

The City and the Development- A Counter Narrative of Sustainable Development

Dr. Ravi Saxena*

*Assistant Professor-in-Political Science, Jyoti Dalal School of Liberal Arts, NMIMS (Deemed-to-be-University), Mumbai. Maharashtra. India. ravi.saxena08@gmail.com

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ABSTRACT

Sustainability of earth has been challenged by the incidents and events of climate change. Although the world is more developed today yet is highly threatened by the prospective natural calamities that continue to jeopardize the possibility of human life on earth in near centuries. Rather it has started influencing the climate-cycles. In today's world, city becomes synonymous with development. Major processes of development in modern world are city-centric. Be it Industry, multiple modes of transportation, spread of corporate business houses involving concrete buildings, huge population as workers and consumers of modern modes of production, etc. This all pollutes the environment and helps in increasing the temperature globally. Initially a city promises 'convenience' to human lives and possibility of human growth and development. Technology becomes the latest catalyst to bring convenience to human lives. Despite all these 'trusted' modes of human progress, recently, human society has started realising the flip side of this city-based urbanised economic development. City of modern world pollutes more than villages. Pollution, population and preservation remain the 'inter-related' buzzwords in the age of 'sustainable development'. In the modern liberal state, no model of development and no Individual Right (other than Right to Life, in its traditional sense) can be justified if anyone violates environmental sustainability. Traditional concept of city-based development faces challenges from the environmental perspective. Production and consumption patterns of cities are more polluting than that of villages. What alternatives are we left with? Has the time come to decentralize our 'economic development'?

This paper explores and evaluates the relational quotient between the urbanization and sustainable development. The very idea of city is based on the counter-narrative of the idea of sustainability. It impels us to think about the urgency of bringing change in the discourse of development that so selectively puts the city in its centre and makes climate change inevitable!

Key Words: Sustainable Development, Urbanization, UN, Pollution, and Gandhi, Dalit.

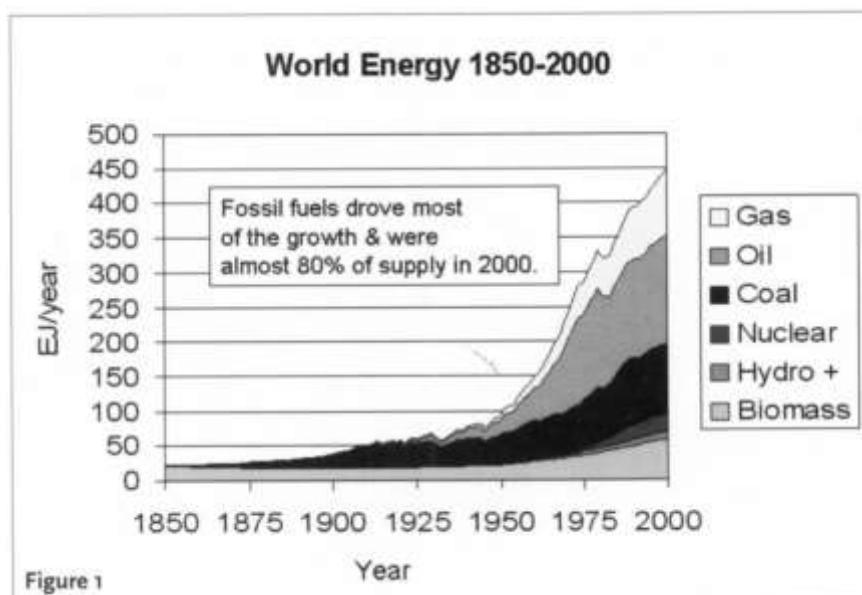
Today, it is the human desire of convenience and affluence had led her to exploit natural resources that are available to humankind freely. Now the world has seen numerous environmental problems worldwide. Air pollution as the resultant effect of industrial activities, water pollution due to industrial and domestic usage, loss of biodiversity, solid-waste, noise pollution, deforestation, and vehicular pollution has alarming effects in the major cities of India and of the world. This demands an urgent consideration and formulation of policies that can establish a harmonious balance between environment development (see Chakrabarty). UN reports that the world would face a 3.5 to 5.0-degree centigrade rise in the earth temperature by 2100. Now-a-days, most of us living in urban or semi-urban localities in India start our days by reflecting over the news items that relate to 'economic and infrastructural' development, under the aegis of grand narrative of 'globalization'. Mostly our orientation of receiving the information or knowledge is 'not mostly' attracted by 'environmental' issues. For many urban dwellers in India, environmental hazards, sustainable development and the issue of climate change would have become the part of their information, but not of their consciousness. We as city-dwellers think of competition and challenges in terms of globalization and market economy, we rarely deal

with the challenges 'environment' would have placed before us or would be placing soon in an unprecedented way. This indicates the need of 'mass-awareness' about the impact of greenhouse gases over the rise in earth-temperature, challenges born out of climate change, ill-impact of fossil fuel, sustainability of energy resources, and many more issues that are 'commonly overlooked'. Why would this all happen? Was the problem of climate change 'inevitable' or could have been avoided? Why this issue is so important in a global context? What implications 'climate change' invariably holds over all the global citizens? Where is the problem? Rather than resorting to a mechanism where we continue to solve issues related to environmental hazards one by one, is it not desirable to re-think about the design of 'development', and particularly the relationship between the sustenance and safety of environmental biodiversity and economic development that invariably involves 'infrastructural development' and incessant supply of 'energy'.

This paper, briefly, tries to investigate the nuanced meaning(s) of *development* in contemporary times, its relationship with society and, how in a city these two are interwoven under the backdrop of 'development'. Energy remains the 'backbone' of modern idea of development, economic or infrastructural. Cities are defined as the urban locations that promise infrastructure for human convenience. But, contrary to that cities also have become a burden of the prospects of a 'convenient' life (especially cities with huge population, as we see in many major cities in India). In a recently published report titled 'State of the Cities 2018', by National League of Cities, Washington (<https://www.nlc.org/resource/state-of-the-cities-2018>) the mayors of the ten best cities of the world attributed 25% of the their attention towards the energy and environment issues.

City, Development and Climate Change

History suggests that the cities as human habitation locality are as old as 5500 years old. With the rise in population in 20th century, with the changes in the production and consumption patterns, urban ecosystem received a backseat. Cities are considered the centres of commerce and trade, economy and polity. Cities concentrate wealth and capital, production and consumption. But cities also live with environmental vulnerability. Modern city based development has been found colossal to environmental conservation. This concentration of wealth, be it in terms of capital or wealth, holds 'energy-based-production' processes in centre. Industrialization and city life in India have become synonymous. Industry involves energy and migration of workers to run its affairs. This changes the landscape of city-based development process. Spatial compulsions lead to multiple modes of transportation within a city. This again requires Energy consumption. Energy consumption in the last one and half century has largely been 'fossil-fuel' energy sources. This fossil fuel remains the biggest reason to climate change. Below-given Figure shows the relationship between Energy and Climate Change during 1850-2000.



Source: (Rosina M. Bierbaum, William K. Reilly, Richard L. Revesz and Richard A. Meserve, 2008).

Rosina M. Bierbaum and others (2008) made a prediction that the energy consumption would remain same for the coming twenty-five years as well. Fossil fuel based development is still the reality of Third World countries. There are obvious reasons for it as the First World- Third World divide prevented the adequate technology transfer and hence Third World nations' dependency on fossil fuel still remains.

City- A Menace to Environment

Multiple aspects related to cities made it the most substantial threat to the cause of sustainable development. Need of the hour is to 'rethink' this city-based development model that is transforming globally a great threat to human existence itself. Now, city poses a great threat to the mutually sustainable existence of environment and human society. Six cities in India (Delhi, Mumbai, Kolkata, Ahmedabad, Kanpur and Nagpur) generate extreme air pollution issues with the levels of total suspended particles atleast three times of what World Health Organization (WHO) suggests (as per WHO report, 2003). Vehicular transportation is also a major cause of environmental worry in Indian cities. We are far way from a point of 'not' using fossil-fuel as our major source of energy or energy-production. Carbon Di-oxide Ozone, Lead, and hydrocarbon are all part of vehicular emissions. With the growth in urban population India-wide it is expected not to stabilize (if not reduce) but to increase in near future. Polluted air is creating toxics and this is lethal for life in Indian cities. In another report of WHO (2013), air pollution is found the fifth largest killer in India. In an interesting analysis, Prof. Chakrabarty and Prakash Chander mention that the World Bank in its 2013 Report found that air pollution costs Rs. 110,000 crores to Indian economy. Surprisingly, the World Bank 2013 Report unveils that the cost of air pollution is the highest annual burden on India's economy with an estimate of nearly half of all of its damages put together.

Water pollution is another menace that simultaneously damages the environment, especially in Indian cities. Municipal sewage and industrial waste remain the two major water pollutants in India. Being not technologically developed and the absence of any 'specific' law with penalties perpetuate this menace in cities. Water management systems are not sufficient to cope up with this large amount of water based waste that is polluting the water-bodies daily in and around the cities daily. Industries have been the major sources of water pollution in India. This polluted water has a highly toxic content in it and, thus, contaminating the agriculture as well. This has polluted the groundwater that is the major source of domestic water supply in municipal localities in India. Alongside, solid waste dumping is also another source of water pollution in India. Recently, the Indian government has come out with policy documents that envision resolve the issue in near future. If not checked, this would convert our rivers and other water bodies into sewages. It is reported that nearly fifty kilometres stretch of Yamuna river in Delhi is severely contaminated due to untreated sewerages with industrial pollutants (Chakrabarty 268). Until we have a very effective legal regime in place that ensures that no industry in city would be allowed to release polluted water in water bodies there hardly seems a possibility to check this menace. Due to industry-politics nexus such laws first fail to come into existence, and secondly, if there is such policy this nexus between the industrialists and politicians sets the pollutants free of any obligation to ensure a healthy environment in and around the city in India.

Another major pollutant in India is solid and hazardous waste. The municipal dumps are failing to deal with day-to-day solid and hazardous waste in cities. This has led to the creation of many (illegal) dump-sites in and around the cities. It is estimated that around 7-8 percent of Indian landmass has already converted into a wasteland, thanks to the open garbage disposal. This has impacted in a way that the wasteland has lost its fertility. Some of the striking facts are: Delhi and Mumbai generate each day around 7000 tonnes of garbage each day whereas it has a (legal) garbage dumping capacity of approximately 5000 tonnes each day. In analysis conducted by TERI (Tata Energy Research Institute: 2001) suggests that by 2021 Delhi is expected to have a daily garbage load of 17,000-25,000 tonnes.

Lately, city in our mental landscape is a geographical site that promises a comfortable life with better amenities, be it economic or social, a better political accessibility and accountability in governance, best educational system, and best of the infrastructure to support to live a dignified life. But, recently, with the kind of problems that the world has started facing, no more such claim about the city can be construed and valid or monolithic. Multiple avenues of development also led to the multiple experiences in a city that stand as the substantial threat to 'live a dignified life' in a city. Unlike in rural areas, the reasons for it are different. Even though cities continue to have a better governance and social system, it has started haunting the very prospects of living a healthy life due to such environmental constraints. Reasons run as unorganised migration towards cities, city-centric industrial and commercial development, employment opportunities located in and around cities, growth in city population, rise in vehicular population, use of fossil-fuel based energy production, deforestation etc. (Singh).

Mangroves are gradually disappearing from the urban landscapes in India. Builders in the cities are capturing those spaces for construction of residential or commercial buildings. Though there is a strict presence of laws to regulate the well being of mangroves yet it is seen that there is a sheer absence of such protective laws. This has threatened the biodiversity in India. Forests are increasingly disappearing and wildlife is endangered. As per an estimate almost ten percent of India's wild life (flora and fauna both) are at risk of extinction.

Modern world has seen the largest consumption of energy, owing to population size, production and consumption processes and patterns. Development defines the global world in a distinct way. This whole model of development is based on the supply of fossil fuel as the major source of energy, globally. Major economies of the world are those who could ensure that level of economic and industrial development with the use of

'fossil-fuel', a nemesis to sustainable development and a major reason behind the occurrences of climate change. We need to 'question' this global model of development. There has been a lack of clarity on the issue of human development and its relation with human well-being. How to relate with the environment while doing commerce or producing goods or rendering services needs a 're-thinking' or 'reminding'. Environment may be considered invisible entity, but it is the most important factor contributing the 'well-being' of humans and other species on earth. The World Commission on Environment and Development explained sustainable development as a right of the forthcoming generations.

Global economics is highly dependent on the use of energy. So, contemporary economic development and supply of energy are coterminous. All aspects of Economy, be it commerce, production, transport, service sector and agriculture require the unhindered supply of energy. Energy consumption, this way, directly influences the employment patterns in a society (Prayas Report). In India, more than thirty percent population is urban in nature. City being the hub of economic activities creates larger chunk of industrial activities. This industry is run on energy. Major chunk of this energy is 'fossil-fuel'. This fossil fuel is largely the biggest reason of climate change globally.

Population, Climate Change and Energy

Growing population and subsequently, ever increasing demands for the production and consumption (both involve unprecedented energy supply, like in the form of industrialization and transportation) have led to newer patterns of damage to 'environment'. Cities, being the traditional centres of industrialization have been, hence, major sources of 'pollution' that danger the sustenance of human life on earth. (Kumar).

India's contribution to climate change poses a serious challenge for development. India is the fourth largest emitter of global greenhouse gas (GHG) emissions after China, the United States and Russia, contributing about 5 percent of total emissions in 2007. Nevertheless, unique seems India's example as it houses a third of the world's poor. Poor is helplessly dependent on the usage of 'fossil-fuel' to govern one's day-to-day life. Indian state cannot boast of technologically so advance that its power-generation facility is not majorly fossil-fuel dependent. In the backdrop of it, India makes a specific case to be analysed and understood. Unlike other major emitters, India is relatively poor and technologically less-developed. Interestingly, India's per capita CO₂ emissions of 1.3 tons are well below the world average of 4.4 tons. Critics say that by 2020-21, with almost a fifth of the world's population living in India, its share is expected to rise to about 7 percent (International Energy Agency). Though the governance in India ensures to enliven the environmental conservation sustainable development, yet the presence of multiple 'bottlenecks' can not be rule out. This has resulted into a socio-economic process that benefitted the upper and middle class and lower and lowest classes seem left out. In light of the urgency for a global turnaround in emissions before 2020. Necessary it seems that the third-world nations develop their economies ensuring the decreasing levels of carbon emissions, ensuring technology-transfer from first-world nations. Needless to say that it seems imperative on the part of first-world nations to first 'lead-by-example' and reduce considerably the carbon-emission. Third-world nations would follow it with the help and technological assistance transfer to these relatively less developed nations. India figures in one of them. This is nowhere to be understood that India tries to do away from its environment conservation related responsibilities.

Cities are highly impacted by the menace of air-pollution globally. India has been no exception to it. Air pollution aggravated due to the burning of fossil fuel, like coal, natural gas and vehicles. The burning of these fossil fuels generate multiple deadly chemicals or gases into the atmosphere like CO₂, CO, Nitrogen oxide, SO₂, and small particles that include lead. This way, urbanization has taken a toll in many cities in India. Population growth, a rapid increase in industrial activity that emits Green House Gases, and vehicular population are primary sources of dangers to the 'sustainability' in cities around the world. As per a report prepared by Tata Environmental Research Institute (see Pallavi Shukla: TERI Report, Air Pollution in Select Indian Cities, <http://www.teriin.org/library/files/Pollution-level-in-India.pdf> assessed on December 27, 2018 at 2:24 PM). Pallavi reminds that two-thirds of global populace live in urban sectors and these sectors are highly exposed to air pollution, threatening to the rise in multiple types of ailments and subsequent threat to the life expectancy levels. Today, Air-pollution is the sixth major cause of deaths in India. As per WHO Global Urban Ambient Air Pollution Database 2016(<https://www.who.int/airpollution/data/cities/en>) as high as 98 percent of total cities in low and middle income countries with more than one hundred thousand human population do not meet WHO air quality guidelines. The report mentions that with the High Income group countries the level falls down to 56 percent. The very report alerts us that India's towns and cities are struggling with the major risk of air pollution that creates toxic air, and reasons are located into the inability on the part of government to introduce the appropriate policies to curb this menace. Vehicular pollution is a major source of this toxic air prevalent in Indian cities and towns. An estimate of the damage can be construed from the fact that in China almost 1.6 million and in India almost 1.4 million people died due to this toxic air in 2013. The same report mentions that there has been a rise from 10 percent to 20 percent in the omissions of O₃ between 1990 and 2013.

How to curb this menace? An answer to this can ensure a sustainable urban setting. But to answer this first we need to locate the causes of air pollution. Major causes of air pollution are urban population growth, lack of monitoring, lack of multi-sectoral policy-making, lack of finances allocated to it, etc.

Hyper Mobility- Energy-Pollution Nexus

Cities are huge, especially in India. Mumbai, Kolkata, Delhi, Chennai, Bengaluru and Hyderabad are huge cities spreading across more than 25 kilometres and home of more than six-seventeen million people. These are the centres of employment and, thus, leading to continuous migration from towns and villages across India. This density and number of population fails all the prevalent parameters of 'urbanization' in Indian cities. Barring Chandigarh in North India, many of our cities are organic cities as they developed without a plan of urbanization. This also makes tough to urbanize the Indian cities. As these cities are spread in a huge geographic area, people each day commute from one place to another place that remains far away. This leads to increase in vehicular population and density in a city. They call it 'Hyper-mobility' (see United Nations Human Settlements Programme: Global Report on Human Settlements 2013, <https://unhabitat.org/planning-and-design-for-sustainable-urban-mobility-global-report-on-human-settlements-2013/>).

Hyper mobility is an experience of more travel at faster speeds covering longer distances greater economic prosperity, remains a 'unique' characteristic of urban settlements globally. Report informs that half of the global population reside in cities. Till 2005, around 7.5 billion trips have been made in cities globally. The report further predicts that by 2015 there may be three or four times as many passenger-kilometres travelled as in year 2000. This fact can make us think about the kind of air and sound pollution a city is going to offer us in near future and what its consequences would be on human life. Despite the facts accessibility to urban centres of development remains a herculean task for commuters in a city. Other than being termed as the financial capital of India and city of Bollywood, Mumbai is equally known by Indians for its traffic jams and vehicular pollution. It is experienced in Mumbai that during office hours, one takes almost one and a half hour to two hours to travel a distance of ten kilometres. Since Buses and private vehicles are the major sources of city-transportation process, it inevitably invites 'air pollution' that is toxic in nature. Current urbanization processes challenge unprecedented problems to accessibility in urban settlements. Since cities are the centre of two major economic activities, industries and service sector, inevitable it becomes to rule out unregulated migration and vehicular pollution. Until the government agencies do not separate the industrial development from cities and decentralise the process of economic development, to resolve this city-pollution nexus remains a wild-goose chase. Worldwide, the transport bias of urban mobility is reflected through the dominance of private vehicles. Hence, extended use of motors remains a major source of 'increasing trends' in energy use and carbon emissions globally. So, until we decentralise the processes of development and adequately distribute these industrial activities and create multiple sites of economic activities that are run on an energy that does not damage environment (renewable energy) we can not resolve the issue of air and other kinds of pollutions. Simultaneously we need to modernise at a fast speed so we can shift from fossil-fuel based energy recourses to non-fossil-fuel based energy resources. Considering the present nature and speed of urbanization it seems a distance reality. Many of the pollution related issues in urban transport sector are related to the inability of the policy-makers to make it non-fossil-fuel based sector.

We need to understand that climate change poses multiple effects beyond rise in global temperature. Unluckily, many of these effects have started taking place now. All over the globe, glaciers have started melting. Heat stress is a problem for agriculture vis-a-vis for human beings. Changing patterns of rainfall have started impacting the agricultural patterns. Deforestation and Urbanisation also caused it. Now climate change is responsible for 'habitat fragmentation', loss of biodiversity and coastal erosion (Rosalina M. Bierbaum et al).

The Way Out: Revisiting the Basics

Climate change is a man-made crisis. Though Donal Trump fails to recognize it that way (see Avinash Parsaud). Increase in population, especially in cities, unregulated migration towards cities due to 'city' as the centre of economic activities, anti-environmental activities like usurpation of land by builders that has once been environmentally enriching, air-pollution, water-pollution, failure of solid-waste management, deforestation, lack of implementation of laws that exist to protect environment are some of the major reasons that hampers the environmental protection in India specifically and lead to experience the devastating experiences of climate change. Solution to this should also come from us. Lack of environmental awareness (specially the challenges it entails) also remains one of the major causes of such a situation. Political regimes have started agreeing to accept that climate change is a problem. Many international non-governmental organizations like International Union for the Conservation of Nature (IUCN) and others are working efficiently in creating a knowledge base to support 'policy-framework' around the globe. Recently held conclave in Poland affirms such efforts on the part of regimes around the globe. USA recently has assured to be a part of inter-governmental framework to deal with the menace of climate change. Yet, these regimes have lost much time and, in doing so, have politicised the issue that does not discriminate any of us. It is a global problem and solution needs to arrive at collectively. Still much can be done. But to ensure the environmental protection and natural conservation we need to 'rethink' city as a site of human development. Decentralization of economic activities is the centre of the solution, as Gandhi would have echoed in *Hind Swaraj* as early as 1908. We need to

consider to have sustainable cities with 'manageable' human population (as Plato and Aristotle would have spoken about Greek city-states almost more than two thousand years back), regulating the vehicular population in the city, reducing the industrial activities that are fossil-fuel based, keeping a stricter legal regime that ensures that nobody is allowed to discriminate against the cause of humanity, against environment. Need of the hour is to create amongst us an awareness that the absence of a healthy environment (that our cities have stopped to promise) is as much a state of 'unfreedom' as the absence of experiencing other freedoms enshrined in our constitution. Renewable Energy is the solution to many of the ills that a city life offers us. Need is to exploit the potential of renewable energy resources in India. India holds great potential towards environmental protection and conservation through the use of renewable energy. Need of the hour is to 'redefine' urban and redevelop the sustainable human settlements. The idea of city has to be defined in terms its sustainability aspects. We need to re-orient ourselves with more sustainable consumption patterns and undo many of life-style patterns that are based on our greed, rather than on our need. India and Brazil, being reluctant to recent Climate Change negotiations (particularly Paris Conference, 2015) at Katowice Climate Conference in 2018 also contributed in distancing the process of 'responsibility-sharing with regard to 'emission-reduction'. Now the world has to deal with the task of keeping the global warming under the 2-degree Celsius limit and, to achieve it, multilateralism and transformation of energy sources (from fossil-fuel to renewable energy) is essential.

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