

State of Air Quality

ODISHA



Overview



- Odisha has attracted more industries in the last two decades, because of its **convenient location** and the **motivational approach** of the government towards the **industrial revolution**.



- The pace of **industrialization** in the last decades in this area has led to **population surges, urbanization**, and other related developments, bringing **environmental impacts** closer to the limits of the tolerance threshold.



- Severely **polluted industrial areas/clusters** are not only environmental challenges but also **public health challenges**.



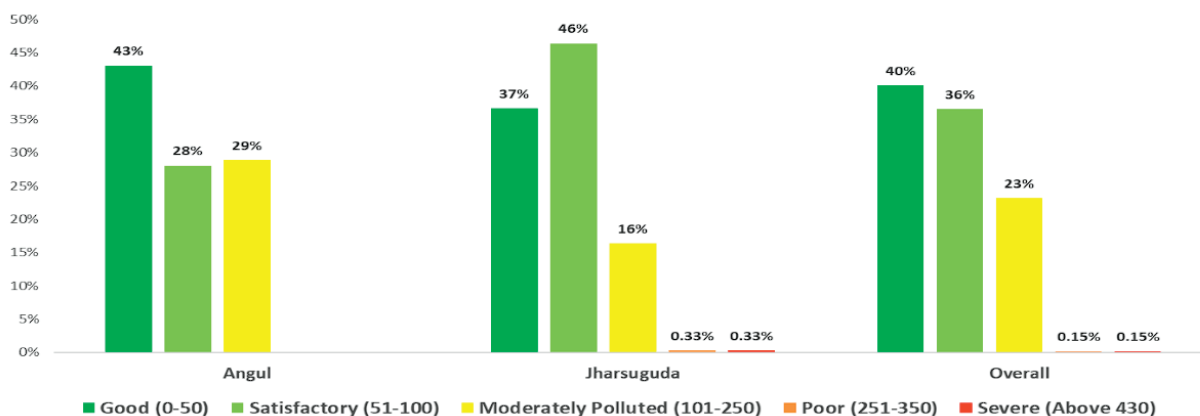
- Although these heavily polluted areas pose a major threat to the **environment and public health**, so far, only a small number of national/international efforts have been made to **curb the pollution level** in these areas.



- Of late this has forced people to realize that it is necessary to develop an objective method to quantify the environmental conditions in the industrial clusters. Though all Indian industries function by following the rules and regulations of the **Central Pollution Control Board (CPCB)**, the pollution situation is still dissatisfactory.



PM10 Level in Angul & Jharsuguda districts of Odisha from Nov 2021 to Nov 2022

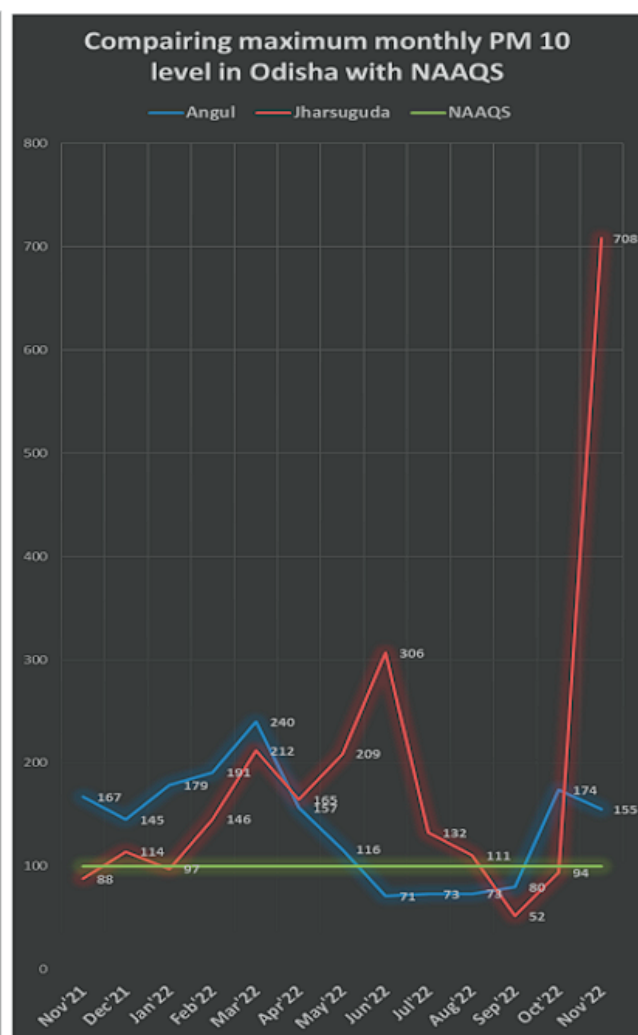
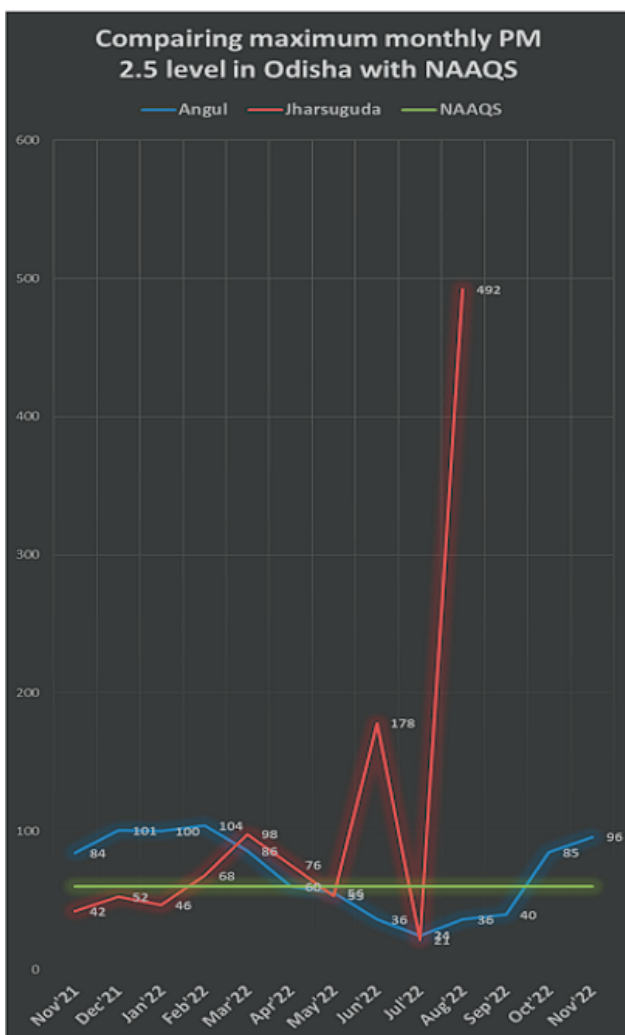


- Various sources are responsible for air pollution in the state of **Odisha**.
- The natural sources are **forest fires, volcanic eruptions** and **bacterial decomposition** of organic matter.

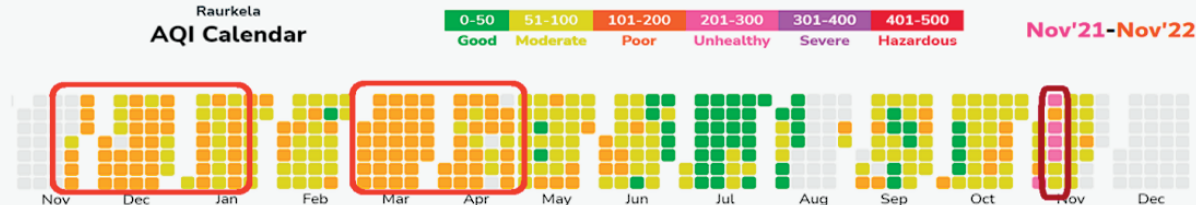


- Operation of industrial processes, burning of fuel for **heating** and **cooking** in households, plying of fuel-driven vehicles, and use of explosives for **mining** and **warfare** are **anthropogenic** sources of air pollution.
- The air pollutants may be either **Primary or Secondary**.
- The primary pollutants are those which are directly released into the atmosphere and the secondary pollutants are products of **atmospheric reactions** of the main primary pollutants.
- Products of **combustion** both complete and incomplete of **fossil fuels** are the main primary pollutants released into the atmosphere. These include **carbon dioxide, carbon monoxide, sulphur dioxide, oxides of nitrogen, & unburnt hydrocarbons**.
- Besides the products of combustion of fossil fuels, primary pollutants also include **suspended particulate matter (SPM)** generated in various activities and other gases or vapours produced in specific industrial and natural processes e.g. **ammonia, chlorine, chloro-fluoro carbon, solvent vapours**.
- A large variety of organic and inorganic compounds like **aldehydes, ketones, acids, nitrates, epoxides**, and **peroxyacetyl nitrate (PAN)** present in the atmosphere in extremely low quantities, are considered secondary pollutants.
- The well-known meteorological phenomena associated with air pollution – **Acid Rain** and **Photochemical Smog** formation – are attributed to **secondary pollutants** formed by atmospheric reactions.

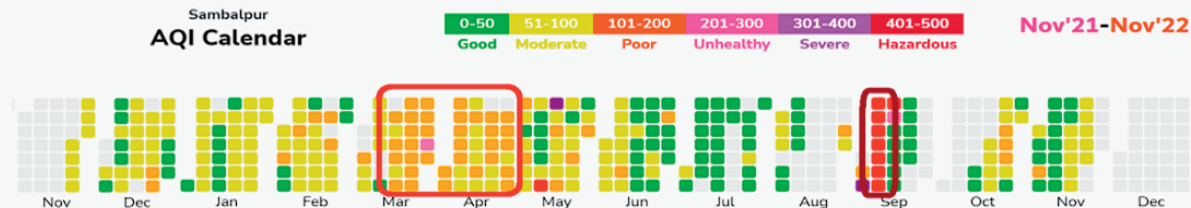
- Air pollution has become very serious in urban areas, mainly due to **automobile exhausts, industrial emissions, and construction work.**
- The **State Pollution Control Board (SPCB)** of Odisha is entrusted with the direct implementation of the provisions of the **Air Act, 1981** to **prevent, control, and abate air pollution** in the State.
- The **National Ambient Air Quality Monitoring** network was initiated by Central Pollution Control Board (CPCB) in 1984.
- State Pollution Control Board, Odisha monitors ambient air quality at **37 stations** in 16 areas of the State under the National Ambient Air Quality Monitoring programme (NAMP) of the Central Pollution Control Board and State Ambient Air Quality Monitoring programme (SAMP) of the Board.



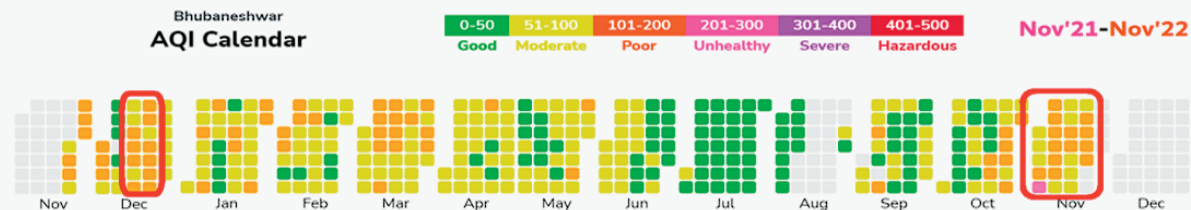
Raurkela
 AQI Calendar



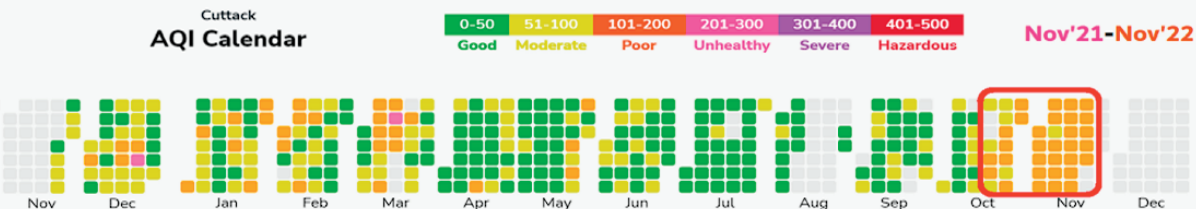
Sambalpur
 AQI Calendar



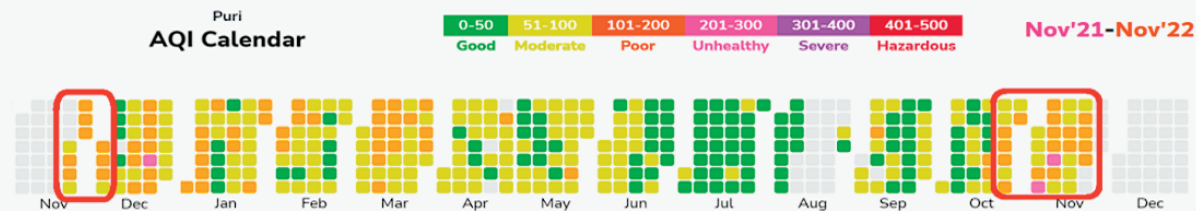
Bhubaneswar
 AQI Calendar



Cuttack
 AQI Calendar



Puri
 AQI Calendar



Source: <https://www.aqi.in/in/dashboard/india/>

Findings from the AQI Calendar

- The average air quality of **Sambalpur and Rourkela** is classified as **poor**. This is due to the presence of **industrial clusters** in these districts. **Industrial emission** is the major source of pollution in this region, followed by **vehicular emissions**.

Poor Air Quality

Major Source
Industrial Emission
Vehicular Emissions



- According to the data published by the **Odisha State Pollution Control Board** (ospcboard.org), the average **AQI value** for **November 2022** in Bhubaneswar is **142**, indicating that the air is **moderately polluted**.
- According to the Sameer app, **Talcher** city, which is **130 km** from Bhubaneswar has a **moderate AQI**, with a maximum value of **184 on the 6th of November**.

Max AQI **184**



- The action plan prepared by CPCB includes components like **identification of sources** and its apportionment considering sectors like **vehicular pollution, industrial pollution, dust pollution, construction activities, garbage burning, agricultural pollution, and residential and indoor pollution**.
- Bhubaneswar and other cities of Odisha are experiencing a progressive degradation of air quality due to the above-stated sources, coupled with **poor environmental performance**, and **ineffective environmental regulations**.