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Urban Sociology

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Lecture No: 7

Urban Development and Sustainability in India

Hello everyone, I welcome you all back to the course on Urban Sociology. So, for today's lecture, we would be talking about urban development and sustainability in India.

Today, we will first discuss about the concept of sustainable development, how it originated, and what it means, then we will talk about some of the innovations and creative solutions that the cities of the global south have come up with for achieving urban sustainability.

After this, we will talk about a few cases where poorly planned urban development to achieve economic growth has greatly damaged the environment of the city. In the end, we will talk about whether the idea of a smart city is at all sustainable or not.

So, let us try to understand what sustainable development is and what do we mean by sustainable urbanization. According to the World Bank projections, globally, over 50 percent of the population live in urban areas today, and it is further projected that by 2045, the world's urban population will increase by 1.5 times to 6 billion.

City leaders are thus trying to plan for growth even more and provide basic services, infrastructure and affordable housing that their expanding population would need. Urban development can thus have different social, economic and cultural dimensions and covers infrastructure about which we have already discussed before - infrastructure for education, health, justice, solid waste, markets, street pavements and cultural heritage protection. These constructions usually form part of specific sector programs, including capacity building measures.

Often, special attention is paid to slums and informal settlements in the cities to provide them with basic urban amenities and improve their living conditions of the city. But sometimes, it

may so happen that urban development and upgradation can take place at the cost of displacements of the poor, which is why we should aim towards a development that is sustainable. And as all of us know, that social justice is one of the most important preconditions of sustainable development. And also sustainable development is a kind of development that is lasting.

Nowadays, we often encounter the word sustainable development, which has certainly become another big buzzword like that of globalization, which again, we have discussed before.

The idea of sustainable development owes a great deal to the works of various United Nations programs. In 1983, the United Nations established the World Commission on Environment and Development WCED, which later became known as the Brundtland Commission, named after its chair, Gro Harlem Brundtland, the prime minister of Norway. Their goal was to formulate realistic proposals to solve several critical issues of the planet. And to ensure that human progress would be sustained through a vision of development that does not deplete the resources for the future generations.

The report of the Brundtland Commission, which was entitled, 'Our Common Future', contained a detailed discussion of the major issues surrounding sustainable development. The report defines sustainable development as 'development that meets the needs of the present, without compromising the ability of the future generations to meet their basic needs.' It emphasizes that basic needs of all people must be met for their common survival. Its main purpose is to raise the standard of living among the most disadvantaged groups in the society. In fact, development that favors the rich and the present generation at the expense of the poor, and those who are yet to be born is by definition unsustainable.

Now, there are three pillars of sustainable development, three very integral pillars, that are constitutive of the comprehensive definition and goals of sustainable development. And we can also say that the concept of sustainable development can be interpreted in several ways. But at its core, it is an approach to development that looks to balance different, and I would say often competing needs in the society. And all the pillars that you can see here, the social, the economic, and the environmental, are interconnected, and they all affect each other, they form the primary core and the pillars of sustainable development of the vision of sustainable development.

All too often, we have seen that development is usually driven by one particular need. And most commonly, that is economic. And this usually happens without fully considering the wider or future impacts of a vision of development that is solely focused on the economy. And we can say that, in countries like India, economic growth has all too often led to different kinds of compromise - social and environmental compromise.

And we are already witnessing many of these damages, we are seeing the damage of this kind of approach that can cause definitely large-scale financial crisis, but it is also leading to a lot of irresponsible behavior, on our part as human mankind. And something that we see in the recent decades, the growing climate change impacts can be one of the most important examples of our preoccupation with economic growth.

And here, I would also like to mention that the longer we pursue unsustainable, blind development, the more frequent and severe would be its consequences. And this is another prime reason why we need to take action now and think, more sustainable, sustainably think about the interconnections between these three pillars much more significantly.

The strategies for attempting to achieve global sustainable development discussed in the report include reducing poverty, improving agricultural practices, conserving energy resources, reducing greenhouse gas emissions, improving technologies, and reducing the disparities between the rich and the poor nations.

I think, many of you know that overall, there are 17 Sustainable Development Goals, which are no poverty, zero Hunger, good health and wellbeing, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economy growth, industry innovation and infrastructure, reduced inequalities, sustainable cities and communities, responsible consumption and production, climate action, life below water, life on land, peace, justice and strong institutions, partnerships for goals.

However, I think the major paradox here is although the goals are very clearly stated, the means, the very means by which they are to be achieved, are less well defined. But it is somehow clear that two basic aspirations in the society have to be reconciled. That is that of achieving economic development and protecting the environment.

The rich economically more developed countries of the North, right now have become accustomed to a lifestyle that they do not readily want to give up. And the poorer and more economically underdeveloped countries of the south are attempting to achieve economic growth by consuming irreplaceable global resources like that of the rain forests. So, we have to understand that achieving sustainable development would mean that we will have to sacrifice with our redundant and often destructive practices, we have to understand that safeguarding the environment is a precondition of development, and not an obstacle to it, as it had been understood for quite a long time.

It is believed that 24 of world's 31 mega cities are in the south and 10 new anticipated mega cities, which are to be added by 2030 will also come from the south. With this unprecedented urban growth being a global driver of environmental change, it becomes pertinent that along with the discussion on sustainable development, we also talk about sustainable urbanization.

The speed and magnitude of growth puts the global south - we have already understood this from the preceding lectures, that the pace of growth in the global south puts it at the center of achieving the sustainable development goals. According to a recent paper by Nagendra, urban sustainability encompasses achieving and maintaining social inclusion, economic wellbeing and environmental quality, the three pillars that we just discussed, while also minimizing negative external impacts, without passing the burden to the future generations.

When urbanization proceeds without accompanying public services, and proper economic growth, it is believed that urban poverty rises sharply. Globally, more than half of the urban dwellers live in slums. And yet at the same time, the urban middle class are projected to become a major driver of global consumption. There is extreme inequality, thus characterizing the global south. But we must remember that there is no typical global south city either.

Say for example, Asia's environmental quality, education, social and physical infrastructure, etc. & Africa and Latin America are drastically different in terms. We have already discussed how the uniqueness of urban issues in the global south means that knowledge on and from the global north is not applicable.

Thus northern dominant knowledge production system presents a real challenge to guiding urban practice in a country like ours, where most of the challenges lie. In fact, if we think about, the many urban solutions that originated in the north did not translate well to the southern cities. Take for example, the technologies that convert waste to energy may be less effective because of the large network of waste pickers, sanitation workers who manually extract that waste and earn their livelihoods by doing so.

But there are opportunities and urban solutions in the south, even more so than the north. It is precisely because of the nature of challenges faced by the global southern cities, that these cities are more conducive to creative and innovative ideas. For example, the need to confront these pressing challenges combined with lack of financial capacity, can spur city leaders to look for radically different, but affordable solutions. Take for example, the bamboo cycle, which was an innovative enterprise using locally available materials produced in Ghana.

In our own country, we can see the Mitticool, which is a mock fridge modified from an earthen pot. It is in part due to the lack of money that these people have a greater opportunity

continuously to innovate towards sustainable feasible solutions. Again, due to inadequate urban infrastructure, people of the south have shown bottom-up involvements of citizens participatory budget processes, alternative sewage and waste treatment, collective action through the social media and new forms of private and community state partnership. Thus, even the shortcomings in the governance systems may facilitate conditions for innovation and creativity.

Strong social supporting networks, informal economies and community interactions can be the fertile grounds for grass root experimentations. Urban communities in the southern cities use social media effectively to take collective action and pressurize administration to act more on urban sustainable measures. Similarly, multi-level governance systems have helped to restore degraded urban water systems in Indian cities such as Bangalore, something that we have discussed before in one of our previous classes. There are many more sites of innovations like solar water heaters, water ATMs in Indian cities and experimentation in green infrastructure, which are just some of the examples. These context specific issues of urban sustainability in the global south provides a fertile ground for new theory and empirical as well as analytical approaches.

The limited scope and lack of recognition of these local homegrown concepts is not only a loss for southern researchers, but also to the urban sustainability, the comprehensive urban sustainability discourse as well.

Let us now look at some of the problems of urban development. In a recent paper authored by myself and Harini Nagendra, we indulge in a discussion of some of the infrastructure projects in the city of Mumbai, where we see the city's complete disregard for issues of environmental justice, health and wellbeing. The appeal of development has instead fascinated planners of Indian cities like these for decades. But this kind of development has often led to the destruction of ecosystems and the essential services that they provide for the Indian cities.

City Development Plans are often designed with a set of objectives, prioritizing the growth of built infrastructure. David Harvey, about whom we have already discussed before, points out that this very kind of development is altogether driven by a blinkered imagination of cities as nodes for the absorption of surplus capital, disregarding the impact of such growth on the urban marginals.

Megadevelopment projects have severely impacted the ecology and environment of the Indian cities, leading to extreme levels of air pollution, decreased groundwater, soaring urban heat Island temperatures, frequent outbreak of diseases, and increasing incidences of floods. Such planning is also most often been driven by an urban imagination that is mostly geared towards ambitious infrastructural and residential projects with the vision of producing world class cities.

Thus, most mega projects in the cities of the Global South largely revealed an absence of ecological imagination. And it is very troubling to mention, that if this continues, there will be rampant social inequality, collective wellbeing will be affected and so will the environment.

As I was telling you that taking an example from India, Mumbai, is believed to have a lot of pressing environmental problems, which were listed in a report on the World Environment Day of 2015, where the report reveals details about shrinking mangroves, toxic air, dying lakes, depleting marine biodiversity, irrational city beautification plans, fires on dumping grounds, e-waste poisoning and so on.

Environmental problems have been disregarded, however, in the rush for the city to rapidly urbanize and globalize itself. As a matter of fact, the city development plan of Mumbai 2034 is geared completely towards real estate development with a complete disregard of that towards the effects on water supply, transport, sewerage, flood and pollution control.

The Municipal Corporation of the city has earmarked around 2500 hectares of salt pans in the city without considering the fact that they provide very very important livelihood opportunities for traditional low income communities. And also, they serve as very critical buffers against floods in a time of climate induced sea level rise.

So, if we know Mumbai, we would be knowing about another example the Aarey milk colony of Mumbai which is one of the largest government dairies in India and also it is an extremely ecologically diverse zone. It covers 4000 acres of green area and houses several cattle herding hamlets. But we would be surprised to know that this area for a long period of time has been subjected to multiple threats of eviction. And right now, it is subjected to a threat of approximately 70 acres of diversion to construct the metro three car shed.

This colony, we should remember, provides fodder for around 30,000 cattle, which supply milk to the entire city and is therefore a very important source of local livelihood. According to our paper, systemic efforts to divert the land for golf courses, luxury hotels, residential complexes, petrol pumps have led to the diversion already of about 500 acres of the green land. There is also the risk of about 2700 mature trees being felled, and this largely would endanger the water retention capacity of the land along the Mithi river that runs adjacent to the milk colony.

Another example from the same city is that of the International Airport plan that Navi Mumbai, the airport is set to be built on 141 hectares of reserved forests and 110 acres of

fragile mangroves. This airport will also disturb a nearby bird sanctuary, The Karnala Bird Sanctuary, which is again home to 147 varieties of resident and 37 species of migratory birds. Along with this, the construction of two parallel airport runways will also displace about 3500 families to make way for the airport.

There are also other ecological hazards posed by the growing degradation of Mumbai lakes. The Powai Lake is now highly degraded with levels of biochemical oxygen demand, reaching 150 milligram per litre against the accepted standards of 20 milligram per litre, posing a large threat to its aquatic life.

Instead of ecological restoration efforts, planners have devised irrational beautification plans, which include installation of musical fountains on the lakes. All these examples show us how the combination of multiple capital-intensive development plans coupled with a bad design choice has had a stark social ecological consequences. The impact of these developments, however, have been largely borne disproportionately by the urban poor.

The marginal fishers, the foragers, the grazers have all been deprived of access to productive resources and pasture commons. Salt pan workers have been ruthlessly evicted for real estate developments, and slums and pavement dwellers all across the city have been largely evicted and dispossessed.

Again, we see another image where the government is attempting to create green spaces or urban parks, municipal parks in Gujarat, but by displacing a slum settlement that has inhabited that area. This is not uncommon. In fact, there has been forcible removal, and several waves of destruction carried out in the Sanjay Gandhi National Park. Even New York's famous Central Park was made by displacing a predominantly African American community. So even though parks may be seen as positive environmental projects, according to Zimmer, Cornea and Veron, they have to be read as political.

Many of the city beautification plans must thus be problematized. Again, we can see how lakes in the city of Bangalore are often fenced, which affects the access to water by local communities, but also the cattle owned by the local communities would previously eat the excess vegetation formed as a process of eutrophication on the lakes. Thus this kind of planning, this kind of design choice has a lot of problematic consequences for the environment, as well as for the people.

Another interesting case is that from West Bengal, where we can see how by seeing land and water, as two separate entities have led us to neglect the role that sediments can play in the lives and livelihoods of the riverine communities.

In a paper by Mukherjee et al., we find how the Choruas who inhabit Chars or the riverbanks, which are largely silt islands, sandy shoals, or bars that frequently emerge and disappear within the riverine channels of the basin were affected by the Farakka Barrage project. The Farakka Barrage project failed to understand the human engagements with the sediments, and how, despite the risks of flood and erosion, these Choruas would come, farm and recite there.

These areas are richer in silt and rendered attractive by the difficulties of accessing agricultural land. Thus, the delta would remain quite populated, but the construction of the very Farakka Barrage Project altered the hydro social relations in this part of Bengal, and had many unforeseen consequences.

The Barrage for instance ended up disrupting not only the down water stream flow, but also the river sediment movements, which the Choruas was dependent on. This also affected the ecology of the main channels in the lower Ganges basin, and contributed to the reduction of commercial species of fish, as well as the Ganges dolphin. As a result of this, the community suffered a lot as their livelihoods were disrupted, and they were settled and resettled 16 times in a span of 15 years.

The constant need to tame or harness the river through terrestrial and riverine infrastructure, including railway lines, road embankments or barrages does have severe consequences on the lives of these marginalized communities. And how these structures crisscross human activities dependent on rivers is often not kept in mind when planning for development and infrastructure.

Let us now sum up what we discussed today. For that to be sustainable development in cities sustainable patterns of urbanization, one must keep in mind the social, the economic, and the ecological dimensions. Innovative urban solutions of the global south can be important lessons for the rest of the world. The examples of unsustainable development from India show how the urban poor are generally the ones who carry the environmental burden in our society.

These are the references that I have used for making this lecture. We will meet again in the next lecture, which is on the major policies of urban India. Thank you.