



SYSTEMATISING CHAOS: CLEAN DEVELOPMENT AND THE PROBLEMS OF URBAN SOCIETY

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Abstract

A rubbish heap can grow but it does not develop. Ackoff, R. L. (1994). The exponential growth of cities and towns has affected the urban sociology in more than one ways. Urbanisation is taking place at a faster rate in India. Population residing in urban areas in India, according to 1901 census, was 11.4%. (Singh, 1978). This count increased to 28.53% according to 2001 census, and crossing 30% as per 2011 census, standing at 31.16%. Roy, B. (2012, June 15). The need for clean development is no more a luxury but a dire necessity. The haphazard growth of towns and lack of far sightedness has created a risk society, which bothers rich and poor equally. Beck, U. (1992). The paper discusses significance and immediate need to resolve the problems of urban society regarding its humungous growth and dispersion. The paper further analyses civil society's behavior pattern and suggests solutions.

Keywords: *Clean Development, urban sociology, urban planning, urbanization*



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Introduction

Reminiscent of the days gone by I recall walking loudly on the floor when *nani ma* (grandmother) said, "slow, kid you might hurt mother Earth". Both with a little inquisitiveness and amusement I said, but *nani ma* she can't feel anything; she has no soul, therefore is not living! With a smirk on her face she softly whispered, "She feels more than you and me, the whole *prakriti* (nature) responds to human actions". Reciting this Sanskrit *shloka* (chant) **समुद्रवसने देवि पर्वतस्तनमण्डले । विष्णुपत्नि नमस्तुभ्यं पादस्पर्श क्षमस्वमे**, she said now onwards every morning before stepping on Earth, apologize to her for doing so. With more subtle steps I walked back to my room. While writing down the paper this incident jogged down my memory making me realize that *nani* made a lot of sense.

"The first man who, having enclosed a piece of ground, bethought himself of saying 'this is mine', and found people simple enough to believe him, was the real founder of civil society. From how many crimes, wars and murders, from how many horrors and misfortunes might

not anyone have saved mankind, by pulling up the stakes, or filling up the ditch, and crying to his fellows, 'Beware of listening to this impostor; you are undone if you once forget that the fruits of the earth belong to us all, and the earth itself to nobody'. Rousseau,J.(1754). The balance of nature, as indicated before, is a balance in a variety of ways. Lore, B. (2009, October 15). Commodification, economic growth, financial abstractions, corporate power: aren't these the processes driving the world's environmental crisis? Now we are told that to save biosphere we need more of them. Monbiot, G. (2012, August 7). The constant race in the garb of growth has put the civil society in a catch 22 situation. The paper discusses the need for clean development. It analyses the impact of clean development and suggests solution towards developmental strategy which makes human a part of the nature's cycle and not the head of the same.

Research Methodology

The method for research methodology has been chosen with careful considerations. A subtle combination of qualitative and quantitative research techniques have been chosen in order to come down to empirical data, inferences and hence conclusions.

The method of case study has been chosen for through knowledge of the current dynamics, the problem of clean development is a universal problem and hence a lot of contemporary data and research papers have been written on the subject. A through interrogation led to a comprehensive view to the problem, cause, effect and prospective solution to the same.

The method of participant was also opted for the research paper investigation. Through this method it was helpful in figuring out behavior and response of civil society for the problem. Observations enable the researcher to describe existing situations using the five senses, providing a "written photograph" of the situation under study (ERLANDSON, HARRIS, SKIPPER, & ALLEN, 1993). Through the medium of interview, government plans and their implementation, views of conservationist and innovative future ideas were gained. The facts and habits which usually people hide and hesitate in answering were easily observed through this method of survey.

Review of the Literature

According to the report 'Our common future' by Ms. Harlem Brundtland, sustainable development is defined as development that satisfies the needs of the present without compromising the ability of future generations to satisfy theirs, This report, published in 1987 by the United Nations World Commission on Environment and Development, insists on the need to protect the diversity of genes, species, and all terrestrial and aquatic ecosystems in nature. Legrand. (n.d.).

Global warming due to increasing greenhouse gas (GHG) concentrations in the atmosphere has become a major concern worldwide. Climate change is manifest in higher average global temperatures, rising global mean sea levels, melting ice caps and an increased intensity and frequency of extreme weather events. Most scientific research suggests that the social and economic consequences of unabated climate change could be dramatic. (UNCTAD, 2012). Nature is being valued and commodified so that it can be exchanged for cash. Monbiot, G. (2012, August 7). Sustainable development is presented as a more or less clean break from other modes of development, which have led and are still leading to worrying social and ecological damage on both a worldwide and a local scale. Legrand. (n.d.). A sustainable development project must be based on a better-developed mode of consultation between the community and the members it comprises. Legrand. (n.d.). The aim should be to determine the extent to which economic growth and environmental sustainability are compatible and can be simultaneously sought and achieved. (Harrington, 2013). Reduced production of waste and the rationalisation of production and energy consumption should be implemented. Legrand. (n.d.).

At the same time, a growing population will put additional strain on non-renewable and agricultural resources. Rising demand for food, water, and modern energy will put pressure on scarce natural resources. This is likely to further increase the prices of food and energy. (UNCTAD, 2012). Sustainable development promotes economic growth, environmental sustainability and social development in both the developed and the developing world. As the current dominating paradigm of development, the principles of sustainable development have been adopted worldwide and have had a significant impact on international agreements and national policies and strategies. (Harrington, 2013).

The relation between the ongoing globalization process and its associated policies is an important element in the evaluation of the progress towards the Millennium Development Goals (MDGs), which has been uneven by countries, regions and goals. (UNCTAD, 2012) While poverty and educational and gender attainment goals have seen significant progress, the other targets, i.e. reduction in child mortality, improvement of maternal health, reducing major diseases, attaining environmental sustainability and improving the conditions for development in particular finance and debt reduction, have seen less marked progress. (UNFCCC). The rise in GHG concentrations is mainly due to carbon dioxide (CO₂) resulting from the use of fossil fuels, especially for power generation and transport in developed countries. (UNCTAD, 2012)

The Clean Development Mechanism (CDM), defined in Article 12 of the Protocol, allows a country with an emission-reduction or emission-limitation commitment under the Kyoto Protocol (Annex B Party) to implement an emission-reduction project in developing countries. UNFCCC. (2015, November 23). Such projects can earn saleable certified emission reduction (CER) credits, each equivalent to one tonne of CO₂, which can be counted towards meeting Kyoto targets. The mechanism is seen by many as a trailblazer. UNFCCC. (2015, November 23). It is the first global, environmental investment and credit scheme of its kind, providing standardized emissions offset instrument, CERs. UNFCCC. (2015, November 23). The CDM, contained in Article 12 of the Kyoto Protocol, allows governments or private entities in industrialized countries to implement emission reduction projects in developing countries and receive credit in the form of “certified emission reductions,” or CERs, which they may count against their national reduction targets.

The CDM strives to promote sustainable development in developing countries, while allowing developed countries to contribute to the goal of reducing atmospheric concentrations of greenhouse gases. (UNFCCC). The mechanism stimulates sustainable development and emission reductions, while giving industrialized countries some flexibility in how they meet their emission reduction or limitation targets. UNFCCC. (2015, November 23). Despite this recognition, the Clean Development Mechanism (CDM) developed under the climate change instruments to deliver sustainable projects in developing states has not adopted measures to implement these obligations. Filzmoser, E., Voigt, J., Trunkl, U., Olsen, K. H., & Jegede, A. O. (2015). The adoption of a range of resolutions by the United Nations Human Rights Council (UNHRC) signals the introduction of a human rights-based approach into the lexicon of climate change negotiation and resulting initiatives. This development has been subsequently reinforced by the Conference of Parties Decision 1/CP.16 which calls upon parties that are implementing programmes under the aegis of the United Nations Framework Convention on Climate Change (UNFCCC) to fully respect human rights in all climate related actions. Filzmoser et al (2015). Developed countries account for most of the historical GHG emissions, especially the energy-related ones since 1900, and they are therefore largely responsible for the global warming. They also have much higher current per capita emissions than developing countries. However, most of the growth in total GHG emissions over the past four decades has taken place outside developed countries. (UNCTAD, 2012)

Development a Necessity

Push and pull factors in towns and cities such as urbanization, pollution explosion, technological advancements, changes in one's lifestyle, have further led the need for urban infrastructural development such as housing, transportation, essential institutions like schools, colleges, hospitals, more number of manufacturing centers, industrial hubs, information technology & communication and many more. This not only makes development inevitable but also a necessity. This example would further substantiate my stance. For that matter lets access the impact on rubber industry by one lac families which changed their means of transportation from scooters to cars due to change in income or because of technological advancement. If one lac people used scooter which has two tyres, each of which weighing 1 kilogram then the net rubber used would be 2 lakh kilograms. With cars the number of tyres doubled each weighing not less than 3 kilograms so now the net rubber used is 12 lakh kilograms, which shows more than tenfold increase. Similar calculations can be done with regards to manifold increase in the utilization of steel, petroleum, aluminum so on and so forth. One must not fail to evaluate the cascading effect that these industries might have on the allied industries. In Certain sectors such defense development is certainly inevitable but not a necessity. Due to the geo political reasons, the logics such as that of nuclear deterrence, lack of cooperation between the neighbor countries have forced and necessitated such expansions. The funds put in such exorbitant projects can be more efficiently appropriated in other imperative and essential sectors. With the equivalent cost of 23 military tanks the entire city of Mumbai can be cleaned.

Development versus Clean Development

A rubbish heap can grow but it does not develop. Ackoff, R. L. (1994). If something develops the quality of the whole should improve and not degrade. As a tree develops, it will not only grow, but also be able to reproduce, bear fruit, be healthy and continue growing. Heveo, H. (2009, September 16). Contrary to the one's wisdom development to be misunderstood only as economic concept would be a folly, it also has social, political and environmental facets and compromise on any one dimension will make development lose its essence. Clean development thus is one which is done after judiciously assessing the impact of a specific activity on the environment. The Indian constitution is a comprehensive collection of ideals and aspiration of Indians; it is the Bible or Gita of Indian democracy. The sheer freedom that Article 21 Right to life confers is undaunted. In 'Bhandua Mukti Morcha versus Union of India' case, Supreme court expanded the ambit of Article 21 by further making Right to live life in a healthy environment as a fundamental right and making India

the first country in the world to be give fourth generational fundamental right to people putting straight into perspective the need for clean development. (Khan, 2014).

Civil Society and Clean Development

Our daily chores starts with reading newspapers in which the government rhetoric fails to impress us, cleaning our houses, eating our breakfasts, leaving for work place with our respective vehicles, returning home and we close the loop by again cribbing about the poor state of the country while watching news. Retrospection of these activities with finer details at micro levels is a proof of our double standards. People are so aloof of their responsibilities that we care the least to even segregate our daily waste as biodegradable or non-biodegradable. One lakh sixty thousand metric ton of per day waste if segregated could account for almost ninety lakh ton of biodegradable waste per annum (60-70 % of total waste) which can be very sustainably be converted into a compost having the capability to produce manure worth twenty seven thousand crore per annum. **Sharma, S. (2016, January 20)**. This manure can be used to increase the fertility of 45 lac acre of barren land, leading to an additional 90 ton agricultural produce. We shudder to think as to why then crores are spent importing urea. The bio waste can even be converted into gas through organic reactions or burned to produce electricity. The non-biodegradable waste can be reused while building permanent structures such as roads, pavements leading to reduced infrastructural costs. The petro chemical waste through environmentally approved 'Pyrolysis method' can be used to again make petro products. We pass on the entire burden of the beauty that the landfills add to our landscapes to the state, when the fact is that we all are tarred with the same brush.

It is hard to fathom that India accounts 59% of the 1.1 billion people in the world who practice open defecation. **WHO. (2010)**. It is now a proven fact that defecating in open prevents the body from absorbing calories & nutrients, the underweight mothers produce stunted babies prone to sickness who may fail to develop their full cognitive potential. (The Economist, 2014). Child stunting make India's children among the shortest in the world. **Venkatraman, S. (2015, October 26)**. Open defecation makes India lose at least 1000 children a day due to diarrheal deaths and is also to be blamed for making holy Ganges home to fecal coliform bacteria (120 times more than the permitted level) making it unsafe even to bathe. (B & B, 2014). Even after the well-intended Government toilet building programme under Swacch Bharat Mission what needs to be kept at the back of the head is that people should be made aware of the problem as it has been noted that many households despite having toilets prefer open defecation. **Sanghi, B. (2010, May 6)**. This mentality if not rectified would lead us building lakhs of empty unused toilets.

We switch our car's engine without keeping in mind that because of our attachment to our comfort we tend to avoid public transport like busses which carry forty passengers at a time which are likely to drive forty cars. In 2013 the report by Global Burden of Diseases mentioned that outdoor air pollution was fifth largest killer in India. **Global Burden of Disease report. (2013, February 13)**. One lakh premature deaths happen annually due to air pollution, the school children in Delhi happen to breathe four times more toxic than the required safety limit and well this cannot be limited to such cities alone, as one should remember that an air pollution created in China has the capacity to travel up to central valley of California. **Greenpeace. (2015, February 16)**. **R. (2017, January 05)**. Coal fired power plants, emissions from cars, burning of agricultural waste, deforestation and change in the land use further proliferate air pollution. Development of proper pedestrian tracks, trams, BRTS, metros and use of "green fuel" can help us mitigate the carbon footprints

We are all biting more than we can chew. The food we eat influences our carbon emissions immensely. According to an online website the average food carbon footprint associated with single household is around 22 tons of carbon di oxide per annum. **Food carbon emission calculator. (n.d.)**. regarding this has already been initiated in the western countries but same needs to be done in India as well.

The unplanned urbanization and its evils

Urbanization along with faulty urban planning has a cascading effect not only the socio political and economic facets but also resulted in brutal assault on the environment more specifically to human health and existence. The government of India has realized this as a matter of concern and also has laid the idea of smart city development. Let us just imagine 5 people tied around with a string covering an area of 1 square meter. At densities lower than 1 person per square meter the crowd is free flowing and stable. As the density of people per square meter increases, the movement gets restricted. Cities like Beijing, Guangzhou, New york, Tokyo, Mexico, Mumbai and so on represents much over used land capacity with respect to population densities. These cities then reduce the walking space and lead to further expansion of roads without proper planning whose subsequent effects further add to the misery urban sprawl that takes place due to haphazard development from the center of the city, wherein again crooked development takes place. These extended areas are mostly used as residences, as getting one close to the center could only be a dream. Such towns need to have a sustainable transport system such as trams or BRTS, because the residents of the extended area commute daily to the center of the cities for work.

As a prospective solution to this misery, effective administration can help reduce the ill effects of poor urban planning and its subsequent effects. Few standards such as per hectare carbon emission, population density, greenery, bio degradable and non-biodegradable waste, water requirement, space for pedestrians, transport density should be specified for each city. These standards can further again be divided for each ward in order to increase more accountability and better implementation. A clean development department both at city and ward wise level involving government administrators/Ward councilors along with public participants and NGOs can be given the responsibility to check such levels. A comparison of each ward can be done by putting in place real time online software that can be developed wherein minute operations such as garbage collection, bio waste disposal and recycle, population density control etc. can be displayed on a website to give an insight of the departmental working. Each ward councilors can incentivize their residents by giving them books, certificates, mobile recharge cards if they do their bit to maintain the above mentioned standards by segregating waste ab initio, carpooling, use public transport, planting trees and so on. The real time internet software can display ward wise achievements on the website. As soon as the permitted standards are crossed the department should go for linear dispersion of the cities where in the important institutions including hospitals, educational centres, government offices etc. are replicated on the outskirts of the cities or the nearby village. This would automatically lead for population dispersion hence easing the concentration of people. This would not only control rural urban migration but would also be a solution to major problems such as the of slum development. A naïve analogy would be that if I place a sweet I attract all the ants nearby but as soon as I place another sweet nearby ants bifurcate. This way I can better administer, manage and control the ants. In the sense managing better transportation system and reduced level of air pollution, more oxygen per person so on and so forth.

In railways through the use of ‘dynamo’ a machine which is responsible for converting mechanical energy to electric energy, the kinetic energy produced by train is then used to electrify the entire train. Application of this in our everyday life’s can be a *jugaad* for reducing carbon footprints. For instance from auto rickshaws to cycles, ceiling fans, washing machines or juicer mixers all produce kinetic energy which with the help of dynamo can produce small amount but collectively substantial amount of electricity, such easily available amenities can help us produce eco-friendly electricity for later use.

The Clean Development Mechanism (CDM) is one of the Flexible Mechanisms defined in the Kyoto Protocol that provides for emissions reduction projects which generate Certified

Emission Reduction units which may be traded in emissions trading schemes is already in place in India. (UNFCCC). One may fail to understand that why despite of an unblemished idea CDM remains to be in shackles? As said a good idea is about 10 per cent and implementation and hard work 90 per cent. (Kawasaki).n.d. The blame is to be put onto the bureaucratic delays, uncertainty of CDM status and unaffordable costs which created a lacuna in its implementation. Same way for any initiative like Swacch Bharat, Smart city project, Clean Ganga to fructify what ardently requires is primarily the political will along with a strong nexus between Government, NGOs and public. No one can deny the role of primary education in this, which in itself is the single most efficient solution.

We can't let the chips fall where ever they may, one needs to understand that the luxury of cars comes at the expense of at least two years of reduced life spans, The germs released by improper sanitation harm rich and poor alike, every time we throw our discarded mobile and laptop batteries to be dumped in landfills, the additional leachate produced contaminates our ground water. We can't afford to forget that Unsustainable development can forever haunt us with deluges like the recent one in the Himalayas. The expense of the cheap plastic bags is borne by animals who risk their life swallowing it. One needs to rethink if children should bear the consequences of global disease for what they haven't done. Before cutting thousands of trees for expansion of roads one needs to know that a single mature tree can absorb carbon dioxide at a rate of 48 lbs/year and release enough oxygen back into the atmosphere to support 2 human beings. **Helmenstine. M. (2017, April 10).**

Conclusion

We are more than sincere followers of our religion. One's way to dress, eat, sleep, walk, speak can instantaneously be regarded as blasphemous if it is not as per the religious code of conduct. Whether Hinduism which places high regard on the concept of 'swachhata' (cleanliness) or Quran verses which treat "Cleanliness is half of faith" or any other religion for that matter, why do we then not get offended if our cities remain unclean, how is it less blasphemous than anything else? Or do we all have the problem of selective amnesia? We need to consider this as impious as anything else. Crossing the streets with handkerchiefs on our nose, when we shut our home's door, we no more can sigh with relief pretending ourselves to be safe. The bad odour of our misdeeds has reached our bedrooms. And is an eerie for rich or poor, towns or villages, developed or developing countries alike. It's time we own up our responsibilities and face this juggernaut with wisdom. We need to keep in mind the theory of Karma which claims that whatever goes around comes back around. We either can be the change or witness the catastrophic change. The good part is we still have a choice.

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