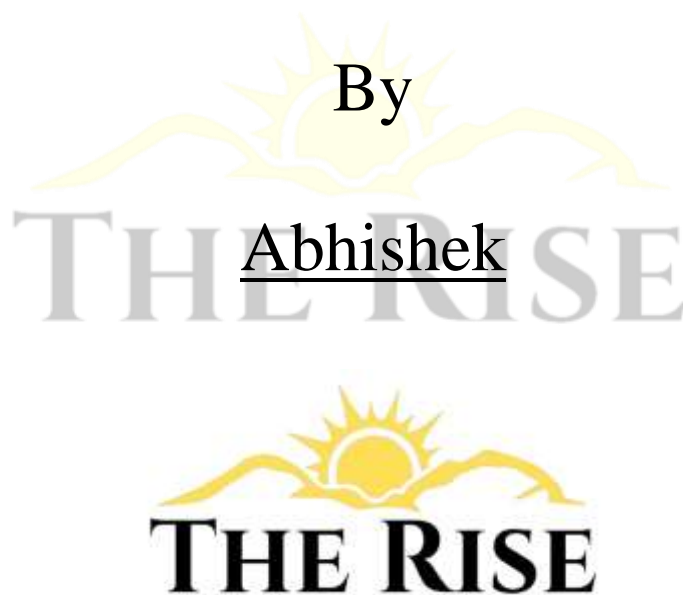


A Report on

**Studying whether urbanization holds the
key for sustainable development of India**

(31st August 2020 to 23rd October 2020)



By

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Under

TheRise Internship Programme - TRIP

An online internship programme

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Abstract

Urbanization refers to shift of population from rural to urban areas. This urbanization yields reduced population in rural areas and increase in load on civic amenities and all other things needed for survival in urban areas. India having agriculture dominated economy has to have certain implications due to thinning population in rural part of the country. At the same time increasing population density in urban areas and limited amenities & resources, the urbanization is likely to have serious implications for the country. Present study will aim at assessing the implications of urbanization with respect to the sustainable development of India.

Keywords: Urbanization, Sustainable development, Population, Agriculture, Implications, Civic amenities, Environment, Future, Protection, Resources



Work Plan

Weekly Work Plan for each week starting from Monday to Friday will be as follows. The guidance can be sought on email any number of times. The intern has to communicate the progress of work done on each working day by email in minimum 25 words by 7.00 PM. There will be a weekly discussion with the intern as per the schedule notified on email.

Week 1: Searching the available literature and statistics pertaining to the broader objective of sustainable development, migration of population, urbanization, etc..

Week 2: Studying the sustainable development and its implications

(Hints: what, how and why sustainable development ...)

Week 3: Studying the socio-economic reasons for migrating from rural areas

(Hints: living conditions, education, economy, aspirations, health,)

Week 4: Studying the urbanization, its limitations and implications

(Hints: human development, health, happiness index, why urbanization,)

Week 5: Studying the urbanization and sustainable development in developed countries

(Hints: sustainable development along with fast urbanization in Japan, China,...)

Week 6: Studying strategies for sustainable development in India.

(Hints: impact of urbanization on energy, land resources, environment, health, etc.in India).

Week 7:

- Writing and submitting an article (upto 1000 words) giving insights into implications of migration from rural areas on rural economy of the country.
- Writing and submitting an article (upto 1000 words) giving insights into implications of urbanization on urban economy of the country.

Week 8:

- Writing and submitting an article (upto 1000 words) giving insights into the socio-economic considerations for sustainable development in India.
- Writing and submitting an article (upto 1000 words) giving insights into the challenges and strategies for urbanization and sustainable development in India.
- Final report writing and its submission for issue of the internship completion certificate.

Objective: “Studying, whether the urbanization holds the key for sustainable development of India?”

Study: Urbanization is an indicator of evolution from conventional rural economies to modern industrial economy. It represents progressive concentration on the population in an urban area. India shares a large proportion of urbanization in developing countries. In the 20th century, it has significantly affected national life in all aspects. This increasing urbanization in the country, population-wise it has regional and worldwide impacts. In the 2011 Census, the urban population of the country has increased from 25.85 million (in 1901) to 377.11 million. Out of 7935 towns in the country, almost 468 cities in India have recorded more than one lakh population and 53 cities with more than one million populations. Two of the world’s most populous cities were from India including the capital Delhi (2nd position) and Mumbai (5th position) (Urban Ecology, 2014).

Development trajectory recently is looked more from the environment efficiency perspective. In a global economic order facing global environmental challenges, the key question arises in front of India is to craft and pursue a sustainable economic strategy for development. Degradation of the environment is rising due to economic activities – mining activities, industrial activities, and infrastructure development. Sustainable development in this context is the need of the hour to address the environmental challenges and the economy.

Urbanization Process in India

India has undergone a rapid urbanization process after independence. Population growth is one cause but not the sole one; it has heavily rushed people in urban areas. Various factors in rural areas have operated together causing poverty, unemployment, lack of work, degraded education standard, poor living condition, fewer wages etc. According to the census data of 2011 in India, the share of the migrant population in the total population was 45.36 percent. The male and female population was 31 percent and 69 percent respectively. In this total migration, 18 percent population was rural to urban. The major social factor accounting for 75 percent population’s migration in India is related to household, education and marriage. Migration for marriage covers

49.3 percent of the total while employment and household constituted 10.2 percent and 15.4 percent (Hindu, 2016).

India being a signatory to almost all the conventions of the UN, the ground realities have remained slow in practical terms. Malnourishment in the country is very deep and comparable to sub-Saharan Africa, in the Human Development Index (HDI) India ranks among the lowest of the countries ranking 129 out of 189 in 2019 (Hindu, 2019).

India's transition to faster economic growth is still dependent on an adequate plan for urbanization. The situation of the rural sector is also linked with the urbanization process. Period of 2000-02 to 2010-11 was a rapid growth period for the Indian economy with a growth rate of an average 7.7% per annum. The growth during 2000-14 was associated with a decline in the poverty population from 45% in 1993-94 to 37% in 2004-05 and 22% in 2011-12. Urbanization rate in India is growing rapidly in 2019 the urban population share has reached 34.47% (Statista, 2020). The pace of employment in the non-agricultural sector is unable to keep up the pace of the output growth.

Next Step Forward

Sustainable development is a global concern and India currently is emerging as an economic superpower. India constitutes 17% of the world's population, accounts for 35% for total poor and 40% illiterates of the world (Kurian, 2007). A substantial amount of people in the rural areas are directly linked to climate-sensitive sectors like agriculture, forest and natural resources like biodiversity, water, coastal zones for their livelihoods. To reduce the economic and social disparity, inclusive growth is important. This inclusive growth is incomplete without improvement in the social sector including education, health, women empowerment etc. (Sathaye, 2006).

Sustainable development is a concerning phenomenon for the Indian cities; introduction of efficient input technology can reduce the exploitation of resources. Urbanization pattern in India is marked by continuous aggregation of people and activities in big cities. It denoted certain unique characteristics: showing growth in class-I cities, occurrences of urbanization without a strong economic base, rural push factor were the cause, and rapid urbanization led to poverty, unemployment, inequalities and decay in the quality of urban life. Most of the class-I cities such

as Delhi, Calcutta, Bombay, Chennai faced some basic issues of housing, transport, sanitation, water supply, slums, pollution etc. In 2019 India recorded six out of ten worst-affected cities from pollution (Regan, 2020).

Skill development is a significant factor in creating technical vocational education system. It suits the business communities and non-university institutes need to work on this. These institutes can be funded through foreign investment. Healthcare is another comprehensive sector to focus on. A comprehensive health survey needs to be undertaken, aid should be provided to national health mission and taxes on alcohol and tobacco should go to the health sector. A sustainable path is required to reduce the burden of diseases on the community.

The marginalized communities are exhibited to inequalities, poverty and several other issues need serious reflection. Women are generally pushed out of the labor force and issues of sexual minorities are hardly discussed. Declining sex ratio and failure in ensuring women's rights are major obstacles in gender equality. Equal rights to women in economic resources and ownership over land, financial services should be provided. Use of Information and Communication Technology (ICT) in women empowerment and strengthening of policies through enforceable legislation will help in reducing gender inequalities. Further mobilizing resources for investments in social services and channel creation for participation in civil society organizations including women's movements is the way forward (Poornima, 2017).

Use of high and labor releasing agricultural growth, availability of infrastructure, higher levels of literacy and skills and easy access to credit and inputs for the poor section of the society is very significant. Women empowerment through acts and schemes related to the girl child need to be reviewed to create gender equality. To control the issue of water, groundwater conservation practices like the construction of Khadin (popular in MP, Maharashtra, Tamil Nadu, Karnataka), check dams, recharge shafts, injection wells, contour trenching can be practiced. Similarly for surface water conservation techniques like ooranies (commonly used in Tamil Nadu) and roof water harvesting and threshing floor can be used.

To improve the ecological conditions sustainable techniques and technologies can be used to reduce the carbon emission. India is already working under the mechanism of eco-friendly projects. Generation of meaningful employment with the development of agricultural

infrastructure and entrepreneurship based opportunities is an important strategy. Basic access to services should be provided to citizens of urban and rural areas. India is already ensuring housing facilities by 2022.

Sustainable development is a concerning phenomenon for the Indian cities; introduction of efficient input technology can reduce the exploitation of resources. Use of environment-friendly technology in controlling pollution is also helpful through its Prime Minister's housing scheme providing direct assistance to poor households. LPG and CNG fuel can reduce the burden on the environment. Fulfilling of cooking fuel through Pradhan Mantri Ujjawala Yojana launched in 2016 aims to give LPG connections to poor families.

Through Integrated Rural Development programmes burden and interdependency on cities for employment. Developing countries are coming up with renewable sources of energy like wind and solar. The government can also stimulate organic farming and recycling of wastage materials.

Conclusions

Sustainable development is a way forward to secure the resources and environment for future generations. It can't be achieved through policies only; it should be taken up as a large principal guiding the everyday choices of citizens. Future generations are under disadvantage because they can inherit an impoverished quality of life with no voice and representation among the present generation. The idea of sustainable development can become a reality if everyone contributes to social justice, economic freedom, and environmental protection better than before.

References

1. Singh, Govind. Urbanisation Trend and Pattern in India: Census 2011 and Beyond. Urban Ecology, 2014. Viewed on 15th October 2020. Available at <http://urbanecology.in/2014/10/10/urbanisation-trend-and-pattern-in-india-census-2011-and-beyond/>
2. Bansal, Samarth. *45.36 Crore Indians are internal migrants*. The Hindu, December 2016. Viewed on 16th October 2020. Available at <https://www.thehindu.com/data/45.36-crore-Indians-are-internal-migrants/article16748716.ece>
3. Chandra, Jagriti. India up one rank in UN development index. 10 December 2019. Viewed on 21 October 2020. Available at <https://www.thehindu.com/news/national/india-up-one-rank-in-un-development-index/article30259959.ece>
4. GDP growth data, World Bank. Viewed on 24th October 2020. Available at <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG>
5. Statista, Degree of Urbanisation from 2009 to 2019. Viewed on 24th October 2020. Available at <https://www.statista.com/statistics/271312/urbanization-in-india/>
6. Sathaye, Jayant. A, et.al, *Cimate Change, Sustainable Development and India: Global and National Concern*. Current Science, 2006, pp. 314-25.
7. Kurian, N.J. *Widening Economic and Social Disparity: Implication for India*. Indian Journal of Medical Research, 2007, pp. 374-80.
8. Regan, Helen. 21 of the world's 30 cities with the worst air pollution are in India. CNN, 25 February 2020. Viewed on 15th October 2020. Available at <https://edition.cnn.com/2020/02/25/health/most-polluted-cities-india-pakistan-intl-hnk/index.html>
9. M. Poornima. Indian Perspectives on Social Sector Issues and Sustainable Development Goals. Sage Publication, Vol. 47(2), 2017, pp. 281–293.

Annexures: Articles Written from the Work

Annexure- 1

Implications of migration from rural areas on rural economy of the country

Migration is a part of the Economic development process in countries. Economic growth in past has led people to move from traditional practices to the popular service sectors. Migration leads people to leave their homes to more productive areas. Study in the past has shown that migration has appeared beneficial to the migrators. Migration has remained significant in molding the economic, social and other structural attributes of a state or a country.

The occurrence of migration can vary from place to place and several factors work together in its implication. On the Status of settlement migration in internal areas can be divided into four types. It can be rural to urban, rural to rural, urban to rural and urban to urban. Although it is classified into four sections, the Rural to Urban migration dominates the other three types (Khan, 2011). One big reason for this has been the difference in socio-economic development between urban areas and rural areas. This difference is perceived as a disparity of development levels in rural areas.

India has undergone a rapid urbanization process after independence. Population growth is one cause but not the sole one; it has heavily rushed people in urban areas. Various factors in rural areas have operated together causing poverty, unemployment, lack of work, degraded education standard, poor living condition, fewer wages etc. According to the census data of 2011 in India, the share of the migrant population in the total population was 45.36 percent. The male and female population was 31 percent and 69 percent respectively. In this total migration, 18 percent population was rural to urban. The major social factor accounting for 75 percent population's migration in India is related to household, education and marriage. Migration for marriage covers 49.3 percent of the total while employment and household constituted 10.2 percent and 15.4 percent (Hindu, 2016).

Migration can affect the rural economy in several potential ways which are categorized into four types. Firstly, there can be direct short term impact of migration in the household labor allocation. Secondly, the indirect impact of migration in short term. Thirdly, it can affect investment decisions on an individual level and fourthly, an overall impact on the rural economy (de Brauw, 2019).

Looking at the cause of migration decisions in past, it shows that the estimate labor productivity is 3.2 times more outside agriculture than within agriculture (de Brauw, 2019). Empirical works on economic history and development economies show that migrants are positively selected for human capital elements. The overall impact of Migration on agricultural productivity is yet unknown. Labor availability is the direct impact of rural migration in agricultural centric economies. This ultimately increases the dependency of wage labor on agriculture outcome. For a country like India, the rural population is rapidly moving to cities causing trouble for households to replace migrant labor.

Labor migration in agriculture has resulted in households shifting to less labor intensive crops or renting out land to other households. The other short term indirect effects of migration on agriculture: First, households by sending away migrants are signaling that they do not require all their land. This will result in the higher land seizure or weaker property rights in a place. Result of this, households may continue to farm on marginal lands and won't make effective agricultural production (Jacoby et al, 2002). Second, the interrelation of migration income and agricultural income is less compared to wage labor income (off-farm) and agricultural income. Therefore, service sector employment in rural areas is heavily linked to an agricultural outcome which is spatially correlated. In this context, long-distance migration provides informal assurance to the migrants (Binswanger & Rosenzweig, 1986). However, the Agriculture sector is compelled to grow demanding crops in the industrial sector.

The labor supply problem is not just confined to small landholder families; even large scale export-oriented plantations face this. Studies show that young men lack the commitment and attracted by an irresistible force of urban amenities. With the improving Education qualifications in young population, they tend to move towards urban centers for more valuable occupations. This leaves behind unskilled labor in rural areas having limited knowledge of new technologies

(Essang & Mabawonku). With increasing amenities in urban areas escalating the industrial sector, the pressure is building upon rural areas. Migrants are forced to leave the villages to fulfil the needs of urban people and industries.

Technology adoption in agricultural production in some areas is considered as an indirect result of migration in rural areas (de Brauw, 2019). For instance in Bangladesh, migration outcome resulted in high yield variety. Broad trends in migration can affect investments in the rural sector as well. Studies done in rural areas suggest that these capital investments in agriculture occurred in areas where the rural population is skillful to use technological advancements. However, the theory of technological advancement is not relevant to all areas. For instance, in the Savannah zone, the alternative of machines for labor resulted more costly due to ecological constraints in that area (Essang & Mabawonku).

Investments from migration in the rural economy can be affected in different ways both in aggregate migrant allowances and households. Investment to get an effect in households depends on the consumption of remittances sent back by migrants. It can be measured on the parameters of investment in the nutrition of children, housing or production, and education. Investments in nutrition and consumption of healthy food intake would depend on the perceived returns. The migration will have a direct impact on it; the purchasing power of rural people will also be seen as a parameter of their condition. These parameters provide a summative result of the overall improvement in the rural population. However, methodological studies show that migration in rural economy sends the most productive age category (21 to 30 yr. age group) to urban areas leaving behind the more vulnerable groups. This effects both agricultural production and dependency of the left group.

The overall cause of migration in a rural economy can vary from place to place according to the economic factors involved in it. In developing countries like India, growth in migration numbers has increased with the growing population. Factors of migration in India are education, households and marriages whether it is a long-distance or small distance. However, the rural economy has certainly dependent on these migration processes. Many studies possess that rural to urban migration has resulted in a transfer of funds from rural to urban. Contradictory to this

several works have emphasized a net transfer of funds from rural to urban areas. Therefore, migration is a significant aspect of current socio-economic trends popular in the country.

References:

1. Khan, Hasan Jabir, et.al. *Socio-Economic Causes of Rural to Urban Migration in India. Asia-Pacific Journal of Social Sciences*. Vol. III (2), 2011, pp. 138-158.
2. Bansal, Samarth. *45.36 Crore Indians are internal migrants*. The Hindu, December 2016. Viewed on 16th October 2020. Available at <https://www.thehindu.com/data/45.36-crore-Indians-are-internal-migrants/article16748716.ece>
3. Brauw, Alan de. *Migration Out of Rural Areas and Implications for Rural Livelihoods*. Annual Review of Resource Economics, 2019.
4. Essang, S.M & Mabawonku A.F, *Impact of Urban Migration on Rural Development: Theoretical Considerations and Empirical evidence from Southern Nigeria*. Wiley.com. Available at <https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1746-1049.1975.tb00348.x>
5. Binswanger H, Rosenzweig M, *Behavioural and material determinants of production relations in agriculture*. The Journal of Development Studies, Vol. 22(3), 1986, pp.503–39.
6. Jacoby H, Li G, Rozelle S, *Hazards of expropriation: tenure insecurity and investment in rural China*. American Economic Review, Vol.92 (5), 2002, pp.1420–47.

Annexure- 2

Implications of urbanization on urban economy of the country

Urbanization is an indicator of evolution from conventional rural economies to modern industrial economy. It represents progressive concentration on the population in an urban area. India shares a large proportion of urbanization in developing countries. In the 20th century, it has significantly affected national life in all aspects. This increasing urbanization in the country, population-wise it has regional and worldwide impacts. In the 2011 Census, the urban population of the country has increased from 25.85 million (in 1901) to 377.11 million. Out of 7935 towns in the country, almost 468 cities in India have recorded more than one lakh population and 53 cities with more than one million populations. Two of the world's most populous cities were from India including the capital Delhi (2nd position) and Mumbai (5th position) (Urban Ecology, 2014).

War breakout with Pakistan and China in 1962 and 1965 resulted in recession, which later hit by drought subsequently in 1967. This worked as a barrier in Industrialization progress in India, though the process of Industrialization in India began in the sixties. Therefore, a shift in population from rural to urban areas didn't make a large difference before 1960. The highest growth rate in urban areas was recorded in the 1970s, which got relatively less in 1980s and 1990s (Jaysawal & Saha, 2014).

Urbanization pattern in India is marked by continuous aggregation of people and activities in big cities. It denoted certain unique characteristics: showing growth in class-I cities, occurrences of urbanization without a strong economic base, rural push factor were the cause, and rapid urbanization led to poverty, unemployment, inequalities and decay in the quality of urban life. Most of the class-I cities such as Delhi, Calcutta, Bombay, Chennai faced some basic issues of housing, transport, sanitation, water supply, slums, pollution etc. In 2019 India recorded six out of ten worst-affected cities from pollution (Regan, 2020).

These cities were using capital intensive technologies, which was an obstacle in generating employment for these rural migrants. This resulted in rural poverty shifting to urban areas and unskilled labour impacted the urban economy. In this way, these megacities became subject to

slums, electricity, water problems and rural migrants. Growth in these cities expanded both horizontally and vertically. Land value in these urban areas escalated drastically due to scarcity of it. Therefore, the mushrooming growth of busy centres and apartments came into existence (Jayaswal & Saha, 2014).

Housing facilities in urban areas was a serious issue hampering the urban cities. The development progress in housing facility expansion failed to catch the rapid demand for urbanization. Results of these poor migrants were compelled to live in slums. Living in slum conditions degraded the health and education facilities of these migrants (Kundu, 1994). Overall human development in these conditions was adversely affected causing more problems to the economy. These slums are in extremely unhygienic conditions without proper sanitation facilities open to diseases like malaria, diarrhoea, jaundice typhoid etc. (Wankhade, 2015). Excessive construction in cities to incorporate more people is leading Govt. authorities to exploit more environmental resources. Lands besides the urban areas are facing troubles due to these construction activities affecting the production numbers.

The transport system in megacities caused a big influx with heavy traffic jams, rise in fuel prices and pollution. Inclination in Road accidents and parking vehicles became a major problem of instability on roads. Public transport systems in cities have evolved with time but citizens are still unable to pay an economic fare. Metro rail services and bus transportation is used to reduce the pressure of cars but still cities like Delhi, and Mumbai are failed to solve the transport system fully.

Urban waste of building materials, hospital wastes, industrial waste are dumped on the public spaces. The sewage system is also not properly installed in the old part of many urban cities where garbage waste is produced double of the population growth. Unauthorized construction in these cities is also a big reason for inefficient civic amenities (Kundu, 1994). This affects the water supply system and many of the sewage lines are draining into nearest water bodies. The Yamuna flowing via Delhi has turned into a sewer from the urban waste which is directly flowing in. Drainage systems in these megacities like Delhi, Mumbai, Gurgaon and Chennai recently have failed badly and floods have become a regular phenomenon. In the areas of Indo-

Gangetic plains, the situation is worse and water remains logged throughout the monsoon period (Kumar & Joseph 2012).

A large number of migration occurring in urban cities accounts for education facilities. This has improved education quality in megacities and a substantial amount of the population is getting benefitted from this. Though education has improved inequalities in economic activities is still prevalent. Low skilled or unskilled migrants coming from rural areas are working in the low-grade informal sector at very low wage-rate. The crime rate is another concerning factor in urban cities causing a fearful environment.

Water supply in the cities have been a big issue all around, various small towns depend on individual water sources. In this case, substantial migration in these areas leads to water scarcity related issues. Pollution in these cities is causing human health issues, according to World Bank report suggests that over forty thousand in India are dying due to air pollution and a large number of people are suffering from respiratory diseases. Most of these cases are in urban centres of the country. Even after the government attempted to reduce vehicle numbers the overall impact has not changed.

Most of the megacities are working rapidly; this has changed the dietary habits of urban areas, in response, people are shifting to pre-prepared foods in long working hours. Therefore, the role of supermarkets has expanded favouring the larger agricultural producers. A change in the food chain can be seen where fewer people working in agriculture and more working in wholesaling, transport, retailing and vending (Satterthwaite et. al, 2010).

To tackle all these troubles of urbanization, the government recently have come up with the “Smart Cities” project identifying various benchmarks for it. The government aims to refine the transport, planning, water supply, waste management, education, healthcare facilities in twenty smart cities. Deforestation due to expansion in urban areas has caused bigger problems for the future. This has resulted in biodiversity loss, rise in carbon emission and land erosion issues. Forest cover in India according to 2019 report is 712,249 sq. Km. which is 21.67 % of total land cover (Mongabay, 2020). Since some of the megacities have reached to a level where employment generation and over-crowding is a general phenomenon, the role of these smart

cities is very significant in reducing the pressure on megacities and helping maintaining their economy.

The overall economic structure of urban areas in countries has severely affected due to the rapid urbanization process in recent time. Tier-I cities are the most affected areas whereas Tier-II cities are unable to overcome economic issues. Operational planning is required in most of the urban areas to restore a strong economic base in the urban economy. Improvement in Policy planning and urban infrastructure, land use planning is essential to regain the lost momentum of the urban environment in the country.

References:

1. Satterthwaite, David, et.al. *Urbanization and its implications for food and farming*. The Royal Society, 2010, pp 2809-20.
2. Jayasawal, Neelmani, and Sudeshna Saha. *Urbanization in India: An Impact Assessment*. Scientific & Academic Publishing, 2014, pp 60-65.
3. Singh, Govind. *Urbanisation Trend and Pattern in India: Census 2011 and Beyond*. Urban Ecology, 2014. Viewed on 15th October 2020. Available at <http://urbanecology.in/2014/10/10/urbanisation-trend-and-pattern-in-india-census-2011-and-beyond/>
4. Shukla, Kamlesh Kumar, et.al. *Urbanisation and Migration Trends in India*. Demography India, Vol. 39, No. 1, 2010, pp. 43-54.
5. Tripathi, Sabyasachi. *An Overview of India's Urbanization, Urban Economic Growth and Urban Equity*. International Journal of Economics and Empirical Research. Vol. 3(3), 2015 pp 115-127.
6. Kundu, Amitabh. *Pattern of Urbanisation with Special Reference to Small and Medium Towns in India*. Har-Anand Publications, 1994.
7. Kumar, S. Ganesh and Nitin Joseph. Drainage and sewerage system in urban India: Need for action. Indian Journal of Occupational and Environmental Medicine, Vol. 16(3), pp. 150-151.
8. Regan, Helen. 21 of the world's 30 cities with the worst air pollution are in India. CNN, 25 February 2020. Viewed on 15th October 2020. Available at

<https://edition.cnn.com/2020/02/25/health/most-polluted-cities-india-pakistan-intl-hnk/index.html>

9. Aggarwal, Mayank. India's forest cover is rising but northeast and tribal areas lose, Mongabay, 3 January 2020. Viewed on 15th October 2020. Available at <https://india.mongabay.com/2020/01/indias-forest-cover-is-rising-but-northeast-and-tribals-lose/>
10. Wankhade, Kavita. Urban sanitation in India: key shifts in the national policy frame. Sage Publication, Vol 27(2), 2015, pp 555–572.



Annexure- 3

Socio-Economic Considerations for Sustainable Development in India

India is among the largest growing economies of the world with open avenues for development opportunities. Although development activities are growing rapidly, India is still lacking in a comprehensive and consistent strategy for sustainable development. Development trajectory recently is looked more from the environment efficiency perspective. In a global economic order facing global environmental challenges, the key question arises in front of India is to craft and pursue a sustainable economic strategy for development. Degradation of the environment is rising due to economic activities – mining activities, industrial activities, and infrastructure development. Sustainable development in this context is the need of the hour to address the environmental challenges and the economy.

The idea of Sustainable Development was adopted in the Brundtland Commission to balance the environmental, social, and economic objectives globally (Basiago, 1999). The doctrine of Sustainable Development has evolved over the years from an economics discipline. In late times the concern has emerged about natural resources to limit production and threat to environmental activities. India's population constitutes 17% of the World's total population and 20% of the total animal population. The geographical area is only 2.5% of the total area. Although, India is endowed with resources, and minerals and abundant reserves of bauxite, coal, iron, limestone, magnesite, chromite, rock salt etc. Total 328 million hectare area was given on lease constituting 0.14% of the total area. Coal production in India in 2019-20 was 729.10 Metric Ton (GOI, 2020).

India being a signatory to almost all the conventions of the UN, the ground realities have been slow in practical terms. Malnourishment in the country is very deep and comparable to sub-Saharan Africa. Even in the Human Development Index (HDI) India ranks among the lowest of the countries ranking 129 out of 189 in 2019 (Hindu, 2019). Education has remained a big issue in a country with public schools unable to provide quality education. A sustainable financing model is required for long term development and equitable quality education. Furthermore, tax needs to be reformed; subsidies need restructuring to education and the social sector. Promotion

of quality and free school education with the implementation of long-term policy through state funding system is required.

Skill development is a significant factor in creating technical vocational education system. It suits the business communities and non-university institutes need to work on this. These institutes can be funded through foreign investment. Healthcare is another comprehensive sector to focus on. A comprehensive health survey needs to be undertaken, aid should be provided to national health mission and taxes on alcohol and tobacco should go to the health sector. A sustainable path is required to reduce the burden of diseases on the community.

The marginalized communities are exhibited to inequalities, poverty and several other issues need serious reflection. Women are generally pushed out of the labor force and issues of sexual minorities are hardly discussed. Declining sex ratio and failure in ensuring women's rights are major obstacles in gender equality. Equal rights to women in economic resources and ownership over land, financial services should be provided. Use of Information and Communication Technology (ICT) in women empowerment and strengthening of policies through enforceable legislation will help in reducing gender inequalities. Further mobilizing resources for investments in social services and channel creation for participation in civil society organizations including women's movements is the way forward.

Education and employment are inter-related; a high growth rate should be supported by policies addressing issues of employment and capabilities that can generate jobs. Education, human capital and employment all three aspects should be given priority for inclusive growth and development. Economic growth, employment, poverty, entrepreneurship, education and government policies should be handled together to boost growth and development. Policies should focus on opportunity creation, skill, networking and knowledge up-gradation. Liberal public funding of education and focus on quality education is required for a holistic approach. Children including migrants or homeless, or affected by any disease should be categorized in the mobile population and plans for better reach should be made. Privatization is occurring in the education system due to unequal education in public schools, controlling of such privatization is very important (Poornima, 2017).

Food security and sustainable agriculture should be the next step forward. There should be an expansion of the food basket for public distribution by including pulses and oils. Minimum support price and procurement policy should be diversified making more effective for crops. Nutrition status of tribal children is also lower than non-tribal children. Tribal areas should be made food-sufficient regions to overcome food insecurities and reducing their dependency on the forest resources. Sustainable agriculture is more economically feasible and use of non-chemical fertilizers, water harvesting, drip and sprinkler system of irrigation will be more efficient. The shift of crop patterns to water-efficient varieties like cereals and crops which help in soil fixation and fertility is more helpful.

Social inequality needs to be given more emphasis, promoting equality, justice and freedom through positive programmes should be the primary focus in development strategies. Structural reasons should be looked for disparities; the nexus between big business and politics can be curbed by enhancing public funding in elections. The disparity in wealth, power and opportunities is common in the country and not being paid attention. Social transformation agenda should be part of popular discourse making government more accountable for its fulfilment.

Overall improvement in health, education, human development, gender equality will be essential for sustainable development in the country. The forward way is to develop target business models based on bilateral/multilateral cooperation. Internal cooperation for creating new markets and technologies can help the economic process to be more self-sufficient.

Development goals can be integrated with efficient economic technologies.

References:

1. Basiago, Andrew D. *Economic, social, and environmental sustainability in development theory and urban planning practice*. The Environmentalist, 1999, Vol. 19, pp. 145-161.
2. Coal Production statistics, Government of India, 2019. Viewed on 21 October 2020. Available at <https://coal.nic.in/content/production-and-supplies>
3. Chandra, Jagriti. India up one rank in UN development index. 10 December 2019. Viewed on 21 October 2020. Available at

<https://www.thehindu.com/news/national/india-up-one-rank-in-un-development-index/article30259959.ece>

4. M. Poornima. Indian Perspectives on Social Sector Issues and Sustainable Development Goals. Sage Publication, Vol. 47(2), 2017, pp. 281–293.



Annexure- 4

Challenges and Strategies for Urbanization and Sustainable Development in India

India's transition to faster economic growth is still dependent on an adequate plan for urbanization. The situation of the rural sector is also linked with the urbanization process. Period of 2000-02 to 2010-11 was a rapid growth period for the Indian economy with a growth rate of an average 7.7% per annum. The growth during 2000-14 was associated with a decline in the poverty population from 45% in 1993-94 to 37% in 2004-05 and 22% in 2011-12 (World Bank). Urbanization rate in India is growing rapidly in 2019 the urban population share has reached 34.47% (Statista). The pace of employment in the non-agricultural sector is unable to keep up the pace of the output growth.

Growth of employment in non-agriculture has been slow in the last 50 years, the expectancy that output growth will accelerate the employment did not happen. Scarcity of skills emerged as a major challenge while employment was growing slowly. To tackle this problem Govt. of India launched a National Skill development initiative in 2007 and followed which works within the public-private partnership framework. Later in 2015, the National Policy for Skill Development and Entrepreneurship was announced (Ahluwalia, 2016).

Private investments have a significant role in escalating economic growth; here the role of govt. is important to provide a regulatory environment to strengthen the competitive economy. Infrastructure sectors such as telecommunication and electricity were slow in institutional reforms and showed enormous challenges. Inadequate infrastructure was a major challenge in several megacities like Chennai, Hyderabad, Pune, Bengaluru, Delhi and Ahmedabad with poor urban infrastructure, roads, housing, transport and sanitation. Absence of urban planning in these cities led to deterioration in public services and the expansion of slums. A quarter of the urban population in the country is estimated to be living in the slums; most of it is in residing in the large cities (Ahluwalia, 2014). A large proportion of this population is exposed to poor water services, health and sanitation.

India's population share is much lesser compared to countries like China, Mexico, Korea and Indonesia. This growth in India's urban population is expected to increase by 40% in 2031, meaning that urban population will reach 600 million in 2031 (Ministry of Urban Development, Govt. of India, 2005). A big reason for the neglect of urban development issues is the political economy of the country has remained focused on rural development. Even though a large population is moving to urban areas many of the politician minds believe that India continues to live in villages.

Several big cities are facing water supply issues and getting a supply for a few hours every third day or fourth day. Sewerage connectivity is also an issue and untreated sewage is dumped in open drains or discharged into rivers or lakes. In lack of a proper wastewater treatment plan, drinking water is getting contaminated and generating health problems. Issue of solid waste management has reached an alarming scale; an average of 11000 and 8700 ton of garbage is produced in Delhi and Mumbai (Mongabay, 2019). Various cities are now trying to implement waste management strategies.

Sustainable development is a global concern and India currently is emerging as an economic superpower. India constitutes 17% of the world's population, accounts for 35% for total poor and 40% illiterates of the world (Kurian, 2007). A substantial amount of people in the rural areas are directly linked to climate-sensitive sectors like agriculture, forest and natural resources like biodiversity, water, coastal zones for their livelihoods (Sathaye, 2006). To reduce the economic and social disparity, inclusive growth is important. This inclusive growth is incomplete without improvement in the social sector including education, health, women empowerment etc.

Use of high and labor releasing agricultural growth, availability of infrastructure, higher levels of literacy and skills and easy access to credit and inputs for the poor section of the society is very significant. Women empowerment through acts and schemes related to the girl child need to be reviewed to create gender equality. To control the issue of water, groundwater conservation practices like the construction of Khadin (popular in MP, Maharashtra, Tamil Nadu, Karnataka), check dams, recharge shafts, injection wells, contour trenching can be practiced. Similarly for surface water conservation techniques like Ooranies (commonly used in Tamil Nadu) and roof water harvesting and threshing floor can be used.

To improve the ecological conditions sustainable techniques and technologies can be used to reduce the carbon emission. India is already working under the mechanism of eco-friendly projects. Generation of meaningful employment with the development of agricultural infrastructure and entrepreneurship based opportunities is an important strategy. Basic access to services should be provided to citizens of urban and rural areas. India is already ensuring housing facilities by 2022.

Sustainable development is a concerning phenomenon for the Indian cities; introduction of efficient input technology can reduce the exploitation of resources. Use of environment-friendly technology in controlling pollution is also helpful through its Prime Minister's housing scheme providing direct assistance to poor households. LPG and CNG fuel can reduce the burden on the environment. Fulfilling of cooking fuel through Pradhan Mantri Ujjawala Yojana launched in 2016 aims to give LPG connections to poor families.

Through Integrated Rural Development programmes burden and interdependency on cities for employment. Developing countries are coming up with renewable sources of energy like wind and solar. The government can also stimulate organic farming and recycling of wastage materials.

Sustainable development is a way forward to secure the resources and environment for future generations. It can't be achieved through policies only; it should be taken up as a large principal guiding the everyday choices of citizens. Future generations are under disadvantage because they can inherit an impoverished quality of life with no voice and representation among the present generation. The idea of sustainable development can become a reality if everyone contributes to social justice, economic freedom, and environmental protection better than before.

References:

1. GDP growth data, World Bank. Viewed on 24th October 2020. Available at <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG>
2. Ahluwalia, Isher Judge, *Challenges of Urbanisation in India*. In: Besley T. (eds) *Contemporary Issues in Development Economics*. International Economic Association Series, 2016, pp. 163-177.

3. Statista, Degree of Urbanisation from 2009 to 2019. Viewed on 24th October 2020. Available at <https://www.statista.com/statistics/271312/urbanization-in-india/>
4. Ahluwalia, Isher Judge. *Transforming Our Cities*. HarperCollins Publishers India, 2014.
5. Ministry of Urban Development. (2005). Jawaharlal Nehru National Urban Renewal Mission Overview, Government of India. Available at <http://jnnurm.nic.in/wp-content/uploads/2011/01/PMSpeechOverviewE.pdf>
6. Aggarwal, Mayank. *India's megacities, Mumbai and Delhi, sitting on a pile of waste*. Published on 11 October 2019. Available at <https://india.mongabay.com/2019/10/indias-megacities-mumbai-and-delhi-sitting-on-a-pile-of-waste/>
7. Sathaye, Jayant. A, et.al, *Cimate Change, Sustainable Development and India: Global and National Concern*. Current Science, 2006, pp. 314-25.
8. Kurian, N.J. *Widening Economic and Social Disparity: Implication for India*. Indian Journal of Medical Research, 2007, pp. 374

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