

# Assessment of Ambient Air Pollution Status (PM<sub>2.5</sub> & PM<sub>10</sub>) in Selected Point in Shwepyithar

## Township, Yangon Region

Nan Wit Yi Tun<sup>1</sup>, Kay Thi Lwin<sup>2</sup>, Alan F. Geater<sup>3</sup>

<sup>1</sup> Lecturer, Department of Preventive and Social Medicine, University of Medicine (1), Yangon, Myanmar

<sup>2</sup> Professor Department of Preventive and Social Medicine, University of Medicine (1), Yangon, Myanmar

<sup>3</sup> Senior Lecturer, Epidemiology Unit, Faculty of Medicine, Prince of Songkla University, Thailand



### Aim

To assess the ambient air pollution status (PM<sub>2.5</sub> and PM<sub>10</sub>) in residential, commercial and industrial areas of Shwepyithar Township, Yangon Region

### Methods

PM<sub>2.5</sub> and PM<sub>10</sub> concentrations were monitored using a HAZ-scanner (EPAS) located in residential, commercial and industrial areas of Shwepyithar Township for 24 hours.

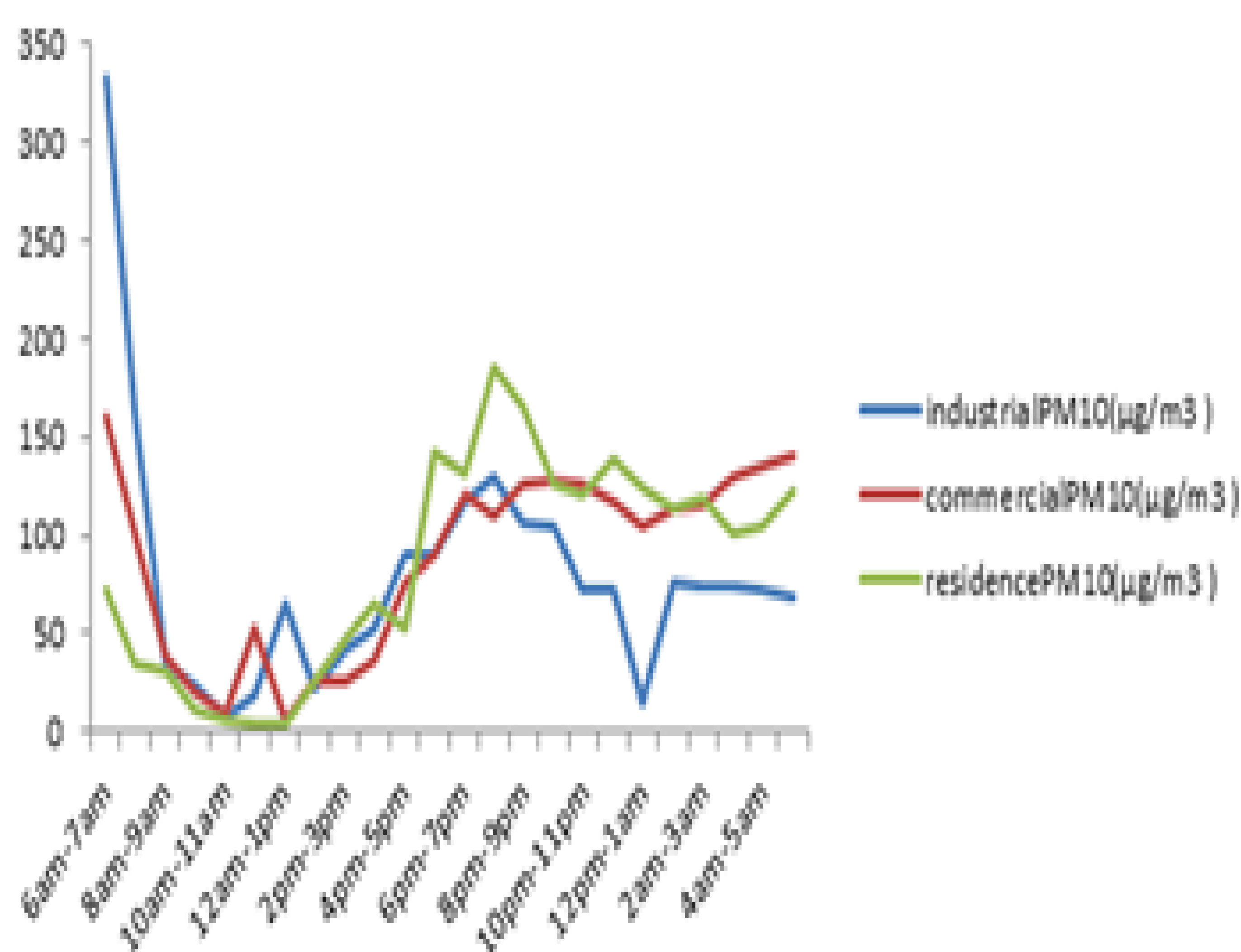


Figure 1. 24 hour variation of PM<sub>10</sub> concentration in residential area, commercial and industrial area

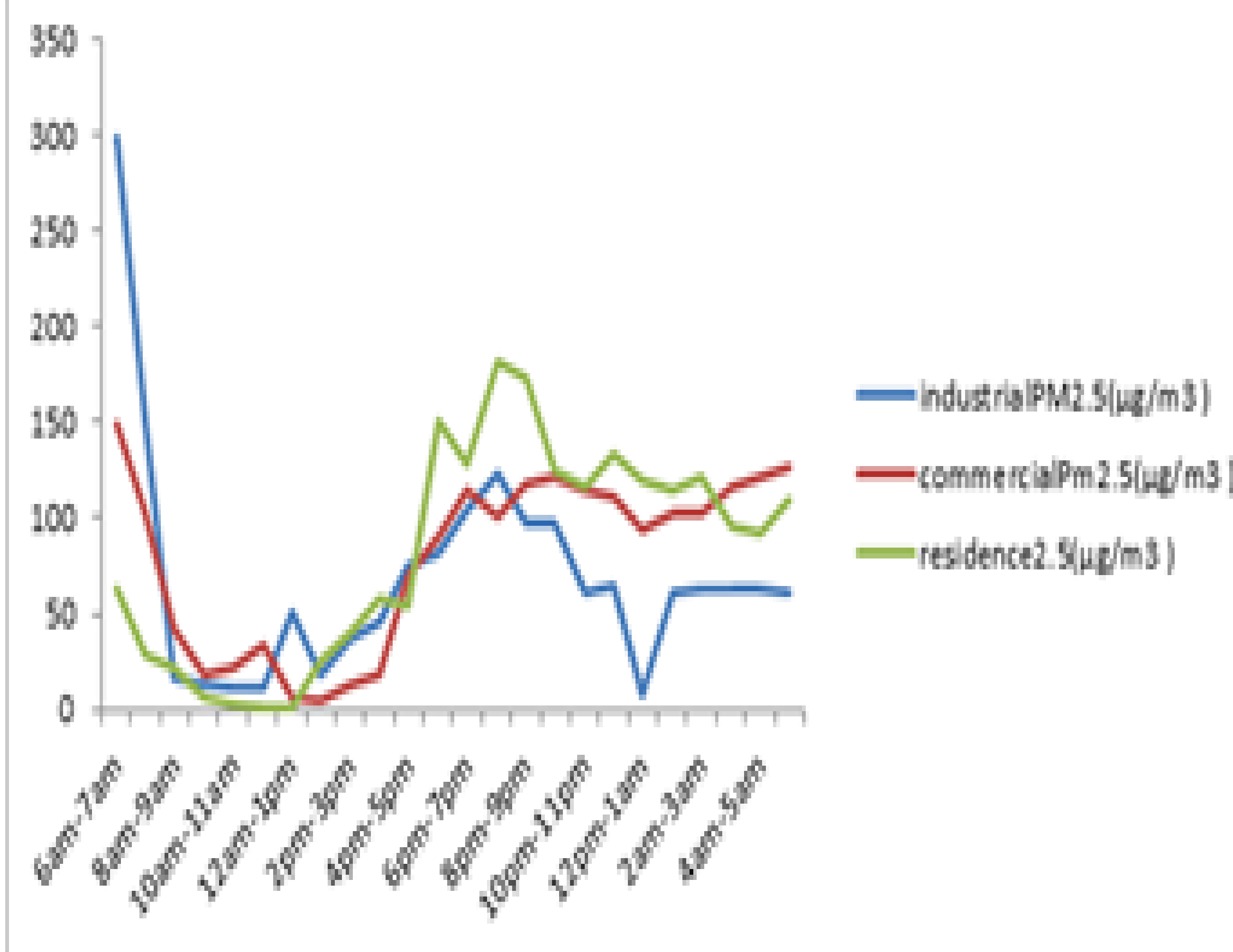


Figure 2. 24 hour variation of PM<sub>2.5</sub> concentration in the residential area, commercial and industrial area

### Results

Twenty-four-hour mean concentrations of PM<sub>2.5</sub> were 87.0 µg/m<sup>3</sup>, 84.6µg/m<sup>3</sup> and 81.8µg/m<sup>3</sup> and those of PM<sub>10</sub> 91 µg/m<sup>3</sup>, 93.5µg/m<sup>3</sup> and 93.1µg/m<sup>3</sup> in residential area, commercial and industrial areas, respectively. All values of 24-hour mean PM<sub>2.5</sub> and PM<sub>10</sub> concentration were higher than the WHO references guideline values.

### Conclusion

There was higher concentration of 24-hour PM<sub>2.5</sub> in the residential area than the commercial and industrial areas. Thus, there was higher PM<sub>10</sub> concentration in the commercial and industrial area than in the residential area. High levels of PM concentration were in all areas of Shwepyithar Township. Exposure to air pollution poses an important human health risk. The estimates indicated the magnitude of the problem, so air pollution control interventions can be prioritized to improve public health. Legislation for control and monitoring of the PM concentration in Yangon city should be established.

### References

- World Health Organization, (2016) Ambient air pollution: a global assessment of exposure and burden of disease
- World Health Organization, (2006), Air Quality Guidelines Global Update 2005