



## Regents international School Air Quality Policy and Practice

Air Quality in our area is generally good, however air quality in Thailand is getting worse due to industrialization and the continued and rising dependence of the country on the burning of fossil fuels. During some periods of the year, particularly in dry season, our air quality can decline. This can be exacerbated by low wind speeds, seasonal burning of agricultural land and many other environmental factors.

### What is AQI?

The AQI is an index for reporting daily air quality. Values are divided into ranges and each range is assigned a descriptor and a colour code. AQI runs from 0 to 500. The higher the AQI value the greater the level of air pollution and the greater the health concern. An AQI value of 100 generally corresponds to the national air quality standard for the pollutant, which is the level the Thai Government has set to protect public health.

Air Quality Index Levels of Health Concern	Numerical Value	Meaning
Good	0 to 50	Air quality is considered satisfactory, and air pollution poses little or no risk
Moderate	51 to 100	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	151 to 200	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	201 to 300	Health alert: everyone may experience more serious health effects
Hazardous	301 to 500	Health warnings of emergency conditions. The entire population is more likely to be affected.

We do not have a local Air Quality monitoring site, the nearest two available sites are in heavily industrialised Laem Chabang (18km away) and rural Pluak Deang Reservoir (25km away). These two sites differ greatly, and in general air quality can vary greatly over a very short distance. We would expect the onsite AQI to be somewhere between the AQU's for these monitoring stations. You can see these here – [www.waqi.info](http://www.waqi.info)

Regents International School Pattaya tracks air quality throughout the day at school, using a portable air quality monitor which monitors PM2.5 and PM10 particles.

### What are PM2.5 and PM10 particles?

PM2.5 refers to atmospheric particulate matter (PM) that have a diameter of less than 2.5 micrometers, which is about 3% the diameter of a human hair. Commonly written as PM<sub>2.5</sub>, particles in this category are so small that



they can only be detected with an electron microscope. They are even smaller than their counterparts PM<sub>10</sub>, which are particles that are 10 micrometres or less, and are also called **fine particles**.

Since they are so small and light, fine particles tend to stay longer in the air than heavier particles. This increases the chances of humans and animals inhaling them into the bodies. Owing to their minute size, particles smaller than 2.5 micrometers are able to bypass the nose and throat and penetrate deep into the lungs and some may even enter the circulatory system. The biggest risk from PM is from long term, or lifetime exposure, and so whilst an individual PM<sub>2.5</sub> / PM<sub>10</sub> measurement might spike during dry / burning season, our average exposure over the course of a year is a more important factor and this would still be very low compared to SEA cities.

### **Response to Air Quality**

Our Primary School response to the AQI is slightly more restrictive than that for our Secondary School because medical evidence indicates that very young children are more vulnerable to the effects of particulate pollution than older children and adults.

The below chart helps explain in greater detail how outdoor activities may be modified depending upon the pollution level and the duration and intensity of the activity.

### **Communications**

The daily air quality will be communicated by the operations department to the Senior Leadership Team who will make the decision whether to restrict outdoor activities and communicate this to staff via email. Any modifications to activities or postponements of events will be communicated to parents via email and/or SMS.



REGENTS INTERNATIONAL SCHOOL PATTAYA AIR QUALITY INDEX RESPONSE						
AIR QUALITY				Break & Lunch	Outdoor Learning, Free Flow Play, PE, CCA (1 hour)	Scheduled Activities (including Sports Days, Outdoor Excursions and Outdoor Community Events)
PM2.5	Air Quality Index (AQI)	Air Quality Level	Description			
0 – 12	0 – 50	Good	Air quality is considered satisfactory. Air pollution poses little or no risk	Normal Activities	Normal Activities	Normal Activities
12.1 to 35.4	51 - 100	Moderate	Air quality is acceptable. The general public is not likely to be affected, but people who are unusually sensitive to air pollution may experience respiratory symptoms	Normal Activities	Normal Activities	Normal Activities
35.5 to 55.4	101 -150	Unhealthy for sensitive groups	People with heart or lung disease, older adults, children and people who are sensitive to air pollution may experience health effects and should avoid heavy exertion outdoors. The general public is less likely to be effected, but should limit prolonged outdoor activity	Activities may be modified	Activities may be modified	Activities may be modified
55.5 to 150.4	151-200	Unhealthy		Activities modified. <b>Early Years and Primary students with asthma or respiratory problems kept indoors.</b>	Reduced exposure, longer breaks, fewer high exertion activities. <b>Early Years and Primary students with asthma or respiratory problems should stay indoors.</b>	Consider rescheduling or relocating event indoors
150.5 to 250.4	201-300	Very Unhealthy	People with heart or lung disease, older adults and children may experience serious health effects and should avoid outdoor activities. The general public may begin to experience health effects and should avoid heavy exertion outdoors	<b>All outdoor activities cancelled</b>		Reschedule or relocate event indoors.
250.5 to 500.4	> 300	Dangerous	Everyone may begin to experience adverse health effects. People with heart or lung disease, older adults and children should remain indoors. The general public should avoid prolonged or heavy exertion outdoors, keep informed of emergency warnings and follow health & safety advice	<b>All students and staff to remain indoors unless moving between buildings. Further safety measures will be taken based on the situation and external guidelines from local authorities</b>		Reschedule events.

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