

## Pollution; an aftermath of Urbanisation

Munir Akhtar Saleemi<sup>1</sup>

Professor/ HoD, Department of Community Medicine, University College of Medicine & Dentistry, The University of Lahore

### Correspondence to

Prof. Dr. Munir Akhtar Saleemi  
E-mail: saleemimunir@yahoo.com



This is an open access article distributed in accordance with the Creative Commons Attribution (CC BY 4.0) license: <https://creativecommons.org/licenses/by/4.0/> which permits any use, Share — copy and redistribute the material in any medium or format, Adapt — remix, transform, and build upon the material for any purpose, as long as the authors and the original source are properly cited. © The Author(s) 2021

Since time immemorial man needed shelter and basic amenities for survival and protection from vagaries of nature. The earlier human abode-ments were developed for procurement of food, water and safe environment. Hence these shelters were built close to bodies of water and fertile lands.<sup>1</sup> In his treatise, Greek physician Hippocrates in 4th century BCE, on Airs, Waters and Places systematically explained the relationship among season, nature of winds, quality of water and land.<sup>2</sup>

The character of populace changed over time. The identities and common interests brought people to live in close environment. This led to formation of towns and cities. The economic and educational pull attracted people from surrounding geographical areas. The change in modes of transport has proved as a catalyst in human migration for better gains.<sup>1</sup>

In our local context above mentioned factors brought ethnic and demographic change in Karachi, Lahore and other cities of Pakistan. The metropolis corporations changed to mega cities. Any human congregation of more than ten million is ascribed as megacity. The population of Karachi is more than sixteen million and similarly Lahore has a figure crossing thirteen million.

Along with densely populated geographical areas with all modern amenities, there was mushroom growth of unplanned peri-urban slums. Similar changes occurred in all urban settings of low middle income countries of the world. This led to human development without appropriate remedial and protective measures.

All types of pollution grew in greater magnitude and brought mankind to a stage that very own existence of mother planet and its people is endangered. Industrial revolution totally changed the environment from better to worse. At state level to achieve maximum economic growth the organized super powers made an extended and accelerated effort to exploit the natural resources to their maximum use.<sup>3</sup>

Human living, activity, refuse and waste burden the environment. The modern life has changed quantum of above mentioned aspects of human living. The present day living is attended with provision and consumption of water, electricity and fuel for cooking. The mobility from one place to another is mechanised. The modes of

transport vary in different parts of country. At individual level motor cycle and cars are used. The public transport in shape of modified chingchi rickshaw, taxi and bus are available in Pakistan.<sup>4</sup>

The industrial units located in periphery of towns use mixture of electricity, coal and gas. Its use contribute to environmental pollution.<sup>4</sup> The major chunk of energy is derived from burning of fossil fuels. In Pakistan the share of clean energy from hydal, nuclear, wind and solar projects is 35% to 38%. The major component 65% is obtained from oil and gas. The burning of biomass contribute to release of green gases which lead to air pollution. There is increased emission of three primary green gases, i.e., carbon dioxide, methane and nitrogen dioxide. Deforestation is direct result of burning of wood for domestic and brick kiln units.<sup>5</sup>

Urbanisation is a complex phenomenon attended with socioeconomic implications. In low middle income countries this transformation has taken place in haphazard manner. Apart from positive aspects of urbanisation, there are negative effects comprising of change in population size, need of more housing units, greater energy requirements, and indigenous industrial units. All these developments lead to production of waste and pollution at a much larger scale.<sup>3,4</sup>

The World Bank document on Cleaning Pakistan's Air comprehensively deal with all aspects of polluted air and resulting morbidity and mortality.<sup>4</sup> There is plenty of evidence on increased morbidity and mortality in paediatric and adult population. According to WHO there are 8.9 million deaths each year due to air pollution. Whereas 94% of (8.9 million) mortality figure is from low middle income countries.<sup>6</sup>

During present era of COVID-19 pandemic and recent Dengue epidemic in Pakistan, the health authorities are more focussed on acute crises. The daily monitoring of quality of air is done by United Nation Environment Programme, Global Environment Mentoring System for Air (GEMS Air). During current winter of 2021, the Pakistan's cities of Lahore and Karachi are on the top of list as most polluted cities of world. The resultant morbidity and mortality is not being projected in media. There is dire need that health authorities should establish data monitoring desk for pollution related morbidity and mortality.

At global level the Peoples Republic of China,

**Editorial**

France and many developed nations have chalked out strategies to manage pollution in their countries. The paucity of funds and lack of political will remains a main hurdle in confronting the harsh reality of growing pollution along with great loss of quality of human life in communities living in Low Middle Income Countries. There is need to organise evidence based research and bring down pollution in our megacities.

**References**

1. Ali N. The restructuring of socio-economic relations during the LPPNB in the south- ern Levant and the role of ritual buildings. *Jordan Journal for History and Archaeology*. 2010; IV(1):159–188.
2. Asclepiades H. *On Airs, waters and Places*. Translated by Francis Adams. Good Press, 10-Apr-2021
3. United Nations, Department of Economic and Social Affairs, Population Division (2019). *World Urbanization Prospects: The 2018 Revision (ST/ESA/SER.A/420)*. New York: United Nations
4. Afzal J, Enriquez S, Khan A, Nakagawa A, Sanchez-Triana E. *Cleaning Pakistan's Air*. Washington DC: International Bank for Reconstruction and Development / The World Bank; 2014. doi:10.1596/978-1-4648-0235-5.
5. Tahir SN, Rafique M, Alaamer AS. Biomass fuel burning and its implications: deforestation and greenhouse gases emissions in Pakistan. *Environ Pollut*. 2010;158(7):2490-5. doi: 10.1016/j.envpol.2010.03.017. PMID: 20398986.
6. Brief Communication. *Environmental Pollution: An Under-recognized Threat to Children's Health, Especially in Low- and Middle-Income Countries*. *Environmental Health Perspectives*. <http://dx.doi.org/10.1289/ehp.1510517>