4759	1/14/2020
1/15/2018	1/15/2019	282.5079	1/15/2020
1/16/2018	1/16/2019	278.4426	1/16/2020
1/17/2018	1/17/2019	281.9749	1/17/2020
1/18/2018	1/18/2019	218.6609	1/18/2020
1/19/2018	1/19/2019	266.8581	1/19/2020
1/20/2018	1/20/2019	292.2449	1/20/2020
1/21/2018	1/21/2019	260.499	1/21/2020
1/22/2018	1/22/2019	168.2398	1/22/2020
1/23/2018	1/23/2019	136.7346	1/23/2020
1/24/2018	1/24/2019	130.5939	1/24/2020
1/25/2018	1/25/2019	60.93444	1/25/2020
1/26/2018	1/26/2019	79.15549	1/26/2020
1/27/2018	1/27/2019	87.05903	1/27/2020
1/28/2018	1/28/2019	141.2633	1/28/2020
1/29/2018	1/29/2019	156.1315	1/29/2020
1/30/2018	1/30/2019	232.3956	1/30/2020
1/31/2018	1/31/2019	181.1365	1/31/2020

2/1/2018	2/1/2019	162.1585	2/1/2020	
2/2/2018	2/2/2019	142.2718	2/2/2020	
2/3/2018	2/3/2019	164.7885	2/3/2020	89.4394
2/4/2018	2/4/2019	171.719	2/4/2020	52.11299
2/5/2018	2/5/2019	139.7654	2/5/2020	52.36139
2/6/2018	2/6/2019	138.2461	2/6/2020	59.70799
2/7/2018	2/7/2019	40.34306	2/7/2020	43.97569
2/8/2018	2/8/2019	97.54972	2/8/2020	57.78368
2/9/2018	2/9/2019	71.62625	2/9/2020	31.62486
2/10/2018	2/10/2019	130.2723	2/10/2020	61.66382
2/11/2018	2/11/2019	156.7368	2/11/2020	68.24903
2/12/2018	2/12/2019	156.6721	2/12/2020	67.63653
2/13/2018	2/13/2019	149.674	2/13/2020	73.50417
2/14/2018	2/14/2019	120.581	2/14/2020	66.93951
2/15/2018	2/15/2019	59.61868	2/15/2020	48.62757
2/16/2018	2/16/2019	58.04577	2/16/2020	47.15493
2/17/2018	2/17/2019	98.63417	2/17/2020	41.36333
2/18/2018	2/18/2019	129.2754	2/18/2020	51.72083
2/19/2018	2/19/2019	137.9254	2/19/2020	41.12479

2/20/2018	2/20/2019	103.3289	2/20/2020	39.51208
2/21/2018	2/21/2019	168.5314	2/21/2020	32.45875
2/22/2018	2/22/2019	109.3315	2/22/2020	18.34569
2/23/2018	2/23/2019	90.91444	2/23/2020	19.28903
2/24/2018	2/24/2019	147.0667	2/24/2020	15.98951
2/25/2018	2/25/2019	192.71	2/25/2020	15.96924
2/26/2018	2/26/2019	83.1309	2/26/2020	11.79056
2/27/2018	2/27/2019	24.20389	2/27/2020	21.56046
2/28/2018	2/28/2019	38.50806	2/28/2020	20.3816
3/1/2018	3/1/2019	132.9722	2/29/2020	18.16306
3/2/2018	3/2/2019	99.61847	3/1/2020	21.07833
3/3/2018	3/3/2019	89.78833	3/2/2020	26.43523
3/4/2018	3/4/2019	85.30125	3/3/2020	35.80667
3/5/2018	3/5/2019	75.90688	3/4/2020	26.80972
3/6/2018	3/6/2019	89.39125	3/5/2020	20.445
3/7/2018	3/7/2019	105.1895	3/6/2020	24.85
3/8/2018	3/8/2019	94.7957	3/7/2020	5.521667
3/9/2018	3/9/2019	98.10785	3/8/2020	13.98111
3/10/2018	3/10/2019	78.20651	3/9/2020	27.42646

3/11/2018	3/11/2019	55.08148	3/10/2020	27.40007
3/12/2018	3/12/2019	79.58968	3/11/2020	23.33903
3/13/2018	3/13/2019	68.40569	3/12/2020	14.24632
3/14/2018	3/14/2019	94.75784	3/13/2020	9.597639
3/15/2018	3/15/2019	64.92	3/14/2020	7.374653
3/16/2018	3/16/2019		3/15/2020	8.141181
3/17/2018	3/17/2019		3/16/2020	18.53632
3/18/2018	3/18/2019		3/17/2020	30.83653
3/19/2018	3/19/2019		3/18/2020	33.41785
3/20/2018	3/20/2019		3/19/2020	30.85431
3/21/2018	3/21/2019		3/20/2020	23.76215
3/22/2018	3/22/2019		3/21/2020	28.74778
3/23/2018	3/23/2019		3/22/2020	18.66111
3/24/2018	3/24/2019		3/23/2020	14.80847
3/25/2018	3/25/2019		3/24/2020	21.45028
3/26/2018	3/26/2019		3/25/2020	20.51319
3/27/2018	3/27/2019		3/26/2020	19.76111
3/28/2018	3/28/2019		3/27/2020	22.92986
3/29/2018	3/29/2019	81.57273	3/28/2020	16.31951



3/30/2018	3/30/2019		3/29/2020	18.33958
3/31/2018	3/31/2019		3/30/2020	18.33722
4/1/2018	4/1/2019		3/31/2020	20.85632
4/2/2018	4/2/2019		4/1/2020	20.44403
4/3/2018	4/3/2019		4/2/2020	15.47819
4/4/2018	4/4/2019		4/3/2020	16.52583
4/5/2018	4/5/2019		4/4/2020	25.71875
4/6/2018	4/6/2019		4/5/2020	16.34299
4/7/2018	4/7/2019		4/6/2020	19.9791
4/8/2018	4/8/2019		4/7/2020	19.23556
4/9/2018	4/9/2019		4/8/2020	17.03681
4/10/2018	4/10/2019	97.73853	4/9/2020	8.991042
4/11/2018	4/11/2019		4/10/2020	15.94493
4/12/2018	4/12/2019		4/11/2020	9.584583
4/13/2018	4/13/2019		4/12/2020	15.51597
4/14/2018	4/14/2019		4/13/2020	13.28604
4/15/2018	4/15/2019		4/14/2020	14.12944
4/16/2018	4/16/2019	725.0389	4/15/2020	11.05382
4/17/2018	4/17/2019	368.4081	4/16/2020	12.87153

4/18/2018	4/18/2019	277.5507	4/17/2020	15.88563
4/19/2018	4/19/2019	374.0815	4/18/2020	15.93208
4/20/2018	4/20/2019	398.4107	4/19/2020	13.72958
4/21/2018	4/21/2019	586.046	4/20/2020	14.2174
4/22/2018	4/22/2019	559.4329	4/21/2020	6.643161
4/23/2018	4/23/2019	777.8764	4/22/2020	6.978611
4/24/2018	4/24/2019	661.9757	4/23/2020	7.949697
4/25/2018	4/25/2019	592.1605	4/24/2020	8.416638
4/26/2018	4/26/2019	833.6962	4/25/2020	12.34826
4/27/2018	4/27/2019	838.1061	4/26/2020	8.742986
4/28/2018	4/28/2019	975.4167	4/27/2020	5.075556
4/29/2018	4/29/2019	882.3688	4/28/2020	5.478056
4/30/2018	4/30/2019	841.7102	4/29/2020	5.962292
5/1/2018	5/1/2019	1021.755	4/30/2020	10.03972
5/2/2018	5/2/2019	666.0539	5/1/2020	6.169444
5/3/2018	5/3/2019	319.4843	5/2/2020	6.273542
5/4/2018	5/4/2019	263.955	5/3/2020	7.847222
5/5/2018	5/5/2019	489.9368	5/4/2020	7.160833
5/6/2018	5/6/2019	625.7021	5/5/2020	7.643403

5/7/2018	5/7/2019	608.2828	5/6/2020	7.076528
5/8/2018	5/8/2019	658.763	5/7/2020	5.950069
5/9/2018	5/9/2019	784.9067	5/8/2020	8.117708
5/10/2018	5/10/2019	728.3849	5/9/2020	10.32944
5/11/2018	5/11/2019	668.9998	5/10/2020	11.21711
5/12/2018	5/12/2019	549.5597	5/11/2020	6.004861
5/13/2018	5/13/2019	729.7513	5/12/2020	12.68174
5/14/2018	5/14/2019	320.9397	5/13/2020	16.43516
5/15/2018	5/15/2019		5/14/2020	19.37736
5/16/2018	5/16/2019		5/15/2020	24.16817
5/17/2018	5/17/2019		5/16/2020	20.02743
5/18/2018	5/18/2019	383.8091	5/17/2020	14.76181
5/19/2018	5/19/2019	312.7062	5/18/2020	17.0134
5/20/2018	5/20/2019	382.228	5/19/2020	20.07639
5/21/2018	5/21/2019	564.3964	5/20/2020	11.25771
5/22/2018	5/22/2019	588.879	5/21/2020	12.48382
5/23/2018	5/23/2019	629.8409	5/22/2020	14.62557
5/24/2018	5/24/2019	651.3086	5/23/2020	8.795139
5/25/2018	5/25/2019	736.4077	5/24/2020	13.85069

5/26/2018	5/26/2019	546.7518	5/25/2020	15.65069
5/27/2018	5/27/2019	617.1145	5/26/2020	12.21431
5/28/2018	5/28/2019	652.705	5/27/2020	15.46875
5/29/2018	5/29/2019	630.3363	5/28/2020	5.528125
5/30/2018	5/30/2019	618.6756	5/29/2020	6.391806
5/31/2018	5/31/2019	710.7	5/30/2020	7.284931
6/1/2018	6/1/2019	427.1127	5/31/2020	7.5575
6/2/2018	6/2/2019	534.0366	6/1/2020	5.229444
6/3/2018	6/3/2019	645.1835	6/2/2020	5.708403
6/4/2018	6/4/2019	437.4108	6/3/2020	8.493958
6/5/2018	6/5/2019	606.0967	6/4/2020	6.986667
6/6/2018	6/6/2019	808.0302	6/5/2020	4.580208
6/7/2018	6/7/2019	453.0761	6/6/2020	2.894931
6/8/2018	6/8/2019	452.8763	6/7/2020	4.366667
6/9/2018	6/9/2019	709.8646	6/8/2020	6.564722
6/10/2018	6/10/2019	573.4176	6/9/2020	8.591667
6/11/2018	6/11/2019	502.086	6/10/2020	9.674931
6/12/2018	6/12/2019	290.0411	6/11/2020	8.615347
6/13/2018	6/13/2019	285.7763	6/12/2020	7.835139

6/14/2018	6/14/2019	406.0615	6/13/2020	3.515347
6/15/2018	6/15/2019	521.0772	6/14/2020	3.538681
6/16/2018	6/16/2019	687.4162	6/15/2020	2.291528
6/17/2018	6/17/2019	397.1118	6/16/2020	1.955556
6/18/2018	6/18/2019	477.8347	6/17/2020	3.130903
6/19/2018	6/19/2019	355.6578	6/18/2020	2.559306
6/20/2018	6/20/2019	177.8361	6/19/2020	3.150813
6/21/2018	6/21/2019	375.4126	6/20/2020	2.287639
6/22/2018	6/22/2019	331.6899	6/21/2020	3.862901
6/23/2018	6/23/2019	16.14826	6/22/2020	2.396806
6/24/2018	6/24/2019	230.8776	6/23/2020	3.793611
6/25/2018	6/25/2019	110.0833	6/24/2020	4.985069
6/26/2018	6/26/2019	97.44458	6/25/2020	3.166181
6/27/2018	6/27/2019	183.6842	6/26/2020	3.292292
6/28/2018	6/28/2019	209.5869	6/27/2020	5.035069
6/29/2018	6/29/2019	234.9154	6/28/2020	5.989167
6/30/2018	6/30/2019	266.0549	6/29/2020	3.313403
7/1/2018	7/1/2019	207.312	6/30/2020	5.016042
7/2/2018	7/2/2019	216.4101	7/1/2020	6.176667

7/3/2018	7/3/2019	78.52125	7/2/2020	7.554722
7/4/2018	7/4/2019	189.0256	7/3/2020	7.358542
7/5/2018	7/5/2019	141.3437	7/4/2020	7.418542
7/6/2018	7/6/2019	18.41563	7/5/2020	4.638403
7/7/2018	7/7/2019	123.4336	7/6/2020	3.841736
7/8/2018	7/8/2019	38.85452	7/7/2020	2.264722
7/9/2018	7/9/2019	12.56764	7/8/2020	3.482361
7/10/2018	7/10/2019	41.68056	7/9/2020	4.684097
7/11/2018	7/11/2019	15.65868	7/10/2020	2.745764
7/12/2018	7/12/2019	87.02236	7/11/2020	3.248333
7/13/2018	7/13/2019	51.32319	7/12/2020	5.132639
7/14/2018	7/14/2019	243.5981	7/13/2020	6.179861
7/15/2018	7/15/2019	81.88507	7/14/2020	4.873889
7/16/2018	7/16/2019	80.7957	7/15/2020	4.476042
7/17/2018	7/17/2019	81.44778	7/16/2020	4.590694
7/18/2018	7/18/2019	100.5488	7/17/2020	5.027708
7/19/2018	7/19/2019	115.2594	7/18/2020	4.946528
7/20/2018	7/20/2019	73.38153	7/19/2020	5.455764
7/21/2018	7/21/2019	35.26132	7/20/2020	4.163194

7/22/2018	7/22/2019	82.52139	7/21/2020	3.710139
7/23/2018	7/23/2019	55.16783	7/22/2020	3.646111
7/24/2018	7/24/2019	18.0009	7/23/2020	3.609028
7/25/2018	7/25/2019	23.6434	7/24/2020	3.560972
7/26/2018	7/26/2019	61.6334	7/25/2020	4.426736
7/27/2018	7/27/2019	95.97729	7/26/2020	5.776806
7/28/2018	7/28/2019	240.3205	7/27/2020	9.329722
7/29/2018	7/29/2019	128.1575	7/28/2020	4.437986
7/30/2018	7/30/2019	109.3425	7/29/2020	3.377639
7/31/2018	7/31/2019	61.72445	7/30/2020	4.060486
8/1/2018	8/1/2019	65.15792	7/31/2020	5.729097
8/2/2018	8/2/2019	82.35357	8/1/2020	2.815486
8/3/2018	8/3/2019	85.49646	8/2/2020	5.461944
8/4/2018	8/4/2019	106.7659	8/3/2020	4.891944
8/5/2018	8/5/2019	51.31861	8/4/2020	4.913681
8/6/2018	8/6/2019	57.80895	8/5/2020	3.097893
8/7/2018	8/7/2019	85.76445	8/6/2020	2.426904
8/8/2018	8/8/2019	270.6272	8/7/2020	3.106736
8/9/2018	8/9/2019	400.8558	8/8/2020	2.604028

8/10/2018		8/10/2019	53.27278	8/9/2020	7.187847
8/11/2018		8/11/2019	28.6219	8/10/2020	4.157431
8/12/2018		8/12/2019	49.56257	8/11/2020	3.626389
8/13/2018		8/13/2019	58.21451	8/12/2020	2.721736
8/14/2018		8/14/2019	87.79302	8/13/2020	3.833542
8/15/2018		8/15/2019	188.2149	8/14/2020	3.307708
8/16/2018	43.47962	8/16/2019	68.6091	8/15/2020	2.801875
8/17/2018	154.2368	8/17/2019	33.54472	8/16/2020	1.869444
8/18/2018	85.60792	8/18/2019	51.52104	8/17/2020	1.784283
8/19/2018	88.84785	8/19/2019	89.43993	8/18/2020	
8/20/2018	68.94379	8/20/2019	84.91518	8/19/2020	
8/21/2018	108.3476	8/21/2019	26.11681	8/20/2020	1.067336
8/22/2018	83.51359	8/22/2019	50.78035	8/21/2020	1.232084
8/23/2018	55.06669	8/23/2019	66.9882	8/22/2020	2.182639
8/24/2018	79.96556	8/24/2019	23.56514	8/23/2020	3.534514
8/25/2018	37.94021	8/25/2019	102.8317	8/24/2020	11.09322
8/26/2018	93.96171	8/26/2019	83.90695	8/25/2020	2.660903
8/27/2018	123.7737	8/27/2019	108.3547	8/26/2020	3.808611
8/28/2018	174.9172	8/28/2019	94.34514	8/27/2020	2.247931



8/29/2018	80.1535	8/29/2019	58.36326	8/28/2020	3.423472
8/30/2018	25.01722	8/30/2019	64.50167	8/29/2020	5.034861
8/31/2018	146.8708	8/31/2019	36.78868	8/30/2020	4.942222
9/1/2018	98.46014	9/1/2019	58.08632	8/31/2020	3.873056
9/2/2018	105.6464	9/2/2019	52.10465	9/1/2020	5.132292
9/3/2018	106.7388	9/3/2019	61.82236	9/2/2020	4.986389
9/4/2018	60.73438	9/4/2019	70.88132	9/3/2020	4.46875
9/5/2018	92.89421	9/5/2019	60.22924	9/4/2020	6.378681
9/6/2018	128.6182	9/6/2019	64.90111	9/5/2020	7.091181
9/7/2018	137.759	9/7/2019	58.35958	9/6/2020	8.397431
9/8/2018	255.3036	9/8/2019	126.3526	9/7/2020	8.786389
9/9/2018	117.7367	9/9/2019	64.65153	9/8/2020	8.717708
9/10/2018	96.50762	9/10/2019	73.56305	9/9/2020	6.608352
9/11/2018	99.94929	9/11/2019	48.31493	9/10/2020	5.199291
9/12/2018	60.93386	9/12/2019	98.96228	9/11/2020	8.135972
9/13/2018	70.15712	9/13/2019	258.8612	9/12/2020	7.218056
9/14/2018	81.95354	9/14/2019	44.35028	9/13/2020	8.161875
9/15/2018	135.3229	9/15/2019	334.1593	9/14/2020	6.260833
9/16/2018	194.9743	9/16/2019	106.2615	9/15/2020	9.971042

9/17/2018	171.2139	9/17/2019	90.79528	9/16/2020	9.771721
9/18/2018	151.0269	9/18/2019	10.12625	9/17/2020	8.935208
9/19/2018	158.6063	9/19/2019	55.72521	9/18/2020	9.498333
9/20/2018	215.1218	9/20/2019	56.24479	9/19/2020	6.231181
9/21/2018	79.57265	9/21/2019	61.81097	9/20/2020	10.90889
9/22/2018	461.8889	9/22/2019	31.15639	9/21/2020	4.932431
9/23/2018		9/23/2019	61.41861	9/22/2020	1.466181
9/24/2018		9/24/2019	92.08681	9/23/2020	1.815139
9/25/2018		9/25/2019	157.6774	9/24/2020	0.797256
9/26/2018		9/26/2019	289.0465	9/25/2020	4.411806
9/27/2018		9/27/2019	31.01521	9/26/2020	8.848819
9/28/2018		9/28/2019	199.001	9/27/2020	16.16229
9/29/2018		9/29/2019	109.4029	9/28/2020	16.34382
9/30/2018		9/30/2019	72.57532	9/29/2020	14.56042
10/1/2018		10/1/2019	69.52493	9/30/2020	17.34888
10/2/2018		10/2/2019	85.27646	10/1/2020	14.76854
10/3/2018		10/3/2019	62.9875	10/2/2020	13.8325
10/4/2018	296.5979	10/4/2019	79.09882	10/3/2020	14.20875
10/5/2018	239.6304	10/5/2019	121.2355	10/4/2020	15.99771

10/6/2018	252.0947	10/6/2019	119.7324	10/5/2020	15.87194
10/7/2018	261.9918	10/7/2019	129.7952	10/6/2020	14.59438
10/8/2018	258.5456	10/8/2019	159.3282	10/7/2020	16.24069
10/9/2018	258.2095	10/9/2019	136.2976	10/8/2020	17.07951
10/10/2018	348.1289	10/10/2019	96.14459	10/9/2020	17.35757
10/11/2018	237.8222	10/11/2019	149.4551	10/10/2020	16.65326
10/12/2018	171.0697	10/12/2019	207.1671	10/11/2020	13.14687
10/13/2018	170.6684	10/13/2019	177.2261	10/12/2020	11.48903
10/14/2018	262.0956	10/14/2019	186.4553	10/13/2020	11.21799
10/15/2018	321.1482	10/15/2019	178.5398	10/14/2020	11.85264
10/16/2018	258.1796	10/16/2019	158.7102	10/15/2020	14.01354
10/17/2018	254.5845	10/17/2019	139.5116	10/16/2020	17.69302
10/18/2018	267.2642	10/18/2019	156.6192	10/17/2020	19.50186
10/19/2018	255.5502	10/19/2019	139.0933	10/18/2020	24.48528
10/20/2018	235.2956	10/20/2019	150.6326	10/19/2020	22.06514
10/21/2018	255.5082	10/21/2019	170.5739	10/20/2020	21.82049
10/22/2018	294.7467	10/22/2019	234.8222	10/21/2020	22.38215
10/23/2018	327.2255	10/23/2019	213.7249	10/22/2020	23.50007
10/24/2018	296.7442	10/24/2019	192.6358	10/23/2020	24.38757

10/25/2018	277.3689	10/25/2019	176.6764	10/24/2020	30.15535
10/26/2018	264.8448	10/26/2019	165.8579	10/25/2020	28.17229
10/27/2018	217.9653	10/27/2019	194.8891	10/26/2020	23.68
10/28/2018	266.5996	10/28/2019	200.8846	10/27/2020	26.17861
10/29/2018	268.7392	10/29/2019	161.0726	10/28/2020	16.0541
10/30/2018	282.7038	10/30/2019	159.2922	10/29/2020	12.82667
10/31/2018	305.7504	10/31/2019	179.2035	10/30/2020	14.89785
11/1/2018	311.4436	11/1/2019	204.3339	10/31/2020	20.08118
11/2/2018	272.0754	11/2/2019	231.1749	11/1/2020	33.65403
11/3/2018	277.5411	11/3/2019	178.1581	11/2/2020	51.26576
11/4/2018	230.3942	11/4/2019	301.5797	11/3/2020	63.62833
11/5/2018	316.7979	11/5/2019	257.8079	11/4/2020	77.8475
11/6/2018	311.6613	11/6/2019	195.5238	11/5/2020	78.40153
11/7/2018	315.0732	11/7/2019	182.4971	11/6/2020	58.90058
11/8/2018	269.7206	11/8/2019	123.5123	11/7/2020	49.88076
11/9/2018	207.8376	11/9/2019	108.4412	11/8/2020	46.63146
11/10/2018	206.6504	11/10/2019	89.16708	11/9/2020	27.26868
11/11/2018	241.8548	11/11/2019	136.2225	11/10/2020	16.43681
11/12/2018	232.364	11/12/2019	165.1449	11/11/2020	19.65479

11/13/2018	303.0487	11/13/2019	117.4038	11/12/2020	24.84951
11/14/2018	274.1872	11/14/2019	99.28243	11/13/2020	35.90181
11/15/2018	231.2765	11/15/2019	100.0511	11/14/2020	57.18447
11/16/2018	231.9515	11/16/2019	113.1314	11/15/2020	
11/17/2018	310.4711	11/17/2019	207.4009	11/16/2020	
11/18/2018	308.4856	11/18/2019	157.5005	11/17/2020	
11/19/2018	322.6797	11/19/2019	139.8759	11/18/2020	
11/20/2018	322.3748	11/20/2019	130.5789	11/19/2020	
11/21/2018	326.3805	11/21/2019	109.1196	11/20/2020	
11/22/2018	277.7739	11/22/2019	122.5653	11/21/2020	
11/23/2018	231.5837	11/23/2019	151.1008	11/22/2020	
11/24/2018	344.9907	11/24/2019	151.633	11/23/2020	
11/25/2018	287.3443	11/25/2019	169.3826	11/24/2020	
11/26/2018	202.8385	11/26/2019	150.0674	11/25/2020	
11/27/2018	198.0336	11/27/2019	132.4915	11/26/2020	
11/28/2018	185.4392	11/28/2019	158.8613	11/27/2020	
11/29/2018	171.9378	11/29/2019	73.3191	11/28/2020	
11/30/2018	202.238	11/30/2019	81.43299	11/29/2020	
12/1/2018	187.8604	12/1/2019	106.9992	11/30/2020	

12/2/2018	199.5863	12/2/2019	120.756	12/1/2020	
12/3/2018	179.0748	12/3/2019	134.4185	12/2/2020	
12/4/2018	178.1949	12/4/2019	125.6029	12/3/2020	203.2295
12/5/2018	180.76	12/5/2019	108.5277	12/4/2020	80.91951
12/6/2018	172.2303	12/6/2019	101.8806	12/5/2020	94.92403
12/7/2018	180.3999	12/7/2019	85.46099	12/6/2020	110.1164
12/8/2018	141.9493	12/8/2019	355.1721	12/7/2020	123.2858
12/9/2018	122.3777	12/9/2019	38.5	12/8/2020	184.4358
12/10/2018	193.5013	12/10/2019	38.5	12/9/2020	147.191
12/11/2018	113.4144	12/11/2019	38.5	12/10/2020	146.2076
12/12/2018	35.25737	12/12/2019	38.5	12/11/2020	151.9317
12/13/2018	127.8517	12/13/2019	38.5	12/12/2020	136.9627
12/14/2018	95.73306	12/14/2019	38.5	12/13/2020	93.09945
12/15/2018	126.6512	12/15/2019	38.5	12/14/2020	111.0576
12/16/2018	62.71633	12/16/2019	38.5	12/15/2020	112.668
12/17/2018	151.8559	12/17/2019	38.5	12/16/2020	93.40556
12/18/2018	107.6011	12/18/2019	38.5	12/17/2020	144.111
12/19/2018		12/19/2019	38.5	12/18/2020	138.2023
12/20/2018		12/20/2019	38.5	12/19/2020	134.5319

12/21/2018	12/21/2019	132.8191	12/20/2020	141.4019
12/22/2018	12/22/2019	211.8765	12/21/2020	180.6858
12/23/2018	12/23/2019	134.6433	12/22/2020	161.0697
12/24/2018	12/24/2019	89.68917	12/23/2020	123.6643
12/25/2018	12/25/2019	103.7851	12/24/2020	120.1824
12/26/2018	12/26/2019	86.69181	12/25/2020	130.7913
12/27/2018	12/27/2019	114.5031	12/26/2020	197.9485
12/28/2018	12/28/2019	107.2067	12/27/2020	172.6135
12/29/2018	12/29/2019	84.07951	12/28/2020	121.1909
12/30/2018	12/30/2019	71.38746	12/29/2020	137.8778
12/31/2018	12/31/2019		12/30/2020	125.1064
			12/31/2020	129.1968