**“Health impacts of Ambient Air Pollution in South Asia: Finding Policy Gaps and Recommendations”**

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**Abstract**

Air pollution is recognized as the fourth largest global risk factor for mortality. Similarly, ambient particulate matter pollution is a significant cause of premature death and ill health worldwide. The elevated level of air pollutants and their long-term exposure increases the susceptibility to several chronic/acute diseases. In recent years, cities in India and Pakistan have been highlighted alternatively as the cities with the worst air quality during winter smog episodes. Considering the severity of the issue and fragmented research carried out in South Asia, this review paper aims to address the burden of disease attributable to air pollution. Diseases such as lower respiratory infection, Ischaemic heart disease, stroke, chronic obstructive pulmonary disease, and diabetes type 2 are increasing the burden of disease in South Asia. Policy gaps are also identified in the study. The current review will help in improving the public health of south Asian countries.The study findings suggest that policymakers at the local, national, and regional levels should devise feasible policies by considering all the relevant parameters, including the country's economic status, local meteorological conditions, industrial interests, public lifestyle, and national literacy rate.

**Keywords:** Particulate Matter, Household air pollution, Health Impacts, Air pollution, South Asia, Policy

**Outline:**

1. Introduction
2. Major Sources of Air Pollution
3. Mortalities (annual) Attributable to Air Pollution (past 10 years)
4. Current Policy structure (directly related to air pollution mitigation i-e Pakistan Clean Air Program
5. Improvement Opportunities
6. Recommendations
7. Conclusion
8. Acknowledgment
9. References

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| **Country** | **Sampling Site**  **(Rural/ Urban)** | **Sampling Method** | **Sampling Period** | **Number of Samples** | | | **Mortalities (Annual) attributable to Air Pollution** | | | | | | | **References** |
|  |  |  |  | **Male** | **Female** | **Children** | **Lower Respiratory Infections** | **Trachea, Bronchus, Lung Cancer** | **Ischaemic Heart Disease** | **Strock** | **Chronic Obstructive Pulmonary Disease** | **Diabetes Type 2** | **Other** |  |
| Pakistan |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Peshawar |  | 2005 |  |  |  | 33.2 DU |  |  | - | - |  |  | How to add reference |
|  | 2006 |  |  |  | 32.3 |  |  | - | - |  |  |
|  | 2007 |  |  |  | 32.5 |  |  | - | - |  |  |
|  | 2008 |  |  |  | 33.3 |  |  | - | - |  |  |
|  | 2009 |  |  |  | 35.3 |  |  | - | - |  |  |
|  | 2010 |  |  |  | 33.6 | 33.6 |  | - | - |  |  |
|  | 2011 |  |  |  | 32.3 | 32.3 |  | - | - |  |  |
|  | 2012 |  |  |  | 34.3 | 34.3 |  | - | - |  |  |
|  | 2013 |  |  |  | 32.6 | 32.6 |  | - | - |  |  |
|  | 2014 |  |  |  | 34.9 |  |  | - | - |  |  |
| Bangladesh | Lahore |  | 2005 |  |  |  | 37.5 | 37.5 | 2.8±1.9 | - | - |  |  |  |
| 2006 |  |  |  | 37.0 | 37.0 | - | - |  |  |
| 2007 |  |  |  | 38.2 | 38.2 | - | - |  |  |
| 2008 |  |  |  | 38.6 | 38.6 | - | - |  |  |
| 2009 |  |  |  | 37.7 | 37.7 | - | - |  |  |
| 2010 |  |  |  | 37.9 | 37.9 | - | - |  |  |
| 2011 |  |  |  | 37.4 | 37.4 | - | - |  |  |
| 2012 |  |  |  | 38.3 | 38.3 | - | - |  |  |
| 2013 |  |  |  | 38.3 | 38.3 |  | - |  |  |
| 2014 |  |  |  | 39.5 | 39.5 | - | - |  |  |
| Bhutan | Karachi |  | 2005 |  |  |  | 36.2 | 36.2 | 3.5±2.4 | - | - |  |  |  |
| 2006 |  |  |  | 36.3 | 36.3 | - | - |  |  |
| 2007 |  |  |  | 36.4 | 36.4 | - | - |  |  |
| 2008 |  |  |  | 37.0 | 37.0 | - | - |  |  |
| 2009 |  |  |  | 37.5 | 37.5 | - | - |  |  |
| 2010 |  |  |  | 36.1 | 36.1 | - | - |  |  |
| 2011 |  |  |  | 37.8 | 37.8 | - | - |  |  |
| 2012 |  |  |  |  | 37.7 | - | - |  |  |
| 2013 |  |  |  |  | 38.6 | - | - |  |  |