

Role of Environment in Urbanization

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Abstract

Human beings have been struggling to shape the ecosphere in a manner they want since the first day. This paper talks about the role of the environment in paving the way for Urbanization. For the same purpose, the emphasis has been put on District Almora of Uttarakhand. Uttarakhand is not new to natural disasters; landslides, floods, and quakes strike this Himalayan state frequently. And India's flawed development policies have not only deepened the state's vulnerability to disasters but also magnified the destruction they cause. The role of healthy forests and other natural ecosystems in Uttarakhand's economy cannot be overstated. Historically the livelihood of the majority of Uttarakhand's population has been intimately connected with forests. Organic agriculture is still practiced traditionally in the mid-hills of Uttarakhand, where the farmer depends on natural leaf manure from the forest rather than synthetic fertilizers.

There are various concerns of the Uttarakhand Government like Housing, out-migration, under-employment, and human-wildlife conflict that might be eased by focusing on forest conservation. There are various administrative bodies/ authorities in place to tackle these issues but the statistics show that the current plans are leading towards the extinction of the naturalness of the place. One more major problem that has led to the loss of the essence of the place is land grabbing. There is a need for cooperation with the law to deal with the issue of land grabbing in the hilly areas. While the arguments against development in hilly areas might sound intriguing, these problems are also caused due to the unavailability of opportunities which is a consequence of underdevelopment. Population increase, technological improvements, the expansions in cities, ways, dams, and other engineering studies have disordered the natural balance and the natural body has changed drastically as a consequence of these activities. Geography and other socio-economic factors differ from space to space and the same should be the paramount factor while devising development plans for a place.

Keyword: Ecology, Environment, Development, Urbanization, Uttarakhand, Master Plan.

Introduction

The term "urban" has traditionally been contrasted with "rural," which refers to a juxtaposition of largely autonomous groupings. There is interaction between settlements, but they can (nearly) subsist on their own. For the sake of survival, every urban neighborhood relies on the contributions of others. The big metropolis, with its various neighborhoods and districts, has traditionally embodied the urban in this way. The term "urbanization" refers to a settlement's overall population growth and degree of industrialization. It represents individuals moving from rural to urban places. Environmental deterioration has been occurring at a rapid rate in India as a result of unregulated urbanization, resulting in a slew of issues such as land insecurity, deteriorating water quality, excessive air pollution, noise, and waste disposal issues.

Through this paper, the researcher will try to throw light on the role of the environment in urbanization and the impact of urbanization on the environment. The same would be done by focusing on the developmental activities in Almora, a district in the state of Uttarakhand. The various urbanization and developmental plans and schemes will be analyzed to look at the same. The approach taken by the development boards and other administrative bodies to facilitate progress would be looked upon while critically examining whether the approach taken is appropriate when one talks about a place like Almora and how it is impacting the environment. The urbanization process and its pace in places where the culture is deeply embedded in the population diminish the essence of a space and the kind of bond people share with that space.

The paper is divided into three parts. The first part will talk about the role of the environment in Urbanization and the impact that these activities have on the environment. The second part focuses on the plans and policies that are being implemented to achieve a certain goal of what the place should be like in the future. The third part will try to look at the various developmental activities that are taking place and how these activities impact the image and the culture of a space. The pros and Cons of these activities will be talked about

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and it will be seen what outweighs the others.

Importance of Environment in Urbanization

One of the most irrevocable human interventions on the global ecosystem is the conversion of Earth's land surface to urban activities. It accelerates the loss of highly productive farmland, has an impact on energy consumption, changes the temperature, causes loss of agricultural land, depletion of surface and groundwater, changes the geomorphic features, flooding, alters hydrologic and biogeochemical cycles, fragments habitats, and lowers biodiversity. The Natural systems in the mountains have been severely impacted by growing urbanization. There is a need to realize the harm that is being done and the ways to prevent or minimize that harm have to be found. Ecological footprint can also be helpful for the same. Ecological footprint is an important basis for determining whether a country's or region's development is within its bio-capacity as a measure of sustainable use of natural resources¹.

Urbanization has been a driving force for most of the things. One of the most important measures of a country's economic growth and development is urbanization and urban growth. This urbanization trend has resulted in considerable changes in the landscape layout and land cover of the affected area. It is what everyone/ everything is striving for. The same has been a major concern in hilly areas. The hilly areas being the providers of a lot of resources like minerals, hydel power, medicinal plants, etc., remained poverty hit due to the lower order development. The ecosystem of these areas has been severely hit due to the human activities that are exploiting the ecological balance that exists in these places which has led to a diminished image of the spaces. The Stockholm Conference in 1972 on Human Environment was the major factor for the environmental laws that we see these days and that was the first time these issues were realized by the policymakers and the public at large². A lot of development took place on the same issue but even after decades of evolution and research on these problems, nothing concrete has come out. A lot of deforestation and exploitation of the ecosystem has been done since Independence. Just the mere act of declaring the hilly areas as eco-sensitive wouldn't solve the problem. Well-thought-upon planning strategies have to be brought into force to have calculated development keeping the environment at the top.

Almora is a district in Uttarakhand state. It is a hill station known for its heavenly views, wildlife, cuisine, and culture among many other things. A very interesting thing about it is that it is a very old town that itself justifies the strong culture of the place. It was founded in 1568 by King Kalyan Chand of the Chand Dynasty and was the administrative headquarters of the Kumaun region and was rich in minerals, handicrafts, etc. Almora is quite different from the megacities that we see nowadays as the megacities are created and people migrate from other places to them so the people there lack a sense of belonging or a strong bond with the place as compared to old places like Almora³. It is divided into Tehsils, Sub-tehsils, Blocks, and panchayats to ensure proper administrative functioning of the district. There is no concrete plan for the development activities going on in the district. The document termed a "master plan" on the official site of the district is just a two-page document that mentions the amount of money that has been allocated for various purposes by the government.

Rapid, unplanned, and unsustainable urban expansion patterns are turning developing cities into focal locations for a slew of new environmental and health risks. As urban populations rise, the quality of the urban environment will become increasingly essential in public health, affecting issues such as solid waste disposal, access to safe water and sanitation, and injury prevention, as well as the intersection between urban poverty, the environment, and health. Various projects are being thought upon and some are even underway that are trying to urbanize the space without realizing the different kinds of problems and hazards that could be very critical⁴. Some of the most attention-requiring ones include the development of various dams/ hydro projects, the construction of big apartments, malls, etc. A lot of real-time scenarios will be discussed in the next part along with different departments that overlook these schemes and some failed initiatives⁵.

The Lavish Initiatives

The goals of sustainability and heeding the need to maintain the ecological balance are enshrined in every department talking about development in the Hills/ mountains. Various initiatives are taken by the state government to facilitate the goal of sustainable development and to include the stakeholders in the process but the reality is far away from the aspirations⁶. The Ministry of Rural Development has many programs one of

which is the Department of Rural Development, Uttarakhand. It aims to provide Rural housing to the poor and also boasts of employing every unemployed person⁷. The poor people suffering in the cold nights of Almora without a roof above them will beg to differ. Another one is an initiative called “Sahyog” (also called 'CSR') that released its agenda for 2020 which included things like providing electricity to every household, cooking gas to everyone, totally online land records, etc. The reality is very different in 2022 as compared to the aim the initiative had for 2020⁸.

Sustainable development is a term that has been used a lot by this institution for describing the work institutions do⁹. There are a lot of questionable developmental activities that are carried on near the place where they are situated.

In the last decade, a lot of developmental activities have taken place in Uttarakhand but most of them include construction of commercial structures across the space. The major attractions out of all of these are the shining resorts/ hotels, malls, dams, apartments, etc. among other ventures that are an attempt to make spaces look urban. One of the most talked about and the ones having a drastic impact on the ecological balance of not just Almora but the whole state of Uttarakhand are the Hydroelectric projects. The biggest issue with these projects is the impact they have on the environment. What is to be kept in mind is that for a place like Almora, preserving the environment or the wildlife might hold a similar kind of importance that a Metro has for people in Delhi. There have been various articles in newspapers that talk about the rising concerns among the people of Almora about the impact these ventures are having on the environment and that they are slowly fading the essence of the place.

There have been various instances where the land that was helping to manage the ecological balance has been utilized for something else that was making the state look more Aesthetic or Urban. The decision by Uttarakhand in November to denotify 87 hectares of designated forest to allow the construction of the Jolly Grant airport west of Dehradun is one more such incident that has raised questions about the proposed development's procedures in this Himalayan state¹⁰. The inherent link between healthy forests and rural well-being, disaster management, and water security has yet to enter the state's development narrative. The formation of all these institutions and the schemes depicts that the dangers to the ecological balance that are posed by the process of Urbanization are known to the government. There are various meetings and conferences on the same issue. At the G.B. Pant National Institute of Himalayan Environment, Almora, a meeting of researchers happened recently and the main focus was on the studies of wildlife, pollinators, water, hazards, livelihood, etc¹¹.

There is a district plan that is promulgated by the GBPNHE in 2019 that is termed as the district environmental plan. It talks about the basic general principles that exist in environmental law i.e. Polluter Pays, Public trust doctrine, precautionary principle, etc. It talks about the environmental concerns that the district has but it talks about it in a way that the people and the community at large have understood these problems and are working together for the cause but the statistics show otherwise¹². In the Almora district, rivulets, springs, and seasonal streams account for an average of 60.8 percent of total water systems. During the critical dry months and lean season, these rivulets rely heavily on the base flow supplied by springs and other groundwater sources. In the last 100 years, the number of operable springs in the Almora region has decreased from 360 to 60. The perennial River Kosi, a lifeline for the Almora district, is on the verge of becoming a seasonal river due to development activities, deforestation, and changing rainfall patterns¹³.

Uttarakhand is sixth in terms of the total forest area it has (that has been recorded). Humans and livestock are mostly dependent on the forests and the consequent degradation of the same has impacted humans and animals alike. Various activities like extraction, forest fires, climate change, natural disasters, encroachment, etc. have contributed to the same. A report was published by the FSI in 2015 that mentioned that the total forest area in Uttarakhand has decreased a lot. The major reason for the same was found to be the human activities termed as developmental activities. With this data, it is very important to ponder upon the rapid pace of development and whether the objective behind this is to solve the problems that exist in the hilly regions or are these creating new hurdles trying to make these spaces Urban¹⁴.

The plans for providing housing in Almora have to go hand in hand with the ecological balance of the place. Development can't be done at the cost of diminishing the essence of the space that lies in the ecology.

Multi-story apartments are being built and flats are being sold like it is done in megacities. The construction of multi-story buildings is warned against in areas with these demographics and the same is risky not only for Human life but also for the environment. This again raises the same question of whether this kind of urbanization is necessary in these areas. The development of building sites in hill districts necessitates the cutting of the hill surface, which is more expensive than in the plains. Furthermore, the removal of waste caused by rock excavation and its disposal has been a source of worry. These disposal sites are typically located outside of town, resulting in significant transportation costs. Furthermore, people in hilly terrain have the predisposition to live as near as possible to a town's center. The acts of unplanned construction and land use have majorly led to the degradation of the socio-economic environment of the place¹⁵.

The Real-Time Degradation Activities

The activities that are termed developmental are degradation activities done in the name of unplanned urbanization. Development in places like Almora has to be very calculated in terms of what is right for the stakeholders, the community, and the ecological balance at large. Not paying heed to these factors not only jeopardizes the lives of the people and other organisms but also leads to tarnishing the essence of the space and its personality. Large-scale infrastructure has been built in Uttarakhand, including hydroelectric projects, and highways. Nonetheless, over the last three decades, this focus has resulted in massive forest damage. The Wildlife Institute of India concluded in 2012 that the 300 dams proposed in the Alakananda-Bhagirathi basin (which could generate 9,563 MW of electricity) would harm parts of two World Heritage Sites, a National Park, and a Wildlife Sanctuary, as well as habitats for numerous globally endangered animal species¹⁶.

Various concerns have to be looked into at the earliest before we run out of the gifts we have received from nature. These include waste management (solid, biomedical, hazardous, water, etc.), Air and noise pollution management, illegal extracting/ mining, and rejuvenation of water bodies and the forest area. As mentioned before, solid waste is disposed of in urban centers but there is no established mechanism for the process of waste collection and management in the district. There are various dumping pits made by people for disposing of personal as well as commercial waste without realizing the consequences of it. Post-Covid times have led to an increase in other kinds of waste more specifically biomedical wastes and there is no institution to regulate/ treat the same. There isn't a proper sewage system. It has to be thought upon whether development or Urbanization of spaces like these is to be done. With serious issues at hand, building malls, dams, and other multi-story aesthetical buildings will only degrade the already existing naturalness of the place rather than develop it¹⁷.

There are a lot of other activities that affect this naturalness. However, these acts have their pros and cons. For example, tourism is a major source of income for the state and helps to employ a lot of people by being small business owners, guides, etc. but at the same time it has led to a lot of increase in land grabbing, pollution, and also to affect the consciousness of the people by bringing that urban-ness to the place. The monitoring of air quality in India has not yet started and hence, it cannot be said with statistics how much the quality has deteriorated but with increasing tourism and vehicles it surely should be a cause of concern¹⁸. Tourism and related livelihoods such as hospitality, taxi services, homestays, roadside eateries, stores, and guiding activities offer income to a considerable proportion of the local population, accounting for up to 4.4 percent of GDP (without accounting for indirect employment). The importance of a healthy forest cover and water supply for sustaining the steady flow of tourists to the state also often goes unrecognized¹⁹.

The people have a strong sense of belonging to their culture and the place. There are several articles in the local newspapers in which the concerned people give voice to their thoughts against such mass urbanization of the place. To relate to this belongingness, an example of the Chipko movement can be taken which originally originated in Uttarakhand in the 1970s. People were ready to give their lives for the trees and forests and this shows the affection they have for the place as well as their conscious decisions to co-exist with nature. The fact that these individuals were women who first brought up that courage shows that not only men, but other people are equally concerned about the turn of events that have taken place in the past few decades.

Most of the activities carried on to make the place urban revolve around the same question of whether these large-scale activities were necessary. Isn't the way the place is and how it evolved with the kind of demographics it had led to the culture and the uniqueness of the place? The anticipatory plans on which many

projects were based weren't well thought out and the whole community and the space had to pay for it. The district has a lot of river sand mining and in-situ sand mining. According to state environmental control board records, illegal mining activities have yet to be discovered in the district. Current mining operations claim to follow environmental regulations. Furthermore, no pollution-related complaints have been filed in the last year. This fact again strengthens the argument of the lack of attention paid to these hazardous acts²⁰.

There are various other projects of extending the roads that are termed as highways and years have passes and the construction is still in process. Some of them get built but are unable to survive even a single monsoon. Also, with the kind of disasters like landslides, cloud bursts, etc., the repair and reconstruction of the spaces have to be focused on keeping the environment at the center. Development is essential as evolution is the natural way of life and to curb problems like under-employment and out-migration, progress has to be made. Most of the megacities are built in urban environments and it might be that they don't have that rawness/naturalness in them.

There have been various initiatives that are taken by the state government that incentivize people to start rainwater harvesting, use solar energy, etc. The same has been ensured by providing subsidies to people for installing solar plants and rainwater harvesting systems. Apart from that, various schemes have been introduced for farmers to promote farming and that is done realizing that farming/ agriculture has been the primary activity of the people to meet ends²¹. With the kind of focus that has been put into the conservation of forests, promoting organic agriculture, renewable energy, etc. some change has been seen in this regard but the destruction caused by human activities outweighs these goods. The same has to be kept in mind to go forward with the environment in mind. A stronger implementation of land use laws also has to be made. As is already discussed a lot of land is being used for transforming the space into an urban the same has led to an ecological imbalance²².

Sustainable development has just become a fancy word that gets used a lot to depict that the choices made for development are through a sustainable course. It is done without realizing the weight and values the word holds. The notion of sustainability must be followed in environmental planning for many environmental components, with science serving as a quantitative tool. The approach to environmental management must be holistic. To get people interested and managers to act and plan, decision-making is a combination of science, management, and conscious decision-making. Many international organizations have talked about these problems in the hilly regions of India and even released reports on the same realizing the gravity of the situation while we sit here misusing the gifts that nature has given to us.

Conclusion

Today, a modernizing India sees Uttarakhand's vast resources as the foundation for a better existence. When development activity is carried out, environmental losses occur. However, we should endeavor to make amends. A cost-benefit analysis of the projects that come to light has to be done keeping the environment as the main stakeholder and then the community. Environmental movements have enlisted the participation of the general population, including children and the elderly. Rapid, unplanned, and unsustainable urban expansion patterns are turning developing cities into focal locations for a slew of new environmental and health risks.

The plans for supplying houses must be compatible with the area's ecological balance. Development cannot be achieved at the expense of the ecology's essential space. Development and Urbanization have to be thought upon as separate phenomena and as is emphasized in the paper, it is to be questioned what is the need of the space. Hilly areas have different topographies and the same has to be realized while devising any kind of plans for the same. The human intervention with the environment is affected a lot more things that are far more important than urbanization. Inspiration should be taken from developed nations that are working for a better environment while leading developmental activities and preserving their culture.

There is a lack of scientific data when we talk about the air quality or the water quality in the concerned space. Most of the reports that are talked about in the paper are quite old and don't depict the real-time situation of the place. A reasonable pace of calculated development has to be picked up keeping in mind the other inhabitants of the space. Stakeholders and the community at large have to be included in the decision-making processes to ensure that the acts are done with the consent of everyone affected. Humans have come a long way

from being animals without a lot of reason and knowledge but the same is not depicted in our actions. We exploit everything we get our hands on for our good but the same has to change, if not for others, then for our selfish reasons.

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