

# Forecasting PM<sub>2.5</sub> in Malaysia Using a Hybrid Model

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**Table S1** Input variables in multiple linear regression (MLR) and the artificial neural network (ANN) for prediction of PM<sub>2.5</sub>

**Fig. S2** Neural network architecture for HPR, MPR and LPR

**Fig. S3** Boxplot for high pollution regions (HPR), medium pollution regions (MPR) and low pollution regions (LPR)

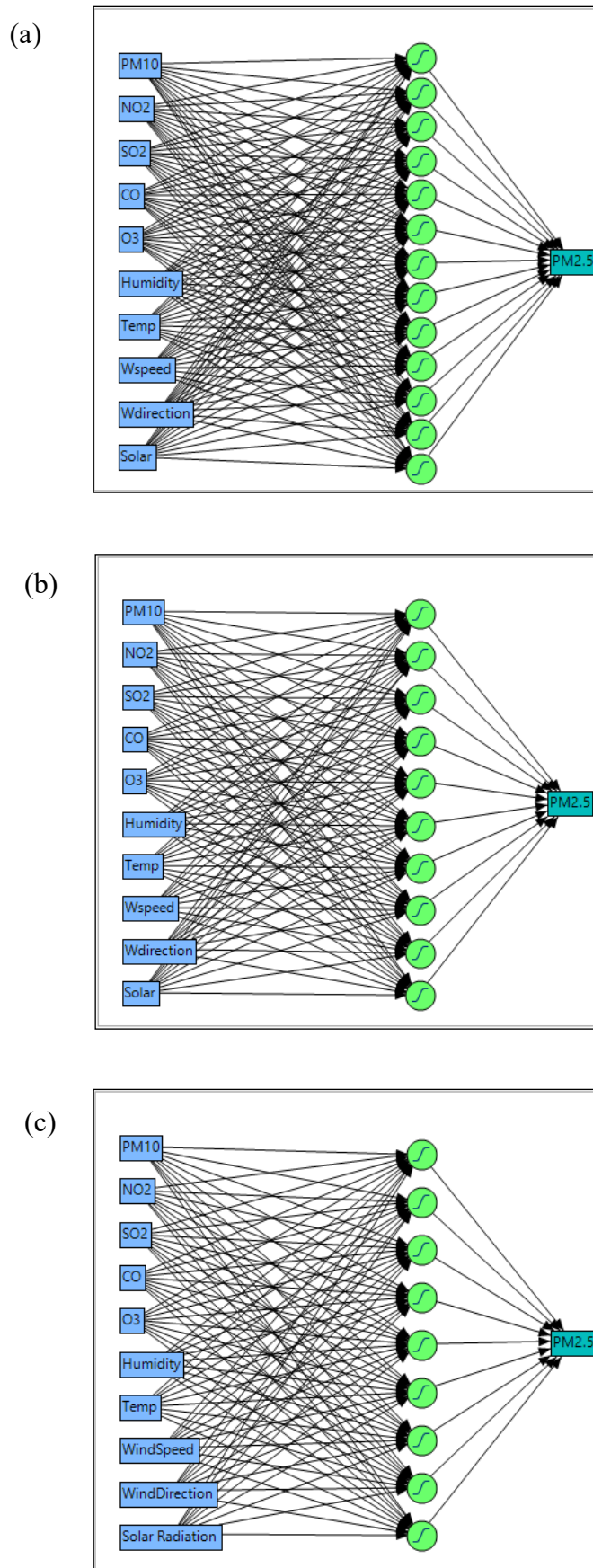
**Fig. S4** Classification of regions using agglomerative hierarchical cluster (AHC) analysis based on PM<sub>2.5</sub> (Rahman et al., 2022)

**Table S5** Descriptive statistics for PM<sub>2.5</sub> in high pollution regions (HPR), medium pollution regions (MPR) and low pollution regions (LPR)

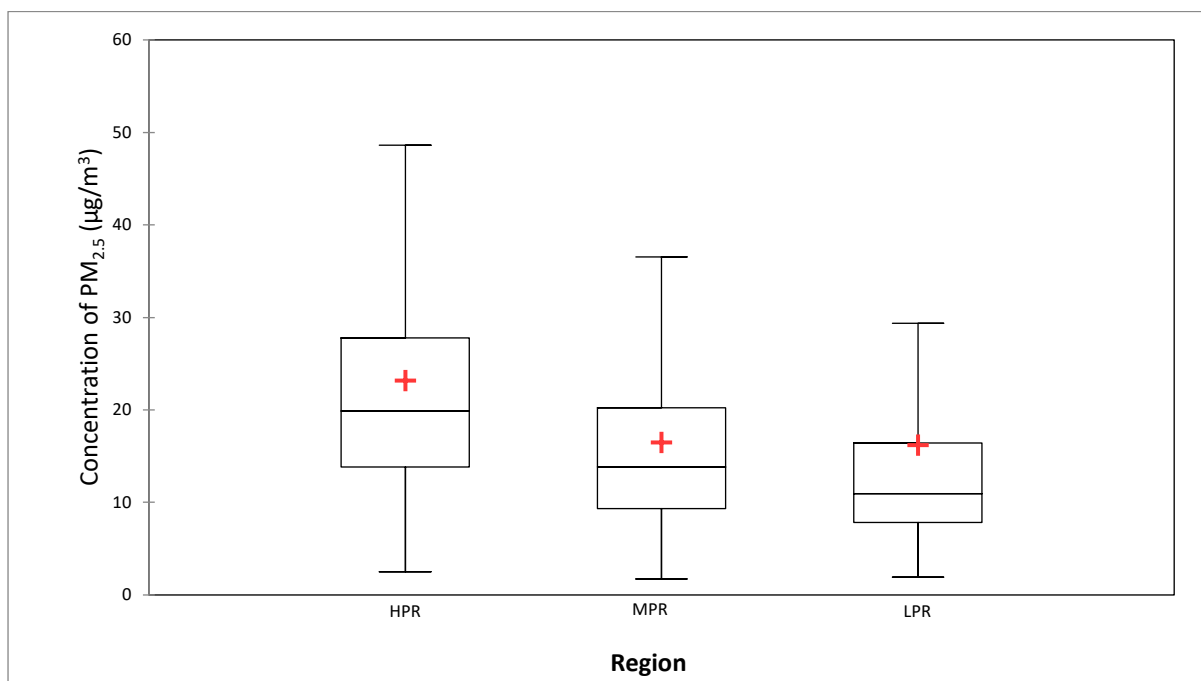
**Fig. S6** Monthly average concentration of PM<sub>2.5</sub> from 2018 to 2019 based on clusters

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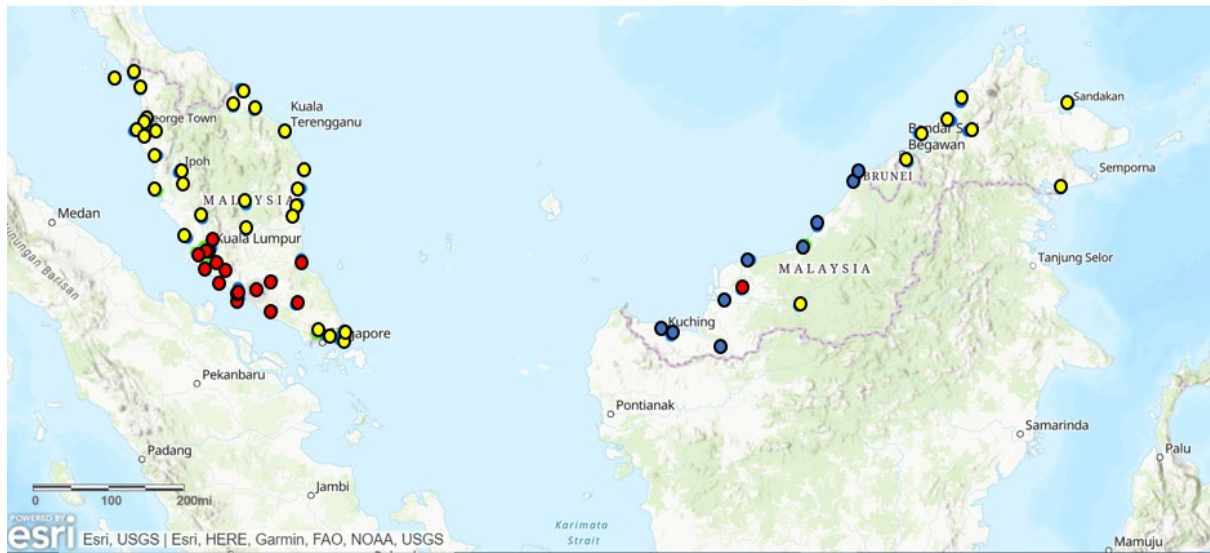
Input Variables	Details	Unit
PM <sub>10</sub>	Particulate Matter	μg/m <sup>3</sup>
NO <sub>2</sub>	Nitrogen Dioxide	ppm
SO <sub>2</sub>	Sulfur Dioxide	ppm
CO	Carbon Monoxide	ppm
O <sub>3</sub>	Ozone	ppm
RH	Relative Humidity	%
T	Temperature	°C
WS	Wind Speed	m/s
WD	Wind Direction	Degrees
SR	Solar Radiation	W/m <sup>2</sup>



**Fig. S2** Neural network architecture for (a) HPR, (b) MPR and (c) LPR



**Fig. S3** Boxplot for high pollution regions (HPR), medium pollution regions (MPR) and low pollution regions (LPR)

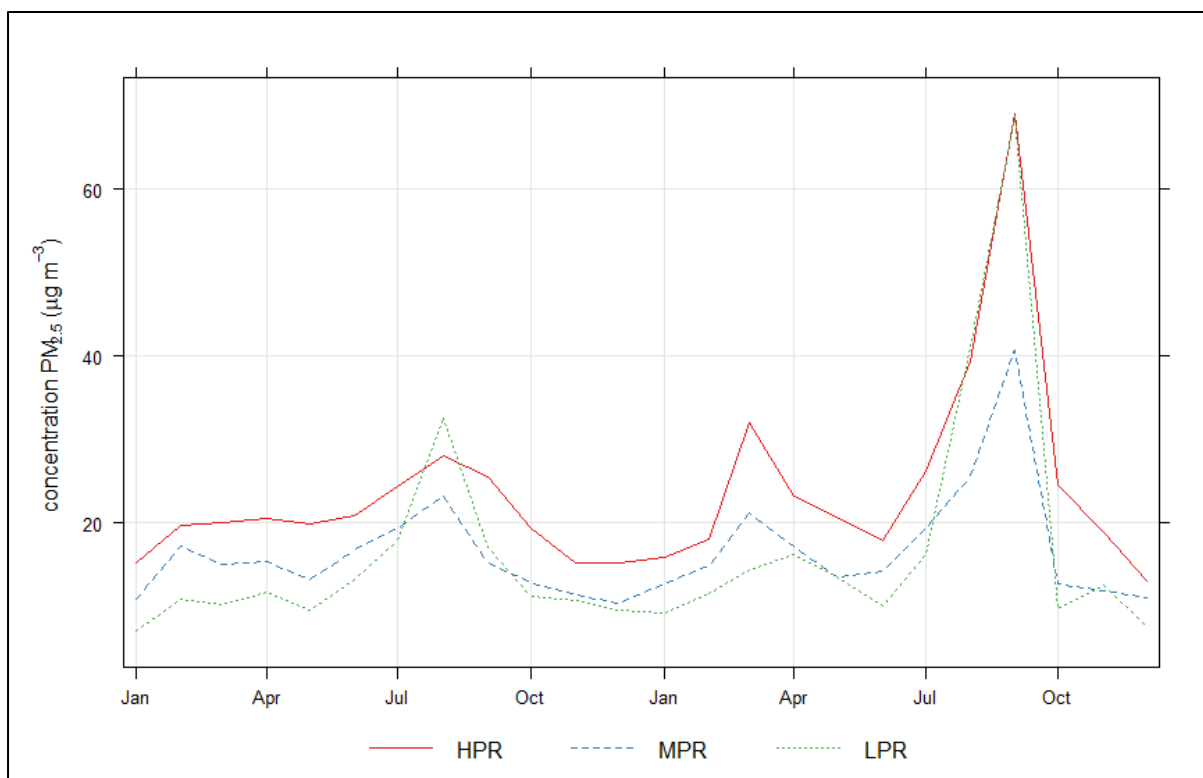


Legend: ● LPR   ● MPR   ● HPR

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**Table S5** Descriptive statistics for PM<sub>2.5</sub> in high pollution regions (HPR), medium pollution regions (MPR) and low pollution regions (LPR)

	<b>HPR</b>	<b>MPR</b>	<b>LPR</b>
Minimum	8.1	6.8	5.3
Maximum	125.5	82.1	140.2
1st Quartile	15.6	11.8	9.0
Median	20.1	14.3	11.3
3rd Quartile	27.0	19.0	16.2
Mean	23.4	16.5	16.3



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