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Working Document

March, 2020, New Delhi, India

Sustainable Measures for Revamping Urbanisation and Environmental Policies





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Session on Climate Change and Sound Ecological Policies for Urban Infrastructure

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Session on Need for Change in Environmental Policies with special focus on Metropolitan Cities

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Session on Environmental Laws & Policies with respect to contemporary trends in Urbanisation

- ❑ Dr Shahana Chattaraj, Director, Science and Research, World Resources Institute, India

Session on Urbanisation Policies and Environment

- ❑ Mr Raman VR, Head of Policy, WaterAid India

Session on Water Policies in India's Urban Quarters

- ❑ Mr Shiv Marwaha, Advisor, Land Use and Planning, WWF, India

Session on Land use Planning on the fringes of Environmentally Vulnerable areas



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About the Organisation:

LexQuest Foundation (LQF) is an independent, non-profit, research and action organisation, established in 2014, in New Delhi. We are striving to create, advocate and implement effective solutions for a diverse range of development issues.

To endorse participative governance, we engage with a broad spectrum of stakeholders, from various sections of the society, to ensure that policy-making remains a democratic process. We utilize pragmatic and futuristic research to disseminate actionable knowledge to decision-makers, experts and the general public.

Our key activities include capacity and skill-building workshops, policy advisory programs, public outreach, and stakeholder consultations. We collaborate with the government, other organizations and individuals for impactful policy formulation and execution.

By employing sustainable and equitable solutions through our multidisciplinary, intersectional initiatives and programs, we are constantly working towards creating empowered communities.



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Background:

LexQuest Foundation organized a one-day public policy symposium for students and young professionals. It was aimed at reflecting on environmental policies and analyzing their impact on the contemporary urban growth landscape of our country. The discussions and presentations were focused on the need to improve the present legal and policy frameworks and to fill the prevalent gaps therein.

This Program witnessed participation of students and professionals from diverse backgrounds, with a keen interest and experience in the field of Environment, Law and Public Policy. At the Symposium, selected participants presented their ideas on the theme of the Program. These participants had earlier submitted Policy Briefs on associated issues, on the basis of which, they were allotted a slot to share their policy recommendations in front of the gathering of policy enthusiasts and experts. All participants got an opportunity to gain perspective about the existing policy landscape besides being a part of a high profile policy discourse with eminent scholars working on environment protection and preservation policies, professionals engaged in urban planning & settlement policies, legal professionals exposed to conflicts related to environment and urban spaces, and specialists in the field of Public Policy.



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Objective of the Working Document:



Emerging economies like India face the mammoth issue of rapid urbanization accompanied by environmental degradation. By 2030, 40.76% of our nation's population will be dwelling in urban zones. As of now, 15 out of the 20 most polluted cities in the world are in India. The problem of waste management is rising with the rapid increase in waste generation (especially hazardous waste: biomedical and e-waste). The need to cater to **food and housing requirements of the increasing**



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population has accelerated the rate of deforestation. Most of the rivers have been adversely affected by the increasing urban landscape. Hence it is imperative, now more than ever before, to take concrete steps and to overhaul our environmental and urbanization policies to ensure that future generations continue to enjoy the planet's natural resources even while we optimally utilize the opportunities offered by urban agglomerations without adversely affecting the environment.

We need **comprehensive urbanization policies with focus on efficient energy and transportation systems, eco-friendly waste management, water conservation, and participatory governance.** The papers presented at the Symposium were related to different aspects of urbanization and environmental policies. Many ideas emerged out of discussions among participants and experts. This document summarizes and discusses the problems in the environmental policy framework in India which were deliberated on, in these papers. It also summarizes various ways suggested by the participants to solve these problems which could vastly help in improving the environment and urbanization policy framework of our country. Conservation of water resources, need for protection of coastal areas, and management of data and information systems in cities were the prominent themes discussed during the Symposium.

Water is essential for most human endeavors. It is one of the key resources for sustainable urban development. Expansion in urban agglomerations and increasing population has put unprecedented pressure on our water resources. Serious **challenges lie ahead concerning access to drinking water, quality of water, sanitation and water-related calamities.** We need strong laws as well as effective implementation mechanisms to ensure that the existing water resources are not further polluted, wasted and entirely depleted. These issues were dealt with in detail by papers presented at the Symposium- "The Unseen Water Crises of Kolkata" by Prachi Aggarwal and "The Concurrent Case of Over-population and Water Crises" by Vaibhav Vardhan and Prateek Jaiswal. The former paper lends to the discussion on



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conservation of river water through judicious water usage. It is argued that such measures ought to be enforced by the government through actions and regulations like **a progressive water taxation system, installation of water meters, penalisation of excessive water use and imposition of limits on developmental and construction projects** that adversely affect natural river flow. The latter paper discusses in detail the **issues of land shortage and water crises that the city of Mumbai** is facing in light of overpopulation. It goes on to suggest complementary measures which aim at tackling both these issues concurrently.

Protecting coastal areas is another sphere that needs urgent attention. Adv. Shubham Kaushal has hence discussed this issue in the paper "Access to urban coastal commons: How do we ensure effective environmental management?". This paper is concerned with the **imperatives of equitable management and conservation of coastal commons** in the country. Coastal areas are one of the most densely populated and resource-rich regions of the country which serve purposes of economic as well as environmental importance. They are not only sites of the emergence of large urban agglomerations and economic growth hubs, but also **perform crucial ecological functions of carbon absorption**. Coastal ecosystems can store up to ten times the amount of carbon per unit area as compared to the terrestrial forests. Adv. Kaushal's paper dwells on the specific case of Mumbai to study the ways in which traditional settlements of fisher communities in the coastal regions of the city have faced displacement with the onslaught of commercial development projects along the coasts. This state of affairs goes against issues of environmental as well as distributive justice as these **fisher communities rely on coastal commons for their livelihoods, and their historically sustainable livelihood practices are integral to the maintenance of the health of the fragile coastal ecosystems**. The existing CRZ regulations do not address the problems faced by the fisher communities. To address these concerns, it is argued that the empowerment of District-Level Committees and



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involvement of the local community in decision making is essential, thereby making coastal zone management a transparent and democratic process.

Another area of discussion was the need to transform data and information systems concerning cities. The advent of big data analytics, artificial intelligence, and the Internet of Things has provided an opportunity to transform information systems and connectivity. Digital governance could help ensure participatory decision making and transparency in administration. However, concerns remain about cross-verification of data, lack of trust in the data collection process, accountability in the data creation process and lack of coordination among stakeholders. There is a need to bridge the gap between the 'inputs received' and 'inputs required' for the implementation of projects. To address this gap, 'data collection' needs to be accorded due importance. Collected and **well-verified data could help us understand the 'urban environment' in a more comprehensive way.** Collected and cross-verified data should be **used extensively for planning, re-designing, and proactive preparation for future growth** as well as for handling any emergency.

Another Policy Brief was discussed wherein the interconnected issues of economic development, urbanisation and environmental conservation have been extensively dealt with. It is argued that even while urbanisation and processes of economic development lead to exploitation of the environment, **such advancement better equips a nation and gives it the capacity to better tackle issues of environmental conservation and produce alternate forms of energy efficiently.** Hence, emphasis is laid on maximising economic growth through policies that balance economic growth with environmental protection.

In the following pages, we have analyzed the scope of these problems and have suggested alternative policy measures that could help address the associated issues.



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Urbanization and Environment

-Deepika B.

India has been ranked among the bottom four countries in the Environmental Performance Index, 2018. A quick country-wise look at the **Environmental Pollution Index reveals that developing countries like India suffer from the issue of environmental degradation**, whereas the developed countries have been able to safeguard their people and environment effectively.



Picture: Wikimedia Commons



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This paper essentially presents us with a dilemma. The author asserts that even while it is evident that **economic growth is a necessary prerequisite for a country to develop the capacity to preserve its environment while providing all its citizens with a minimum standard of living, this economic growth is driven by urbanization and innovation which in turn has adverse effects on the environment.**

It is argued in the paper that while pollution and climate change are indeed serious concerns among people, we cannot ignore that urbanization drives innovation which brings economic prosperity to the nation and that economically rich countries are better equipped to tackle climate change. India still has **to raise people from poverty, improve basic infrastructure and provide affordable energy for all**, which could be possible only if there is **industrial growth and overall economic growth.**

With the above-mentioned complications in the picture, is it possible for India to look at the environmental challenges such economic advancement can pose? We are also witnessing negotiations regarding the [Paris Agreement](#), owing to which there is mounting pressure on developing countries to cut down on their greenhouse gas emissions; which could in turn hamper growth, and none of the problems discussed earlier could be solved. Without economic growth, it is difficult to provide adequate resources to potential green energy manufacturers in the renewable energy industry, to switch to eco-friendly energy alternatives.

Increasing urbanization and mass migration to cities is leading to increasing traffic congestion, thereby giving rise to further air pollution. The response of the policymakers so far has been to encourage public transport and increase the tax for purchasing private vehicles, which has not proved to be remarkably effective. Moreover, the problem of waste management is soaring with every passing day. Those who live in the vicinity of landfill sites are affected most by this problem.



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To tackle these issues, we need to look into several policy alternatives, some of which have been listed here:

- Regulations for businesses, innovating entrepreneurs and civil society organisations could be reduced. The process of obtaining licenses could be simplified. This would enable many startups and non-governmental organisations to pioneer new technologies that could help with water treatment, segregation and recycling of waste.
- Decentralize large cities by providing autonomy to local bodies to carry out various tasks efficiently. Countries with a large population can be managed efficiently through decentralization, by providing more autonomy to States and City-Level Local Bodies.
- Impose strict penalties on industries that are polluting water resources, and destroying land properties.
- The annual budget expenditure on infrastructure in India is very less compared to other countries, therefore it should be increased from the existing \$110 Billion. This can be done by proper management of tax revenue.
- Revenue allocation in urban areas and rural areas can be monitored by using technology like Artificial Intelligence and Machine Learning, as any policy without numbers could prove to be costly, as it might fail to identify issues relating to the region it is sought to be implemented in.
- Extensive awareness programs on population explosion should be conducted. Overpopulation creates an additional burden on the resources, which can lead to further environmental degradation.
- Moving industry with hazardous wastes away from residential areas can help in reducing the pollution of water bodies. There should be a strong legal



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framework with strict penalties in place, in case there is a failure to comply with this regulation.

- Using big data technologies can help companies and policymakers to focus on economic growth as well as observe environment indicators and take steps for improvement accordingly.
- Ensure education and revival of our civilizational values that uphold respect for nature, and awareness to harness respect for the environment. All sections of the society including common citizens, policymakers and industries should play a part in creating an atmosphere where sustainable development is prioritised over individual goals.



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The Unseen Water Crisis of Kolkata: A case study to ensure better preservation of such water bodies across the country

-Prachi Agarwal and Bavadharini Manohar



Picture: Gurvinder Singh

Over the past few years, the city of Kolkata has been facing a new threat - scarcity of potable water. Water resources in the city are not as plentiful as they used to be, given the inconsistent monsoon patterns in Kolkata as well as the **increased salinity of the Hooghly river** and decrease in the rate of ground-water percolation in the city. The Hooghly River is a perennial water resource for Kolkata, and its loss would be massively costly to not just Kolkata with its rapidly growing population, but to all the towns along its banks. Despite this grave state of affairs, **the measures instituted to**



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conserve rapidly depleting water resources have been grossly insufficient and outdated. On the contrary, the projects undertaken by government bodies like the Kolkata Municipal Corporation and the Public Works Department of the City have proved to be more harmful to the environment and the water resources. Two such projects are the underwater metro project that aims to connect the two banks of the Hooghly, and the Diamond Harbour "Hanging Park". Further, the [Jal Marg Vikas Yojna](#) proposed by the Central Government **opens the river to dredging and other interventions which will have a massive direct and long term impact not only on marine life but also on the populace which occupies the land on either side of the river.**

The uncertainty regarding the Teesta river water sharing agreement between India and Bangladesh also adds to the concerns of water scarcity. This is so as this river's water is a vital fixture in West Bengal's economic development, and the **lack of agreement on Teesta river water sharing between the governments of Bangladesh, India (Central) and West Bengal (State) leads to an insufficient flow of water** which does not fulfill the needs of people on either side of the border.

Such problems are being faced in various urban areas with similar water sources, across the country. The government needs to undertake feasible policy action to combat this alarming situation. Here are a few suggestions which could be immediately looked into and used to solve analogous problems:

- Strong legislation should be drawn to ensure that the existing water resources are not further polluted or wasted.
- The construction along the coast of, and in Hooghly, should be discontinued. This includes the construction of future dams, barrages, ports, docks, warehouses, underwater tunnels, etc.



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- All government buildings (offices, schools, hospitals, Courts, etc.) should have a fixed quota of water as per necessity. The overflow of tanks due to negligence should be discouraged with monetary penalties.
- Meters must be installed in households (independent houses and flats) to measure and regulate consumption to ensure the judicious use of water. Excess water usage should be fined.
- Installation of Water-Meters should be made compulsory so that a progressive water tax system could be brought in, based on water consumption. Tax slabs could be decided keeping in mind the income and minimum needs of individuals based on culture, gender, and other factors of import.
- The Kolkata Municipal Corporation should come up with guidelines for how to distribute and conserve water resources effectively and judiciously.
- Points, where water tankers are filled, should be strictly monitored for avoidable water spillage or leakage.
- The Water Tax, which was abolished in 2011 by the West Bengal government must be brought back and implemented seriously.
- Steps ought to be taken towards the resolution of the Teesta water dispute to distribute water between India and Bangladesh.
- The government should exhaust all means to make people aware of the need to judiciously use water via advertisements in newspapers, radio, and television, workshops across schools and colleges, and posters across the city.



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Access to urban coastal commons: How do we ensure effective environmental management?

-Adv. Shubham Kaushal



Picture: The Indian Express

Mumbai's narrative of being an economic powerhouse, veils the fact that it is a **socio-ecologically diverse coastal city with an extensive system of wetlands, river systems, mangroves, sand dunes, sea-grass beds, turtle nesting grounds, habitat for Schedule-I species, rocky shores, mudflats, and indigenous coastal communities**. With rapid urbanization, most of these coastal traditional settlements found themselves in the path of varied development projects. Seashores attract



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premium-priced residential/commercial space that is appealing to influential people, who have the capacity to access financial resources and political power, and hence, manipulate policies. This situation has thrown open access to the coastal stretches to all, altering the meaning of coastal commons.

Given that urban agglomerations such as Mumbai largely fall under CRZ areas, 'development' in urban agglomerations such as Mumbai are governed by the CRZ Notification. [The CRZ Notification](#) **lacks any specific provisions and measures that explicitly recognize the relationship of the fishers and their rights to the coastal stretches.** This lack of formal recognition has led to usurping of coastal stretches by non-coastal and purely economic interests. Throughout the country, there has been an unambiguous demand from the fishing communities for a central role and responsibility for the management and protection of coastal areas.

Priority must be given to participatory governance through a socio-ecological lens in the face of the increased impacts of local environmental degradation and climate change. **District-Level Committees (DLCs), the constitution of which was introduced by the CRZ Notification of 2011, remain underutilized so far and can be made crucial in effective monitoring and implementation of the CRZ notification in urban agglomerations,** which appear to bear the brunt of conflict over coastal resources. To address these concerns, the following steps need to be taken:

- Development of a public interface for creating awareness of environmental norms in CRZ areas, proposed projects, and grievance redressal.
- Representation & participation of local fisher community, fisher union, civil society, research organizations and independent urban experts in the local nodal agency.



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- Introducing adequate amendments in respective legislation to empower DLCs as the Nodal Agency can also ensure that adequate representation and participation of all local interests, particularly the primary stakeholders, are catered to.
- The [CRZ Notification of 2011](#) introduced the concept of a [Coastal Zone Management Plan \(CZMP\)](#), the purpose of which is to regulate coastal development activities based on the zonal classification of coastal stretches. The task of preparation of the same vests with the State administration, instead of the State Coastal Zone Management Authorities (SCZMAs) that is specifically set up for the purpose of regulating CRZ. The preparation is carried out as per the guidelines laid down in the Notification that provide for public consultation, and specifically mention mapping and earmarking coastal commons. However, there is hardly any real engagement of the traditional coastal communities in formulating the CZMPs. The DLCs should be involved in the preparation of a Coastal Zone Management Plan incorporating development plans and proposed projects for the duration of the CZMP.
- Impact Assessment of Development Plans of urban agglomerations and individual projects (if proposed) should be carried out, before their sanction after finalizing the CZMP.
- Post-clearance on-ground monitoring of projects and enforcement of environmental norms should be looked into.
- Amendments in the CRZ Notification to implement the suggestions would not only ensure that coastal zone management becomes a transparent and democratic process, but it would also lead to higher instances of workable solutions for addressing violations, stricter implementation, arresting impacts of natural hazards to vulnerable settlements of fisher communities and catering



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to the sustainable urban development needs. Furthermore, the delegation of the aforesaid functions to DLCs would improve the functioning of SCZMAs and enforcement of environmental norms in CRZ areas.



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Data in visualizing Urban Environment

-Maadhava Anusuyaa C

The number of people residing in cities is rapidly increasing, and so is the role of data in shaping urban management. Data is considered as the lifeline of next-generation smart cities. In this context, urban management bases itself on evidence and truth inferred from data. Cities, at present, have a relatively greater concentration of data as well as technologies. This has given rise to 'Urban Informatics'- a branch of study that uses data and technology to solve problems faced by any city.



Picture: Oracle Blogs



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Ease of Living (2017) and Municipal Performance (2019) Indices have been launched with the objective to enable a shift to a data-driven approach in urban planning and management. There is an **attempt to develop Next Generation Infrastructure by integrating physical infrastructure and technology like the Internet of Things and automation to maximize efficiency**. This is recognizable from the fact that cities such as Amaravati (Andhra Pradesh), GIFT city (Gandhinagar, Gujarat) and Lavasa (Pune, Maharashtra) are being attempted to be built "intelligently" from scratch. This explains the 'cruciality' of data in today's urban planning and management.

These attempts are changing the way 'data' is looked at. Crowd-sourced data (that collected by volunteers) is considered inconsistent. Instead, data that is proliferated hugely by digital technologies is considered valuable in assessing and recognizing patterns of human behavior. Such data includes data from social media, app-based inventories, spatial data, mobile phone traffic data, data captured through CCTVs, Internet of Things, etc. Developments in Data Science, Big Data, Artificial Intelligence, Block-Chain Technologies, and Machine Learning have now vested data with the potential of turning into the eyes and ears of an urban landscape. Such **data automation has the ability to introduce and inform the problems faced by society to urban planners**.

At present, the data flow is just a one-way process: from consumers to the providers. This architecture does not result in the creation of "trust" in the process of data collection. Also, most of the data created is ephemeral. It disappears shortly after the end goal of any project has been achieved. Since there is a continuous inflow of data, it becomes challenging to track the data subsequently.

The emphasis on data relays greater prominence to the link that government and industries share with academia. The Smart Cities Mission envisages the **creation of a 'quadruple helix' ecosystem consisting of multi-layered partnerships among government, citizens, academia, and industry**. This could create a hierarchy based



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on 'data-information-knowledge'. Data-savvy institutions and 'infomediaries' could gain greater prominence in providing insights required for policymaking.

In the aforementioned context, the following policy recommendations should be deliberated upon:

- George Rajna in his paper '[AI in Citizen Science Data](#)' explains that crowd-sourced data could be adjusted using a '[deep learning model](#)' to remove its inherent biases and inconsistencies. This could help create an alternate parallel data-set, which could indirectly nudge accountability and transparency mechanisms in the data creation processes.
- Data has limited capability. It can only provide us with facts. The why of it remains unexplained. Instead of looking at data and theory as opposed to one another, one should view them as a continuum: Data needs to give rise to theory and theory needs to explain data. This approach could help check the inconsistencies that might result from the nature of data and the cumbersome process it involves. [Citizen Science and Smart Cities Report](#) states that "there is a need to work with the community and not just for, or on, the community. It is critical not just to take but to give back something that is valued by the community itself".
- We have already entered the age of data. The Delhi Police has used facial recognition to identify 3000 missing children. The Centre for Development of Advanced Computing is using Artificial Intelligence tools to tackle cybersecurity threats. The street lights under 'The Pune Street Light Project' can be remotely controlled through Supervisory Control and Data Acquisition (SCADA) Systems. The Telangana Police's 'Smart RoboCop' is equipped with an array of sensors connected to GPS.



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We are not required to wait until our systems are 100% foolproof to migrate towards a data-driven approach to decision making. Intervention at earlier stages wherein the data is largely collected and algorithms are written is the need of the hour.

- Data is not about stories, myths or illusions. Data could be considered as hard facts. To know the truth is one thing but to acknowledge it is another. Therefore, there is an urgent need for a discussion on what we are going to perceive as 'transparency' and 'accountability' given the evolving data architecture.



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Concurrent case of over-population and water crisis

-Vaibhav Vardhan and Prateek Jaiswal

The modern metropolis, however magical and attractive it may seem to the rural multitude, has inherent problems demanding acute actions. Overpopulation and subsequent concerns of optimal land utilization and resource scarcity are some of the most urgent issues facing metropolitan cities. As of 2016, estimates of the economy of the Mumbai Metropolitan Region have ranged from INR 10 trillion to INR 26 trillion. The average **annual losses due to direct flooding- damage to crops, houses and public utilities account for almost 0.11% of the GDP**, implying INR 11 to 28 billion every year, that is not including the workforce loss the city faces every day it remains closed. Land shortage is another problem that both Mumbai and Delhi have to deal with, owing to the ever-increasing in-migration and limited land availability. The ultimate bearer of this load is the environment, with Delhi (as an example) in its current state falling short of 40% of the forest cover as prescribed by the National Forest Policy. From a distance, both issues might seem unrelated, but their solutions can be devised cooperatively.



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Picture: ZeeNews

Government policies of taxation exacerbate existing patterns of inefficient land usage by **heavily taxing high-rise structures while encouraging low-rise structures which waste precious land resources**. On the contrary, the government ought to frame policies that **incentivize the construction of high-rise buildings, penalize low-rise structures, and chastise nuclear family housing in independent structures such as bungalows**. It is further asserted that the **underutilized land resources of the region can be used to extend the green initiatives and increase the forest cover within the city**. Besides the underutilization of land, shortage of land is another problem facing the modern metropolitan cities given the increasing migrations they witness each year. The ultimate load of such demographic stress is shouldered by the environment.



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Mumbai faces a flooding crisis annually which results in an approximate loss of 870 crores. On 26th July 2005, Mumbai faced a grave situation when 35% of its annual rainfall occurred in a single day. To alleviate the damage from such events if they happen again, the Brihanmumbai stormwater disposal system (BRIMSTOWAD) was planned to refurbish Mumbai's drainage systems. This was sought to be done by widening the existing water drains and increasing their size in order to create more water carrying pathways. However, this endeavor wasn't entirely successful due to structural limitations arising out of the way in which foundations of older buildings had been laid. The initiative also envisaged setting up of pumping stations at the points of outflow. However, the requirement of electricity or liquid fuel for the functioning of these pumps proved to be a hurdle as both of these are often in short supply during floods.

It is argued that despite the seemingly apparent distance between the issues of overpopulation, land-use and water crisis mentioned above, they can, in fact, be tackled concurrently in the following way:

→ Taxation on low rise structures can be increased as a penalty for under-utilizing the land resources. Similarly, for new high rise structures, decreased taxation can serve as a good incentive to promote optimal land utilization.

→ Property tax model to be followed:

Newer-low rise structures > Older low-rise structures > Newer high- rise structures

→ Provision of greater tax benefits for architects and developers for integrating a city-wide network of tanks, called percolation tanks, as a feature with the new constructions is a good way of tackling the problem of land shortage. The government can also sponsor the construction of percolation tanks at any new construction. Not only would this provide a pathway for the excess flooding



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water to flow from one area to a neutral one, but even combining a system of rain-water harvesting.

- Devising a milestone action plan is necessary for a thorough implementation of the proposed model.
- Years of advancement and innovative engineering can be put to use. Following in Tokyo's footsteps, a city that has been able to effectively deal with the extreme flooding situations, we could also look into implementing a city-wide (sparse yet effective) connected network of tanks (named percolation tanks)- not only would this provide a pathway for the excess flooding water to flow from one area to another neutral one, but will even combine a system of rain-water harvesting. These tank structures can be conveniently merged with the newly constructed, proposed high-rise structures.



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Conclusion:



Cities are the engines of growth, as well as the primary source of activities that result in environmental degradation. **It is extremely important to not see urbanization as the development of the city area but to focus on the transformation of rural areas as per urban settings, without disturbing the natural ecological processes of the environment.** In the absence of strong urban governance, public-private partnerships



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become imperative. Such partnerships can help set priorities that are shared broadly, and therefore, implemented soundly.

Economic growth is crucial to induce prosperity, to end poverty and to solve the problem of unemployment; it is also **essential for tackling climate change issues in a better manner as an economically rich nation with adequate resources will have the capacity to start producing alternative forms of energy efficiently**. On the flip side, focusing on economic growth alone and **relying on cheap energy, leads to overexploitation of natural resources**. The adverse economic impacts of environmental degradation are quite well known. Our urbanization and environmental policies must be framed in a manner conducive to maximizing growth while minimizing environmental degradation- only then will we be able to ensure a flourishing and sustainable future for India.



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