

Study Of Planning Policy Weaknesses That Are Responsible For Farmland Loss In Indian Growing Cities: Case Studies Of Pune And Bangalore

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Abstract: *In 2011, India's urban population was 377 million, with 600 million predicted by 2031. Cities are rapidly expanding in India, primarily at the expense of valuable countryside. In India, urban growth consumes an average of 0.12 million hectares of agriculture per year. The purpose of this research is to investigate the current planning policies in India that are causing agricultural land loss during the development process. With respect to regional plans and development plans, planning policies for the developing cities of Pune and Bangalore are analysed and compared in depth. The analysis demonstrates a significant shift in planning policies throughout time, with the development agenda for the region's economic development taking precedence over the preservation of farmlands that are becoming urbanised for all of these rising cities. Many of the planning policies are similar in all of the cities analysed, but only a few are considered as taking into account local realities and political agendas. According to the study, quick action is needed to address planning flaws and reform the few planning regulations that can assist preserve farmlands that are being impacted by urbanisation.*

Keywords: *Urban expansion, Farmland, Policy, Planning, Land Loss*

1. INTRODUCTION

In 2011, India's urban population was 377 million, with 600 million predicted by 2031. Cities are rapidly expanding in India, primarily at the expense of fertile agricultural land. In India, urban expansion consumes 0.12 million hectares of agricultural land on an annual basis. [1] The expansion of urban agglomerations is the result of urban development and population growth. The establishment of economic development programmes, urban planning, and industrialization are the first causes of urban expansion to the periphery. Manufacturing, socioeconomic infrastructure, communication, and road networks all necessitate the restructuring and reconstruction of existing human-occupied area. [2] Many emerging nations' urban expansion primarily results from natural population growth, but in some countries, rural-urban migration is a significant factor. [3], [4] Cities are now in demand as both places to live and work as well as the origins of technological innovation. [5], [6], [7], [8]

In India, horizontal urban expansion occurs at the price of productive and fertile agricultural land in the periphery villages. [9] Expansion encroaches on farmland, displaces

farmers, and eliminates agricultural jobs. Displaced farmers would eventually become impoverished as a result of this. [2]

This is the cumulative effect of four main factors:

a. Insensitive planning and planning policies for urban expansion, such as the Pune Regional Plan and Development Plan and the Pimpri-Chinchwad Development Plan, which bring rich fertile agricultural area under development.

b. Land acquired for regional and development plans with compensation and no plans for resettlement. Pune, Bangalore, Lucknow are but a few examples of this phenomenon. [10], [11], [12], [13]

c. Involvement of private developers who provide alluring surveillance payments in exchange for property sales and joint venture project proposals. Pune, Jaipur, Lucknow, and Kolkata are just a few of the major cities where this may be seen. [10], [11], [12], [13]

d. Developers pay market prices for agricultural land in order to develop it. Farmers profit handsomely from these agreements. However, because these farmers have not had proper financial training, any cash gained during exchanges are quickly depleted owing to reckless spending. Farmers are now in a position where they don't own any land and don't have any money.

2. METHODOLOGY

The focus of this research is on material interpretation, field observations, and interviews. Fieldwork in two metro towns, Pune and Bangalore, where horizontal urban expansion has gobbled up a considerable amount of periferal agriculture over the last three decades, was followed by interviews with stakeholders. The essential aspects of this research's analysis are a content evaluation, one case study, and a few interviews and discussions with affected farmers, planners, bureaucrats, and developers.

3. CASE STUDIES

A. Urban expansion and farmland loss in Pune:

• Urban expansions in Pune

Urbanization is a process that transforms a rural area into a city. Previous transportation routes, as well as existing and potential industrial projects in and around Pune, all affect Pune's urban expansion (CBD). The growth of Pune has been focused on employment nodes, areas close to these nodes that allow for fast access.[2]

• Population:

According to the 2011 Census of India, Pune has a population of over 3 million people. With an increase in economic activity, the city's population increased sixfold, from 0.48 million in 1951 to 3.11 million in 2011. [2] Pune is growing because of both migration and natural expansion. The decade pattern of population increase in Pune Municipal Corporation is as follows:

Year	Population	Area under city (sq.km)	Decadal growth rate (%)
1950	488419	125.00	
1960	606777	125.00	24.23%

1970	856105	138.05	41.09%
1980	1203363	145.92	40.56%
1990	1691430	146.00	40.56%
2000	2538473	243.84	50.08%
2010	3,124,458	243.84	22.73%
2021*	43,70,721	Approx. 331	39.8%

Table-1. Population growth in Pune, Source: (Pune Municipal Corporation, 2012)

- **Urban sprawl**

PMC has grown in a circular design over the years. The growth of the information technology (IT) industry, as well as the economy's boom in the automobile sector, are primary drivers of growth in Pune. Peripheral growth resulted in more people, more houses, and more public transportation and infrastructure. Between 1971 and 2011, Pune's population grew by 5 to 6 times, with a spike occurring in 1981. Due to the ever-increasing population, the city has spread outwards. Urban sprawl has occurred in all directions, but especially to the east, south, and west. More change has occurred in the eastern part of the city.[2]

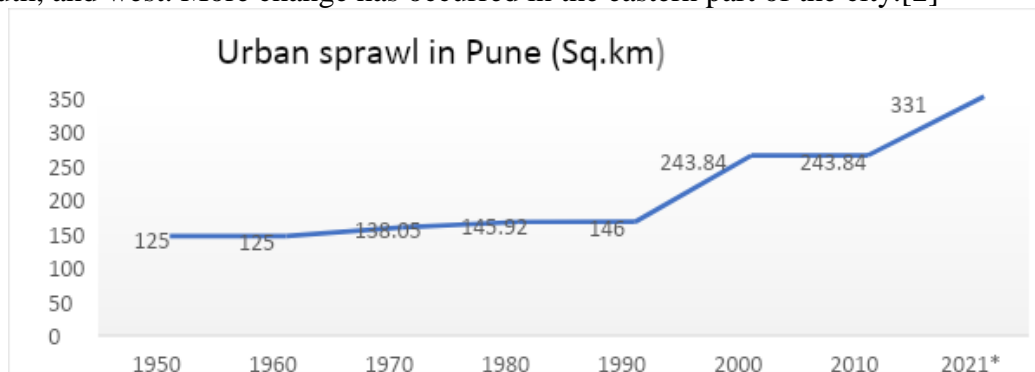


Table-2. Urban sprawl in Pune, Source: (Pune Municipal Corporation, 2012)

- **Farmland loss:**

The city of Pune has created a hotspot for urban growth in the peri-urban area. For commercial, industrial, educational, transportation, and other land uses, the amount of farmland has shifted significantly. Land speculation is rampant in cities' areas, leading to agricultural land's conversion to non-agricultural land. Land-use conversion is critical in developing countries because it could impact food security in countries where population growth is exponential. [4]

Agriculture Landuse in Pune city (1980-2021)

Year	Area under agriculture land use (sq.km)
1980	14.42
1990	13.27
2000	20.11
2010	16.82
2021*	17.87

Table-3. Agriculture land use in Pune city, Source: (Nitin N. Mundhe, 2014)

Agricultural land loss over the year		
Year	Area under city(sq.km)	Farmland Land loss
1950	125.00	
1960	125.00	0.00
1970	138.05	13.05
1980	145.92	7.87
1990	146.00	0.08
2000	243.84	97.84
2010	243.84	0.00
2021*	Approx. 331	87.16

Table-4. Agricultural land loss in Pune city, Source: (Pune Municipal Corporation, 2012)

Agriculture occupies 10.39% of the land area (1973) and 6.90% of the land area today (2011). Agricultural land is being converted to urban areas. Higher build-up of land in the periphery has caused issues like inadequate sanitation, poor building development, and inappropriate road use, among other things. Unplanned development leads to urban degradation. [four] Pune's unbridled growth has led to a highway-induced real estate reorganisation, as farmland landowners must pool their dispersed agricultural holdings in order to increase their economic returns.

- **Displaced farmers in Pune:**

The fact that a large number of Pune residents are choosing non-agricultural and industrial jobs. This includes a large percentage of people from rural areas, which have traditionally hosted farming hubs. The causes are not obscure, but rather plain to see. Maintaining even a basic family expenditure has become a daunting effort for traditional small land holding farmers since earning a living has become increasingly challenging. As a result, a considerable portion of peri-urban land is sold and used for real estate development. Villagers and villages lose their identity, space, and values as a result of this process, as they become dependent on the metropolis and a part of it. Poor farmers are more likely to sell their land to developers. Builders typically purchase land at a low cost and use it to build residential and commercial developments. The developers have a tendency to build infrastructure and amenities until they reach their property parcel, resulting in the city's development being haphazard and directionless.[5]

Number of Working Population as Cultivators		
Year	Number of Cultivators	Number of Displaced farmers
1980	38136	-
1990	28754	-9382
2000	12938	15816
2010	10971	1967

Table-5. Number of working population as cultivators, Source: (Census of India 2011) (CENSUS OF INDIA 1981, 1988)[6, 7]

- **Planning instruments to control farmland:**

Section 63 of the Maharashtra Tenancy and Agricultural Lands Act (abbreviated as "MTAL" or "the Act") explicitly prohibited non-agriculturists from buying or inheriting agricultural land in the state. MTAL amended Section 63 of the Maharashtra Act 1 of 1966, which went into effect on January 1, 2016. said amendment removes the prohibition on the transfer of agricultural land from land located within a Municipal Corporation or Municipal Council, or land within the jurisdiction of a Special Planning Authority or a New Town Development Authority established under the Maharashtra Regional and Town Planning Act, 1966 (MRTP), for short..[9]

- **Planning Policies for Pune:**

- i. **Land use policy:**

Maharashtra has relaxed regulations limiting the conversion of agricultural properties to non-agricultural (N.A.) uses, making farmland available for speculation. The Maharashtra Land Revenue (Conversion of Use of Land and Non-Agriculture Assessment) Rules, 1969 is an Act that unifies and amends Maharashtra's land and land revenue laws. Section 44A, which dealt with industrial use of land, stated that no permit was required under the terms of Section 42 and 44. Dept of Dept of Dept of Dept of It When the Regional Town Planning Act of 1966 is in effect, legally accepted/proposed industrial zones are present, according to this Government Ordinance issued in 1994. Land designated as horticulture can be owned by anyone under the new revised Agricultural Property Ceiling Act.

- ii. **Zoning regulation**

Officials from the state housing department say the announcement will make huge tracts of agricultural land available for the promotion of affordable homes in Maharashtra. Pradhan Mantri Awas Yojana, a government programme aimed at increasing affordable housing for the poor (PMAY). Only for the EWS, residential development can be permitted on farm land in municipal corporations and councils with a Floor Space Index (FSI) of 1.

- iii. **Master plan principles:**

The previous regional plan for the PMRDA was written in 1990. Since then, the situation on the ground has radically shifted. It is unable to keep up with the region's rapid rate of change. As a result, the city planning department is gathering comprehensive data and conducting surveys in order to draught a new regional plan. Because the draught

acknowledged that development was flowing into the communities on the outskirts, it allowed for low-density development with an FSI of 0.5 in these areas. However, because of their zoning for agricultural or allied purposes, these areas designated as No Development zones in the regional plan were excluded from the scope of the ULC Act as not developed.

iv. Farmland protection policy:

The governors of states having Fifth Schedule areas have the right to issue notifications and rules to ensure good governance under the Constitution's Fifth Schedule. The governor can guarantee that legislation applies, does not apply, or applies with specified modifications by issuing notifications under Clause 5(1) of the Fifth Schedule. In compared to many other Indian states, Maharashtra's land regulations have generally been lax in protecting tribal territory. In Andhra Pradesh, for example, the Land Transfer Regulation Act I of 1970 made it illegal to sell tribal lands to non-tribals. Land transfer from tribals to non-tribals is prohibited in states with Fifth Schedule territories, including as Jharkhand, Chhattisgarh, and Madhya Pradesh.

v. Farmer's right policy:

As a permanent solution to the farmers' problem, AIKSCC's Farmers Freedom from Indebtedness Bill 2018 and Farmers' Right to Guaranteed Remunerable Minimum Support Price for Agricultural Commodities Bill 2018 have been prepared. A bill supporting farmers that will free them from debt, while another that ensures a guaranteed adequate support price for agricultural commodities would keep them from entering debt, claim the AIKSCC. A farmers' strike is being staged in opposition to the bill's passage. Farmers are still experiencing hardships. (Kamath, 2018)

vi. Land acquisition and compensation policy:

A proposal from the Maharashtra government called for land acquisitions of four to five times the ready reckoner rate, even if the landowner did not accept. This law has been suspended because of the farmers' rally in the state. Thousands of farmers from Nashik gathered in Mumbai on March 11th to voice their grievances. Land ownership is their primary demand. Farmers demand that the Forest Land Rights Act, 2006, be implemented. They also ask that the state not acquire land for the Mumbai-Ahmetabad high-speed train project and the Mumbai-Nagpur eight-lane Samruddhi highway.

Land acquisition barriers are being sought to be removed as requirements of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation Act 2018. The additional measures were added to the original plan to compensate farmers and others whose land has been taken for rural roads, district highways, or highways. At least four times the RRP, the state administration requires that land compensation be paid. (New policy to speed land acquisition for roadways, T. T. India, 2018)

vii. Farmer eviction and resettlement policy

Despite the fact that the court issued an injunction in 2013, the farmers' claims have not been resolved. According to the court, 396 resettlement applications were pending. Several families have been displaced and are now living on the streets. Adding that the farmers are uneducated, their claims were rejected even after paperwork were submitted, citing insufficient documentation. 2017 (Sequeira)

viii. Agriculture policy

The prevalence of rainfed areas, variable climatic conditions, and acute underdevelopment in Vidarbha, Marathwada, and Konkan were the state's major development obstacles. Agriculture was the population's main source of income. Except for sugar cane, very little has been accomplished in the sector in comparison to other regions of the country over the last six decades (Sawant et al 1999; World Bank 2003). The agricultural industry

was given a harsh deal by the government, putting it under extreme stress. The agricultural industry is in a state of stagnation, and it is losing cultivable land to other purposes. Small and marginal ownership have increased dramatically as a result of this.(2020, Khalil Shaha)

B. Urban expansion and farmland loss in Bangalore:

• Urban expansions in Bangalore:

The state capital of Karnataka is located in the city of Bangalore. Bangalore has recently experienced substantial growth, from 163,091 people in 1901 to 8,499,399 in 2011. As a result of these factors, population growth, migration, and expansion have been extensive in and around Bangalore.[3]

• Population:

Between 1991 and 2001, Bangalore grew at a 38 percent annual rate, making it the fastest-growing metropolis in India after New Delhi. Since 1951, Bangalore has experienced fast industrialization, with large-scale construction activity, educational and employment opportunities, medical facilities, business and industrial activity, and other amenities all attracting a huge number of migrants. Bangalore urban agglomeration had the greatest population of the 237 towns and urban agglomerations in the state in 2001, with 61.90 lakh people.

Year	Population	Area under city (sq.km)	Population Growth rate (%)
1950	7,86,343	66.04	
1960	12,06,961	88.05	53.5
1970	18,97,826	119.13	57.2
1980	31,00,811	365.7	63.4
1990	43,20,297	457.10	39.4
2000	58,87,853	530.85	36.3
2010	84,43,675	740.6	43.4
2021*	135,51,445	1206.9	60.5

*Projected through calculation

Table- 6. Population growth in Bangalore, Source: (Sudarshan, 2011) (BDA, 2017) (Sarthak Verma, 2017) (Census of India, 2011)

• Migration

Migration has been the primary cause of the city's population growth. Migrants primarily came from Tamil Nadu, Andhra Pradesh, and Kerala between 1941 and 1951. The contribution of overall population growth fell from 20% in 1961 to 15% in 1981. The city's population increased by 65 percent due to natural growth, while migration increased the population by 35 percent. The anticipated chances for education, marriage, and employment pushed migration. The quickly expanding metropolis, which gave more job and educational

opportunities, operated as a pull factor for migration, while the destitute region's socioeconomic conditions worked as a push factor.

Components of Urban Growth	1981-1991 (million)	1991-2001 (million)
Natural Increase	0.266	0.342
In-migration	0.544	0.700
Jurisdictional Change	0.403	0.519
Total Increase	1.209	1.557

Table- 7. Composition of Growth during 1981-2001

- **Urban sprawl**

The 1970s are regarded as a watershed moment in Bangalore's development since it saw the city's fastest population and geographic expansion. The city's urbanisation and geographical expansion became much more flexible during the 1970s. According to the 1981 census, the population of the Bangalore urban agglomeration was 32, 58,475 people, with a land area of 365.7 square kilometres.

The population increased by 33% between 1981 and 1991 and 1991 to 2001 due to the expansion of the jurisdictional boundary. Bangalore's borders grew from 365.7 square kilometres in 1981 to 457.10 square kilometres in 1991 and 530.85 square kilometres in 2001 throughout this time..[5]

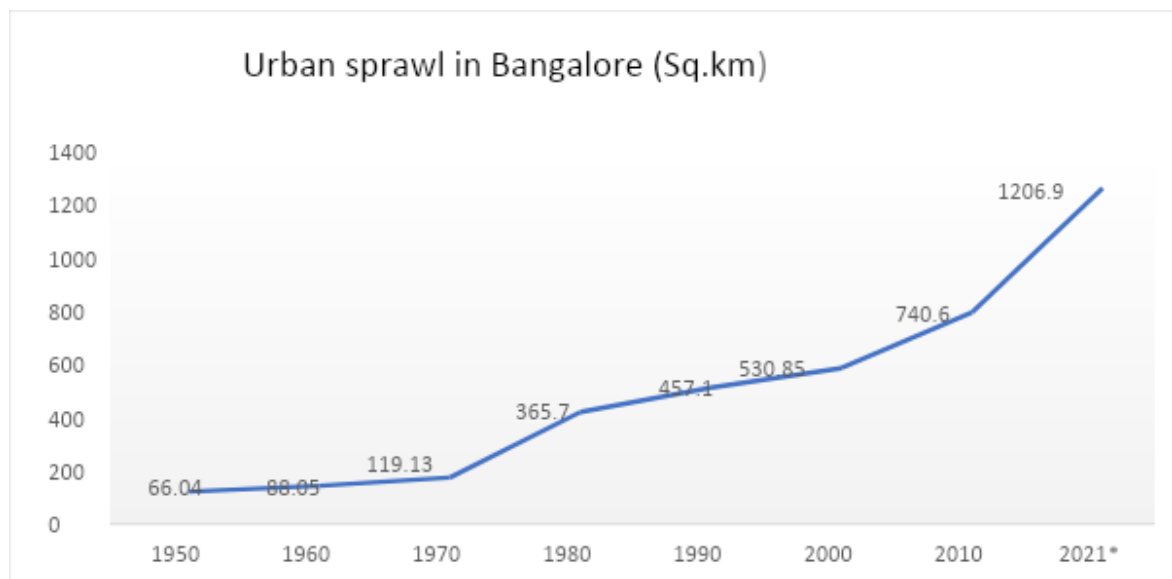


Table- 8. Urban sprawl in Bangalore, Source: (Sudarshan, 2011) (BDA, 2017) (Sarthak Verma, 2017)

- **Farmland loss:**

Bengaluru's population grew from 35.09% in 2001 to 47.18% in 2011. the population shifts have a greater impact on the ecosystem, resulting in farmland loss

Since the city's green belt was cut in 1995, the geographic extent of the city's vegetation ratio has decreased. The website was redesigned, and a lot of new companies were founded. During this time, several IT companies appeared outside of cities. Bengaluru is known for its abundant green space and clean ecosystem. Agricultural land gradually disappeared in 2001. Real estate development made many landowners transition agricultural land into development

land. In 2010, the entire agricultural land and city around Bangalore was rezoned to Yellow Zones and Layouts, respectively. [6]

Agriculture Land use in Bangalore city (1980-2021)	
Year	Area under agriculture land use (sq.km)
1980	-
1990	205.32
2000	196.36
2010	234.89
2021*	322.65

Table-9. Agricultural land use in Bangalore, Source: (Sudarshan, 2011) (BDA, 2017) (Census of India, 2011) (Sarthak Verma, 2017)

Agricultural land loss over the year		
Year	Area under city(sq.km)	Farmland Land loss
1950	66.04	
1960	88.05	22.01
1970	119.13	31.08
1980	365.7	276.57
1990	457.10	91.4
2000	530.85	73.75
2010	740.6	209.75
2021*	1206.9	466.3

Table-10. Agricultural land loss in Bangalore, Source: (Sudarshan, 2011) (BDA, 2017) (Census of India, 2011) (Sarthak Verma, 2017)

Over the years, urban growth to the outskirts has resulted in a 16.31% decrease in agricultural land. With the growing need for both land and food security, it's more important than ever to maintain and safeguard farmlands through policies and guidelines.

- **Displaced farmers in Bangalore:**

Land is a valuable asset for farmers in countries like India, where agriculture employs half of the population. However, government land acquisition, private business growth, and the continuous demand for infrastructure in metropolitan areas all have a stronger impact on peri-urban farmland and its people. Traditional farming practises have decreased as a result of migration to urban areas.[7]

Number of Working Population as Cultivators	
Year	Number of Cultivators
1980	15891
1990	20275
2000	30642

2010	32991
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Table-11. Number of working population as cultivators, Source: (Sudarshan, 2011) (Census of India, 2011) (Sarhthak Verma, 2017)

Land is critical for farmers in places like India, where agriculture employs more than half of the population. Nonetheless, government land acquisition, commercial real estate growth, and necessary infrastructure development in peripheral urban areas all impact the farmland in peri-urban areas. Agricultural land has expanded, and farmers' and family farms' agricultural practises have dwindled as a result of migration to cities.[7]

- **Planning instruments to control farmland:**

Because of the urban containment policy's ineffectiveness, farmland is being swallowed up by cities. There have been at least four major city-integrated design plans since 1972. Urbanization has fragmented farms, causing a loss of a traditional economic base. Unforeseen development is common in BMA due to the type of development done there. Not only will the LPA's developments affect the agricultural land, but the projects will also have a negative effect on the adjoining village settlements, turning them into poverty islands with little infrastructure.[1]

- **Planning policies for Bangalore:**

- i. **Land use policy:**

Karnataka's economy grew at a slower pace in 2015-16, dropping from 7.8 percent in 2014-15 to 6.2 percent. This slowdown, according to the Chief Minister, is purely due to a drop in the agricultural sector's growth rate. Drought is expected to cause the agriculture industry to shrink by 4.7 percent in 2016. The lack of a territorial policy to reduce resource degradation, as well as a complicated collection of policies impacting agricultural resource usage, aggravates the situation. The Karnataka government has stated that it will not acquire property for SEZs, instead relying on private firms to purchase land from individuals on the open market. New compensation and rehabilitation schemes for those who may lose their land have also been announced. While the government's Land Acquisition Act was marred by controversy, allowing considerably stronger private firms to negotiate directly with farmers and landowners raises concerns about social justice. In such circumstances, the government's responsibility in providing equitable benefits for all stakeholders becomes critical. (Hindu, Karnataka's economic growth slows down, agriculture major concern, 2016)

- ii. **Zoning regulation**

To attract investors and supply them with land for industrial projects, the State government has issued a set of guidelines for the acquisition and conversion of agricultural property for industrial purposes. The government revised Section 109 of the Karnataka Land Reforms Act, 1961, in March 2020, to allow for the acquisition of farms for industrial uses. It allowed the sale of lands exempted under section 109 of the Act after the land had been used for the purpose for which it was exempted for seven years. These instructions were released just days after the government agreed to change Sections 63 (a), 79 (a), (b), and (c) 80 of the Act, allowing any non-agriculturalist to purchase farmland. (Hindu, 2020)

- iii. **Master plan principles:**

In 2031, the city's population will be 24.7 million, accounting for roughly 58 percent of Karnataka's urban population. Because development is not limited to Bangalore Metropolitan Area (BMA) of Bangalore Metropolitan Region, agrarian regions are likely to be urbanised in an unplanned manner (BMR). The fact that surrounding Local Planning Areas (LPA) are proposing development interventions that are contiguous with the BMA border will intensify this process. The Business-As-Usual (BAU) scenario forecasts growth using a transportation

model that includes metro phases I and II, a ring road, and existing roads. The Business-As-Usual (BAU) scenario is predicted to encroach not just on agricultural land, but also on nearby village settlements, turning them into impoverished islands with limited infrastructure. (Authority), 2017)

iv. Farmland protection policy:

By ordinance, the government has amended the aforementioned sections of the Karnataka Land Reforms Act, 1961. The government claims that in 83,171 cases where there are around 2 lakh acres, the cases are pending in the revenue courts. The government claims that lifting the limits will assist farmers in getting better prices for their land and by providing more capital and new technologies. (Bengaluru's industry body hails proposed amendment to land reforms law, 2020)

v. Farmer's right policy:

Despite the fact that a huge number of farmers from throughout the state have spoken out against it, the administration is determined to abolish limits on the purchase of farm property through an ordinance. An impartial survey conducted by former KAPC Chairman Prakash Kammaradi revealed farmers' discontent with the substantial revisions of the Act. 59.2% of farmers considered the changes brought about by the ordinance to be "not acceptable." The delegates were also unhappy with the previous modifications to the APMC Act. (Kumar, 2020)

vi. Land acquisition and compensation policy:

The new land acquisition Act, which was enacted by the Center and implemented by the Karnataka government in 2014, is a huge roadblock for many federal ministries attempting to acquire land for development projects. Compensation should be three to four times the market price, but numerous departments cannot afford it. They developed a plan to sidestep the Act by using land-sharing agreements and negotiations.

Since the government services that require residential layouts, hostels, schools, irrigation canals, and burial sites to be built are most impacted, they are looking into other land acquisition possibilities. Due to increased costs from the new legislation, departments prefer to grant rather than pay in cash for land. In Karnataka, land pooling is nothing new. (India T. T., High compensation: Land acquisition hurdle hits development projects, 2018)

vii. Farmer eviction and resettlement policy

The state government of Karnataka passed the Karnataka Relocation of Project Displaced Persons Act to provide for the resettlement of people displaced from lands acquired for public utility projects. The overall impression of this act is that it is simply an extension of the land acquisition act with a few tweaks.

The Karnataka Resettlement of Project Displaced Persons Act, 1987, is unique in that it focuses solely on monetary compensation and physical resettlement for displaced persons. The act has overlooked socio-cultural, economic, and environmental rehabilitation, which is more significant to displaced people than the former. The act presumptively assumed that displacement is a necessary feature of any development effort. As a result, it makes no mention of avoiding or limiting displacement. Social factors such as caste, kin, neighbourhood, occupational network, and local community are not given any weight in the resettlement process. (Mangalekar, 2006)

viii. Agriculture policy

Farmers in Karnataka have been dealing with a variety of difficulties, ranging from poor technology to agricultural loan obligations. Karnataka is a large state with a diverse topography; while some sections are agriculturally rich, others are severely impacted by the state's regular droughts. Even after introducing and executing key regulations for farmers, the

Karnataka government has failed to safeguard farmers, resulting in more than 3500 farmers committing suicide between 2013 and 2020.

4. SURVEYS AND INTERVIEWS

Farmers, planners, bureaucrats, and politicians were interviewed using semi structured questions in the cities of Pune and Bangalore. For the interviews, random samplings were chosen to collect generic information and responses.

The stakeholders who are directly involved or affected by agricultural land loss and its consequences have been identified. The city of Bangalore enlists the assistance of local architecture students to overcome the language barrier when conducting farmer interviews. It was difficult to identify the farmers who had been impacted by the loss of agricultural land. Local people's support, on the other hand, has been successful in all of the cities.

Summary of the responses obtained in the interviews are as follows:

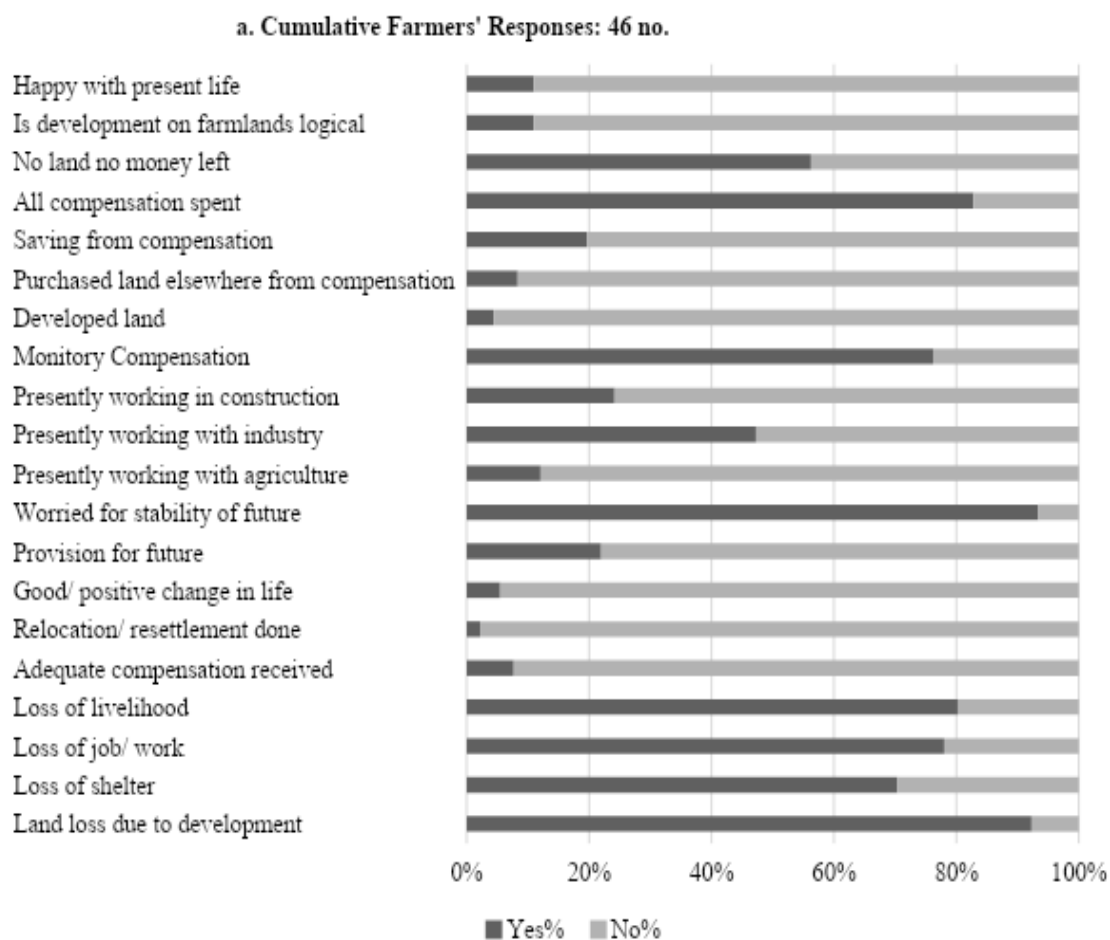


Table-11. Cumulative farmers' responses through interviews in Pune and Banglore

Inferences

- Survey clearly shows that farmers are economically as well as socially affected by loss of land.
- The above number shows actual difference between the decided compensation versus received compensation.

- Agriculture land is lifelong source of income for farmers. Whereas the compensation received against the land has no long financial benefit the farmers.
- Irony of the land loss is that the farmers once who had his own piece of land and a good income has to work at construction sites and industries to sustain at low wages.
- Farmers is the key stakeholder hence his involvement in the land acquisition process as well as in deciding the compensation is important.

b. Cumulative Planners' Responses: 6 No.
 in the food security of region

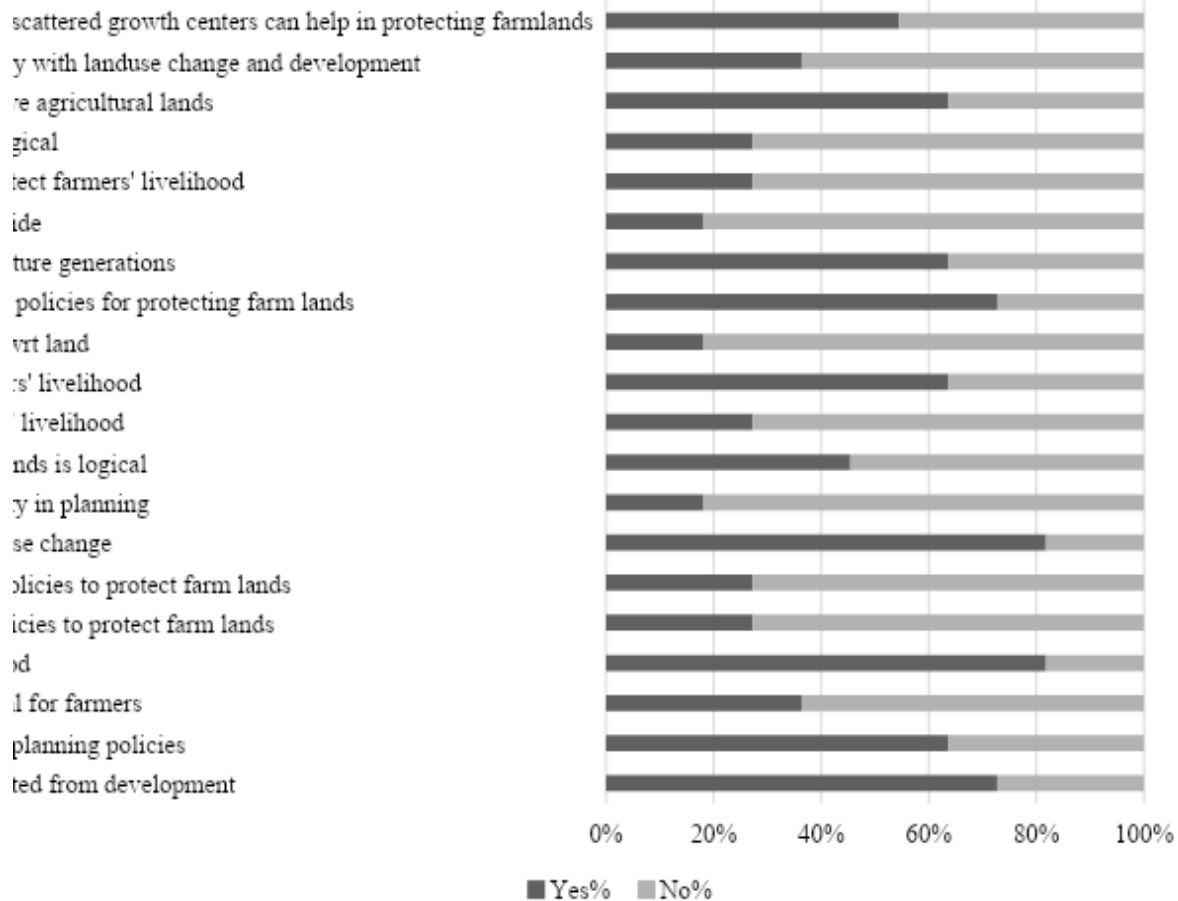


Table-12. Cumulative planners' responses through interviews in Pune and Bangalore

Inferences:

- Agriculture land use should be clearly identified as separate land use rather than demarcating green zone.
- Land is main source of livelihood for farmers hence proper consideration should be taken while displacement.
- Should have bottom-up approach while formulating the policies for protecting the agriculture land.
- Productivity of Agriculture land and future yield is clearly not considered while deciding resettlement and compensation.
- Planners should develop new strategies for sustainable growth of city.
- Planning should also consider the social repercussions of the land loss on the farmers.

c. Cumulative Beuracrats' Rerponses: 4 No.



Table-13. Cumulative beuracrats' responses through interviews in Pune and Banglore

Inferences:

- Farmland loss has economic as well as social effect on the farmers hence bureaucrats should show support to them.
- In case of compensation bureaucrats should form proper committee for deciding the compensations which has long-term benefit.
- Bureaucrats should form proper committee for necessity of resettlement but also monitor post- resettlement condition.
- Bureaucrats should not consider the growth of city on the cost of farmers and their livelihood.
- Bureaucrats have major role in policy formation hence regulating conversion of agriculture land to NA by drawing firm policies.

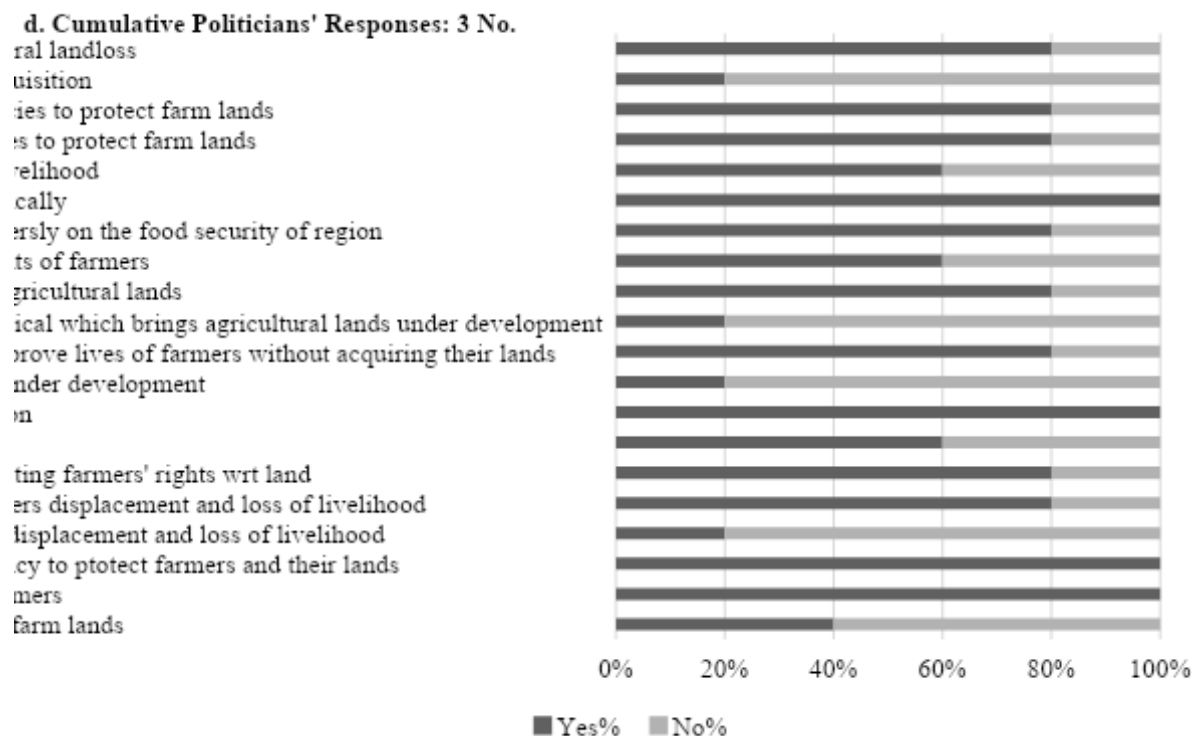


Table-14. Cumulative politicians’ responses through interviews in Pune and Bangalore

Inferences:

- Loss of farmland may create an imbalance between food producers to food consumers leading to food security issues.
- Learning from past mistakes and developing new agendas to supporting farmers should be core idea of the party.
- Farmers are one of the pillar of the nation’s economy hence prioritizing their needs is important in current situation.
- Developing new strategies of growth in consultation with all stake holders like farmers, planners and Bureaucrats.
- Formulating new policies or redefining the existing for agriculture land conservation.
- All stake holder should work on the common agenda of protecting farmland and farmers.

5. RESULTS AND CONCLUSIONS

This research examines the topic and conducts case studies in Pune and Bangalore to determine why urban development plans that protect farmland and farmers' livelihoods fail to be implemented. While urban expansion is considered to be pursued in the planning of the Regional Plan and Development Plan, in accordance with the legal requirements of the subsequent Regional and Town Planning Acts applicable from state to state, there is no agricultural land security due to weak policies and unidirectional land implementation. Farmers who have their land acquired through the planning process are compensated in cash, transfer of development rights (TDR), or developed property unrelated to their existing

professions. There are no initiatives to re-locate displaced farmers so that they can live and continue to work in agriculture. During the planning process, the demands of those rural communities that are not included in a new socio-economic metropolitan setting are ignored. Due to a lack of responsive planning and implementation policies, rural communities are left without potential prospects, resulting in poverty. Changes in land use without proper planning result in hazardous environmental conditions and a threat to food security. The research concludes that existing planning policies, land use change laws, and zoning regulations in India must be intervened immediately to protect farmlands and farming communities' livelihoods getting affected due to rapid urbanization and horizontal growth of Indian cities.

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