Globalisation Environment and Health:
A Case Study of Air Pollution in Hyderabad City

A thesis submitted to the University of Hyderabad in partial fulfilment of the Award of

DOCTOR OF PHILOSOPHY

IN

DEPARTMENT OF POLITICAL SCIENCE

BY

YUVARAJ GUDIGONDA

SUPERVISOR
Prof. Ramdas Rupavath

DEPARTMENT OF POLITICAL SCIENCE
SCHOOL OF SOCIAL SCIENCES
UNIVERSITY OF HYDERABAD
HYDERABAD – 500046
TELANGANA, INDIA
JUNE- 2022

DEPARTMENT OF POLITICAL SCIENCE

SCHOOL OF SOCIAL SCIENCES

UNIVERSITY OF HYDERABAD

****

DECLARATION

I, **YUVARAJ GUDIGONDA**, hereby declare that this thesis entitled **'Globalisation, Environment and Health: A Case Study of Air Pollution in Hyderabad City'** submitted by me, under the supervision of **Prof. Ramdas Rupavath, Department of Political Science,** is a bonafide research work and is free from plagiarism. I also declare that it has not been submitted previously in part or in full to this University or any other University or Institution for the award of any degree or diploma. I hereby agree that my thesis can be deposited in Shodhganga/INFLIBNET.

A report on plagiarism statistics from the University Librarian is enclosed.

Date: 28, June,2022.
Hyderabad

Signature of the Student

Yuvaraj Gudigonda
Reg.No: 13SPPH01

//Countersigned//

Signature of the Supervisor **Head, Department of Political Science**

DEPARTMENT OF POLITICAL SCIENCE

SCHOOL OF SOCIAL SCIENCES

UNIVERSITY OF HYDERABAD

****

CERTIFICATE

This is to certify that the thesis entitled **'Globalisation, Environment and Health: A Case Study of Air Pollution in Hyderabad City'** submitted by **YUVARAJ GUDIGONDA** bearing Regd. No. **13SPPH01** in partial fulfillment of the requirements for the award of **Doctor of Philosophy** in the **Department of Political Science** is a bonafide work carried out by him under my supervision and guidance.

The thesis is free from plagiarism and has not been submitted previously in part or in full to this or any other University or Institution for the award of any degree or diploma. Further, the student has the following publication(s) before submission of the thesis/monograph for adjudication and has produced evidence for the same in the form of acceptance letter or the reprint in the relevant area of research: (**Note:** at least one publication in referred journal is required).

1. 'Globalisation effects on Indian society: An Overview', *Infokara Research*, Volume 10, Issue 6, June, pp.161-169. ISSN NO: 1021-9056. **(Journal indexed in UGC-CARE Group-I (Serial no: 15775) & SCOPUS indexed till 2014) Impact Factor - 5.3** Chapter of dissertation where this publication appears (delete if not applicable) Chapter II.

2. 'Role of the State in Mitigating Environmental Pollution in India', *Infokara Research*, Volume 10, Issue 6, June, pp.112-132. ISSN NO: 1021-9056. **(Journal indexed in UGC-CARE Group-I (Serial no: 15775) & SCOPUS indexed till 2014) Impact Factor - 5.3** Chapter of dissertation where this publication appears (delete if not applicable) Chapter II.

He has made presentations at the following Conferences:

1. Presented a paper entitled "Assesment of the Environmental Susstainablity in the State of Andhra Pradesh in the view of Globalisation", in the National Conference on Critical Refletions on Challenges, Perspectives and Prospects of Social Work organised by Department of Social Work, Don Bosco Arts and Science College, Angadikkaduvu, Kerala, India held on 2 to 3 of November, 2012. (National).

Further, the student has passed the following courses towards fulfillment of course work requirement for PhD / was exempted from doing coursework (recommended by Doctoral Committee) on the basis of the following courses passed during M. Phil Program and the M. Phil degree was awarded.

SI. No	Course Code	Name of the Course	Credits	Pass/ Fail
1	DP601	Research Methodology	5.00	Pass
2	DP601	International Relations	5.00	Pass
3	STAT416	Statistical Methods for Social sciences	3.00	Pass
4	DPIS605	Background Paper	5.00	Pass

Date: 28, June,2022.
Hyderabad

Supervisor	Head	Dean
Prof. Ramdas Rupavath	Prof. K. K. Suan Hausing	Prof. Y. A. Sudhakar Reddy

ACKNOWLEDGEMENTS

I take this opportunity to express my heartfelt and strong sense of warm appreciation for the guidance and encouragement provided to me by my research supervisor **Prof. Ramdas Rupavath**, who patiently and untiringly guided my thought process and gave valuable suggestions for which I am deeply indebted to him. Whenever I had any doubt at any point in my research he showed me the way to follow and clarified the doubts.

My Heartful thanks to Prof. K. K. Suan Hausing, Head, Department of Political Science and Prof. Arun Kumar Patnaik, Dean, School of Social Sciences. Further, my sincere thanks to the esteem Doctoral Research Committee members i.e., Prof. Kailash Kunhi Krishnan and Dr. Arvid Susarla and my special thanks to teachers at Department of Political Science; Prof. Sanjay Palshikar, Prof. Vasanthi Srinivasan, Prof. Prithvi Ram Mudiam, Prof. Manjari Katju, Prof. E. Venkatesu and Prof. K.Y. Ratnam, who have been a great source of encouragement and inspiration during my research. They are not only Teachers of mine, Mentors and well wishers too. Next, my heartfelt gratitute to non-teaching staff of the depatment, epsepcially to prakash sir for his timely assistance, cooparation and guidence. .

I am much beholden and obliged to my all loving friends, seniors and juniors for their unending support and cooperation. I extend my profound thanks to Shankar, Dr. Ramanjaneyulu, Dr. Suman Damera, Dr. Srinivas, Deelip sir, Charan, Dr. Ashok Dara, Dr. Joseph Alugula, Dr. Satri Veera Kesalu, Dr. Balaji Bellekeri, Syam Kumar, who shared their thoughts and valuable inputs to shape my work whenever I needed.

Words are inadequate to express my immense gratitude to my parents Yesob and Lalitha and Brother Raj Kumar, sisster Roja Rani and brotherinlaw Moses for their love, effection, constistenst encouragement, care, support and prayers and who are responsible for my enthusiasm in academics. Last but not least my special heartful thanks to all who helped me directly or indirectly to finish my thesis.

- Yuvaraj Gudigonda

LIST OF CONTENTS

ABBREVIATIONS

Acronym		Full form
AQI	:	Air Quality Index
BS-IV	:	Bharat Stage IV
CAAQMS	:	Continuous Ambient Air Quality Monitoring Station
Cd	:	Cadmium
CNG	:	Compressed Natural Gas
CO	:	Carbon monoxide
COPD	:	Chronic obstructive pulmonary disease
CPCB	:	Central Pollution Control Board
CPI	:	Communist Party of India
Cr	:	Chromium
CSE	:	Centre for the Study of the Environment
Cu	:	Copper
EBIC	:	Environmentally balanced industrial complexes
Fe	:	Iron
GBD	:	Global Burden of Disease
GHGs	:	Greenhouse gases
GHMC	:	Greater Hyderabad Municipal Corporatio
GIS	:	Geographic information system
GPF	:	Globalization Policy Forum
H2S	:	Hydrogen sulphide
HAP	:	Household air pollution
HCU	:	Hyderabad Central University
HF	:	Hydrogen fluoride
HUDA	:	Hyderabad Urban Development Area
ICRISAT	:	The International Crops Research Institute for the Semi-Arid Tropics
IMF	:	International Monetary Fund
KSSP	:	Kerala Sastra Sahitya Parishad
LPG	:	Liquefied petroleum gas
MoEF	:	Ministry of Environment and Forest
MSMEs	:	Micro, Small, and Medium Enterprises
MW	:	Megawatts
NAAQS	:	The National Ambient Air Quality Standards
NAMP	:	National Air Monitoring Program
NAMP	:	National Air Quality Monitoring Program
NCEPP	:	National Council for Environmental Planning and Policy
NEERI	:	National Environmental Engineering Research Institute
NEP	:	National Environmental Policy
NO_2	:	Oxides of Nitrogen
NO3	:	Nitrates

NOx	:	Nitrogen oxides
NTR	:	National Testing Range
NVBDCP	:	National Vector Borne Disease Control Programme
O3	:	Ozone
Pb	:	Lead
PM	:	Particulate matter
RSPM	:	Respiratory Particulate Matter
SAAQM	:	State Ambient Air Quality Monitoring Program
SO_2	:	Sulphur Dioxide
SO4	:	Sulfates
SPM	:	Suspended particle matter
SPM	:	Suspended Particulate Matter
TSIIC	:	Telangana State Industrial Infrastructure Corporation
TSPCB	:	Telangana State Pollution Control Board
UK	:	United Kingdom
UMS	:	Urban Malaria Scheme
UN	:	United Nations
UNCED	:	The United Nations Conference on Environment and Development
UNCHE	:	the United Nations Conference on Human Rights
US	:	United States
US AQI	:	United States Air Quality Index
US EPA	:	US Environmental Protection Agency
UV	:	Ultraviolet radiation
VOC	:	Volatile natural mixtures
WHO	:	World Health Organisation
Zn	:	Zinc

GLOSSARY OF TERMS

Term		Description
Climate	:	Climate is the long-term weather pattern in an area
Conservation	:	Conservation is the care and protection of these resources so that they can persist for future generations. It includes maintaining diversity of species, genes, and ecosystems, as well as functions of the environment, such as nutrient cycling.
COPD	:	Chronic obstructive pulmonary disease is a chronic inflammatory lung disease that causes obstructed airflow from the lungs. Symptoms include breathing difficulty, cough, mucus (sputum) production and wheezing
Ecology	:	Ecology is the study of the environment, and helps us understand how organisms live with each other in unique physical environments.
Egalitarian	:	Egalitarianism, or equalitarianism, is a school of thought within political philosophy that builds from the concept of social equality, prioritizing it for all people.
Environment	:	the surroundings or conditions in which a person, animal, or plant lives or operates
GHMC	:	Greater Hyderabad Municipal Corporation The Greater Hyderabad Municipal Corporation (GHMC) is the civic body that oversees Hyderabad, the capital and largest city in the State of Telangana. It is the Local Government for the Cities of Hyderabad and Secunderabad.
GIS	:	A Geographic Information System (GIS) is a computer system that analyzes and displays geographically referenced information. It uses data that is attached to a unique location.
Globalisation	:	globalisation, is the process of interaction and integration among people, companies, and governments worldwide. Globalization has accelerated since the 18th century due to advances in transportation and communication technology.
LPG	:	Liquefied petroleum gas is the liquefied form of petroleum gases released during the extraction of crude oil and natural gas or during the refining of crude oil.
Mortality	:	the state of being subject to death.
National Clean Air Programme	:	National Clean Air Programme (NCAP), launched in 2019, is India's flagship program for better air quality in 122 cities. This review evaluates the scientific, legislative, financial, and institutional framework of the 102 publicly available clean air action plans submitted under NCAP.
PM10	:	PM10 describes inhalable particles, with diameters that are generally 10 micrometers and smaller.
PM2.5	:	Fine particulate matter (PM2.5) is an air pollutant that is a concern for people's health when levels in air are high. PM2.5 are tiny particles in the air that reduce visibility and cause the air to appear hazy when levels are elevated.
Third-world countries	:	The term Third World was originally coined in times of the Cold War to distinguish those nations that are neither aligned with the West (NATO) nor with the East, the Communist bloc. Today the term is often used to describe the developing countries of Africa, Asia, Latin America, and Australia/Oceania.

LIST OF TABLES

LIST OF FIGURES

CHAPTER I
Introduction

1. Back ground of the Study

Hyderabad, is one of the most environmental contamination cities in India. The Swiss organisation IQAir estimates that more than 7 million people worldwide die prematurely each year due to air pollution, which also costs the world economy more than $5 trillion annually. From 2018 to 2020, there was an improvement in air quality across all of India's cities. On the other hand, 22 of the world's top 30 most polluted cities are found in India. The 'National Clean Air Programme' of India was initiated in 2019, and it has a "tentative national objective" of achieving a 20 to 30 percent reduction in PM 2.5 and PM 10 concentrations by the year 2024, with 2017 serving as the baseline year (Times of India, Jan 10, 2022). (From the Times of India, January 10th, 2022)

As evidence of how much worse things have grown, we might look at the air quality index for Hyderabad. The Air Quality Index (AQI) is a metric used to measure the air quality in a particular location. It goes from 0 up to 500. When the AQI number is high, there is a larger potential for exposure to various air pollutants. The Air Quality Index is broken down into six main groups, each indicating a different level of potential danger to one's health. "Green (0-50) - Healthy, Yellow (51-100) - Moderate, Orange (1001-150) - Unhealthy for sensitive groups, d) Red (151-200) - Unhealthy, e) Purple (201-300) - Extremely unhealthy, f) Maroon (301 and higher) - Dangerous" (Times of India, Jan 10, 2022).

Even as the Air Quality Index of several major cities in the country is turning out to be a cause of concern, Hyderabad is charting its own course with considerable improvement in air quality levels since the beginning of 2021. According to data from the Telangana State Pollution Control Board (TSPCB), air quality has improved across the State. In January 2021, 18 localities, including Sanathnagar, University of Hyderabad, ICRISAT, Jeedimetla, Chikkadpally, Kukatpally, Nacharam, Uppal, and Bolarum, had a moderate AQI (from 101 to 200), indicating that pollution in the air was dense enough to cause breathing difficulties to lung and heart patients. But current data shows a marked change, with most of these areas having satisfactory AQI

(from 51 to 100) (Namrata Srivastava, November 15, 2021). During October, pollution levels of only four areas in the city - Balanagar, Charminar, Nehru Zoological Park and Pashamylaram were above 100, making the air quality of these areas mildly toxic. At the same time, the pollution level in Balanagar has shown maximum improvement. The AQI of Balanagar in January was 162, and while it did increase to 169 in February, it came down to 103 in October (Namrata Srivastava, November 15, 2021).

In any given location, poor air quality results from a combination of several factors. Several types of pollutants can be detected in the air, including pollutant gases and suspended particles (PM10 and PM2.5). Particulate matter is a term that refers to pollutants in the air that are in the form of small solid or liquid particles (PM). A person breathes in particulate matter that may harm their health (PM). Larger PM10 particles can irritate the eyes, nose, and throat. This can be brought on by prolonged exposure (coarser). The dust that originates from various locations, such as streets, farms, and dry riverbeds, makes up pollutant 10 (PM10). PM2.5 particles are more dangerous than other types of particulate matter because they can penetrate further into your lungs and, potentially, your bloodstream (Times of India, Jan 10, 2022).

Following hypertension, indoor air pollution, cigarette smoking, and poor nutrition, air pollution has recently ascended to the sixth most significant cause of death in India, with an estimated 6,20,000 people dying from air pollution-related illnesses. Nearly every city suffers from severe particulate pollution, with poisons like nitrogen oxides, ozone, and air pollutants wreaking havoc on people's health. According to the Centre for the Study of the Environment (CSE), approximately half of the urban population breathes in unsafe air. A third of city people are exposed to particle contamination to some degree (Tandal, 2011). Globalization has hastened urbanization, industrialization, and liberalization, as well as revealed that human social orders all over the world have formed closer linkages logically. In recent years, the rate of global inclusion has accelerated substantially. Remarkable advances in communications, transportation, and computer technology have re-energized interaction and made the world more connected than at any previous time (Globalization Policy Forum, 2005).

The global social justice movement, which is a result of globalisation, pushes for a more democratic and responsive response to public demands (Global Policy Forum, 2011). Products, services, and money have tremendous adaptability thanks to advances in communications and transportation technologies and a deregulated economy ideology. Northern nations must open global business sectors to their products and take advantage of plentiful, low-wage jobs in the South, which is something that most Southern elites welcome. They leverage international monetary foundations and regional economic agreements to compel fragile countries to "coordinate" by decreasing taxes, selling state-owned firms, and loosening environmental and labour rules (Global Policy Forum, 2005).

Metropolitan cities already house most of the world's population, with estimates suggesting this proportion will rise to 70% by 2050. Creating districts will house 80 percent of the world's metropolitan population, primarily in African and Asian cities. Between 1950 and 2010, 1.3 billion people were added to small urban areas, with medium urban areas (632 million) and gigantic urban areas (1.3 billion) receiving more than double the number of people (570 million). Individual versatility, typical population growth, financial turn of events, environmental alterations, and local and public approaches are all factors that contribute to metropolitan places' continued advancement (UN, 2013). The effect will probably be profound in non-industrial nations, especially in super urban communities (urban communities with a populace of more than 10 million). Using biomass fuel has expanded indoor and open-air pollution and the resulting infection trouble. Outside discharges emerge from sources like yield squander copying, family biomass use, charcoal assembling, waste cremation (counting medical services blow), block furnaces, cars, and businesses. The WHO gauge indicates that outside air pollution contributes to around 1 00,000 worldwide mortality and bleakness (WHO, 2012).

Therefore, laws, economies, and social processes are forming at the global level. Many government officials, academics, and columnists regard these tendencies as unavoidable and (in most cases) welcome. For billions of people worldwide, however, business-driven globalisation means abandoning old ways of life and jeopardising careers and civilizations (Global Policy Forum, 2011). Instead of working via their governments, civil society organisations act globally through

forming coalitions with organisations in other countries, adopting global exchange frameworks, and directly lobbying international organisations and other entertainers. (Global Policy Forum, 2005).

Our way of life has been profoundly affected by globalisation. It has led to the most significant amount of invention and advancement. It has prospered in financial matters, opened up vast office channels, and played a critical role in bringing people from other civilizations together. Globalization has also given rise to several concerns, the most prominent of which is the impact it has had on the environment (Ilyas, 2010). Globalization has resulted in an increase in the use of natural resources, which has had an impact on the environmental cycle. Increased use leads to a rise in product creation. As a result, the climate gains importance. The expansion of globalisation has led to an increase in both the area covered by transportation and the amount of climate pollution. Globalization has resulted in other climate impacts such as air and noise pollution, landscape incursion, and various substances' consumption of the ozone layer (Gupta, 2002).

Globalization additionally prompts enterprises, and it expanded modern wastage synthetic and severely influenced soil and made it numerous natural issues have arisen in metropolitan territories like sterilization, lodging, staffing, development of ghettos and so forth, and the issue of pollution of the climate. These issues are turning out to be not kidding and extreme consistently by quickly developing populace and over utilization of regular assets. Further, the developing quantities of vehicles have a practically high pitch in the previous decade, adding to the developing threat of air contamination. Significant urban communities throughout the world have gotten over troubled with gaseous emanation from vehicles. The passing rate of auto contamination is expanding in the metropolitan regions (Ilyas, 2010). PM 10 surpassed the air quality principles endorsed by CPCB for mechanical and blended territories (Gupta, 2002). Expanding urbanization and industrialisation have grown the degree of different pollution. Residue smoke and other harmful gases have undermined the presence and prosperity of people (Delhi Master Plan, 2020).

Understanding the Globalisation, Environment and Health

Globalization mirrors the interaction of internationalization, advancement, and liberation of cross-boundary stream of exchange, capital, innovation, thought, culture,

and so on. That positively prompted the beginning of the new worldwide economy, worldwide guidelines of administration, worldwide culture, worldwide everyday society, and other substantial worldwide substances, which create all essential chances for everywhere on the advancement of an individual on this space boat of earth. In this feeling, the term was authored in 1983 (Theodre Levitt, 1983). The term has been utilized in a variety of senses. A few essayists relate it with an expanding interconnectedness of occasions and improvements occurring all the while in more than one country. For other people, Globalization infers a few things past likenesses. They contend that these patterns and improvements are associated and that there is a consistent duplication and escalation of connections and streams among discrete public elements with a more significant association level and coordinated into one framework. For a couple of journalists, the term will, in general, be utilized freely to allude to the broad reach and extraordinary assortment of cycles and patterns, some of which, like privatization and progression, are progressively getting away from control by the nation-state, mirroring another degree of industrialist advancement in another arrangement of supranational organizations, which supplanted the nation-state (Veltmeyer, Henry, 2005). The issue with Globalization is that it's anything but a solitary interaction, yet a complex of cycles, at times covering and interlocking cycles yet additionally, on occasion, conflicting and oppositional ones.

Globalization implies the nearer incorporation of nations and individuals, made conceivable by mechanical turns of events and institutional changes. Globalization, he defines, is the unification of the world's nations and people groups as a result of massive reductions in transportation and information costs, as well as the removal of counterfeit barriers to the cross-border movement of goods, services, capital, information, and (less significantly) people. Globalization has been joined by the making of new establishments that have gotten together with existing ones to work across borders. Globalization is effectively determined by worldwide enterprises, which get capital and products across borders and settled global intergovernmental organizations quite a while ago (Stiglitz, J. E., 2000).

Globalization has had a wide range of effects on our way of life. It has resulted in the most rapid invention and progress. Aside from playing a vital role in bringing individuals from other societies together, it has flourished in financial problems and opened up vast avenues of division. Globalization has also sparked concern in various

areas, the most significant of which is its influence on the environment. Globalization has led to an increase in the consumption of goods, which has influenced the biological cycle because higher usage leads to increased product creation. As a result, the environment becomes more critical (Herman E. Daley, 1999). Globalization has other climate impacts, such as noise pollution and scene disruption, and several gases contribute to the ozone layer's depletion. Globalization also encourages initiatives, increases contemporary waste, and significantly impacts soil (Ilip G. Cerny, 1995). Climate is a broad term referring to both living and non-living organisms. Because of globalisation, the climate is gravely altered and confronted with such a plethora of challenges, and we can't make it on the globe without it.

Concept of Environment

The English word "environment" originated from the French word "environment," which also referred to the natural environment. People, plants, critters, bacteria, and other biotic elements coexist with abiotic forces such as light, air, water, soil, and so on in our environment. Indeed any outside power, substance, or condition that influences life forms in any capacity turns into a factor of their current circumstance, and the amount of every one of these elements establishes a climate (Daubenmire, 1974). Fitting (1972) has characterized it as the entirety of milieu components of a life form. In the mid-twentieth century, it was imagined that human exercises and animals were unequivocally impacted and compelled by typical habitat, a view styled natural determinism. By the mid-twentieth century, it was understood that an exceptionally unbending deterministic view was not predictable with the way that individuals could alter their current circumstance, so ecological possibilism turned into the idea that conditions gave potential outcomes to the human decision (Kumra, 1982).

In the first place, the climate of early man comprised of just actual parts of the planet earth (land, air, and water) and biotic networks; however, with the walk of time and progression of society, man broadened his current circumstance through his social, social, financial and political capacities (Brijgopal, 1978). Social or human climate might be characterized as the cycle by which individuals establish a relationship with their regular habitat. It incorporates man-made highlights like

populace, human foundations, farming, creation, political factors, transportation, and so on (Singh, 1991).

The topographical climate is worried about the cooperation between the physical and physical-social environment. The characteristic and social climate joins in shaping the complete climate. Man gets by in this climate. If a man wants to endure, he needs to keep up the natural equilibrium or equilibrium of ecological energy. On the off chance that any aggravation happens at any level in any timeframe, it would cause unsettling influence as contamination or debacle. It may upset the existing pattern of the human environment and natural food order (Singh, 1991).

Pollution is a change in the physical, synthetic, or natural qualities of air, water, or soil that can hurt or risk the life of any live organic species. Pollution is instantaneous or reversible changes in any part of the biosphere that are harmful to living things, including humans, and negatively impact mechanical progress, social and natural resources, or the overall climate.

Human activities directly or indirectly have a negative impact on the climate. A stone smasher releases a lot of suspended particle matter and creates a lot of noise in the atmosphere. Vehicles pollute the environment by emitting nitrogen oxides, sulfur dioxide, carbon monoxide, and a bizarre mix of unconsumed hydrocarbons and black silt out their tailpipes. Water basins are contaminated by homegrown sewage and runoff from horticulture fields, which are laden with pesticide and manure deposits (Kumra, 1982). Industrial effluents contain various hazardous synthetic chemicals and have a horrible odor. These are a couple of models that demonstrate how human activities pollute the environment. Pollution is defined as the release of undesired materials into the atmosphere as a result of human pursuits. Poisons are specialists who are responsible for natural contamination. Poisons are described as a physical, synthetic, or natural substance that is mistakenly discharged into the environment that is detrimental to humans and other living organic organisms directly or indirectly.

The term 'pollution' is generally utilized and nearly misjudged broadly (Singh, 1991). Various meanings of the terms are inspected, and options are recommended.

Certain characteristic marvels causing crumbling in the nature of water, air, or soil might be comparative in their belongings to a portion of man's exercises. However, just the last is ordinarily liable to man's control. Any adjustment of the physical, substance or natural qualities of the air, water, or soil that can influence the well-being, endurance, or exercises of human or other life in an unwanted manner is called as pollution of the climate (Singh, 1991).

According to the President's Science Advisory Committee's study, Restoring the Quality of Our Environment, Washington, D.C., pollution is described as an "ominous rotation of our environmental factors entirely or generally as a side-effect of man's activities through immediate, or roundabout impact of changes in energy designs, radiation levels, compound, and actual constitution and the wealth of creatures" (Singh, 1991). Dixon (1972) characterized pollution as "every one of those exercises cognizant or oblivious to man and his homegrown creatures and the outcome thereof, which diminish in any capacity in the long haul or present moment, from pleasure in his current circumstance and his capacity to get a full advantage from that place." It mirrors that there are three measures for understanding pollution viz. (I) the waste materials coming about because of human exercises and removal of squanders, (ii) harm brought about by arranged waste, and (iii) conditions where the impact of harm isn't by outsiders (Dixon, 1972).

Environmental Pollution: Pollution of the environment, also known as environmental contamination, is described as pollution of the environment that is generated by the emission of any substance from any activity which has the potential to harm man as well as other living species that are dependent on the environment (Hussain, 1998). This is called pollution when the earth-atmosphere system's biological and physical components become polluted where standard environmental processes are interrupted. Pollution can also be caused by human activity. (Kemp, 1998). Environmental pollution is the degradation of local environmental quality caused solely by modern human activity (Singh, 1991). Since the problem of environmental pollution has become a worldwide concern, there is a growing understanding of pollution as a "vicious circle" situation. A complete examination of pollution's definition and perception, forms of pollution, sources of pollution, causes and processes of pollution, and environmental and ecological implications,

monitoring of pollution and pollution abatement program is not only desirable for environmental geographers and environmental scientists. Still, it is also necessary that future strategies for resource utilization and comprehensive environmental management program may be formulated and implemented.

Pollutants: Any energy, substance, or activity that generates a condition of dissonance from a state of harmony in prevailing typical habitats is referred to as a pollutant. (Singh, 1991). By and large, contamination is a substance or impact brought into the metropolitan or provincial climate, in huge fixation as sewage, squander unintentional releases, or as a side-effect of a few assembling measures or by different human exercises. Pollutants might be strong, sub-strong, fluid, or gaseous sub-atomic particles. Furthermore, pollution impact or stress is ordinarily some waste energy like warmth, commotion, or vibration.

There are chiefly two sorts of pollutants, noticeable and invisible, found in our current circumstance. Noticeable contaminations incorporate fireplace smoke, squandered water coming from release, trash tossed at different focuses around there, and imperceptible poisons are a few sorts of microscopic organisms, poisonous compounds blended in with water and soil, and so forth. Defilement and wrongdoings go under the undetectable class of social contaminations. The overall reason for ecological contamination in metropolitan regions might be arranged under four general heads: (i) That brought about essentially itself over what man has after no control, (ii) That subsequent from the populace as sewage, strong waste, and as gaseous exhaust, (iii) That because of mechanical foundation which releases liquid effluents, deny in strong structure into water bodies or gaseous discharge into the environment, and, (iv) That subsequent from horticultural waste and practices. The idea of contamination manages its wellspring of contamination, its qualities, and its geological conveyance (Kumra, 1982).

Ecological geology may be the investigation of spatial qualities of the interrelationship between living organic entities and regular habitat all in all and between mechanically progressed 'monetary man' and his current circumstance precisely in fleeting and spatial structure' (Singh, 1989). It addresses a significant arrangement of logical apparatuses for evaluating the effect of human exercises on the

climate by estimating the aftereffect of human action on common landforms and cycles. It is absurd to expect to comprehend ecological issues without understanding the segment, social, and financial cycles that lead to expanded asset utilization and waste age (Kemp, 1998). Large numbers of these cycles are intricate and transnational. Moreover, as the human relationship with the climate has changed because of globalization and mechanical change, another methodology is expected to comprehend the evolving and dynamic relationship.

Historical Origin of Air Pollution

The world's life is governed by air. It is a conglomeration of many gases, liquids, and inert substances. It serves as a source of oxygen for humans and other living things. Plants require carbon dioxide to survive. Any tainting in the air can potentially disrupt the entire environmental framework, which serves as a protective shield around the earth. Without air, there would be no breezes, clouds, snow, rain, or fire on the planet. Around 75 percent of the earth's climate lives within a 16-kilometer radius of the earth's surface, while 99 percent exists beneath a 30-kilometer height (Saxena, 2000).

According to H. Perkins (1974), pollution of the air is defined as "The presence in the open air of at least one pollutants like residue, exhaust, gas, fog, scent, smoke or fume in amounts of qualities and of span, for example, to be damaging to human, plant, or creature life and to property or which preposterously meddles with the agreeable pleasure throughout everyday life and property." Air pollution is described as a scenario in which the surrounding outside climate contains material in fixation that is hazardous to man and his environment, based on information provided by the World Health Organization (WHO). Air contamination is a collection of anomalies like the air that cause nausea and unpleasant effects. According to K.E. Maxwell (1973), the vastly elevated levels of air pollution that we have generated are now a danger to human health and a risk to life. It is wreaking havoc on plant and animal life in areas polluted with toxic smoke, residue, and smoke. The nature, measurement, and extent of air pollution depend on various considerations, including the home season of toxins in the air, poisonous wellsprings, the nature of toxins, the measure of toxins, and so on. The home season of air contaminations varies

dramatically depending on the concept of poisons, the method in which outflow has occurred, climatic elements, and sink instruments.

Air Pollutants: A substance, whether physical or organic, is considered an air pollutant if it can pollute an indoor or outdoor environment and change the characteristics of the air. Ignition systems for automobile engines for families, "businesses, and forest fires are all common sources of air pollution. Suspended particle matter (SPM), carbon monoxide (CO), ozone (O3), nitrogen dioxide (NOX), and sulfur dioxide are all air contaminants that are harmful to people's health (SO2). Air pollution, both outside and inside, can induce respiratory and other illnesses, which can be fatal in some cases. Sulfur dioxide (SO2), nitrogen oxides (NOx), ozone (O3), carbon monoxide (CO), volatile natural mixtures (VOC), hydrogen sulfide (H2S), hydrogen fluoride (HF), aldehydes, ammonia, and many forms of heavy metals are examples of gaseous poisons. Toxins are emitted by massive stationary sources", for example, petroleum product terminated force plants, smelters, mechanical boilers, petrol treatment facilities, fabricating offices units, and vehicular traffic (Mahesh Rangarajan, 2007). They are destructive to different materials, which may harm landmarks, injure environments and organic entities, exasperate respiratory illnesses and decrease permeability.

Particulates are released from both large and small or "fine" strong structures. Substances such as residue, asbestos filaments, and lead are found in large particles. Sulfates (SO4) and nitrates are found in fine particles (NO3); power stations, smelters, mining activities, and cars are all significant sources of particles. Asbestos and lead affect organic entities, while sulfates and nitrates wreak havoc on health and cause corrosive rain or affidavit, as well as a loss in perceptibility. Particulate matter, which can refer to either solid particles or fluid droplets, is a term that is also used interchangeably with the term particulates. Harmful air contaminations are a class of synthetics that may conceivably mess well-being up considerably (Dwivedi, O.P. 1997). The wellsprings of poisonous air toxins incorporate force plants, businesses, pesticide application, and polluted windblown residue. Constant deadly toxins, like mercury, are of specific concern because of their worldwide versatility and capacity to collect in the evolved way of life.

Sources of Air Pollution

When we talk about "sources of air pollution," we're talking about all the different things that play a role in the emission of pollutants into the air. There are many kinds of naturally occurring and artificially produced contaminants that can be detected in the air (Kemp, 1998). The human activities that contribute to anthropogenic air pollution are carried out to provide society with the labor and goods that it requires. There are many different stages in the lifespans of things and services that result in air toxicity outflows. Some of these stages include extracting crude materials, acquiring energy, manufacturing, distribution, reuse, reuse, reusing, and extreme removal. Some examples of effective removal include coal and other gas consumption, sewage sewer vents, etc. (Singh, 1991). The subsequent emissions go through several different physical and chemical transformations, as a consequence of which a variety of negative impacts on human health as well as the environment are caused. These effects include a decline in air quality, a toxicological burden on human health and biological systems, the creation of photooxidants (brown haze), depletion of stratospheric ozone (O3), and so on (Pennington, 2004). There are two basic types of categorization for air pollution:

(a) Natural sources: The natural form of particulate matter is the consequence of volcanic residue and gases, mineral deposition, ocean salt precious stones, and so forth. Volcanoes emanate hot magma, and thick dust storms load compound vapor into the climate containing higher centralization of SO2, NOX, CO, methane, and so on. Another class of natural particulate matter is smoke from forest fires and grass fires (Kemp, 1998). It has expanded the centralization of carbon dioxide in the environment. Living plants discharge dust and spores into the air. These are natural mixtures. Certain hydrocarbons called drills are likewise delivered into the environment from trees in the forest.

(b) Man-made sources: Man-made particulate matter comes from numerous sources. It fundamentally incorporates counterfeit contaminations, and they are filled with air by multiple sources. In any case, the significant source is the ignition of hydrocarbon energy (oil-based goods, coal, peat, and wood); the ignition of solid waste causes air pollution. Vehicles discharge lead and other weighty metals into the environment, which are exceptionally hurtful to humankind and plants (Saxena, 2000). Nuclear

energy stations consuming petroleum products, especially coal and sometimes petroleum or diesel, produce 66% of the all-out SO2 transmitted into the air. Different sorts of matter brought into the air are mechanical synthetic substances, fly debris, topping off petroleum derivatives, mining and refining minerals, just as contaminations released from quarrying, forming exercises, and so on based on nature and impacts, wellsprings of air pollution might be named:

(i) Domestic Sources: The simplest form of combustion is the use of fuels for domestic use. In India, as well as in a significant number of other developing nations, wood, coal, cow dung, and kerosene oil are commonly used as fuel. All these materials, after burning, emit carbon dioxide, carbon monoxide, sulfur dioxide, etc. (Mahesh Rangarajan, 2007). On the one hand, burning fuel and wood pollutes the air, and on the other, it causes the degradation of forests.

(i) Stationary and Area Sources: A stationary discharge source also referred to as a point source, is what we mean when talking about a fixed fountain of air pollution. Examples of selected sources include industrial facilities, power plants, cleaners, and degreasing tasks. These units use coal, oil, natural gas, power, or atomic splitting for power age (Mahesh Rangarajan, 2007). Stale smoke radiated from businesses contaminates the air for the enormous scope, which incorporates ash, debris, and coarseness produced in the smoke.

(ii) Mobile Sources: In general, Automobiles, sport utility vehicles, and buses are examples of mobile sources." There is also a category known as non-road or off-road, which includes things like gas-powered lawn mowers, agricultural and construction equipment, leisure vehicles, boats, planes, and trains" (Mahesh Rangarajan, 2007). With the continuous increase in vehicular population, particularly in towns and cities in a hot climate, the problem of air pollution assumes a greater dimension.

Parameters of air quality:

Air pollution is a complex mixture of diverse compounds in various physical and synthetic forms that come from multiple sources. Air quality is often defined as

the unconfined portion of the air in which humans and other species live and breathe (Asif Ekbal, Hrishabh Gupta, 2015). Particulate matter (PM), defined as particles with a linear width of less than 10 m (PM10) and less than 2.5 m (PM2.5), nitrogen dioxide, sulfur dioxide, and ozone are the four air pollutions that the WHO is concerned about. Particulate matter, sulfur dioxide, and nitrogen oxides are among the several air contaminants that come from various sources and play a significant role in altering air quality and, as a result, harming human health (Gowtham. Sarella, Mrs. Dr. Anjali. K. Khambete, 2015). This report centers around PM2.5 fixations, as this is the contamination generally viewed as generally unsafe to human wellbeing. PM2.5 is characterized as surrounding airborne particles comparing 2.5 microns in size. Its tiny size permits the particles to enter the circulatory system using the respiratory framework and travel all through the body, causing sweeping well-being impacts, including asthma, cellular breakdown in the lungs, and coronary illness. Air contamination has additionally been related to low birth weight, expanded intense respiratory diseases, and stroke (Balashanmugam, P., 2012). Overall environmental air pollution accounts as:

Cellular breakdown in the lungs accounts for 29% of all deaths and illnesses; intense lower respiratory contamination accounts for 17% of all deaths and diseases; stroke accounts for 24% of all deaths and illnesses; ischaemic coronary illness accounts for 25% of all deaths and conditions, and the persistent obstructive pulmonary disease accounts for 43% of all deaths and illnesses.

Airborne particulate matter can start from a scope of sources. Ignition from vehicle motors, industry, flames, and coal consumption address the average person-made sources, while dust storms, agribusiness, and synthetic substances responding in the air address the most widely recognized familiar sources (Balashanmugam, P., 2012).

Figure 1.1: Showing Air Quality guideline

Source: world health organisation

To connect fixation esteem to a more relatable reference for wellbeing hazards, this report alludes to two rules for PM2.5 contamination: the World Health Organization (WHO) Air Quality Guideline, an incentive for PM2.5 openness, and the United States Air Quality Index (US AQI). The shading file utilizes the US EPA standard, enhanced by the WHO rule for values under 10µg/m³ (Balashanmugam, P., 2012).

The rapid development of enterprises has brought about increasingly more discharge of air toxins. Different mechanical cycles discharge practically a wide range of poisons into the air. A few enterprises like concrete, iron and steel, compost, petrochemical, and so on are of great concern due to the expense of controlling the discharge of poisons from them. The corrosive downpour has become an incredible danger to the climate. The utilization of dissolvable is expanding with the developing utilization of paints, splash, clean, and so forth. Because of the quality of hydrocarbons in these materials, air contamination is caused, which is risky for wellbeing. Likewise, the splash of pesticides on developed fields is additionally answerable for causing air pollution even in country territories (Saxena, 2000).

Table- 1.1: Main Pollutants of Air and Their Effect On Human Health

Sl. No.	Pollutants	Sources	Health Hazardous
1.	Carbon-monoxide	Automobiles due to incomplete combustion/burning of carbon in the fuel of internal combustion engine.	Displaces oxygen in blood, reduced amount of oxygen to blood tissue. Dulls mental performance, causes accident proneness, burden on anaemic, heart and lung patient.
2.	Particulates (soot, smoke, fly ash etc.)	Stationary fuel combustion in industrial processes.	Occurrence of photochemical smog which can cause wide spread death in a few days.
3.	Oxide of Sulphur	Many industrial processes involving burning of coal and oil as fuel.	Temporary or permanent injury to the respiratory system, irritate the upper respiratory tract and lung tissue.
4.	Hydrocarbons	Automobiles, fuel combustion in electric power plants, industrial processes, combustion in SW Disposal and agricultural burning.	Gaseous hydrocarbons in atmosphere are not toxic but help in forming photo-chemical smog.
5.	Oxides of Nitrogen	Burning of fuel at very high temperatures as in transport vehicle, power plants and industrial boilers.	Nitrogen oxides combine with hydrocarbons in the presence of ultraviolet rays of the sun to form secondary pollutants called photo-chemical oxidants.
6.	Others	Photo-chemical oxidants.	Photo-chemical (oxidants Tri-oxyacetylene nitrogen, aldehydes and) cause eye irritation and flue, when they combine with particulate to form smog.

Source: WHO, 2014

When delivered into the air, atomic material is dangerous for all living forms. Atomic weapon tasting, nuclear reactors, compound handling plants, research foundations, and medical clinics contribute radionuclides into the air. The table shows the primary wellsprings of air toxins and their potential impacts. As indicated by source type, pollution can be created from burning, transportation outflows, mechanical cycles, utilization of solvents, and radioactivity (Marian A. L. Miller, 1995). Ignition measures yield particulate like fly debris and smoke and sulfur and nitrogen oxides. The extent of sulfur oxide transmitted relies on the sulfur substance in the fuel utilized. High-temperature cycles, for example, the warm obsession of barometrical nitrogen, yield more significant amounts of nitrogen oxide.

As indicated by the beginning of the pollution, it very well might be gathered into two classifications: (i) Primary Pollutant: The essential toxins are those gaseous and other strong miniature particles enlisted to the environment. These pollutions are transmitted and, as such, are not found noticeable all around(Marian A. L. Miller, 1995). The primary gaseous poisons are carbon monoxide, sulfur oxides, hydrogen sulfide, hydrocarbons, oxides of nitrogen, ozone, and different oxidants. (ii) Secondary Pollutant: Secondary toxins are formed when critical poisons undergo chemical alterations due to climate change. An example of an auxiliary toxin is ozone. "It takes shape when nitrogen oxides (NOx) and unstable natural mixtures (VOCs) are

mixed and warmed by sunshine. Ozone (O3) is a significant component of the exhaust cloud. Ozone found in the lower atmosphere or near the ground should not be confused with ozone found in the stratosphere or upper air, which is helpful" (Michael P. Todaro & Stephen C Smith, 2008). The beneficial ozone that is found in the stratosphere protects the earth from the damaging rays that are emitted by the sun.

Air Pollution in 20th Century

The problems with air pollution are numerous, and they aren't going away soon. They have an impact not just on the ecosystem but also on human health, including the earth's natural vegetation, atmosphere, and climate. Human-caused emissions to the atmosphere are combined with naturally occurring elements that are often similar to pollutants. The most notable dramatic air pollution incidents are described from a historical perspective. The most significant effects of pollution worldwide are the depletion of the stratospheric ozone layer, the creation of the greenhouse effect, and a contribution to the acceleration of global warming. Local, regional, and international repercussions of pollution include the following: In terms of their impact on health, the effects of polluted indoor air and radioactive contamination, whether from natural or artificial sources, should not be ignored. This is especially important to remember in light of recent atmospheric nuclear testing and incidents related to the peaceful use of atomic energy. Two types of pollution, namely acid rain and pollution in the stratosphere, have been brought under control in recent years (Fontan Jacques, 2017).

Two different kinds of air pollution affect the whole world. The first problem is an alarming reduction in the thickness of the ozone layer (O3) in the upper stratosphere, which is accompanied by a considerable rise in the amount of ultraviolet radiation (UV) that reaches the surface of the planet and is harmful to both humans and the biosphere. The second effect is an increase in the concentrations of gases with low reactivity in the troposphere, where these gases may build up because they are released rather than eliminated (Fontan Jacques, 2017).

They are transparent to the sun's rays, allowing solar energy to be absorbed by the Earth to varying degrees. The lower levels of the atmosphere are warmed due to the emission of some of the power as infrared radiation, which is partially absorbed

by these gases before being collected by the atmosphere and causing the warming of those levels. The greenhouse effect is the name given to this phenomenon. The environment is similar to that of a gardener's greenhouse's glass or plastic wall. The greenhouse effect occurs naturally in the atmosphere, owing to absorbent gases such as water vapor and carbon dioxide. Other elements, like methane, also have a role, albeit to a lesser extent. We enjoy pleasant temperatures on Earth because of this occurrence.

Without such an impact, the overall average temperature on the surface of the Earth would be around 35°C lower than it is now. Pollution has dramatically enhanced the intensity of the greenhouse effect since the industrial age, modestly but adequately to produce a shift in the planet's temperature (Fontan Jacques) (2017). The increased greenhouse effect is what it's termed. Finally, there are three different types of pollution in the air. "It has effects on human health at the local level, but not only; at the regional level, the most dramatic effects are acidification of surface waters and forest decline; and finally, at the global level, it poses climate change risks and impacts on the biosphere, sea level, and human health due to the destruction of stratospheric ozone and an increase in the greenhouse effect."

Health and Disease

Health isn't an issue of specialists, social administrations, and clinics. It is an issue of social equity too (Park, 2007). Topography contemplates Health from the spatial and natural points of view. Its principal center is the geology of Health. Various geographic elements impact Health and, on occasion, even decide the situation with the soundness of people, creatures, and other living things. The typical habitat and its constituent components like land, water, air, vegetable, creatures including microorganisms, and people themselves make certain spots more decent and solid than others. Geology considers health "an agreeable balance between man and his current circumstance" (Mishra, 2007).

The idea of human Health for various networks fluctuates as indicated by their way of life, yet the fundamental topic consistently stays steady that the "Health is the sufficiency of body and brain; it is a condition wherein body's capacities are properly and productively released" (Oxford English Dictionary). As indicated by Perkins,

"Health is a condition of the relative balance of body structures and capacity which results from its fruitful, powerful acclimation to powers tending to upset it. It isn't uninvolved interaction between body substance and powers impinging upon it yet a functioning reaction of body powers pursuing rearrangement" (Ramchandra Guha and Juan Martinez Alier, 1998).

The broadly acknowledged meaning of Health is that given by the World Health Organization in the preface to its constitution: "A condition of complete physical, mental and social prosperity and not simply a shortfall of illness or ailment and the capacity to lead a socially and monetarily useful life" (WHO, 1948) and as "the degree to which an individual or a gathering is capable, from one perspective, to acknowledge desires and to fulfill needs, and on the other to change or adapt to the climate" (WHO, 1985). Health has a few measurements, and everyone is significant. Yet, its relative significance opposite different heights relies upon the conditions wherein an individual or local area exists and capacities. Among these measurements, the important are: physical, mental, wholesome, natural, instructive, socio-social, financial, profound and passionate, preventive, and remedial (Mishra, 2007).

There have been numerous endeavors to characterize illnesses. Webster describes the illness as "a condition wherein body Health is impeded, a takeoff from a condition of Health, a change of the human body intruding on the exhibition of crucial capacities." From a realistic perspective, sickness is characterized as the maladjustment of the living human being to the climate (Gregg, 1956). The expression "infection" in a real sense signifies "without ease" (anxiety). It is the inverse of straightforwardness when something isn't right with substantial capacity. It is a physiological/mental brokenness. The least complex definition is that illness is the exact inverse of Health, for example, any deviation from typical working or condition of complete physical or mental prosperity since Health and infection are unrelated (Park, 2007).

Infection results from cooperation among the specialist, host, and climate. The specialist and the host commonly interface and are simultaneously associated with the perplexing framework called the climate, which is both physical and social—infections resulting from cooperation among the host, specialist, and climate fall

inside the extent of topography. Man can live in a generally unique natural setting: from the snow-covered Himalayas to the desert area of Rajasthan. The human body, be that as it may, should have limited flexibility. When the edge is crossed, the body's response to the upgrades is not, at this point, physiological. It becomes obsessive, for example, a side effect of infection (Mishra, 2007).

Common habitats, including factors like alleviation, soils, environment, and vegetation, significantly affect human health. Alleviation has an extraordinary effect on ashore use and land efficiency. It additionally impacts the presence and endurance of other living things, including the creatures that reason infections and hosts through which they arrive at the human body. It has a direction on the beginning and end of a few transmittable illnesses. Slant decides the seepage arrangement of space. The delicate slope is helpful for water-logging and consequently ideal for rearing organisms, mosquitoes, and different sorts of creepy crawlies that produce sicknesses like jungle fever, filarial, looseness of the bowels, and so forth. Height additionally has an extraordinary effect on the climate and environment. Higher the rise, bringing down the temperature, is a general principle. A considerable lot of the infection-creating organisms flourish just in warm and wet climatic conditions. The surge has an additional negative impact on the pulse. Those experiencing hypertension are more regrettable in mountain regions, and those with low circulatory strain are in an ideal situation. There are cozy connections between the environment and illnesses. Certain sicknesses are occasional. Drying out and cholera are basic during warm summer; intestinal sickness fever during blustery seasons; and hack, cold, and bronchitis during winters.

Approaches to study Environmental pollution and Health

Environmental pollution becomes a vital piece of Environmental examination while dissecting different ecological pollutions in the Spatio-temporal system. Predominantly four kinds of approaches are utilized for considering natural issues which are depicted beneath:

Spatial Approach: Spatial approach shows the varieties in the appropriation, arrangement, and expansion like poisons identified with the nature of spots. This methodology helps in deciding the nature of climate. The current examination shows

that the thickly populated zones are more inclined to sick impacts of contamination; for instance, the inward zone where populace densities are high experience the ill effects of wellbeing, financial and social issues more than the center and external zones(Peter H. Raven & Linda R. Berg, 2006). The equivalent might be seen with the spatial appropriation of vehicular traffic. The principal goes across streets, traffic bottlenecks, level intersections, and so on experience the ill effects of air and commotion contamination. The spatial investigation also helps recognize regions that need rapid improvement and insurance at the most punctual. It likewise helps people and gatherings of people to get what it takes to tackle complex natural issues at public, local, and neighborhood levels(Peter H. Raven & Linda R. Berg, 2006).

Ecological Approach: The problem of environmental pollution may likewise be concentrated according to an ecological perspective. This methodology experimentally breaks down the interrelation and connection between man and his current circumstance. In the present study, different components of the city's biological system have been considered for examination, like environment, nature of air, land use, and so forth. The effects of contamination are generally set apart in regions that are without vegetation and in areas where indiscriminate land use designs win. Also, with the developing city limits inundating modern units, the degree of contamination mounts up in the remote regions(Peter H. Raven & Linda R. Berg, 2006). To examine the impacts of the air, water, strong waste, and commotion contamination, periodical checking of these characteristics has been done. Moreover, traffic thickness has likewise been assessed to dissect encompassing air quality and clamor level, which impact individuals and climate in metropolitan territories. This methodology helps discover answers for current issues and forestall new ones in enormous metropolitan urban areas. Different components of the environment, soil, vegetation, and land use design are investigated to outline the effects of contamination on human wellbeing.

Systems Approach: This methodology requests that dynamic and complex factors of a framework having specific properties are regular to numerous different frameworks. It enjoys the benefit of giving a theoretical system inside which an entire scope of inquiries about the comprehension of the design and activity of other frameworks might be inquired. Along these lines, new experiences are given into old issues, and new connections whose presence might not have been valued already are

uncovered(Peter H. Raven & Linda R. Berg, 2006). To know the degree of contamination from autos around there, traffic review has been led at different intersections, and the degree of various toxins estimated by gathering air tests at multiple areas, which will prove that traffic stream and level of contamination are connected.

Behavioral Approach: To study of environmental pollution of a metropolitan city, the social methodology is currently broadly utilized by social scientists, particularly sociologists and geographers. It assists with examining the effect of accepted practices, for example, monetary and word-related design of the inhabitants influencing their conduct concerning contamination. It additionally assists with assessing discernment towards ecological contamination in a metropolitan populace and their anxiety about it(Peter H. Raven & Linda R. Berg, 2006). Insight studies are directed through a poll to know the degree of mindfulness in various cross-areas of the local area. Additionally, this methodology is exceptionally valuable for understanding and breaking down the conduct parts of ecological contamination among the city inhabitants.

The current examination investigates the issues related to environmental pollution and human health in Hyderabad city. The crucial factor of expanding the populace and its different exercises related, for the most part, to financial improvement are making the climate awkward to live in. These issues have presented more special tests to the whole society and have caused genuine worry for every last one. Appropriate and far-reaching techniques to secure the climate must be advanced right away. This methodology is broadly utilized in figuring systems for an urban ecology anticipating the present.

2. Emergence of the Problem

According to the World Health Organization, the greatest threat to human health posed by a single environmental factor is air pollution, with a broad scope of adverse health results including dreariness and mortality and related to enormous outer expenses for society WHO (2014). Air pollution is expanding step by step in India. "Air pollution is a significant and growing risk factor for chronic illness in India, accounting for a large portion of the country's overall illness burden. According to the Global Burden of Disease comparative risk assessment for 2015, air pollution

causes 1.8 million unexpected deaths and 49 million disability altered life-years (DALYs) lost in India, making it one of the country's top medical diseases risk factors (Gargava P, Rajagopalan V, 2016). It is home to 10 of the top 20 urban areas with the highest yearly levels of PM2.5 (World Health Organization, 2016). With a few studies showing a deteriorating pattern over time, it's safe to assume that rapid urbanisation and mechanical progress have had a negative impact on metropolitan air quality due to automotive and contemporary emissions (Dey S, Di Girolamo L, van Donkelaar A, Tripathi SN, Gupta T, Mohan M, 2012). Meanwhile, more than 66 percent of provincial Indians trapped in the 'chulha trap' rely on biomass sources for cooking and heating, such as wood, feces, or coal, resulting in smoke-filled homes and high levels of vulnerability, particularly among women and children".

Poor air quality has an impact on both rural and urban India. Despite this, there is a wide range of origins and toxicity characteristics. Cooking, for example, energises changes among metropolitan and provincial families, vehicular thickness is inconceivably unique in urban regions and towns, and amounts of pollution in the ambient air that vary according to place and season are influenced by variable climatology and geology across India.

Air pollution is sometimes referred to as a democratising factor, but it is anything but as it exacerbates existing environmental inequities (Boyce JK, Shrivastava A, 2016). According to several studies, younger children and the elderly are more vulnerable to the adverse consequences of exposure to high levels of air pollution. It has been demonstrated that children's lung expansion is hindered by air pollution, which also has an effect on the development of children's cognitive abilities and leads to high rates of mortality due to respiratory illnesses. (Central Pollution Control Board, 2008). A. Clifford, L. Lang, R. Chen, K.J. Anstey, and A. Seaton, 2016). Long-term pollution exposure makes the elderly more susceptible to chronic respiratory and cardiac ailments and a higher risk of having a heart attack or stroke during periods of heavy pollution. Those with a lower socioeconomic standing are also vulnerable, with research demonstrating that they are more susceptible to air pollution insults for a variety of reasons, including occupation, housing, and cooking fuel consumption, with poverty being the common link. Adar SD, Auchincloss AH, Lovasi GS, O'Neill MS, Hajat A, Diez-Roux A V., Adar SD, Auchincloss AH, Lovasi GS, O'Neill MS, 2013).

While climate, well-being, and improvement are regularly hollowed in antagonistic jobs in the talk on financial development, distributed proof contends that they are primarily in consonance. According to research that the World Bank carried out in 2016, the cost of air pollution to India was approximately 8 percent of the country's gross domestic product in 2013, equivalent to $560 billion. This figure accounts for lost productivity caused by premature death and sickness. This examination, while a significant initial step, neglected to catch the medical services expenses of treating air contamination prompted diseases, which, whenever considered, could create a far more considerable number (Hajat A, Diez-Roux A V., Adar SD, Auchincloss AH, Lovasi GS, O'Neill MS, 2013).

While the globalisation, environment, health, and development are frequently set against each other in discussions about economic growth, data suggests that they are very much in synchronous. Hyderabad is in second place after New Delhi in the highest air-polluted cities in India due to globalisation, industrialization, privatization, and liberalisation. Some reports state that indoor and outdoor air pollution is increased heavily due to most of the health complications faced by the elderly people, pregnant women, old age, children aged under 14 years worsening respiratory problems, such as irritated airways, coughing, or trouble breathing; a reduction in pulmonary function; severe asthma; Children that suffer from respiratory failure; bronchitis or chronic obstructive lung illness that has been going on for a long time; Heartbeat that isn't regular; Heart attacks that do not result in death; Premature mortality in patients with heart or lung disease, including lung cancer death; Increase susceptibility to respiratory infections; Exacerbate lung illness, triggering asthma episodes and acute bronchitis; In persons with cardiac problems, cause heart attacks and arrhythmias; The eyes, nose, and throat are all irritated. You may experience the following symptoms: wheezing, chest pain, a dry throat, a headache, or nausea; decreased immunity to illness; cough; pain in the chest; and breathlessness. There has been a noticeable increase in tiredness and a decline in athletic ability. The present research is intended to study the status of air pollution in Hyderabad and mitigation policies to deal with it. Also, to get the people's perceptions and awareness of air pollution and its effects on health in Hyderabad city.

3. Rationale of the Study

An objective assessment of Globalisation, Environment, and Health is long overdue. Interestingly, many of the scholarly works have largely remained unrecognised and unstudied. Still, very little research has been done on the Globalisation, Environment, and Health in the Indian context, especially on air pollution effects on health. Most of the studies are confined to the causes of pollution and health risks. The present work on Hyderabad city has been designed to evaluate environmental pollution and its effect on human health in a Spatio-temporal context through intensive fieldwork. An attempt has also been made to find out respondents' attitudes towards Globalisation, Environment, Health, and also air pollution and its health effects in Hyderabad city, and it is also giving a picture of the status of air pollution and mitigation policies in the context of global, Indian and Telangana level. To find out the problem, the study has conducted intensive fieldwork in the five most polluted areas of Hyderabad city, namely Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan and Katedan in Charminar and Panjagutta.

4. Review of Literature

During the most recent a very long while, it has been uncovered that physical and social climate components are significant realities in examining the connection between man and his living environment. The issues of environmental disintegration emerge solely after the period of modern insurgency over the most recent couple of years of the nineteenth century. Around then, it was anything but a significant issue causing substantial health impacts on a person, yet gradually it was acknowledged as an issue with expanding populace in metropolitan places. The living climate got contaminated by developed tension on municipal conveniences. Even though part of the work has been done on urban natural issues, it needs immediate consideration from preservationists.

Bhagwati Jagdish (2004) argues that many critics of globalisation target economic globalisation because they see it as a global extension of capitalism and that many social ills have surfaced as a direct consequence of the ongoing process of economic globalisation. These ills include an increase in the use of child labour as well as the weakening of labour unions and rights. In order to refute the claims of those who oppose globalisation, the author provided examples of underdeveloped countries that chose not to take part in globalisation because they

did not believe they would benefit. Young people who believe that globalisation as an economic system cannot manage the problem of social justice are mistaken, in his opinion, because globalisation is capable of doing so. He believes that globalisation has the potential to level the playing field economically and remove advantages. The author believes that the process of globalisation does not lack a human face. The author believes that a country's institutions and laws can be altered to alleviate some of the adverse effects that globalisation can have on a country, even though globalisation can have detrimental impacts on countries.

According to Ramachandra Guha (2000), "Environmentalism" is a detailed chronological account of the evolution and manifestations of environmental concern and how people and organisations have perceived, disseminated, and acted upon their experience of environmental degradation. Additionally, "Environmentalism" is a detailed historical examination of the origins and expressions of environmental concern. Guha is composed of several outstanding environmental philosophers, in addition to a few geniuses during the last two centuries, with a smaller amount of public recognition. The philosophers are discussed within the context of their respective social environments, emphasizing the development of industrial, colonial, and post-colonial practices. During the first wave of environmental thought, which started in the 1860s and lasted through the interwar period, there was competition among three different schools of environmental thought to develop an assessment of the degradation of the environment and an alternative vision to it. The which was before Indian agricultural thinker Mahatma Gandhi, who read Carpenter and Ruskin while studying in England, is considered a more practical example of an agrarian theorist. The United Kingdom and Germany were the birthplaces of scientific conservation, which may be characterised as a concern for the degradation of the environment and faith in the power of science to reverse it. This movement eventually extended throughout the rest of the world. As colonial powers developed government ministries to manage their colonies' forests, land, water, animals, and fisheries, the global dissemination of scientific conservation ideals became more direct and controlling. Guha is critical of these social and environmental responsibility management attempts, and he favors Japan's indigenous forest science.

Consequently, sovereign states reinforced the concept of wildness in European colonies, with native animal protection frequently taking precedence over native peoples. After World War II, the first wave of environmentalism ended with a period of ecological innocence. The second wave brought an ecologically conscious populace into the traditionally expert realm of environmental philosophy worldwide. Guha divides his study of the second wave into three sections, which he refers to as the first, second, and third worlds. After 1962, the possibility of an imminent catastrophe, as well as the aspiration to take advantage of nature in the same way one would any other commodity, spurred the sluggish development of the environmental movement among the wealthy. Guha differentiates profound ecologists against environmental justice campaigners in American radical environmentalism.

Farmers and indigenous peoples in nations such as Malaysia, India, Thailand, and Brazil have environmental issues, as well as concerns about social justice and anxieties about their economic well-being. These concerns are brought together in this article. The ecology, or lack thereof, in Russia and China is a helpful reminder of the violent competition between the North and the South during the second wave of revolutions. A concluding chapter argues that to have a shared global common destiny, there must be a global democracy that is both egalitarian and participatory. In the absence of such a democracy, there would be a great deal of bickering over environmental matters. In his conclusion, Guha identifies restraint (in the sense of putting limitations on one's behavior toward the environment and other humans) and foresight as recurrent themes among the environmentalists he has interviewed. This history of the environment around the world covers a wide range of environmental topics, each represented by its unique concept.

Bhola R. Gurjar, Luisa T. Molina, and C.S.P. Ojha (2010). investigate how this multifaceted issue influences global health as well as the natural environment. Research conducted in the field and case studies offer valuable insight into the specific challenges faced in each region. This book discusses a variety of approaches that can be taken to lessen the negative effects of air pollution on both human health and the natural environment. The book discusses several policies and management approaches regarding air quality. Students learn how to recognise

socioeconomic and environmental determinants of public health and apply research data based on countries to eradicate health disparities and environmental injustices through the book "Recognizing Socioeconomic and Environmental Determinants of Public Health." It lends support to the continuation of research and policy action on the effects of air pollution on health and the environment on a local to global scale.

The study by Rais Akhtar and Cosimo Palagiano (2018) focuses on regional perspectives on climate change's influence on air pollution, including participation from scientists from developed and developing nations. The authors analyse the various consequences of global warming on air pollution and health after examining the fluctuations in climatic data over the past few decades. As per the IPCC, "pollen, smoke, and ozone levels are expected to increase in a warmer world, negatively impacting the health of city dwellers." According to an essential UN climate assessment, "rising temperatures will damage air quality through much more ozone in cities, greater wildfires, and higher pollen outbreaks." According to the findings of this study, the World Health Organization's estimates that air pollution is the most significant environmental health concern in the world are supported. According to this estimate, air pollution was liable for the death of 7 million people in 2014. Comparatively, malaria took the lives of 0.4 million individuals. The elderly, children, people with chronic diseases, and expecting moms will be most adversely affected by poor air quality. According to secondary research, air pollution kills more than 5.5 million people annually, with China and India accounting for further than half of those deaths.

Dean Spears (2019) argues that India's air pollution posed a lethal threat in 2019. Will the nation's lawmakers rise to the occasion? About one million Indians are killed annually by the world's worst air pollution. It also affects the development of children and constitutes a threat to future generations' economic and physical health. Pollution is an imminent danger from which no household is exempt.

In contrast, governments have undertaken flashy, unsuccessful programs without even attempting to quantify the problem. With the proper restrictions, India's air quality might be improved. Several measures have the potential to both reduce pollution and the nation's susceptibility to future climate change. However, doing so would

necessitate an honest assessment of both challenges: airborne particulates and rising temperatures. Children in India require more than empty platitudes; they need a sincere commitment to altering their circumstances. The environment and economic development are commonly portrayed as adversarial, but this indispensable book's compelling examples and lucid statistics cast doubt on this notion. It is time to take a deep breath and cleanse the air.

In his article titled "Globalization and its Socio-Economic Impact," Mathew V. Kurian (2004) notes numerous points of view regarding the nature of globalisation and its effects on society and the economy. He has discussed a variety of theoretical dimensions of globalisation in addition to its social repercussions at this point. According to the author, today's globalization is an imperialist form of globalisation. He makes the observation that the phenomena of globalisation can be seen from three different points of view: globalisation as a plan or project; globalisation as a phenomenon; and globalisation as a phenomenon. 2. The practise of internationalisation 3—the ideology of globalisation in political theory. After looking at the specific problems, this author believes that the "effects of globalisation can be seen in areas such as social and economic exclusion, contract labour, employment and unemployment, privatisation of the public sector, globalisation and food insecurity," the political impact of globalisation, the militarization impact of globalisation, and the environmental impact of globalisation.

Malcolm Waters (1995) presents a detailed explanation of numerous perspectives on globalisation (both old and new theories) and a sketch of how the future globe would look in his book Globalization.' According to the author, a single society and culture will occupy the planet in a globalised world, but this society and culture would most likely not be happily combined. There will be a lot of division and upheaval.

Singh Arun Kumar (2004) notes that the current era of globalisation is characterised by three distinct aspects: "a shrinking space, a shrinking time, and a shrinking borders". Each of these aspects is becoming increasingly prevalent. He continues by stating that globalisation is not just an economic process but also a political, social, and cultural phenomenon; nonetheless, its primary focus is on economics.

Medury Uma (2004) believes that globalisation brings substantial changes to the political, economic, social, and cultural arenas. The author criticises the notion that globalisation is necessary and irreversible, emphasising the importance of changing the belief that there is no alternative.

Mishra Sweta (2004) writes in her article 'Globalization and Gender Issues in India,' according to Mishra Sweta, Globalisation has had a mixed influence on women. On the one hand, gender disparities are less severe today than they were half a century ago, and globalisation has enhanced women's educational opportunities.

Bisht Pushpa (2004) claims that Adam Smith is considered the originator of the debate between market economies and centralizedly planned economies in her thesis titled 'India under Globalization facing an unequal World.' Adam Smith advocated for free market competition and government intervention in the economy. According to the author, such an approach in a tough economy like India will result in different imbalances, as well as laissez-faireism and liberalisation. There is a possibility that the western model of economic development is not appropriate for India. When it comes to achieving social and economic fairness in a nation such as India, the engagement of the state is necessary because India's socialist framework can only be strengthened in this way.

Jain Niraj (2001) strongly criticizes the NEP/Globalization plan in his book 'Globalization or Recolonization.' He refers to it as recolonization, and he believes that it is turning third-world countries into the colonial economic possessions of wealthy imperialist nations that colonised them directly in the 19th and early 20th centuries in the name of free markets and free trade. He bases this belief on the fact that these countries were colonised in the name of free markets and free trade. According to the author, globalisation has wreaked havoc on the lives of billions of people in developing countries.

In his article 'Religion under Globalization,' Radhakrishanan P. (2004) delves deeply into the connections between globalisation and religious fanaticism. According to the author, globalization is more than just an economic phenomenon;

which also has geopolitical, social, cultural, and religious expressions.

In his work "Globalization and Social Development," Sundar I. (2006) looked at globalisation and social development difficulties. According to the author, globalisation has produced widespread societal concern in both rich and developing countries. The author argues that the globalisation of the economy has led to severe human rights violations for laborers, peasant producers, and indigenous peoples. She provides legislative measures to address these issues.

In his book, 'On Economic Inequality,' Sen Amartya (1997) argues that the concept of equity and justice has evolved dramatically through time. The fundamental concept of inequality has changed substantially, and today's welfare economy is unconcerned about income distribution.

Raphael Kaplinsky challenges the idea that participating in the global economy will automatically solve problems of poverty and inequality. The author contrasts the World Bank's views and other globalization advocates. These interpretations hold that most of the world's impoverishment may be attributed to producers who refuse to participate in globalisation. The author emphasises that the experiences of nations engaged in the globalisation process reveal that, rather than reducing poverty, it has worsened inequality in those countries. This is the conclusion that can be drawn from those countries' experiences.

Menon Rajiv N. (2005) asserts that globalisation has rattled the political systems, markets, culture, environment, technological advancements, living standards, and national security of several countries. These nations' economies could not keep up with the rapid changes brought about by the new international order because it came into effect so suddenly.

In their article titled "Impact of Globalization," written in 2005, Ujagare D.V. and Murtadak J. B. contend that the last two decades of reforms have changed India substantially more dramatically than most people believe they have. They back up their statements with statistical data on crucial indicators of human growth. According to the author, India's globalisation policy, which began 12 years ago, is

responsible for all these achievements.

Dixon (1972), in his examination, has taken populace size and normal assumptions for life as the significant variables in the investigation of contamination and its impact on human health regarding antiquated Egypt. Jones and Claire (1972) saw that pollution had become an intense issue for the populace living in any piece of the world as a, rural and urban communities specifically. He has additionally recognized wellsprings of contamination and gave appropriate ideas to tackle this issue.

In a pioneer study, Berry (1974) associated pollution levels with the condition of human health in American urban communities. After the sanctioning of the Clean Air Act, researchers from various nations were pulled in to examine the issue of pollution and its consequences on human health. Agrawal and Ghosh (1974) checked the degree of air contamination at chosen street crossing around there and connected it with the occurrence of respiratory illnesses.

Karan (1977) has made a beneficial commitment to the field of environmental pollution. In any case, he had slightly accentuated the spatial example of contamination. In another investigation on the view of air contamination, he saw that individuals' need to control air pollution differs from one individual to another and all around. Further, Mehta (1977) examined different issues related to metropolitan climate, health, and medical services framework and proposed solid urban communities.

House (1979) surveyed word-related pressure and medical issues among regular laborers. Kumra (1982) examined a spatial example of natural contamination in Kanpur city and noted that expanding contamination levels have come about the higher pervasiveness of infections. Afterward, his examination gave a base for geographers to consider metropolitan natural issues and the depiction of contamination zones. An investigation directed by Murli and Murthy (1983) additionally led that traffic commotion in Visakhapatanam has surpassed more than 90 dB even in the first part of the day hours, causing sick impacts on human wellbeing.

Gerasimov and Lappo (1984) saw that the eco-topographical examination of metropolitan natural issues should be accentuated. They have likewise given the idea of conveying the limit of urban areas to maintain a better metropolitan climate. Further, Kayastha and Kumra (1984) investigated metropolitan issues of Kanpur city and its environmental factors for cleaner and better living.

Pandey, Agrawal, Khanum, Narayan, and Rao (1992) have considered the situation with encompassing air quality in Varanasi City at different street intersections and presumed that SPM and O3 are the fundamental toxins. Dockery (1993), in his investigation, proposed that fine-particulate matter or a more mind-boggling contamination combination is related to abundance mortality in urban communities in the United States. Mishra, Dutta, and Singh (1994) discovered substantial metals like Cu, Zn, Pb, Fe, Cr, and Cd found in the waterway Subarnarekha water is answerable for crumbling in nature of water. Berg Kiibus and Kautsky (1995) surveyed the dispersion of hefty metals, especially Cr, Cd, Cu, Pb, Mn, Ni, Zn, and Se, in the lake environment of tropical Lake Kariba, Zimbabwe.

In his work R. S. Scorer (1973) clarified that air contamination had become part of the everyday presence of numerous individuals who work, live, and utilize the roads in Asian urban areas. Every day, many city tenants inhale air contaminated with convergences of synthetic substances, smoke, and particles that significantly surpass World Health Organization rule esteems. Decaying air quality fundamentally affects human health and climate in Asia. He clarifies an extensive and near evaluation of the current status and difficulties in metropolitan air contamination on the board in 20 urban areas in the Asian district. He analyzes the consequences for human health, climate, and future ramifications for arranging, transporting, and energy areas. Public and nearby governments have started to foster air quality administration systems to address the crumbling in metropolitan air quality; in any case, such methodologies' degree and viability generally change. He clarifies air quality administration techniques, analyzes triumphs and disappointments in these urban communities, and presents methods for improving air quality administration in urban communities across Asia and the remainder of our quickly urbanizing world.

Sita Venkateswar and Sekhar Bandyopadhyay (2006), in their 'Globalization and the Challenges of Development in Contemporary India' examinations of unforeseen issues outlining a quickly changing India in the 21st century. It moves past the prepared polarities frequently reached to comprehend India as a progression of differences and offers new experiences into the mind-boggling fundamental factors of India today, accordingly empowering us to expect the long time to come. The supervisor's emphasis on three important topics, each talked about in part: The primary area, outlining the Macroeconomic environment, characterizes the structure for examining globalization and economic changes in India throughout the most recent couple of years of the twentieth century spiraling into India in the 21st century. The following segment, food security and natural resources, feature essential contemplations engaged with caring for a prospering populace. The conversations offer significant conversation starters comparable to the versatility of the two individuals and planet facing progressively eccentric environment-instigated situations. The last segment, development, activism, and changing technologies, talks about a portion of the social difficulties of contemporary India through the perspective of disparities and new activisms. The segment finishes with an elaboration of the potential and guarantee of changing advances and new web-based media to assemble an educated and dynamic populace across existing social partitions.

5. Objectives of the Study:

- To study the relationship between Globalisation, Environment and Health.
- To understand the status of air pollution and mitigation policies
- To assess the impact of air pollution on human health
- To determine people’s attitude, concern and seriousness towards problem of air pollution and evaluate affect of air pollution on human health in Hyderabad city.

6. Research Questions of the Study

- Why does the Globalisation is been central point to study the Environmental challenges?

- What are the main areas to understand the relation between Globalisation, Environment and Health?
- What is the direct and indirect effects air pollution on Human health?
- What are the measures and action plans taken by the Hyderabad concerned authorities to curb the air pollution levels?
- What are the reasons for increasing the air pollution levels and implications of Globalisation on air pollution policies in Hyderabad city?

7. Methodology of the Study

In order to get a comprehensive understanding of the issue, the thesis makes use of qualitative and quantitative approaches. The current research is primarily based on primary and secondary data gathered from various sources. The primary data was gathered using a well-structured questionnaire, sampling, field survey and observation. The questionnaire was distributed amongst respondents to acquire people's perception towards air pollution and human health.

For sample study, the stratified random sampling technique has been used because When the populace is heterogeneous in terms of the variable or trait being studied, stratified sampling is employed to get more efficient and accurate results. The term stratified refers to the division of the world into groups based on geographical, sociological, or economic factors. To know the cause and effect, consequences, and severity of the environmental problems posed due to pollution, people's attitude towards pollution has been obtained.

A total of 250 respondents were interviewed to know their health status covering all the five areas, namely Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan, and Katedan in Charminar and Panjagutta. Fifty respondents were taken from each selected area for the purpose of the study. Jidimetla and Balanagar areas are highly exposed to chemical factories. Animal skin processing units are concentrated in Bolak Pur area of Museerabad, and also the note-making point is Bolak Pur area is highly exposed to water contamination. Amberpet area is exposed to water and solid waste contamination and is located by the side of Musi River. General

oil processing and dead animal oil processing units are concentrated in Karwan and Katedan of Charminar, its located in the old city area. Panjagutta is located in the center of the city it's highly exposed to traffic pollution.

8. Chapterisation of the Study:

Chapter I '*Introduction to Globalisation, Environment and Health'* intends to understand the relation between globalisation, environment and health with focus of air pollution and its consequences. It also places emphasis on conducting a literature review that is connected to the topic of the study. The chapter emphasizes the research protocol, including the study's objectives, research problem, research questions, and research methodology.

Chapter II, *'Status of Air Pollution and Mitigation Policies: An Appraisal*,' discusses, on a global scale, three categories of air pollution that are known to have an adverse effect on human health. These categories are "ambient (open-air) fine particle pollution, ambient troposphere ozone, and household air pollution." Additionally, this chapter discusses climate and air pollution mitigation measures and steps taken to minimise pollution. In the end, this brings a lot to the current state of affairs regarding air pollution and its global effects. In addition, it discusses the current state of air pollution and state efforts to mitigate it on both a global and Indian scale. Furthermore, it examines air pollution's effects on people's health in India and worldwide.

This chapter highlights that air pollution is a major concern worldwide, including India. A large portion of the world's population is affected by air pollution. Air pollution is now at the top of the worldwide environmental priority list. In 2019, air pollution overtook the effects of other popularly thought chronic illness risk factors, such as obesity (high weight list), high cholesterol, and malnutrition, to become the world's fourth most significant cause of death. The threat of poor air quality to human health and our existing condition is likely the most thorough indicator that any environmental hazard element exists. Air pollution is progressively increasing at present. Air pollution was India's top cause of unintentional deaths in 2019, accounting for almost 18% of all deaths (more than 1.67 million). Particulate matter (PM2.5) is the fourth most harmful component, and household air pollution

(HAP) is the sixth most dangerous when evaluated separately. Ozone was not among the top 20 hazard variables. In locations where PM2.5 levels surpass the WHO's solid air limit of 10 g/m 3, 100 percent of India's population lives. Air pollution claimed the lives of 1.67 million people in 2019. Around 21% of newborn child mortality is attributed to air pollution.

In 2019, 61 percent of the population cooked with solid fills, resulting in approximately 1 million deaths from open-air PM2.5 exposure. "More than 600,000 people have perished as a result of air pollution in their homes. Between 2010 and 2019, PM 2.5 and household air pollution exposure dropped, whereas ozone exposure increased. There are around 200 stations in India that monitor PM 2.5 levels. In terms of PM 2.5 openness, India is the most open of the six South Asian countries. Air pollution is the primary cause of sudden death in India". In India, ischemic heart disease, COPD, diarrheal illnesses, lower-respiratory problems, and intracerebral drain are among the top causes of death, with hypertension, cigarettes, a poor diet, and high glucose levels among the leading risk factors. Air pollution causes 164 deaths per 100,000 persons in India, compared to 86 deaths worldwide when age differences are taken into account. In India, children under the age of 5 account for 18% of absolute air pollution-related deaths, while persons over the age of 70 account for 18%.

Chapter III '*Understanding Air Pollution and Mitigation Policies in Hyderabad City: An overview*' explained that it is India's sixth largest and fastest growing city, with 7,000,000 citizens and a population density of 17,000 people per square kilometre. The city's expansion has been spurred by a robust data innovation economy, which now covers the satellite areas that make up the Hyderabad Urban Development Area (HUDA). The rising popularity of personal and public transportation and the rapid growth of the construction area have all contributed to the deterioration of "urban air quality (IES 2004; APPCB 2006; IES 2008; Gummeneni et al. 2011). In 2007–2008, the US Environmental Protection Agency (USEPA) projected overall health costs at $ 430 million. IES (2004), 2008. These assessments include the cost of 3,000 yearly unanticipated losses due to air pollution and the gloom of chronic bronchitis, confirmations from respiratory and cardiovascular medical clinics, trauma centre visits, asthma attacks", limited action, and respiratory

manifestation days, as well as confirmations from respiratory and cardiovascular medical clinics.

In 2010, a study of six more Indian cities, including "Pune, Chennai, Indore, Ahmedabad, Surat, and Rajkot, revealed a total of 15,200 unexpected losses. (Jawahar and Guttikunda, 2012). In August 2003, citing the growing effects of air pollution in Hyderabad and other Indian cities (Shah et al. 2000; Schwela et al. 2006; Johnson et al. 2011), the Supreme Court of India directed the state governments of Andhra Pradesh, Maharashtra, Uttar Pradesh, Karnataka, and Tamilnadu to prepare activity plans for improving air quality and present their plans to the Environmental Pollution (Prevention and Control) Authority". The erstwhile Andhra Pradesh and Telangana states introduced various policies and programs in Hyderabad to address this issue. Data progression, individual development, exchanging designs, capital progression, administrative frameworks, and social dissemination have increased global availability in recent decades. This enormous growth in sectoral, financial, commercial, and natural records has been nicknamed the Great Acceleration due to globalisation. Globalisation has had both positive and harmful consequences on the environment and health. With this in mind, this chapter aims to understand and review the current level of air pollution in Hyderabad, as well as to provide a summary of state-sponsored air pollution reduction regulations and programs. It also includes a brief biography of respondents and a description of their thoughts on globalisation, the environment, and health.

Chapter-IV '*People perception on Air Pollution and Health risks*' investigates how toxicological effects on human health can be a direct result of air pollution, which has become a major problem in the newly acculturated environment. There are many flow sources, but the bulk of air pollution is brought on by modern motorcycles and cars with internal combustion engines. "Ground-level ozone, particle pollution, sulfur oxides, carbon monoxide, lead, and nitrogen oxide"s are the six primary air pollutants identified by the World Health Organization (WHO). Airborne toxins can cause a wide range of health difficulties in humans, including problems with the lungs and heart, neurological and behavioral disorders, dry eyes, skin problems, and chronic conditions such as cancer.

A few studies have found a direct correlation between prolonged exposure to low air quality and adverse health effects `and the increasing rate of bleakness, as well as death from cardiovascular and respiratory diseases. Asthma, cellular breakdown in the lungs, ventricular hypertrophy, Alzheimer's, mental entanglements, fetal development, and low birth weight are all believed to be critical natural hazard factors in the rate and progression of some illnesses. The purpose of this chapter is to describe how people think about air pollution and its sources. It highlights the short- and long-term health concerns that people experience.

Chapter –V '*People perception on Response of State on Air pollution*' explains that the respondents vies on state, civil society and political parties role and their initiations to mitigate air pollution in the Hyderabad city.

Chapter –VI *'Conclusion'* summarizes the all chapters and finding of the study.

CHAPTER II

Status of Air pollution and Mitigation Policies: An Appraisal

Globally, air pollution is seen as a significant problem. The great majority of countries suffer from air pollution. Air pollution has risen to the top of the list of global environmental issues. In 2019, air pollution surpassed the effects of other well-regarded danger indicators for continual illness, such as stoutness (high weight record), more elevated cholesterol, and a lack of proper sustenance, to become the fourth leading cause of death worldwide. Poor air quality has been linked to human health and our current situation and is perhaps the most comprehensive proof of any ecological threat element. Currently, air pollution is increasing daily (U Shankar, 2008).

Air pollution was India's most significant cause of premature death in 2019, accounting for almost 18% of all deaths (more than 1.67 million). When taken independently, ambient particulate matter (PM2.5) is the fourth most harmful factor, and home air pollution (HAP) is the sixth most dangerous component (UN, 2013). Ozone was not among the top 20 hazard variables. In places where PM2.5 levels are above the WHO's healthy air standard (10 g/m 3), 100 percent of India's population lives. Air pollution claimed the lives of 1.67 million people in 2019. Around 21% of newborn child mortality is attributed to air pollution. Approximately 1 million people have died as a result of exposure to outdoor PM2. 5.61 percent of people used strong energises for cooking in 2019. (WHO, 2019).

It is estimated that over 600,000 people died directly from the air pollution caused by home activities. While exposures to PM 2.5 and home air pollution decreased between 2010 and 2019, disclosures to ozone increased throughout this period. In India, there are approximately 200 stations that provide information on the PM 2.5 levels in the area. India is the country in South Asia with a high PM 2.5 exposure out of the six countries that comprise the region. Air pollution is the primary cause of death among people who die at an early age in India. In India, ischemic heart disease, COPD, diarrheal diseases, lower respiratory infections, and intracerebral drain are among the significant causes of death, whereas hypertension, smoking, poor eating habits, and high glucose levels are among the leading risks factors (WHO,

2019). Air pollution causes 164 deaths per 100,000 people in India, compared to 86 deaths globally when age differences are considered. Children under the age of five account for 18% of all air pollution-related deaths in India, while those over the age of 70 account for 18%.

This chapter examines three different types of air pollution that are known to be harmful to health: "ambient (open-air) fine particle pollution, ambient troposphere ozone pollution, and domestic air pollution," as well as climate and air pollution mitigation methods and initiatives made to reduce pollution on a global scale. Finally, it summarises the current state of air pollution and its global implications. It also discusses the current situation of air pollution, state mitigation efforts on a global and Indian scale, and the health consequences of air pollution in India and abroad.

Ambient Fine Particle Air Pollution

PM2.5 is the abbreviation for particulate matter in the air that is considered ambient. These particles, in addition to the reactant and synthetic product compounds that contribute to their possible production in the environment, are transported by a wide variety of human and natural sources, including automobiles, power plants that burn coal for fuel, mechanical operations, garbage disposals, and many other activities and processes (Peter H. Raven & Linda R. Berg, 2006). Studies have demonstrated that lengthy exposure to elevated average concentrations of air pollutants is the most reliable and essential risk factor for mortality from cardiac, respiratory, and other diseases. This is the case even though smaller and bigger airborne particles can be harmful.

Particulate matter concentrations in the environment are measured in micrograms per cubic meter of air, or g/m3. To determine the degree of sickness caused by PM2.5 pollution, researchers must first understand how people perceive their exposure. The population-weighted yearly average fixation, or the fixation to which the vast majority of a country's population is exposed, is used by the GBD project to measure openness at the national level.

Global Patterns in Ambient PM2.5 Exposure

In 2019, almost ninety percent of the population had yearly average PM2.5 fixations that were higher than the World Health Organization's (WHO) Air Quality Guideline of 10 g/m3.

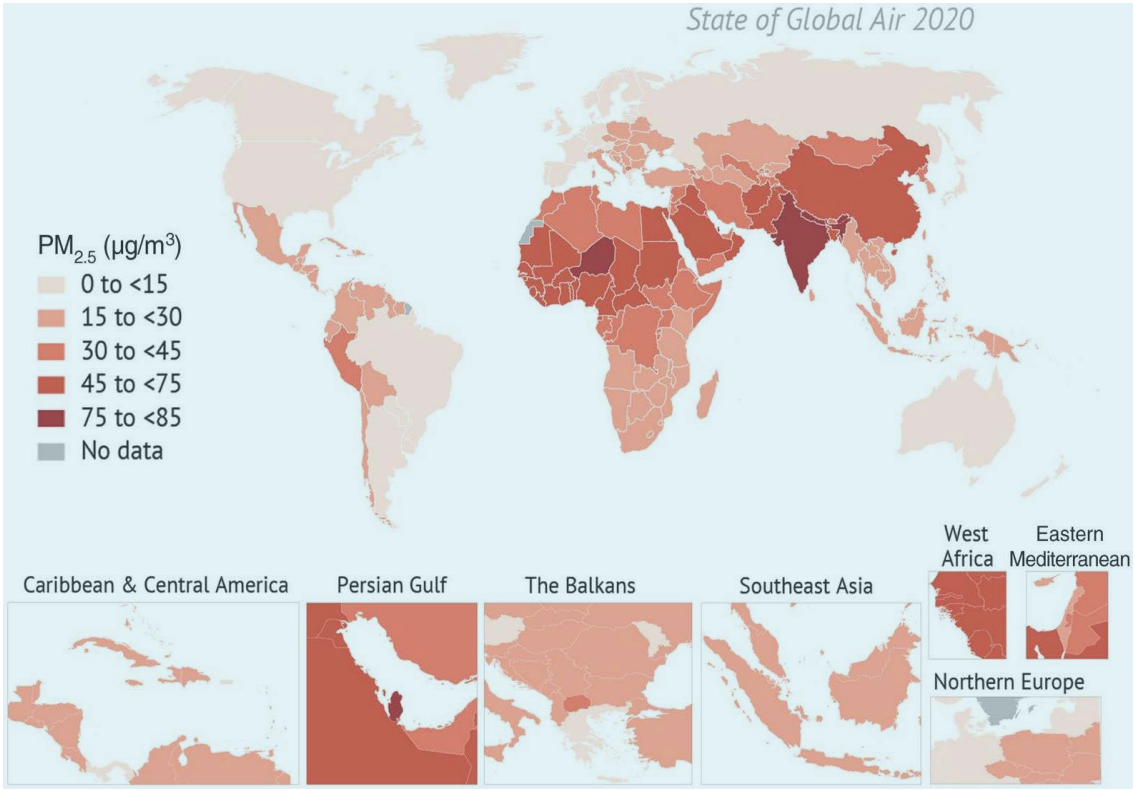
TABLE-2.1: In 2019, the top ten countries with the greatest population-weighted yearly average PM2.5 exposures

Country	PM2.5 Concentration (ug/m$^{3)}$	95 % Uncertainty intervals
India	83.2	76.1 to 90.7
Nepal	83.2	62.9 to 107
Niger	80.1	42.2 to 145
Qatar	76.0	59.2 to 96.6
Nigeria	70.4	45.4 to 105
Egypt	67.9	47.8 to 92.8
Mauritania	66.8	37.6 to 108
Cameroon	64.5	43.8 to 92.6
Bangladesh	63.4	55.1 to 73.5
Pakistan	62.6	49.9 to 77.5

Source: https://stateofglobalair.org

These are the ten countries with the highest overall exposures (Table 2.1), although the rankings are incomplete due to the appraisals' weakness. Asia, Africa, and the Middle East had the highest yearly average exposures (Figure 1). "Australia, Brunei Darussalam, Canada, Estonia, Finland, Iceland, New Zealand, Norway, Sweden, and the United States are the ten countries with the lowest exposures (i.e., population-weighted yearly normal focuses under 8 g/m3)". Since these populace-weighted PM2.5 focuses address yearly midpoints across whole nations, they incorporate, yet don't address, the extensively higher fixations that might be noticed every day or in specific seasons, particularly around urban communities or significant pollution sources. Long-term exposures are responsible for the bulk of air pollution's disease and death burden. Although short-term concentration spikes might harm health, most of the disease and mortality burden is caused by long-term exposures.

FIGURE-2.1: In 2019, a global map depicting population-weighted annual average PM2.5 concentrations was created.

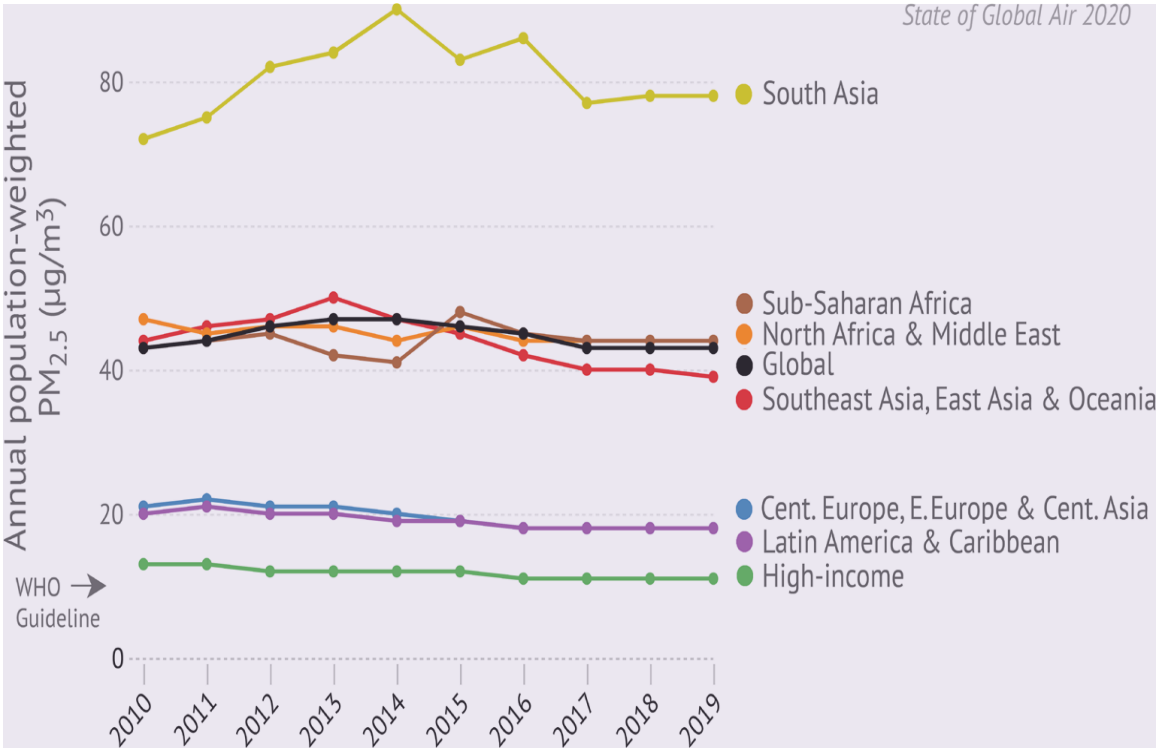


Source: Health Effects Institute. 2020. State of Global Air 2020. Special Report. Boston, MA: Health Effects Institute.

Trends in Ambient PM2.5 Exposure

Worldwide PM2.5 exposures declined marginally from 2010 to 2019 yet reflect different encounters across the GBD Super Regions (nations assembled by comparable reason for death designs; Figure 2.1). A few regions have seen enhancements, strikingly South-east Asia, East Asia, and Oceania, driven by China, Vietnam, and Thai-land. Nonetheless, others, specifically the Middle East, North Africa, and sub-Saharan Africa, have encountered almost no advance or seen an expansion in an exposure.

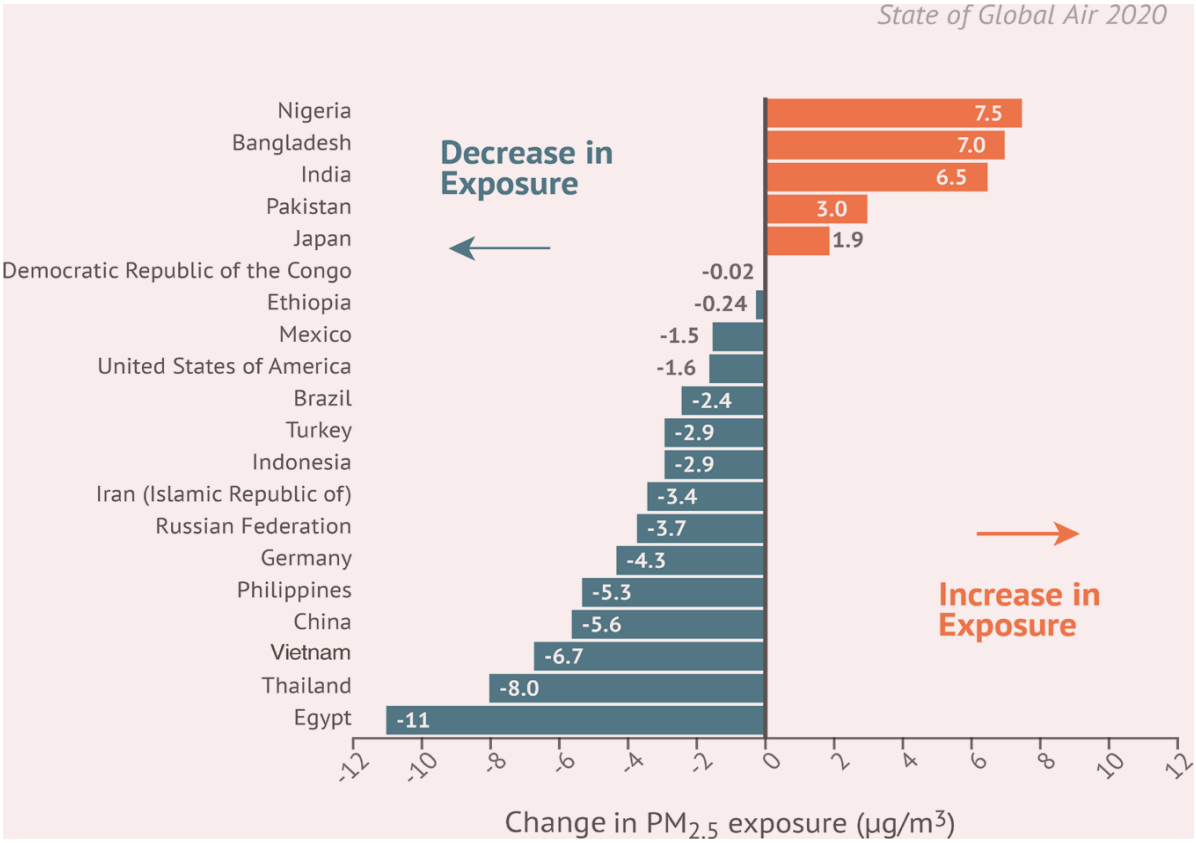
FIGURE 2.2 Global and GBD Super Region trends in population-weighted annual average PM2.5 concentrations, 2010–2019.



Source: https://stateofglobalair.org

Over the last decade, the discrepancies in PM2.5 exposure between these regions have mainly stayed unchanged, with "South Asia consistently having the highest levels. These provincial trends are in great part influenced by financial changes and public-sector activity. All regions' exposures continue to exceed the WHO limit of 10 g/m3, with the exception of the High-Income Super Region. In fact, PM2.5 concentrations in four of the seven super regions continue to surpass the WHO's least severe moderate objective, Interim Target 1, of 35 g/m3".

FIGURE 2.3 Changes in yearly average PM2.5 exposure in the 20 most populous countries from 2010 to 2019.



Source: Health Effects Institute. 2020. State of Global Air 2020. Special Report. Boston, MA: Health Effects Institute.

The world's 20 most crowded countries service 70% of the world's population together. Fortunately, throughout the last decade, 14 of these 20 nations have seen reductions in yearly mean PM2.5 exposures, ranging from a slight drop of 2.9 g/m3 (from 22.3 to 19.4 g/m3) in Indonesia to a considerable decrease of 10.6 g/m3 (from 78.5 to 67.9 g/m3) in Egypt (Figure 4). The High-Income Super Region, which includes Germany and the US, has suffered small reductions since 2010. Another country in the High-Income Super Region, Japan, recorded a slight increase in PM2.5 levels (11.5 to 13.5 g/m3), which could be attributed to increasing outflows from petroleum-fueled power plants that have mostly supplanted atomic power plants since the Fukushima nuclear accident in 2011.

In Nigeria, PM2.5 levels increased by 7.5 g/m3 from 62.9 g/m3 in 2010. Ninety-five percent vulnerability range to 70.4 g/m3 in 2019. "The countries with the largest exposures on the planet, India, Pakistan, and Bangladesh, continue to see rises

.

Ambient Ozone Air Pollution

Ground-level ozone, also known as tropospheric ozone, is a highly reactive pollutant that affects human health, food crops, and other vegetation. Rather than being discharged directly into the air, it is created in a mind-boggling synthetic reaction between nitrogen oxides and unstable organic combinations in the presence of sunlight. A multitude of human activities produces nitrogen oxides and unpredictable organic mixtures. When petroleum fuels (oil, gas, and coal) are used in autos, power plants, mechanical boilers, and residential heating systems, nitrogen oxides are generated. Unstable organic combinations are emitted by motor vehicles, oil and gas extraction, preparation, and other modern operations. Plants, for example, can naturally release specific sorts of unstable organic combinations.

According to studies, Ozone levels are 30 to 70 percent higher today than they were 100 years ago. Increased emissions of the synthetic compounds that make up ozone and rising global and local temperatures, both of which can speed ozone growth, are to blame for this increase. Ozone is also a greenhouse gas, contributing to the warm environment in which it thrives. In metropolitan regions, ozone levels can generally change inside and around urban areas relying upon the neighborhood and local sources. What's more, ozone is a potent territorial poison, making a trip significant distances to rural and provincial zones and public limits, prompting high ozone levels a long way from the discharge sources that add to its arrangement.

Global Patterns in Ozone Exposure

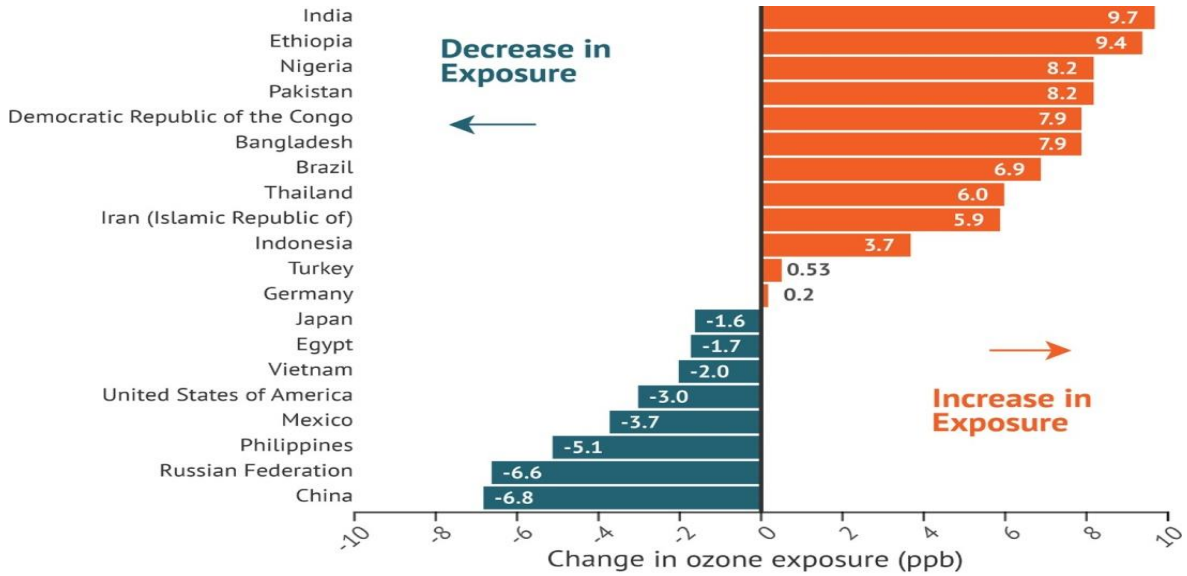
TABLE 2.2 Top 10 countries with the highest ozone exposures globally in 2019

Country	Tropospheric Ozone (ppb)	95 % Uncertainty intervals
Qatar	67.2	62.3 to 72.4
Nepal	67.	65.5 to 68.6
India	66.2	66.0 to 66.3
Bangladesh	64.6	63.9 to 65.3
Bahrain	64.0	51.7 to 75.9
Pakistan	63.3	62.8 to 63.8
Kuwait	62.1	57.6 to 67.1
Iran	59.5	58.8 to 60.2
Republic of Koria	57.9	56.4 to 59.3
Soudi Arebia	58.2	57.7 to 58.6

Source: Health Effects Institute. 2020. State of Global Air 2020. Special Report. Boston, MA: Health Effects Institute.

Ozone levels in the atmosphere vary from a low of 12.2 parts per billion to a high of 67.2 parts per billion around the world. The ten countries with the highest usual ozone exposures in 2019 were in Asia and the Middle East (Table 2.2), despite the fact that the distinctions in the rankings are not generally significant from the vulnerability stretches. Micronesia and Papua New Guinea, both small island governments, were among the countries with the fewest fixations. What's the link between these amounts of exposure and health-related recommendations? The WHO set a daily maximum 8-hour ozone exposure limit of 50 parts per billion (ppb), which all 10 main countries have exceeded. The United States' Public Ambient Air Quality Standard is 70 parts per billion. It is defined as the yearly fourth-highest day-by-day, most significant 8-hour fixation, determined by a claim for at least three years. They haven't calculated the same way as GBD ozone levels. Still, ozone levels have been continuously growing in recent years, bringing them closer to levels that are creating worry for global health in many places.

FIGURE 2.4 2010–2019 variation in population-weighted average seasonal 8-hour maximum ozone concentrations in the 20 most populous countries.



Source: Health Effects Institute. 2020. State of Global Air 2020. Special Report. Boston, MA: Health Effects Institute.

From 2010 to 2019, Figure 2.4 depicts the highest changes in "population-weighted typical occasional 8-hour greatest ozone focuses for the 20 most crowded countries. Over this period, ozone fixations increased in Ethiopia", Nigeria, the Democratic Republic of the Congo, and Brazil. Ethiopia, for example, had a 27 percent in-wrinkle from 34.9 parts per billion (95 percent UI: 34.5 to 35.3) in 2010 to 44.3 parts per billion (95 percent UI: 43.8 to 44.6) in 2019. India, Pakistan, and Bangladesh, which were among the most populous countries with the highest ozone levels in 2010, have also witnessed the most significant increases. India, for example, saw a 17 percent increase from 56.5 parts per billion (95 percent UI: 56.3 to 56.6) in 2010 to 66.2 parts per billion (95 percent UI: 66.0 to 66.3) in 2019. Over the previous decade, ozone levels fell in eight of the twenty countries, ranging from 1.6 parts per billion in Japan to 6.8 parts per billion in China.

Household Air Pollution

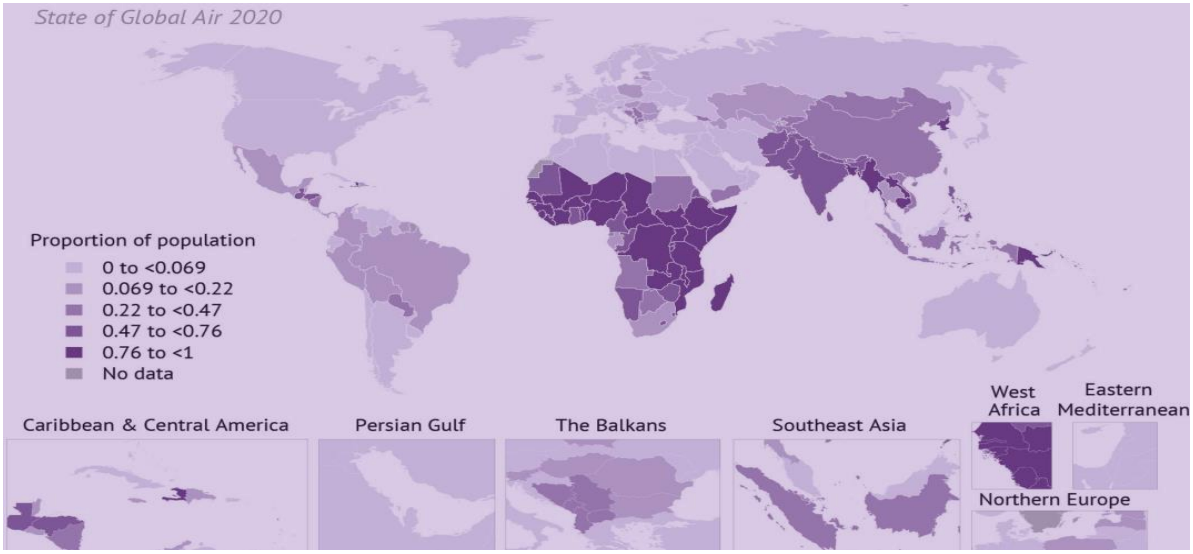
Different energises (coal, charcoal, wood, farming waste, animal manure, and lamp fuel, among others) are "consumed for heating or cooking in open flames or cooking ovens with limited ventilation, resulting in household air pollution. Copying

these abilities releases a range of pollutants, including fine particulate matter (PM2.5), dark carbon, and carbon monoxide, all of which can harm human health. The GBD concentrates primarily on the chore of swallowing strong energises for cooking in its estimations of exposure to home air pollution. These exposures in homes are computed in terms of PM2.5 concentrations using data from household and individual exposure estimation studies and the fraction of a country's population that cooks with solid fuel. These analyses will likely minimise the absolute exposure, and health impact in specific regions since they do not include exposures associated with strong fills for warming and boiling water or exposures" from consuming fluid energises such as lamp fuel.

Worldwide Patterns in Household Air Pollution Exposure

In Sub-Saharan Africa and parts of Asia, exposure to household air pollution is widespread (Figure 2.5).

FIGURE 2.5 In 2019, a global map depicting the proportion of the world's population using solid fuels for cooking.

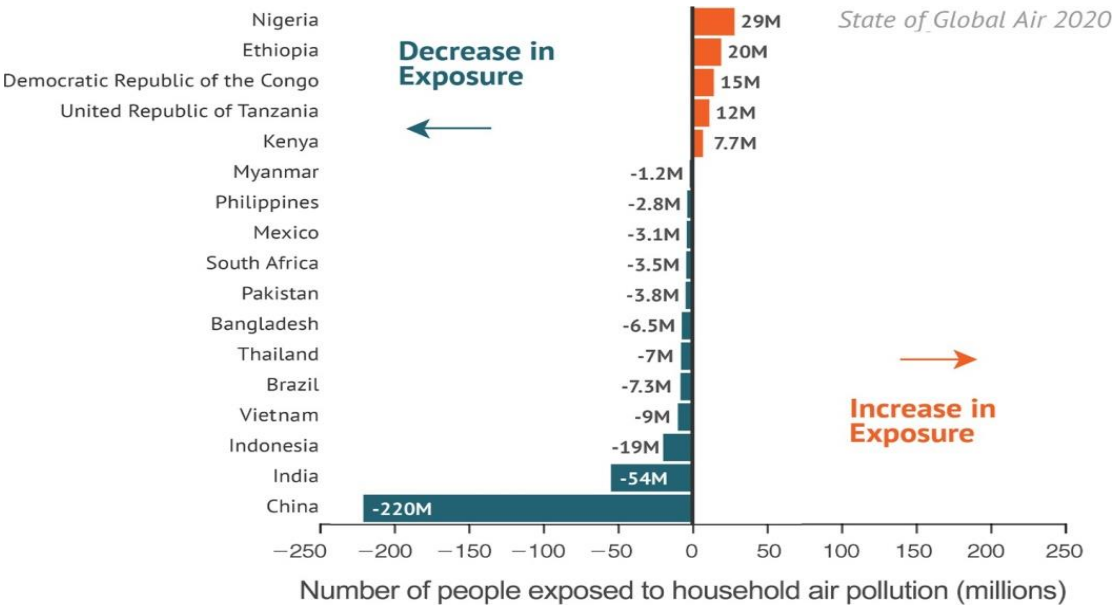


Source: Health Effects Institute. 2020. State of Global Air 2020. Special Report. Boston, MA: Health Effects Institute.

The ten nations with the most noteworthy extent of households cooking with strong powers are the Central African Republic, South Sudan, Rwanda, Burundi,

Niger, Mali, Madagascar, Tanzania, Uganda, and Guinea-Bissau; in every, over 97% of the country's populace utilizes strong energizes for cooking.

FIGURE 2.6 Change in the number of people exposed to household air pollution in the 17 countries with over 50 million people and at least 10% of their population cooking with solid fuels, 2010–2019.



Source: Health Effects Institute. 2020. State of Global Air 2020. Special Report. Boston, MA: Health Effects Institute.

The global average drop in the proportion of people exposed to residential air pollution between 2010 and 2019 reveals significant disparities between countries. Countries in South and East Asia, particularly India and China, where substantial missions urging a switch to cleaner power have been despatched, have clearly outweighed the impact on the number of people affected (Figure 2.6). During the decade, China's population exposed to residential air pollution fell from 54 percent to 36 percent, while India's rate fell from 73 percent to 61 percent.

Despite decreases in the rates of their populations using strong powers for cooking, there was a net increase in the number of people exposed to home air pollution in a few African countries experiencing high population growth. Nigeria, for instance, decreased the level of its populace utilizing vital energy from 82% to 77%, yet populace development implied that 29 million individuals stayed uncovered.

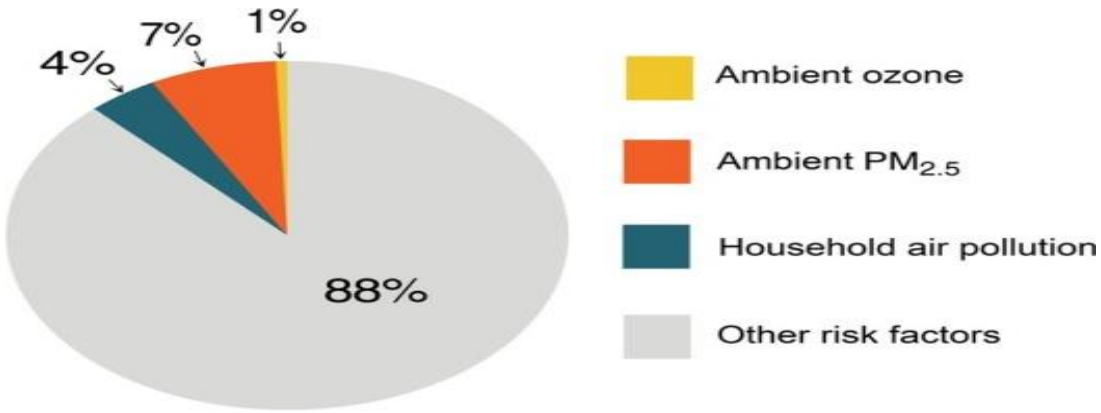
Expansions in the quantities of individuals uncovered happened in nations, for example, in Ethiopia and the Democratic Republic of the Congo, where 96 and 93 percent of the populations continue to rely on powerful energises for cooking charcoal is the most common form of fuel.

Understanding the burden of disease of air pollution

The negative health effects of air pollution are real. Understanding these findings, as well as the hazards encountered by specific groups, the effects of various contaminants, and the trend over time is critical for air quality mediators to be educated and lives to be saved. The logical proof of air pollution's detrimental health impacts is the first step in understanding the sickness burden it places on society. A significant collection of logical explanations has been amassed over a long period, containing concentrates from numerous places worldwide. Air pollution can have a short-term negative impact on people's health; for example, high-pollution days can aggravate asthma symptoms and increase hospitalizations or even deaths related to respiratory and cardiovascular problems.

Long-term "air pollution exposure raises the risk of morbidity and mortality from ischemic heart disease, the cellular meltdown in the lungs, chronic obstructive pulmonary disease (COPD), lower-respiratory airborne contaminants (e.g., pneumonia), stroke, type 2 diabetes, and, more recently, unfavorable birth outcomes, according to widespread scientific consensus, and that the general health burden from these exposures is far greater than that from brief exposures". The GBD project evaluates the burden of the disease caused by air pollution in terms of fatality and extended stretches of healthy life lost by populations worldwide using epidemiological research and other information. The impact of air pollution on the development of disease, psychological problems, and other repercussions (e.g., chronic renal troubles) will be explored in future years as additional evidence accumulates for consideration in the GBD project. It is estimated that 6.67 million people died all around the world due to air pollution in 2019 (95 percent UI: 5.90 to 7.49 million), accounting for almost 12% of all deaths.

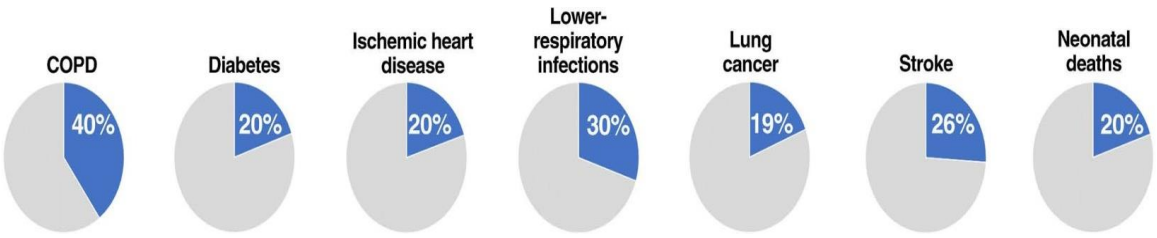
FIGURE 2.7 Percentage of global deaths attributable to individual pollutants.



Source: Health Effects Institute. (2020). State of Global Air 2020. Special Report. Boston, MA: Health Effects Institute.

High blood pressure (10.8 million, 95 percent UI: 9.51 to 12.1 million), tobacco usage (8.71 billion dollars, 95 % confidence UI: 8.1 to 9.3 billion annually), and dietary hazards are the major causes of premature death (7.94 million, 95 percent UI: 6.5 to 9.8 million). Overall, 1.28 million people died in 2019 as a consequence of ambient air pollution rather than car accidents, indicating that air pollution kills more people than car accidents.

FIGURE 2.8 Total air pollution is responsible for a certain percentage of global deaths from specific causes.



Source: Health Effects Institute. (2020). State of Global Air 2020. Special Report. Boston, MA: Health Effects Institute.

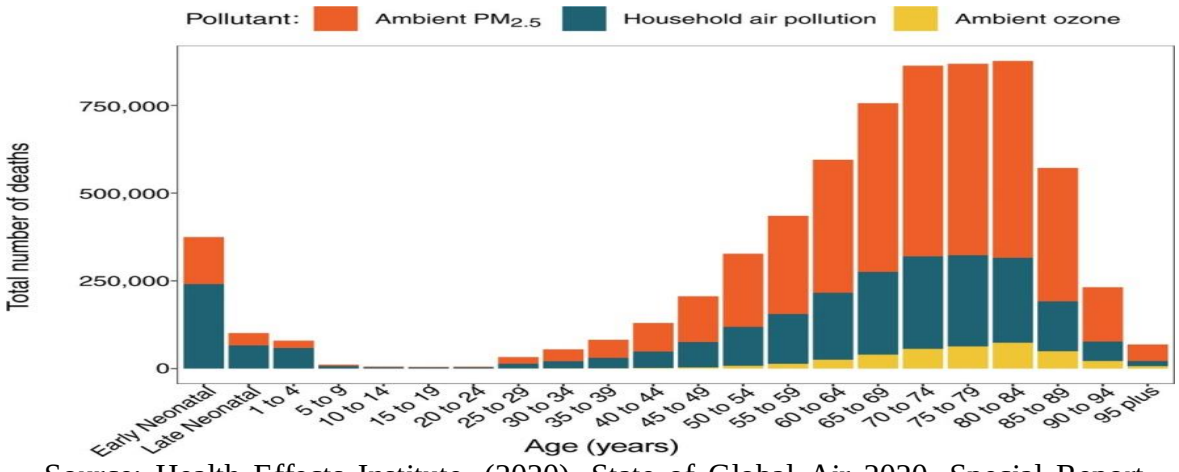
Long-term exposure to air pollution is associated with chronic non-communicable diseases and, more particularly, with one of the most significant leading causes of mortality in the world in 2019 (Figure 2.8). Diseases that cannot be passed on from person to person account for roughly 80 percent of the adverse effects of air pollution. For example, PM2.5, hazardous air pollutants, and ozone are to blame for up to forty percent of all COPD-related deaths. COPD is a debilitating lung

condition. Air pollution has also been linked to as much as thirty percent of all cases of lower respiratory diseases and twenty percent of neonatal deaths within the first month of a baby's life.

A Burden Borne by the Young and Old

The health effects of air pollution are not evenly distributed among age groups. The most heavily influenced people on the earth are children and the elderly. Figure 2.9 shows the maximum pollution-related deaths among children in the mid (0–6 days) and late (7–27 days) newborns groups, reflecting the impact of particulate matter on poor birth outcomes and lower-respiratory infections meanwhile the second, more significant high point in the elderly population tends to represent air pollution's obligations to reduce respiratory infections and substantial medical complications, which cause ischemic coronary illness in the long run. The prominent peak is significantly more significant for the younger age groups, reflecting the lifetime of lost years for the youngest children. DALYs follow a similar pattern as absolute deaths. However, the major peak is much more significant for the younger age groups.

FIGURE 2. 9: Mortality Rates Around the World Caused by PM2.5, Ozone, and Household Air Pollution in 2019 Broken Down by Age Group (years, except early neonatal [0 to 6 days] and late neonatal [7 to 27 days]).



Source: Health Effects Institute. (2020). State of Global Air 2020. Special Report. Boston, MA: Health Effects Institute.

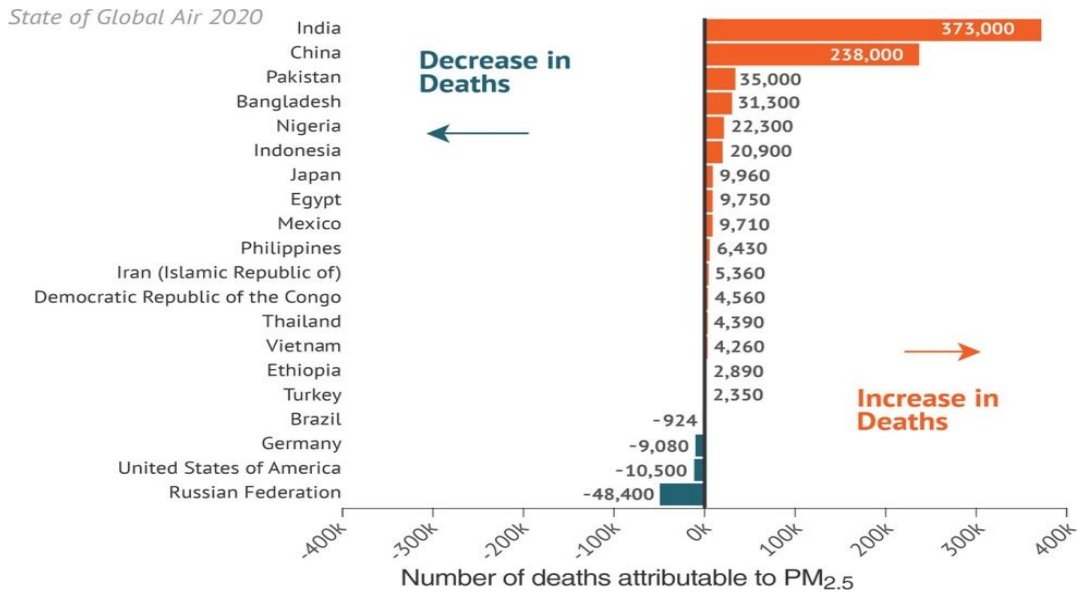
Figure 2.9 also depicts the relationship between the three forms of air pollution in various age groups. Ambient PM2.5 and household air pollution are the

biggest supporters of mortality and long periods of healthy life lost throughout age groups. The consequences of ozone are only apparent in adults since COPD takes a long time to acquire, which is the only health effect included in the ozone study.

The Health Risks associated with exposure to Ambient Fine Particle Air Pollution

Prolonged exposure to ubiquitous particulate matter (PM2.5) pollution caused 4.14 million fatalities and 118 million DALYs in 2019, representing 62 percent of all air quality deaths and 55 percent of DALYs. Among the 69 possible modifiable risk factors included in the GBD study, ambient PM2.5 ranks sixth after hypertension, smoking, and high glucose concentrations. Of all environmental and geopolitical threats, this is the most dangerous.

FIGURE 2.10 Change in total PM2.5-related deaths in the world's 20 most densely populated countries, 2010–2019



Source: Health Effects Institute. (2020). State of Global Air 2020. Special Report. Boston, MA: Health Effects Institute.

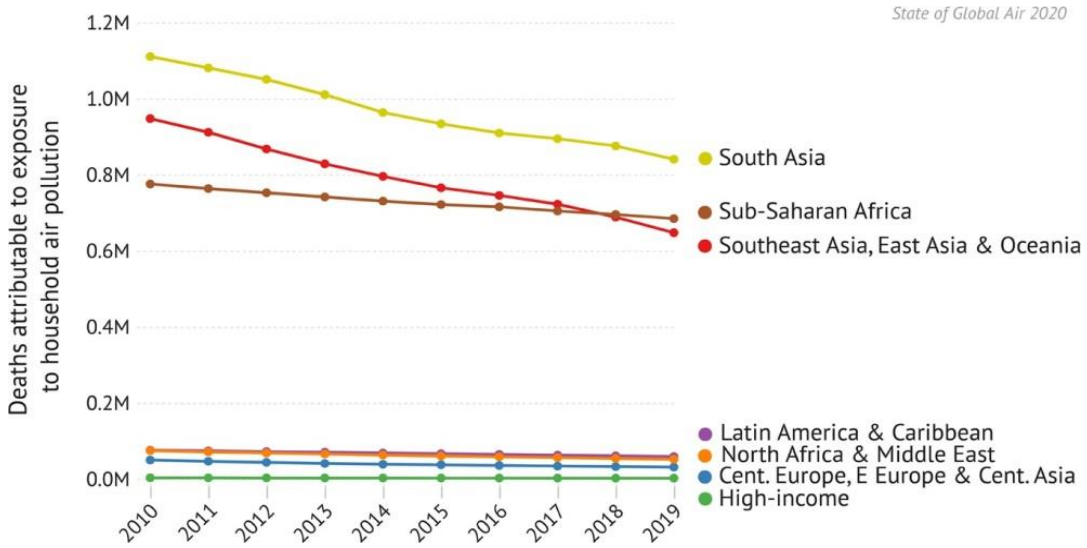
When examined more closely, the world's 20 most populous nations provide some clues about the locations of some of the most substantial shifts in the PM2.5-inferred death load that has taken place (Figure 2.10). Inferable mortality from PM2.5 has increased over the past decade in sixteen of these countries, ranging from 2,350

deaths (a growth of 6 percent) in Turkey to 373,000 fatalities (a growth of 61 percent) in India. There was a 20 percent rise in the number of deaths that occurred in China, which came to over 238,000 people. Bangladesh and the Democratic Republic of the Congo experienced the biggest load rate increases throughout this period, despite the fact that neither country has a particularly heavy burden. Over 900 people lost their lives due to PM2.5 in Brazil, whereas over 48,000 people lost their lives due to PM2.5 in the Russian Federation (a 2% drop) (a reduction of 39.6 percent).

Patterns in the Incidence of Disease Caused by Household Air Pollution

Over the previous decade, "the worldwide burden of disease due by household air pollution has steadily reduced. Overall, deaths caused by household air pollution reduced by 23.8 percent (95 percent UI: 32.3 to 15.5), and age-normalized mortality rates decreased by 37.5 percent (95 percent UI: 44.0 to 31.1). Complete DALYs have fallen at the same rate as age-normalized DALY rates derived from household air pollution. The majority of these decreases have happened in GBD Super Regions like South Asia, East Asia, Sub-Saharan Africa", Southeast Asia, and Australasia, where the use of strong energises and accompanying fatality rates are the biggest (Figure 2. 11).

FIGURE 2.11 In the GBD Super Regions, trends in total mortality attributed to household air pollution.



Source: Health Effects Institute. 2020. State of Global Air 2020. Special Report. Boston, MA: Health Effects Institute.

Among the 17 nations with more than 50 million individuals and were in any event, 10% of the populace depended on strong powers in 2010. In the previous decade, all of them saw significant reductions in illness burden due to household air pollution (Figure 2.11). China, where large-scale efforts have focused on the replacement of coal cook ovens, resulting in dramatic reductions in exposure to household air pollution, and India, where access to clean energy (i.e., melted oil gas [LPG]) has been significantly expanded across the country, have made the most progress. Due to increased treatment and endurance of air pollution-related diseases, these trends represent reduced exposures as well as lower death rates for some contaminants. Even in nations like Nigeria and Ethiopia, where the number of individuals exposed to indoor air pollution increased, this outpaced population growth and population aging.

Standards of Air Quality

Industrialization and urbanization have come about a weakening in the air quality of Indian urban areas and towns. In four major metros, the ambient air quality is weakening alarmingly in more modest urban regions and towns. Although each city has an exciting arrangement of issues, sources are regular in more extensive parts of urban areas and towns (Global Policy Forum, 2011).

Table 2.3: Standards for the Quality of Ambient Air at the National Level in India

Sl. No.	**Pollutant**	**Time Weighted Average**	**Concentrations in Ambient Air** ($\mu g/m^3$)		
			Sensitive Areas	Industrial Areas	Residential, Rural, and Other
1.	Sulphur Dioxide (SO_2)	Annual 24 hours	20 80	50 80	50 80
2.	Oxides of Nitrogen (NO_2)	Annual 24 hours	30 80	40 80	40 80
3.	Suspended Particulate Matter (SPM)	Annual 24 hours	70 100	360 500	140 200
4.	Respiratory Particulate Matter (RSPM)	Annual 24 hours	60 100	60 100	60 100
5.	Carbon Monoxide (CO)	24 hours	4000	4000	4000

Source: *Central Pollution Control Board, 2009*

There is a recorded steep ascent in the quantity of contaminating vehicles combusting tremendous measure of diesel and petroleum. Modern units are additionally answerable for causing air pollution however pollution heap of businesses is a lot lesser than the vehicular traffic. Grouping of air poisons in a city is contrasted, and the National Ambient Air Quality Standards (NAAQS) are used to determine the pollution level and air quality (Table 2.3). Under the National Air Monitoring Program, the Central Pollution Control Board, in collaboration with various State Pollution Control Boards, Pollution Control Committees for Union Territories, and NEERI, monitors the ambient air quality in terms of sulfur dioxide (SO2), nitrogen dioxide (NO2), and PM10 and PM2.5 (particulate matter under 10 micron and 2.5 microns) under NAMP.

Automobile as a Source of Air Pollution

Automobiles are one of the most polluting sources of air in all cities and towns. They are responsible for almost 60% of a city's total air pollution load. "Nitrogen oxides (NOX), carbon monoxide (CO), carbon dioxide (CO2), particulates", hydrocarbons, and aldehydes are among the pollutants released by automobile engines (Davidson, 1993). Most of the pollutants emitted from automobiles are transformed in the atmosphere to form other secondary pollutants due to chemical reactions like ozone (O3). Ozone is photochemically formed in the presence of "volatile organic compounds (VOCs), carbon monoxide (CO), and nitrogen oxides (NO+NO2=NOX)" and can build to dangerous amounts in favorable weather circumstances (Davidson, 1993). The hyper concentration of pollutants takes place mainly on the national highways and major connecting roads of the cities where vehicular traffic density is relatively high. With the cropping up of unplanned colonies adjacent to these roads, the concentration of gaseous pollutants and particulates is also increasing, causing the formation of localised high pollution zone (Dwivedi, O.P. 1997).

The table below explains that the growth patterns of enrolled vehicles in India are given in Table 2.4. India has encountered a massive expansion in the absolute The number of enrolled automobiles has "increased from roughly 0.3 million on March 31, 1951, to around 142 million on March 31, 2011". Between 2001 and 2011, the nation's total enlisted cars grew at a 9.9% compound annual growth rate (CAGR).

Table 2.4: Trend of Growth Rate of Vehicular Population in India

Sl. No.	Year	Number of registered motor vehicles (millions)
1.	1951	0.3
2.	1961	0.7
3.	1971	1.9
4.	1981	5.4
5.	1991	21.4
6.	2001	55.0
7.	2002	58.9
8.	2003	67.0
9.	2004	72.7
10.	2005	81.5
11.	2006	89.6
12.	2007	96.7
13.	2008	105.3
14.	2009	115.0
15.	2010	127.0
16.	2011	141.8

Source: *Office of State Transport Commissioner/UT Administrations,* 2011.

Air Pollution Level in India

Contemplated uncovered that air pollution levels in substantial urban areas had expanded significantly. It has done genuine harm to human health because of respiratory diseases. In 2004, open-air pollution in cities caused about 1.2 million deaths (2 percent among all deaths) as well as 0.6 percent of the worldwide illness burden. (Asif Ekbal, Hrishabh Gupta, 2015). Transportation-related air pollution, which is a critical supporter of all-out metropolitan air pollution, expands the dangers of cardio-pneumonic-related deaths and non-hypersensitive respiratory disease. As indicated by Washington News, an investigation uncovered that human-caused air pollution may have resulted in a decline in yearly storm precipitation in recent years. In the latter half of the twentieth century, scientists say that the measure of downpour recorded in the Northern Hemisphere during summer rainstorms fell by as much as 10%. Changes to global precipitation examples can have genuine ramifications for human health and horticulture (Gowtham. Sarella, Mrs. Dr. Anjali. K. Khambete, 2015). Researchers found that discharges of little air particles from man-spreading the word about sources such as anthropogenic vaporizers were the reason for this (TOI, 2014). India likewise faces similar air pollution difficulties after China, the United States of America (USA), and the United Kingdom (UK).

Table 2.5: Annual Average Concentration of Air Pollutants in India, 2012

Sl. No.	Name of City	Parameter		
		SPM (µg/m³)	NO_2(µg/m³)	SO_2(µg/m³)
1.	Delhi	237	59	5
2.	Mumbai	117	20	5
3.	Kolkata	135	70	12
4.	Chennai	57	21	12
5.	Bangalore	121	28	14
6.	Hyderabad	79	28	4
7.	Ahmedabad	83	24	12
8.	Pune	93	44	22
9.	Surat	97	26	16
10.	Jaipur	187	52	9
11.	Kanpur	215	34	8
12.	Lucknow	211	32	8
13.	Nagpur	103	32	10
14.	Ghaziabad	248	34	30
15.	Indore	143	20	12
16.	Coimbatore	68	27	3
17.	Kochi	70	10	3
18.	Patna	166	36	6
19.	Kozhikode	56	8	2
20.	Bhopal	173	21	3
21.	Thrissur	73	15	2
22.	Vadodara	102	38	16
23.	Agra	196	23	5
24.	Vishakhapatnam	97	12	6
25.	Malappuram	36	-	-
26.	Thiruvananthapuram	55	22	9
27.	Ludhiana	228	27	11
28.	Kannur	-	-	-
29.	Nashik	95	27	24
30.	Vijayawada	65	13	12
31.	Madurai	48	30	14
32.	Varanasi	138	21	18
33.	Meerut	129	43	4
34.	Faridabad	184	38	12
35.	Rajkot	99	17	13
36.	Jamshedpur	150	49	37
37.	Srinagar	-	-	-
38.	Jabalpur	75	24	2
39.	Asansol	111	37	10
40.	Vasai	-	-	-
41.	Allahabad	317	32	14
42.	Dhanbad	178	40	17
43.	Aurangabad	80	32	9
44.	Amritsar	202	39	15
45.	Jodhpur	189	24	6
46.	Ranchi	202	35	18
47.	Raipur	268	40	14
48.	Kollam	41	19	4
49.	Gwalior	329	27	13
50.	Durg-Bhilainagar	103	22	8
51.	Chandigarh	110	19	2
52.	Tiruchirapalli	76	17	11
53.	Kota	156	32	8

Source: *NAAQMS, 2014*

Air quality has deteriorated in the vast majority of the enormous urban areas in India. The significant wellsprings of air pollution incorporate street dust, development exercises, diesel ignition, biomass consumption, and so forth, which have contaminated urban communities like Delhi, Mumbai, Chennai, Kolkata, Howrah, Bangalore, Noida, Faridabad, Ghaziabad, Kanpur, Firozabad, Agra, and so on.

Table 2.5 shows how the "Central Pollution Control Board (CPCB) monitors ambient air quality concerning State Pollution Control Boards, Pollution Control Committees for Union Territories, and NEERI across the country. The National Air Monitoring Program detects sulfur dioxide (SO2), nitrogen dioxide (NO2), and suspended particle matter (SPM) in metro areas (NAMP)". In practically all of the urban communities, air quality data for 2009 reveals that SO2 levels stayed under the National Ambient Air Quality Standards.

In any case, NO2 levels in the urban areas of Asansol, Howrah, Kolkata, Jamshedpur, Delhi, Mumbai, Raipur, Navi Mumbai, and Jharia exceeded the recommended levels. Increased levels of air toxins have wreaked havoc on human health. Particulate matter is estimated to be responsible for 8% of deaths in India due to cellular breakdown in the lungs, 5% of deaths due to cardiovascular disease, and 3% of deaths due to respiratory contaminations (WHO, 2006-07). Short exposures to nitrogen dioxide, a marker for a mind-boggling combination of principally traffic-related synthetic compounds, have been related to impacts on aspiratory work, expanded hypersensitive airway irritation responses, emergency clinic affirmations, and mortality. Diminished lung work and the expanded likelihood of respiratory manifestations are related to long-haul exposure to nitrogen dioxide. As indicated by a WHO study, Delhi is the most polluted city in the world today regarding air quality.

Industries, thermal power plants, and automobiles are significant contributors to India's air pollution. In major centers like Bombay, Delhi, Kolkata, Agra, and others, motor vehicles are responsible for 50 to 60% of air pollution. In most metropolitan areas, coal and fuel wood for cooking also contribute significantly to air pollution (Peter H. Raven & Linda R. Berg, 2006). As per the air quality overview, the degrees of sulfur dioxide and oxides of nitrogen in Indian urban communities are well inside recommended limits. However, the degrees of particulate matter are on the

higher side. This is incomplete because of natural dusty conditions winning in India and halfway because of high fly debris emanations from power plants.

The Repercussions of Pollution in the Air on Human Health

Air pollution has "both immediate (eye, nose, and throat irritation, as well as upper respiratory infections such as bronchitis and pneumonia) and long-term (chronic respiratory diseases, cellular breakdown in the lungs, coronary disease, and even damage to the cerebrum, nerves, liver, and kidneys) effects on human health. Air pollution has an unanticipated effect on certain groups of people". (P.M. Prasad, 2006). A few people are significantly more touchy with poisons than others. Little youngsters and old individuals often experience the ill effects of the evil impacts of air pollution. When the air in their area is polluted, "those with health problems like asthma, heart disease, and lung illness will suffer more. The extent to which an individual is harmed by air pollution is usually determined by the overall amount of hazardous gases exposed to them. i.e., the term of exposure and the convergence of synthetic compounds should be considered" (M.N. Murthy, 2001). "The primary factors answerable for everyday disintegration in metropolitan air quality are developing industrialization, expanding vehicular populace and consuming of non-renewable energy sources. According to the findings of a study on the effects of pollution on human health that was carried out over the course of the past twenty years by the K.E.M. Clinic in Mumbai, the impact of air pollution has been given a greater amount of attention (Kamat, 1997). The problem of urban air pollution has been spreading throughout Indian urban areas at an alarming rate over the course of a number of years due to factors including traffic, inadequate housing, poor disinfection, seepage, and the accumulation of rubbish. The elevated levels of air pollutants have caused significant harm to human health, particularly in children. An investigation found that the open-air pollution in Indian urban regions was directly responsible for 84,000 deaths (WHO, 1996). Pollution of the air inside was responsible for the deaths of 496,000 people in rural areas and 93,000 people in urban areas (WHO, 1997). Every year, 51,779 individuals in India die due to the evident extent of air pollution. In addition, 26 million people are hospitalised each year, putting a strain on the government's finances. In Delhi alone, 9,859 young people die

prematurely due to poor air quality on a regular basis. Kolkata (10,647), Mumbai (7,023), Kanpur (3,639), Ahmadabad (3,006), and other major cities account for over 66 percent of India's total premature fatalities.

Mitigating Policies of Environmental and Air pollution at Global and Indian Level

Following an increase in global environmental pollution, all nations became aware of the problem and began implementing mitigation strategies in their states. Between 2013 and 2017, The first systematic five-year plan to improve air quality was enacted in China, and the following methods have been undertaken to combat air pollution. Outdoor PM2.5 levels in China reduced by 30% between 2010 and 2019, thanks to efforts made over the previous 5 to 7 years, such as a switch from coal to gas in the industrial and residential sectors and a reduction in industrial discharges. Notwithstanding this, there are concerns that the present economic downturn and the resulting increases in coal-burning restrictions will continue to pose problems in terms of overall air pollution control.

India's National Clean Air Program was launched in 2019 to lower outdoor PM2.5 levels by 2024. While the initiative has been criticised for lacking a genuine mandate and mainly focusing on metropolitan areas, it has resulted in increased commitment to the issue of air pollution at the state and local levels. In April 2020, the country began transitioning to Bharat Stage VI (BS-VI) automobile emission norms, which is expected to benefit the country in the following years. Despite this, the COVID-19 pandemic has sparked concerns that the switch's complete implementation may be delayed.

The level of PM2.5 in the air in Nigeria increased by 7% between 2010 and 2019. The National Short-Lived Climate Pollutant Plan was released in 2019, with a target of reducing PM2.5 emissions by 75% by 2030. The 22 major measures to address PM2.5 include guidelines and implementation of vehicle output restrictions, switching to cleaner cooking sources, restricting gas flaring, and minimising discharges from agricultural burning and domesticated animals.

Despite the fact that the Pakistan Environmental Protection Act specifically targets air quality, the country lacks a coordinated national air pollution policy.

Controlling discharges from block furnaces, agricultural burning, and industry has been the focus of recent efforts, some of which have been implemented by Supreme Court judgments. Emissions from small and large uncontrolled enterprises are unregulated, and the country relies entirely on Euro-II car emission laws. Progress has been spotty, despite the presence of regional new initiatives (such as the Punjab Clean Air Action Plan).

In 2019, Bangladesh introduced a draft of a Clean Air Bill, which would pave the way for establishing a National Air Quality Management Plan and verifiable verification of critical air quality zones and other measures. This would be a positive step toward improving air quality in Bangladesh. The country launched a determined effort beginning in 2009 and continuing through 2019 to tackle the air pollution caused by block ovens and the transportation industry (Clean Air and Sustainable Environment Project).

Environment as a major challenge for Globalisation:

The environmental degradation is more unacceptable than the record on financial and social imperfections comparable to Globalization. A significant issue for this can be that the amazing business and cash intrigues prevailing with regards to pushing economic liberalization and furthermore the "free market" way to deal with be the transcendent need for some administrations. Environmental contemplations fell numerous indents. Liberalization, commercialization, and monetary interaction close by the rationale of the competition to hold or acquire "competitiveness" has subverted feasible improvement in every standard and a program. Along these lines, the interaction of Globalization drives some significant issues to the world's environment, which is as per the following:

Global market coordination has worked with the establishments and exercises that have prompted more noteworthy misuse and exhaustion of characteristic assets and speed up environmentally hurtful exercises, leading to the degradation of the environment.

There is a strain to build fares of normal assets and farming wares in enormous scope. Since the outside obligation must be reimbursed in foreign exchange, this necessitates that nation's foods ought to surpass its imports. The IMF upheld strategy

changes that accentuated the production of fare motivations to work with through the debasements. It is said that downgrading expands the interest for a fare, which becomes less expensive, and decreases imports which become more costly. The expanded interest for sending out shifts the country's average assets like land, timberlands, and minerals into an exchanging area and away from creation for neighborhood utilization. Along these lines, Globalization disregards the drawn-out outcomes of the consumption of characteristic assets.

For a positive financial turn of events and dynamic investment in the global market, each country must emerge from the filthy phase of industrialization, which results in the extraction of toxic materials, destructive gases, atomic wastes, and other pollutants that are harmful to human health worldwide.

Improvement in the methods for transportation and communications is viewed as a significant vehicle for Globalization as it speeds up the cycle indeed. This remarkable development in transportation and communications causes the annihilation of greenery, wetlands, marine life, and so on, and that reasons for biological degradation.

Another major worry is deforestation. Horticulture is a crucial source of our daily needs. Globalization energises the advance of development in underdeveloped countries where labour costs are low, transforming timberlands into croplands. To make matters worse, large-scale manufacturing and the desire for a higher return necessitate using pesticides and composts that are clearly harmful to the environment. Crop items are now available in zones where they were previously difficult to obtain due to globalisation. Using these synthetic substances in farming pollutes groundwater and annihilates life forms that aren't posing a problem for agricultural production in an unpredictable manner.

The net impact of Globalization, in addition, is to expand the biological impression of every individual in the world by constantly advancing economic development just as developing practically strict confidence in the worth of utilization in the cost of electronic toys, vehicles, and inexpensive food, all of which requires an ever-increasing number of shared assets, energy, and frameworks to create. The developing coordination and aberrations among economies are likewise expanding the

degree and number of biological shadows, which will generally move the natural harm of all the more impressive economies to more vulnerable economies.

Because of the worldwide blending of greenhouse gases (GHGs) in the environment, anthropogenic environmental change is a global issue. Therefore, worldwide collaboration is essential to accomplish huge advancements in alleviating environmental change. Drawing on distributed examination, this part basically analyzes and assesses how arrangements and instruments for worldwide collaboration have been and can be coordinated and carried out. The review investigation of global collaboration in the section evaluates and examines what has been accomplished to date and studies the writing on clarifications of triumphs and disappointments.

The extent of the part is defined by the scope of attainable peaceful accords and other arrangement instruments for participation in environmental change moderation and variation. Worldwide environmental arrangements date back, in any event, a century. Despite this, MEAs have increased in the last 30 years as environmental security has become a major concern around the world. "The United Nations Conference on Environment and Development (UNCED)" in 1992, as well as the United Nations Conference on Human Rights (UNCHE) in 1972, paralleled the rise in global concern about the environment and served as catalysts for new agreements. MEAs already address a wide range of environmental wonders locally and globally.

It's possible that recognizing patterns is essential for comprehending examples of illness load across nations and locations and highlighting activities to reduce pollution in ways that benefit health the most.

India’s Constitutional Provisions for Sustainable Environment Protection:

The environment's conservation and maintenance are vital to India's strict customs and principles. All Indian religions believe that environmental protection is one of the most effective ways to serve people and God. Undoubtedly, the Indian Constitution reflects the Indian people's strong belief in environmental preservation through the inclusion of many laws regulating the conservation of natural resources such as forests, lakes, and wildlife. Furthermore, active engagement in many international conventions and conferences demonstrates that the vast majority of the

difficulties humanity faces today revolve around human beings (Shyam Divan and Armin Rosencranz, 2001).

Environmental pollution and unsustainable development are examples of such issues. It should be noted that these problems do not affect just one country; consequently, all developed and developing countries must work together to find solutions to these issues. Undoubtedly, the global community has made strategic choices to address the abovementioned concerns through international conferences, agreements, and declarations. In 1972, the Stockholm Declaration on Human Environment was signed as the most crucial worldwide conference for environmental preservation and sustainable development. India participated in the conference and pledged to implement the Stockholm Declaration's requirements at the regional level (R.N. Bhattacharya, 2001). At the end of the day, one may argue that it was a deliberate move by the Indian government to combat environmental pollution and unsustainable development.

The item set for administration by the cutting edge government helps governments about themselves is a development that is environmentally friendly and handles individual difficulties. Different laws established by Parliament and numerous clauses enshrined in the Constitution relating to environmental protection and sustainable development point to the government's sincere efforts in this area (Mukund G Rajan, 1997). We take pride in that our Constitution is one of the world's longest and most well-written, with enough support for environmental preservation and sustainable development criteria. The Indian Constitution's "Articles 14, 19(1) (g), 21, 26, 32, 47, 48-A, 51 (A) (g), 226, 253, Seventh Schedule, and Eleventh Schedule" are all relevant to environmental protection and sustainable development. When Indian citizens express their desire for India to become a high-level nation, they expect a worthier provision of fundamental necessities like pure water, air, health, and a clean environment (Mukund G Rajan, 1997). To satisfy that want, the government of India, on various occasions, has consistently tried to accomplish the article.

The Indian Constitution, as the most well-known statute, illustrates a more substantial national commitment to environmental protection and preservation. It protects the right to life as well as the right to personal liberty. They're also backed up by a slew of Indian government legal statements. The Indian Constitution requires the

state and its inhabitants to maintain and conserve the natural environment to attain the goal above (Basu, DD., 2002). These clauses are part of our constitutional duty and reflect "a national consensus on the need for environmental conservation and improvement to lay the framework for environmental legislation (M.C. Mehta v. the State of Orissa, AIR 1992 ORI 225). From the Stockholm Declaration of 1972 to the Rio+20 Declaration of 2012 and the BRICS Summit" of 2014, India has always been a central participant among the nations that have been submitted for environmental protection and sustainable development requirements.

There was no formal provision for environmental preservation at the time of the Constituent Assembly deliberations. Environmental issues were mostly ignored during the time. However, the legal executive, on the other hand, was performing admirably. Governments and individuals are becoming more aware of sustainable development due to increased legal awareness of environmental protection and adjusted development (Padam Nepal, 2009). National environmental initiatives in India have also contributed significantly to the country's environmental rebirth. Environmental movements' rise and expansion in the States Without a doubt, India's growth model at the time was one of the most crucial driving forces behind these initiatives.

The Appiko Movement is a forest-based environmental movement in India that is frequently considered a continuation of the Chipko Movement. In the mid-1970s, Shri Sunder Lal Bahugana (a famous environmentalist) launched the Chipko Andolan to defend against unpredictably cut trees and deforestation. The uprising happened in the Uttara Kannada District of Karnataka, which is located in the Western Ghats of India. It was for the purpose of preventing forest devastation due to tree felling (Padam Nepal, 2009). Furthermore, the Kerala Sastra Sahitya Parishad (KSSP) spearheaded the Silent Valley Movement to persuade the government to halt the project's implementation because It harms the ecology and eco-system. Its rainforest covers 8,950 hectares, rendering it one of India's few notable rainforests with significant and diverse vegetation. In 1973, The state government of Kerala decided to construct a dam in the Kunthipuzha River, which runs through the peaceful valley. The dam will be built across the basin. The project that is being proposed might well produce 200 megawatts (MW) of electricity and act as a stimulant for the expansion of the local economy. In any case, the proposed project was unnaturally

suited since it would suffocate a significant portion of the valley's important rainforest and imperil the life of a big group of threatened plant and animal species. By 1979," students, rural teachers, science forums, columnists, citizens, and purposeful groups" had compiled a body of information against the project that was well-reasoned and supported by evidence (Padam Nepal, 2009). Besides a higher ranking, Chilika Bachao Andolan is one of India's most closely scrutinized environmental movements. The growth began at the grassroots level and progressed over time to become a coordinated mass development. Even though the development has achieved its core purpose of preventing the passage of b the poor's business, it continues to focus on increasingly conspicuous environmental and natural targets. "The Baliapal Movement (an agitation against the foundation of the National Testing Range (NTR), India's first missile testing project in the balaipal and bhogari squares of Orissa), The Movement Against Tehri Dam, and Narmada Bachao Andolan have proven that advanced Indian nation." (Padam Nepal, 2009).

India is quickly becoming a role model for countries all over the world in terms of balanced development. Her performance might be seen on a global scale. International conventions, conferences, agreements, and declarations such as the "Stockholm Declaration of 1972 (also known as the Magna Carta of the Environment), the Rio Declaration of 1992 (also known as the Earth Summit), the Kyoto Protocol, the Johannesburg Declaration of 2002, the Copenhagen Meeting of 2009", the Cancun Meeting of 2010, the Durban Declaration of 2011, the Rio+20 Summit of 2012, the BRICS Summit of 2014, and the G20 Leaders Summit of 2014 demonstrate that the Indian government is consistently committed to environmental protection and sustainability (Padam Nepal, 2009).

Until 1976, biological well-being was independent of administrative arrangements; nevertheless, Articles 14, 19, 21, 32, 39, 42, 47, 48, 49, and so on, by implication, influenced the environment and reinforced sustainable development, which had previously been a neglected aim. The constitution, as the law of the land, will impose restrictions on both inhabitants and non-residents, as well as actual states (S.K. Shukla, 1989). Constitution 42nd Amendment, 1976 was enacted to comply with the Stockholm Declaration. It was a fruitful assembly effort to achieve environmental preservation. The purpose of Parts IV and IV-A of the Constitution is to comprehend pollution reduction for biological security (Basu, DD., 2002). The

aforementioned evidence demonstrates that India possesses an intriguing constitution that contains numerous clauses relating to maintaining ecological balance and promoting sustainable growth. The following are ways in which many are documented and investigated:

The concern for the preservation of the natural environment is also mentioned in the Constitution, including people in general, monetary, and opinionated nobles. The preamble of the 42nd Amendment has three words: secularism, socialism, and integrity (Nistha Jaswal, 2008). The Constitution alludes to these ideas. The change clarifies these ideas in the preamble (J.N. Pandey, 2003). The preamble now reads: "We, the people of India, having solemnly resolved to establish India into a Sovereign, Socialist, Secular, Democratic, Republic and....."

The fact that India has always adhered to the objective of a socialist society, the 42nd Amendment was the first time that the ideal was granted constitutional legitimacy (M.P. Jain, 2005). In this way, S.K. Verma clarifies that natural infectivity is a widespread problem that affects everyone. The transition from a libertarian model of society to a socialist one has increased the government's and state's labour and responsibilities, such as ensuring cultural equity and eliminating local area shortcomings (Nistha Jaswal, 2008).

One of the most significant challenges a nation's society can face is the contamination of its natural resources. Non-industrial countries should learn from the magnitude of the environmental pollution problem that developed countries face (S.K. Verma, 2010). As a member of the Stockholm Conference, India was obligated to comment on the conference's suggestions. In this way, the 42nd Amendment Act of 1976 has been implemented. The concept of "socialism" emphasizes the importance of social issues over the significance of the individual problems, and the protection of the environment is one of those issues.

The first principle of the Stockholm Declaration outlines fundamental rights. It states that is “Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generation” (Nistha Jaswal, 2008). Above given

principle finds reflection in a series of fundamental rights, which are explained as below:

Article 14's right to equality protects citizens from forceful and unjust state actions. Part III's overarching article denies discretion. Thus it's crucial. Equalities and assertions are not incompatible. The new right to equality, which forbids engagement, is often utilised by the legal executive to suppress state-granted development permits without considering the environment.

Article 14 has been used by the Indian judiciary many times to protect the environment. Saw effectuation is one of the topics covered, and it's especially beneficial in mining and stone crushing scenarios. The damage to wildlife and ecology may result from arbitrary rent awarding and outlandish mine operations (S.K. Verma, 2010). When mining activities polluted the Mussoorie Hill range, which is a part of the Himalayas, the problem of economic development and its effects on the environment was pushed into sharp light for the first time.

In 2010, the "Communist Party of India (CPI) asked then-Prime Minister Dr. Manmohan Singh to inspect the uber steel project granted to South Korean Steel Gaint Posco in Orissa and urged him to revoke the project's arbitrary environmental freedom" in light of the project's continued savagery and barbarity against the local population (Article 14). According to CPI, the program gave no direct advantage to the territory's inhabitants, the country's or state's economy, and was instead targeted at depleting the enormous mineral treasures of space (The Hindu, 2010).

Article 19(1) (a) provides the freedom of speech and expression to Indian citizens, subject to reasonable limitations. New communication techniques have been developed as social orders have progressed, which can be used to motivate speech and expression. The law forbids us from using these methods indiscriminately because public health necessitates the restriction of the use of any machine that creates a raucous disturbance during the day or in the evening. In P.A. Jacob v. Director of Police, Kottayam (AIR 1993 Ker 1), the Kerala High Court recognized the preceding. It stated, "The right to free speech does not include the right to employ loudspeakers or sound enhancers to pollute the environment and endanger human health " (S.K. Verma, 2010). The Court has also stated that the use of mechanical sound intensifying

devices interferes with men's enjoyment in the park and that freedom of speech does not include using sound speakers to amplify others' natural voice ".

The freedom to realise, which can be considered an element of a dignified life, is linked by Article 19 (1). (a). When the government's plans may endanger people's health and lives, the right to know has proven effective in environmental matters. When this is taken into consideration, any project that the government has for "the construction of a dam, nuclear plant, hazardous industrial unit, or thermal plant that is not sustainable and has the potential to disturb the lives and well-being of people" should be disseminated to a large audience (Nistha Jaswal, 2008). Examples of this include the Narmada Valley Project, located in the states of Madhya Pradesh, Maharashtra, and Gujarat; the National Missile Testing Range, located in Baliapal, Orissa; and other similar endeavors. These measures have provoked well-known protests against the government, which, if allowed to continue, have the potential to overhaul India's existing strategy for economic development.

In this regard, the Brundtland Report of 1987 found that: Some large initiatives necessitate the participation of a different premise. Public petitions and hearings on development and environmental implications can go a long way toward causing people to recognise other points of view. When the environmental impact of a proposed project is significant, the public study of the case should be subject to prior open endorsement, maybe by choice? (Paranjpye, 1988).

Article 48-A of the Constitution (Forty-second Amendment) Act of 1976 included another directive provision governing environmental protection and enhancement. It states that the government will make every effort to maintain and improve the environment and the country's forests and wildlife (Basu, DD., 2002).

The state cannot treat environmental protection and improvement as a basic religious responsibility. The directive principles aren't only decorative elements in the window. They are "essential to the country's governance" (Paramjit S. Jaswal, 1992). and as part of the land's Supreme Law, they must be followed (Paranjpye, 1988).

According to the Supreme Court's decisions, adjudicators can take constructive steps to compel the State's other organs, especially the legislative and executive, to agree to the statutory duty of protecting and promoting the environment

in certain circumstances (L.K. Koolwal v. State A.I.R. 1988 Raj. 2 at 6). It may not be appropriate for the court to interfere without malice if the government is aware of the different considerations that demand thought and care and has reached a cautious determination after evaluating them.

The Court will not be able to remain silent if this does not happen. By issuing relevant writs, orders, and directives, the Court can successfully intervene to ensure that the constitutional purpose of environmental protection and enhancement is met (Bhimagiri Bhaskar v. Income Divisional officer, A.I.R. 2001 A.P. 492 at 498).

In the case, M.C. Mehta v. Union of India, also known as the CNG case, the Supreme Court of India concluded that articles 39 (e), 47, and 48-A, both individually and jointly, place an obligation on the state to protect the health of the people. This was stated in the court's decision that the state must protect the people's health. Enhance not just one's general health and sense of well-being but also one's ability to defend the natural world around them.

Environmental policy making in India:

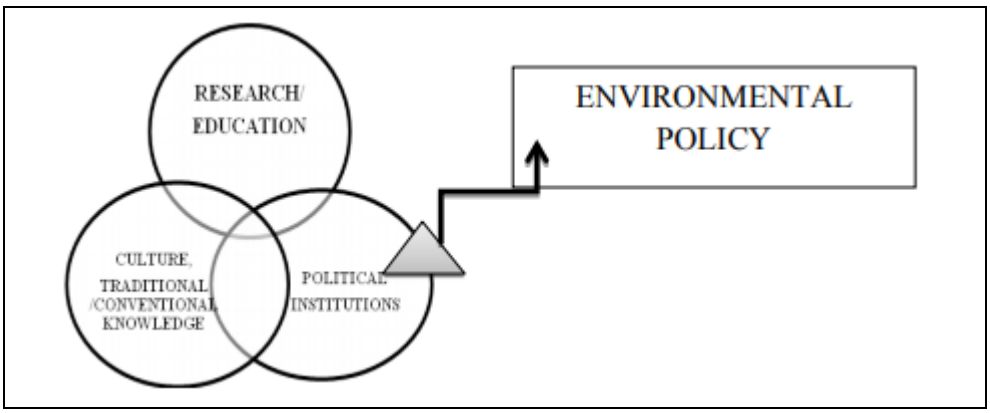
Concern for the environment in India is nearly as old as our culture itself. "The environment is an aggregation of water, air, and land, between relationships among themselves and furthermore with human organisms, other living life forms, and property," our forefathers understood the value of the environment. The Environment (Protection) Act of 1986 contains this definition (Paranjpye, 1988). Environmental policy was described in Kautilya's Arthashastra, written between 321 and 300 BC, and had provisions to govern numerous views associated with the environment. The globe has become increasingly sensitive to environmental challenges in recent years, notably since the mid-1970s. These issues affect a wide range of controls and manifest themselves at various spatial scales. Unexpected population growth and trend-setting innovation have a substantial environmental impact. Development is enhanced stress on the environment and resources. There's a lot of concern these days about the world's life-sustaining emotional network being jeopardised (Sarkar, 1994).

One line of thought has gained traction, stating that the environment is a vital part of the development and that economic goals and environmental imperatives should be merged. As a result, the primary focus is on maximising asset utilisation

and providing effective environmental management, both of which are beneficial to lowering construction costs (Ramana and Bhardwaj, 1980). The phases of development, the architecture of economies, and environmental plans are among the variables that influence the environmental difficulties that countries face (WDR, 1992).

The first international convention on environment and development was held in Stockholm in 1972, and the second international convention on environment and development was held in Rio de Janeiro in 1992. These conventions were the source of inspiration for India's environmental policies. The principle that "the polluter should pay" (also known as "polluter pays"), the prudent rule, and the idea of intergenerational value have all been incorporated into environmental policy in a variety of countries.

Figure-2.12: showing the making of Environmental policy



Policies regarding the environment might differ greatly from one nation to the next. As seen in the image to the right, general approaches are influenced by a number of factors, including the investigation itself, the culture and traditions of the country in question, and the political institution that governs it. The National Council for Environmental Planning and Policy and the Ministry of Environment and Forest underwent name changes in 1985. The National Council for Environmental Planning and Policy was established in 1972. Long-term goals for India include accelerating economic growth, reducing poverty, increasing employment opportunities, and developing the country's regions. In addition, the goal of sustainable development as a

priority for public policy is being advocated. The following is a rundown of India's substantial environmental plans for each of the four-time periods:

Pre-independence period (1853 to 1947):

During the pre-independence period, the British government implemented a number of regulations aimed at protecting the environment and reducing pollution at various levels. Shore Nuisance (Bombay and Kolaba) Act, 1853, Elephant Preservation Act, 1879, Fisheries Act, 1897, Factories Act, 1897, Bengal Smoke Nuisance Act, 1905, Bombay Smoke Nuisance Act, 1912, and Wild Birds and Animals Protection Act, 1912 are some of the environmental mitigation acts.

Independence to the Stockholm Conference (1947 – 1972):

During this period, laws were enacted to place restrictions on various activities, including cutting down trees, deterioration of forests, and the unplanned construction of towns. Acts such as those listed below were also passed: the Factories Act was enacted in 1948. According to the Factories Act of 1948, any fluid effluents, gases, or vapors formed during the production process must be managed before being released to minimize the likelihood of negative repercussions. During this period, the government's attention became increasingly centered on promoting economic growth, while environmental concerns were relegated to a secondary role. In 1957, legislation known as the Mines and Minerals (Regulation and Development) Act was enacted to regulate and advance the mining industry (Paranjpye, 1988).

Post Stockholm Conference to Bhopal disaster (1972-1984):

The environmental policymaking process was significantly influenced by the Stockholm Conference on Environment and Development, which took place in 1973, resulting in a constitutional amendment as well as significant legislation such as the Water (Prevention and Control of Pollution) Act, 1974, and the Air (Prevention and Control of Pollution) Act, 1981, as well as the establishment of institutions such as Central and State Pollution Control Boards to carry out the Acts' provisions. Any solid, liquid, or gaseous substance (including commotion) present in the climate in such concentration as might be or will, in general, be hazardous to human beings, other living animals, plants, property, or the environment, according to the Air

(Prevention and Control of Pollution) Act of 1981. The Water Act of 1974 established the CPCB and SPCBs responsible for enforcing the Act's obligations.

Bhopal Tragedy to 2006 (1984-2006):

The Bhopal gas tragedy in 1984 profoundly impacted lawmakers' personalities, resulting in extensive environmental legislation being passed in 1986. On November 19, 1986, the Environment (Protection) Act of 1986, which covers the entire country, entered into effect. Following the enactment of the Water (Prevention and Control of Pollution) Act of 1974 and the Air (Prevention and Control of Pollution) Act of 1981, it was concluded that an overarching law for environmental protection and planning the actions of multiple regulatory offices was necessary. There was also a need to create a body with the power to protect the environment, restrict the release of hazardous substances, respond rapidly to environmental disasters, and punish those who damage the human environment, security, or health. Other laws went into effect, including the Motor Vehicles Act of 1988, the National Environment Appellate Authority Act of 1997, and the National Environment Tribunal Act of 1995.

The reform process, which was implemented in 1991, was the impetus for constitutional revisions in 1994, which were intended to decentralise power and resources to the various localities. In addition to the statement on the policy for the reduction of pollution, "The National Conservation Strategy and Policy Statement on Environment and Development" was initially drafted by the Ministry of Environment and Forests (MoEF) in the year 1992. This was done in conjunction with the statement on the policy for the reduction of pollution. Both documents are related to environmental and economic development. The Environmental Action Program, also known as EAP, is a program supported by the government. When the organisation was first established in 1993, environmental management and concerns were immediately included in various development efforts.

National Environmental Policy, 2006: The first attempt at a comprehensive environmental plan design. It investigates the factors that contribute to land degradation and provides therapeutic recommendations. Factors such as monetary, tax, and sectoral approaches should be evaluated for their unintended impacts on land degradation.

The need for sustainable development in these different situations serves as the foundation for these accords. By considering recent facts and information gathered, the National Environment Policy makes an effort to broaden its scope of inclusion and close the gaps that currently exist (NEP, 2006). On the other hand, laws must come first before any meaningful policy. Any long-term, inclusive growth strategy must prioritize environmental conservation (Ganesamurthy, 2009). The Eleventh Five Year Plan emphasizes the importance of sustainable development in the face of environmental problems. The Indian government has made various efforts to improve our environment.

The primary monitorable focuses for environmental protection have been prioritized in the Eleventh Plan record: Meet WHO air quality requirements in all major cities. All wastewater from the city should be treated. Increase energy efficiency by 20% while increasing forest and tree cover by 5%. As witnessed in the NEP of 2006, any policy is only as good as its implementation. As shown in the National Environment Policy of 2006, there are a variety of new and ongoing projects aimed at enhancing environmental conservation. To be satisfied, these necessitate coordinated efforts from a variety of individuals.

It's fascinating to see that, despite several initiatives by countries at all levels, pollution levels remain high, and the risk factor remains high. Furthermore, individuals and groups must take responsibility for their actions; otherwise, nothing will succeed. It is critical to alter people's personalities, so extraterrestrial education emphasizing environmental morality is required.

Conclusion

This chapter concludes with the impacts of air pollution on health worldwide. The fascinating point is that air quality has improved in some big league salaries or created nations in recent years. Nonetheless, countries with low and intermediate incomes, as well as nations still in the process of developing, continue to struggle with problematic levels of air pollution. The nations of Africa, Asia, and the Middle East continue to be the regions with the most significant levels of PM2.5 pollution in their ambient air. Even though PM2.5 levels have shown unobtrusive enhancements in certain areas, there has been next to zero supported advancement in the most dirtied districts. Worldwide ozone exposure has been gradually but consistently expanding

over the previous decade. The most un-created nations endure the most noticeably terrible air quality. In 2019, 6.67 million more deaths were attributed to air pollution worldwide. The ambient concentration of PM2.5 is the primary contributor to illness caused by air pollution across the globe. The assumed disease burden continues to rise even when PM2.5 exposures are reduced since populations continue to grow and age.

Air pollution continues to be a significant issue in India and elsewhere in the world, despite the fact that several state-led efforts have been made to reduce it. It's possible that poor air quality could create significant health problems if you're exposed to it over a long period. Air quality is currently a severe concern in India due to the country's high pace of urbanization, growth, and industrialization. The fast urbanization that is taking place in India is one of the primary factors that is leading to a deterioration in the air quality across the country. The rapid growth of the metropolitan population has led to the development of the metro area in a way that was not expected. Between the years 1951 and 1991, the population of the metropolitan area increased from 17.3 percent to 25.7 percent of the total. The metropolitan population went from 62.4 million to 217.6 million (Pachauri R.K., Sridharan, P.V., 1998).

It is well established that exposure of humans to air pollution can have detrimental effects on their health, particularly in urban settings. Recent research has shown a correlation between high levels of air pollution and a variety of respiratory diseases, which lends credence to the idea that living in close proximity to heavily traveled thoroughfares is detrimental to one's respiratory health (McConnell R, Berhane K, Yao L, et al., 2006). There was a correlation between prolonged exposure to air pollution and an increased risk of chronic respiratory illness. Exposure is the most crucial aspect in establishing whether or not there is a possible link between air pollution and health. Numerous factors affect human health, and determining whether or not there is a link between air pollution and health is critical.

Children and the elderly are particularly susceptible to the adverse effects of air pollution, despite the fact that the majority of the time, everyone is equally impacted by the impacts of air pollution. Children are more susceptible to the adverse effects of air pollution than adults because they have specific characteristics that make them more sensitive to its impact. These characteristics include a lower breathing

zone, greater outdoor time, undeveloped receptivity, and developing organs. There is evidence from several studies to show that exposure to air pollution caused by traffic affects the maturation of lung function in young children and adolescents.

The main source of health effects in senior citizens is a weak insusceptible framework response, with the cardio-respiratory framework being the most impacted. Impacts on the elderly are still little understood, with the exception of studies for short-term results. Gaseous and particulate contaminants behave differently in the respiratory system. Nitrogen and sulfur oxides are transformed into nitrates, nitric corrosive, and sulfates in the respiratory system, which function as aggravators. Longer exposures wreak havoc on the lungs' structure, digestion, and ability to resist infection. Particulate matter reduces the respiratory system's cleansing ability and disease resistance, especially when combined with sulfuric acid. They also serve as a transporter for various pollutants, some of which are carcinogenic (dioxins, PAH, heavy metals, and so on).

There is a correlation between exposure to PM2.5 air pollution and the morbidity and mortality rates associated with respiratory and cardiovascular diseases, which has been confirmed by a number of research. Exposure to PM2.5 has been associated to a variety of diseases, including asthma, chronic obstructive pulmonary disease (COPD), pulmonary fibrosis, cancer, neurological problems, and even obesity. There is substantial evidence linking PM2.5 exposure to these diseases. Exposure to PM can result in an increase in oxidative pressure, bronchial reactivity, airway obstruction, and the quantity of airway inflammatory cells, all of which can contribute to a reduction in lung function.

CHAPTER III

Understanding of Air Pollution and Mitigation Policies in Hyderabad City: An overview

Hyderabad, the state capital of Telangana, is a 400-year-old metropolis. It has a population of seven million people and a population density of 17,000 people per square kilometre, making it the sixth largest and fastest expanding metropolitan area in India (Gummeneni et al. 2011). A robust information technology industry has been a significant contributor to the growth of the city, and it is now spread over the satellite areas that come together to form the Hyderabad Urban Development Area (HUDA). The increase in the demand for both personal and public transportation, as well as the expansion of manufacturing facilities and the growth of the construction sector, have all contributed to a reduction in the quality of the air in urban areas (APPCB 2006; Gummeneni et al. 2011). The United States Environmental Protection Agency (USEPA) estimated that overall health care expenses will total $ 430 million in 2007–2008. IES (2004), study figures take into account the price of 3,000 avoidable fatalities that occur annually as a direct result of air pollution, as well as the "morbidity from chronic bronchitis, admissions to respiratory and cardiac medical clinics, emergency department visits, asthma attacks, restricted activity, and respiratory symptom days". A study of six additional Indian cities revealed that 15,200 people died prematurely in the cities of "Pune, Chennai, Indore, Ahmedabad, Surat, and Rajkot" in the year 2010. (Jawahar and Guttikunda, 2012).

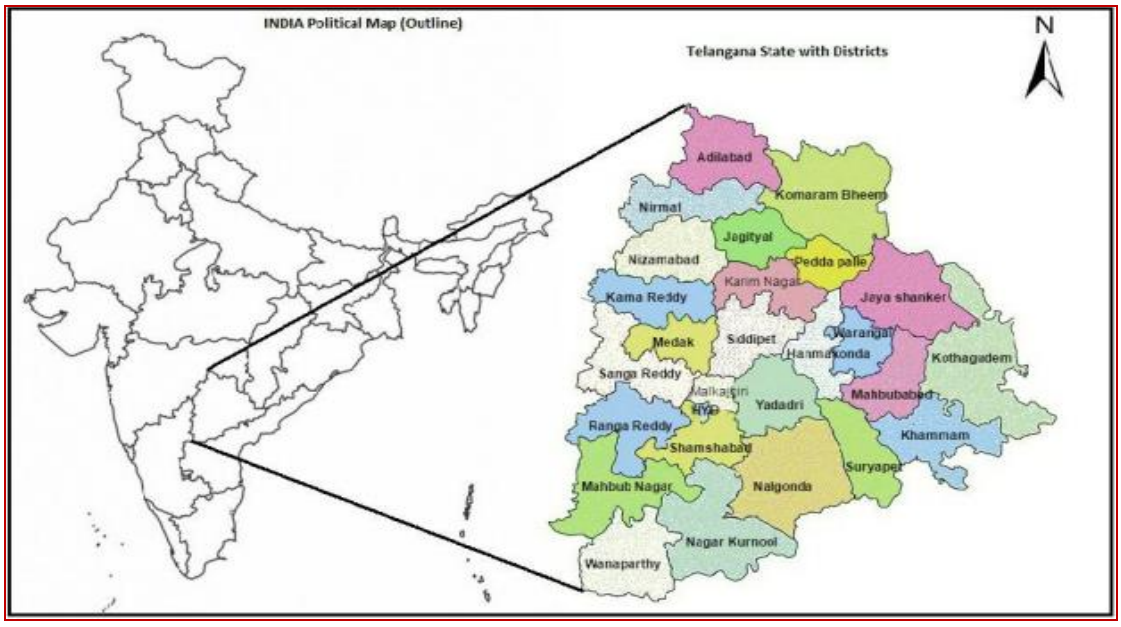
While we can analyze and predict the consequences, better air quality management necessitates a better understanding of the emission sources as well as their strengths in terms of air pollution prevention (Shah et al. 2000; Schwela et al. 2006; Johnson et al. 2011). "The Supreme Court of India, citing increased air quality impacts in Hyderabad and other Indian cities, ordered the state governments of Andhra Pradesh, Maharashtra, Uttar Pradesh, Karnataka, and Tamilnadu to prepare and submit action plans for improving air quality to the Environmental Pollution (Prevention and Control) Authority in August 2003" (Reinventing Telangana, 2016). To address this issue, the erstwhile Andhra Pradesh and new Telangana state launched a slew of policies and projects in Hyderabad. With this background, the present chapter is intended to focus on to understand and review the status of air pollution in

Hyderabad city and also gives a brief account of state initiated mitigation policies and programs of air pollution in Hyderabad city. This chapter is also focusing on to give a brief profile of respondents and field areas and also explains the perception of respondents on globalisation, environment and health. In the most recent decades, international connectivity has expanded on a number of fronts, including the flow of information, the movement of people, investment strategies, flow of funds, legal frameworks, and social diffusion. Globalization has been dubbed the Great Acceleration because of these exponential rises in demographic, economic, commercial, and environmental indicators. Globalization has had both beneficial and detrimental consequences on the environment and health.

Profile of Telangana

Telangana is India's 29th state, established on June 2, 2014. Telangana is a state in India's southernmost region. In terms of both territory and population, it is India's tenth largest state. Hyderabad is the country's capital and most populous city. Telugu, Hindi, English, and Urdu are the most widely spoken languages in the state. The state is organised into ten administrative areas, 459 mandals, and approximately 10434 revenue villages (Telangana Socio-economic Profile, 2015).

FIGURE-3.1: Map of Telangana State depicting Study area of Hyderabad District



Source: Telangana state pollution control board.

Natural Resources

There is an abundance of natural resources in the Telangana region. This region accounts for twenty percent of the total coal reserves in the country. Coal for industrial use and thermal power plants is obtained by Singareni Collieries from the several mines that are located in the area. In addition, Telangana contains a substantial quantity of limestone reserves, which are essential for cement mills. Mica and bauxite are two additional types of minerals that can be found in Telangana. Both the Godavari and the Krishna rivers are everlasting waterways that travel through the Indian state of Telangana on their way to the Bay of Bengal. Musi, Bhima, Kinnerasani, and Pen Ganga are some of Telangana's small rivers (Telangana Socio-economic Profile, 2015).

Economic overview

At the pricing levels that were in effect continuously in 2004-2005, it is estimated that the state's GSDP was roughly 2,07,069 crores in the fiscal year 2013-14 (provisional estimates). This is an increase from the First updated Estimates for 2012-13, which came in at Rs. 1,96,182 crores. The growth rate implied by this increase is 5.55 percent. This growth rate is lower than India's average growth rate of its GDP in 2011-12, which was 7.1 percent, which was 8.04 percent. Agriculture had a growth of 4.58 percent, while industrial production increased by 2.70 percent, and service sector growth was an astounding 7.15 percent (Socio-economic Profile, 2015). The state has done an outstanding job, prevailing over all obstacles such as the worldwide economic downturn and natural catastrophes such as heavy and untimely rains, floods, and other natural calamities, and is currently working toward a bigger average annual growth objective of 10.2 percent.

Industries

Telangana's manufacturing sector has exploded in recent years. Industry growth improved to 4.1 percent in 2014-15 (Advanced Estimate) from 0.13 percent in 2013-14. At constant prices, the State grew at an annual rate of 7.8% on average from 2004-05 to 2014-15. (2004-05). The state's growth path, on the other hand, has more ups and downs than the rest of India. Aside from Medak, Rangareddy, and Hyderabad, the manufacturing sector's expansion shows that seven locations require specific strategies and government engagement (Reinventing Telangana, 2016). The

unregistered manufacturing sector, which comprises micro and small companies, electricity, gas, and water distribution, and construction, has decreased as a result of the increase in sub-sectors. Up till January 2015, 2,091 large-scale industries had begun operations, with a total investment of INR 45,3933.3 million and 6,67,499 persons employed. Around 48,894 Micro, Small, and Medium Enterprises (MSMEs) were created between 2001 and January 2015, employing 5,65,496 people and involving a total investment of INR 225,206.3 million (Telangana Socio-economic Profile, 2015). The number of MSMEs and people employed in the state expanded considerably between 2001-05 and 2013-14. There are six special economic zones in the IT/ITES sector. Telangana has also made advances in the fields of aerospace, biotechnology, and formulations.

The Telangana State Industrial Infrastructure Corporation (TSIIC) has granted permission for the development of 150 industrial zones across ten different locations, with a combined land area of 74133.8 acres. At the moment, there are a total of 13165 units (businesses) located in these parks, and there are currently 917.30 acres of land (out of a total of 74133.18 acres) available to be assigned to industries. TSIIC conducted an assessment of 2.5 million acres of unused or undeveloped land and found that 234,064.35 acres are appropriate for industrial use and are in the process of being readied for industrialisation (Reinventing Telangana, 2016). The state is responsible for the production of "33 million tonnes of industrial minerals and 54 million cubic metres of dimensional stones and building materials. There are 18 prospecting licences, 521 mining leases, and 1186 quarry leases for major minerals (industrial minerals)", and there are 1429 minor mineral leases (construction minerals). The combined acreage of these four types of leases is 53,5805 hectares, 5633 hectares, 2764 hectares, and 3611 hectares. Minerals are widespread and can be found in abundant amounts across the state. Minerals such as coal, limestone, granite, dolomite, quartz, feldspar, clays, and barytes are categorised as large-scale mechanised. Other minerals, such as granite, dolomite, quartz, feldspar, clays, and barytes, are categorised as semi-mechanized medium. Over ninety percent of mines are under the category of the minor sector, while the remaining mines fall under the medium and big categories (Telangana Socio-economic Profile, 2015). The cities of Khammam, Warangal, Adilabad, and Karimnagar are where the majority of the state's mining operations are located.

A rise in the industry's use of petroleum products and emissions of greenhouse gases. Both the number of businesses that operate inside the state and the methods that are used to handle garbage are on the rise. Because of their geographic position and reliance on raw materials, agrobusiness and food processing companies are particularly susceptible to the effects of severe weather, including hailstorms, floods, and unexpectedly heavy downpours. Leaching from landfills, pollution of surface water, and depletion of aquifers are all contributing to this problem. To cite only a few instances, we have land degradation and widespread deforestation, noise and vibration, a reduction in available living space, and a decline in biodiversity.

An increase in the amount of suspended particulate matter in the air can be caused by a variety of operations, including blasting, drilling, excavation, truck loading, and transportation. The uprooting of human populations and the negative health effects on persons who reside in close proximity to mining sites (Reinventing Telangana, 2016). Heat islands, particularly in chemical plants, disrupt inventory networks, and reduce productivity as a result of increased heat waves, all of which are threats to companies as a result of climate change. The quality of the water and the quantity of the water are both under stress, and they will continue to be under stress, which poses a risk to the operations of the industry (Telangana Socio-economic Profile, 2015). Industries that rely on a steady supply of electricity are at risk if the energy sector's problems are not solved. There is a paucity of knowledge regarding climate change's possible effects and appropriate adaptation strategies. Industrial units and parks will be flooded as the number of occurrences of sudden heavy rain rises.

Transportation

Driver licencing, vehicle registration, transportation permit issuing, motor vehicle tax levy and collection, and enforcement are all handled by the Transportation Department. It serves as a focal point for motor vehicle road safety and pollution management. As of February 1, 2015, the state had 7.7 million autos on its books. Automobiles, three-wheelers, buses, and trucks account for the remaining 74.12 percent of all vehicles on the road. The table below shows a list of registered motor vehicles on the road.

Table 3.1: Registered motor vehicles on roads

Type of Vehicles	Number of Vehicles on January- 2015
Auto-Rickshaws	291354
Contract Carriage Vehicles	6466
Educational Institute Vehicles	20243
Goods Carriage Vehicles	328087
Maxi Cabs	18978
Mopeds and Motor Cycles	5722894
Motor Cars	924778
Motor Cabs	62590
Private Service Vehicles	2482
Stage Carriage Vehicles	15572
Tractor and Trailers	285581
Others	42090
Total	7721115

Driver's licences, registrations, permits, and taxes are all ways for the Transportation Department to make money. The table below shows the revenue growth.

Table 3.2: Growth of Revenue of Transport Department

Year	**Total Revenue (Rs. Crore)**
2010-11	1294.73
2011-12	1517.40
2012-13	1768.00
2013-14	1753.72
2014-15 (Upto January 2015)	1579.76
Total	7913.61

Source: Reinventing Telangana, Socio Economic Outlook, 2015, p.107

The emergence of cities and the mass migration of people living in rural areas to urban areas have both contributed to an increase in the overall population and the density of the population. The number of people living in metropolitan areas is disproportionately high in relation to the infrastructure that is now available. The number of cars and trucks on the road has multiplied as a direct result of the rise in both the population and the wealth of the country (practically 200 percent over the most recent 10 years). The transportation industry is experiencing significant disruptions as a direct result of human-caused climate change. After the electrical sector, the transportation industry, and more specifically the road transport sector, is the second largest contributor to the rising CO2 levels in the atmosphere. The number

of individuals who use public transit is low; in Hyderabad, it is only 44%, which is far lower than international best practises (Reinventing Telangana, 2016). As a result of the increasing car population, road congestion has become a severe problem in urban areas, resulting in poor fuel economy. Low carbon fuel vehicle adoption is modest, despite the existence of incentive programmes (such as tax exemptions for battery/compressed natural gas/solar power driven vehicles). In terms of natural gas access, Telangana offers a lot of promise. However, CNG mobilisation in the transportation sector is weak in comparison to the potential (in Hyderabad, 1623 vehicles run on CNG, accounting for only 0.08 percent of the city's total vehicle population). There are no systematic efforts to encourage drivers and owners of'vehicles in use' to increase fuel efficiency and eco-driving tendencies (private or governmental).

Environmental Health in Telangana

The death rate for children under one in Telangana is significantly high. 65 percent of all newborn fatalities are attributed to neonatal mortality, which has a death rate of 27 deaths per 1000 live births. Only 27% of families living in rural areas of Telangana have access to some sort of toilet facility (Census 2011). Over ninety percent of hygienic problems may be traced back to traditional environmental dangers, such as an inadequate supply of potable water and sanitation facilities, as well as polluted indoor air caused by the combustion of biomass fuels (Reinventing Telangana, 2016). At this point in time, it is generally accepted that human activities are the primary contributor to the phenomena known as climate change. Since approximately 420,000 years ago, the levels of carbon dioxide in the atmosphere have remained stable between 180-220 parts per million (ppm). However, these levels are now reaching 390.55 ppm and continuing to rise. Already, the effects of climate change may be seen in the distribution of disease around the world, particularly in the most disadvantaged parts of society (Reinventing Telangana, 2016). Heat waves and precipitation, for example, are examples of climate change aspects that have negative health impacts.

However, there is a dearth of study on climate change's health implications in India. The expected health consequences in Telangana were calculated using global research evidence. Exhibit 23 demonstrates the forces that put in action a chain of

events that lead to climatic changes and, as a result, negative health consequences (Socio Economic Outlook, 2015). The climate of Telangana is characterised by extreme heat and a lack of precipitation due to the state's location in a semi-arid zone. The state also has regular dry spells. Urban households are more vulnerable to environmental pollution caused by vehicular transportation and industrialization, which can lead to increased exposure to biological, chemical, and toxic wastes, despite the fact that they have easier access to water, better sanitation, and cleaner fuels for cooking than their colleagues in the provinces (Reinventing Telangana, 2016). Climate change is exacerbating the health effects of these traditional environmental concerns.

Factory emissions, refineries, power plants, and automobile emissions all contribute to outdoor air pollution. Benzene, toluene, methylene, chlorides, and dioxins, which are produced during the breakdown of plastics and asbestos, as well as metals like cadmium, mercury, and lead, are toxic air pollutants. "Cigarette smoke, nitrogen dioxide, fuels such as oil, gas, kerosene, and coal, cooling systems such as air conditioners and humidification devices, and cleaning chemicals" are the primary contributors to the pollution of the air that is found inside buildings. The effects of climate change on the quality of the air we breathe are profound. There is a possibility that certain weather patterns will increase the amount of chemical contaminants in the air. Producing ground-level ozone, which is one of the components that make up urban brown haze, requires a lot of sunshine and temperatures that are relatively high. As a consequence of this, there is a possibility that an increase in the average temperature will cause an increase in its concentration (Reinventing Telangana, 2016). It's possible that other types of air pollution, such fine particulate matter, would increase as a consequence of climate change. Diseases of the cardiovascular system, cancer, and respiratory conditions such as asthma and chronic obstructive pulmonary disease are among the adverse outcomes of exposure to high levels of air pollution (COPD). In the years 2007 and 2008, the prevalence of asthma cases was highest in the Khammam region (EPTRI, 2009). According to global estimations, air pollution's health consequences, as well as their amplification due to climate change, are likely to intensify (Socio Economic Outlook, 2015).

Impact of extreme weather events on Health

It has been shown that both heat waves and cold waves are connected with an increased risk of morbidity and mortality. It is projected that heat waves will become more common, which will lead to an increase in the risk from exposure, illness, and mortality, especially among the elderly and children. In the lack of drinking water, heat strokes and increased mortality are likely to occur (especially safe drinking water). In Telangana State, summer lasts from April through June (Socio Economic Outlook, 2015). During this season, the temperature rises substantially, with certain regions in Khammam, Nizamabad, Nalgonda, Karimnagar, and Warangal reaching 47 degrees Celsius in May. In 2014-15, 541 deaths were reported in Telangana State owing to sunstrokes, according to the Disaster Management Department's figures (May 30th, 2015).

Health Issues Caused by Environmental Changes are Addressed by Policy and Legislation It is possible that the Rajiv Aarogyasri Health Insurance policy, which strives to promote the fairness of access to healthcare for the underprivileged, could experience an increase in need for healthcare services as a result of the fragility caused by climate change (Reinventing Telangana, 2016). Telangana's government would be able to devise preventive measures based on these trends, such as heat wave notifications, permitting anyone at risk, such as those working outside, to take the necessary precautions to protect themselves from the effects of heat stress. In 1971, the Government of India approved the Urban Malaria Scheme (UMS) as part of the NVBDCP, with the main goals of reducing malaria mortality, transmission, and morbidity. This programme presently protects an estimated 130 million people in 131 towns across 19 states and union territories. Under this scheme, the Government of India provides cash assistance to the larvicides, but the state/corporation/municipality is responsible for all staff and operating expenditures (Reinventing Telangana, 2016).

Profile of Hyderabad:

Hyderabad is the capital of Telangana. Hyderabad Urban Development Authority (HUDA), a renowned creative centre with rising economic activity, is made up of the twin cities of Secunderabad and Hyderabad, as well as eleven adjacent municipalities, with a population of around one crore. The coordinates for this place are 17° 23' 13" N and 78° 29' 30" E. (Socio Economic Outlook, 2015).

FIGURE-3.2: Map of Hyderabad google image

With a population of 68,09,970 people and a land area of 650 square kilometres, Hyderabad is India's fourth most populous and fourth most densely populated metropolitan agglomeration (250 square miles). According to the census completed in 2011, there are a total of 35,00,802 male inhabitants and 33,09,168 female people. It is estimated that there are roughly 10 million people living in Hyderabad at the present time. When it was established in 2007, the Greater Hyderabad Municipal Corporation was responsible for a land area that had grown from 170 square kilometres (66 square miles) to 650 square kilometres. (250 square miles). There are 18,480 people packed into every square kilometre of land area (Socio Economic Outlook, 2015). The Greater Hyderabad Municipal Corporation is comprised of the previous Hyderabad Municipal Corporation, in addition to eleven municipalities and eight panchayats in the area that was formerly known as Ranga Reddy, as well as two municipalities in the area that was formerly known as Medak (GHMC). The 10 municipalities of the erstwhile Ranga Reddy area are "L. B. Nagar, Gaddiannaram, Uppal Kalan, Malkajgiri, Kapra, Alwal, Qutubullapur, Kukatpally, Serilingampalle, and Rajendranagar. The eight panchayats of the erstwhile Ranga

Reddy area are Shamshabad, Satamarai, Jallapalli, Mamdipalli, Mankhal, Sardanagar, and Ravirala" (Reinventing Telangana, 2016).

Economic activity in Hyderabad:

Hyderabad is a prominent IT hub with a lot of international software companies as well as a thriving pharmaceutical industry. The city offers a comprehensive network of public transportation to fulfil the needs of various commuter groups, including state-owned Road Transportation, Multi-Modal Transit, an elevated Mono Rail system, as well as paratransit (3-wheeler Autos) and private taxis. The total number of autos is believed to be in the 50 lakhs range, with 1000 new vehicles being registered every day (Socio Economic Outlook, 2015). Bikes are the most common mode of transportation, while the percentage of passenger vehicles on the road has risen in recent years. The city's outward growth has been fueled by increased economic activity and population movement, making the once industrial estates an important component of the metropolis (Socio Economic Outlook, 2015).

Status of Air Pollution in Hyderabad

Vehicles are a major contributor to both PM10 and PM2.5 levels of air pollution, making them a source of the apportionment of air pollutants. Particulate Matter pollution is caused by vehicles. The emission of particulate matter into the atmosphere from motor vehicles is a significant contributor to both the PM10 and PM2.5 levels. Emissions from motor vehicles are responsible for more than half of the world's total air pollution (Reinventing Telangana, 2016).

Road dust is the second most significant contributor to particulate matter pollution in the case of PM10. The contribution of lofted dust due to vehicular movement makes up about 33% of total particulate matter. This could be due to a number of circumstances, including vehicle activity on unpaved shoulders exiting the highway and poor road maintenance. Re-entrained particles are released into the air as a result of construction and demolition activity, as well as related material handling. Road dust accounts for about 11% of PM2.5 emissions. (Socio-Economic Outlook, 2015)

One of the most significant contributors to the emission of particulate matter into the atmosphere is the combustion of coal for industrial uses. In contrast to PM10, particulate matter with a 2.5 micron diameter has a bigger contribution. The vast majority of industries have already made the transition to fuels that are less harmful to the environment (Reinventing Telangana, 2016). One of the primary contributors to particulate matter is the burning of open biomass, which can also take place in industrial boilers (Reinventing Telangana, 2016).

As a result of chemical processes, secondary pollutants cause particulate matter to form in the atmosphere. Cement: Construction activity contributes to particulate matter emissions in order to meet housing and infrastructure needs (Reinventing Telangana, 2016).

Ambient Air Quality Monitoring Program

Under the National Air Quality Monitoring Program (NAMP), State Ambient Air Quality Monitoring Program (SAAQM), and Continuous Ambient Air Quality Monitoring Station, the TSPCB has been monitoring ambient air quality (CAAQMS).

National Air Quality Monitoring Programme (NAMP):

"Under the NAMP Program, the State Board monitors ambient air quality at 22 locations throughout Telangana. PM 10, SO 2, NOx, CO, Ammonia, Heavy Metals, and other parameters are measured. The GHMC is home to eight of the 22 stations" (Socio Economic Outlook, 2015).

State Ambient Air Quality Monitoring Programme (SAAQM):

In addition to "NAMP stations, the Telangana Board monitors ambient air quality at 16 stations. In the GHMC area, 12 of the 16 stations are operational".

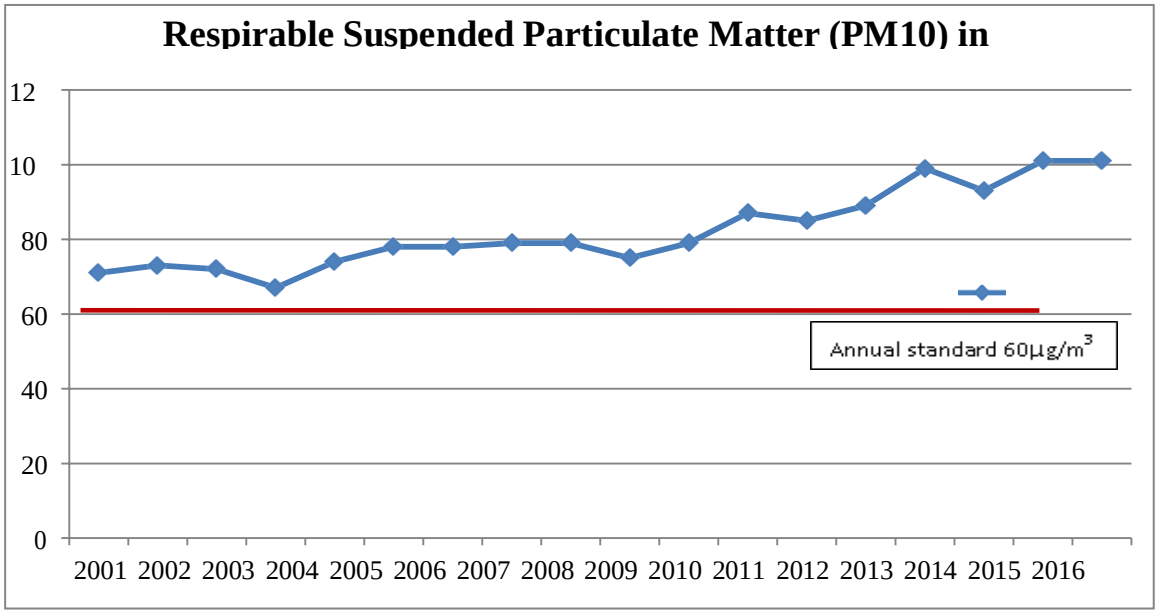
Continuous Ambient Air Quality Monitoring Station (CAAQMS):

At six "CAAQMS sites, the TSPCB monitors ambient air quality: (1) Sanathnagar, Head Office (2) HCU (3) Zoo Park (4) Pashamylaram IDA (5) Bollaram IDA and (6) ICRISAT. Analyzers for NO 2, SO 2, NH 3, PM 10, PM 2.5, O 3, BTX, CO, and meteorological parameters have been installed in the CAAQMS. These CAAQMS stations generate real-time data, which is then shared via the PCB and TSPCB websites" (Socio Economic Outlook, 2015).

Ambient Air Quality Trends

PM10: The trends in Ambient Air Quality with respect to particulate Matter of Size less than 10µm is given in the below Figure:

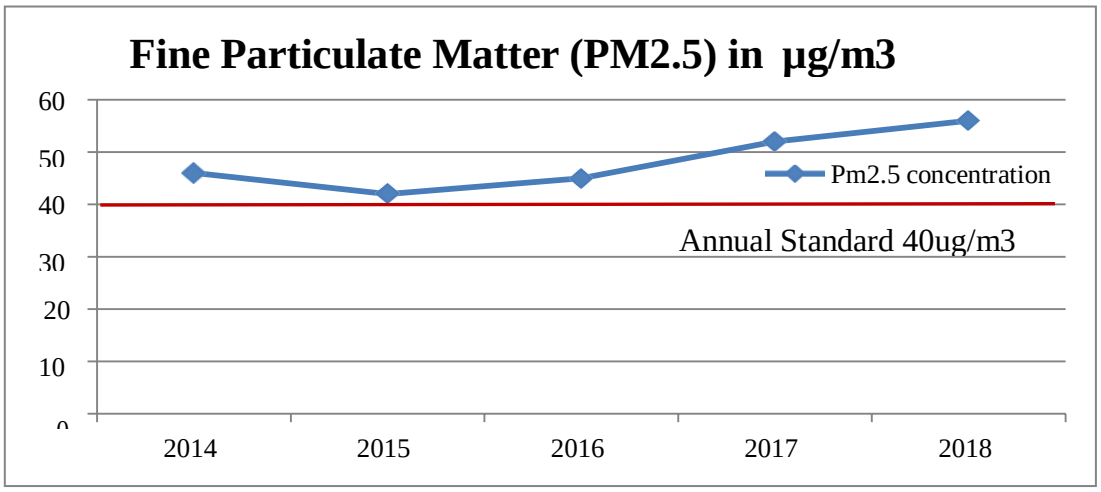
Figure: 3.3 Ambient Air Quality Trends in Hyderabad from 2001 to 2018 for RSPM



Source: Socio Economic Outlook, 2015

"PM2.5: In 2009, the CPCB released the New National Ambient Air Quality Criteria (NAAQS), which included criteria for PM2.5 particles. The TSPCB began measuring PM2.5 levels as a result. The trends in ambient air quality for particulate matter with a size less than 2.5m" are shown below.

Figure 3.4: Ambient Air Quality Trends in Hyderabad from 2014 to 2018 for FPM



Source: Socio Economic Outlook, 2015

There is a level of particulate matter in the air that exceeds the yearly National Ambient Air Quality Standards for both PM10 and PM2.5. The trend indicates that the concentrations of particulate matter are growing higher and higher each year. The number of vehicles on the road as well as the number of vehicle kilometres that are travelled each day are both growing at a rate that is faster with each passing year. Between the years of 2004 and 2010, the action plan that was put into place was effective in keeping the particulate matter concentrations stable. The number of vehicles on the road, the number of daily vehicle kilometres driven, and the amount of gasoline consumed have all increased, despite the fact that economic activity has increased. Since then, there has been a gradual rise in the amount of particulate matter in the air in each of the years beginning in 2011. (Socio Economic Outlook, 2015).

Table-3.3: The details of the Air Quality index during the years 2010 -2018

″A.	NAMP stations	2010	2011	2012	2013	2014	2015	2016	2017	2018
1	Balanagar	100	100	118	129	123	103	125	141	123
2	Uppal	89	97	106	90	99	88	96	112	110
3	Jubilee Hills	52	78	83	72	80	85	103	122	115
4	Paradise	82	99	93	84	113	109	119	115	107
5	Charminar	78	103	107	95	108	109	109	130	113
6	Jeedimetla	97	105	97	92	105	115	113	133	124
B.	SAMP stations	2010	2011	2012	2013	2014	2015	2016	2017	2018
1	Abids	97	98	99	81	103	92	100	99	102
2	KBRN Park	51	57	60	44	58	54	58	69	76
3	Langar House	102	99	103	103	91	151	84	96	100
4	Madhapur	74	47	82	88	66	50	74	83	92
5	MGBS	72	66	66	79	69	67	75	95	94
6	Chikkadapally	68	87	87	79	84	81	80	82	92
7	Kukatpally	90	100	111	125	109	115	86	102	114
8	Nacharam	85	86	85	74	94	*	87	97	102
9	Rajendranagar	38	35	43	42	33	41	67	64	65
10	Sainikpuri	59	72	85	108	92	108	80	87	77
11	BPPA	66	61	72	54	68	64	63	68	74
12	Shameerpet	51	59	68	74	79	70	73	73	68
C.	CAAQMS Stations	2010	2011	2012	2013	2014	2015	2016	2017	2018
1	Panjagutta	106	99	115	113	111	*	*	*	*
2	University of Hyd	*	*	*	*	71	76	87	95	92
3	Zoopark	61	60	68	73	73	105	131	130	118
4	Sanathnagar	98	115	124	73	*	90	97	111	104
5	Pashamylaram	*	*	*	*				105	113
6	Bollaram	*	*	*	*	*	*	*	122	109
7	ICRISAT	*	*	*	*	*	*	*	101	98"

Source: Reinventing Telangana, 2016

Air Quality Index: The TSPCB is preparing an air quality index for the Ambient Air Quality. On the TSPCB website, the CAAQMS AQI is updated on a regular basis, and the information for the Manual Stations is updated weekly. The AQI of Hyderabad was established in 2011 to better understand the patterns in air quality at each of the monitoring sites. Table-1 shows the AQI details, whereas Table-3 shows the monthly AQI for the year 2018.

Table: 3.4 Monthly Air Quality Index Values of Hyderabad city from Jan to Dec–2018

"Monthly Air Quality Index Values of Hyderabad city from Jan to Dec - 2018												
Location	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Hyderabad Zone - NAMP Stations												
Balanagar	141	129	127	127	121	107	90	97	123	132	136	148
Uppal	141	126	126	112	107	87	85	82	91	107	122	134
Jubilee Hills	129	124	124	104	116	109	100	101	106	106	135	123
Paradise	130	125	117	106	118	104	83	93	102	96	102	106
Charminar	145	128	117	102	101	106	91	97	111	123	111	129
Jeedimetla	135	141	128	126	126	97	83	105	125	129	154	136
SAAQM stations:												
Abids	126	122	112	99	105	98	90	91	85	100	94	106
KBRN Park	100	90	87	77	79	53	53	51	62	78	86	93
Langahouse	116	128	113	90	97	89	75	84	103	103	100	98
Madhapur	112	100	105	104	97	72	71	68	84	99	91	105
MGBS	102	107	110	89	83	73	75	86	98	100	100	105
Chikkadapally	99	99	96	99	90	81	76	82	94	95	88	108
Kukatpally	144	131	127	120	111	100	83	78	97	125	123	126
Nacharam	115	106	123	113	114	107	88	84	90	101	91	98
Rajedranagar	61	56	60	55	60	48	46	64	72	86	73	93
Sainikpuri	90	85	68	69	74	74	67	71	78	54	99	90
BPPA	88	78	86	62	74	67	53	60	75	77	74	90
Shameerpet	63	75	66	65	57	55	69	68	70	71	83	73
CAAQMS stations:												
HCU	146	106	107	93	93	56	42	41	73	111	112	129
Sanathnagar	229	125	122	83	69	45	33	33	60	86	163	202
Zoopark	217	123	115	97	89	50	44	48	94	157	165	216
Pashamylaram	171	105	105	85	86	68	80	100	100	131	156	173
Bollaram	156	118	129	109	107	80	66	75	93	127	111	136
ICRISAT	152	110	109	89	91	54	43	45	75	121	138	151 "

Source: Reinventing Telangana, 2016

The National Ambient Air Quality Standards (NAAQS) establishes statutory limits of 50 g/m3 (annual SO2) and 40 g/m3 (annual NOx) for ambient air quality in Hyderabad (annual standard for NOx). Hyderabad's PM10 and PM2.5 levels are both below the national standard (NAAQS) of 60 g/m3 and 40 g/m3, respectively (annual Standard). Source According to studies, automobile pollution is the leading source of PM10 and PM2.5. Telangana's government has taken steps to improve traffic

management, infrastructure like as elevated expressways, the Outer Ring Road, flyovers, and road widening, as well as promote alternative fuels and comply with Bharat Stage-IV requirements. The metro system will transport 15 lakh people, alleviating traffic congestion on the roads (Socio Economic Outlook, 2015).

Table: 3.5 AQI Colour Index & Health Effects

"GOOD (0 – 50)	Minimal Impact
SATISFACTORY (51– 100)	Minor Breathing Discomfort to Sensitive People
MODERATE (101 – 200)	Breathing discomfort to with Lung & Heart Disease,children and Old adults
POOR (201 – 300)	Breathing discomfort to People on Prolonged Exposure
VERY POOR (301 – 400)	Respiratory Illness to People on Prolonged Exposure
SEVERE > 400	Respiratory Effects on Healthy people"

Source: Reinventing Telangana, 2016

The AQI colour index and its impacts on one's health are covered in the table that can be found above. 0 to 50 is considered to be good because it has minimal effects, 51 to 100 is considered to be satisfactory because it causes minor breathing discomfort to sensitive people, 101 to 200 is considered to be "moderate because it causes breathing discomfort to people with lung and heart disease, children, and the elderly", 201 to 200 is considered to be poor because it causes breathing discomfort to people who have been exposed for a long time, and 301 to 400 is considered to be very poor because it causes breathing discomfort to people who have been exposed for a long time

Role of State to control air pollution

The city of Hyderabad is experiencing an increase in air pollution. Traditional air quality monitoring and assessment is a time-consuming and confusing process for many individuals. GIS aids in the preparation of guides for various contaminants and their variations, which are presented in an easily accessible manner to the general audience. It becomes quite simple for decision-makers to determine which localities are impacted by which type of pollutant and to determine appropriate remedial steps.

Although we have no control over natural disruptions, we can strictly limit our interventions with natural processes to ensure that our actions have no known negative (short or long-term) consequences for our lives and the environment. We

should only release air pollutants into the atmosphere to the extent that they have the least amount of harmful environmental impact as possible. This is the most basic way of thinking about air pollution prevention and control, and it should serve as the foundation for any pollution-control approach.

The strategies should focus on how much development can be supported by the environment, as well as appropriate technologies, designs, and pollution control methods (Socio Economic Outlook, 2015). Air pollution is now largely seen as a serious threat to our quality of life, if not our very survival. As a result, there have been more requests for a suitable pollution control policy to be developed and implemented. As seen by the various pollution control measures now in place, the Indian government is well aware of this.

Statutory Regulations:

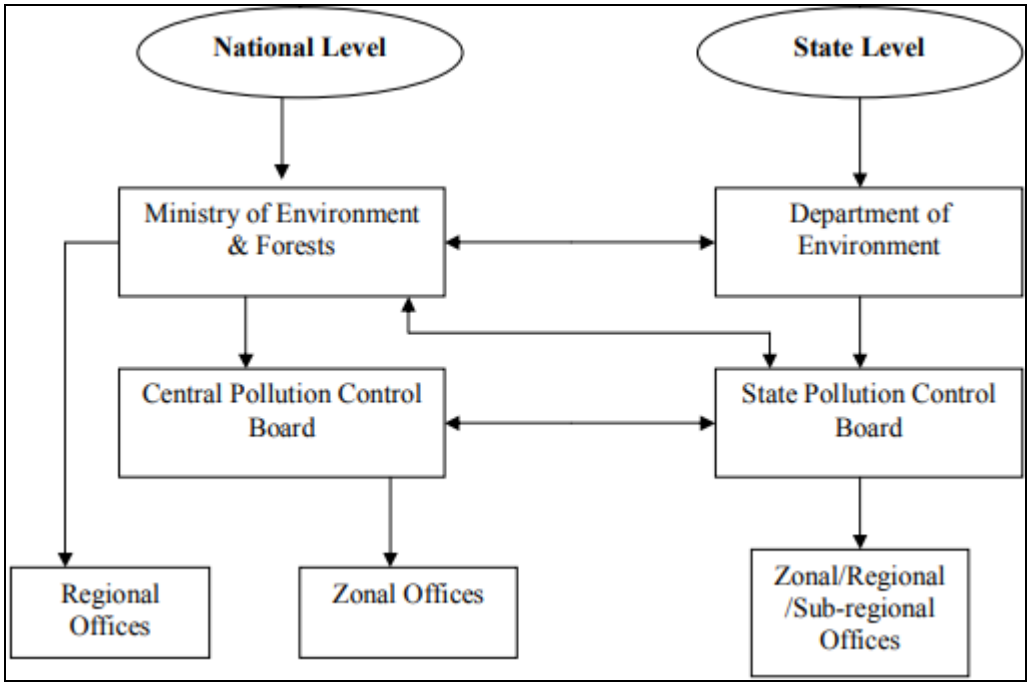
India is the first country in the world to include a clause in its constitution to ensure the protection of the environment. Every Indian citizen is required to protect and improve the natural environment, as well as the natural environment itself, by the constitution of India, which mandates that the government must take measures to maintain and improve the environment. " The Water (Prevention and Control of Pollution) Act, which was enacted as a result of the United Nations Conference in Stockholm in 1972, became the first specific guidelines for the national control of environmental pollution" in the year 1974. These guidelines were established as a result of the Water (Prevention and Control of Pollution) Act. Since then, India's laws governing the environment have made significant strides forward. In the states, there are around 200 legislation that deal with issues pertaining to health, pollution, and the environment at the present time (Socio Economic Outlook, 2015).

Administrative Structure for Environmental Protection:

A federal-level central government and state-level or provincial-level state governments make up India's administrative system. In various areas, the Indian constitution explicitly states the mandates and administrative controls at the national and state levels. The federal and state governments work closely together to ensure that government operations run smoothly and that numerous laws and acts are

implemented. Collaboration between the federal and state governments is advantageous in terms of pollution control (Socio Economic Outlook, 2015). The figure below depicts the administrative structure of India's environmental protection.

FIGURE-3.5: Figure showing Administrative Structure for Environment Protection



"The Ministry of Environment and Forests (MoEF) is the nodal body for planning, promotion, and coordination of environmental and forestry activities in the Central Government's administrative framework. Environmental National and State Level; Ministry of Environment and Forests, Department of Environment, Central Pollution Control Board, State Pollution Control Board, Zonal Offices, Zonal/Regional/Sub-regional Offices, Zonal/Regional/Sub-regional Offices, Zonal/Regional/Sub-regional Offices, Zonal/Regional/Sub-regional Offices, Zonal/Regional/Sub-regional Offices, Zonal/Regional/Sub-regional Offices, Z Impact assessment by Regional Offices; eco-regeneration; assistance to organisations implementing environmental protection programmes; promotion of research, training, and education; international cooperation; dissemination of environmental information; and creation of environmental awareness among all sectors of the population" (Reinventing Telangana, 2016). Environmental departments at the state level perform comparative functions in their individual states.

Under the requirements of the "Water (Prevention and Control of Pollution) Act, 1974, the Central Pollution Control Board (CPCB) was established at the federal level in 1974. Following that, the CPCB was tasked with enforcing various laws of the Air (Prevention and Control of Pollution) Act of 1981 and the Environment (Protection) Act of 1986. (Socio Economic Outlook, 2015). The CPCB is the main agency at the Central level for pollution control planning and execution, as well as developing ambient environment and source-specific emission and effluent discharge regulations at the national level. It is an autonomous body wholly funded by the MoEF. The CPCB's mandates include: (I) advising the Central Government on pollution control matters; (ii) collecting, collating, and disseminating information on pollution and pollution prevention and control measures; (iii) formulating ambient and source specific standards; (iv) co-ordinating the activities of State Pollution Control Boards; (v) sponsoring investigations and research; (vi) organising training and awareness projects; and (vii) planning and causing to be carried out a Nation (Reinventing Telangana, 2016). State Pollution Control Boards (SPCBs) were established at the state level with the primary task of granting consent or a permit to operate a business subject to specific evaluation and emission restrictions. Aside from that, SPCBs serve the same tasks at the state level as CPCBs do at the national level".

Strategy:

In India, there are three techniques to pollution control: "(I) dealing with pollutants, (ii) managing pollution at the source, and (iii) dealing with polluted areas. The use of a combination of these measures is a good way to safeguard the environment" (Reinventing Telangana, 2016).

Tackling of the pollutants:

This is done to cut down on the amount of pollution produced. Waste minimization strategies include process improvements, the use of clean/low waste technology, energy and natural resource conservation, trash recycling, and the recovery of valuable items from waste. Examples of direct pollution reduction include coal beneficiation, lowering the amount of lead in motor oil, reducing the amount of sulphur in diesel, and using cleaner fuel in industrial processes. Another example is lowering the amount of sulphur in diesel. This methodology has had a significant amount of impact on the policies and programmes undertaken by the Indian

government, most notably in the realm of environmental audits and the promotion of cleaner technology (Reinventing Telangana, 2016).

The approach described above, in which various strategies and projects for the prevention and control of air pollution are planned out and put into action, has unquestionably proven successful in terms of either enhancing the quality of the air or possibly preventing its further degradation. However, there is still a significant distance to travel, and in order to accomplish the goal of a cleaner environment, it will be necessary to have the ongoing commitment of pollution control agencies, the commitment of polluters, and the cooperation of the people (Reinventing Telangana, 2016).

Implemented adaptation interventions for Transportation Sector

The Telangana State Road Transport Corporation (TSRTC) is going to be the organisation that puts out and evaluates new recommendations for improving fuel efficiency that were produced in conjunction with the World Bank. Biodiesel is used in the Telangana State Road Transport Corporation's fleet. Transport vehicles that have been registered for more than 15 years are subject to a green tax. The Hyderabad Metrorail project is being constructed as an underground transit system to ensure the project's financial viability and to lower the city's overall carbon footprint. It's a basic public transportation system, but it's being used to help Hyderabad become a more environmentally conscious city. The elevated stations are being built with the environment in mind. Use of alternative fuels (replacing diesel with LPG in auto rickshaws, cars).

Interventions and Strategies for Industries to control air pollution

Implement "cleaner production practises" throughout all sectors of industry while working closely with the Central and State Pollution Control Boards to reduce waste as much as possible. Determine the degree to which large industrial cities are vulnerable to climate-related threat maps. To lessen the hazards to industrial centres, work on protection, disaster mitigation, and adaptation (Reinventing Telangana, 2016). Reduce the environmental impact of industrial and mining activities, especially GHG emissions. Develop varied and scattered companies, particularly small and medium-scale agro-processing operations, in order to assist farmers in maintaining

their means of subsistence. In order to avoid corrosive mine drainage, extensive research into biological metal extraction methods from mine crown jewels is being conducted. Air pollution mitigation and prevention measures for open-pit mining operations. For the impacted population, resettlement and rehabilitation efforts are being pursued. Initiatives for large-scale compensatory afforestation to offset biodiversity loss in the forest (Socio Economic Outlook, 2015).

Telanganaku Haritha Haram

One of the primary objectives of the Telangana State Government's programme is to increase the proportion of the state's total land area that is covered by trees from the current level of 24 percent to 33 percent. It is anticipated that this objective will be accomplished through the utilisation of a multi-faceted strategy that will involve the revitalization of degraded forests, the enhancement of forest protection against smuggling, encroachment, fire, and grazing, and the implementation of stringent soil and moisture conservation techniques based on the watershed method. In addition to the aforementioned, significant support is being provided to Social Forestry in the form of a significant boost for massive plantation activities that are taking place outside of Forest areas. These activities include planting trees on "multi-column road-side avenues, river and waterway banks, barren slopes, tank bunds and foreshore areas, institutional premises, religious places, housing colonies, local area abandoned lands, and so on" (2016, Reinventing Telangana). The greening operations will engage all parties. The essential policy, legal, and administrative reforms would be well-supported by this methodology. Over the following three years, the state expects to plant 230 million seedlings as part of this programme. A total of 130 million seedlings will be planted in areas of the state that are not designated as forest zones. Of this number, 10 million will be planted within HMDA borders, and the remaining 120 million will be planted in the remainder of the state. It is also claimed that by improving forest protection and increasing the use of live rootstock, 100 million plants might be regenerated within the designated forests (Socio Economic Outlook, 2015). In addition to improving the amount of green cover and biological diversity, maintaining ecological balance, promoting sustainable lifestyles, ensuring adequate rainfall, and cutting carbon dioxide emissions by about 10 million tonnes.

Swacch – Bharat Mission

It was started by the national government in order to maintain the cleanliness of the country. The primary goals of the mission are to put an end to the practise of manual scavenging and open defecation; to implement a contemporary and scientific approach to the management of municipal solid waste; and to alter people's mentalities regarding the importance of proper sanitation. Promoting cleanliness and highlighting its importance to public health should go hand in hand with strengthening the capabilities of ULBs.

Smart Cities Mission

The Smart Cities Mission's methodology is "to promote cities that provide fundamental infrastructure and provide a fair quality of life for their residents, as well as a clean and sustainable environment and the use of 'Smart' solutions (Reinventing Telangana, 2016). The emphasis is on sustainable and equitable development, with the goal of examining compact regions and developing a repeatable model that will serve as a light for other ambitious communities. The government's Smart Cities Mission is a bold new effort (Socio Economic Outlook, 2015). Its goal is to create comparative Smart Cities in different locations and parts of the country by setting examples that can be emulated both within and outside the Smart City. Appropriate water supply, assured electricity supply, sanitation, including solid waste management, efficient urban versatility and public transportation, affordable housing, particularly for the poor, robust IT connectivity and digitalization, good governance, particularly e-Government and citizen participation, sustainable environment, safety and security of citizens, particularly women, children, and the elderly, are all core infrastructure elements in a smart city".

Hyderabad City-specific Interventions

Although there were activities against industry in Hyderabad, the majority of the interventions were directed at the transportation sector. Sulphur levels in diesel were reduced to 0.5 percent in 1996 and 0.25 percent in 2000, motorcycles were required to run on pre-mixed 2T oil in 1999, and polluting enterprises were prosecuted in 2000. (2016, Reinventing Telangana). Apart from prohibiting the registration of three-wheelers, the government's top goals in 2001 and 2002 were road

development and maintenance, as well as better traffic planning and management (Socio Economic Outlook, 2015). It is important to undertake research over a longer period of time to investigate the connections between pollution loads and disease patterns, as well as climate change and disease patterns. These are the ones in question. Enhance efforts to detect disease outbreaks and establish early warning systems. The monitoring of an individual's health is often referred to as the "surveillance" of that individual's health. Education of the general public regarding the avoidance of diseases that are caused by pollution and are connected to climate change Research is still being conducted on the creation of low-cost vaccines, particularly for illnesses that are transmitted by vectors.

Develop rapid response capabilities to deal with climate-related hazards like sun exposure and prolonged dry seasons, as well as green parks and highways. Increase the percentage of people who use public transportation in their overall transportation mix. Increase the number of low-emission/fuel-efficient automobiles on the road, as well as vehicles with a spike in alternative-fuel demand. Non-motorized modes of transportation, such as walking and cycling, should be encouraged. Road networks should be constructed or altered to ensure that traffic flows smoothly. Private and public means of transportation should be interconnected to limit the use of private transportation (Reinventing Telangana, 2016).

Better municipal waste management and drainage systems are among the key concerns of stakeholders. Defend against vector-borne diseases, develop a more effective public transit system, etc. Subsidies for public transit and electric vehicles, as well as the disposal of old cars, are also being promoted. The proceeds from the green tax will be utilised to grow trees. Promoting the 3Rs principle (Reduce, Recycle, and Reuse), Miniature irrigation, drip irrigation, and other systems are becoming more successful. For the removal and handling of industrial waste, a better regulatory framework is needed. The establishment of a more effective public transportation system. The use of plastic is being minimised. Vehicle sales should be limited, and cleaner vehicle fuels should be encouraged (Reinventing Telangana, 2016).

There are a few important concerns for the industry's management. Strict pollution controls, effective manufacturing waste management, and a prohibition on the use of ozone-depleting chemicals in industries are all on the board. Implementing energy and material optimization techniques, zoning and setting industries appropriately, promoting plastic alternatives, promoting zero discharge and environmentally balanced industrial complexes (EBIC), implementing energy-efficient technologies, promoting small and medium-scale industries, promoting non-conventional energy use, implementing reduce-recycle-reuse based manufacturing units, and implementing integrated (Reinventing Telangana, 2016). "Promoting public transportation and its use, promoting electric vehicles through subsidies, providing dedicated cycle lanes, switching public transportation to lower carbon fuels like CNG, LPG, and electricity, promoting bio diesel blending, phasing out old vehicles from the road, and discouraging inefficient vehicles through carbon taxes are some of the key concerns for transportation management. Other key concerns include providing dedicated cycle lanes, switching public transportation to lower carbon fuels like CNG, LPG, and electricity, and switching public transportation to lower carbon fuel" (Reinventing Telangana, 2016).

Socio-Economic and Political Profile of Respondents of the study

Before going to discuss the perceptions of respondents on globalisation, environment and health let me give respondents socio- economic and political profile of the field study. First 1 to 11(3.6 - 3.16) tables give frequencies, percentage and cumulative percent of the respondents and next 12 to 21 (3.17- 3.28) tables explain that area wise respondents percentage with their profile and afterwards, respondents views are explained on globalisation, environment and health.

Table-3.6: Area of Study

Area	Frequency	Percent	Valid Percent	Cumulative Percent
Jidimetla& Bala nagar	50	20.0	20.0	20.0
Museerabad (Bolak pur)	50	20.0	20.0	40.0
Ambarpet	50	20.0	20.0	60.0
Charminar (Karwan& katedan)	50	20.0	20.0	80.0
Panjagutta	50	20.0	20.0	100.0
Total	250	100.0	100.0	

Source: Data collected from Field study"

The above table explains the selected field areas in Hyderabad city. Total numbers of areas are 5 altogether, namely Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan and Katedan in Charminar and Panjagutta. 50 respondents are taken from each selected area for the purpose of the study and all together 250 respondents. Jidimetla and Balanagar areas are highly exposed to chemical factories, animal skin processing units are concentrated in Bolak Pur area of Museerabad and also note making point is Bolak Pur area is highly exposed to water contamination. Amberpet area is exposed to contamination of water and solid waste and it is located by the side of Musi River. General oil processing and dead animal oil processing units are concentrated in Karwan and Katedan of Charminar, its located in the old city area. Panjagutta is located in the center of the city it's highly exposed to traffic pollution.

Table-3.7: Age profile of Respondents

Age	Frequency	Percent	Valid Percent	Cumulative Percent
15-25	7	2.8	2.8	2.8
25-35	34	13.6	13.6	16.4
35- 45	58	23.2	23.2	39.6
45- 55	45	18.0	18.0	57.6
55- 65	69	27.6	27.6	85.2
> 65	37	14.8	14.8	100.0
Total	250	100.0	100.0	

Source: Data collected from Field study

The ages of the people who participated in the study are broken down in the table that can be found above. There were a total of 250 people who participated in the survey; 2.8 percent of respondents were in the age bracket ranging from 15 to 25 years old, 13.6 percent of respondents were in the age bracket ranging from 26 to 35 years old, 23.6 percent of respondents were in the age bracket ranging from 35 to 45 years old, 18 percent of respondents were in the age bracket ranging from 46 to 55 years old, 27.6 percent of respondents were in the age bracket ranging from 56 to 65 years old, and 14.8 percent The age group between 35 and 45 had the next highest percentage of respondents after the 55-65 year old demographic, which was highly represented in the study. The age group between 15 and 25 years old has the lowest percentage of people in it.

Table-3.8: Gender profile of Respondents

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	180	72.0	72.0	72.0
Female	70	28.0	28.0	100.0
Total	250	100.0	100.0	

Source: Data collected from Field study

The gender distribution of study respondents is broken down in the table that can be found above. There are a total of 250 people who participated in the survey, with men accounting for 72 percent of the respondents and women contributing 28 percent. The percentage of male respondents is significantly higher than that of female respondents.

Table-3.9: Religion profile of Respondents

Religion	Frequency	Percent	Valid Percent	Cumulative Percent
Hindu	125	50.0	50.0	50.0
Muslim	52	20.8	20.8	70.8
Christian	59	23.6	23.6	94.4
Others	14	5.6	5.6	100.0
Total	250	100.0	100.0	

Source: Data collected from Field study

The following table provides an explanation of the religious profile of those who participated in the study. There are a total of 250 people who responded, with Hindu respondents accounting for 50 percent of the total and Muslim respondents making up 20.8 percent, Christians are 23.6 percent and 5.6 percent are others who are other than above religious background, few of them are following Buddhism and reaming are not following any religion. Most of the respondents are Hindus.

Table-3.10: Caste profile of Respondents

Caste	Frequency	Percent	Valid Percent	Cumulative Percent
SC	70	28.0	28.0	28.0
ST	20	8.0	8.0	36.0
BC	90	36.0	36.0	72.0
OC	70	28.0	28.0	100.0
Total	250	100.0	100.0	

Source: Data collected from Field study

The Caste profile of respondents to the study is broken down in the table that can be found above. There were a total of 250 people who participated in the survey; 28 percent of those participants came from the SC category, 8 percent of those participants came from the ST category, 36 percent of those participants came from the BC category, and 28 percent of those participants came from the OC category. The proportion of people who responded that they were in the BC category is the highest of any other category; the SC and OC categories tied for second place with 28 percent. The STs in descending order according to the number of respondents they received are the fewest.

Table-3.11: Education profile of Respondents

Education	Frequency	Percent	Valid Percent	Cumulative Percent
Illiterate	19	7.6	7.6	7.6
Primary to Secondary	52	20.8	20.8	28.4
Inter to Degree	90	36.0	36.0	64.4
PG and Above	89	35.6	35.6	100.0
Total	250	100.0	100.0	

Source: Data collected from Field study

The respondents' educational backgrounds are broken down in the table that can be found above. The total number of respondents is 250, 7.6 percent of respondents are illiterate, 20.8 percent of respondents have completed elementary school or secondary school, and 36 percent of respondents have completed some level of postsecondary education. 35.6% of respondents have completed at least one PG or above level of education. Respondents who had completed their secondary education or higher are overrepresented in the study. The percentage of respondents who had completed their postsecondary education or higher was 35.6%. The percentage of illiterate people makes up the smallest part of all the respondents.

Table-3.12: Occupation profile of Respondents

Occupation	Frequency	Percent	Valid Percent	Cumulative Percent
laborer	20	8.0	8.0	8.0
driver	50	20.0	20.0	28.0
employee	52	20.8	20.8	48.8
Home maker	40	16.0	16.0	64.8
Academician	12	4.8	4.8	69.6
Activist	18	7.2	7.2	76.8
student	8	3.2	3.2	80.0
Bureaucrats	50	20.0	20.0	100.0
Total	250	100.0	100.0	

Source: Data collected from Field study

The occupational profile of responders is shown in the table above. There are 250 total responders, with 8% being labourers, 20% being drivers, 20.8 percent being employees, 16% being homemakers, 4.8 percent being academicians, 7.2 percent being activists, 3.2 percent being students, and 20% being bureaucrats. Employees are the most common occupation among respondents, while students make up the smallest fraction of the overall number of respondents.

Table-3.13: Annual income profile of Respondents

Annual income	Frequency	Percent	Valid Percent	Cumulative Percent
50000 - 75000	20	8.0	8.0	8.0
75000 - 100000	46	18.4	18.4	26.4
100000 - 150000	69	27.6	27.6	54.0
>150000	115	46.0	46.0	100.0
Total	250	100.0	100.0	

Source: Field study

The data presented in the table above illustrates the average annual income of the respondents. There were a total of 250 people who participated in the survey, and 8% of them have an annual income that ranges from 50,000 to 75,000, 18.4percent of respondents are earning 75000 - 100000, 16 percent of respondents are Home makers, 4.8 percent of respondents are Academicians, 27.6 percent of respondents are having annual income between 100000 - 150000, 46 percent of respondents are earning above 150000. High percent of respondents are earning above 150000 and 8 percent of respondents are earning between 50000 – 75000 in least percentage in the total percentage of the respondents.

Table-3.14: Respondents affiliation to any Civil Society Organization

affiliated to any Civil Society Organization	Frequency	Percent	Valid Percent	Cumulative Percent
YES	147	58.8	58.8	58.8
NO	103	41.2	41.2	100.0
Total	250	100.0	100.0	

Source: Data collected from Field study

The above table depicts s information of affiliations to civil Society organisations of the of respondents. Total numbers of respondents are 250 altogether, 58.8 percent of respondents are having affiliations to civil society organisations and 41.2 percent expressed that they don’t have any affiliation to any organisations

Table-3.15: Respondents who follow day to day politics

follow day to day politics	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	222	88.8	88.8	88.8
No	28	11.2	11.2	100.0
Total	250	100.0	100.0	

Source: Field study

The table that can be found above provides an explanation of the respondents' level of awareness regarding day-to-day politics. There were a total of 250 people who answered the survey, and 88.8 percent of those people follow day-to-day politics and they are aware of their surrounding and active in their roles but 11.2 percent of respondents are not following day to today politics and they expressed that they are not interested in politics and other things except their work and family matters.

Table-3.16: Political affiliations of Respondents

Political affiliations	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	80	32.0	32.0	32.0
No	170	68.0	68.0	100.0
Total	250	100.0	100.0	

Source: Data collected from Field study

The respondents' political leanings are outlined in the table that can be found above. There were a total of 250 people who filled out the survey, and 32 percent of those people identified themselves as belonging to a political party and these people are aware of their surrounding and active in politics but 68 percent of respondents are not having any political affiliations and they expressed that they are not at all interested in politics and affiliations to political parties. 80 members of the respondents said that they have political affiliations and 170 members of respondents are expressed that they don't have any political affiliations.

Table-3.17: Area wise Age profile of Respondents

Area	Age of the respondents						Total
	15-25	25-35	35- 45	45- 55	55- 65	> 65	
Jidimetla& Bala nagar	2	5	11	12	12	8	50
	4.0%	10.0%	22.0%	24.0%	24.0%	16.0%	100.0%
Museerabad (Bolak pur)	1	7	14	9	13	6	50
	2.0%	14.0%	28.0%	18.0%	26.0%	12.0%	100.0%
Ambarpet	3	10	11	9	12	5	50
	6.0%	20.0%	22.0%	18.0%	24.0%	10.0%	100.0%
Charminar (Karwan& katedan)	0	8	10	6	17	9	50
	.0%	16.0%	20.0%	12.0%	34.0%	18.0%	100.0%
Panjagutta	1	4	12	9	15	9	50
	2.0%	8.0%	24.0%	18.0%	30.0%	18.0%	100.0%
Total	7	34	58	45	69	37	250
	2.8%	13.6%	23.2%	18.0%	27.6%	14.8%	100.0%

Source: Data collected from Field study

The age distribution of respondents is broken down by region and presented in the table above. Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan and Katedan in Charminar and Panjagutta bring the total number of neighbourhoods in Charminar and Panjagutta to five. There were a total of 250 people who participated in the survey; 2.8 percent of respondents were in the age bracket ranging from 15 to 25 years old, 13.6 percent of respondents were in the age bracket ranging from 26 to 35 years old, 23.6 percent of respondents were in the age bracket ranging from 35 to 45 years old, 18 percent of respondents were in the age bracket ranging from 46 to 55 years old, 27.6 percent of respondents were in the age bracket ranging from 56 to 65 years old, and 14.8 percent The age group between 35 and 45 had the next highest percentage of respondents after the 55-65 year old demographic, which was highly represented in the study. The age group between 15 and 25 years old has the lowest percentage of people in it.

Table-3.18: Area wise Gender profile of Respondents

Area	Gender		Total
	Male	Female	
Jidimetla& Bala nagar	35	15	50
	70.0%	30.0%	100.0%
Museerabad (Bolak pur)	34	16	50
	68.0%	32.0%	100.0%
Ambarpet	37	13	50
	74.0%	26.0%	100.0%
Charminar (Karwan& katedan)	36	14	50
	72.0%	28.0%	100.0%
Panjagutta	38	12	50
	76.0%	24.0%	100.0%
Total	180	70	250
	72.0%	28.0%	100.0%

Source: Data collected from Field study

The gender distribution of respondents is broken down by region and presented in the table above. Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan and Katedan in Charminar and Panjagutta bring the total number of neighbourhoods in Charminar and Panjagutta to five. There was a total of 250 people that participated in the survey, with men accounting for 72 percent of the respondents and women contributing 28 percent. The percentage of male respondents is significantly larger than that of female respondents.

In each area, 50 people were polled. In Jidimetla and Balanagar, 70% of males and 30% of females were interviewed. In Amberpet, 74 percent of males and 26% of females were interviewed. In Museerabad's Bolak Pur, 68 percent of men and 32 percent of women were interviewed. In Karwan and Katedan in Charminar, 72 percent of males and 28 percent of females were interviewed. In Panjagutta, 76 percent of men and 24 percent of women were interviewed.

Table-3.19: Area wise Gender profile of Respondents

Area	Religion				Total
	Hindu	**Muslim**	**Christian**	**Others**	
Jidimetla& Bala nagar	26	10	11	3	50
	52.0%	20.0%	22.0%	6.0%	100.0%
Museerabad (Bolak pur)	25	10	13	2	50
	50.0%	20.0%	26.0%	4.0%	100.0%
Ambarpet	25	9	13	3	50
	50.0%	18.0%	26.0%	6.0%	100.0%
Charminar (Karwan& katedan)	24	11	11	4	50
	48.0%	22.0%	22.0%	8.0%	100.0%
Panjagutta	25	12	11	2	50
	50.0%	24.0%	22.0%	4.0%	100.0%
Total	125	52	59	14	250
	50.0%	20.8%	23.6%	5.6%	100.0%

Source: Data collected from Field study

The religious profile of respondents is broken down by region and presented in the table above. Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan and Katedan in Charminar and Panjagutta bring the total number of neighbourhoods in Charminar and Panjagutta to five. There was a total of 250 people who responded, with Hindu respondents accounting for 50 percent of the total and Muslim respondents accounting for 20.8 percent, Christians are 23.6 percent and 5.6 percent are others who are other than above religious background, few of them are following Buddhism and reaming are not following any religion. Most of the respondents are Hindus.

In each area 50 respondents were taken. 52 percent of Hindus, 30 percent of Muslims and 22 percent of Christians were interviewed within Jidimetla and Balanagar. 50 percent of Hindus, 18 percent of Muslims and 26 percent of Christians were interviewed within Amberpet. 50 percent of Hindus, 20 percent of Muslims and 26 percent of Christians were interviewed within in Bolak Pur in Museerabad. 48 percent of Hindus, 22 percent of Muslims and 22 percent of Christians were interviewed within in Karwan and Katedan in Charminar. 50 percent of Hindus, 24 percent of Muslims and 22 percent of Christians were interviewed within Panjagutta.

Table-3.20: Area wise Caste profile of Respondents

Area	Caste				Total
	SC	ST	BC	OC	
Jidimetla& Bala nagar	14	5	18	13	50
	28.0%	10.0%	36.0%	26.0%	100.0%
Museerabad (Bolak pur)	14	4	18	14	50
	28.0%	8.0%	36.0%	28.0%	100.0%
Ambarpet	14	4	18	14	50
	28.0%	8.0%	36.0%	28.0%	100.0%
Charminar (Karwan& katedan)	14	3	18	15	50
	28.0%	6.0%	36.0%	30.0%	100.0%
Panjagutta	14	4	18	14	50
	28.0%	8.0%	36.0%	28.0%	100.0%
Total	70	20	90	70	250
	28.0%	8.0%	36.0%	28.0%	100.0%

Source: Data collected from Field study

The religious profile of respondents is broken down by region and presented in the table above. Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan and Katedan in Charminar and Panjagutta bring the total number of neighbourhoods in Charminar and Panjagutta to five. There were a total of 250 people who participated in the survey; 28 percent of those participants came from the SC category, 8 percent of those participants came from the ST category, 36 percent of those participants came from the BC category, and 28 percent of those participants came from the OC category. The proportion of people who responded that they were in the BC category is the highest of any other category; the SC and OC categories tied for second place with 28 percent. The STs in descending order according to the number of respondents they received are the fewest.

In each area 50 respondents were taken. 28 percent of SC, 10 percent of ST, 36 percent of BC, 26 percent of OC were interviewed in Jidimetla and Balanagar. 28 percent of SC, 8 percent of ST, 36 percent of BC, 28 percent of OC were interviewed within in Bolak Pur in Museerabad. 28 percent of SC, 8 percent of ST, 36 percent of BC, 28 percent of OC were interviewed within Amberpet. 28 percent

of SC, 6 percent of ST, 36 percent of BC, 30 percent of OC were interviewed within Charminar. 28 percent of SC, 8 percent of ST, 36 percent of BC, 28 percent of OC were interviewed within Panjagutta.

Table-3.21: Area wise Education profile of Respondents

Area	Education				Total
	Illiterate	Primary to Secondary	Inter to Degree	PG and Above	
Jidimetla& Bala nagar	2	11	19	18	50
	4.0%	22.0%	38.0%	36.0%	100.0%
Museerabad (Bolak pur)	3	8	23	16	50
	6.0%	16.0%	46.0%	32.0%	100.0%
Ambarpet	4	12	14	20	50
	8.0%	24.0%	28.0%	40.0%	100.0%
Charminar (Karwan& katedan)	5	11	16	18	50
	10.0%	22.0%	32.0%	36.0%	100.0%
Panjagutta	5	10	18	17	50
	10.0%	20.0%	36.0%	34.0%	100.0%
Total	19	52	90	89	250
	7.6%	20.8%	36.0%	35.6%	100.0%

Source: Data collected from Field study

The educational profile of the respondents is broken down by region and presented in the table above. Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan and Katedan in Charminar and Panjagutta bring the total number of neighbourhoods in Charminar and Panjagutta to five. The total number of respondents is 250, 7.6 percent of respondents are illiterate, 20.8 percent of respondents have completed elementary school or secondary school, and 36 percent of respondents have completed some level of postsecondary education. 35.6% of respondents have completed at least one PG or above level of education. Respondents who had completed their secondary education or higher are overrepresented in the study. The percentage of respondents who had completed their postsecondary education or higher was 35.6%. The percentage of illiterate people makes up the smallest part of all the respondents.

Table-3.22: Area wise occupation profile of Respondents

Occupation	Area					Total
	Jidimetla& Bala nagar	Museerabad (Bolak pur)	Ambarpet	Charminar (Karwan& katedan)	Panjagutta	
laborer	3	3	6	4	4	20
	15.0%	15.0%	30.0%	20.0%	20.0%	100.0%
driver	10	10	8	11	11	50
	20.0%	20.0%	16.0%	22.0%	22.0%	100.0%
employee	11	9	12	9	11	52
	21.2%	17.3%	23.1%	17.3%	21.2%	100.0%
Home maker	9	8	9	8	6	40
	22.5%	20.0%	22.5%	20.0%	15.0%	100.0%
Academician	2	4	1	2	3	12
	16.7%	33.3%	8.3%	16.7%	25.0%	100.0%
Activist	3	4	3	4	4	18
	16.7%	22.2%	16.7%	22.2%	22.2%	100.0%
student	1	1	1	2	3	8
	12.5%	12.5%	12.5%	25.0%	37.5%	100.0%
Bureaucrats	11	11	10	10	8	50
	22.0%	22.0%	20.0%	20.0%	16.0%	100.0%
Total	50	50	50	50	50	250
	20.0%	20.0%	20.0%	20.0%	20.0%	100.0%

Source: Data collected from Field study

The table above illustrates the respondents' occupational profiles by area. Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan, and Katedan in Charminar and Panjagutta make up the total number of areas. There are 250 total responders, with 8% being labourers, 20% being drivers, 20.8 percent being employees, 16% being homemakers, 4.8 percent being academicians, 7.2 percent being activists, 3.2 percent being students, and 20% being bureaucrats. Employees are the most common occupation among respondents, while students make up the smallest fraction of the overall number of respondents.

Table-3.23: Area wise annual income profile of Respondents

Area	Annual Income				Total
	50000 - 75000	75000 - 100000	100000 - 150000	>150000	
Jidimetla& Bala nagar	4	9	12	25	50
	8.0%	18.0%	24.0%	50.0%	100.0%
Museerabad (Bolak pur)	2	10	15	23	50
	4.0%	20.0%	30.0%	46.0%	100.0%
Ambarpet	6	8	13	23	50
	12.0%	16.0%	26.0%	46.0%	100.0%
Charminar (Karwan& katedan)	4	9	14	23	50
	8.0%	18.0%	28.0%	46.0%	100.0%
Panjagutta	4	10	15	21	50
	8.0%	20.0%	30.0%	42.0%	100.0%
Total	20	46	69	115	250
	8.0%	18.4%	27.6%	46.0%	100.0%

Source: Data collected from Field study

The above table shows that annual income profile of respondents in area wise. Total numbers of areas are 5 altogether, namely Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan and Katedan in Charminar and Panjagutta. Total numbers of respondents are 250 altogether, 8 percent of respondents annual income is between 50000 – 75000, 18.4percent of respondents are earning 75000 - 100000, 16 percent of respondents are Home makers, 4.8 percent of respondents are Academicians, 27.6 percent of respondents are having annual income between 100000 - 150000, 46 percent of respondents are earning above 150000. High percent of respondents are earning above 150000 and 8 percent of respondents are earning between 50000 – 75000 in least percentage in the total percentage of the respondents.

Table-3.24: Area wise affiliations of respondents to any civil society organisations

Area	affiliated to any Civil Society Organization		Total
	YES	NO	
Jidimetla& Bala nagar	29	21	50
	58.0%	42.0%	100.0%
Museerabad (Bolak pur)	30	20	50
	60.0%	40.0%	100.0%
Ambarpet	29	21	50
	58.0%	42.0%	100.0%
Charminar (Karwan& katedan)	30	20	50
	60.0%	40.0%	100.0%
Panjagutta	29	21	50
	58.0%	42.0%	100.0%
Total	147	103	250
	58.8%	41.2%	100.0%

Source: Data collected from Field study

The above table explains that affiliations of respondents to any civil society organisations in area wise. Total numbers of areas are 5 altogether, namely Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan and Katedan in Charminar and Panjagutta. Total numbers of respondents are 250 altogether, 58.8 percent of respondents are having affiliations to civil society organisations and 41.2 percent expressed that they don't have any affiliation to any organisations.

In each area 50 respondents were taken. 58 percent of respondents are having affiliations to civil society organisations and 42 percent expressed that they don't have any affiliation to any organisations within Jidimetla and Balanagar. 60 percent of respondents are having affiliations to civil society organisations and 40 percent expressed that they don't have any affiliation to any organisations within in Bolak Pur in Museerabad. 58 percent of respondents are having affiliations to civil society organisations and 42 percent expressed that they don't have any affiliation to any organisations within Amberpet. 60 percent of respondents are having affiliations to civil society organisations and 40 percent expressed that they don't have any affiliation to any organisations within Charminar. 58 percent of respondents are having affiliations to civil society organisations and 42 percent expressed that they don't have any affiliation to any organisations within Panjagutta.

Table-3.25: Area wise profile of Respondents who follow day today politics

Area	follow day to day politics		Total
	Yes	No	
Jidimetla& Bala nagar	44	6	50
	88.0%	12.0%	100.0%
Museerabad (Bolak pur)	44	6	50
	88.0%	12.0%	100.0%
Ambarpet	44	6	50
	88.0%	12.0%	100.0%
Charminar (Karwan& katedan)	45	5	50
	90.0%	10.0%	100.0%
Panjagutta	45	5	50
	90.0%	10.0%	100.0%
Total	222	28	250
	88.8%	11.2%	100.0%

Source: Data collected from Field study

The above table depicts respondents' interest to follow day today politics in area wise. Total numbers of areas are 5 altogether, namely Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan and Katedan in Charminar and Panjagutta. Total numbers of respondents are 250 altogether, 88.8 percent of respondents are following day to today politics and they are aware of their surrounding and active in their roles but 11.2 percent of respondents are not following day to today politics and they expressed that they are not interested in politics and other things except their work and family matters.

In each area 50 respondents were taken. 88 percent of respondents are following day to today politics and they are aware of their surrounding and active in their roles but 12 percent of respondents are not following day to today politics and they expressed that they are not interested in politics within Jidimetla and Balanagar, Bolak Pur in Museerabad and Amberpet. 90 percent of respondents are following day to today politics and they are aware of their surrounding and active in their roles but 10 percent of respondents are not following day to today politics and they expressed that they are not interested in politics within Charminar and Panjagutta.

Table-3.26: Area wise profile of Respondents who have political affiliations

Area	political affiliations		Total
	Yes	No	
Jidimetla& Bala nagar	17	33	50
	34.0%	66.0%	100.0%
Museerabad (Bolak pur)	16	34	50
	32.0%	68.0%	100.0%
Ambarpet	15	35	50
	30.0%	70.0%	100.0%
Charminar (Karwan& katedan)	17	33	50
	34.0%	66.0%	100.0%
Panjagutta	15	35	50
	30.0%	70.0%	100.0%
Total	80	170	250
	32.0%	68.0%	100.0%

Source: Data collected from Field study

The above table depicts respondents' have political affiliations in area wise. Total numbers of areas are 5 altogether, namely Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan and Katedan in Charminar and Panjagutta. Total numbers of respondents are 250 altogether, 32 percent of respondents are having political affiliations and these people are aware of their surrounding and active in politics but 68 percent of respondents are not having any political affiliations and they expressed that they are not at all interested in politics and affiliations to political parties.

In each area 50 respondents were taken. 34 percent of respondents are having political affiliations and these people are aware of their surrounding and active in politics but 66 percent of respondents are not having any political affiliations and they expressed that they are not at all interested in politics and affiliations to political parties within Jidimetla and Charminar. 32 percent of respondents are having political affiliations and these people are aware of their surrounding and active in politics but 68 percent of respondents are not having any political affiliations and they expressed that they are not at all interested in politics and affiliations to political

parties within Balanagar, Bolak Pur in Museerabad. 30 percent of respondents are having political affiliations and these people are aware of their surrounding and active in politics but 70 percent of respondents are not having any political affiliations and they expressed that they are not at all interested in politics and affiliations to political parties within Amberpet and Panjagutta.

Globalisation and Development

Table-3.27: Area wise response on globalisation is important for the development

Area	globalization is important for the development			Total
	Accept	Not Accept	DK	
Jidimetla& Bala nagar	42	6	2	50
	84.0%	12.0%	4.0%	100.0%
Museerabad (Bolak pur)	43	5	2	50
	86.0%	10.0%	4.0%	100.0%
Ambarpet	40	5	5	50
	80.0%	10.0%	10.0%	100.0%
Charminar (Karwan& katedan)	42	8	0	50
	84.0%	16.0%	.0%	100.0%
Panjagutta	40	7	3	50
	80.0%	14.0%	6.0%	100.0%
Total	207	31	12	250
	82.8%	12.4%	4.8%	100.0%

Source: Data collected from Field study

The above table explains the respondent's views on globalisation is important for the development in area wise. Total numbers of areas are 5 altogether, namely Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan and Katedan in Charminar and Panjagutta. Total numbers of respondents are 250 altogether, 82 percent of respondents are accepted that globalisation is important for the development but only 12 percent of respondents said that globalisation is not a important factor for the development and further explained that globalisation is giving adverse effects on the overall development. 4.8 percent of respondents expressed that they don't know about it. 86 percent of bolakpur respondents said that globalisation is good for development.

Table-3.28: Gender wise response on globalisation is important for the development

Gender	**globalization is important for the development**			
	Accept	Not Accept	DK	**Total**
Male	151	21	8	180
	83.9%	11.7%	4.4%	100.0%
Female	56	10	4	70
	80.0%	14.3%	5.7%	100.0%
Total	207	31	12	250
	82.8%	12.4%	4.8%	100.0%

Source: Data collected from Field study

The following table provides an explanation of why gender-specific thoughts on globalisation are essential for the process of development. Only 12.4 percent of respondents said that globalisation is not an important factor for development and further explained that globalisation is giving adverse effects on the overall development. The total number of respondents came to 250 in total, and 82 percent of them agreed that globalisation is an important factor for the advancement of humankind. 4.8% of those who participated in the survey stated that they are unaware about it. The ratio of males who are accepted is higher than the ratio of females who are accepted.

Prabhakar Rao hails from Charminar area expressed that globalisation is good for their development because the impact of liberalisation and globalisation changed the human life and pushed him to the global village. after the libaralisation and globalisation even Indian economic conditions were also changed a lot. Rama Devi from Balanagar area said that women got the wings with the impact of globalisation before that society not allowed the women to go out and work. globalisation brought the economic freedom. Impact of Globalization' makes the case that the last 10 years of reforms have had a significantly more profound effect on India than the majority of people realise. being a women I can say that globalisation changed the life of women and gave an opportunity to involve in the development activities of the family and at job market.

Globalisation and it direct and indirect effects on Environment Globally

Table-3.29: Area wise response on globalisation effects on environment

Globalisation effects on environment	**Area**					**Total**
	Jidimetla& Bala nagar	Museerabad (Bolak pur)	Ambarpet	Charminar (Karwan& katedan)	Panjagutta	
CO2	2	2	3	4	2	13
	15.4%	15.4%	23.1%	30.8%	15.4%	100.0%
Smoke	2	2	2	1	1	8
	25.0%	25.0%	25.0%	12.5%	12.5%	100.0%
Rise in pollution level	18	18	17	17	16	86
	20.9%	20.9%	19.8%	19.8%	18.6%	100.0%
Depletion of Ozone Layer	2	2	2	2	3	11
	18.2%	18.2%	18.2%	18.2%	27.3%	100.0%
Deterioration of fields	1	1	1	1	1	5
	20.0%	20.0%	20.0%	20.0%	20.0%	100.0%
Chemical Sensitivity	1	1	1	1	1	5
	20.0%	20.0%	20.0%	20.0%	20.0%	100.0%
health problems	6	6	5	5	7	29
	20.7%	20.7%	17.2%	17.2%	24.1%	100.0%
above all	18	18	19	19	19	93
	19.4%	19.4%	20.4%	20.4%	20.4%	100.0%
Total	50	50	50	50	50	250
	20.0%	20.0%	20.0%	20.0%	20.0%	100.0%

Source: Data collected from Field study

The above table explains the respondent's views on globalisation and its direct and indirect effects on environment in are wise. Total numbers of areas are 5 altogether, namely Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan and Katedan in Charminar and Panjagutta. Total numbers of respondents are 250 altogether, overall 37 percent of respondents said that above all adverse affects on environment by the process of globalisation such as CO2, Smoke, Rise in pollution level, Depletion of Ozone Layer , Deterioration of fields, Chemical Sensitivity,

health problems. 34. 4 percent of all area respondents expressed that rise of pollution is more with compare to any other problems, further said that due to rise of pollution only all kinds of health problems are coming.

Table-3.30: Category wise response on globalisation effects on environment

Directly and indirectly effect on environment	Category				Total
	SC	ST	BC	OC	
CO2	6	0	3	4	13
	46.2%	.0%	23.1%	30.8%	100.0%
Smoke	0	3	5	0	8
	.0%	37.5%	62.5%	.0%	100.0%
Rise in pollution level	18	8	52	8	86
	20.9%	9.3%	60.5%	9.3%	100.0%
Depletion of Ozone Layer	11	0	0	0	11
	100.0%	.0%	.0%	.0%	100.0%
Deterioration of fields	5	0	0	0	5
	100.0%	.0%	.0%	.0%	100.0%
Chemical Sensitivity	1	0	0	4	5
	20.0%	.0%	.0%	80.0%	100.0%
health problems	7	6	13	3	29
	24.1%	20.7%	44.8%	10.3%	100.0%
above all	22	3	17	51	93
	23.7%	3.2%	18.3%	54.8%	100.0%
Total	70	20	90	70	250
	28.0%	8.0%	36.0%	28.0%	100.0%

Source: Data collected from Field study

The above table explains the caste wise reflections on globalisation and it direct and indirect effects on environment. Total numbers of respondents are 250 altogether, overall 37 percent of respondents of all caste groups said that above all adverse affects on environment by the process of globalisation such as CO2, Smoke, Rise in pollution level, Depletion of Ozone Layer, Deterioration of fields, Chemical Sensitivity, health problems. 34. 4 percent of all area respondents expressed that rise of pollution is more with compare to any other problems, further said that due to rise of pollution only all kinds of health problems are coming.

Globalization and it impact on the overall development of India

Table-3.31: Category wise response on globalisation gave positive impact on the development of India

Follow day to day politics	globalization gave positive impact on the overall development of India				Total
	Effectively	partially	not at all	D.K	
Yes	136	63	15	8	222
	61.3%	28.4%	6.8%	3.6%	100.0%
No	10	18	0	0	28
	35.7%	64.3%	.0%	.0%	100.0%
Total	146	81	15	8	250
	58.4%	32.4%	6.0%	3.2%	100.0%

Source: Data collected from Field study

The above table explains the respondents who follow day today politics and their perception on globalisation is important for the overall development of India. Total numbers of respondents are 250 altogether, 58.4 percent of respondents are accepted that globalisation is important for the development but 32.4 percent of respondents said that globalisation is partially gave positive impact on the development of India and 3.2 percent of the respondents, 6 percent of the respondents said that not at all gave positive impacts on the over development of India Moreover, 4.8 percent of respondents stated that they were unaware of the issue.

Overall, those who follow day to day politics 61.3 percent of the respondents expressed that globalization gave positive impact on the development of India. 28.4 percent of respondents said that partially gave positive impact on the development Moreover, 3.6 percent of those who were polled stated that they were unaware of the issue. Those individuals who do not keep up with current events in the political world. Even if they do not follow day-to-day politics, 35.7% of respondents believed that globalisation has a beneficial impact on the growth of India. 64.3 percent of respondents stated that giving a good impact on the development even partially was important to them.

Table-3.32: Area wise response on globalisation gave positive impact on the development of India

Area	globalization gave positive impact on the overall development of India				Total
	Effectively	partially	not at all	D.K	
Jidimetla& Bala nagar	29	16	3	2	50
	58.0%	32.0%	6.0%	4.0%	100.0%
Museerabad (Bolak pur)	29	16	3	2	50
	58.0%	32.0%	6.0%	4.0%	100.0%
Ambarpet	28	17	3	2	50
	56.0%	34.0%	6.0%	4.0%	100.0%
Charminar (Karwan& katedan)	30	16	3	1	50
	60.0%	32.0%	6.0%	2.0%	100.0%
Panjagutta	30	16	3	1	50
	60.0%	32.0%	6.0%	2.0%	100.0%
Total	146	81	15	8	250
	58.4%	32.4%	6.0%	3.2%	100.0%

Source: Data collected from Field study

The above table explains the area wise reflection of respondents on globalisation is important for the overall development of India. Total numbers of areas are 5 altogether, namely Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan and Katedan in Charminar and Panjagutta. Total numbers of respondents are 250 altogether, 58.4 percent of respondents of all areas are accepted that globalisation is important for the development but 32.4 percent of respondents said that globalisation is partially gave positive impact on the development of India 6 percent of the respondents said that not at all gave positive impacts on the over development of India and 3.2 percent of the respondents Additionally, 4.8 percent of respondents stated that they were ignorant of the issue.

Overall, 58 percent of Balanagar and Jidimetla respondents said globalisation had a beneficial impact on India's development. According to 32% of respondents, this had a slightly beneficial impact on development. 6 percent of respondents claimed it had no good impact on India's overall development, while 4 percent said they had no idea.

Overall, 58 percent of respondents in the Bolakpur district said that globalisation had a good impact on India's development. According to 32% of respondents, this had a slightly beneficial impact on development. 6 percent of respondents claimed it had no good impact on India's overall development, while 4 percent said they had no idea. Those who do not keep up with current events in politics are, on the whole, uninformed. Even though they do not follow current politics, 35.7 percent felt that globalisation had a beneficial impact on India's progress. 64.3 percent of respondents said it had a good impact on development in some way..

Table-3.33: Education wise response on globalisation gave positive impact on the development of India

Education	**globalization gave positive impact on the overall development of India**				**Total**
	Effectively	partially	not at all	D.K	
Illiterate	5	2	4	8	19
	26.3%	10.5%	21.1%	42.1%	100.0%
Primary to Secondary	12	36	4	0	52
	23.1%	69.2%	7.7%	.0%	100.0%
Inter to Degree	69	19	2	0	90
	76.7%	21.1%	2.2%	.0%	100.0%
PG and Above	60	24	5	0	89
	67.4%	27.0%	5.6%	.0%	100.0%
Total	146	81	15	8	250
	58.4%	32.4%	6.0%	3.2%	100.0%

Source: Data collected from Field study

The above table shows that educational perception of respondents on globalisation is important for the overall development of India. Total numbers of respondents are 250 altogether, 58.4 percent of respondents of all areas are accepted that globalisation is important for the development but 32.4 percent of respondents said that globalisation is partially gave positive impact on the development of India 6 percent of the respondents said that not at all gave positive impacts on the over

development of India in addition, 3.2 percent of those polled and 4.8 percent of those polled stated that they are unaware of it.

Overall, with in the respondents who accepted that effectively globalisation is impacting on the overall development of India 76.8 percent of respondents are from inter to degree level education are highly accepted among all other educational backgrounds.

Globalization and it impact on the Environment in India

Table-3.34: Area wise response on globalisation gave on globalisation gave adverse impact on the environment in India

Area of Study	globalization gave adverse impact on the environment in India			Total
	Yes	No	DK	
Jidimetla& Bala nagar	40	8	2	50
	80.0%	16.0%	4.0%	100.0%
Museerabad (Bolak pur)	38	10	2	50
	76.0%	20.0%	4.0%	100.0%
Ambarpet	41	6	3	50
	82.0%	12.0%	6.0%	100.0%
Charminar (Karwan& katedan)	38	10	2	50
	76.0%	20.0%	4.0%	100.0%
Panjagutta	40	8	2	50
	80.0%	16.0%	4.0%	100.0%
Total	197	42	11	250
	78.8%	16.8%	4.4%	100.0%

Source: Data collected from Field study

The above table explains the area wise reflection of respondents on globalisation gave adverse impact on the environment in India. Total numbers of areas are 5 altogether, namely Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan and Katedan in Charminar and Panjagutta. Total numbers of respondents are 250 altogether, Globalisation has had a negative influence on the environment in India, according to 78.8% of respondents from all areas, but 16.8% of respondents claimed it has had a negative impact on the environment in India, and 4.4

percent of respondents stated they don't know about it. Overall, with in the respondents who accepted that globalisation gave adverse impact on the environment in India 82 percent of respondents is from Amber pet area highly accepted among all other areas.

Overall, 80 percent of Balanagar and Jidimetla respondents said that globalisation had had a negative influence on India's ecology. 16 percent of respondents claimed that globalisation has a negative impact on the environment in India, while 4% said they didn't know. Overall, among the Bolakpur area respondents, In India, 76 percent of respondents said that globalisation had a negative influence on the environment. Twenty percent of respondents indicated that globalisation has a negative impact on the environment in India, while 4% said they were unaware of the issue. Overall, 82 percent of respondents in the Amberpet area said that globalisation had had a negative influence on the environment in India. 12 percent of respondents claimed that globalisation has a negative impact on the environment in India, while 6 percent said they were unaware of the issue. Overall, 76 percent of respondents in the Karwan and Katedan areas stated that globalisation had had a negative impact on India's ecology. Twenty percent of respondents indicated that globalisation has a negative impact on the environment in India, while 4% said they were unaware of the issue. Overall, 80 percent of Panjagutta respondents said that globalisation had a negative impact on India's ecology. 16 percent of respondents claimed that globalisation has a negative impact on the environment in India, while 4% said they didn't know.

Table-3.35: Gender wise response on globalisation gave on globalisation gave adverse impact on the environment in India

Gender	globalization gave adverse impact on the environment in India			Total
	Yes	No	DK	
Male	151	25	4	180
	83.9%	13.9%	2.2%	100.0%
Female	46	17	7	70
	65.7%	24.3%	10.0%	100.0%
Total	197	42	11	250
	78.8%	16.8%	4.4%	100.0%

Source: Data collected from Field study

The above table indicates how respondents felt about globalisation having a negative impact on the environment in India based on their gender. With a total of 250 responses, 78.8% of respondents across all areas agree that globalisation has had a negative influence on India's environment, although 16.8% disagree, and 4.4 percent don't know. In general, male respondents agreed that globalisation had a negative influence on the environment in India, whereas female respondents disagreed.

Overall, 83.9 percent of male respondents said that globalisation had a negative influence on the environment in India. Globalisation does not have a negative influence on the environment in India, according to 13.9 percent of respondents, and 2.2 percent do not know about it. Overall, 65.7 percent of female respondents said that globalisation had a negative influence on the environment in India. 24.3 percent of respondents responded that globalisation has had no negative influence on the environment in India, while 10% indicated they were unaware of the issue.

Table-3.36: Gender wise response on globalisation gave on globalisation gave adverse impact on the environment in India

Religion	globalization gave adverse impact on the environment in India			Total
	Yes	No	DK	
Hindu	99	23	3	125
	79.2%	18.4%	2.4%	100.0%
Muslim	39	12	1	52
	75.0%	23.1%	1.9%	100.0%
Christian	51	7	1	59
	86.4%	11.9%	1.7%	100.0%
Others	8	0	6	14
	57.1%	.0%	42.9%	100.0%
Total	197	42	11	250
	78.8%	16.8%	4.4%	100.0%

Source: Data collected from Field study

The above table shows how respondents felt about globalisation having a negative impact on the environment in India based on their faith. With a total of 250 responses, 78.8% of respondents across all areas agree that globalisation has had a negative influence on India's environment, although 16.8% disagree, and 4.4 percent don't know. In comparison to other religious responders, Christians and Hindus agreed that globalisation had a negative influence on the environment in India.

Overall, 79.2 percent of Hindu respondents said globalisation had a negative impact on India's environment. 18.4 percent of respondents responded that globalisation has had no negative influence on the environment in India, while 2.4 percent indicated they were unaware of the issue. Overall, 75% of Muslim respondents said that globalisation had a negative impact on India's environment. 23.1 percent of respondents responded that globalisation has had no negative influence on the environment in India, while 1.9 percent indicated they were unaware. Overall, 57.1 percent of other respondents, such as Buddhists and those who do not follow the region, agreed that globalisation has had a negative influence on the environment in India, while 42.9 percent claimed they are unaware of it.

Environment pollution and health

Table-3.37: Area wise response on environment pollution is mortifying our health conditions

Area	environment pollution is mortifying our health conditions			Total
	Agree	Not Agree	DK	
Jidimetla& Bala nagar	43	5	2	50
	86.0%	10.0%	4.0%	100.0%
Museerabad (Bolak pur)	44	5	1	50
	88.0%	10.0%	2.0%	100.0%
Ambarpet	42	6	2	50
	84.0%	12.0%	4.0%	100.0%
Charminar (Karwan& katedan)	42	6	2	50
	84.0%	12.0%	4.0%	100.0%
Panjagutta	41	7	2	50
	82.0%	14.0%	4.0%	100.0%
Total	212	29	9	250
	84.8%	11.6%	3.6%	100.0%

Source: Data collected from Field study

The above table shows the area wise reflection of respondents on environment pollution is mortifying our health conditions. Total numbers of areas are 5 altogether, namely Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan and Katedan in Charminar and Panjagutta. Total numbers of respondents are 250 altogether, 84.8 percent of respondents of all areas are agreed that environment pollution is mortifying our health conditions but 11.6 percent of respondents said that environment pollution is not mortifying our health conditions and 3.6 percent of the respondents expressed that they don't know about it. Overall, with in the respondents who agreed that environment pollution is mortifying our health conditions.88 percent of respondents are from Bolakpur area highly accepted among all other areas. Overall, with in the respondents who don't agree that environment pollution is mortifying our health conditions. 14 percent of respondents are from Panjagutta area highly not agrees among all other areas.

Overall, 86 percent of respondents in Balanagar and Jidimetla agreed that environmental pollution is mortifying our health conditions, however 10% of respondents stated it is not mortifying our health conditions, and 4% of respondents said they don't know about it. Overall, 88 percent of respondents in the Bolakpur area agreed that environmental pollution is mortifying our health conditions, however 10% of respondents stated it is not mortifying our health conditions, and 2% of respondents said they don't know about it. Overall, 84 percent of respondents in the Amberpet area think that environmental pollution is mortifying our health problems, whereas 12 percent disagree and 4% don't know.

Overall, 84 percent of respondents in the Karwan and Katedan areas agreed that environmental pollution is mortifying our health conditions, whereas 12 percent of respondents stated it is not mortifying our health conditions, and 4% of respondents said they don't know about it. Overall, 82 percent of respondents in the Panjagutta area agreed that environmental pollution is mortifying our health conditions, but 14 percent stated it is not mortifying our health conditions, and 4 percent said they don't know about it.

Table-3.38: Education wise response on environment pollution is mortifying our health conditions

Education	environment pollution is mortifying our health conditions			Total
	Agree	Not Agree	DK	
Illiterate	19	0	0	19
	100.0%	.0%	.0%	100.0%
Primary to Secondary	52	0	0	52
	100.0%	.0%	.0%	100.0%
Inter to Degree	72	13	5	90
	80.0%	14.4%	5.6%	100.0%
PG and Above	69	16	4	89
	77.5%	18.0%	4.5%	100.0%
Total	212	29	9	250
	84.8%	11.6%	3.6%	100.0%

Source: Field study

The table that you can see above displays the respondents' educational perspectives on how environmental pollution is deteriorating our health situations. There were a total of 250 people who participated in the survey, and 84.8 percent of respondents across all areas agreed that environmental pollution is negatively impacting our health. On the other hand, 11.6 percent of respondents stated that environmental pollution does not negatively impact our health, and 3.6 percent of respondents stated that they were unaware of the topic.

Overall, 100 percent of respondents are from illiterate and primary to secondary level educated highly accepted among all other education background. Overall, with in the respondents who don't agree that environment pollution is mortifying our health conditions. 18 percent of respondents are from PG and above level educated do not agree among all other education background. Interesting point is that illiterates and primary to secondary level educated respondents 100 accepted that environment pollution is mortifying our health conditions.

Table-3.39: Respondent's affiliations to any civil society organizations reflections on environment pollution are mortifying our health conditions

affiliated to any Civil Society Organization	environment pollution is mortifying our health conditions			Total
	Agree	Not Agree	DK	
YES	116	22	9	147
	78.9%	15.0%	6.1%	100.0%
NO	96	7	0	103
	93.2%	6.8%	.0%	100.0%
Total	212	29	9	250
	84.8%	11.6%	3.6%	100.0%

Source: Field study Data

The above table explains respondent's affiliations to any civil society organizations reflections on environment pollution are mortifying our health conditions. Total numbers of respondents are 250 altogether, 84.8 percent of respondents of all areas are agreed that environment pollution is mortifying our health conditions but 11.6 percent of respondents said that environment pollution is not mortifying our health conditions and 3.6 percent of the respondents expressed that they don't know about it. Overall, with in the respondents who agreed that environment pollution is mortifying our health conditions 93.2 percent of respondents are from no affiliations to any civil society organizations. Overall, with in the respondents who don't agree that environment pollution is mortifying our health conditions. 15 percent of respondents are from affiliations to any civil society organizations.

Overall, with in the respondents of affiliations to any civil society organizations. The majority of respondents (78.9 percent) believe that pollution in the environment is having a negative impact on people's health. On the other hand, some respondents (15 percent) believe that pollution in the environment does not have a negative impact on people's health, and 6.1 percent of respondents said that they were unaware of the topic. Overall, with in the respondents of no affiliations to any civil society organizations. 93.2 percent of respondents are agreed that environment

pollution is mortifying our health conditions but 6.8 percent of respondents not agree that environment pollution is not mortifying our health conditions.

Table-3.40: Reflections of respondents who follow day today politics on environment pollution are mortifying our health conditions

follow day to day politics	environment pollution is mortifying our health conditions			Total
	Agree	Not Agree	DK	
Yes	206	7	9	222
	92.8%	3.2%	4.1%	100.0%
No	6	22	0	28
	21.4%	78.6%	.0%	100.0%
Total	212	29	9	250
	84.8%	11.6%	3.6%	100.0%

Source: Field study Data

The table that can be found above displays the responses of respondents who keep up with current politics on environment pollution are mortifying our health conditions. Total numbers of respondents are 250 altogether, 84.8 percent of respondents of all types are agreed that environment pollution is mortifying our health conditions but 11.6 percent of respondents said that environment pollution is not mortifying our health conditions and 3.6 percent of those who participated in the survey stated that they were unaware of it. Overall, with in the respondents who agreed that environment pollution is mortifying our health conditions 92.8 percent of respondents are from who follow day today politics. Overall, with in the respondents who don't agree that environment pollution is mortifying our health conditions 78 percent of respondents are from who do not follow day today politics.

Overall, with in the respondents of who follow day today politics 92.8 percent of respondents agreed that environmental pollution is making our health conditions worse, while 3.2 percent of respondents disagreed and said that environmental pollution is not making our health conditions worse, and 4.1 percent of respondents said they were unaware of the problem. Overall, with in the respondents of who do not follow day today politics 21.4 percent of respondents are agreed that environment

pollution is mortifying our health conditions but 78.6 percent of respondents not agree that environment pollution is not mortifying our health conditions.

Table-3.41: Age wise reflections on type of environment pollution are giving adverse effects on health

Age	what type of environment pollution is giving adverse effects on Health				Total
	Air pollution	Water pollution	Noise pollution	Solid waste pollution	
15-25	0	5	2	0	7
	.0%	71.4%	28.6%	.0%	100.0%
25-35	19	15	0	0	34
	55.9%	44.1%	.0%	.0%	100.0%
35- 45	33	11	10	4	58
	56.9%	19.0%	17.2%	6.9%	100.0%
45- 55	25	7	2	11	45
	55.6%	15.6%	4.4%	24.4%	100.0%
55- 65	46	8	5	10	69
	66.7%	11.6%	7.2%	14.5%	100.0%
> 65	18	8	1	10	37
	48.6%	21.6%	2.7%	27.0%	100.0%
Total	141	54	20	35	250
	56.4%	21.6%	8.0%	14.0%	100.0%

Source: Field study Data

The age-specific perspectives of respondents on the types of environmental pollution that are having a negative impact on health are presented in the table that is located above. There were a total of 250 people who responded to the survey, 56.4 percent of respondents said that air pollution is giving adverse effects on health. 21.6 percent of respondents expressed that water pollution is giving adverse effects on health, 8 percent of respondents opinioned that noise pollution is giving adverse effects on health and 14 percent of respondents said that solid waste pollution is giving adverse effects on health. Overall irrespective of all age groups accepted that air pollution is giving adverse effects on health with compare to other pollutions. Overall, with in the age group of 15-25 agreed that water and noise pollutions are giving adverse effects on health.

Table-3.42: Gender wise reflections on type of environment pollution are giving adverse effects on health

Gender	what type of environment pollution is giving adverse effects on Health				Total
	Air pollution	Water pollution	Noise pollution	Solid waste pollution	
Male	98	36	20	26	180
	54.4%	20.0%	11.1%	14.4%	100.0%
Female	43	18	0	9	70
	61.4%	25.7%	.0%	12.9%	100.0%
Total	141	54	20	35	250
	56.4%	21.6%	8.0%	14.0%	100.0%

Source: Field study Data

The preceding table illustrates how respondents, broken down by gender, reflected on the many types of environmental pollution that are having a negative impact on their health. There were a total of 250 people who responded to the survey, 56.4 percent of respondents said that air pollution is giving adverse effects on health. 21.6 percent of respondents expressed that water pollution is giving adverse effects on health, 8 percent of respondents said that noise pollution is giving adverse effects on health and 14 percent of respondents said that solid waste pollution is giving adverse effects on health. Overall irrespective of their gender agreed that air pollution is giving adverse effects on health with compare to other pollutions. Female respondents are highly agreed that air pollution is giving adverse effects on health with compare to male.

Overall, with in the male respondents 54.4 percent of respondents are agreed that air pollution is giving adverse effects on health. 20 percent of respondents said that water pollution is giving adverse effects on health, 11 percent of respondents expressed that noise pollution is giving adverse effects on health and 14.4 percent of respondents opined that solid waste pollution is giving adverse effects on health. Overall, with in the female respondents 61.4 percent of respondents are agreed that air

pollution is giving adverse effects on health. 25.7 percent of respondents said that water pollution is giving adverse effects on health, and 12.9 percent of respondents opined that solid waste pollution is giving adverse effects on health.

Table-3.43: Category wise reflections on type of environment pollution are giving adverse effects on health

Category	what type of environment pollution is giving adverse effects on Health				Total
	Air pollution	Water pollution	Noise pollution	Solid waste pollution	
SC	47	13	0	10	70
	67.1%	18.6%	.0%	14.3%	100.0%
ST	13	5	0	2	20
	65.0%	25.0%	.0%	10.0%	100.0%
BC	57	13	10	10	90
	63.3%	14.4%	11.1%	11.1%	100.0%
OC	24	23	10	13	70
	34.3%	32.9%	14.3%	18.6%	100.0%
Total	141	54	20	35	250
	56.4%	21.6%	8.0%	14.0%	100.0%

Source: Field study Data

The following table presents the responses of survey participants, broken down by caste, about the sort of environmental pollution that is having a negative impact on health. There were a total of 250 people who responded to the survey, 56.4 percent of respondents expressed that air pollution is giving adverse effects on health. 21.6 percent of respondents said that water pollution is giving adverse effects on health, 8 percent of respondents said that noise pollution is giving adverse effects on health and 14 percent of respondents said that solid waste pollution is giving adverse effects on health. Overall irrespective of their caste agreed that air pollution is giving adverse effects on health with compare to other pollutions. SC respondents are highly agreed that air pollution is giving adverse effects on health with compare to other caste groups.

Overall, with in the SC respondents 67.1 percent of respondents are said that air pollution is giving adverse effects on health. 18.6 percent of respondents opined

that water pollution is giving adverse effects on health and 14.3 percent of respondents opined that solid waste pollution is giving adverse effects on health. Overall, with in the ST respondents 63.3 percent of respondents are expressed that air pollution is giving adverse effects on health. 25 percent of respondents opined that water pollution is giving adverse effects on health and 10 percent of respondents opined that solid waste pollution is giving adverse effects on health. Overall, with in the BC respondents 65 percent of respondents are said that air pollution is giving adverse effects on health. 14.4 percent of respondents said they agreed that water pollution has a negative impact on health; 11.1 percent said they agreed that noise pollution has a negative impact on health; and 11.1 percent said solid waste pollution has a negative impact on health. Overall, with in the OC respondents 34.3 percent of respondents are said that air pollution is giving adverse effects on health. 32.9 percent of respondents expressed that water pollution is giving adverse effects on health, 14.3 percent of respondents agreed that noise pollution is giving adverse effects on health and 18.6 percent of respondents expressed that solid waste pollution is giving adverse effects on health.

Conclusion

According to the chapter, the city of Hyderabad is seeing a surge in urbanisation and motorization, both of which have contributed to an increase in human health and environmental concerns. The increasing levels of pollution made it necessary to put into place effective measures to combat air pollution, particularly PM, which is currently connected to a greater incidence of death and morbidity in Indian cities as a direct result of air pollution.

The following are some of the significant findings of the investigation: 1. In the last five years, ambient PM10 levels have risen considerably due to the city's demographic, transportation, and industrial growth2. Emissions caused by the operation of motor vehicles are the primary contributors to the city's growing particulate matter pollution problems (direct vehicular exhaust and indirect fugitive residue). 3. The emissions of diesel-powered vehicles, such as passenger cars and trucks, are becoming increasingly dangerous. 4. Despite being separated into huge pockets, the city as a whole is experiencing an increase in the long-distance transmission of effluent gases and particles from its various industrial sources. Both

the burning of coal and the usage of diesel in generating units can be decreased, which will result in a lower overall emission level. 5. The particulate matter 10 made up the majority of the road dust emissions. 6. The incineration of waste is a major contributor to the formation of fine particulate matter in residential areas, landfills, and along roadways.

A mix of initiatives for improved air quality management in Hyderabad was proposed based on these findings. Overall, the transportation sector has the greatest potential for improving air quality and lowering greenhouse gas emissions and particulate matter emissions. In IES, the details of the action plan are outlined, as well as an analysis of the potential benefits of numerous actions in the transportation, industrial, and waste management sectors.

It is suggested in numerous surveys and studies that air pollutants are the reason to develop a disease of airway inflammation and aggravate respiratorily and causing different diseases. To ensure for avoiding such unsafe effects due to air pollution, the state should follow some recommendation, for example, to follow PPE, increase the rate of Plantation and trees and to install Air Pollution Control Devices (APCD) scrubbers systems to controls the air pollution with in standards limits.

This chapter also explained about respondent views on globalisation environment and health and also the profile of respondents and field study. Total numbers of areas are 5 altogether, namely Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan and Katedan in Charminar and Panjagutta. 50 respondents are taken from each selected area for the purpose of the study and all together 250 respondents. Jidimetla and Balanagar areas are highly exposed to chemical factories, animal skin processing units are concentrated in Bolak Pur area of Museerabad and also note making point is Bolak Pur area is highly exposed to water contamination. Amberpet area is exposed to contamination of water and solid waste and it is located by the side of Musi River. General oil processing and dead animal oil processing units are concentrated in Karwan and Katedan of Charminar, its located in the old city area. Panjagutta is located in the center of the city it’s highly exposed to traffic pollution.

58.8 percent of respondents are having affiliations to civil society organisations and 41.2 percent expressed that they don't have any affiliation to any organisations. 88.8 percent of respondents are following day to today politics and they are aware of their surrounding and active in their roles but 11.2 percent of respondents are not following day to today politics and they expressed that they are not interested in politics and other things except their work and family matters. 32 percent of respondents are having political affiliations and these people are aware of their surrounding and active in politics but 68 percent of respondents are not having any political affiliations and they expressed that they are not at all interested in politics and affiliations to political parties.

82 percent of respondents are accepted that globalisation is important for the development but only 12 percent of respondents said that globalisation is not a important factor for the development and further explained that globalisation is giving adverse effects on the overall development. 4.8 percent of respondents expressed that they don't know about it. 86 percent of bolakpur respondents said that globalisation is good for development. overall 37 percent of respondents of all caste groups said that above all adverse affects on environment by the process of globalisation such as CO2, Smoke, Rise in pollution level, Depletion of Ozone Layer, Deterioration of fields, Chemical Sensitivity, health problems. 34. 4 percent of all area respondents expressed that rise of pollution is more with compare to any other problems, further said that due to rise of pollution only all kinds of health problems are coming.

58.4 percent of respondents are accepted that globalisation is important for the development but 32.4 percent of respondents said that globalisation is partially gave positive impact on the development of India and 3.2 percent of the respondents, 6 percent of the respondents said that not at all gave positive impacts on the over development of India and 4.8 percent of respondents expressed that they don't know about it. 58.4 percent of respondents of all areas are accepted that globalisation is important for the development but 32.4 percent of respondents said that globalisation is partially gave positive impact on the development of India 6 percent of the respondents said that not at all gave positive impacts on the over development of India and 3.2 percent of the respondents.

On the other hand, 16.8 percent of respondents stated that globalisation has had a negative influence on the environment in India, and 4.4 percent of respondents stated that they are unaware of what globalisation has done to the environment in India. In all, 78.8 percent of those surveyed from all different parts of India felt that globalisation had a negative effect on the country's natural resources and ecosystems. When compared to respondents of other religions, Christians and Hindus were more likely to agree that globalisation had a negative influence on the environment in India. 84.8 percent of respondents from all areas agreed that pollution in the environment is making our health conditions worse. However, 11.6 percent of respondents said that pollution in the environment is not making our health conditions worse, and 3.6 percent of respondents said that they don't know about it. Overall, with in the respondents who agreed that environment pollution is mortifying our health conditions.88 percent of respondents are from Bolakpur area highly accepted among all other areas. Overall, with in the respondents who don't agree that environment pollution is mortifying our health conditions. 14 percent of respondents are from Panjagutta area highly not agrees among all other areas.

84.8 percent of respondents of all areas are agreed that environment pollution is mortifying our health conditions but 11.6 percent of respondents said that environment pollution is not mortifying our health conditions and 3.6 percent of the respondents expressed that they don't know about it. Overall, with in the respondents who agreed that environment pollution is mortifying our health conditions 93.2 percent of respondents are from no affiliations to any civil society organizations. Overall, with in the respondents who don't agree that environment pollution is mortifying our health conditions. 15 percent of respondents are from affiliations to any civil society organizations. 56.4 percent of respondents said that air pollution is giving adverse effects on health. 21.6 percent of respondents expressed that water pollution is giving adverse effects on health, 8 percent of respondents opinioned that noise pollution is giving adverse effects on health and 14 percent of respondents said that solid waste pollution is giving adverse effects on health. Overall irrespective of all age groups accepted that air pollution is giving adverse effects on health with compare to other pollutions. Overall, with in the age group of 15-25 agreed that water and noise pollutions are giving adverse effects on health. 56.4 percent of respondents said that air pollution is giving adverse effects on health. 21.6 percent of respondents

expressed that water pollution is giving adverse effects on health, 8 percent of respondents said that noise pollution is giving adverse effects on health and 14 percent of respondents said that solid waste pollution is giving adverse effects on health. Overall irrespective of their gender agreed that air pollution is giving adverse effects on health with compare to other pollutions. Female respondents are highly agreed that air pollution is giving adverse effects on health with compare to male.

Chapter -IV

People perception on Air Pollution and Health risks

It has been demonstrated that exposure to high levels of air pollution can have a negative impact on a person's health. This is a serious concern in the contemporary, civilised world. The operation of motor vehicles and industrial activities are responsible for the majority of the world's pollution problems, despite the fact that there are a wide diversity of sources of emission. Particle pollution, ground-level ozone, carbon monoxide, sulphur oxides, nitrogen oxides, and lead are the six primary air pollutants, as outlined by the World Health Organization (WHO"). Long-term and short-term toxicological repercussions of air dispersed toxicants on people include, but are not limited to, concerns with the respiratory and cardiovascular systems, problems with the neuropsychiatric system, irritation of the eyes and skin, and chronic diseases such as cancer.

According to the findings of a number of studies, poor air quality is directly linked to an increase in the number of deaths as well as illnesses that are related to the cardiovascular system and the respiratory system. Air pollution is a key environmental risk factor that has been linked to a variety of ailments, including" asthma, pulmonary cellular breakdown, ventricular hypertrophy, Alzheimer's disease, psychological difficulties, foetal development, and low birth weight". The present chapter is intended to explain the people’s perception on air pollution and sources of air pollution. It discusses short term and long term health risks faced by the people and also focuses on hospital or clinical implications in selected areas of Hyderabad city.

Understanding air pollution

Table-4.1: Gender wise reflections on understanding of air pollution

Gender	7 million deaths are caused due to air pollution		Total
	yes	no	
Male	174	6	180
	96.7%	3.3%	100.0%
Female	56	14	70
	80.0%	20.0%	100.0%
Total	230	20	250
	92.0%	8.0%	100.0%

Source: Data collected from Field study

The above table explains the gender wise reflection of respondents on understanding of air pollution. Total numbers of respondents are 250 altogether, 92 percent of respondents irrespective of their gender accepted that deaths are caused due to air pollution but 8 percent of respondents not accept that deaths are caused due to air pollution only and other implications may be there. Overall, male respondents accepted that deaths are caused due to air pollution with compare to female respondents.

Overall, with in the male respondents 96.7 percent of respondents accepted that deaths are caused due to air pollution and 3.3 percent of respondents not accept that deaths are caused due to air pollution. Overall, with in the female respondents 80 percent of respondents accepted that deaths are caused due to air pollution and 20 percent of respondents not accept that deaths are caused due to air pollution.

Rajasekharam from Ameerpet expressed that he is aware of the air pollution and he knew that 7 million deaths were caused by air pollution and further he said that he regularly watches news in TV and aware of all the updates from news. Saradambha from karwan said that air pollution is a most dangerous pollution among other pollutions and it is seriously leading for the dealths of old and infant babies.

Table-4.2: Education wise reflections on understanding of air pollution

Education	7 million deaths are caused due to air pollution		Total
	yes	no	
Illiterate	19	0	19
	100.0%	.0%	100.0%
Primary to Secondary	51	1	52
	98.1%	1.9%	100.0%
Inter to Degree	81	9	90
	90.0%	10.0%	100.0%
PG and Above	79	10	89
	88.8%	11.2%	100.0%
Total	230	20	250
	92.0%	8.0%	100.0%

Source: Data collected from Field study

The above table depicts the education wise reflection of respondents on understanding of air pollution. Total numbers of respondents are 250 altogether, 92 percent of respondents irrespective of their educational background accepted that deaths are caused due to air pollution but 8 percent of respondents not accept that deaths are caused due to air pollution only. Overall, illiterates 100 percent accepted that deaths are caused due to air pollution with compare to other educational levels of respondents.

Overall, with in the primary and secondary educational background of respondents 98.1percent accepted that deaths are caused due to air pollution and 1.9 percent of respondents not accept that deaths are caused due to air pollution only. Overall, with in the PG and above educational background of respondents 88.8 percent accepted that deaths are caused due to air pollution and 11.2 percent of respondents not accept that deaths are caused due to air pollution only.

Table-4.3: Category wise reflections on understanding of air pollution

Category	7 million deaths are caused due to air pollution		Total
	yes	no	
SC	66	4	70
	94.3%	5.7%	100.0%
ST	18	2	20
	90.0%	10.0%	100.0%
BC	82	8	90
	91.1%	8.9%	100.0%
OC	64	6	70
	91.4%	8.6%	100.0%
Total	230	20	250
	92.0%	8.0%	100.0%

Source: Data collected from Field study

The above table explains the category wise reflection of respondents on understanding of air pollution. Total numbers of respondents are 250 altogether, 92 percent of respondents accepted that deaths are caused due to air pollution but 8 percent of respondents not accept that deaths are caused due to air pollution only. Overall, SC respondents highly accepted that deaths are caused due to air pollution with compare to other caste groups of respondents.

Overall, with in the SC respondents 94.3 percent accepted that deaths are caused due to air pollution and 5.7 percent of respondents not accept that deaths are caused due to air pollution only. Overall, with in the ST respondents 90 percent accepted that deaths are caused due to air pollution and 10 percent of respondents not accept that deaths are caused due to air pollution only. Overall, with in the BC respondents 91.4 percent accepted that deaths are caused due to air pollution and 8.9 percent of respondents not accept that deaths are caused due to air pollution only. Overall, with in the BC respondents 91.1 percent accepted that deaths are caused due to air pollution and 8.6 percent of respondents not accept that deaths are caused due to air pollution only.

Table-4.4: Gender wise reflections on top 5 air polluted cities in India

Gender	top 5 air polluted cities in India					Total
	Delhi	Hyderabad	Mumbai	Kolkata	Chennai	
Male	86	57	17	11	9	180
	47.8%	31.7%	9.4%	6.1%	5.0%	100.0%
Female	33	33	0	0	4	70
	47.1%	47.1%	.0%	.0%	5.7%	100.0%
Total	119	90	17	11	13	250
	47.6%	36.0%	6.8%	4.4%	5.2%	100.0%

Source: Data collected from Field study

The table above shows how respondents felt about the top 5 most polluted cities in India based on their gender. There were 250 total replies, and 47.6% of all respondents, regardless of gender, agreed that Delhi was the best of the five cities. Hyderabad is ranked second among five cities by 36 percent of respondents, regardless of their gender. 6.8% of respondents, regardless of gender, agreed that Mumbai is in third rank out of five cities. Chennai is ranked fourth among five cities by 5.2 percent of respondents, regardless of gender, and Kolkata is ranked fifth among five cities by 4.4 percent of respondents, regardless of gender. Overall, 47.8 percent of male respondents said that Delhi is the best of the five cities. Hyderabad is ranked second among five cities by 31.7 percent of respondents. Mumbai is ranked third among five cities, according to 9.4% of respondents. 6.1 percent of respondents agreed that Kolkata is in fourth position out of five cities, and 5% of respondents agreed that Chennai is in fifth place out of five cities, regardless of gender. Overall, 47.1 percent of female respondents agreed that Delhi is the best of the five cities. 47.1 percent of respondents said Hyderabad is in second position out of five cities, and 5.7 percent said Chennai is in third place out of five cities.

Table-4.5: Gender wise reflections who follow day today politics on top 5 air polluted cities in India

follow day to day politics	top 5 air polluted cities in India					Total
	Delhi	Hyderabad	Mumbai	Kolkata	Chennai	
Yes	101	80	17	11	13	222
	45.5%	36.0%	7.7%	5.0%	5.9%	100.0%
No	18	10	0	0	0	28
	64.3%	35.7%	.0%	.0%	.0%	100.0%
Total	119	90	17	11	13	250
	47.6%	36.0%	6.8%	4.4%	5.2%	100.0%

Source: Data collected from Field study

The table above depicts the views of respondents who follow day-to-day politics on India's top 5 most polluted cities. There were 250 total responders, and 47.6% of them agreed that Delhi was the best of the five cities. Hyderabad is ranked second among five cities by 36 percent of respondents. Mumbai is ranked third among five cities, according to 6.8% of respondents. Chennai is ranked fourth among five cities, according to 5.2 percent of respondents, and Kolkata is ranked fifth among five cities, according to 4.4 percent of respondents.

Overall, 47.5 percent of respondents who follow day-to-day politics believe Delhi is in first place among five cities, while 36 percent believe Hyderabad is in second place among five cities. Mumbai is ranked third among five cities, according to 7.7% of respondents. Chennai has a 5.7 percent acceptance rate. Kolkata is ranked fourth out of five cities, with 5% of respondents agreeing that it is the fifth most populous city. Overall, 64.3 percent of respondents who don't follow current news politics believe Delhi is the best of the five cities, while 35.7 percent believe Hyderabad is the best of the five cities.

Table-4.6: Education wise reflections on top 5 air polluted cities in India

Education	top 5 air polluted cities in India					Total
	Delhi	Hyderabad	Mumbai	Kolkata	Chennai	
Illiterate	16	3	0	0	0	19
	84.2%	15.8%	.0%	.0%	.0%	100.0%
Primary to Secondary	16	11	9	6	10	52
	30.8%	21.2%	17.3%	11.5%	19.2%	100.0%
Inter to Degree	42	41	4	1	2	90
	46.7%	45.6%	4.4%	1.1%	2.2%	100.0%
PG and Above	45	35	4	4	1	89
	50.6%	39.3%	4.5%	4.5%	1.1%	100.0%
Total	119	90	17	11	13	250
	47.6%	36.0%	6.8%	4.4%	5.2%	100.0%

Source: Data collected from Field study

The table that follows displays, according to the respondents' level of education, which cities in India are among the top five most polluted for air quality. There were a total of 250 people who participated in the survey, and 47.6 percent of those people agreed that Delhi is in first place out of the other five cities. 36 percent of those who participated in the survey agreed that Hyderabad is in second place out of the five cities. 6.8 percent of those who participated in the survey agreed that Mumbai is in third rank out of the five cities. It was determined that Chennai is in fourth position among the five cities by 5.2% of those who participated in the survey, while 4.4% of those who participated in the survey determined that Kolkata is in fifth place among the five cities.

Overall, among respondents who had a history in illiteracy, 84.2 percent agreed that Delhi is in first rank among the five cities, and 15.8 percent agreed that Hyderabad is in second place among the five cities. 30.8 percent of respondents who had completed their primary and secondary school agreed that Delhi is in first position among the five cities, and 21.2 percent of respondents agreed that Hyderabad is in second place among the five cities. 19.2 percent of those who participated in the survey agreed that Chennai is in third rank out of the five cities. 17.3 percent of those polled said that Mumbai is currently in fourth rank out of the five cities, while 11.5

percent of those polled agreed that Kolkata is currently in fifth place out of the five cities. In general, among respondents whose educational background ranged from Inter to Degree, 46.7 percent agreed that Delhi is in first position among the five cities, while 45.5 percent said that Hyderabad is in second place among the five cities. Only 4.4 percent of people polled agreed that Mumbai is the third best city out of the five options. 2.2 percent of those polled agreed that Chennai is currently in fourth rank out of the five cities, while just 1.1 percent of those polled said that Kolkata is currently in fifth place out of the five cities. Overall, among respondents with educational backgrounds of postgraduate level or higher, 50.6% agreed that Delhi is in first position among the five cities, while 39.3% agreed that Hyderabad is in second place among the five cities. Only 4.4 percent of people polled agreed that Mumbai is the third best city out of the five options. 4.4 percent of those polled said that Kolkata is currently in fourth rank out of the five cities, and 1.1 percent of those polled agreed that Chennai is currently in fifth place out of the five cities.

Sukumar from Balanagar area said that air pollution is increasing year by year in India. Delhi is highly polluted city in India and Hyderabad is in next position why because it is rapidly growing city in India so now it is over populated city and it have been undergoing so many contraction works those are lead to heavy traffic, establishment of civil amenities and also many other things. all of these lead Hyderabad to became one of the most polluted city India. Ranganna from Carminar area expressed that India is becoming most polluted country in the world. Hyderabad is also quickly growing city among other cities in India. all this cities are prominent cities in India so people from other states are also coming to this cities for job purposes and setting in this cities so all these reasons are behind for the increasing of air pollution in these cities.

Table-4.7: Occupation wise reflections of respondents on major sources of air pollution

Occupation	Do you know what are the major sources of air pollution		Total
	Yes	No	
laborer	20	0	20
	100.0%	.0%	100.0%
driver	47	3	50
	94.0%	6.0%	100.0%
employee	42	10	52
	80.8%	19.2%	100.0%
Home maker	40	0	40
	100.0%	.0%	100.0%
Academician	9	3	12
	75.0%	25.0%	100.0%
Activist	18	0	18
	100.0%	.0%	100.0%
student	5	3	8
	62.5%	37.5%	100.0%
Bureaucrats	50	0	50
	100.0%	.0%	100.0%
Total	231	19	250
	92.4%	7.6%	100.0%

Source: Data collected from Field study

The responses of respondents, broken down by employment, regarding the causes of air pollution are presented in the table that can be found above. There were a total of 250 people who participated in the survey; 92.4% of those people claimed that they were aware of the key causes of air pollution, whereas 7.6% of those people said that they were unaware of the major causes of air pollution. In comparison to the responses of the other respondents, labourers, home makers, activists, and bureaucrats each gave a score of one hundred percent when asked if they know the sources of air pollution.

Naveen Naik from Amberpet expressed that he know the sources of air pollutions such as industrial, vehicle, oil, gas, and indoor and contamination of waste.

Table-4.8: Income wise reflections on major sources of air pollution

Annual income	Do you know what are the major sources of air pollution		Total
	Yes	No	
50000 - 75000	17	3	20
	85.0%	15.0%	100.0%
75000 - 100000	41	5	46
	89.1%	10.9%	100.0%
100000 - 150000	62	7	69
	89.9%	10.1%	100.0%
>150000	111	4	115
	96.5%	3.5%	100.0%
Total	231	19	250
	92.4%	7.6%	100.0%

Source: Data collected from Field study

The responses that respondents provided on the causes of air pollution are broken down by annual income in the table that can be found above. There were a total of 250 people who participated in the survey; 92.4% of those people claimed that they were aware of the key causes of air pollution, whereas 7.6% of those people said that they were unaware of the major causes of air pollution. In general, respondents with yearly incomes of more than 150000 had a greater depth of knowledge than those with lower annual income levels.

85 percent of respondents with an annual income between 50,000 and 75,000 stated that they were aware of the primary sources of air pollution, whereas 15 percent of respondents with an annual income in this range stated that they were unaware of the major sources of air pollution. Overall, among respondents whose annual income falls between 75,000 and 100,000 dollars, 89.1 percent of respondents stated that they were aware of the primary causes of air pollution, whereas 10.9 percent of respondents indicated that they were unaware of the primary causes of air pollution. Overall, 89.9 percent of respondents stated that they were aware of the primary sources of air pollution, whereas 10.1 percent of respondents indicated that they were unaware of the key sources of air pollution. The yearly income range for these

respondents was between 100,000 and 150,000. 96.5 percent of respondents with an annual income of more than $150,000 stated that they were aware of the major sources of air pollution, while 3.5 percent of respondents with an annual income of more than $150,000 stated that they were unaware of the major sources of air pollution.

Table-4.9: Reflections of respondents who affiliated to any civil society organisations on major sources of air pollution

affiliated to any Civil Society Organization	**Do you know what are the major sources of air pollution**		**Total**
	Yes	No	
YES	133	14	147
	90.5%	9.5%	100.0%
NO	98	5	103
	95.1%	4.9%	100.0%
Total	231	19	250
	92.4%	7.6%	100.0%

Source: Data collected from Field study

The table that follows displays the responses of respondents who are affiliated with any civil society organisations regarding the question of what causes air pollution and where it comes from. There were a total of 250 people who participated in the survey; 92.4% of those people claimed that they were aware of the key causes of air pollution, whereas 7.6% of those people said that they were unaware of the major causes of air pollution. In general, respondents with yearly incomes of more than 150000 had a greater depth of knowledge than those with lower annual income levels.

90.5 percent of respondents who were affiliated with any civil society organisations claimed that they were aware of the primary sources of air pollution, whereas 9.5 percent of respondents said that they were unaware of the major sources of air pollution. 95.5 percent of respondents who don't affiliate with any civil society organisations expressed that they knew the major sources of air pollution, but 4.9 percent of respondents said that they don't know the major sources of air pollution. In total, 95.5 percent of respondents knew the major sources of air pollution.

Table-4.10: Age wise reflections on major sources of air pollution

Age	sources of air pollution						Total
	Industrial	vehicles	oil and gas	contamination of water and waste	indoor	all of above	
15-25	0	1	1	3	0	2	7
	.0%	14.3%	14.3%	42.9%	.0%	28.6%	100.0%
25-35	13	7	3	0	0	11	34
	38.2%	20.6%	8.8%	.0%	.0%	32.4%	100.0%
35- 45	18	6	3	2	4	25	58
	31.0%	10.3%	5.2%	3.4%	6.9%	43.1%	100.0%
45- 55	13	4	1	4	2	21	45
	28.9%	8.9%	2.2%	8.9%	4.4%	46.7%	100.0%
55- 65	11	2	6	5	5	40	69
	15.9%	2.9%	8.7%	7.2%	7.2%	58.0%	100.0%
> 65	6	0	3	1	3	24	37
	16.2%	.0%	8.1%	2.7%	8.1%	64.9%	100.0%
Total	61	20	17	15	14	123	250
	24.4%	8.0%	6.8%	6.0%	5.6%	49.2%	100.0%

Source: Data collected from Field study

The above table depicts the age wise reflections of respondents on what are the sources of air pollution. Total numbers of respondents are 250 altogether, 24.4 percent of respondents expressed that industrial pollution, 8 percent of respondents expressed that vehicles or traffic pollution, 6.8 percent of respondents expressed that oil and gas pollution, 6 percent of respondents expressed that contamination of water and waste pollution, 5.6 percent of respondents expressed that indoor pollution and 49.2 percent of respondents expressed that above all sources are causes for air pollution.

Table-4.11: Gender wise reflections on major sources of air pollution

Gender	sources of air pollution						Total
	Industrial	vehicles	oil and gas	contamination of water and waste	indoor	all of above	
Male	48	11	15	15	14	77	180
	26.7%	6.1%	8.3%	8.3%	7.8%	42.8%	100.0%
Female	13	9	2	0	0	46	70
	18.6%	12.9%	2.9%	.0%	.0%	65.7%	100.0%
Total	61	20	17	15	14	123	250
	24.4%	8.0%	6.8%	6.0%	5.6%	49.2%	100.0%

Source: Data collected from Field study

The above table depicts the gender wise reflections of respondents on what are the sources of air pollution. Total numbers of respondents are 250 altogether, Industrial pollution is mentioned by 24.4 percent of respondents, vehicles or traffic pollution is mentioned by 8% of respondents, oil and gas pollution is mentioned by 6.8% of respondents, contamination of water and waste pollution is mentioned by 6% of respondents, indoor pollution is mentioned by 5.6 percent of respondents, and air pollution is mentioned by 49.2 percent of respondents.

Overall, within male respondents 26 percent of respondents indicated that industrial pollution, 6.1 percent indicated that vehicle or traffic pollution, 8.3 percent indicated that oil and gas pollution, 8.3 percent indicated that contamination of water and waste pollution, 7.8 percent indicated that indoor pollution, and 42.8 percent indicated that all of the above are causes of air pollution. Overall, within female respondents 18.6 percent of respondents stated that industrial pollution, 12.9 percent stated that vehicle or traffic pollution, 2.9 percent stated that oil and gas pollution, and 65.7 percent stated that all of the above are causes of air pollution.

Table-4.12: Education wise reflections on major sources of air pollution

Education	sources of air pollution						Total
	Industrial	vehicles	oil and gas	contamination of water and waste	indoor	all of above	
Illiterate	0	0	0	0	0	19	19
	.0%	.0%	.0%	.0%	.0%	100.0%	100.0%
Primary to Secondary	11	1	1	9	7	23	52
	21.2%	1.9%	1.9%	17.3%	13.5%	44.2%	100.0%
Inter to Degree	24	9	9	4	1	43	90
	26.7%	10.0%	10.0%	4.4%	1.1%	47.8%	100.0%
PG and Above	26	10	7	2	6	38	89
	29.2%	11.2%	7.9%	2.2%	6.7%	42.7%	100.0%
Total	61	20	17	15	14	123	250
	24.4%	8.0%	6.8%	6.0%	5.6%	49.2%	100.0%

Source: Data collected from Field study

The above table depicts the education wise reflections of respondents on what are the sources of air pollution. Total numbers of respondents are 250 altogether, 24.4 percent of respondents indicated that industrial pollution, 8% indicated that vehicles or traffic pollution, 6.8 percent indicated that oil and gas pollution, 6% indicated that contamination of water and waste pollution, 5.6% indicated that indoor pollution, and 49.2% indicated that the aforementioned sources are causes of air pollution. 100 percent of illiterates indicated that above all other sources of air pollution,.

Overall, within Primary to Secondary level educated respondents, 21.2 percent expressed that industrial pollution, 1.9 percent of respondents expressed that vehicles or traffic pollution, Oil and gas pollution was mentioned by 1.9 percent of respondents, water and waste pollution was mentioned by 17.3 percent of respondents, indoor pollution was mentioned by 13.5 percent of respondents, and air pollution was mentioned by 44.2 percent of respondents. Overall, within Inter to Degree level educated respondents, 21.2 percent expressed that industrial pollution, 10% of respondents said vehicles or traffic pollution is a source of air pollution, 10% said oil and gas pollution is a source of air pollution, 4.4 percent said contamination

of water and waste pollution is a source of air pollution, 1.1 percent said indoor pollution is a source of air pollution, and 47.8% said that all sources are sources of air pollution. Overall, within PG and Above level educated respondents, 29.2 percent expressed that industrial pollution, Vehicles or traffic pollution was mentioned by 11.2 percent of respondents, oil and gas pollution was mentioned by 7.9 percent, water and waste pollution was mentioned by 2.2 percent of respondents, indoor pollution was mentioned by 6.7 percent of respondents, and air pollution was mentioned by 42.7 percent of respondents.

Health risks of air pollution

Table-4.13: Education wise reflections on knowledge of consequence of air pollution

Education	knowledge of consequence of air pollution		Total
	yes	no	
Illiterate	19	0	19
	100.0%	.0%	100.0%
Primary to Secondary	47	5	52
	90.4%	9.6%	100.0%
Inter to Degree	56	34	90
	62.2%	37.8%	100.0%
PG and Above	49	40	89
	55.1%	44.9%	100.0%
Total	171	79	250
	68.4%	31.6%	100.0%

Source: Data collected from Field study

The above table depicts the education wise reflections of respondents on knowledge of consequence of air pollution. Total numbers of respondents are 250 altogether, 68.4 percent of respondents stated that they were aware of the repercussions of air pollution, whereas 31.6 percent of respondents stated that they were unaware of the repercussions. the consequence of air pollution. 100 percent illiterates said that they knew the consequence of air pollution.

Overall, within Primary to Secondary level educated respondents, 90.4 percent expressed that they knew the consequence of air pollution and 9.6 percent expressed that they don’t know the consequence of air pollution. Overall, within Inter to Degree

level educated respondents, 62.2 percent expressed that they knew the consequence of air pollution and 37.8 percent expressed that they don't know the consequence of air pollution. Overall, within PG and above level educated respondents, 55.1 percent expressed that they knew the consequence of air pollution and 44.9 percent expressed that they don't know the consequence of air pollution.

Table-4.14: Religion wise reflections on knowledge of consequence of air pollution

Religion	**knowledge of consequence of air pollution**		
	yes	no	**Total**
Hindu	77	48	125
	61.6%	38.4%	100.0%
Muslim	43	9	52
	82.7%	17.3%	100.0%
Christian	39	20	59
	66.1%	33.9%	100.0%
Others	12	2	14
	85.7%	14.3%	100.0%
Total	171	79	250
	68.4%	31.6%	100.0%

Source: Data collected from Field study

The above table explains the religion wise reflections of respondents on knowledge of consequence of air pollution. Total numbers of respondents are 250 altogether, 68.4% of respondents indicated that they were aware of the effects of air pollution, whilst 31.6% of respondents did not know the consequence of air pollution. Others have more knowledge of consequences of air pollution with compared to other religious groups.

Overall, within Hindu respondents, 61.6 percent expressed that they knew the consequence of air pollution and 38.4 percent expressed that they don't know the consequence of air pollution. Overall, within Muslim respondents, 82.7 percent expressed that they knew the consequence of air pollution and 17.3 percent expressed that they don't know the consequence of air pollution. Overall, within Christian respondents, 66.1 percent expressed that they knew the consequence of air pollution and 33.9 percent expressed that they don't know the consequence of air pollution. Overall, within others respondents, 85.7 percent expressed that they knew the

consequence of air pollution and 14.3 percent expressed that they don't know the consequence of air pollution.

Types of diseases can cause due to air pollution

Table-4.15: Gender wise reflections on what kind of diseases can cause due to air pollution

Gender	what types of diseases can cause due to air pollution										Total
	irritation to eyes, nose and throat	chronic respiratory diseases	pneumonia	COPD	lung cancer	heart disease	damage to the brain, nerves, liver, or kidneys	Decreased exercise performance	Dermatitis	ALL of the above	
Male	5	17	20	18	18	21	19	0	4	58	180
	2.8%	9.4%	11.1%	10.0%	10.0%	11.7%	10.6%	.0%	2.2%	32.2%	100.0%
Female	10	14	2	0	0	4	0	9	2	29	70
	14.3%	20.0%	2.9%	.0%	.0%	5.7%	.0%	12.9%	2.9%	41.4%	100.0%
Total	15	31	22	18	18	25	19	9	6	87	250
	6.0%	12.4%	8.8%	7.2%	7.2%	10.0%	7.6%	3.6%	2.4%	34.8%	100.0%

Source: Data collected from Field study

The above table explains the gender wise reflections of respondents on what kind of diseases can cause due to air pollution. Total numbers of respondents are 250 altogether, 34.8 percent of respondents expressed above all such as (1) irritation to eyes, nose and throat, (2) chronic respiratory diseases , (3) pneumonia (4) COPD (Chronic Obstructive Pulmonary Diseases) (5) lung cancer (6) heart disease (7) damage to the brain, nerves, liver, or kidneys (8) Decreased exercise performance, (9) Dermatitis. Over all, Female respondents are more aware of diseases can cause due to air pollution.

Health risks from the air pollution

Table-4.16: Gender wise reflections on are you facing health risks from the air pollution

Gender	Are you facing health risks from the air pollution		Total
	Yes	No	
Male	139	41	180
	77.2%	22.8%	100.0%
Female	46	24	70
	65.7%	34.3%	100.0%
Total	185	65	250
	74.0%	26.0%	100.0%

Source: Data collected from Field study

The above table depicts the gender wise reflections of respondents on are you facing health risks from the air pollution. Total numbers of respondents are 250 altogether, 74 percent of respondents expressed that they are facing health risks from the air pollution and 26 percent expressed that they are not facing any risks from air pollution.

Overall, within male respondents 77.2 percent of respondents expressed that they are facing health risks from the air pollution and 22.8 percent expressed that they are not facing any risks from air pollution. Overall, within female respondents 65.7 percent of respondents expressed that they are facing health risks from the air pollution and 34.3 percent expressed that they are not facing any risks from air pollution.

Karthik from Ambarpet expressed he and his family members are facing health risks from the air pollution such as chronic respiratory diseases, irritation of eyes and noise. further he told that even children are also suffering from the air pollution they are not facing problems in taking breath and some time it is very hard to us to see the children problem because of that he wants to sell his property and go nearby village and settle there.

Table-4.17: Age wise reflections on facing health risks from the air pollution

Age	Are you facing health risks from the air pollution		Total
	Yes	No	
15-25	4	3	7
	57.1%	42.9%	100.0%
25-35	22	12	34
	64.7%	35.3%	100.0%
35- 45	43	15	58
	74.1%	25.9%	100.0%
45- 55	32	13	45
	71.1%	28.9%	100.0%
55- 65	58	11	69
	84.1%	15.9%	100.0%
> 65	26	11	37
	70.3%	29.7%	100.0%
Total	185	65	250
	74.0%	26.0%	100.0%

Source: Data collected from Field study

The above table depicts the age wise reflections of respondents on are you facing health risks from the air pollution. Total numbers of respondents are 250 altogether, 74 percent of respondents expressed that they are facing health risks from the air pollution and 26 percent expressed that they are not facing any risks from air pollution.

Overall, within 15-25 ages of respondents 57.1 percent of respondents expressed that they are facing health risks from the air pollution and 42.9 percent expressed that they are not facing any risks from air pollution. Overall, within 25-35ages of respondents 64.7 percent of respondents expressed that they are facing health risks from the air pollution and 35.3 percent expressed that they are not facing any risks from air pollution. Overall, within 45- 55 ages of respondents 71.1 percent of respondents expressed that they are facing health risks from the air pollution and 28.9 percent expressed that they are not facing any risks from air pollution. Overall, within 55- 65 ages of respondents 84.1 percent of respondents expressed that they are facing health risks from the air pollution and 15.9 percent expressed that they are not facing any risks from air pollution. Overall, within above 65 ages of respondents 70.3

percent of respondents expressed that they are facing health risks from the air pollution and 29.7 percent expressed that they are not facing any risks from air pollution.

Kind of health problems facing by air pollution

Table-4.18: Gender wise reflections on kind of problems facing

Annual income	What kind of health problems you are facing		Total
	Long term affects	short term effects	
50000 - 75000	11	9	20
	55.0%	45.0%	100.0%
75000 - 100000	36	10	46
	78.3%	21.7%	100.0%
100000 - 150000	37	32	69
	53.6%	46.4%	100.0%
>150000	74	41	115
	64.3%	35.7%	100.0%
Total	158	92	250
	63.2%	36.8%	100.0%

Source: Data collected from Field study

The above table explains the Annual income wise reflections of respondents on what kind of problem facing weather long term or short term. Total numbers of respondents are 250 altogether, 63.2 percent of respondents expressed that they are facing long term health problems and 26 percent expressed that they are facing short term health problems.

Overall, within annual income between 50000-75000, 55 percent of respondents expressed that they are facing long term health problems and 26 percent expressed that they are facing short term health problems. Overall, within annual income between 75000 – 100000, 78.3 percent of respondents expressed that they are facing long term health problems and 21.7 percent expressed that they are facing short term health problems. Overall, within annual income between 100000 - 150000, 53.6 percent of respondents expressed that they are facing long term health problems and 46.4 percent expressed that they are facing short term health problems. Overall,

within annual income above 150000, 64.3 percent of respondents expressed that they are facing long term health problems and 35.7 percent expressed that they are facing short term health problems.

Table-4.19: Religion wise reflections on wise reflections on kind of problems facing

Religion	What kind of health problems you are facing		Total
	Long term affects	short term effects	
Hindu	91	34	125
	72.8%	27.2%	100.0%
Muslim	22	30	52
	42.3%	57.7%	100.0%
Christian	35	24	59
	59.3%	40.7%	100.0%
Others	10	4	14
	71.4%	28.6%	100.0%
Total	158	92	250
	63.2%	36.8%	100.0%

Source: Data collected from Field study

The above table explains the religion wise reflections of respondents on what kind of problem facing weather long term or short term. Total numbers of respondents are 250 altogether, 63.2 percent of respondents expressed that they are facing long term health problems and 26 percent expressed that they are facing short term health problems.

Overall, within Hindu, 72.8 percent of respondents expressed that they are facing long term health problems and 27.2 percent expressed that they are facing short term health problems. Overall, within Muslim 42.3 percent of respondents expressed that they are facing long term health problems and 57.7 percent expressed that they are facing short term health problems. Overall, within Christian 59.3 percent of respondents expressed that they are facing long term health problems and 40.7 percent expressed that they are facing short term health problems. Overall, within others 71.4 percent of respondents expressed that they are facing long term health problems and 28.6 percent expressed that they are facing short term health problems.

Table-4.20: Category wise reflections on what kind of health issues you have been facing most

Category	health issue you have been facing most										Total
	irritation to eyes, nose and throat	chronic respiratory diseases	pneumonia	COPD	lung cancer	heart disease	damage to the brain, nerves, liver, or kidneys	Decreased exercise performance	Dermatitis	some of the above	
SC	6	17	4	2	6	5	5	0	5	20	70
	8.6%	24.3%	5.7%	2.9%	8.6%	7.1%	7.1%	.0%	7.1%	28.6%	100.0%
ST	0	0	3	0	3	3	1	0	0	10	20
	.0%	.0%	15.0%	.0%	15.0%	15.0%	5.0%	.0%	.0%	50.0%	100.0%
BC	0	4	1	6	0	12	6	7	0	54	90
	.0%	4.4%	1.1%	6.7%	.0%	13.3%	6.7%	7.8%	.0%	60.0%	100.0%
OC	15	4	7	9	8	5	7	0	0	15	70
	21.4%	5.7%	10.0%	12.9%	11.4%	7.1%	10.0%	.0%	.0%	21.4%	100.0%
Total	21	25	15	17	17	25	19	7	5	99	250
	8.4%	10.0%	6.0%	6.8%	6.8%	10.0%	7.6%	2.8%	2.0%	39.6%	100.0%

Source: Data collected from Field study

The above table explains the caste wise reflections of respondents on what kind of health issues you have been facing most. Total numbers of respondents are 250 altogether, 39.6 percent of respondents expressed some of the above. Those are (1) irritation to eyes, nose and throat, (2) chronic respiratory diseases , (3) pneumonia (4) COPD (Chronic Obstructive Pulmonary Diseases) (5) lung cancer (6) heart disease (7) damage to the brain, nerves, liver, or kidneys (8) Decreased exercise performance, (9) Dermatitis. Over all, Female respondents are more aware of diseases can cause due to air pollution.

Table-4.21: Gender wise reflections on do you have any inherited disease

Gender	Do you have any inherited disease		Total
	Yes	No	
Male	50	130	180
	27.8%	72.2%	100.0%
Female	33	37	70
	47.1%	52.9%	100.0%
Total	83	167	250
	33.2%	66.8%	100.0%

Source: Data collected from Field study

The above table depicts gender wise reflections of respondents on do you have any inherited disease. Total numbers of respondents are 250 altogether, 33.2 percent of respondents said that they have some inherited disease and 66.8 percent expressed that they don't have any inherited disease. Overall, female respondents are having more inherited diseases and suffering with compare to male respondents.

Overall, within male, 27.8 percent of respondents expressed that they have some inherited disease and 72.2 percent expressed that they don't have any inherited disease. Overall, within female, 47.1 percent of respondents opined that they have some inherited disease and 52.9 percent expressed that they don't have any inherited disease.

Ramana is a auto driver from Panjagutta expressed that he has inherited problem of chronic respiratory issue and he is living in this area nearly 49 years. and also facing severe head ach. Mariamma from Amberpet says that she is suffering from COPD (Chronic Obstructive Pulmonary Diseases). actually her mother has that issue so it is genetically came to her and she is also suffering like her mother. Farroq from Karwan area expressed that he is suffering from higher tension and Dermatitis.

Table-4.22: Education wise reflections on do you have any inherited disease

Education	Do you have any inherited disease		Total
	Yes	No	
Illiterate	0	19	19
	.0%	100.0%	100.0%
Primary to Secondary	4	48	52
	7.7%	92.3%	100.0%
Inter to Degree	36	54	90
	40.0%	60.0%	100.0%
PG and Above	43	46	89
	48.3%	51.7%	100.0%
Total	83	167	250
	33.2%	66.8%	100.0%

Source: Data collected from Field study

The above table shows education wise reflections of respondents on do you have any inherited disease. Total numbers of respondents are 250 altogether, 33.2 percent of respondents opined that they have some inherited disease and 66.8 percent expressed that they don't have any inherited disease. Overall, 100 percent illiterate respondents expressed that they don't have any inherited diseases with compare to other educational background of respondents. PG and above respondents are having and suffering with more inherited diseases with compare to other educational background of respondents.

Overall, within Primary to Secondary educational background, 7.7 percent of respondents expressed that they have some inherited disease and 92.3 percent expressed that they don't have any inherited disease. Overall, within Inter to Degree educational background, 40 percent of respondents expressed that they have some inherited disease and 60 percent expressed that they don't have any inherited disease. Overall, within PG and Above educational background, 48.3 percent of respondents expressed that they have some inherited disease and 51.7 percent expressed that they don't have any inherited disease.

Table-4.23: Occupation wise reflections on specific time of high air pollution during the day

Occupation	specific time of high air pollution during the day		Total
	Eight to ten hours of morning	Late hour of the evening are better	
laborer	7	13	20
	35.0%	65.0%	100.0%
driver	35	15	50
	70.0%	30.0%	100.0%
employee	21	31	52
	40.4%	59.6%	100.0%
Home maker	37	3	40
	92.5%	7.5%	100.0%
Academician	0	12	12
	.0%	100.0%	100.0%
Activist	12	6	18
	66.7%	33.3%	100.0%
student	4	4	8
	50.0%	50.0%	100.0%
Bureaucrats	40	10	50
	80.0%	20.0%	100.0%
Total	156	94	250
	62.4%	37.6%	100.0%

Source: Data collected from Field study

The above table explains occupation wise reflections of respondents on specific time of high air pollution during the day. Total numbers of respondents are 250 altogether, 62.4 percent of respondents expressed that eight to ten hours of morning have high air pollution during the day and 37.6 percent expressed that late hour of the evening are better. Overall, majority of the respondents are expressed that eight to ten hours of morning have high air pollution during the day.

Table-4.24: Category wise reflections on specific time of high air pollution during the day

Category	specific time of high air pollution during the day		Total
	Eight to ten hours of morning	Late hour of the evening are better	
SC	48	22	70
	68.6%	31.4%	100.0%
ST	11	9	20
	55.0%	45.0%	100.0%
BC	44	46	90
	48.9%	51.1%	100.0%
OC	53	17	70
	75.7%	24.3%	100.0%
Total	156	94	250
	62.4%	37.6%	100.0%

Source: Data collected from Field study

The above table shows caste wise reflections of respondents on specific time of high air pollution during the day. Total numbers of respondents are 250 altogether, 62.4 percent of respondents opined that eight to ten hours of morning have high air pollution during the day and 37.6 percent agreed that late hour of the evening are better. Overall, high percent of OC respondents expressed that eight to ten hours of morning have high air pollution during the day with compare to other caste groups.

Overall, within the SC respondents 68.6 percent told that eight to ten hours of morning have high air pollution during the day and 31.4 percent agreed that late hour of the evening are better. Overall, within the ST respondents 55 percent told that eight to ten hours of morning have high air pollution during the day and 45 percent agreed that late hour of the evening are better. Overall, within the BC respondents 48.9 percent told that eight to ten hours of morning have high air pollution during the day and 51.1 percent agreed that late hour of the evening are better. Overall, within the OC respondents 75.7 percent told that eight to ten hours of morning have high air pollution during the day and 24.3 percent agreed that late hour of the evening are better.

Table-4.25: Education wise reflections on air pollution annoy you

Education	air pollution annoy you		Total
	Yes	No	
Illiterate	19	0	19
	100.0%	.0%	100.0%
Primary to Secondary	52	0	52
	100.0%	.0%	100.0%
Inter to Degree	72	18	90
	80.0%	20.0%	100.0%
PG and Above	67	22	89
	75.3%	24.7%	100.0%
Total	210	40	250
	84.0%	16.0%	100.0%

Source: Data collected from Field study

The above table depicts education reflections of respondents on air pollution annoy you. Total numbers of respondents are 250 altogether, 84 percent of respondents agreed that air pollution annoyed them and 16 percent said that air pollution didn't annoy them. Overall, 100 of illiterates and primary to secondary educational back ground respondents expressed that air pollution annoyed them.

Overall, within Inter to Degree respondents 80 percent told that air pollution annoyed them and 20 percent said that air pollution didn't annoy them. Overall, within PG and above respondents 75.3 percent told that air pollution annoyed them and24.7 percent said that air pollution didn't annoy them.

Raja babu from Balanagar expressed that he is facing difficulty with air pollution he has breathing problem so whenever he goes out some time he fell down on the ground that movement he dont know what happened to him.

Table-4.26: Age wise reflections on air pollution annoy you

Age	air pollution annoy you		Total
	Yes	No	
15-25	4	3	7
	57.1%	42.9%	100.0%
25-35	22	12	34
	64.7%	35.3%	100.0%
35- 45	54	4	58
	93.1%	6.9%	100.0%
45- 55	39	6	45
	86.7%	13.3%	100.0%
55- 65	62	7	69
	89.9%	10.1%	100.0%
> 65	29	8	37
	78.4%	21.6%	100.0%
Total	210	40	250
	84.0%	16.0%	100.0%

Source: Data collected from Field study

The above table shows age reflections of respondents on air pollution annoy you. Total numbers of respondents are 250 altogether, 84 percent of respondents agreed that air pollution annoyed them and 16 percent expressed that air pollution didn't annoy them. Overall, within 15-25 respondents 57.1 percent told that air pollution annoyed them and 42.9 percent said that air pollution didn't annoy them. Overall, within 25-35 respondents 64.7 percent told that air pollution annoyed them and 35.3 percent said that air pollution didn't annoy them. Overall, within 35- 45 respondents 93.1 percent told that air pollution annoyed them and 6.9 percent said that air pollution didn't annoy them. Overall, within 45- 55 respondents 86.7 percent told that air pollution annoyed them and 13.3 percent said that air pollution didn't annoy them. Overall, within 55- 65 respondents 89.9 percent told that air pollution annoyed them and 10.1 percent said that air pollution didn't annoy them. Overall, within above age of 65 respondents 78.4 percent told that air pollution annoyed them and 21.6 percent said that air pollution didn't annoy them.

Regarding hospital/ clinical

Table-4.27: Category wise reflections on how frequently you or your family members visit hospitals

Category	How frequently you or your family members visit hospitals due to that				Total
	Yearly	Half Yearly	Monthly	Weekly & Bi-weekly	
SC	8	11	40	11	70
	11.4%	15.7%	57.1%	15.7%	100.0%
ST	4	9	4	3	20
	20.0%	45.0%	20.0%	15.0%	100.0%
BC	6	27	16	41	90
	6.7%	30.0%	17.8%	45.6%	100.0%
OC	2	6	55	7	70
	2.9%	8.6%	78.6%	10.0%	100.0%
Total	20	53	115	62	250
	8.0%	21.2%	46.0%	24.8%	100.0%

Source: Data collected from Field study

The above table shows category wise reflections of respondents on how frequently you or your family members visit hospitals. Total numbers of respondents are 250 altogether, 8 percent of respondents agreed that they visit hospitals once a year, 21 percent said that once a half year, 46 percent opined that monthly once and 24.8 percent said that week and bi-weekly once visit to hospital. Overall, majority of the respondents visit monthly once.

Overall, within SC respondents 11.4 percent agreed that they visit hospitals once a year, 15.7 percent said that once a half year, 57.1 percent opined that monthly once and 15.7 percent said that week and bi-weekly once visit to hospital. Overall, within ST respondents 20 percent agreed that they visit hospitals once a year, 45 percent said that once a half year, 20 percent opined that monthly once and 15 percent said that week and bi-weekly once visit to hospital. Overall, within BC respondents 6.7 percent agreed that they visit hospitals once a year, 30 percent said that once a half year, 17.8 percent opined that monthly once and 45.6 percent said that week and bi-weekly once visit to hospital. Overall, within OC respondents 2.9 percent agreed that

they visit hospitals once a year, 8.6 percent said that once a half year, 78.6 percent opined that monthly once and 10 percent said that week and bi-weekly once visit to hospital.

Table-4.28: Education wise reflections on how frequently you or your family members visit hospitals

Education	How frequently you or your family members visit hospitals due to that				Total
	Yearly	Half Yearly	Monthly	Weekly & Bi-weekly	
Illiterate	0	0	4	15	19
	.0%	.0%	21.1%	78.9%	100.0%
Primary to Secondary	0	11	35	6	52
	.0%	21.2%	67.3%	11.5%	100.0%
Inter to Degree	6	22	41	21	90
	6.7%	24.4%	45.6%	23.3%	100.0%
PG and Above	14	20	35	20	89
	15.7%	22.5%	39.3%	22.5%	100.0%
Total	20	53	115	62	250
	8.0%	21.2%	46.0%	24.8%	100.0%

Source: Data collected from Field study

The above table depicts education reflections of respondents on how frequently you or your family members visit hospitals. Total numbers of respondents are 250 altogether, 8 percent of respondents agreed that they visit hospitals once a year, 21 percent said that once a half year, 46 percent opined that monthly once and 24.8 percent said that week and bi-weekly once visit to hospital. Overall, majority of the respondents visit monthly once.

Overall, within Illiterate respondents, 21.1 percent opined that monthly once and 78.9 percent said that week and bi-weekly once visit to hospital. Overall, within Primary to Secondary respondents 21.2 percent said that once a half year, 67.3 percent opined that monthly once and 11.5 percent said that week and bi-weekly once visit to hospital. Overall, within Inter to Degree respondents 6.7 percent agreed that they visit hospitals once a year,24.4 percent said that once a half year, 45.6 percent opined that monthly once and 23.3 percent said that week and bi-weekly once visit to hospital.

Overall, within PG and above respondents 15.7 percent agreed that they visit hospitals once a year, 22.5 percent said that once a half year, 39.3 percent opined that monthly once and 22.5 percent said that week and bi-weekly once visit to hospital.

Table-4.29: Age wise reflections on at what stage of disease you go to hospital

Age	**At what stage of disease you go to hospital**				**Total**
	Early stage	Vague symptoms	Mostly when at complicated stage	Early stage but do not follow medical advice	
15-25	1	4	1	1	7
	14.3%	57.1%	14.3%	14.3%	100.0%
25-35	15	9	4	6	34
	44.1%	26.5%	11.8%	17.6%	100.0%
35- 45	28	16	3	11	58
	48.3%	27.6%	5.2%	19.0%	100.0%
45- 55	26	13	2	4	45
	57.8%	28.9%	4.4%	8.9%	100.0%
55- 65	36	21	5	7	69
	52.2%	30.4%	7.2%	10.1%	100.0%
> 65	15	14	5	3	37
	40.5%	37.8%	13.5%	8.1%	100.0%
Total	121	77	20	32	250
	48.4%	30.8%	8.0%	12.8%	100.0%

Source: Data collected from Field study

The above table shows age reflections of respondents on at what stage of disease you go to hospital. Total numbers of respondents are 250 altogether, 48.4 percent of respondents agreed that they visit hospital early stage. 30.8 percent said that they visit hospital at the stage of vague symptoms, 8 percent said that they visit hospital mostly when at complicated stage, 12.8 percent said that visit hospital early stage but do not follow medical advice. Overall, most of the respondents are visit hospitals at early stage.

Table-4.30: Gender wise reflections on most affected gender

Gender	Most affected Gender		Total
	Male	Female	
Male	75	105	180
	41.7%	58.3%	100.0%
Female	32	38	70
	45.7%	54.3%	100.0%
Total	107	143	250
	42.8%	57.2%	100.0%

Source: Data collected from Field study

The above table depicts gender wise reflections of respondents on most affected gender. Total numbers of respondents are 250 altogether, 42.8 percent of respondents said male are most effected gender and 57.2 said that female are most effected gender. Overall, female affected more with compare to male. Overall, within male, 41.7 percent of respondents said male are most effected gender and 58.3 said that female are most effected gender. Overall, within female, 45.7 percent of respondents said male are most effected gender and 54.3 said that female are most effected gender.

Suvarthamma from Amberpet expressed that women is most effected gender with compare to men why because women has weak body and mind so immediately and automatically women effecting to it. Generally in this area women always stays at home and these houses are very small and there is no proper ventilation so almost all women are having some kind of problems. Raghu Ramaraju from Panjagutta also agreed that women is most effecting gender than men because of lack of physical activities with compare to men. Nagarathna from Balanagar not agreed that women is most effected gender. she argues that women has more immune strength and mental balance with compare to men.

Table-4.31: Religion wise reflections on most affected gender

Religion	Most affected Gender		Total
	Male	Female	
Hindu	30	95	125
	24.0%	76.0%	100.0%
Muslim	36	16	52
	69.2%	30.8%	100.0%
Christian	29	30	59
	49.2%	50.8%	100.0%
Others	12	2	14
	85.7%	14.3%	100.0%
Total	107	143	250
	42.8%	57.2%	100.0%

Source: Data collected from Field study

The above table explains religion wise reflections of respondents on most affected gender. Total numbers of respondents are 250 altogether, 42.8 percent of respondents said male are most effected gender and 57.2 said that female are most effected gender. Overall, female affected more with compare to male.

Overall, within Hindu, 24 percent of respondents said male are most effected gender and 76 said that female are most effected gender. Overall, within Muslim, 69.2 percent of respondents said male are most effected gender and 30.8 said that female are most effected gender. Overall, within Christian, 49.2 percent of respondents said male are most effected gender and 50.8 said that female are most effected gender. Overall, within others, 85.7 percent of respondents said male are most effected gender and 14.3 said that female are most effected gender.

Table-4.32: Category wise reflections on most affected gender

Category	Most affected Gender		Total
	Male	Female	
SC	23	47	70
	32.9%	67.1%	100.0%
ST	0	20	20
	.0%	100.0%	100.0%
BC	35	55	90
	38.9%	61.1%	100.0%
OC	49	21	70
	70.0%	30.0%	100.0%
Total	107	143	250
	42.8%	57.2%	100.0%

Source: Data collected from Field study

The above table shows caste wise reflections of respondents on most affected gender. Total numbers of respondents are 250 altogether, 42.8 percent of respondents said male are most effected gender and 57.2 said that female are most effected gender. Overall, female affected more with compare to male.

Overall, within SC, 32.9 percent of respondents said male are most effected gender and 67.1 said that female are most effected gender. Overall, within ST, 100 said that female are most effected gender. Overall, within BC 38.9 percent of respondents said male are most effected gender and 61.1 said that female are most effected gender. Overall, within OC 70 percent of respondents said male are most effected gender and 30 said that female are most effected gender.

Radha from Amberpet expressed that men are most effected gender with compare to women because men is always roaming and staying and spending time outside so obviously men is most effected gender. Chennamma from Amberpet expressed that women is more venerable than men so women is most effected gender with compare to men.

Table-4.33: Age wise reflections on what age mostly suffers

Age	What Age Mostly Suffer			Total
	Mostly children	Mostly adult	Mostly Aged	
15-25	4	0	3	7
	57.1%	.0%	42.9%	100.0%
25-35	14	0	20	34
	41.2%	.0%	58.8%	100.0%
35- 45	15	4	39	58
	25.9%	6.9%	67.2%	100.0%
45- 55	11	7	27	45
	24.4%	15.6%	60.0%	100.0%
55- 65	25	7	37	69
	36.2%	10.1%	53.6%	100.0%
> 65	17	2	18	37
	45.9%	5.4%	48.6%	100.0%
Total	86	20	144	250
	34.4%	8.0%	57.6%	100.0%

Source: Data collected from Field study

The above table depicts age wise reflections of respondents on what age mostly suffers. Total numbers of respondents are 250 altogether, 34.4 percent of respondents said mostly children, 8 percent of respondents said mostly adults, 57.6 percent of respondents said mostly aged. Overall, high percentage of old age respondents' sufferers with compare to other groups.

Raja Rathnam from Bolakpur expressed that mostly old age people are effecting with compare to other age groups because they don't have good strength and immune system. Ahmad Ansur from Katedan not agreed that old age people effecting and said that infant babies and small children are most effected other age groups.

Table-4.34: Gender wise reflections on what age mostly suffers

Gender	What Age Mostly Suffer			Total
	Mostly children	Mostly adult	Mostly Aged	
Male	47	17	116	180
	26.1%	9.4%	64.4%	100.0%
Female	39	3	28	70
	55.7%	4.3%	40.0%	100.0%
Total	86	20	144	250
	34.4%	8.0%	57.6%	100.0%

Source: Data collected from Field study

The above table depicts gender wise reflections of respondents on what age mostly suffers. Total numbers of respondents are 250 altogether, 34.4 percent of respondents said mostly children, 8 percent of respondents said mostly adults, 57.6 percent of respondents said mostly aged. Overall, high percentage of old age respondents' sufferers with compare to other groups. Overall within male respondents 34.4 percent expressed that mostly children, 9.4 percent of respondents said mostly adults, 64.4 percent of respondents said mostly aged. Overall within female respondents 55.7 percent expressed that mostly children, 4.3 percent of respondents said mostly adults, 40 percent of respondents said mostly aged.

Table-4.35: Caste wise reflections on what age mostly suffers

Category	What Age Mostly Suffer			Total
	Mostly children	Mostly adult	Mostly Aged	
SC	24	6	40	70
	34.3%	8.6%	57.1%	100.0%
ST	8	0	12	20
	40.0%	.0%	60.0%	100.0%
BC	41	13	36	90
	45.6%	14.4%	40.0%	100.0%
OC	13	1	56	70
	18.6%	1.4%	80.0%	100.0%
Total	86	20	144	250
	34.4%	8.0%	57.6%	100.0%

Source: Data collected from Field study

The above table explains caste wise reflections of respondents on what age mostly suffers. Total numbers of respondents are 250 altogether, 34.4 percent of respondents said mostly children, 8 percent of respondents said mostly adults, 57.6 percent of respondents said mostly aged. Overall, high percentage of old age respondents' sufferers with compare to other groups.

Overall within SC respondents 34.4 percent expressed that mostly children, 8.6 percent of respondents said mostly adults, 57.1 percent of respondents said mostly aged. Overall within ST respondents 40 percent expressed that mostly children and 60 percent of respondents said mostly aged. Overall within BC respondents 45.6 percent expressed that mostly children, 14.4 percent of respondents said mostly adults, 40 percent of respondents said mostly aged. Overall within OC respondents 18.6 percent expressed that mostly children, 1.4 percent of respondents said mostly adults, 80 percent of respondents said mostly aged.

Table-4.36: Gender wise reflections on what protective measures do you take

Gender	**What protective measures do you take**			**Total**
	we do wear mask while on job if it available	mask is available but do not wear it	It is uncomfortable to wear mask during work	
Male	139	34	7	180
	77.2%	18.9%	3.9%	100.0%
Female	41	27	2	70
	58.6%	38.6%	2.9%	100.0%
Total	180	61	9	250
	72.0%	24.4%	3.6%	100.0%

Source: Data collected from Field study

The above table explains gender wise reflections of respondents on what protective measures do you take. Total numbers of respondents are 250 altogether, 72 percent of respondents said we do wear mask while on job if it available, 24.4 percent of respondents said mask is available but do not wear it, 3.6 percent of respondents said It is uncomfortable to wear mask during work. Overall, high percentage of respondents taking protects measures.

Overall within male respondents 77.2 percent expressed that we do wear mask while on job if it available, 18.9 percent of respondents said mask is available but do

not wear it, 3.9 percent of respondents said it is uncomfortable to wear mask during work. Overall within female respondents 58.6 percent expressed that we do wear mask while on job if it available, 38.6 percent of respondents said mask is available but do not wear it, 2.9 percent of respondents said it is uncomfortable to wear mask during work.

Table-4.37: Occupation wise reflections on what protective measures do you take

Occupation	What protective measures do you take			Total
	Yes, we do wear mask while on job if it available	Yes, mask is available but do not wear it	It is uncomfortable to wear mask during work	
laborer	11	9	0	20
	55.0%	45.0%	.0%	100.0%
driver	31	15	4	50
	62.0%	30.0%	8.0%	100.0%
employee	39	9	4	52
	75.0%	17.3%	7.7%	100.0%
Home maker	29	11	0	40
	72.5%	27.5%	.0%	100.0%
Academician	12	0	0	12
	100.0%	.0%	.0%	100.0%
Activist	17	1	0	18
	94.4%	5.6%	.0%	100.0%
student	4	3	1	8
	50.0%	37.5%	12.5%	100.0%
Bureaucrats	37	13	0	50
	74.0%	26.0%	.0%	100.0%
Total	180	61	9	250
	72.0%	24.4%	3.6%	100.0%

Source: Data collected from Field study

The above table explains occupation wise reflections of respondents on what protective measures do you take. Total numbers of respondents are 250 altogether, 72 percent of respondents said we do wear mask while on job if it available, 24.4 percent of respondents said mask is available but do not wear it, 3.6 percent of respondents said It is uncomfortable to wear mask during work. Overall, high percentage of respondents taking protects measures. Overall labours, drivers and students are not

taking much protective measures with compare to employees, home makers, academicians, activists and bureaucrats.

Table-4.38: Category wise reflections on what protective measures do you take

Category	What protective measures do you take			Total
	Yes, we do wear mask while on job if it available	Yes, mask is available but do not wear it	It is uncomfortable to wear mask during work	
SC	47	21	2	70
	67.1%	30.0%	2.9%	100.0%
ST	13	6	1	20
	65.0%	30.0%	5.0%	100.0%
BC	71	19	0	90
	78.9%	21.1%	.0%	100.0%
OC	49	15	6	70
	70.0%	21.4%	8.6%	100.0%
Total	180	61	9	250
	72.0%	24.4%	3.6%	100.0%

Source: Data collected from Field study

The above table explains caste wise reflections of respondents on what protective measures do you take. Total numbers of respondents are 250 altogether, 72 percent of respondents said we do wear mask while on job if it available, 24.4 percent of respondents said mask is available but do not wear it, 3.6 percent of respondents said It is uncomfortable to wear mask during work. Overall, high percentage of respondents taking protects measures. Overall OC and BC respondents taking many protective measures with compare to SC and ST respondents.

Overall, within SC 67.1 percent of respondents said we do wear mask while on job if it available, 30 percent of respondents said mask is available but do not wear it, 2.9 percent of respondents said It is uncomfortable to wear mask during work. Overall, within ST 65 percent of respondents said we do wear mask while on job if it available, 30 percent of respondents said mask is available but do not wear it, 5 percent of respondents said It is uncomfortable to wear mask during work. Overall, within BC 78.9 percent of respondents said we do wear mask while on job if it available and 21.1 percent of respondents said mask is available but do not wear it. Overall, within OC 70 percent of respondents said we do wear mask while on job if it

available, 21.4 percent of respondents said mask is available but do not wear it, 8.6 percent of respondents said It is uncomfortable to wear mask during work.

Conclusion

It explained the short term and long term health risks faced by the people and also focused implications of hospital or clinical implications in selected areas of Hyderabad city. Majority of respondents irrespective of their gender accepted that deaths are caused due to air pollution highest percent of respondents accepted that Delhi is in first place among 5 cities and Hyderabad is in second place among 5 cities.

Majority of respondents expressed that they knew the major sources of air pollution. Huge percent of respondents expressed that they knew the consequence of air pollution such as (1) irritation to eyes, nose and throat, (2) chronic respiratory diseases , (3) pneumonia (4) COPD (Chronic Obstructive Pulmonary Diseases) (5) lung cancer (6) heart disease (7) damage to the brain, nerves, liver, or kidneys (8) Decreased exercise performance, (9) Dermatitis. Over all, Female respondents are more aware of diseases can cause due to air pollution. Majority percent of respondents expressed that they are facing health risks from the air pollution

Overall, female respondents are having more inherited diseases and suffering with compare to male respondents. Overall, majority of the respondents are expressed that eight to ten hours of morning have high air pollution during the day. Majority percent of respondents agreed that air pollution annoyed them.

Majority of the respondents visit monthly once. most of the respondents are visit hospitals at early stage. female affected more with compare to male. Overall, high percentage of old age respondents' sufferers with compare to other groups. Majority percent of respondents said we do wear mask while on job if it available. Overall, high percentage of respondents taking protective measures.

Chapter –V
People perception on
Response of State on Air pollution

There are many different factors that contribute to urban air pollution, and these factors vary geographically and according to the kinds of development that have taken place. Air pollution is largely caused by human activities, such as increased industrialization, exploitation and overconsumption of natural resources, and ever-increasing population sizes. Anthropogenic activities also contribute to other environmental problems, such as water pollution and soil contamination. In recent years, the steadily worsening problem of air pollution has emerged as a serious cause for concern, particularly in metropolitan regions. When it comes to particle matter, in particular, a significant number of cities and towns fall short of the pollution limits that have been set. There are a few cities in India with ambient particulate matter concentrations that are three to four times, if not more than, above the norms. " In order to both regulate air quality and carry out efforts to reduce air pollution, various provisions of the Air (Prevention and Control of Pollution) Act, 1981, and the Environment (Protection) Act, 1985, which prescribe the procedure and authority for dealing with the issue, are applied. These laws prescribe the procedure and authority for dealing with the issue. These statutes were created in order to stop and regulate the pollution that is released into the atmosphere. This topic includes a discussion of the considerable impact that this has on the health of the general population. When there is only a moderate amount of pollution in the air, it is quite unlikely that young and healthy people will be adversely affected in any way over the long run. On the other hand, high concentrations of air pollution and/or prolonged exposure to it may be responsible for the development of symptoms and disorders related to one's health. This has a mostly detrimental influence on the respiratory and inflammatory systems, but it also has the potential to lead to more severe difficulties such as heart disease. Additionally, this has the potential to develop to more significant issues. People who already have illnesses that affect their lungs or hearts may be especially susceptible to the impacts that pollution has. The problem has been given more attention as a result of a number of international investigations that have established a connection between the impact of air pollution on health and the occurrence of diseases and deaths in India. These investigations were carried out in order to establish a connection between

the impact of air pollution on health and the occurrence of diseases and deaths in India. Significant efforts are being made by the national government to cut down on the quantity of pollution that is released into the air. Regulations have been put in place by both the federal government and state governments around the country in an effort to prevent, manage, and lessen the amount of air pollution that exists. This chapter analyses the respondent views on state, civil society and political parties role and their initiations to mitigate air pollution in the Hyderabad city

Table-5.1: Area wise reflections on has government implemented the mitigation policies

Area	**has government implemented the mitigation policies**				**Total**
	Effectively	partially	not at all	D.K	
Jidimetla& Bala nagar	14	22	12	2	50
	28.0%	44.0%	24.0%	4.0%	100.0%
Museerabad (Bolak pur)	10	24	13	3	50
	20.0%	48.0%	26.0%	6.0%	100.0%
Ambarpet	10	30	9	1	50
	20.0%	60.0%	18.0%	2.0%	100.0%
Charminar (Karwan& katedan)	13	28	8	1	50
	26.0%	56.0%	16.0%	2.0%	100.0%
Panjagutta	10	28	9	3	50
	20.0%	56.0%	18.0%	6.0%	100.0%
Total	57	132	51	10	250
	22.8%	52.8%	20.4%	4.0%	100.0%

Source: Field study Data

The above table shows that reflections of respondents in area wise on has government implemented the mitigation policies. Total numbers of areas are 5 altogether, namely Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan and Katedan in Charminar and Panjagutta. Total numbers of respondents are 250 altogether, 22.8 percent of respondents said that government has effectively implemented the mitigation policies, 52.8 percent of respondents opined that government has partially implemented the mitigation policies, 20.4 percent of respondents said that government has not at all implemented the mitigation policies

and 4 percent of respondents said that they don't know about whether government has implemented the mitigation policies or not. Overall, majority of respondents expressed that government has partially implemented the mitigation policies and not taken active initiation to implement the policies.

Overall, within the Jidimetla& Bala nagar area 28 percent of respondents opined that government has effectively implemented the mitigation policies, 44 percent of respondents expressed that government has partially implemented the mitigation policies, 24 percent of respondents said that government has not at all implemented the mitigation policies and 4 percent of respondents said that they don't know. Overall, within the Bolak Pur area of Musheerabad 20 percent of respondents opined that government has effectively implemented the mitigation policies, 48 percent of respondents expressed that government has partially implemented the mitigation policies, 26 percent of respondents said that government has not at all implemented the mitigation policies and 6 percent of respondents said that they don't know. Overall, within the Amberpet area 20 percent of respondents opined that government has effectively implemented the mitigation policies, 60 percent of respondents expressed that government has partially implemented the mitigation policies, 18 percent of respondents said that government has not at all implemented the mitigation policies and 2 percent of respondents said that they don't know.

Overall, within the Karwan and Katedan area in Charminar 26 percent of respondents opined that government has effectively implemented the mitigation policies, 56 percent of respondents expressed that government has partially implemented the mitigation policies, 16 percent of respondents said that government has not at all implemented the mitigation policies and 2 percent of respondents said that they don't know. Overall, within the Karwan and Katedan area in Charminar 20 percent of respondents opined that government has effectively implemented the mitigation policies, 56 percent of respondents expressed that government has partially implemented the mitigation policies, 18 percent of respondents said that government has not at all implemented the mitigation policies and 6 percent of respondents said that they don't know.

Table-5.2: Age wise reflections on has government implemented the mitigation policies

Age	has government implemented the mitigation policies				Total
	Effectively	partially	not at all	D.K	
15-25	1	3	2	1	7
	14.3%	42.9%	28.6%	14.3%	100.0%
25-35	10	10	12	2	34
	29.4%	29.4%	35.3%	5.9%	100.0%
35- 45	12	37	8	1	58
	20.7%	63.8%	13.8%	1.7%	100.0%
45- 55	6	24	13	2	45
	13.3%	53.3%	28.9%	4.4%	100.0%
55- 65	21	38	8	2	69
	30.4%	55.1%	11.6%	2.9%	100.0%
> 65	7	20	8	2	37
	18.9%	54.1%	21.6%	5.4%	100.0%
Total	57	132	51	10	250
	22.8%	52.8%	20.4%	4.0%	100.0%

Source: Field study Data

The table that follows presents what the respondents believe to be smart thoughts on whether or not the government has implemented the mitigation policies. There were a total of 250 people who responded to the survey. 22.8 percent of respondents opined that government has effectively implemented the mitigation policies, 52.8 percent of respondents expressed that government has partially implemented the mitigation policies, 20.4 percent of respondents said that government has not at all implemented the mitigation policies and 4 percent of respondents expressed that they don't know about whether government has implemented the mitigation policies or not. Overall, majority of respondents expressed that government has partially implemented the mitigation policies and not taken active initiation to implement the policies.

Overall, within the 15-25 ages of respondents 14.3 percent expressed that government has effectively implemented the mitigation policies, 42.9 percent of respondents expressed that government has partially implemented the mitigation policies, 28.6 percent of respondents said that government has not at all implemented the mitigation policies and 14.3 percent of respondents said that they don't know.

Overall, within the 25-35 ages of respondents 29.4 percent expressed that government has effectively implemented the mitigation policies, 29.4 percent of respondents expressed that government has partially implemented the mitigation policies, 35.3 percent of respondents said that government has not at all implemented the mitigation policies and 5.9 percent of respondents said that they don't know. Overall, within the 35- 45 ages of respondents 20.7 percent expressed that government has effectively implemented the mitigation policies, 63.8 percent of respondents expressed that government has partially implemented the mitigation policies, 13.8 percent of respondents said that government has not at all implemented the mitigation policies and 1.7 percent of respondents said that they don't know. Overall, within the 55- 65 ages of respondents 13.3 percent expressed that government has effectively implemented the mitigation policies, 53.3 percent of respondents expressed that government has partially implemented the mitigation policies, 28.9percent of respondents said that government has not at all implemented the mitigation policies and 4.4 percent of respondents said that they don't know. Overall, within the 45- 55 ages of respondents 30.4 percent expressed that government has effectively implemented the mitigation policies, 55.1 percent of respondents expressed that government has partially implemented the mitigation policies, 11.6 percent of respondents said that government has not at all implemented the mitigation policies and 2.9 percent of respondents said that they don't know. Overall, within the 55- 65 ages of respondents 18.9 percent expressed that government has effectively implemented the mitigation policies, 54.1 percent of respondents expressed that government has partially implemented the mitigation policies, 11.6 percent of respondents said that government has not at all implemented the mitigation policies and 2.9 percent of respondents said that they don't know. Overall, within the above age of 65 respondents 30.4 percent expressed that government has effectively implemented the mitigation policies, 55.1 percent of respondents expressed that government has partially implemented the mitigation policies, 21.6 percent of respondents said that government has not at all implemented the mitigation policies and 5.4 percent of respondents said that they don't know.

Table-5.3: Area wise reflections on has government implemented the mitigation policies

Gender	government has implemented the mitigation policies				Total
	Effectively	partially	not at all	D.K	
Male	36	104	34	6	180
	20.0%	57.8%	18.9%	3.3%	100.0%
Female	21	28	17	4	70
	30.0%	40.0%	24.3%	5.7%	100.0%
Total	57	132	51	10	250
	22.8%	52.8%	20.4%	4.0%	100.0%

Source: Field study Data

The above table shows respondents' opinions on whether the government has implemented mitigation programmes, broken down by gender. 250 respondents in all have responded, 22.8 percent of respondents opined that government has effectively implemented the mitigation policies, 52.8 percent of respondents expressed that government has partially implemented the mitigation policies, 20.4 percent of respondents said that government has not at all implemented the mitigation policies and 4 percent of respondents expressed that they don't know about whether government has implemented the mitigation policies or not. Overall, majority of respondent's irrespective of their gender expressed that government has partially implemented the mitigation policies and not taken active initiation to implement the policies.

Overall, within male 20 percent respondents opined that government has effectively implemented the mitigation policies, 57.8 percent of respondents expressed that government has partially implemented the mitigation policies, 18.9 percent of respondents said that government has not at all implemented the mitigation policies and 3.3 percent of respondents said that they don't know. Overall, within female 30 percent respondents opined that government has effectively implemented the mitigation policies, 40 percent of respondents expressed that government has partially implemented the mitigation policies, 24.3 percent of respondents said that government has not at all implemented the mitigation policies and 5.7 percent of respondents said that they don't know

Table-5.4: Reflections of respondents who follow day to day politics on has government implemented the mitigation policies

follow day to day politics	government has implemented the mitigation policies				Total
	Effectively	partially	not at all	D.K	
Yes	53	116	46	7	222
	23.9%	52.3%	20.7%	3.2%	100.0%
No	4	16	5	3	28
	14.3%	57.1%	17.9%	10.7%	100.0%
Total	57	132	51	10	250
	22.8%	52.8%	20.4%	4.0%	100.0%

Source: Field study Data

The aforementioned table demonstrates how respondents who regularly follow politics felt that the administration has put mitigation plans in place. Total numbers of respondents are 250 altogether, 22.8 percent of respondents opined that government has effectively implemented the mitigation policies, 52.8 percent of respondents expressed that government has partially implemented the mitigation policies, 20.4 percent of respondents said that government has not at all implemented the mitigation policies and 4 percent of respondents expressed that they don't know about whether government has implemented the mitigation policies or not. Overall, majority of respondent's irrespective who follow day to day politics or not expressed that government has partially implemented the mitigation policies and not taken active initiation to implement the policies.

Overall, within who follow day to day politics 14.3 percent respondents opined that government has effectively implemented the mitigation policies, 57.1 percent of respondents expressed that government has partially implemented the mitigation policies, 20.7 percent of respondents said that government has not at all implemented the mitigation policies and Only 3.2% of people polled admitted to having no idea what the question was. Overall, among those who don't keep up with day-to-day politics, 23.9 percent of those polled believed that the government has successfully executed the mitigation plans. 52.3 percent of respondents expressed that government has partially implemented the mitigation policies, 17.9 percent of respondents said that government has not at all implemented the mitigation policies and 10.7 percent of respondents said that they don't know.

Table-5.5: Education wise reflections on has established pollution monitoring equipments

Education	government has established pollution monitoring equipments			Total
	Yes	No	DK	
Illiterate	17	0	2	19
	89.5%	.0%	10.5%	100.0%
Primary to Secondary	46	5	1	52
	88.5%	9.6%	1.9%	100.0%
Inter to Degree	66	22	2	90
	73.3%	24.4%	2.2%	100.0%
PG and Above	59	27	3	89
	66.3%	30.3%	3.4%	100.0%
Total	188	54	8	250
	75.2%	21.6%	3.2%	100.0%

Source: Field study Data

The information presented in the table above provides an explanation regarding the education levels of respondents' reflections on the pollution monitoring equipments established by the government. There were a total of 250 people who responded to the survey. 75.2 percent of respondents expressed government has established pollution monitoring equipments, 21.6 percent of respondents opined that government hasn't established pollution monitoring equipments, 3.2 percent of respondents expressed that they don't know about whether government has established or not. Overall, majority of respondent's irrespective their education expressed that government established pollution monitoring equipments.

Overall, within illiterate respondents 89.5 percent said government has established pollution monitoring equipments and 10.5 percent of respondents expressed that they don't know about whether government has established or not. Overall, within Primary to Secondary educated respondents 88.5 percent opined government has established pollution monitoring equipments, 9.5 percent of respondents expressed that government hasn't established pollution monitoring equipments, 1.9 percent of respondents expressed that they don't know about whether government has established or not. Overall, within Inter to Degree educated respondents 73.3 percent opined that government has established pollution monitoring equipments, 24.4 percent of respondents expressed that government hasn't established

pollution monitoring equipments, 2.2 percent of respondents expressed that they don't know about whether government has established or not. Overall, within PG and above educated respondents 66.3 percent opined that government has established pollution monitoring equipments, 30.3 percent of respondents expressed that government hasn't established pollution monitoring equipments, 3.4 percent of respondents expressed that they don't know about whether government has established or not.

Table-5.6: Reflections of respondents who follow day to day politics on has government established pollution monitoring equipments

follow day to day politics	**has government established pollution monitoring equipments**			**Total**
	Yes	No	DK	
Yes	166	50	6	222
	74.8%	22.5%	2.7%	100.0%
No	22	4	2	28
	78.6%	14.3%	7.1%	100.0%
Total	188	54	8	250
	75.2%	21.6%	3.2%	100.0%

Source: Field study Data

The table that can be found above provides an explanation of the reflections of respondents who follow day-to-day politics on the subject of having the government install pollution monitoring equipment. Total numbers of respondents are 250 altogether, 75.2 percent of respondents expressed government has established pollution monitoring equipments, 21.6 percent of respondents opined that government hasn't established pollution monitoring equipments, 3.2 percent of respondents expressed that they don't know about whether government has established or not. Overall, majority of respondent's irrespective who follow day to day politics or not expressed that government established pollution monitoring equipments.

Overall, within who follow day to day politics 74.8 percent of respondents opined government has established pollution monitoring equipments, 22.5 percent of respondents opined that government hasn't established pollution monitoring equipments, 2.7% of those who participated in the survey stated that they were unaware of whether or not the government had already established. In general, among

those who aren't up to date with day-to-day politics According to responses from participants, 78.6 percent of people believe the government has set up pollution monitoring equipment. 14.3 percent of respondents opined that government hasn't established pollution monitoring equipments, 7.1 percent of respondents expressed that they don't know about whether government has established or not.

Table-5.7: Occupation wise reflections on has government established pollution monitoring equipments

Occupation	government has established pollution monitoring equipments			Total
	Yes	No	DK	
Laborer	8	11	1	20
	40.0%	55.0%	5.0%	100.0%
Driver	42	3	5	50
	84.0%	6.0%	10.0%	100.0%
Employee	40	12	0	52
	76.9%	23.1%	.0%	100.0%
Home maker	35	5	0	40
	87.5%	12.5%	.0%	100.0%
Academician	9	3	0	12
	75.0%	25.0%	.0%	100.0%
Activist	17	1	0	18
	94.4%	5.6%	.0%	100.0%
Student	4	4	0	8
	50.0%	50.0%	.0%	100.0%
Bureaucrats	33	15	2	50
	66.0%	30.0%	4.0%	100.0%
Total	188	54	8	250
	75.2%	21.6%	3.2%	100.0%

Source: Field study Data

The table that can be found above explains, occupation by occupation, the responses of respondents about whether or not the government has developed pollution monitoring equipment. There were a total of 250 people who participated in the survey, and 75.2% of them said that the government had established pollution monitoring apparatus, 21.6 percent of respondents opined that government hasn't establish pollution monitoring equipments, 3.2 percent of respondents expressed that

they don't know about whether government has establish or not. Overall, majority of respondent's irrespective of their occupation expressed that government established pollution monitoring equipments.

Overall, within laborer 40 percent of respondents opined government has established pollution monitoring equipments, 55 percent of respondents opined that government hasn't established pollution monitoring equipments, 5 percent of respondents expressed that they don't know about whether government has established or not. Overall, within driver 84 percent of respondents opined government has established pollution monitoring equipments, 6 percent of respondents opined that government hasn't established pollution monitoring equipments, 10 percent of respondents expressed that they don't know about whether government has established or not. Overall, within employee 76.9 percent of respondent's opined government has established pollution monitoring equipments, 23.1 percent of respondents opined that government hasn't establish pollution monitoring equipments. Overall, within Home maker 87.5 percent of respondents' opined government has establish pollution monitoring equipments, 12.5 percent of respondents opined that government hasn't establish pollution monitoring equipments. Overall, within Academician 75 percent of respondents' opined government has established pollution monitoring equipments, 25 percent of respondents opined that government hasn't establish pollution monitoring equipments. Overall, within Academician 75 percent of respondents' opined government has established pollution monitoring equipments, 25 percent of respondents opined that government hasn't establish pollution monitoring equipments. Overall, within Activist 94.4 percent of respondents' opined government has established pollution monitoring equipments, 5.6 percent of respondents opined that government hasn't establish pollution monitoring equipments. Overall, within students 50 percent of respondents' opined government has established pollution monitoring equipments, 50 percent of respondents opined that government hasn't establish pollution monitoring equipments. Overall, within Bureaucrats 66 percent of respondents' opined government has establish pollution monitoring equipments, 30 percent of respondents opined that government hasn't establish pollution monitoring equipments. 4 percent of respondents expressed that they don't know about whether government has established or not.

Table-5.8: Gender wise reflections on status of state conducting air pollution awareness programs at Hyderabad

Gender	state conducting air pollution awareness programs at Hyderabad				Total
	Frequently	Rarely	Never	D.K	
Male	4	125	36	15	180
	2.2%	69.4%	20.0%	8.3%	100.0%
Female	14	35	16	5	70
	20.0%	50.0%	22.9%	7.1%	100.0%
Total	18	160	52	20	250
	7.2%	64.0%	20.8%	8.0%	100.0%

Source: Field study Data

The gender-specific perspectives of respondents on the status of the state's efforts to raise awareness about the dangers of air pollution are detailed in the table that can be found above. There were a total of 250 people who participated in the survey; 7.2 percent of respondents believed that the government frequently conducts air pollution awareness programmes at Hyderabad, 64% of respondents believed that the government rarely conducts air pollution awareness programmes at Hyderabad, 20.8 percent of respondents agreed that the government never conducts air pollution awareness programmes at Hyderabad, and 8% of respondents stated that they don't know. In general, the vast majority of respondents of both sexes believed that the government rarely conducts air pollution awareness initiatives in Hyderabad. This sentiment held true regardless of the respondents' gender.

Overall, within male 2.2 percent of respondents opined government is frequently conducting air pollution awareness programs at Hyderabad, 69.4 percent of respondents expressed government is rarely conducting air pollution awareness programs at Hyderabad, 20 percent of respondents agreed government is never conducting air pollution awareness programs at Hyderabad and 8.3 percent of respondents expressed that they don’t know. Overall, within female 20percent of respondent’s opined that government is frequently conducting air pollution awareness programs at Hyderabad, 50 percent of respondents expressed government is rarely conducting air pollution awareness programs at Hyderabad, 22.9 percent of

respondents agreed government is never conducting air pollution awareness programs at Hyderabad and 7.1 percent of respondents expressed that they don't know.

Table-5.9: Category wise reflections on status of state conducting air pollution awareness programs at Hyderabad

Category	state conducting air pollution awareness programs at Hyderabad				Total
	Frequently	Rarely	Never	D.K	
SC	4	53	9	4	70
	5.7%	75.7%	12.9%	5.7%	100.0%
ST	1	13	2	4	20
	5.0%	65.0%	10.0%	20.0%	100.0%
BC	9	44	30	7	90
	10.0%	48.9%	33.3%	7.8%	100.0%
OC	4	50	11	5	70
	5.7%	71.4%	15.7%	7.1%	100.0%
Total	18	160	52	20	250
	7.2%	64.0%	20.8%	8.0%	100.0%

Source: Field study Data

The data presented in the table above caste-wise reflect the perspectives of respondents on the status of the state's efforts to raise awareness about the dangers of air pollution in Hyderabad. There were a total of 250 people who participated in the survey; 7.2 percent of respondents believed that the government frequently conducts air pollution awareness programmes at Hyderabad, 64% of respondents believed that the government rarely conducts air pollution awareness programmes at Hyderabad, 20.8 percent of respondents agreed that the government never conducts air pollution awareness programmes at Hyderabad, and 8% of respondents stated that they don't know. In general, regardless of the respondents' caste, the vast majority of those who participated in the survey said that the government rarely holds awareness programmes on air pollution in Hyderabad.

Overall, within SC 5.7 percent of respondents expressed that government is frequently conducting air pollution awareness programs at Hyderabad, 75.7 percent of respondents said that government is rarely conducting air pollution awareness programs at Hyderabad, 12.9 percent of respondents agreed government is never

conducting air pollution awareness programs at Hyderabad and 5,7 percent of respondents stated that they were unsure about the matter. Overall, within ST 5 percent of respondents expressed that government is frequently conducting air pollution awareness programs at Hyderabad, 65 percent of respondents said that government is rarely conducting air pollution awareness programs at Hyderabad, 10 percent of respondents agreed government is never conducting air pollution awareness programs at Hyderabad and Twenty percent of those who participated in the survey provided that I don't know. Overall, within BC 10 percent of respondents expressed that government is frequently conducting air pollution awareness programs at Hyderabad, 48.9 percent of respondents said that government is rarely conducting air pollution awareness programs at Hyderabad, 33.3 percent of respondents agreed government is never conducting air pollution awareness programs at Hyderabad and 7.8 percent of respondents stated that they were unsure about the topic. Overall, within OC 5.7 percent of respondents expressed that government is frequently conducting air pollution awareness programs at Hyderabad, 71.4 percent of respondents said that government is rarely conducting air pollution awareness programs at Hyderabad, 15.7 percent of respondents agreed government is never conducting air pollution awareness programs at Hyderabad and 7,1 percent of respondents stated that they were unsure about the matter.

Table-5.10: Education wise reflections on status of state conducting air pollution awareness programs at Hyderabad

Education	**state conducting air pollution awareness programs at Hyderabad**				
	Frequently	Rarely	Never	D.K	**Total**
Illiterate	1	6	12	0	19
	5.3%	31.6%	63.2%	.0%	100.0%
Primary to Secondary	2	45	2	3	52
	3.8%	86.5%	3.8%	5.8%	100.0%
Inter to Degree	4	58	18	10	90
	4.4%	64.4%	20.0%	11.1%	100.0%
PG and Above	11	51	20	7	89
	12.4%	57.3%	22.5%	7.9%	100.0%
Total	18	160	52	20	250
	7.2%	64.0%	20.8%	8.0%	100.0%

Source: Field study Data

The above table explains that education wise reflections of respondents on status of state conducting air pollution awareness programs at Hyderabad. Total numbers of respondents are 250 altogether, 7.2 percent of respondents expressed government is frequently conducting air pollution awareness programs at Hyderabad, 64 percent of respondents expressed government is rarely conducting air pollution awareness programs at Hyderabad, 20.8 percent of respondents agreed government is never conducting air pollution awareness programs at Hyderabad and Eight percent of those who participated in the survey stated that they were unsure. In general, the vast majority of respondents, regardless of the level of education they held, stated that the government rarely conducts initiatives to raise awareness about the dangers of air pollution in Hyderabad.

Overall, within illiterate respondents 5.4 percent agreed that government is frequently conducting air pollution awareness programs at Hyderabad, 75.7 percent of respondents opined that government is rarely conducting air pollution awareness programs at Hyderabad, 12.9 percent of respondents agreed government is never conducting air pollution awareness programs at Hyderabad and 5.7 percent of respondents agreed that they don't know. Overall, within Primary to Secondary educated respondents 3.8 percent agreed that government is frequently conducting air pollution awareness programs at Hyderabad, 86.5 percent of respondents expressed that government is rarely conducting air pollution awareness programs at Hyderabad, 3.8 percent of respondents agreed government is never conducting air pollution awareness programs at Hyderabad and 5.8 percent of respondents agreed that they don't know. Overall, within Inter to Degree educated respondents 4.4 percent said that government is frequently conducting air pollution awareness programs at Hyderabad, 64.4 percent of respondents opined that government is rarely conducting air pollution awareness programs at Hyderabad, 20 percent of respondents expressed government is never conducting air pollution awareness programs at Hyderabad and 11.1 percent of those who participated in the survey stated that they are unsure. Overall, within PG and above educated respondents 12.4 percent expressed that government is frequently conducting air pollution awareness programs at Hyderabad, 57.3 percent of respondents agreed that government is rarely conducting air pollution awareness programs at Hyderabad, 22.5 percent of respondents said government is never

conducting air pollution awareness programs at Hyderabad and 7.9 percent of respondents opined that they don't know.

Table-5.11: Reflections of who affiliated to civil society organisation on government should follow the Delhi model of even and odd system

affiliated to any Civil Society Organization	**government should follow the Delhi model of even and odd system**			**Total**
	Yes	No	DK	
YES	121	21	5	147
	82.3%	14.3%	3.4%	100.0%
NO	80	8	15	103
	77.7%	7.8%	14.6%	100.0%
Total	201	29	20	250
	80.4%	11.6%	8.0%	100.0%

Source: Field study Data

The above table shows the reflections of respondents who affiliated to civil society organisation on government should follow the Delhi model of even and odd system. Total numbers of respondents are 250 altogether, 80.4 percent of respondents agreed that government should follow the Delhi model of even and odd system, 11.6 percent of respondents stated that there is no need to adopt the Delhi model of the even and odd system, while 8% of respondents confirmed that they are unaware of this system. Overall majority of the respondents expressed that government should follow the Delhi model of even and odd system.

Overall, within who affiliated to civil society organisation 82.3 percent of respondents agreed that government should follow the Delhi model of even and odd system, 14.3 percent of respondents stated that it is unnecessary to follow the Delhi model of even and odd system and 3.4 percent of respondents agreed they don't know about it. Overall, within who don't have affiliations to civil society organisation 77.7 percent of respondents agreed that government should follow the Delhi model of even and odd system, 7.8 percent of the respondents indicated that it is unnecessary to follow the Delhi model of even and odd system and 14.6 percent of respondents agreed they don't know about it.

Table-5.12: Gender wise response on government should follow the Delhi model of even and odd system

Gender	government should follow the Delhi model of even and odd system			Total
	Yes	No	DK	
Male	145	16	19	180
	80.6%	8.9%	10.6%	100.0%
Female	56	13	1	70
	80.0%	18.6%	1.4%	100.0%
Total	201	29	20	250
	80.4%	11.6%	8.0%	100.0%

Source: Field study Data

The gender-specific perspectives of respondents on whether or not the government should adopt the Delhi model of even and odd numbers are presented in the table that can be found above. There were a total of 250 people who participated, and 80.4% of them believed that the government should adopt the even and odd approach that Delhi has pioneered, 11.6 percent of respondents stated there is no requirement to observe the Delhi model of even and odd system, 8 percent of respondents concurred that they are unaware of it. Overall majority of the respondents irrespective of their gender expressed that government should follow the Delhi model of even and odd system.

Overall, within male 80.6 percent of respondents agreed that government should follow the Delhi model of sari and besi system, 8.9 percent of the respondents reported that it is unnecessary to follow the Delhi model of even and odd system and 10.6 percent of respondents agreed they don't know about it. Overall, within female 80 percent of respondents agreed that government should follow the Delhi model of even and odd system, 18.6 percent of those surveyed that it is unnecessary to follow the Delhi model of even and odd system and 1.4 percent of respondents agreed they don't know about it.

Table-5.13: Education wise response on government should follow the Delhi model of even and odd system

Education	government should follow the Delhi model of even and odd system			Total
	Yes	No	DK	
Illiterate	15	1	3	19
	78.9%	5.3%	15.8%	100.0%
Primary to Secondary	43	2	7	52
	82.7%	3.8%	13.5%	100.0%
Inter to Degree	76	12	2	90
	84.4%	13.3%	2.2%	100.0%
PG and Above	67	14	8	89
	75.3%	15.7%	9.0%	100.0%
Total	201	29	20	250
	80.4%	11.6%	8.0%	100.0%

Source: Field study Data

The table that follows describes the education-related thoughts that respondents had on whether or not the government should adopt the even and odd system that Delhi uses as a model. There were a total of 250 people who participated, and 80.4% of them said that the government should adopt the even and odd numbered system that Delhi uses, In the opinion of 11.6% of respondents, there is no need to follow the Delhi model even and odd system, 8 percent of respondents claimed ignorance on the topic. Overall majority of the respondents irrespective of their educational background agreed that government should follow the Delhi model of even and odd system.

Overall, within illiterate 78.9 percent of respondents expressed that government should follow the Delhi model of even and odd system, 5.3 percent of respondents said that it is unnecessary to follow the Delhi model of even and odd system and 15.8 percent of respondents did not know about the topic. Overall, within Primary to Secondary level educated respondents 82.7 percent agreed that government should follow the Delhi model of even and odd system, 3.8% of respondents stated that there is no requirement to observe the Delhi model of even and odd system and 13.5 percent of respondents opined they don’t know about it. Overall,

within Inter to Degree level educated respondents 84.4 percent expressed that government should follow the Delhi model of even and odd system, 13.3 percent of respondents agreed that there is no need to follow the Delhi model of even and odd system and 2.2% of respondents claimed they were unaware of it. Overall, within PG and above level educated respondents 75.3 percent said that government should follow the Delhi model of even and odd system, 15.7 percent of respondents indicated there is no reason to proceed the Delhi model of even and odd system and 9 percent of respondents stated they were unaware.

Yadamma from Balanagar said that Telangana government should follow the Delhi model of even and odd system for the efficient functioning and monitoring of the traffic and its pollution. Nagendra Yadav from Panjaguta also expressed the same opinion why because Hyderabad is a rapid growing city like Delhi so the same model of transport system should follow in Hyderabad. Kanaka Raj from charminar area not agreed that government should follow the Delhi model of even and odd system because of only in some areas heavy traffic is there and rest of the areas is not that much traffic in Hyderabad so there is no need to follow the Delhi model.

Table-5.14: Religion wise response on government should strictly cancel the BS4 vehicles in Hyderabad

Religion	**government should strictly cancel the BS4 vehicles in Hyderabad**		**Total**
	Yes	No	
Hindu	113	12	125
	90.4%	9.6%	100.0%
Muslim	52	0	52
	100.0%	.0%	100.0%
Christian	59	0	59
	100.0%	.0%	100.0%
Others	14	0	14
	100.0%	.0%	100.0%
Total	238	12	250
	95.2%	4.8%	100.0%

Source: Field study Data

The following table displays the religiously specific responses of responders to the question of whether or not the government in Hyderabad should firmly cancel the

BS4 automobiles. There were a total of 250 people that participated, and 95.2% of them agreed that the government should definitively stop allowing BS4 automobiles in Hyderabad, 4.8 percent of respondents said that there is no need to government should strictly cancel the BS4 vehicles in Hyderabad. Overall, majority of the respondents irrespective of their religious background expressed that government should strictly cancel the BS4 vehicles in Hyderabad. Muslim, Christians and other religious respondents 100 percent agreed that government should strictly cancel the BS4 vehicles in Hyderabad. Overall, within Hindu 90.4 percent of respondents expressed that government should strictly cancel the BS4 vehicles in Hyderabad, 9.6 percent of respondents opined that there is no need to government should strictly cancel the BS4 vehicles in Hyderabad. Gangadhar Rao from Amberpet opined that government should strictly cancel the BS4 vehicles because of this vehicle produce and cause for more pollution. Krishna from Katedan also expressed the same opinion.

Table-5.15: Occupation wise response on government should strictly cancel the BS4 vehicles in Hyderabad

Occupation	**government should strictly cancel the BS4 vehicles in Hyderabad**		**Total**
	Yes	No	
Laborer	13	7	20
	65.0%	35.0%	100.0%
Driver	45	5	50
	90.0%	10.0%	100.0%
Employee	52	0	52
	100.0%	.0%	100.0%
Home maker	40	0	40
	100.0%	.0%	100.0%
Academician	12	0	12
	100.0%	.0%	100.0%
Activist	18	0	18
	100.0%	.0%	100.0%
Student	8	0	8
	100.0%	.0%	100.0%
Bureaucrats	50	0	50
	100.0%	.0%	100.0%
Total	238	12	250
	95.2%	4.8%	100.0%

Source: Field study Data

The table that follows summarises the occupation-specific responses of respondents to the question of whether or not the government in Hyderabad should rigorously cancel the BS4 automobiles. There were a total of 250 people who participated, and 95.2 percent of them said that the government should absolutely stop allowing BS4 automobiles in Hyderabad, 4.8 percent of respondents opined that there is no need to government should strictly cancel the BS4 vehicles in Hyderabad. Overall, majority of the respondents irrespective of their occupational background said that government should strictly cancel the BS4 vehicles in Hyderabad. Except laborer and drivers reaming all occupational respondents 100 percent agreed that government should cancel the BS4 vehicle in Hyderabad.

Table-5.16: Reflections of respondents who follow day to day politics on government should strictly cancel the BS4 vehicles in Hyderabad

follow day to day politics	**government should strictly cancel the BS4 vehicles in Hyderabad**		**Total**
	Yes	No	
Yes	210	12	222
	94.6%	5.4%	100.0%
No	28	0	28
	100.0%	.0%	100.0%
Total	238	12	250
	95.2%	4.8%	100.0%

Source: Field study Data

The above table indicates the reflections of respondents who follow day to day politics on government should strictly cancel the BS4 vehicles in Hyderabad. Total numbers of respondents are 250 altogether, 95.2 percent of respondents expressed that government should strictly cancel the BS4 vehicles in Hyderabad, 4.8 percent of respondents agreed that there is no need to government should strictly cancel the BS4 vehicles in Hyderabad. Overall, majority of the respondents irrespective of their awareness opined that government should strictly cancel the BS4 vehicles in Hyderabad.

Overall, within who follow day today politics 94.6 percent of respondents agreed that government should strictly cancel the BS4 vehicles in Hyderabad, 5.4 percent of respondents expressed that there is no need to government should strictly

cancel the BS4 vehicles in Hyderabad. Overall, within who don't follow day today politics 100 percent of respondents opined that government should strictly cancel the BS4 vehicles in Hyderabad.

Girijha from Bolakpur said that Telangana government should strictly cancel the BS4 vehicles because these vehicles are creating lot of pollution in Hyderabad. Ramarao from Panjagutta also opined that there a need to cancel BS4 vehicles.

Table-5.17: Reflections of respondents who follow day to day politics on Haritha Telangana by government gives the positive impact on air pollution

follow day to day politics	**Haritha Telangana by government gives the positive impact on air pollution**			**Total**
	Yes	No	DK	
Yes	189	21	12	222
	85.1%	9.5%	5.4%	100.0%
No	28	0	0	28
	100.0%	.0%	.0%	100.0%
Total	217	21	12	250
	86.8%	8.4%	4.8%	100.0%

Source: Field study Data

The above table explains the reflections of respondents who follow day to day politics on Haritha Telangana by government gives the positive impact on air pollution. Total numbers of respondents are 250 altogether, 86.8 percent of respondents agreed that Haritha Telangana implemented by government gave the positive impact on air pollution, 8.4 percent of respondents expressed that Haritha Telangana implemented by government not give the positive impact on air pollution and further stated that not implemented the program properly and 4.8 percent expressed that they don't know about it and the implementation of the program. Overall, majority of the respondents irrespective of their awareness opined that Haritha Telangana implemented by government gave the positive impact on air pollution.

Overall, within who follow day today politics 85.1 percent of respondents agreed that Haritha Telangana implemented by government gave the positive impact on air pollution, 9.5 percent of respondents expressed that Haritha Telangana implemented by government not give the positive impact on air pollution and further

stated that not implemented the program properly and 5.4% of respondents indicated that they do not know about it or the program's implementation. In general, one hundred percent of respondents who don't follow day-to-day politics were in agreement with the statement that the implementation of Haritha Telangana by the government had a good influence on air pollution.

Table-5.18: Reflections of respondents who follow day to day politics on Haritha Telangana by government gives the positive impact on air pollution

affiliated to any Civil Society Organization	**Haritha Telangana by government gives the positive impact on air pollution**			**Total**
	Yes	No	DK	
YES	146	1	0	147
	99.3%	.7%	.0%	100.0%
NO	71	20	12	103
	68.9%	19.4%	11.7%	100.0%
Total	217	21	12	250
	86.8%	8.4%	4.8%	100.0%

Source: Field study Data

The responses of respondents who are affiliated with civil society organisations are shown in the table above. These respondents believe that the implementation of Haritha Telangana by the government has a good influence on air pollution. Total numbers of respondents are 250 altogether, 86.8 percent of respondents agreed that Haritha Telangana implemented by government gave the positive impact on air pollution, 8.4 percent of respondents agreed that Haritha Telangana implemented by government not give the positive impact on air pollution and further stated that not implemented the program properly and 4.8 percent opined that they don’t know about it and the implementation of the program. Overall, majority of the respondents irrespective of their affiliations expressed that Haritha Telangana implemented by government gave the positive impact on air pollution.

Overall, within who affiliated to civil society organisations 99.3 percent of respondents agreed that Haritha Telangana implemented by government gave the positive impact on air pollution, 0.7 percent of respondents expressed that Haritha Telangana implemented by government not give the positive impact on air. Overall, within who don’t affiliate to civil society organisations 68.9 percent of respondents

agreed that Haritha Telangana implemented by government gave the positive impact on air pollution, 19.4 percent of respondents expressed that Haritha Telangana implemented by government not give the positive impact on air and 11.7 percent of respondents indicated that they are unaware of it.

Table-5.19: occupation wise response on Haritha Telangana by government gives the positive impact on air pollution

Occupation	Haritha Telangana by government gives the positive impact on air pollution			Total
	Yes	No	DK	
Laborer	13	0	7	20
	65.0%	.0%	35.0%	100.0%
Driver	42	3	5	50
	84.0%	6.0%	10.0%	100.0%
Employee	50	2	0	52
	96.2%	3.8%	.0%	100.0%
Home maker	25	15	0	40
	62.5%	37.5%	.0%	100.0%
Academician	11	1	0	12
	91.7%	8.3%	.0%	100.0%
Activist	18	0	0	18
	100.0%	.0%	.0%	100.0%
Student	8	0	0	8
	100.0%	.0%	.0%	100.0%
Bureaucrats	50	0	0	50
	100.0%	.0%	.0%	100.0%
Total	217	21	12	250
	86.8%	8.4%	4.8%	100.0%

Source: Field study Data

The following table demonstrates, according to the respondents' occupations, how the implementation of Haritha Telangana by the government has a favourable impact on the level of air pollution. There were a total of 250 people who participated in the survey, and 86.8 percent of those people reported that the implementation of Haritha Telangana by the government had a beneficial influence on air pollution, 8.4 percent of respondents opined that Haritha Telangana implemented by government not give the positive impact on air pollution and further stated that not implemented the program properly and 4.8 percent said that they don’t know about it and the implementation of the program. Overall, majority of the respondents irrespective of

their occupation agreed that Haritha Telangana implemented by government gave the positive impact on air pollution. Overall, activists, students and bureaucrats 100 percent accepted that Haritha Telangana implemented by government gave the positive impact on air pollution.

Table-5.20: Age wise response on Green parks & Green roads by government gives the positive impact on air pollution

Age	Green parks & Green roads by government gives the positive impact			Total
	Yes	No	DK	
15- 25	4	3	0	7
	57.1%	42.9%	.0%	100.0%
25-35	34	0	0	34
	100.0%	.0%	.0%	100.0%
35- 45	47	9	2	58
	81.0%	15.5%	3.4%	100.0%
45- 55	34	9	2	45
	75.6%	20.0%	4.4%	100.0%
55- 65	49	13	7	69
	71.0%	18.8%	10.1%	100.0%
> 65	26	7	4	37
	70.3%	18.9%	10.8%	100.0%
Total	194	41	15	250
	77.6%	16.4%	6.0%	100.0%

Source: Field study Data

The table that follows presents, according to the respondents' ages, their thoughts on whether or not green parks and green roads created by the government have a good impact on air pollution. Total numbers of respondents are 250 altogether, 77.6 percent of respondents agreed that Green parks and Green roads by government gave the positive impact on air pollution, 16.4 percent of respondents opined that Green parks & Green roads by government didn't give the positive impact on air pollution and Only six percent of respondents said they were unaware of it. In general, the vast majority of respondents, regardless of their age, agreed that the government's efforts to create green parks and green roads had a beneficial influence on efforts to reduce air pollution.

Overall, within the 15-25 ages of respondents 57.1 percent agreed that Green parks and Green roads by government gave the positive impact on air pollution, 42.9 percent of respondents opined that Green parks & Green roads by government didn't give the positive impact on air pollution. Overall, within the 25-35 ages of respondents 100 percent of respondents agreed that Green parks and Green roads by government gave the positive impact on air pollution. Overall, within the 35- 45 ages of respondents 81 percent agreed that Green parks and Green roads by government gave the positive impact on air pollution, 15.5 percent of respondents opined that Green parks & Green roads by government didn't give the positive impact on air pollution and 3.4 percent stated that they don't know about it. Overall, within the 45-55 ages of respondents 75.6 percent agreed that Green parks and Green roads by government gave the positive impact on air pollution, 20 percent of respondents opined that Green parks & Green roads by government didn't give the positive impact on air pollution and 4.4 percent stated that they don't know about it. Overall, within the 55- 65 ages of respondents 71 percent agreed that Green parks and Green roads by government gave the positive impact on air pollution, 18.8 percent of respondents opined that Green parks & Green roads by government didn't give the positive impact on air pollution and 10.1 percent stated that they don't know about it. Overall, within above 65 ages of respondents 70.3 percent agreed that Green parks and Green roads by government gave the positive impact on air pollution, 18.9 percent of respondents opined that Green parks & Green roads by government didn't give the positive impact on air pollution and 10.8 percent stated that they don't know about it.

Sangameswara Rao from Panjagutta expressed that green parks and green roads by the government are giving good results. It's a good initiative of government. these are reducing the level of air pollution in Hyderabad as a whole.

Table-5.21: Education wise response on Green parks & Green roads by government gives the positive impact on air pollution

Education	Green parks & Green roads by government gives the positive impact			Total
	Yes	No	DK	
Illiterate	16	3	0	19
	84.2%	15.8%	.0%	100.0%
Primary to Secondary	19	22	11	52
	36.5%	42.3%	21.2%	100.0%
Inter to Degree	81	6	3	90
	90.0%	6.7%	3.3%	100.0%
PG and Above	78	10	1	89
	87.6%	11.2%	1.1%	100.0%
Total	194	41	15	250
	77.6%	16.4%	6.0%	100.0%

Source: Field study Data

The responses of respondents on their educational backgrounds are listed in the table above on Green parks and Green roads by government gives the positive impact on air pollution. Total numbers of respondents are 250 altogether, 77.6 percent of respondents stated that Green parks and Green roads by government gave the positive impact on air pollution, 16.4 percent of respondents accepted that Green parks & Green roads by government didn't give the positive impact on air pollution and 6 percent of respondents stated that they are unaware of it. Overall, majority of the respondents irrespective of their education said that Green parks and Green roads by government gave the positive impact on air pollution.

Overall, within the Illiterate 84.2 percent of respondents stated that Green parks and Green roads by government gave the positive impact on air pollution, 15.8 percent of respondents agreed that Green parks & Green roads by government didn't give the positive impact on air pollution. Overall, within the Primary to Secondary education of respondents 36.5 percent said that Green parks and Green roads by government gave the positive impact on air pollution, 42.3 percent of respondents stated that Green parks & Green roads by government didn't give the positive impact on air pollution and 21.2 percent agreed that they don't know about it. Overall, within the Inter to Degree education of respondents 90 percent expressed that Green parks

and Green roads by government gave the positive impact on air pollution, 6.7 percent of respondents opined that Green parks & Green roads by government didn't give the positive impact on air pollution and 3,3 percent of people gave the response that they were unaware of it. Overall, within the PG and above education of respondents 87.6 percent said that Green parks and Green roads by government gave the positive impact on air pollution, 11.2 percent of respondents accepted that Green parks & Green roads by government didn't give the positive impact on air pollution and 1.1 percent expressed that they don't know about it.

Table-5.22: Gender wise response on Green parks & Green roads by government gives the positive impact on air pollution

Gender	**Green parks & Green roads by government gives the positive impact**			**Total**
	Yes	No	DK	
Male	131	41	8	180
	72.8%	22.8%	4.4%	100.0%
Female	63	0	7	70
	90.0%	.0%	10.0%	100.0%
Total	194	41	15	250
	77.6%	16.4%	6.0%	100.0%

Source: Field study Data

The table that follows presents, gender wise responses of respondents to the proposition that the creation of green parks and green roads by governments has a favourable impact on air pollution. Total numbers of respondents are 250 altogether, 77.6 percent of respondents agreed that Green parks and Green roads by government gave the positive impact on air pollution, 16.4 percent of respondents expressed that Green parks & Green roads by government didn't give the positive impact on air pollution and 6 percent of respondents said that they were unaware of it. In general, the vast majority of respondents, regardless of the level of education they held, believed that green parks and green roads created by the government had a favourable impact on reducing air pollution.

Overall, within the male 72.8 percent of respondents accepted that Green parks and Green roads by government gave the positive impact on air pollution, 22.8 percent of respondents agreed that Green parks & Green roads by government didn't

give the positive impact on air pollution and 4.4 percent stated that they don't know about it.

Overall, within the female 90 percent of respondents agreed that Green parks and Green roads by government gave the positive impact on air pollution, and 10 percent expressed that they don't know about it.

Table-5.23: Gender wise response on civil society organisations took efforts to aware people about air pollution

Age	civil society organisations took efforts to aware people			Total
	yes	no	DK	
15-25	6	1	0	7
	85.7%	14.3%	.0%	100.0%
25-35	6	28	0	34
	17.6%	82.4%	.0%	100.0%
35- 45	21	33	4	58
	36.2%	56.9%	6.9%	100.0%
45- 55	24	18	3	45
	53.3%	40.0%	6.7%	100.0%
55- 65	38	21	10	69
	55.1%	30.4%	14.5%	100.0%
> 65	25	9	3	37
	67.6%	24.3%	8.1%	100.0%
Total	120	110	20	250
	48.0%	44.0%	8.0%	100.0%

Source: Field study Data

The responses of respondents, broken down by age in the table above, provide some insight into the efforts that civil society organisations have made to educate people about the dangers of air pollution. There were a total of 250 people who participated in the survey, and responses indicated that 48 percent of them believed that civil society organisations made an attempt to educate people about air pollution, 44 percent of respondents expressed that civil society organisations didn't take any efforts to aware people about air pollution and Only eight percent of respondents indicated that they were unaware of it. Overall, majority of the respondents irrespective of their age expressed mixed opinion and only 48 percent said that civil society organisations took efforts to aware people about air pollution.

Overall, within the 15-25 ages of respondents 85.7 percent stated that civil society organisations took efforts to aware people about air pollution, 14.3 percent of respondents accepted that civil society organisations didn't take any efforts to aware people about air pollution. Overall, within the 25-35ages of respondents 17.6 percent opined that civil society organisations took efforts to aware people about air pollution, 82.4 percent of respondents agreed that civil society organisations didn't take any efforts to aware people about air pollution. Overall, within the 35- 45 ages of respondents 36.2 percent agreed that civil society organisations took efforts to aware people about air pollution, 56.9 percent of respondents expressed that civil society organisations didn't take any efforts to aware people about air pollution and 6.9 percent opined that they don't know about it. Overall, within the 45- 55 ages of respondents 53.3 percent stated that civil society organisations took efforts to aware people about air pollution, 40 percent of respondents expressed that civil society organisations didn't take any efforts to aware people about air pollution and 6,7 percent of respondents stated that they are unaware about it. Overall, within the 55- 65 ages of respondents 55.1 percent agreed that civil society organisations took efforts to aware people about air pollution, 30.4 percent of respondents expressed that civil society organisations didn't take any efforts to aware people about air pollution and 14.5 percent opined that they don't know about it. Overall, within above 65 ages of respondents 67.6 percent agreed that civil society organisations took efforts to aware people about air pollution, 24.3 percent of respondents expressed that civil society organisations didn't take any efforts to aware people about air pollution and 8.1 percent said that they don't know about it.

Suneetha from Bolakpur expressed that civil society organizations took efforts to aware people about air pollution like conducting air pollution awareness campus, keeping holding in the junctions and distributing hand palmlets.

Table-5.24: Occupation wise response on civil society organisations took efforts to aware people about air pollution

Occupation	civil society organisations took efforts to aware people			Total
	yes	no	DK	
Laborer	1	19	0	20
	5.0%	95.0%	.0%	100.0%
Driver	31	8	11	50
	62.0%	16.0%	22.0%	100.0%
Employee	37	11	4	52
	71.2%	21.2%	7.7%	100.0%
Home maker	26	14	0	40
	65.0%	35.0%	.0%	100.0%
Academician	11	1	0	12
	91.7%	8.3%	.0%	100.0%
Activist	7	11	0	18
	38.9%	61.1%	.0%	100.0%
Student	3	5	0	8
	37.5%	62.5%	.0%	100.0%
Bureaucrats	4	41	5	50
	8.0%	82.0%	10.0%	100.0%
Total	120	110	20	250
	48.0%	44.0%	8.0%	100.0%

Source: Field study Data

The table that follows displays, according to the respondents' occupations, their reflections on the efforts that civil society organisations have taken to educate people about the dangers of air pollution. There were a total of 250 people who participated in the survey, and of those people, 48 percent said that civil society organisations made efforts to educate people about air pollution, 44 percent said that civil society organisations did not make any efforts to educate people about air pollution, and 8 percent said that they were unaware of the topic. In general, the majority of respondents, regardless of their occupation, had mixed opinions, and just 48 percent said that civil society organisations made attempts to educate people about the dangers of air pollution.

Table-5.25: Reflections of respondents who follow day to day politics on political parties took efforts to aware people about air pollution

follow day to day politics	political parties took efforts to aware people and to make appropriate laws			Total
	Yes	No	DK	
Yes	120	99	3	222
	54.1%	44.6%	1.4%	100.0%
No	28	0	0	28
	100.0%	.0%	.0%	100.0%
Total	148	99	3	250
	59.2%	39.6%	1.2%	100.0%

Source: Field study Data

The responses of respondents who keep up with day-to-day politics are depicted in the table above, and they discuss the efforts that political parties have made to educate people about the dangers of air pollution. Total numbers of respondents are 250 altogether, 59.2 percent of respondents stated that political parties took efforts to aware people about air pollution, 39.6 percent of respondents accepted that political parties didn't take any efforts to aware people about air pollution and Only 1.2 percent of respondents said that they were unaware of it. In general, the majority of respondents, regardless of their level of understanding, expressed the opinion that political parties made attempts to educate the general public about the dangers of air pollution.

In general, among those respondents who follow day-to-day politics, 54.1 percent of respondents stated that political parties took efforts to aware people about air pollution, 44.6 percent of respondents accepted that political parties did not take any efforts to aware people about air pollution, and 1.4 percent of respondents opined that they do not know about it. Overall, among respondents who don't follow politics on a day-to-day basis, one hundred percent of them felt that political parties made attempts to educate people about the dangers of air pollution.

Sai Kumar from Amberpet without any hesitation expressed that political parties didnt take any efforts to aware people and always they are busy in doing politics only but there is no social service activities from them.

Table-5.26: Reflections of respondents who affiliated to any Civil Society Organization on political parties took efforts to aware people about air pollution

affiliated to any Civil Society Organization	political parties took efforts to aware people and to make appropriate laws			Total
	Yes	No	DK	
YES	143	2	2	147
	97.3%	1.4%	1.4%	100.0%
NO	5	97	1	103
	4.9%	94.2%	1.0%	100.0%
Total	148	99	3	250
	59.2%	39.6%	1.2%	100.0%

Source: Field study Data

The responses of respondents who were affiliated with any Civil Society Organization are presented in the table above. These respondents were asked to reflect on the efforts that political parties made to educate people about the dangers of air pollution. Total numbers of respondents are 250 altogether, 59.2 percent of respondents accepted that political parties took efforts to aware people about air pollution, 39.6 percent of respondents said that political parties didn't take any efforts to aware people about air pollution and Only 1.2 percent of respondents said that they were unaware of it. Overall, majority of the respondents irrespective of their affiliations stated that political parties took efforts to aware people about air pollution.

Overall, within who affiliated to Civil Society Organization 97.3 percent of respondents accepted that political parties took efforts to aware people about air pollution, 1.4 percent of respondents accepted that political parties didn't take any efforts to aware people about air pollution and Only 1.4 percent of respondents said that they were unaware of it. Overall, among those who were not associated with any particular Civil Society Organization Only 4.9 percent of respondents were willing to acknowledge that political parties made attempts to educate people about the dangers of air pollution, 94.2 percent of respondents accepted that political parties didn't take any efforts to aware people about air pollution and 1 percent said that they don't know about it.

Table-5.27: Education wise response on political parties took efforts to aware people about air pollution

Education	political parties took efforts to aware people and to make appropriate laws			Total
	Yes	No	DK	
Illiterate	4	14	1	19
	21.1%	73.7%	5.3%	100.0%
Primary to Secondary	14	38	0	52
	26.9%	73.1%	.0%	100.0%
Inter to Degree	63	26	1	90
	70.0%	28.9%	1.1%	100.0%
PG and Above	67	21	1	89
	75.3%	23.6%	1.1%	100.0%
Total	148	99	3	250
	59.2%	39.6%	1.2%	100.0%

Source: Field study Data

The table that follows provides an explanation of the education-wise reflections that respondents have made regarding the efforts that political parties have taken to aware people about air pollution. There were a total of 250 people who participated in the survey; 59.2 percent of respondents agreed that political parties took efforts to aware people about air pollution, 39.6 percent of respondents expressed that political parties did not take any efforts to aware people about air pollution, and 1.2 percent of respondents admitted that they do not know about it. The vast majority of respondents, regardless of the level of education they held, were of the opinion that political parties made attempts to educate the public about the dangers of air pollution.

Overall, within illiterate 21.1 percent of respondents said that political parties took efforts to aware people about air pollution, 73.7 percent of respondents stated that political parties didn't take any efforts to aware people about air pollution and 5.3 percent opined that they don't know about it. Overall, within Primary to Secondary education of respondents 26.9 percent accepted that political parties took efforts to aware people about air pollution, 73.1 percent of respondents expressed that political parties didn't take any efforts to aware people about air pollution. Overall, within

Inter to Degree educated respondents 70 percent stated that political parties took efforts to aware people about air pollution, 28.9 percent of respondents agreed that political parties didn't take any efforts to aware people about air pollution and 1.1 percent accepted that they don't know about it. Overall, within PG and above educated respondents 75.3 percent expressed that political parties took efforts to aware people about air pollution, 23.6 percent of respondents said that political parties didn't take any efforts to aware people about air pollution and 1.1 percent opined that they don't know about it.

Table-5.28: Reflections of respondents who follow day to day politics on media is giving proper coverage to air pollution and its effects

follow day to day politics	**media is giving proper coverage to air pollution and its effects**		**Total**
	Yes	No	
Yes	82	140	222
	36.9%	63.1%	100.0%
No	4	24	28
	14.3%	85.7%	100.0%
Total	86	164	250
	34.4%	65.6%	100.0%

Source: Field study Data

The responses of respondents who keep up with day-to-day politics are depicted in the table above, and they discuss whether or not they believe the media provides adequate coverage of the effects of air pollution. There were a total of 250 people who participated in the survey, and among those people, 34.4 percent of respondents stated that the media is providing appropriate coverage to air pollution and its effects, whereas 65.6 percent of respondents accepted that the media is not providing appropriate coverage to air pollution and its effects. In general, the vast majority of respondents, regardless of the level of understanding they possessed, expressed the view that the media does not give adequate coverage to air pollution and the impacts it has.

Overall, among respondents who follow day-to-day politics, 36.9 percent said that the media is giving appropriate coverage to air pollution and its effects, while

63.1 percent said that the media is not giving appropriate coverage to air pollution and its effects. Overall, among those who don't follow day-to-day politics, 14.3 percent agreed that the media is giving appropriate coverage to air pollution and its impacts, while 85.7 percent agreed that the media is not giving appropriate coverage to air pollution and its effects.

Table-5.29: Education wise response on media is giving proper coverage to air pollution and its effects

Education	Media is giving proper coverage to air pollution and its effects		Total
	Yes	No	
Illiterate	0	19	19
	.0%	100.0%	100.0%
Primary to Secondary	8	44	52
	15.4%	84.6%	100.0%
Inter to Degree	41	49	90
	45.6%	54.4%	100.0%
PG and Above	37	52	89
	41.6%	58.4%	100.0%
Total	86	164	250
	34.4%	65.6%	100.0%

Source: Field study Data

The table that follows displays the responses of respondents, broken down by education level, about whether or not the media provides adequate coverage of the effects of air pollution. There were a total of 250 people who participated in the survey; of those, 34.4 percent of respondents agreed that the media is providing appropriate coverage to air pollution and its effects, while 65.6 percent of respondents believed that the media is not providing appropriate coverage to air pollution and its effects. The vast majority of respondents, regardless of the level of education they had, expressed the opinion that the media does not provide sufficient coverage of the effects of air pollution.

Overall, within illiterate 100 percent of respondents expressed that media is not giving proper coverage to air pollution and its effects. Overall, within Primary to Secondary educated respondents 15.4 percent stated that media is giving proper

coverage to air pollution and its effects and 84.6 percent of respondents opined that media is not giving proper coverage to air pollution and its effects. Overall, within Inter to Degree educated respondents 45.6 percent said that media is giving proper coverage to air pollution and its effects and 54.4 percent of respondents accepted that media is not giving proper coverage to air pollution and its effects. Overall, within PG and above educated respondents 41.6 percent agreed that media is giving proper coverage to air pollution and its effects and 58.4 percent of respondents opined that media is not giving proper coverage to air pollution and its effects.

Table-5.30: Gender wise response on media is giving proper coverage to air pollution and its effects

Gender	**media is giving proper coverage to air pollution and its effects**		**Total**
	Yes	No	
Male	65	115	180
	36.1%	63.9%	100.0%
Female	21	49	70
	30.0%	70.0%	100.0%
Total	86	164	250
	34.4%	65.6%	100.0%

Source: Field study Data

The gender-specific reflections of respondents on whether or not the media is providing adequate coverage of air pollution and its impacts may be seen in the table that was just presented. There were a total of 250 people who participated in the survey; of those, 34.4 percent of respondents stated that the media provides appropriate coverage of air pollution and its effects, while 65.6 percent of respondents stated that the media does not provide appropriate coverage of air pollution and its effects. The vast majority of respondents, regardless of the gender of those who participated, were of the opinion that the media does not give adequate coverage to the effects of air pollution.

Overall, within male 36.1 percent of respondents reported media is not giving proper coverage to air pollution and its effects and 63.9 percent of the respondents indicated media is not giving proper coverage to air pollution and its effects. Overall, within female 30% of respondents agreed that the media does not adequately cover air

pollution and its effects, whereas 70% of respondents felt that the media does not adequately cover air pollution and its effects.

Table-5.31: Age wise response on level of air pollution is decreased globally after COVID

Age	**level of air pollution is decreased globally after COVID**		**Total**
	Yes	No	
15-25	6	1	7
	85.7%	14.3%	100.0%
25-35	33	1	34
	97.1%	2.9%	100.0%
35- 45	54	4	58
	93.1%	6.9%	100.0%
45- 55	41	4	45
	91.1%	8.9%	100.0%
55- 65	65	4	69
	94.2%	5.8%	100.0%
> 65	35	2	37
	94.6%	5.4%	100.0%
Total	234	16	250
	93.6%	6.4%	100.0%

Source: Field study Data

According to the data presented in the table above, the majority of respondents, regardless of age, believe that the level of air pollution has decreased since COVID was conducted. There were a total of 250 people who participated in the survey, and 93.6 percent of those people reported that the level of air pollution has decreased internationally as a result of COVID and 6.4 percent of respondents expressed that level of air pollution is not decrease globally after COVID. Overall, majority of the respondents irrespective of their age opined that level of air pollution is decreased globally after COVID.

Overall, within 15-25 ages of respondents 85.7 percent expressed that level of air pollution is decreased globally after COVID and 14.3 percent of respondents expressed that level of air pollution is not decrease globally after COVID. Overall, within 25-35 ages of respondents 85.7 percent expressed that level of air pollution is decreased globally after COVID and 14.3 percent of respondents expressed that level

of air pollution is not decrease globally after COVID. Overall, within 35- 45 ages of respondents 93.1 percent expressed that level of air pollution is decreased globally after COVID and 6.9 percent of respondents expressed that level of air pollution is not decrease globally after COVID. Overall, within 45-55 ages of respondents 91.1 percent expressed that level of air pollution is decreased globally after COVID and 8.9 percent of respondents expressed that level of air pollution is not decrease globally after COVID. Overall, within 55- 65 ages of respondents 94.2 percent expressed that level of air pollution is decreased globally after COVID and 5.8 percent of respondents expressed that level of air pollution is not decrease globally after COVID. Overall, within above 65 ages of respondents 94.6 percent expressed that level of air pollution is decreased globally after COVID and 5.4 percent of respondents expressed that level of air pollution is not decrease globally after COVID.

Table-5.32: Reflection of respondents who affiliated to any Civil Society Organization on level of air pollution is decreased globally after COVID

affiliated to any Civil Society Organization	**level of air pollution is decreased globally after COVID**		**Total**
	Yes	No	
YES	146	1	147
	99.3%	.7%	100.0%
NO	88	15	103
	85.4%	14.6%	100.0%
Total	234	16	250
	93.6%	6.4%	100.0%

Source: Field study Data

The data presented in the table above reflect the opinions of respondents who are involved with some type of civil society organisation. These respondents believe that the overall level of air pollution has decreased as a result of COVID. Total numbers of respondents are 250 altogether, 93.6 percent of respondents stated that level of air pollution is decreased globally after COVID and 6.4 percent of respondents expressed that level of air pollution is not decrease globally after COVID. Overall, majority of the respondents irrespective of their affiliations opined that level of air pollution is decreased globally after COVID.

Overall, within who affiliated to any Civil Society Organization 99.3 percent expressed that level of air pollution is decreased globally after COVID and 0.7 percent of respondents expressed that level of air pollution is not decrease globally after COVID. Overall, within who didn't affiliate to any Civil Society Organization 85.4 percent expressed that level of air pollution is decreased globally after COVID and 14.6 percent of respondents expressed that level of air pollution is not decrease globally after COVID.

Table-5.33: Gender wise response on level of air pollution is decreased globally after COVID

Gender	**level of air pollution is decreased globally after COVID**		**Total**
	Yes	No	
Male	176	4	180
	97.8%	2.2%	100.0%
Female	58	12	70
	82.9%	17.1%	100.0%
Total	234	16	250
	93.6%	6.4%	100.0%

Source: Field study Data

According to the results presented in the table above, respondents of both sexes agree that the overall level of air pollution has decreased since COVID was conducted. There were a total of 250 people who participated in the survey, and 93.6 percent of those people reported that the level of air pollution has decreased internationally as a result of COVID and 6.4 percent of respondents expressed that level of air pollution is not decrease globally after COVID. Overall, majority of the respondents irrespective of their gender opined that level of air pollution is decreased globally after COVID.

Overall, within male 97.8 percent expressed that level of air pollution is decreased globally after COVID and 2.2 percent of respondents expressed that level of air pollution is not decrease globally after COVID. Overall, within who didn't affiliate to any Civil Society Organization 82.9 percent expressed that level of air pollution is decreased globally after COVID and 17.1 percent of respondents expressed that level of air pollution is not decrease globally after COVID.

Table-5.34: Age wise response on any noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID

Age	any noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID			Total
	Yes	No	DK	
15-25	4	3	0	7
	57.1%	42.9%	.0%	100.0%
25-35	34	0	0	34
	100.0%	.0%	.0%	100.0%
35- 45	45	12	1	58
	77.6%	20.7%	1.7%	100.0%
45- 55	31	11	3	45
	68.9%	24.4%	6.7%	100.0%
55- 65	52	17	0	69
	75.4%	24.6%	.0%	100.0%
> 65	27	10	0	37
	73.0%	27.0%	.0%	100.0%
Total	193	53	4	250
	77.2%	21.2%	1.6%	100.0%

Source: Field study Data

The following table presents the responses of respondents, broken down according to gender, regarding any discernible shifts in the level of air pollution in Hyderabad both before and after the implementation of COVID. Total numbers of respondents are 250 altogether, 93.6 percent of respondents stated that noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID and 6.4 percent of respondents expressed that there are no noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID. Overall, majority of the respondents irrespective of their gender opined that noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID.

Overall, within 15-25 ages of respondents 57.1 percent expressed that noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID and 42.9 percent of respondents expressed that there are no noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID. Overall, within 25-35 ages of respondents 100 percent expressed that there

are noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID. Overall, within 35- 45 ages of respondents 77.6 percent expressed that there are noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID and 20.7 percent of respondents expressed that there are no noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID. Overall, within 45- 55 ages of respondents 68.9 percent expressed that there are noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID and 24.4 percent of respondents expressed that there are no noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID. Overall, within 55- 65 ages of respondents 75.4 percent expressed that there are noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID and 24.6 percent of respondents expressed that there are no noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID. Overall, within above 65 ages of respondents 73 percent expressed that there are noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID and 27 percent of respondents expressed that there are no noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID.

Table-5.35: Reflection of respondents who affiliated to Civil Society Organization on any noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID.

affiliated to any Civil Society Organization	**any noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID**			**Total**
	Yes	No	DK	
YES	140	3	4	147
	95.2%	2.0%	2.7%	100.0%
NO	53	50	0	103
	51.5%	48.5%	.0%	100.0%
Total	193	53	4	250
	77.2%	21.2%	1.6%	100.0%

Source: Field study Data

The table that follows provides an explanation of the thoughts of respondents who were affiliated with Civil Society Organizations on any noticeable changes in the level of air pollution in Hyderabad both before and after the time of COVID. There were a total of 250 people who participated in the survey; of those, 77.2 percent of

respondents stated that there are noticeable changes in the level of air pollution in Hyderabad before and after the time of COVID, 21.2 percent of respondents expressed that there is no noticeable change in the level of air pollution in Hyderabad before and after the time of COVID, and 1.6 percent of respondents expressed that they don't know. In general, the vast majority of respondents, regardless of the groups to which they belonged, were of the opinion that there had been discernible shifts in the level of air pollution in Hyderabad both before and after the time of COVID.

95.2 percent of respondents who were affiliated with a Civil Society Organization said that there are noticeable changes in the level of air pollution in Hyderabad before and after the time of COVID. Two percent of respondents said that there is no noticeable change in the level of air pollution in Hyderabad before and after the time of COVID, and 2.7 percent of respondents said that they don't know. In general, among respondents who are not affiliated with any Civil Society Organization, 51.5 percent of respondents stated that there are noticeable changes in the level of air pollution in Hyderabad both before and after the time of COVID, while 48.5 percent of respondents expressed that there is no noticeable change in the level of air pollution in Hyderabad both before and after the time of COVID.

Table-5.36: Gender wise response on any noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID.

Gender	**any noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID**			**Total**
	Yes	No	DK	
Male	132	45	3	180
	73.3%	25.0%	1.7%	100.0%
Female	61	8	1	70
	87.1%	11.4%	1.4%	100.0%
Total	193	53	4	250
	77.2%	21.2%	1.6%	100.0%

Source: Field study Data

The following table presents the responses of respondents broken down according to gender about any discernible shifts in the level of air pollution in Hyderabad both before and after the implementation of COVID. There were a total of

250 people who participated in the survey; of those, 77.2 percent of respondents stated that there are noticeable changes in the level of air pollution in Hyderabad before and after the time of COVID, 21.2 percent of respondents expressed that there is no noticeable change in the level of air pollution in Hyderabad before and after the time of COVID, and 1.6 percent of respondents expressed that they don't know. In general, the majority of respondents of both sexes agreed, regardless of whether they were male or female, that there have been discernible shifts in the level of air pollution in Hyderabad both before and after the time of COVID.

In general, among male respondents, 73.3 percent of respondents stated that there are noticeable changes in the level of air pollution in the Hyderabad before and after the time of COVID, while 25 percent of respondents expressed that there is no noticeable change in the level of air pollution in the Hyderabad before and after the time of COVID, and 1.7 percent of respondents expressed that they don't know. Overall, among female respondents, 87.1% of respondents stated that there are noticeable changes in the level of air pollution in the Hyderabad before and after the time of COVID. On the other hand, 11.4% of respondents expressed that there is no noticeable change in the level of air pollution in the Hyderabad before and after the time of COVID, and 1.4% of respondents stated that they don't know.

Table-5.37: Reflections of respondents who follow day to day politics on hindrances to control the air pollution

follow day to day politics	**hindrances to control the air pollution**				**Total**
	Negligence of Government	Lack of awareness	Peoples negligence	all of the above	
Yes	61	41	29	91	222
	27.5%	18.5%	13.1%	41.0%	100.0%
No	2	6	5	15	28
	7.1%	21.4%	17.9%	53.6%	100.0%
Total	63	47	34	106	250
	25.2%	18.8%	13.6%	42.4%	100.0%

Source: Field study Data

The table that you can see above displays the responses of individuals who follow day-to-day politics regarding the obstacles that stand in the way of controlling the air pollution. Total numbers of respondents are 250 altogether, 25.2% of

respondents reported that negligence of Government is most hindrance to control the air pollution, 18.8% of respondents agreed with that lack of awareness is most hindrance to control the air pollution, 13.6% of respondents agreed with that peoples negligence is most hindrance to control the air pollution, 42.4% of respondents strongly agreed with that above all reasons are hindrances to control the air pollution. Overall, majority of the respondents irrespective of their awareness expressed that above all reasons are hindrances to control the air pollution.

Overall, within who follow day to day politics 7.1 percent of respondents stated that negligence of Government is most hindrance to control the air pollution, 21.4 percent of respondents accepted that lack of awareness is most hindrance to control the air pollution, 13.1 percent of respondents accepted that peoples negligence is most hindrance to control the air pollution, 41 percent of respondents accepted that above all reasons are hindrances to control the air pollution. Overall, within who don't follow day to day politics 27.5 percent of respondents stated that negligence of Government is most hindrance to control the air pollution, 18.5 percent of respondents accepted that lack of awareness is most hindrance to control the air pollution, 17.9 percent of respondents accepted that peoples negligence is most hindrance to control the air pollution, 53.6 percent of respondents accepted that above all reasons are hindrances to control the air pollution.

Table-5.38: Reflections of respondents who have political affiliations on hindrances to control the air pollution

political affiliations	**hindrances to control the air pollution**				**Total**
	Negligence of Government	Lack of awareness	Peoples negligence	all of the above	
Yes	24	19	16	21	80
	30.0%	23.8%	20.0%	26.2%	100.0%
No	39	28	18	85	170
	22.9%	16.5%	10.6%	50.0%	100.0%
Total	63	47	34	106	250
	25.2%	18.8%	13.6%	42.4%	100.0%

Source: Field study Data

The responses of respondents who identified themselves as having political affiliations are depicted in the table above. These respondents were asked about the

challenges they face in attempting to control air pollution. Total numbers of respondents are 250 altogether, 25.2% of respondents reported that negligence of Government is most hindrance to control the air pollution, 18.8% of respondents agreed with that lack of awareness is most hindrance to control the air pollution, 13.6% of respondents agreed with that peoples negligence is most hindrance to control the air pollution, 42.4 percent of respondents agreed that above all reasons are hindrances to control the air pollution. Overall, majority of the respondents irrespective of their apolitical affiliations expressed that above all reasons are hindrances to control the air pollution.

Overall, within who have political affiliations 30 percent of respondents stated that negligence of Government is most hindrance to control the air pollution, 23.8% of respondents agreed with that ack of awareness is most hindrance to control the air pollution, 20% of respondents agreed with that peoples negligence is most hindrance to control the air pollution, 26.2% of respondents agreed with that above all reasons are hindrances to control the air pollution. Overall, within who don't have political affiliations 22.9 percent of respondents stated that negligence of Government is most hindrance to control the air pollution, 16.5 percent of respondents accepted that lack of awareness is most hindrance to control the air pollution, 10.6 percent of respondents accepted that peoples negligence is most hindrance to control the air pollution and 50 percent of respondents accepted that above all reasons are hindrances to control the air pollution.

Table-5.39: Education wise response on hindrances to control the air pollution

Education	hindrances to control the air pollution				Total
	Negligence of Government	Lack of awareness	Peoples negligence	all of the above	
Illiterate	6	6	4	3	19
	31.6%	31.6%	21.1%	15.8%	100.0%
Primary to Secondary	19	7	11	15	52
	36.5%	13.5%	21.2%	28.8%	100.0%
Inter to Degree	22	18	7	43	90
	24.4%	20.0%	7.8%	47.8%	100.0%
PG and Above	16	16	12	45	89
	18.0%	18.0%	13.5%	50.6%	100.0%
Total	63	47	34	106	250
	25.2%	18.8%	13.6%	42.4%	100.0%

Source: Field study Data

The table that follows displays the responses that respondents gave on the education-related obstacles that stand in the way of controlling air pollution. There were a total of 250 people who participated in the survey, and 25.2% of those people said that the neglect of the government is the most significant obstacle in the way of controlling air pollution, 18.8 percent of those polled agreed that lack of awareness is most hindrance to control the air pollution, 13.6% of respondents strongly agreed with that peoples negligence is most hindrance to control the air pollution, 42.4% of respondents agreed with that above all reasons are hindrances to control the air pollution. Overall, majority of the respondents irrespective of their apolitical affiliations expressed that above all reasons are hindrances to control the air pollution.

Overall, within illiterates 31.6 percent of respondents stated that negligence of Government is most hindrance to control the air pollution, 31.6 percent of respondents concurred that lack of awareness is most hindrance to control the air pollution, 21.1% of respondents agreed with that peoples negligence is most hindrance to control the air pollution, 15.8% of respondents agreed with that above all reasons are hindrances to control the air pollution. Overall, within primary to secondary education of respondents 36.5 percent stated that negligence of Government is most hindrance to control the air pollution, 13.5 percent of respondents accepted that lack of awareness

is most hindrance to control the air pollution, 21.2 percent of respondents accepted that peoples negligence is most hindrance to control the air pollution and 28.8% of respondents agreed with that above all reasons are hindrances to control the air pollution.

Overall, within Inter to Degree education of respondents 24.4 percent stated that negligence of Government is most hindrance to control the air pollution, 20% of respondents agreed with that lack of awareness is most hindrance to control the air pollution, 7.8% of respondents agreed with that peoples negligence is most hindrance to control the air pollution and 48% of respondents agreed with that above all reasons are hindrances to control the air pollution. Overall, within PG and above education of respondents 18 percent stated that negligence of Government is most hindrance to control the air pollution, 18 percent of respondents accepted that lack of awareness is most hindrance to control the air pollution, 13.5 percent of respondents accepted that peoples negligence is most hindrance to control the air pollution and 50.6 percent of respondents accepted that above all reasons are hindrances to control the air pollution.

Vijaya from Jidimetla expressed that negligence of Government, lack of awareness and peoples negligence are hindrances to control the air pollution.

Table-5.40: Caste wise reflections of respondents on your suggestions to improve the air pollution

Category	**suggestions to improve the air pollution**				**Total**
	Proper implementation of policies	create awareness	strict punishments for violations	All of the above	
SC	18	20	2	30	70
	25.7%	28.6%	2.9%	42.9%	100.0%
ST	8	8	1	3	20
	40.0%	40.0%	5.0%	15.0%	100.0%
BC	31	26	5	28	90
	34.4%	28.9%	5.6%	31.1%	100.0%
OC	12	38	4	16	70
	17.1%	54.3%	5.7%	22.9%	100.0%
Total	69	92	12	77	250
	27.6%	36.8%	4.8%	30.8%	100.0%

Source: Field study Data

The table that follows illustrates those responses, broken down by caste, that respondents gave on your suggestions to reduce air pollution. There were a total of 250 people who participated in the survey, and 27.6 percent of those people said that the most important factor in reducing air pollution is the correct execution of policies, 36.8% of respondents agreed with that create awareness among people is most important to improve the air pollution, 4.8% of respondents agreed with that strict punishments for violations is most important to improve the air pollution, 42.4 percent of respondents agreed that above all reasons are most important to improve the air pollution. Overall, majority of the respondents irrespective of their caste expressed that above all reasons are most important to improve the air pollution.

Sanketh said that proper implementation of policies, create awareness and strict punishments for violations are most important action plans will improve the air pollution in Hyderabad.

Table-5.41: Reflection of respondents who have political affiliations on your suggestions to improve the air pollution

political affiliations	**suggestions to improve the air pollution**				**Total**
	Proper implementation of policies	create awareness	strict punishments for violations	All of the above	
Yes	49	9	3	19	80
	61.2%	11.2%	3.8%	23.8%	100.0%
No	20	83	9	58	170
	11.8%	48.8%	5.3%	34.1%	100.0%
Total	69	92	12	77	250
	27.6%	36.8%	4.8%	30.8%	100.0%

Source: Field study Data

The table that you can see above displays the opinions of respondents who identify with various political affiliations on your recommendations to reduce air pollution. Total numbers of respondents are 250 altogether, 27.6 percent of respondents stated that proper implementation of policies is most to improve the air pollution, 36.8 percent of the respondents indicated that create awareness among people is most important to improve the air pollution, That was accepted by 4.8 percent of respondents strict punishments for violations is most important to improve the air pollution, 42.4 percent of respondents agreed that above all reasons are most important to improve the air pollution. Overall, majority of the respondents

irrespective of their political affiliations expressed that above all reasons are most important to improve the air pollution.

Conclusion

This chapter analyses the respondents vies on state, civil society and political parties role and their initiations to mitigate air pollution in the Hyderabad city. Overall, majority of respondents expressed that government has partially implemented the mitigation policies and not taken active initiation to implement the policies.

Majority of respondent's irrespective their education expressed that government established pollution monitoring equipments. Overall, majority of the respondents irrespective of their gender agreed that government is rarely conducting air pollution awareness programs at Hyderabad. Huge number of the respondents expressed that government should follow the Delhi model of even and odd system and should strictly cancel the BS4 vehicles in Hyderabad. Haritha Telangana, Green parks and Green roads are some of the great initiations of Telangana government and those gave the positive impact on air pollution.

It is noteworthy that political parties and leader doing very minimal but civil society organisation are taking great initiations to aware people. interesting point is that media is not giving proper coverage to air pollution and its effects. Overall, majority of the respondents irrespective of their affiliations expressed that negligence of Government, lack of awareness and peoples negligence are hindrances to control the air pollution. Majority of the respondents irrespective of their caste expressed proper implementation of policies, create awareness and strict punishments for violations are most important action plans will improve the air pollution in Hyderabad.

Chapter VI

CONCLUSION

The aim of the present thesis is to evaluate and understand the changing dynamics of Globalisation, Environment and Health with a case study of air pollution impact on health risks in Hyderabad city of Telangana. The study has been explained and analysed with suitable concepts and field data in earlier chapters of the thesis. Finally, it summarizes the chapters and findings of the thesis.

Over the last century, life expectancy has substantially increased, and attaining optimal health for all populations across the globe has become an established international goal. Nevertheless, there is still a gap in terms of health between those who are wealthy and those who are poor, and the prospects for future health are becoming an increasing amount dependent on relative new globalisation trends. The concept of globalisation has always been understood as primarily an economic phenomenon. It is now generally acknowledged as a more all-encompassing phenomenon molded by a range of factors and events rapidly influencing the direction in which our society is moving (Maud MTE Huynen, Pim Martens, and Henk BM Hilderink, 2005).

Air pollution has remained a significant unease to public health throughout the world; especially it has appeared as a severe threatening issue faced by the developing countries. The European developed countries and states of the United States of America (USA) have suffered severe environmental problems due to air pollution. Suppose we compare the current scenario of environmental problems caused by air pollution in developing countries with developed countries that had initiated industrialization decades ago. The environmental problem caused by the air pollution of current creation is more severe due to encroachment of forests, massive use of fossil fuels and energy consumption, demolishment of rural areas to urbanization, reconstructions of high-rise buildings, and excessive use of smoke-emitting transportation: developed which were developed and developing countries. According to a report published by the World Health Organization (WHO) in 2008, air pollution was responsible for 3 million deaths worldwide. Another analysis from 2012

estimated a 3.7 million rise in fatalities. Not only has industrialization had a negative impact, but according to a WHO assessment, household air pollution has also had a negative impact, resulting in two million fatalities in 2008. In 2012, the number of deaths reached 4.3 million. Each year, air pollution is the sole cause of the untimely deaths of 2 million individuals worldwide. According to a 2012 estimate, home and ambient air pollution caused 7 million fatalities.

The polluted air is hazardous to our health. It can cause several severe diseases that can affect us long and short term. The impact of polluted air could vary according to age groups and their immunity level. The less immune age group, like young children and elderly people, are most likely to get more affected by air pollution. People already having lung, asthma, and heart diseases are more likely to suffer in polluted air. The polluted air carries damaging chemicals that can cause harm to any individual. Nonetheless, it is not a matter of whether the person is sustaining the air pollution either for a short time or a long time. Both have it is own effects on the health of vicinity people.

The eyes, nose, and throat can become irritated, and upper respiratory tract infections like bronchitis and pneumonia can also occur. These symptoms only last for a short period. In addition to those, you may also have nausea, headaches, and allergic reactions. Patients suffering from asthma and emphysema may find that short-term exposure to air pollution worsens their conditions. In 1952, severe pollution levels caused a brown haze to descend upon London, which lasted for only a few short days yet claimed the lives of 4,000 people. Long-term health impacts include chronic respiratory illness, cellular breakdown in the lungs, heart disease, brain, nerves, liver, or kidney damage. Chronic respiratory disease is the most common long-term health effect.

Children's lungs are more susceptible to the adverse effects of air pollution, and long-term exposure can worsen existing health problems in the elderly. An average human inhales 16 kg of air and breathes around 22,000 daily. The clean that we breathe is life-supporting. However, contaminants present in the air often cause dangerous effects. These pollutants are a mix of different concentrations, and significant exposure to such natural pollutants will cause medical issues to human health. The immune system of infants and elderly people is weak, due to which they

are at the most risk in such polluted environment. Further, winter weather has more adverse health effects of air pollutants compared to other seasons. Few of the most common and vital air pollutants affect human health. Sulfur dioxide is considered to be the most dangerous pollution gas for humans. This gas is produced by a variety of industries and causes a variety of respiratory problems. Nitrogen oxides and carbon monoxide reduce the delivery of oxygen to the tissues. Lead poisoning is metal poisoning that damages tissue and causes a variety of aberrant behavior patterns. Chronic pulmonary illnesses are mainly caused by suspended particulate matter (SPM). Long-term radioactive isotope exposure causes anemia and increases cancer risk and genetic abnormalities.

After a study of review of the literature, the study has identified some gaps in the literature, and the study has tried to address some of the gaps. Different scholastic works and reports are confined to the causes of pollution and health risks and aspects of globalisation, environment and health. The present work on Hyderabad city has been designed to evaluate environmental pollution and its effect on human health in a Spatio-temporal context through intensive fieldwork. Based on fieldwork, an attempt has also been made to determine attitudes toward air pollution.

The thesis has divided into 6 chapters including of introduction and conclusion. Chapter I '*Introduction to Globalisation, Environment and Health'* explained the relation between globalisation, environment and health with focus of air pollution and its consequences. It also emphasises the literature evaluation pertinent to the subject of the investigation. The emphasis of this chapter is on the research protocol, including the study's problem, objectives, research questions, and methods.

In this chapter first objective was discussed and analysed with suitable concepts. the study is identified that there is a correlation among Globalisation, Environment and Health. In the beginning of globalisation, most of the scholars perceived in economic perspective but the approach was changed to development aspects. This aspect was changed the entire world in to a small village through the communication and information technology. This development aspects were gradually gave adverse effects environment to pollute in various forms across the globe. The environmental pollutions are caused the ill health of the people. Majority

of the scholars agreed it and the present study is also making a note that there is a positive relation among the variables.

Chapter II '*Status of Air Pollution and Mitigation Policies: An Appraisal'* discussed second and third objectives of the study. This chapter discusses status of air pollution and mitigation measures and steps taken to minimise pollution at global and India level. Furthermore, it examines air pollution's effects on people's health in India and worldwide. This chapter has provided a comprehensive overview of three types of air pollution that harm human health: pollution from ambient (open-air) fine particles, pollution from ambient troposphere ozone, and pollution from domestic air at global level. In addition, it elucidates the techniques and beginnings that are being taken to moderate climate change and air pollution to regulate the pollution. At least, it has provided an update on the current state of air pollution and the ramifications that this condition has on a global scale.

Air Pollution is recognised as a significant problem on a global scale. The vast majority of countries are now dealing with issues related to air pollution. The air pollution issue has quickly risen to the top of the list of environmental concerns on every continent. In 2019, air pollution increased to become the fourth most common cause of death worldwide, moving up from its previous position as the fifth most common cause.

The nations of Asia, Africa, and the Middle East continue to be the locations with the highest levels of PM2.5 pollution in their ambient air. In spite of the fact that PM2.5 levels have shown barely noticeable improvements in some regions, there has been almost no progress that can be supported in the region with the highest level of pollution. This is the case even though there have been some regions in which PM2.5 levels have decreased. Since the beginning of this decade, there has been a slow but steady increase in the amount of ozone in the atmosphere of the entire planet. Countries with negligible human development typically have the most severe pollution problems.

In the context of status of air pollution in India it is evident that, In 2019, premature mortality due to air pollution was India's leading cause of death risk,

accounting for around 18 percent of the country's total deaths (more than 1.67 million). When both factors are considered separately, ambient particulate matter (PM2.5) ranks as the fourth most dangerous factor for drivers, and household air pollution (HAP) ranks as the sixth most dangerous factor for drivers. Ozone levels were not among the top 20 most hazardous factors. There is not a single person in India who does not live in an area where the PM2.5 levels are higher than the WHO standard for healthy air (10 ug/m3). 1.67 million people will lose their lives this year due to air pollution. Almost 21 percent of mortality in infants and children under the age of one is attributed to air pollution. Exposure to PM2 in the environment has been linked to over one million deaths.

In 2019, 61 percent of the population cooked with powerful energises, an increase from the previous year. Over 600,000 people have lost their lives due to exposure to the air pollution in their homes. Between the years 2010 and 2019, there was a reduction in people's exposure to PM 2.5 and air pollution from residential sources, but there was an increase in people's exposure to ozone. In India, around 200 monitoring sites report PM 2.5 concentrations. India has the lowest average PM 2.5 exposure of the six countries that are included in the South Asia region. The most significant contributor to untimely deaths in India is found to be air pollution. When adjusted for differences in age, the number of deaths attributable to air pollution in India is 164 for every 100,000 people. In contrast, the number of deaths attributable to air pollution worldwide is 86. 18 percent of all deaths in India can be attributed to air pollution, with 18 percent of those deaths occurring in children under the age of 5 and 18 percent occurring in people over the age of 70.

The government of India has launched a significant number of programs and projects pertaining to the preservation of the environment, in particular, to cut down on the amount of pollution in the air. Despite the piece of evidence that air pollution in India has been reduced because of the many state-level prevention measures that have been implemented, the problem remains a significant one both in India and on a worldwide scale. It's possible that poor air quality could create significant health problems if you're exposed to it over a long period. Air quality is currently a severe concern in India due to the high pace of urbanisation, growth, and industrialization in the country. The fast urbanisation that is taking place in India is one of the primary

factors that is leading to a deterioration in the air quality across the country. The rapid growth of the metropolitan population has led to the development of the metropolitan area in a way that was not expected.

Chapter III '*Understanding Air Pollution and Mitigation Policies in Hyderabad City: An overview'* dealt third objectives of the study. It intended to focus on to understand and review the status of air pollution in Hyderabad city and also gives a brief account of state initiated mitigation policies and programs of air pollution in Hyderabad city.

In the context of the status of air pollution in Hyderabad, we can observe that air pupation in Hyderabad city is gradually increasing even though the government of Telangana has taken measures to reduce air pollution, such as relocating industries, installing the most up-to-date machinery, and equipment, preventing illegal garbage burning and dumping at landfills, enhancing road maintenance, introducing compressed natural gas to the public transportation sector, starting Haritha Telangana, and creating green parks, among other things. It is suggested in numerous surveys and studies that air pollutants are the reason for developing a disease of airway inflammation and aggravating respiratorily and causing different diseases. To ensure for avoiding such unsafe effects due to air pollution, the state ought to follow some recommendations, for example, to follow PPE, increase the rate of Plantation and trees, and to install Air Pollution Control Devices (APCD) scrubbers systems to control the air pollution within standards limits.

This chapter explained respondent views on globalization environment and health and additionally the profile of respondents and field study. The total number of areas is five, namely Jidimetla and Balanagar, Bolak Pur in Museerabad, Amberpet, Karwan, and Katedan in Charminar and Panjagutta. Fifty respondents were taken from each selected area for the purpose of the investigation and 250 respondents. Jidimetla and Balanagar areas are exceptionally exposed to chemical factories, creature skin processing units are concentrated in Bolak Pur area of Museerabad, and note-making point is Bolak Pur area is profoundly exposed to water contamination. Amberpet area is exposed to contamination of water and solid waste, and it is located by the side of Musi River. General oil processing and dead creature oil processing units are concentrated in Karwan and Katedan of Charminar, its located in the old city area. Panjagutta is located in the center of the city it's exceptionally exposed to traffic

pollution. the greater part of the respondents agreed that there is a correlation between globalization, environment and health. globalization is a necessary and natural phenomenon in the world.

Most respondents accepted that globalization is critical for development; however, only 12 percent of respondents said that globalization is certainly not a huge factor for the development and further explained that globalization has adverse effects on overall development. The dominant part of respondents noted that globalization has an adverse impact on the environment, for example, issues like CO2, Smoke, Rise in pollution level, Depletion of Ozone Layer, Deterioration of fields, Chemical Sensitivity, and health problems.

The majority of respondents of all areas accept that globalization is enormous for development, yet 32.4 percent of respondents said that globalization has a partially positive impact on India's growth. 78.8 percent of respondents of all areas are accepted that globalization gave adverse impact on the environment in India however 16.8 percent of respondents said that globalization gave adverse impact on the environment in India. 84.8 percent of respondents of all areas are agreed that environmental pollution is mortifying our health conditions however 11.6 percent of respondents said that environmental pollution isn't mortifying our health conditions and 3.6 percent of the respondents expressed that they don't think about it. 56.4 percent of respondents said that air pollution is giving adverse effects on health. 21.6 percent of respondents expressed that water pollution is having adverse effects on health.

Chapter -IV *'People perception on Air Pollution and Health risks'* explained fourth objective of the study. It is intended to explain the people's perception on air pollution and sources of air pollution. It also highlighted the short- and long-term health hazards that people face, as well as hospital or clinical consequences in specific parts of Hyderabad. It looks at how air pollution has become a serious concern in the modern world, with toxicological consequences for human health. Air pollution originates from a variety of sources, but the most significant contributors are motor vehicles and industrial processes. Particulate pollution, ground-level ozone, carbon monoxide, sulphur oxides, nitrogen oxides, and lead are cited as the six most significant air contaminants by the World Health Organization (WHO). The long-term

and short-term toxicological consequences of air dispersed toxicants on people include a variety of "respiratory and cardiovascular issues, neuropsychiatric problems, eye irritation, skin diseases, and long-term chronic diseases such as cancer. Eye irritation is also one of the consequences". Several studies have found a direct connection between poor air quality and an increase in the number of deaths as well as illnesses related to the cardiovascular system and the respiratory system. Disorders such as asthma, Alzheimer's disease, mental issues, foetal development, and low birth weight are all related to air pollution as a major environmental risk factor.

Most of respondents irrespective of their gender accepted that deaths are caused due to air pollution. 92.4 percent of respondents expressed that they knew the significant sources of air pollution however 7.6 percent of respondents said that they don't have the foggiest idea about the significant sources of air pollution. Overall, laborers, home makers, activists and bureaucrats 100% said that they knew the sources of air pollution with compare to other respondents. 24.4 percent of respondents expressed that industrial pollution, 8 percent of respondents expressed that vehicles or traffic pollution, 6.8 percent of respondents expressed that oil and gas pollution, 6 percent of respondents expressed that contamination of water and waste pollution, 5.6 percent of respondents expressed that indoor pollution and 49.2 percent of respondents expressed that above all sources are causes for air pollution.

68.4 percent of respondents stated that they were aware of the repercussions of air pollution, whereas 31.6 percent of respondents stated that they were clueless regarding the repercussions of air pollution, for example, (1) irritation to eyes, nose and throat, (2) chronic respiratory diseases , (3) pneumonia (4) COPD (Chronic Obstructive Pulmonary Diseases) (5) cellular breakdown in the lungs (6) heart disease (7) damage to the brain, nerves, liver, or kidneys (8) Decreased exercise performance, (9) Dermatitis. Female respondents are more aware of diseases can cause due to air pollution.

Overall, greater part of the respondents are expressed that eight to ten hours of morning have high air pollution during the day. 84 percent of respondents agreed that air pollution annoyed. Greater part of respondents agreed that they visit emergency clinics monthly once and they visit medical clinic early stage. Overall, females are most affected gender with compare to male. High percentage of old age respondents'

sufferers with compare to other gatherings. a large portion of the respondents said we do wear veil while on work on the off chance that it available, Overall, high percentage of respondents said that they are taking protection measures.

Chapter –V *'People perception on Response of State on Air pollution'* elucidated fourth objective of the study. It analysed the respondent views on state, civil society and political parties role and their initiations to mitigate air pollution in the Hyderabad city. It explained that air pollution in cities comes from a variety of sources, which might shift depending on location and development activities. Air pollution is mostly caused by anthropogenic activities such as widespread industrialisation, exploitation and overconsumption of natural resources, and ever-increasing population sizes. The growing problem of air pollution has become a major source of concern, particularly in urban areas. A large number of cities and towns, notably in the area of particulate matter, fail to meet pollution restrictions. Ambient particulate matter concentrations in a few Indian cities are three to four times, if not more, above the standards. Different provisions of the Air (Prevention and Control of Pollution) Act, 1981, and the Environment (Protection) Act, 1985, which prescribe the procedure and authority for dealing with the issue, are applied in order to regulate air quality and carry out efforts to reduce air pollution. These acts were passed in order to prevent and control pollution in the air. The fundamental influence is highlighted with regard to the health of the population. When air pollution is at modest levels, it is highly improbable that young and healthy people will experience any long-term impacts. However, large levels of air pollution and/or long-term exposure to it might cause symptoms and illnesses relating to one's health. This has a predominantly negative impact on the respiratory and inflammatory systems, but it also has the potential to lead to more significant issues such as heart disease. People who already have lung or heart conditions may be particularly vulnerable to the effects of pollution. The issue has been given more attention as a consequence of a number of international investigations that have established a connection between the impact of air pollution on health and the occurrence of diseases and deaths in India. The national government is making significant efforts to reduce the amount of pollution in the air. Regulations have been put in place by both the federal government and state governments around the country in an effort to prevent, manage, and lessen the amount of air pollution that exists.

Interesting point to note that lion's share of respondents expressed that government has partially implemented the mitigation policies and not taken active initiation to implement the policies.75.2 percent of respondents expressed government has established pollution monitoring equipments and 64 percent of respondents expressed government is rarely conducting air pollution awareness programs at Hyderabad. The vast majority of respondents agreed that government ought to follow the Delhi model of even and odd system to control air pollution. 95.2 percent of respondents agreed that government ought to stringently cancel the BS4 vehicles in Hyderabad and 86.8 percent of respondents agreed that Haritha Telangana implemented by government gave the positive impact on air pollution and additionally 77.6 percent of respondents stated that Green parks and Green roads by government gave the positive impact on air pollution.

Finally the thesis has identified that there is a correlation between Globalisation, Environment and Health. It also understood that role of state in mitigating air pollution is needed positive and necessary action. Air pollution is effecting human health in short and long term health risks and also having direct and indirect health issues. Majority of the respondents of the study has expressed various views on different issues. Some of the findings of the study as follows;

Finding of the study

- The study has identified that the highest levels of ambient PM2.5 continue to be found in Asia, Africa, and the Middle East.
- The study observed that Although PM2.5 levels have improved slightly in some areas, there has been little or no persistent gain in the most polluted areas
- The study has identified that global levels of ozone exposure have been continuously increasing over the last decade.
- The study explored that the least developed countries have the lowest air quality.
- The study noted that air pollution caused 6.67 million deaths worldwide in 2019.

- The study explored that ambient PM2.5 is the leading cause of sickness worldwide due to air pollution.

- A number of recent studies have found links between air pollution levels and respiratory disorders, implying that living near busy highways has negative respiratory health consequences.

- In general, air pollution affects the entire population, but characteristics such as a child's lower breathing zone, greater time spent outdoors, immature immunity, and developing organs make them more vulnerable to the harmful effects of air pollutants.

- Several studies have also revealed that traffic-related air pollution has an impact on children's and teenagers' lung function development.

- The study concluded that rising pollution levels necessitated the implementation of adequate air pollution control measures, particularly for PM, which has been related to a greater incidence of death and morbidity in Indian cities as a result of air pollution.

- The study has identified that 82 percent of respondents are accepted that globalisation is important for the development but only 12 percent of respondents said that globalisation is not a important factor for the development and further explained that globalisation is giving adverse effects on the overall development.

- The study has identified that majority respondents accepted that globalisation gave adverse impact on the environment in India.

- The study has identified that female respondents are highly agreed that air pollution is giving adverse effects on health with compare to male.

- The study has identified that female respondents are more aware of diseases can cause due to air pollution.

- The study has found 100 of illiterates and primary to secondary educational back ground respondents expressed that air pollution annoyed them.

- The study has identified that most of the respondents are visit hospitals at early stage.

- The study has found that female affected more to air pollution with compare to male.

- The study has identified that high percentage of old age respondents' sufferers with compare to other age groups.

- The study has found that majority of respondents expressed that government has partially implemented the mitigation policies and not taken active initiation to implement the policies.

- The study has identified that majority of respondent's irrespective their education expressed that government established pollution monitoring equipments.

- The study has found that majority of the respondents irrespective of their gender agreed that government is rarely conducting air pollution awareness programs at Hyderabad.

- The study has identified that majority of the respondents expressed that government should follow the Delhi model of even and odd system.

- The study has found that majority of the respondents irrespective of their religious background expressed that government should strictly cancel the BS4 vehicles in Hyderabad.

- The study has identified that majority of the respondents irrespective of their awareness opined that Haritha Telangana implemented by government gave the positive impact on air pollution.

- The study has found that majority of the respondents irrespective of their education said that Green parks and Green roads by government gave the positive impact on air pollution.

- The study has identified that majority of the respondents irrespective of their age expressed mixed opinion and only 48 percent said that civil society organisations took efforts to aware people about air pollution.

- The study has found that majority of the respondents irrespective of their awareness expressed that media is not giving proper coverage to air pollution and its effects.

- The study has identified that majority of the respondents irrespective of their age opined that level of air pollution is decreased globally after COVID.

- The study has found that majority of the respondents irrespective of their affiliation opined that there are noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID.

- The study has identified that majority of the respondents irrespective of their apolitical affiliations expressed that above all reasons such as negligence of Government, lack of awareness and peoples negligence are hindrances to control the air pollution.

- The study has identified that majority of the respondents irrespective of their caste expressed that above all reasons such as Proper implementation of policies, create awareness and strict punishments for violations are most important to improve the air pollution.

Bibliography

Afroz, R, Hassan, MN & Ibrahim, NA (2003). 'Review of air pollution and health impacts in Malaysia', *Environmental Research*, vol. 92, pp.71-77.

Alberini, Anna & Cropper, Maureen & Fu, Tsu-Tan &Krupnick, Alan & Liu, Jin-Tan & Shaw, Daigee& Harrington, Winston, (1997). "Valuing Health Effects of Air Pollution in Developing Countries: The Case of Taiwan," *Journal of Environmental Economics and Management*, Elsevier, vol. 34(2), 1997, pp.107-126, October.

Amann, M. et al. (2008). *Health risks of ozone from long-range Tran boundary air pollution.* Copenhagen: World Health Organization Regional Office for Europe.

Amartya Sen, (1981). *Poverty and Famines: An Essay on Entitlement and Deprivation*, Oxford: Clarendon Press.

Amitave Mukerjee, (1993). *Environment and Development Views From the East and West*, New Delhi: Concept Publishing Company,

Anil Kumar and Umesh Prasad Singh, (1990). *Environmental Protection and Industrial Development*, New Delhi: Ashish Publishing House.

Anna Alberini& Alan Krupnick,. (1997). "Air Pollution and Acute Respiratory Illness: Evidence from Taiwan and Los Angeles," *American Journal of Agricultural Economics,* Agricultural and Applied Economics Association, vol. 79(5), pp.1620-1624.

APPCB. (2006). Analysis of air pollution and health impacts in Hyderabad. APPCB report submitted to Burelal Committee. Hyderabad: Govt. of India, Andhra Pradesh Pollution Control Board.

Apte JS, Brauer M, Cohen AJ, Ezzati M, Pope CA (2018). Ambient PM2.5 reduces global and regional life expectancy. *Environ Sci Tech- nol Lett* 5:546–551.

Arkadipta Ghosh and Arnab Mukherji (2014). Air Pollution and Respiratory Ailments among Children in Urban India: Exploring Causality, *Economic Development and Cultural Change* Vol. 63, No. 1 (October), pp.191-222

Arshdeep Singh & Jaypreet Singh Kohli (2012). 'Effect of Pollution on Common Man in India: A Legal Perspective', Advances in Life Science and Technology, vol. 4, pp. 35-41.

Atul Kohli, (1990). *Democracy and Dissent: India's Growing Crisis of Governability*, Cambridge: Cambridge University Press.

Avijit Gupta (1988). *Ecology and Development in the Third World,* London: Routledge.

Barman, S. C., Kumar, N., Singh, R., Kisku, G. C., Khan, A. H., Kidwai, M. M., Murthy, R. C., Negi, M.P.S., Pandey, P., Verma, A. K., Jain, G. and Bhargava, S. K. (2010). Assessment of urban air pollution and it's probable health impact. *Journal of Environmental Biology*, Vol. 31 (6). pp. 913-920.

Bates DV (1995). The effects of air pollution on children. Environ. Health. *Perspect*. 103: Suppl. 6,49-53.

Bhargav Krishna (2017). Tackling the health burden of air pollution in South Asia *BMJ: British Medical Journal* Vol. 359 (13 Nov 2017 - 19 Nov), pp1-5

Bhimagiri Bhaskar v. Revenue Divisional officer, A.I.R. 2001 A.P.

Bishoi, B., Prakash, A. and Jain, V.K. (2009). A Comparative Study of Air Quality Index Based on Factor Analysis and US-EPA Methods for an Urban Environment. *Aerosol and Air Quality Research*, Vol. 9 (1), pp. 1-17.

Bommer C, Heesemann E, Sagalova, V, Manne-Goehler J, Atun R, Bär- nighausen T, et al. 2017. The global economic burden of diabetes in adults aged 20–79: A cost-of-illness study. *Lancet Diabetes Endocrinal* 5:423-430.

Boogaard H, Walker K, Cohen A. (2019). Air pollution: The emergence of a major global health risk factor. Int Health 11(6): 417–421.

Boyce JK, Shrivastava A (2016). Delhi's air pollution is a classic case of environmental injustice. *The Guardian.*

Brainbent, Guy, (1996). "Public Administration and Development", *International review Administrative Sciences*, Vol.62 (2), pp.492-501.

Central Pollution Control Board (1981). *Inventory and Assessment of Pollution Emission in and Around Agra-Mathura Region (Abridged).* Control of Urban Pollution Series, New Delhi.

Central Pollution Control Board (1997). Ambient Air Quality Status and Statistics. *CPCB Report*, New Delhi.

Central Pollution Control Board (2000). *Annual Report 2000-2001.* India.

Central Pollution Control Board (2002). Environmental Management Plan for Agra, January, *CPCB Report*, New Delhi.

Central Pollution Control Board (2006). *Air Quality Trends and Action Plan from Control of Seventeen Cities,* NAAQM, Series/29/2006-07, CPCB, New Delhi.

Central Pollution Control Board (2006*). Status of Air Quality in Agra Region, Control of Urban Pollution Series*. New Delhi.

Central Pollution Control Board (2008). *Air Quality Trends and Action Plan for Control of Air Pollution from Seventeen Cities.* Central Pollution Control Board and Ministry of Environment & Forests. pp. 23-31.

Central Pollution Control Board (CPCB). *Ministry of Environment and Forests (2014). National Ambient Air Quality Status and Trends-2012*, NAAQMS Series August, 2014-2015, CPCB, New Delhi.

Centre for Science and Environment (1987). The State of the Environment, 1984-85, New Delhi, India.

Centre for Science and Environment, (1987). *The State of the Environment, 1984-85,* New Delhi, India.

Chary SN, Vinod Vyasalm (2000). *Environmental Management an Indian Perspective*, New Delhi: Mc Millian India ltd.

Chhabra, SK, Chhabra, P, Rajpal, S & Gupta, RK (2001). 'Ambient air pollution and chronic respiratory morbidity in Delhi', *Arch. Environ Health*, vol. 56, pp. 58-64.

Chopra S. K. (1984). Remarks of the Principle Discussion. In the Shekhar Singh (ed.), *Environmental Policy in India*. Indian Institute of Pub. Admin., New Delhi.

Clifford A, Lang L, Chen R, Anstey KJ, Seaton A (2016). Exposure to air pollution and cognitive functioning across the life course – A systematic literature review. *Environ Res* May;147:383–98.

Cohen AJ, Brauer M, Burnett R, Anderson HR, Frostad J, Estep K, et al (2017). Estimates and 25- year trends of the global burden of disease attributable to ambient

air pollution: an analysis of data from the Global Burden of Diseases Study 2015. *Lancet*.;389(10082):1907–18.

Cohen AJ, Brauer M, Burnett R, Anderson HR, Frostad J, Estep K, et al. (2017). Estimates and 25-year trends of the global burden of dis- ease attributable to ambient air pollution: An analysis of data from the Global Burden of Diseases Study 2015. *Lancet* 389:1907–1918.

Consumer Education and Research Centre v. Union of India (1995) 3 SCC 42; Kirloskar Brothers v. Employees State Insurance Corporation (1996) 2 SCC 682; State of Punjab v. Mohinder Singh: Chawla AIR 1997 SC 1225; N.D. Jayal v. Union of India, (2004) 9 SCC 362.

CPCB (2010). "Air Quality Monitoring, Emission Inventory and Source Apportionment Study for Indian Cities", Central Pollution Control Board, Government of India, New Delhi, India.

Davidson, A. (1993). Update on ozone trends in precursor concentrations and oxidant distribution in the Tokyo and Osaka areas, *Journal of Atmospheric chemical*, Netherlands, Vol. 30.

Dewaram A. Nagdeve (2004). Environmental Pollution and Control: A Case Study of Delhi Mega City, *Population and Environment* Vol. 25, No. 5 (May,), pp. 461-473.

Dey S, Di Girolamo L, van Donkelaar A, Tripathi SN, Gupta T, Mohan M. (2012). Variability of outdoor fine particulate (PM 2.5) concentration in the Indian subcontinent: a remote sensing approach. *Remote Sens Environ.* 127:153–61.

Dwivedi, O.P. (1997). *India's Environmental Policies, Programmes and Stewardship*, New York: St. Martin's Press.

Feachem RGA (2001). "Globalisation is good for your health mostly", *BMJ*, (1 September.), 323:504-6.

Fleischer NL, Merialdi M, van Donkelaar A, Vadillo-Ortega F, Martin RV, Betran AP, et al. (2014). Outdoor air pollution, preterm birth, and low birth weight: Analysis of the World Health Organization Global Survey on Maternal and Perinatal Health. *Environ Health Perspect* 122:425–430.

Furqan Ahmad (2008). "Legal Parameters of the National Environment Policy, 2006", in M.S. Bhatt, Shahid Ashraf and Ashref Illiyan (eds), *Problems and Prospects of Environment Policies – Indian Perspective,* New Delhi: Aakar Books.

Gargava P, Rajagopalan V (2016). Source apportionment studies in six Indian cities—drawing broad inferences for urban PM10 reductions. *Air Qual Atmos Heal*. 9(5):471–81.

General Public of Saproon Valley v. State of H.P., A.I.R. 1993

Ghana S Gurung and Michael Kollmair, (2005). Marginality: Concepts and their Limitations, Swiss National Centre of Competence in Research North-South, Zurich, IP6 Working Paper 4.

Ghose, M. K., Paul, R. and Banerjee, R. K. (2005). Assessment of The Status of Urban Air Pollution And its Impact on Human Health in The City of Kolkata. *Environmental Monitoring and Assessment,* Vol. 108, pp. 151-167.

Gill. Stephen (1995). "Globalisation: Market Civilisation and Deisciplinary Neoliberalism", Millenium*,* Vol. 24(3), pp.399-423.

GOI (1986). The Environment Protection Act, 1986, Publications Division, 1986, Section 2, Subsection (a), New Delhi, India.

GOI, (2009). *State of Environment Report, India- 2009*, Ministry of Environment and Forest, New Delhi: Government of India.

Government of India (2006). *Uttar Pradesh Development Report*. Planning Commission, Vol. 2.

Government of India, (2010). *India 2010*, A Reference Annual compiled by Research, Reference & Training Division, 54th edition, published by Ministry of Information and Broadcasting, Government of India, New Delhi.

Gowher Rizvi, (2007). "Emergent India: Globalisation, Democracy and Social Justice", *International Journal Canadian International Counci*l, Toronto, vol62, no4, Autumn, p7658-65.

Gowtham. Sarella , Mrs. Dr. Anjali. K. Khambete, (2015). AMbient Air Quality Analysis using Air Quality Index – A Case Study of Vapi, *IJIRST,*1(10), pp.68-71.

Goyal, P., Singh, M.P. and Bandyopadhyay, T.K. (1994). Environmental Studies of SO_2, SPM and NO_X, over Agra, With Various Methods of Treading Calms. *Atmospheric Environment*, No. 19 Vol. 28, pp. 3113-3123.

Grigoras, G. and Mocioaca, G. (2012). Air Quality Assessment in Craiova Urban Area*, Romanian Reports in Physics*, Vol. 64, No. 3, P.768–787.

Gudrun Benecke (2009). "Varieties of Carbon Governance: Taking stock of the Local Carbon Market in India", *Journal of Environment and Development: A Review of International Policy*, vol. 18, no. 4, December, p.347-348.

Hajat A, Diez-Roux A V., Adar SD, Auchincloss AH, Lovasi GS, O'Neill MS, et al (2013). Air Pollution and Individual and Neighborhood Socioeconomic Status: Evidence from the MultiEthnic Study of Atherosclerosis (MESA). *Environ Health Perspective*. Sep 27.

Har Govind (1989). Recent Developments in Environmental Protection in India: Pollution Control, *Ambio* Vol. 18, No. 8, pp.429-433.

HEI (2004). "Health Effects of Outdoor Air Pollu- tion in Developing Countries of Asia: A Litera- ture Review", Special Report 15, Health Effects Institute, Boston, US.

HEI (2010). "Outdoor Air Pollution and Health in the Developing Countries of Asia: A Compre- hensive Review", Special Report 18, Health Effects Institute, Boston, US.

Himanshu Thakkar, (2007). "Water pollution Control: Role of Community and Public Action", in Mahesh Rangarajan, (ed), *Environmental Issues in India: A Reader,* New Delhi: Dorling Kindersley Pvt Ltd.

Holgate T., Jonathan M Sanet, Hillel S Koren, Robert L Maynard (1999). *Air Pollution and Health*, New York: Academic Press.

Hoshiar Singh (1992). *Environmental Policy and Administration*. Jaipur: Printwell.

Hystad P, Yusuf S, Brauer M. (2020). Air pollution health impacts: The knowns and unknowns for reliable global burden calculations. Car- diovasc Res.

IARC (International Agency for Research on Cancer). (2013). Air Pollution and Cancer. IARC Scientific Publication No. 161. Lyon, France: World Health Organization.

Illyas, S. Z., Khattak, A. I., Nasir, S. M., Qurashi, T. and Durrani, R. (2010). Air pollution assessment in urban areas and its impact on human health in the city of Quetta, Pakistan. *Clean Techn Environ Policy*, Springer, Vol. 12. pp.291-299.

J.N. Pandey (2003). *Constitutional Law of India*, Central Law Agency.

Jagdish Bhagwati, (2004). *In defense of Globalisation*, New Delhi: Oxford University Press.

Janet Currie, Matthew Neidell & Johannes F Schmieder (2009). 'Air pollution and infant health: Lessons from New Jersey', *Journal of Health Economics*, vol. 28, pp. 688-703.

Jayasree De (2007). Development, Environment and Urban Health in India", *Geography*, Summer Vol. 92, No. 2, pp. 158-160.

John Rawls (1971). *A Theory of Justice*, Cambridge: Harvard University Press.

JS Sondhi, (2008). "An Analysis of India's Development: Before and After Globalisation", Indian Journal of Industrial Relations, vol43, no3, January, p323-29.

Kalpana Balakrishnan, R.S. Dhaliwal and Bela Shah (2011). Integrated Urban-Rural Frameworks for Air Pollution and Health-Related Research in India: The Way Forward, *Environmental Health Perspectives* Vol. 119, No. 1 (JANUARY), pp. A12-A13

Kalpana C Satija, (2015). "Economic Reforms and Social Justice in India", *International Journal of Social Economics,* vol36, no9, p.952-59.

Kamat, S.R. and Mahashur, A.A. (1997). Air Pollution-Slow Poisoning" in *the Hindu Survey of the Environment*, Madras.

Kesavanand Bharti v. State of Kerala A.I.R. 1973 S.C. 1461 at 1952.

Khan I. A. (2002). *Environmental Laws*. Allahabad: Central Law Agency.

Kiran B Chhokar, Mamta Pandia and Meenaregunathan, (1993). *Understanding Environment*, New Delhi: Saga Publications.

Klepac P, Locatelli I, Korošec S, Künzli N, Kukec A. (2018). Ambient air pollution and pregnancy outcomes: A comprehensive review and identification of environmental public health challenges. *Environ Res* 167:144–159.

Koop, G & Toleba, L (2004). 'Can we really say that people are dying from bad air' *Journal of Environmental Economics and Management*, vol. 47, no. 78, pp. 30-54.

Kumar, S & Paramjit (2012). 'Valuation of health impacts of air pollution in India', *Research Journal of Economics, Business and Act*, vol.5, pp. 1-7.

Lee K. (2007). *Globalisation and health: An introduction*. London: Palgrave

M.N. Murthy (2001). "Environmental Regulations & the Economics of Environmental Policies" in R.N. Bhattacharya (ed) *Environmental Economics: An Indian Perspective,* New Delhi: Oxford University Press.

Maddela Abel, (2006). *Remade in India: Political Modernisation in the Indian Context*, Hyderabad: Institute of Chartered Financial Analysts of India University Press.

Mahendra Dev S and N Chandrashekhara Rao (2009). *India: Perspectives on Equitable Development,* New Delhi: Academic Foundation.

Mahesh Rangarajan (2007). *Environmental Issues in India: A Reader,* New Delhi: Dorling Kindersley Pvt Ltd.

Manivasakam N, (1984). *Environmental Pollution*, New Delhi: National Book Trust.

Marian A. L. Miller, (1995). *The Third World in Global Environmental Politics,* Buckingham: Open University Press.

Martin RV, Brauer M, van Donkelaar A, Shaddick G, Narain U, Dey S. (2019). No one knows which city has the highest concentration of fine particulate matter. *Atmos Environ* 3:100040.

Maxwell, K.E. (1973). Environmental life, *Dickenson publication Company*, California.

Md.Asif Ekbal,Hrishabh Gupta, (2015). Assessment of Ambient Air Quality Index of Coal City Dhanbad for Public Health Information, *JERET,*2(1),pp.50-53.

Melinda Mills, (2009). "Globalisation and Inequality", *Oxford Journals: European Sociological Review,* vol-25, no1, p.1-12.

Michael P. Todaro & Stephen C Smith (2008). *Economic Development*, 8th edition, New York: Addison Wesley.

Michelle L. Bell, Devra Davis, Luis Cifuentes, Aaron Cohen, Nelson Gouveia, Lester Grant, Collin Green, Todd Johnson, Jorge Rogat, Jack Spengler and George Thurston (2002). International Expert Workshop on the Analysis of the Economic and Public Health Impacts of Air Pollution: Workshop Summary, *Environmental Health Perspectives* Vol. 110, No. 11 (Nov.), pp. 1163-1168

Ministry of Heath & Family Welfare. Government of India (2015). Report of the Steering Committee on Air Pollution and Health Related Issues.

Mukund G Rajan (1997). *Global Environmental Politics: India and the North-South Politics of GlobalEnvironmental Issues,* New Delhi: Oxford University Press.
Munazah Nazeer, Uzma Tabassum and Shaista Alam (2016). Environmental Pollution and Sustainable Development in Developing Countries, *The Pakistan Development Review* Vol. 55, No. 4, pp. 589-604.

Murena, F. (2004). Measuring Air Quality over Large Urban Areas: Development and Application of an Air Pollution Index at the Urban Area of Naples. *Atmos. Environ.* 38: 6195-6202.

Nachane, DM (2010). Liberalisation, Globalisation and the Dynamics of Democracy in India, London School of Economics and Political Science, Asia Research Centre Working Paper 32, June.

Narain, U and R G Bell (2006). "Who Changed Delhi's Air?", Economic & Political Weekly, 41, 1584-88.

Narayan, L., and Kumra, V.K. (1997). Effect of air pollution on human health in Varanasi city, *National Geographical Society of India*, Vol. 43 (1). pp.44-52.

Narayanan, P. (2009). *Air pollution, Environmental Pollution, Principal Analysis and Control,* CBS Publishers & Distributors, New Delhi. pp.47-69.

Noor Artika Hassan, Zailina Hashim and Jamal Hisham Hashim (2016). Impact of Climate Change on Air Quality and Public Health in Urban Areas, Supplement Issue: Global Environmental Change and Human Health, *Asia Pacific Journal of Public Health* Vol. 28, No. 2, (March), pp. 38S-48S

Ojha, AK. (2002). Globalisation and Liberalisation - Prospects of New World, New Delhi: Concept Publishers.

P.Balashanmugam et.al, (2012). Ambient Air Quality Monitoring in Puducherry, *IJERA* 2(2),pp.300-307.

P.M. Prasad (2006). "Environment Protection: Role of Regulatory System in India", *Economic & Political Weekly*,April 1-7, vol. XLI, no. 13, p.1278-84.

P.S. & Nistha Jaswal (2008). *Environmental Law*, Pioneer publication.

Padam Nepal, (2009). *Environmental Movements in India- Politics of Dynamism and Transformations*, Authors Press.
Parmanand Katara v. Union of India. AIR 1989 SC 2039, Kharak Singh v. State of U.P. AIR 1963.

Pashchim Bang Khet Mazdoor Samiti v. State of West Bengal AIR 1996 SC 2426.

Patankar, AM (2011). 'Monetary burden of health impacts of air pollution in Mumbai, India: Implications for public health policy', *Public Health*, vol. 125, pp.157-164.

Pennington, D.W., Pottingb, J., and Finnveden, G. (2004). Life Cycle Assessment Part 2: Current Impact Assessment Practice, *Environment International*, Vol. 30. Issue 5. pp.721-739.

Pope DP, Mishra V, Thompson L, Siddiqui AR, Rehfuess EA, Weber M, et al. (2010). Risk of low birth weight and stillbirth associated with indoor air pollution from solid fuel use in developing countries. *Epidemiol Rev* 32:70–81.

Prakash R and Choydey S.M., (1990). *Environmental Problems and Health Hazards*, New Delhi: Jagmander Book Agency.

Prasad, D. and Sanyal, S. (2011). Assessment of Ambient Air Quality in Lucknow city. *National Geographical Journal of India,* Vol. 57(4). pp.65-72.

Prasad. P. M., (2006). Environment Protection: Role of Regulatory System in India, *Economic and Political Weekly* Vol. 41, No. 13 (Apr. 1-7), pp.1278-1288.

Pulapre Balakrishnan, (2011). "Globalisation and Development: India since 1991", *The Journal of Economic Asymmetries,* vol8, no2, December, pp.52-59.

Rajendraprasad B. Dave (1988). *From Eco-Crisis to Eco-Development: Micro level Environmental Movements in India*, Ann Arbor: University of Michigan.

Ramchandra Guha and Juan Martinez Alier (1998). *Varieties of Environmentalism: Essays North & South,* New Delhi: Oxford University Press.

Rao .M.N. and Rao H.V.N., (2003). *Air Pollution,* New Delhi: Mc Graw Hill.

Rao X, Patel P, Puett R, Rajagopalan S. (2015). Air pollution as a risk factor for type 2 diabetes. *Toxicol Sci* 143(2): 231–241.

Rao, D.N., Sharma T.P., and Udai Raj Singh, (2003). *Air Pollution Development at what cost?,* New Delhi: Daya Publishing House.

Rao, S.T. (1978). Pollution of Taj Mahal and its Environs due to the proposed Mathura Oil Refinery. *International Symposium on Environmental Agents and Their Biological Effects*, Osmania University, Hyderabad.

S.K. Shukla (1989). *Environment Protection and the Law*, Jaipur: Shashi publications.
Saha, A. and Ranjan, R. (2009). Air Pollution and Health Hazard: A Case Study of Patna, *ANNALS, NAGI*, Vol. XXIX, No. 2. pp.60-74.

Sarath Guttikunda (2012). Air Pollution in Delhi, *Economic and Political Weekly* Vol. 47, No. 26/27 (JUNE 30-JULY 7,), pp.24-27.

Saxena, H.M. (2000). *Environmental Management.* Jaipur and New Delhi: *Rawat Publication*.

Schraufnagel DE, Balmes JR, Cowl CT, De Matteis S, Jung S-H, Mor- timer K, et al. (2018). Air pollution and noncommunicable diseases: A review by the forum of International Respiratory Societies' Envi- ronmental Committee, Part-1: The damaging effects of air pollution. *Chest* 155(2): 409–416.

Schraufnagel DE, Balmes JR, Cowl CT, De Matteis S, Jung S-H, Mor- timer K, et al. (2018). Air pollution and noncommunicable diseases: A review by the forum of International Respiratory Societies' Environ- mental Committee, Part 2: Air pollution and organ systems. *Chest* 155(2): 417–426.

Schwela, D., Haq, G., Huizenga, C., Han, W., Fabian, H., & Ajero, M. (2006). *Urban air pollution in Asian cities—status, challenges and management.* London: Earthscan Publishers.

Senthilnathan T. (2007). Analysis of Concentration of Air Pollutants and Air Quality Index Levels in the Ambient Air in Chennai City, *IE (I) Journal-EN*, Vol. 87, pp.3-7.

Shankar U (2008). "The Role of Economic Instruments in Prevention and Control of Industrial Pollution in India: Scope, Design and Implementation," in M.S. Bhatt, Shahid Ashraf and Ashref Illiyan (eds), *Problems and Prospects of Environment Policies – Indian Perspective,* New Delhi: Aakar Books.

Sharma, N., Chaudhary K.K., and Chalapati Rao C.V. (2004). Vehicular pollution prediction modelling: A review of transport dispersion models. *Transport Review (U.K.)*. Vol. 24 (4). p. 401-9.

Sharma, V. and Chauhan, S. (2009). Atmospheric Quality in Agra City, *ANNALS, NAGI,* No. 2 Vol. XXIX, pp.32-39.

Sheetal Verma, (2008). "Economy-Environment linkages: Economic Growth, Quality of Environment and Sustainability," in M.S. Bhatt, Shahid Ashraf and Ashref Illiyan (eds), *Problems and Prospects of Environment Policies – Indian Perspective,* New Delhi: Aakar Books.

Shukla, A., Mishra, R. K. and Parida, M. (2010). Estimation of Composite Air Quality Index for Lucknow. Institute of Town Planners, India, Vol. 7 (4). pp.45-56.

Shukla, V., Dalal, P. and Chaudhry, D. (2010). Impact of vehicular exhaust on ambient air quality of Rohtak city, *India. Journal of Environmental Biology*. Vol. 31 (6), pp.929-932.

Shyam Divan and Armin Rosencranz (2005). *Environmental Law and Policy in India*, New Delhi: Oxford University Press.

Shyam Divan and Armin Rosencranz, (2001). *Environmental Law and Policy in India: Cases, Materials and Statues*,New Delhi: Oxford University Press.

Simkhada, K., Murthy V, K. and Khanal, S. N. (2005). Assessment of ambient air quality in Bishnumati corridor, Kathmandu metropolis. *International Journal of Environmental Science Tech.* Vol. 2 (3), pp.217-222.

Singh, S. (2008). *Air Pollution-Environmental pollution*, Environmental Geography, Allahabad: Prayag Pustak bhawan.

Sivaramakrishnan K., (2011). Environment, Law, and Democracy in India, *The Journal of Asian Studies* Vol. 70, No. 4 (November), pp.905-928.

Snehal Rebello, 2014). "India needs stringent norms to curb vehicular pollution: Study", *Hindustan Times*, Mumbai,February 22.

SoE-Delhi (2010). "State of the Environment Report for the National Capital Region of Delhi 2010", Government of Delhi, New Delhi, India.

Sohail AHMAD and Mack Joong CHOI (2010). Urban India and Climate Change: Mitigation Strategies towards Inclusive Growth, *Theoretical and Empirical Researches in Urban Management* Vol. 5, No. 6 (15) (May), pp. 60-73

Sriparna Bandyopadhyay (1998). "Pollution Control Measure in India: Some Anomalies", in Dilip Roy (ed), *Environment Management with Indian Experience* New Delhi: APH Publishing Corporation.

State of Kerala v. N.M. Thomas (1976) 2 SCC 310 at 379.

Stieb, D.M., Doiron, M.S., Blagden, P. and Burnett, R.T. (2005). Estimating the public health burden attributable to air pollution: an illustration using the development of an alternative air quality index, *Journal of Toxicology and Environmental Health*, Part A. Vol. 68. No. 13, pp. 1275–1288.

Sumeet Saksena (2007). Public Perceptions of Urban Air Pollution with a Focus on Developing Countries, East-West Center, Oct. 1, pp.1-32

Sushmita Chatterjee, Kishore K. Dhavala and M. N. Murty (2007). Estimating Cost of Air Pollution Abatement for Road Transport in India: Case Studies of Andhra Pradesh and Himachal Pradesh, *Economic and Political Weekly* Vol. 42, No. 36 (Sep. 8 - 14,), pp. 3662-3668

T.S. Ashton (1948). The Industrial Revolution, 1760-1830, London: Oxford University Press.

Tamplin, S. (2002). The politics of public health, *Regional Workshop on Transport Planning, Demand management and air Quality (ADB),* Manila.

Tecam (2019). '10 Serious Effects of Air Pollution on the Environment', https://www.tecamgroup.com/effects-air-pollution-environment/, 2019/04/29.

The Hindu (2010). Withdraw Eco-Clearance for Posco Project: CPI, May 18, p-6.
The Times of India (2013). "Air Pollution Fifth Leading Cause of Death in India: Study", 14 Feb.

Thom, G.C. and Ott, W.R. (1976). A Proposed Uniform Air Pollution Index. *Atmos. Environ*. 10: 261-264.

Thom, G.C. and Ott, W.R. (1976). *Air Pollution Indices: A Compendium and Assessment of Indices used in the United States and Canada*, Ann Arbor Science Publishers Inc., Michigan.

Tripathy, AK, (1993). *Global Environmental Problems* Vol-III, New Delhi: Asish Publishing House.

Turner MC, Jerrett M, Pope CA 3rd, Krewski D, Gapstur SM, Diver WR, et al. (2016). Long-term ozone exposure and mortality in a large pro- spective study. *Am J Respir Crit Care Med* 193(10): 1134–1142.

U.S. EPA (United States Environmental Protection Agency). (2019). Integrated Science Assessment (ISA) for Particulate Matter. Washington, DC:U.S. Environmental Protection Agency.

Unni Krishnan v. State of A.P. (1993) 1 SCC 645.

WHO (1997). *Health and Environment in Sustainable Development: Five Years after Earth Summit*, Geneva.

WHO (2004). Health aspects of air pollution: Results from the WHO project "Systematic review of health aspects of air pollution in Europe". Copenhagen, *World Health Organization Regional Office for Europe*.

WHO (2007). *Health risks of heavy metals from long-range transboundary air pollution. Copenhagen, World Health Organization Regional Office for Europe.*

Yuan L, Zhang Y, Gao Y, Tian Y. (2019). Maternal fine particulate mat- ter (PM2.5) exposure and adverse birth outcomes: An updated systematic review based on cohort studies. *Environ Sci Pollut Res* 26:13963–13983.

Globalisation, Environment and Health: A Case Study of Air Pollution in Hyderabad City

The answers mentioned in the scheduled will be used only for the purpose of doctoral research and not for anything else. I assure you that the information given by you will be kept strictly confidential; nowhere your name will be disclosed.

Interview Schedule

Profile of the respondent

1. Name of the Respondent _____
2. Area of respondents : (1) Jidimetla& Bala nagar (2) Museerabad (Bolak pur) (3) Ambarpet (4) Charminar (Karwan& katedan) (5) Panjagutta
3. Age of the Respondent (in Years)
   (1)15-25 (2) 25-35 (3) 35- 45 (4) 45- 55 (5) 55- 65 (6) > 65
4. Gender: (1) Male (2) Female
5. Religion: (1) Hindu (2) Muslim (3) Christian (4) Others
6. Category: (1) SC (2) ST (3) OBC (4) Others
7. Education: (1) Illiterate (2) Primary to Secondary (3) Inter to Degree (4) PG and Above
8. Occupation: (1) laborer (2) driver (3) employee (4) Home maker (5) Academician (6) Activist (7) student (8) Bureaucrat (9) other…….....
9. Do you possess land? (1) Yes (2) No
10. If Yes, No. of acres of land possessed by you?
    (1) No (2) 0 to 1 (3) 1 to 3 (4) 3 to 5 (5) Tenant
11. Annual income: (1) Rs. 50000- 75000 (2) Rs. 75000 - 100000 (3) Rs. 100000 - 150000 (4) above Rs.150000

12. Are you affiliated to any Civil Society Organization? (1) Yes (2) No (3) D.K
13. Do you follow day to day politics? (1) Yes (2) No (3) D.K
14. Do you have any political affiliations? (1) Yes (2) No (3) D.K

Understanding of Globalisation, Environment and Health

15. Do you accept that globalization is important for the development of the world?
 1 Accept 2 Not accept 3 DK

16. Do you know directly or indirectly effected environment by the process of globalization in the word?
 1 CO2 2 Smoke. 3 Rise in pollution level. 4 Depletion of Ozone Layer. 5 Deterioration of fields. 6 Chemical Sensitivity 7 health problems 8 above all

17. Do you feel that globalization gave positive impact on the overall development of India?
 (1) Effectively (2) partially (3) not at all (4) D.K

18. If yes, How? Please explain…….....

19. Do you concur that the process of globalization gave adverse impact on the environment in India?
 1 Yes 2 No 3 DK

20. If yes, How? Please explain…….....

21. Do you perceive that environment pollution is mortifying our health conditions?
 1 Agree 2 Not agree 3 DK

22. According to you what type of environment pollution is giving adverse effects on Health?
 1 Air pollution 2 Water pollution 3 Noise pollution 4 Solid waste pollution

Understanding air pollution

23. Do you know that 7 million deaths are caused due to air pollution (household and ambient) in a year globally? 1 Yes 2 No 3 DK

24. What is air pollution in your words? ……

25. What are the top 5 air polluted cities in India?
 1 Delhi 2 Hyderabad 3 Mumbai 4 Kolkata 5 Chennai

26. Do you know what are the major sources of air pollution?

 1 Yes 2 No 3 DK

27. If yes what are they?

1 Industrial, 2 vehicles 3 oil and gas 4 contamination of water and waste 5 indoor 6 all of above 7 any…

Health risks of air pollution

28. Do you have any knowledge of consequence of air pollution?
1 Yes 2 No 3 DK

29. Do you have any knowledge what types of diseases can cause due to air pollution?
(1) irritation to eyes, nose and throat, (2) chronic respiratory diseases , (3) pneumonia (4) COPD (Chronic Obstructive Pulmonary Diseases) (5) lung cancer (6) heart disease (7) damage to the brain, nerves, liver, or kidneys (8) Decreased exercise performance, (9) Dermatitis (10) ALL of the above

30. Are you facing health risks from the air pollution?
1 Yes 2 No 3 DK

31. What kind of health problems you are facing?
1 Long term affects 2 short term effects

32. Which health issue you have been facing most?
(1) irritation to eyes, nose and throat, (2) chronic respiratory diseases , (3) pneumonia (4) COPD (Chronic Obstructive Pulmonary Diseases) (5) lung cancer (6) heart disease (7) damage to the brain, nerves, liver, or kidneys (8) Decreased exercise performance, (9) Dermatitis (10) some of the above (11) most of the above

33. Do you have any inherited disease?
1 Yes 2 No 3 DK

34. Any specific time of high air pollution during the day which annoys you more?
1 Eight to ten hours of morning is more annoying due to air pollution
2 Late hour of the evening are better

35. Does air pollution annoy you?
1 Yes 2 No 3 DK

36. How frequently you or your family members visit hospitals due to that?
1 Yearly. 2 Half Yearly. 3 Monthly. 4 Weekly & Bi-weekly

37. At what stage of disease you go to hospital?
1 Early stage 2 Vague symptoms 3 Mostly when at complicated stage.
4 Early stage but do not follow medical advice.

38. Most affected Gender?
1Male 2 Female 3 TG

39. What Age Mostly Suffer?
1 Mostly children. 2 Mostly adult. 3 Mostly Aged.

40. What protective measures do you take?
1) Yes we do wear mask while on job if it available.
2) Yes, mask is available but do not wear it
3) It is uncomfortable to wear mask during work.
4) We cannot afford.
5) No. We have no knowledge of such thing.

Intervention of State to control air pollution

41. Do you feel that government has implemented the mitigation policies to control air pollution? (1) Effectively (2) partially (3) not at all (4) D.K

42. Do you know that government has established pollution monitoring equipments to know the status of air pollution? (1) Yes (2) No (3) DK

43. Does the state conducting air pollution awareness programs at Hyderabad?
(1) Frequently (2) Rarely (3) Never (4) D.K

44. Do you agree that government should follow the Delhi model of Even and Odd system in Hyderabad to control pollution? (1) Yes (2) No (3) DK

45. Do you agree that government should strictly cancel the BS4 vehicles in Hyderabad to control pollution? (1) Yes (2) No (3) DK

46. Do you accept that the initiation of the program of one core plantation, Haritha vanam & Haritha Telangana by government gives the positive impact on air pollution? (1) Yes (2) No (3) DK

47. Do you accept that the initiation of Green parks & Green roads by government gives the positive impact on air pollution? (1) Yes (2) No (3) DK

Efforts of Political parties/ Civil Society Organisations to aware people

48. Any civil society organisations took efforts to aware people?
(1) Yes (2) No (3) D.K

49. Any political parties took efforts to aware people and to make appropriate laws?
(1) Yes (2) No (3) D.K

50. Do you think the media is giving proper coverage to air pollution and its effects on health? (1) Yes (2) No (3) Can't Say

COVID and After COVID

51. Do you understand that percentage level of air pollution is decreased globally after COVID? (1) Yes (2) No (3) D.K

52. Do you observe any noticeable changes in level of air pollution in the Hyderabad before and after the time of COVID? (1) Yes (2) No (3) D.K

Your suggestions for improving air pollutions

53. What are the hindrances to control the air pollution?
(1) Negligence of Government (2) Lack of awareness (3) Peoples negligence
(4) Any other (5) All of the above

54. What are your suggestions to improve the air pollution?

(1) Proper implementation of policies (2) create awareness (3) strict punishments for violations (4) Any other (5) All of the above

Globalisation effects on Indian society: An Overview

Yuvaraju Gudigonda[1]

Abstract

Indian Society is drastically changing after globalisation and urbanisation has brought a lot of changes in the Indian culture. Economic polices have a direct impact in shaping the structural framework of economy. Economic polices formulated and executed by the government, have also played an important role in determination of levels of income, savings, investments and employment in the society. It mil be a mistake to assume that India can evaluate an effective machinism for economic reforms and it will be difficult for India to adopt with global changes without dealing with domestic problems like control of terrorism, providing employment to rural educated people, and work for the rural poor, empowering women and marginalised people and providing reasonable price and market facilities for the farmers. Global changes are operating on many new areas of conflict and cooperation for India and we can achieve a new level of integration of Indian economy with world markets on the basis of protection of our own national interest. This article shows how globalisation touches upon issues of well-being and social justice and analyses its effects on the marginalised to understand rising inequalities in India

Keywords: Globalisation, Health, Indian Society, Marginalised groups

Introduction

Globalisation is the new buzzword that has come to dominate the world since the nineties the last century. The study of globalisation inevitably poses a preliminary challenge to all are interested in locating and addressing various facts-economic, political and social - that bearing on our conceptions of domestic and international order. Globalisation is a process of adjustment increasingly emerging as a kind of irreversible process that challenges the importance the

[1] Doctoral Fellow, Department of Political Science, School of Social Sciences, University of Hyderabad, Prof. C. R. Rao Road, P.O. Central University, Hyderabad- 500046, Telangana, India.

Role of the State in Mitigating Environmental Pollution in India

Yuvaraju Gudigonda*

Abstract

India is the seventh greatest country on the planet and has the world's second biggest populace (which is around 16% of the total populace). It is geologically the biggest country in South Asia. India arose as a vital Third World actor since the Stockholm Conference. With 1.2 billion individuals and the world's fourth-biggest economy, India's new development and advancement has been quite possibly the main accomplishments of the current time. Over the six and half a very long time since autonomy, the nation has achieved a milestone farming transformation that has changed the country from persistent reliance on grain brings into a worldwide rural stalwart that is presently a net exporter of food. India has been viewed as a proper contextual investigation mirroring the Developing Countries worries on worldwide environmental issues. India is one of the 12 nations that comprise of the biggest number of living species on earth. One out of each 6 individuals on the earth daily routines in this country and offers their experiencing space with these bunch other living creatures. Be that as it may, 1 out of 4 Indians lives in destitution and it's anything but a nation having the world's biggest working-class, bound to encounter various issues. India has been advanced from one of the 12 quickest developing economies in the world to one of the 9 quickest, in the course of the last 25 years (Mahesh Rangarajan, 2007). With its background, the article bestows a critical look at the role of the state in mitigating Environmental Pollution in India.

Keywords: State, Environmental Pollution, Mitigating policies, India

Introduction

Since independence, India followed a ‘socialistic mixed economy model’ of economic development that stressed an import substitution oriented heavy manufacturing strategy. For decades the country was nailed at low rates of growth and suffered a bureaucratic license and permit dominated economic model that subdued rapid growth. However, in the late 1980s and 1990s India began to shift from its socialist economy and political orientation and belligerently adopted features of

* Doctoral Fellow, Department of Political Science, School of Social Sciences, University of Hyderabad, Prof. C. R. Rao Road, P.O. Central University, Hyderabad- 500046, Telangana, India.

RESSAISIR 2012
be a partner in change

DON BOSCO
ARTS & SCIENCE COLLEGE ANGADIKKADAVU

CERTIFICATE

This is to Certify that

~~Dr~~/Mr/~~Ms~~ Gudhigonda Yuvaraj

Participated/Paper Presented on

Assessment of the Environmental Sustainability in the State of Andhra Pradesh in the view of Globalization

in the National Conferance on

" Critical Reflections on Challenges, Perspective and Prospects of Social Work"

Organized by

P.G. Department of Social Work, Don Bosco Arts & Science College, Angadikkadavu

on 2nd & 3rd November

Dr. Anoop Antony	Fr.Dr. Jose Koyickal SDB	Fr. Martin Manikkanamparambil SDB
Staff Co-ordinator	Manager & HOD, MSW Dept	Principal

Globalisation, Environment and Health: A Case Study of Air Pollution in Hyderabad City

by Gudigonda Yuvaraj

Globalisation, Environment and Health: A Case Study of Air Pollution in Hyderabad City

ORIGINALITY REPORT

5%	4%	2%	1%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	tspcb.cgg.gov.in Internet Source	<1%
2	Submitted to University of Hyderabad, Hyderabad Student Paper	<1%
3	www.stateofglobalair.org Internet Source	<1%
4	etd.aau.edu.et Internet Source	<1%
5	www.moef.gov.in Internet Source	<1%
6	www.science.gov Internet Source	<1%
7	baadalsg.inflibnet.ac.in Internet Source	<1%
8	"Handbook of Environmental Materials Management", Springer Science and Business Media LLC, 2019 Publication	<1%