



---

## **Air Quality Index (AQI) Basics**

*Miss. Chaitali Santosh Gadekar*

T.Y.B.SC. Student (Chemistry), PadmashriVikhePatil College of Arts, Science and Commerce, Pravaranagar, A/P-Loni Tal-RahataDist-Ahmednagar, Pin - 413713 Affiliated to SavitribaiPhule Pune University Pune.

---

### **ABSTRACT:**

Pollution is derived from the Latin term 'polluere,' which simply means contamination. In layman's terms, pollution is defined as something that pollutes the environment. Pollution is defined as the presence of dangerous compounds in the air, land, or water that can harm living things and the environment. Unwanted elements that are damaging to the environment and human health are referred to as pollution. This research is based on secondary data. This information was gathered from a variety of sources. This research paper was written from a descriptive standpoint.

---

Key word: Air Quality Index, Human resources, Pollution, Human Health.

---

### **Introduction:**

These materials are seen to be crucial for preserving the environment's quality. Natural and human resources are both crucial. Since the Industrial Revolution, there has been a massive increase in pollution, primarily in the form of air pollution, land pollution, water pollution, and waste contamination. When you consider the multiple negative impacts of such pollution on human health and the environment, it's clear that human health and the environment are deteriorating. Technology is often regarded as the leading cause of many sorts of pollution and economic progress. River pollution, air pollution, and trash pollution are all the result of diverse human activities.

---

### **Amis and objective:**

This study approach relies on secondary data information. This research report is written from a single perspective. This research report was written with the crucial goal of determining how to classify air quality in mind.

---

### **Methodology:**

The internet and numerous research papers were used to get information on whether this research work relies on secondary data. These works were written from a descriptive standpoint.

---

### **Air Quality Index (AQI):**

The AQI method is useful for determining the degree of environmental quality and human health. Consider the AQI as a scale that ranges from 0 to 500. The higher the AQI value, the more polluted the air is and the greater the health risk. An AQI of 50 or less, for example, indicates good air quality, whereas an AQI of 300 or more indicates hazardous air quality. An AQI value of 100 for each pollutant refers to an ambient air concentration that is equivalent to the short-term national ambient air quality standard for public health protection. AQI scores of 100 or less are generally considered good. When the AQI exceeds 100, the air quality becomes unhealthy: initially for some sensitive groups of individuals, then for everyone as the AQI rises. There are six categories in the AQI. Each level of health concern relates to a particular category. Each category has its own color scheme. People can immediately detect whether air quality in their neighborhoods has reached harmful levels thanks to the color. There are six quality classifications in an AQI approach, and each of these six levels is assigned a different color.

**Table no 01: AQI Basics for Ozone and Particle Pollution**

Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Green	Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

Source: [www.airnow.gov/aqi/aqi-basics/](http://www.airnow.gov/aqi/aqi-basics/)

(A) Using the Air Quality Index ( [www.airnow.gov/aqi/aqi-basics/](http://www.airnow.gov/aqi/aqi-basics/) )

1. What it is: The U.S. Air Quality Index, or AQI, is EPA's tool for communicating daily air quality. It uses color-coded categories and provides statements for each category that tell you about air quality in your area, which groups of people may be affected, and steps you can take to reduce your exposure to air pollution. It's also used as the basis for air quality forecasts and current air quality reporting.( [www.airnow.gov/aqi/aqi-basics/](http://www.airnow.gov/aqi/aqi-basics/) )
2. Who issues it: EPA has issued a national index for air quality since 1976 to provide an easy-to-understand daily report on air quality in a format that's the same from state to state. The AQI as we know it today was issued in 1999; it's been updated several times since to reflect the latest health-based air quality standards.( [www.airnow.gov/aqi/aqi-basics/](http://www.airnow.gov/aqi/aqi-basics/) )
3. What pollutants it covers: There's a U.S. AQI for five major pollutants that are regulated by the Clean Air Act: ozone, particle pollution (also called particulate matter), carbon monoxide, nitrogen dioxide and sulfur dioxide. The AQI for each pollutant is generally based on the health-based national ambient air quality standard for that pollutant and the scientific information that supports that standard.( [www.airnow.gov/aqi/aqi-basics/](http://www.airnow.gov/aqi/aqi-basics/) )
4. What time frame it covers: It varies by pollutant. The ozone AQI is an 8-hour index; for particle pollution, it's 24 hours.( [www.airnow.gov/aqi/aqi-basics/](http://www.airnow.gov/aqi/aqi-basics/) )
5. Where can you get it: Metro areas with a population of more than 350,000 are required to report the daily AQI. Many more areas report it as a public service. You can find the daily AQI on Air Now and on state and local agency websites. Some agencies also report the AQI via their local news media, or by telephone hotlines.( [www.airnow.gov/aqi/aqi-basics/](http://www.airnow.gov/aqi/aqi-basics/) )
6. How to use it: Check the previous day's AQI to learn more about air quality in your community.( [www.airnow.gov/aqi/aqi-basics/](http://www.airnow.gov/aqi/aqi-basics/) )

## Conclusion:

Environmental pollution is increasing due to various economic activities of human beings, mainly due to industrialization, development of transport, and large scale use of chemicals and fertilizers in agriculture. The quality of the households is categorized in this category, mainly Green color is a good quality if the answer is that Maroon color is a high level effect.

## Reference:

1. P. H Mhaske (2009) Analysis of roads network connectivity in Ahmednagar district, International Referred Research Journal, 2(18) Pp26-27.
2. P.H Mhaske et al. (2011), Land Use & Economic Activity in Shirdi, Rahata Taluka, District Ahemadnagar M.H, International Referred

- Research Journal, Research analysis and Evaluation, Vol. 2, Issue.18, Pp.75-76.
3. S.D Gulave (2020) Use of Landsat ETM+ Data for Delineation of Vegetation Cover Area in Akole Thasil, International Research Journal of Engineering and Technology, Volume 7, Issue 2, Pp.57-61.
  4. Shejul M. E (2020) Level of Human Resources Development - A Conceptual and Review Exposition, International Journal for Research in Applied Science & Engineering Technology, vol.8, Issue 03 , Pp.687-691.
  5. Shejul M. E et al.(2020) A Geographical Study of Human Resources Development in Ahmednagar District, Maharashtra, India. EPRA International Journal of Multidisciplinary Research, vol., 6 Issue. 03 Pp 86-93. <https://doi.org/10.36713/epra4116>
  6. Sonawane V. R. et.,al.(2020)A Geographical Study of Crop Combination in Tribal Area of Nashik District, Maharashtra, India.Studies in Indian Place Names, Vol., 40 Issue 3, Pp.3915-3940.
  7. Sonawane V. R. et.,al.(2020) Analysis of Chemical Properties of Soil under Sugarcane Crop: A Case Study of Khandala, Shrirampur, Ahmednagar District, Maharashtra State, India. Our Heritage Vol. 68, Issue, 30, Pp.6522-6547.
  8. SoniyaSonkar (2021) Physico-Chemical Characteristics of Ground Water in RahuriTahsil of Ahmednagar District, M.S., India, International Journal of Scientific Research in Chemical Sciences 8(1) Pp 4-8
  9. SoniyaSonkar (2021) The Study of Physico-Chemical Characteristics of Pravara River, International Journal of Science, Engineering and Technology 9(2) Pp1-6.

**Website:**

1. [www.airnow.gov/aqi/aqi-basics/](http://www.airnow.gov/aqi/aqi-basics/)
2. <https://www.vedantu.com/question-answer/what-is-pollution-how-many-types-of-pollution-define-it-5b82f97ae4b0a50233a8b468>