Air Quality Life Index (AQLI) Report

Why in news?

According to the University of Chicago report, the air pollution has major impact on the life expectancy.

What is the Air Quality Life Index (AQLI) report about?

- **Prepared by-** University of Chicago's Energy Policy Institute (UCEPI)
- **Purpose-** To quantify the causal relationship between long-term human exposure to air pollution and life expectancy.
- **Data-** The latest report analysed particulate matter data from 2021 to determine its impact on life expectancy.
- The index then combines this research with hyper-localised, satellite measurements of global particulate matter (PM2.5), yielding unprecedented insight into the true cost of pollution.
- **Policies-** It illustrates how air pollution policies can increase life expectancy if pollution levels were reduced to ,
    - World Health Organization's (WHO) safe guideline
    - Existing national air quality standards, or
    - By user-selected % reductions.
- **Better decision making-** This information can help to inform local communities and policymakers about the benefits of air pollution policies in very concrete terms.

Record of Pollution policies
• Industrialization period- - The big smoke-London - Smoke capital- Osaka, Japan, - Smog capital of the world- Los Angeles as the USA boomed following World War II. • Cleaner cities- Now, these rich, vibrant, and much cleaner cities are evidence that today's pollution does not need to be tomorrow's fate. • But the air did not become cleaner in these countries by accident. Much of it was the result of forceful policie

What are the key findings of the report?

- **South Asia** - Air pollution is a major threat to South Asians especially for those living in Bangladesh, India, Nepal, and Pakistan.
- Its impact on life expectancy in each of these countries is far greater than other prominent health threats.

Issues	Impact on Life Expectancy

Use of Tobacco	Reduce by 2.8 years
Sanitation and unsafe water	Reduces by 1 year
Use of alcohol	Reduces half a year

- **Impact on life expectancy** - The South Asian nation stands to *lose 6.8 years* of life on average per person.
- If the pollution levels in 2000 remained constant over time, the residents in these countries would be on track to *lose 3.3 years of life expectancy and not the 5.2 years* that they stand to lose in 2021.
- The average person living in Bangladesh, India, Nepal, and Pakistan is exposed to particulate pollution levels that are *51.3% higher* than at the turn of the century.
    - ***Bangladesh** remains the most polluted country in the world.*
- **Against WHO**- Although it witnessed a drop of 2.1% in particulate pollution in 2021 compared to 2020 levels, pollution in the country was about *14 to 15 times the WHO guideline* for the past decade.

According to the WHO, annual average concentrations of PM 2.5 should not exceed 5 µg/m3.

How about the situation in India?

A 2022 Lancet study reveals air pollution caused more than 16.7 lakh premature deaths in India in 2019. Out of the total deaths, 9.8 lakh were caused by PM2.5 pollution, and another 6.1 lakh by household air pollution.

- India is the *2nd most polluted nation*. From 2013-2021, 59.1% of the world's increase in pollution has come from India.
- **Particulate pollution-** All 1.3 billion people live in areas where the annual average particulate pollution level surpasses the WHO guideline.
- Between 2020 and 2021, PM2.5 level in India *increased 10 times* more than the WHO guideline.
- **Reduce life expectancy**- Air pollution shortens the average Indian life expectancy by *6.3 years,* relative to what it would be if the World Health Organization (WHO) guideline was met
- From 1998 to 2021, average annual particulate pollution increased by 67.7%, further reducing average life expectancy by *2.3 years.*
- **Most polluted**- The world's 50 most polluted regions belong to the *Northern Plains of India.*
- *Delhi*, the national capital, has the highest level of pollution in the country, with pollution 14 times greater than the WHO guideline.

What are the reasons behind the spike in air pollution?

- **Industrialisation-** Release of toxic pollutants from industries without proper safety guidelines.
- **Economic development-** People undermining conservation over development results in degradation of the planet health.
- **Population growth**- It has increased the energy demand and fossil fuel use across the region
- **Increase in vehicles**- In India and Pakistan, the number of vehicles on the road has increased about four-fold since the early 2000s.
- **Electricity production**- It is produced predominantly using fossil fuels which had tripled between 1998 and 2017 in Bangladesh, India, Nepal and Pakistan combined.
- **Increase in Pollution**- Although high energy use has contributed to better living standards and economic output in these countries, the consequent increase in particulate pollution has had their own consequences.

What are the impacts of Particulate Matter?

- **Impact on health-** PM 2.5 can easily enter the circulatory system of humans through the nose and throat.
- It can cause chronic diseases such as asthma, heart attack, bronchitis and other respiratory problems.
- **Life expectancy**- PM 2.5 has close link between exposure to fine particles and premature death from heart and lung disease.
- **Birth defect**- Several reports establish an association between mothers' exposure to fine particles and birth defects.

Steps taken by Government to Curb Air Pollution

• **Air (Prevention and Control of Pollution) Act 1981-** It was inspired from the decisions made during Stockholm conference.
• **National Clean Air Program**- It was launched in 2019 as a long-term, time-bound, national level strategy to tackle the air pollution problem across the country.
• The Government of India revamped its *NCAP (National Clean Air Programme)* goal in 2022 which aims to achieve a 40% reduction in particulate pollution levels by 2026 in 131 non-attainment cities.
• **Monitor-** 'National Air Monitoring Program' (NAMP), was launched in 2009 which aims to cover a larger extent of states and cities in India.
• **National Air Quality Index**- It was launched in 2014 for effective dissemination of air quality information to the people.
• **Infrastructure**- Eastern Peripheral Expressway and Western Peripheral Expressway has been operationalized to divert non destined traffic from Delhi.
• **Ban-** 10-year-old diesel vehicles and 15-year-old vehicles in Delhi NCR has been banned.
• **Faster Adoption and Manufacturing of Electric Vehicles (FAME Scheme)** - Promotes the use of electric vehicles.
• **Extended Producer Responsibility (EPR)** - It is a framework for plastic packaging, battery waste, tyre waste and e-waste.
• **Graded Response Action Plan (GRAP)** - It was launched in 2017, for prevention, control and abatement of air pollution in NCR.
• **SAMEER app**- Air quality information is available to public along with provision for registering complaints against air polluting activities.

References

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2. Down to Earth- University of Chicago report
3. Indian Express- Pollution reduce lifespan in south Asia

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