



**Journal of Oral Surgery Oral Pathology and Oral Medicine**  
**An Official Publication of Bureau for Health & Education Status Upliftment**  
**(Constitutionally Entitled As Health-Education, Bureau)**

## Air Pollution and Health Risk: Intelligent Mapping

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### ABSTRACT-

**Aim.** Air pollutants are manifold. In addition to microbiological pollutants, non-biological substances and chemical pollutants have their impact on health. The exposure then concerns a wide range of organic and mineral compounds. The degree of seriousness of these pollutants on public health varies according to the nature of the pollutants, their concentration as well as the predisposition of people and their sensitivity. **Method.** As the system is multi factorial and very complex to analyze by classical methods, this study offers an intelligent analysis by the principles of fuzzy inference. A fuzzy system is built with fuzzy variables at the input of the system and their impact on individuals as a fuzzy variable at the output. A rule base is built connecting the inputs to the output.

**Conclusion.** Given the complexity and the impossibility of modeling such a system by classical mathematical techniques, considering them uncertain variables, fuzzy analysis makes it possible to compensate for these inaccuracies. It then becomes possible to introduce variables at the input to predict the impact of a given environment on public health.

**Keywords:** Air pollution, Risk factors, Intelligent systems, Fuzzy logic

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Website: <http://heb-nic.in/osopom-issues/>

Received for OSOPOM 18/11/2021

Accepted for OSOPOM 28/11/2021

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