

# Air Quality Policy

Revised August 2018

The International School of Beijing (ISB) strives to promote a healthy environment for its students, staff, parents, contractor partners, and visitors to our campus. Being situated in the capital of a nation on a journey of economic and technological transformation has resulted in near-term environmental concerns for human health, including air pollution. It is the objective of this Policy to detail the mitigation measures taken at ISB to maintain a healthy environment.

Exposure to elevated levels of air pollution cause both short-term and long-term health effects. The extent of those effects varies depending on individual risk factors such as age, existing cardiovascular or respiratory conditions, and nature of activities performed. Research has found children (ages 0 to 18) and the elderly (age 65+) are the most susceptible receptors and thus require additional mitigation measures as compared to the general population.

ISB's approach is built on three components:

- Provide our community with awareness and knowledge to enable individuals to make educated decisions surrounding air pollution and its impacts.
- Provide our community with a safe indoor learning environment. Our HEPA filtered air ventilation system and two activity domes are demonstrations of this commitment.
- Balance the benefits of outdoor activities with science-based expert guidance.

## The Basics:

1. ISB relies on the Air Quality Index (AQI) to determine the extent of health impacts and mitigation response needed. Conversion of criteria pollutant (PM2.5, PM10, Ozone, NO2, SO2 and CO) concentrations differs among nations globally. ISB recognizes the AQI developed by the United States Environmental Protection Agency.
2. While there are six criteria pollutants considered in the AQI, PM2.5 is currently the primary driver of elevated AQI levels in Beijing. Mitigation measures will center primarily on this pollutant.

## Outdoor Activity Guide:

Color Level	AQI Range	Mitigation Measures
Blue	0-150	None
Orange	151-175	<ol style="list-style-type: none"> <li>1. ES Indoors</li> <li>2. Modify MS/HS Heavy Exertion Activities</li> </ol>
Red	176-200	<ol style="list-style-type: none"> <li>1. MS/HS PE Indoors</li> <li>2. Modify All MS/HS Outdoor Activities</li> </ol>
Purple	201+	<ol style="list-style-type: none"> <li>1. All Student Activities Indoors</li> <li>2. Campus-wide recommendation to wear a PM2.5 mask when outside for more than 30 minutes</li> </ol>

ISB Air Quality Policy Graphic is provided as *Attachment 2*.

### Definitions:

- **Heavy Exertion Activities:** Includes rugby, soccer (football), cross country, track and field (distance portion), and similar ASAs/field trips.
- **Modified:** A change to reduce the time and/or level of exertion of an activity. Examples include moving indoors, focus on technical skills, replace workout for easy day, and wear a mask. Implementation is left up to the discretion of the coach or activity leader.
- **PM2.5 Mask:** Any mask meeting the NIOSH N95 or N99 standard, meaning the mask will filter 95 or 99 percent of particulates that are 0.3 microns in size or larger. PM2.5 consists of all particulates small than 2.5 microns in size.

### Detailed Division-Specific Outdoor Activities Guidance:

- **Campus:**
  - o At All Times:
    - Doors to the outside shall be kept closed.
  - o At AQI > 200:
    - Recommendation for all students, staff, contractor partners (i.e. Sodexo, security), parents, and visitors to wear a PM2.5 mask when outside for more than 30 minutes.
- **Elementary School:**
  - o At AQI > 150:
    - PE, ASAs, recess, and classroom activities will move indoors;
    - Field trips with significant outdoor time (> 1 hour) will be canceled/postponed.
  - o At AQI > 200:
    - All remaining field trips will be canceled/postponed. The basis for this is buses and commercial facilities typically provide, at minimum, a 50-percent reduction in particulate load, meaning an outdoor AQI of 200 will result in an indoor AQI of around 150.
- **Middle School/High School:**
  - o At AQI > 150:
    - Heavy exertion outdoor activities will be modified (sports, ASAs).
  - o At AQI > 175:
    - PE and recess will move indoors;
    - All remaining outdoor activities will be modified (sports, ASAs).
  - o At AQI > 200:
    - All activities will move indoors (including open student time during the school day (8:00 am to 3:20 pm));
    - Field trips with significant outdoor time (> 1 hour) will be canceled/postponed.
  - o At AQI > 350:

- All remaining field trips will be canceled/postponed. The basis for this is buses and commercial facilities typically provide, at minimum, a 50-percent reduction in particulate load, meaning an outdoor AQI of 350 will result in an indoor AQI of around 200.

#### Additional Guidance/Exceptions:

- Community members who are more sensitive to the health effects of air pollution, including individuals with asthma, respiratory illness, and heart or lung disease are recommended to take additional mitigation measures. Parents of these children should speak with their Principal and ensure the conditions are recorded within the school's records. Faculty/employees should inform their direct supervisor of such conditions.
- Air pollution levels will vary during the day and may rise above or below outdoor activity guidance levels during ongoing activities. Activities with less than one hour remaining may proceed using the mitigation measures the activity started with. Activities (excluding field trips) with greater than one hour remaining shall align with the mitigation measures for the most recent AQI reading.
- Sport Conference (e.g. APAC, ACAMIS, ISAC) AQI Policies supersede this Policy. Additional information on specific conference Air Quality policies are provided in *Appendix 1*.
- External partners using ISB facilities (e.g. Sports Beijing) are recommended, but not required to adhere to this Policy.

#### Monitoring Procedure:

- The official measurement used by ISB is the Shunyi New Town government station. This station reads once per hour with a typical reporting delay of 15 to 30 minutes. The reading for this station can be found here: <http://aqicn.org/city/beijing/shunyixincheng/>
- ISB does not have an automatic notification system for AQI. Monitoring AQI readings shall be the responsibility of the individual managing the activity:
  - Coaches for practices
  - Mentors for ASAs and weekend trips
  - Principals for school events and field trips
  - Activities Director for sports games
- Modification/cancelation/suspension decisions shall be made within the following timeline:
  - Field trips/School events (i.e. International Day) – Two hours prior to departure
  - School day activities (PE, recess, ASAs, practices) – Use last available reading
  - Sports games – Two hours prior to start or per conference guidelines

## APPENDIX 1 – ACTIVITY CONFERENCE GUIDELINES

### Asia Pacific Activities Conference (APAC):

The Tournament/Festival Director will have jurisdictional authority for the interpretation of the rules and schedule during competitions or festivals.

APAC Guidelines on cancellation of outdoor events due to air pollution.

1. Staging of outdoor activities will depend upon air quality, as measured by the U.S. Air Quality Index (AQI) or its equivalent. Index as follows:
  - a. Level 1 (1-200 AQI): No modification necessary
  - b. Level 2 (201-300 AQI): The host Activities Director has the authority to modify or suspend activities.
  - c. Level 3 (301+ AQI): The activity should be suspended and AQI monitored. The activity can resume once the AQI drops below 300.
2. Measurements are taken within an hour of game time.
3. Track and field may be modified throughout the day.

### International School Alliance China (ISAC):

ISAC recognizes that while many schools have varying approaches and rules pertaining to AQI, it is left to the host school and event director to determine whether an outdoor event can go ahead – based on the following ISAC agreements:

- An ISAC outdoor sports tournament should not begin if the AQI is > 250 – with a two-hour notification from the event coordinators expected from participating schools.
- Any ISAC sports tournament that begins must be ended when the AQI (if able to be measured) moves to 276 or above during the event.
- Final results of a shortened tournament should be determined by the host tournament director, after consultation with participating coaches.

## APPENDIX 2 – ISB AIR QUALITY POLICY GRAPHIC

US AQI Index (PM <sub>2.5</sub> - µg/m <sup>3</sup> )	USEPA Recommended Action	ISB Outdoor Activity Guide
0 – 50 (0 – 12)	None	None
51 – 100 (12 – 35)	Unusually sensitive people should consider reducing prolonged (3+ hours) or heavy exertion	
101 – 150 (35 – 55)	The following groups should <u>reduce prolonged</u> or <u>heavy outdoor exertion</u> - People with heart or lung disease/children and older adults	
151 – 175 (55 – 103)	The following groups should <u>avoid prolonged</u> or <u>heavy exertion</u> - People with heart or lung disease - Children and older adults	ES Indoors Modify MS/HS heavy exertion activities
176 – 200 (103 – 150)	Everyone else should reduce prolonged or heavy exertion Same as above	MS/HS PE indoors Modify All MS/HS outdoor activities
201+ (150+)	The following groups should <u>avoid all</u> physical activity outdoors: - People with heart or lung disease - Children and older adults  Everyone else should avoid prolonged or heavy exertion	All student activities indoors  Campus-wide recommendation to wear a PM <sub>2.5</sub> mask when outside for more than 30 minutes

**Notes:**

a) Conference activities (games / tournaments) will follow the applicable conference air quality policy

b) Air Quality monitoring uses the Shunyi New Town government station accessible here: <http://aqicn.org/city/beijing/shunyixincheng/>