

Comparison of Policy Weaknesses Responsible For Loss of Agricultural Lands in Indian Growing Cities: Case Studies of Kolkata and Lucknow

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Abstract---In 2011, India's urban population was 377 million, and by 2031 it will be 600 million. In India, urbanisation is displacing farmland. In India, urbanisation consumes 0.12 million hectares of farmland annually. This paper examines the planning policies in India that result in agricultural land loss during development. Planning policies for the developing cities of Kolkata and Lucknow are compared and contrasted with regional and city plans. The study shows a dramatic shift in planning policies over time, prioritising economic development over farmland preservation for all these expanding cities. Many planning policies are universal across cities studied, but few appear to be tailored to local conditions and political agendas. The study calls for immediate action to address planning flaws and change policies that can help preserve farmlands threatened by urbanisation.

Keywords---Urban expansion, Farmland, Policy, Planning, Land Loss.

I. INTRODUCTION

A population of 377 million in 2011 will be 600 million in 2031. Urbanisation is displacing agriculture in India. Urbanization in India consumes 0.12 million hectares of farmland per year. [1] Growth in population and urbanisation expand urban agglomerations. Economic growth, urban planning, and industrialisation all contribute to urban expansion. In order to build new factories and highways, existing human space must be rearranged. Rural-urban migration is accelerating urbanisation in many developing countries. 3 & 4 Cities are also becoming more popular as places to live, work, trade, culture, educate, and innovate. 5-6-8

Urban sprawl in India displaces productive farmland. [9] Expansion destroys farmland and displaces farmers. Eventually, displaced farmers would be poor. [2]

II. METHODOLOGY

This research involves material interpretation, field observations, and interviews. Field research in four metro cities: Pune, Bangalore, Lucknow, and Kolkotta, followed by stakeholder interviews. This study's analysis includes a content review, one case study, and interviews with farmers, planners, bureaucrats, and developers.

III. CASE STUDIES:

A. Study of Kolkata, West Bengal:

a. Introduction of city:

Kolkata, the administrative capital of West Bengal, is the world's 14th largest city and India's first metropolis. The Kolkata Metropolitan Area includes Kolkata and its surroundings. The Kolkata Metropolitan Development Authority is in charge of all planning and development in this area (KMDA). The Kolkata Metropolitan Area (KMA) is one of the oldest and largest agglomerations in eastern India. The KMA covers the Hooghly from Kalyani to Budge on the east and Bansberia to Uluberia on the west. It includes Kolkata, Howrah, Hooghly, North 24 Parganas, South 24 Parganas, and Nadia in West Bengal. [1]

b. Urban expansion and farmland loss in Kolkata:

There is a strong correlation between the existing urbanisation pattern in this region and the geographical distribution of natural resources. Kolkata's great industrial system made it a producer and distributor of goods and services, a financier for public and private enterprises, a centre of advanced learning and modern medical facilities. [3]

• Population:

The population of Kolkata increased from 1.5 million in 1901 to 14 million in 2011. According to the 2011 census, Kolkata had 1.5 million residents in 1901, 11 million in 1991, and 14 million in 2011. It has encroached into the

back swamp and marshy land to the east, filling up large areas, especially in the Salt Lake and Rajarhat regions. Kolkata's urban population has exploded in the last four decades. Large-scale migration from rural and smaller towns to larger cities is driving this rapid increase in urban population.[4]

Year	Population	Area under city (sq.km)	Population Growth rate (%)
1960	5983669	1269.09	28.14
1970	7420300	1482	24.01
1980	9194081	1380.75	23.90
1990	11021918	1785.04	19.88
2000	13205697	1851.41	19.81
2010	14112636	1886.67	7.6
2021*	15,845,219	1946.67	

Table-1. Population census and city area correlation in KMA, Source: (S. K. Nath, 2015) (Saha, 2015) (Mitra, 2016)

• *Migration*

After India's independence, KMA saw a new wave of immigration. Due to its proximity to Bangladesh, this urban area became the main refugee destination. 31.3 million refugees came to West Bengal between 1946 and 1958. Many of them came to the present study area. Between 1958 and 1963, over 50,000 refugees arrived, and between 1964 and 1971, over 6 lakhs.[2]

• *Urban sprawl*

It is also known as Greater Calcutta (GC), Calcutta Industrial Region (CIR), Calcutta Conurbation (CC), or Calcutta Metropolitan District (CMD) (CMD). [3] The Census authorities recognised the Calcutta Industrial Region in 1951, which included 36 towns over 424.83 sq.km. In 1960, the Calcutta Metropolitan Planning Organization (CMPO) was formed to plan urban development in West Bengal. The Calcutta Metropolitan District (CMD) was established legally in 1964 by West Bengal Government Resolution No.1833/IE-5/64, with an area of approximately 1269.09 sq.km.[3]

c. *Farmland loss:*

Urbanization and growth are concentrated in the city's outskirts, rural and small town areas. Urban population growth is linked to city expansion. Because of massive urbanisation and subsequent urban expansion, most of the vegetation, agricultural land, and water bodies have been converted into residential, commercial, or barren land. Kolkata had a high percentage of agricultural land in 1990. However, the percentage of cultivated or agricultural land has rapidly decreased due to the rapid urbanisation of

Kolkata's rural areas.[1]

Agriculture Land use in Kolkata city (1980-2021)		
Year	Area under agriculture land use (sq.km)	Area under agriculture land use (%)
1980	104.54	7.89
1990	99.60	5.58
2000	72.01	3.89
2010	61.5	3.26

Table 2: Agriculture Land use in Kolkata city (1980-2021)Source: (Majumdar, January 2020)

Agriculture land loss over the year		
Year	Area under city(sq.km)	Farmland Land loss
1960	1269.09	
1970	1482.0	212.91
1980	1325.0	-157.0
1990	1785.04	460.04
2000	1851.41	66.37
2010	1886.67	35.26
2021*	1946.67	60.00

Table 3: Agriculture land loss over the year in KMA Source: (Saha, 2015)

d. *Displaced farmers in Kolkata:*

The percentage of agricultural land is decreasing due to urbanisation. Aside from these reasons, most of the agricultural labour or cultivators in these areas want to engage in secondary activities like grocery shopping, car driving, etc. Moreover, the rural areas of KMA have a high percentage of non-availability of water supply. Piped water is very useful for crop cultivation. A good market facility is another criterion for farming. It not only helps them earn money easily but also allows them to export goods to the city for daily needs. Market facility is a major factor in agricultural growth. Due to lack of basic facilities, farmers turn to other activities.[1]

Number Working Population as Cultivators		
Year	Number of Cultivators	Number of Displaced farmers
1980	37236	-
1990	28216	9020
2000	23109	5107
2010	9009	14100

Table 1: Number Working Population as Cultivators in KMA Source: (CENSUS OF INDIA 1981, 1988) (India, 2011)[6, 7]

e. Planning instruments to control farmland:

Kolkata has a population of 15.89 million people and a lack of open land determines the value of agricultural areas to the people. That is, as urbanisation increases, more agricultural land is converted to non-agricultural uses, reducing agricultural output. Policymakers should focus on this major issue to discourage conversion. Kolkata's planners and policymakers should devise new strategies to protect agricultural tracts from urban encroachment. [1] The West Bengal Town & Country (Planning & Development) Act, 1979, regulates land use and development. With this control exercise, the goal is to maintain a minimum of 33% of the total land as vacant. **Planning Policies in Kolkata:**

- *Land use policy:*

The Mamata Banerjee-led government was adamantly opposed to SEZs. Irrational and counterproductive for industry, the West Bengal government's hands-off land policy sounds. Leaving the land transaction entirely open to the market would encourage land mafias, artificially inflating the land price and the project cost. Leaving all land transactions to the state would lead to political and bureaucratic corruption. So, like regulatory commissions, a quasi-judicial body or a land commission should handle land transactions. (Bengal's land and SEZ policies defy logic, 2013) The Left Front government acquired 997 acres of land in Singur, 40km from Kolkata, for Tata Motors to build the Nano factory in 2008. The project cost would have been much higher if Tata Motors had to individually bargain with 13,000 landowners.

Zoning regulation

The West Bengal government has proposed lifting building and land conversion restrictions in a section of the 12,500 hectares of East Kolkata Wetlands (EKW). The move will kill the world's largest organic sewage management system and choke Kolkata. But environmental experts say the decision will harm the wetland already facing threats from encroachment and illegal construction. "There cannot be any area of 'no importance to wetlands' in EKW. It sounds like the government aims at sacrificing them for urbanization. It was their petition in the Calcutta high court in 1992 that resulted in the ban on land conversion and special regulations.

- *Master plan principles:*

Urban areas are the engines of the development of rural hinterlands in any region. Effective planning in the regional scale provides appropriate preference and promotion of industries and commercial activities. The urban agglomeration along both banks of the river Hooghly in Kolkata is designated as Kolkata Metropolitan Area (KMA). Several issues have come up in the development of the

region.

- *Farmland protection policy:*

Mamata Banerjee may be willing to sacrifice the state's industrial prospects to "protect farmland" in Singur, but Nano farmers are willing to sell their plots for a good price. The Tata project has increased land prices, and farmers receive four to five times the compensation package. For money, farmers are willing to give up land. A two-acre farmland plot in Jhakarimouza was sold for Rs 32.51 lakh on August 27, according to a Singur ADSR land deal document, despite being two to three kilometres from the project site and lacking even a pucca road. Lot near the Nano plant and Durgapur Expressway sell for three times as much. An economist said this was to be expected when a project of this magnitude is launched in a new area. Usually, investors, speculators, and industrialists buy the land. In 2006, the state offered compensation ranging from Rs 8-12 lakhs depending on the land's characteristics. The price of land in Singur has risen by 500-700% in two years. (Mukherji).

Farmer's right policy:

Despite being ruled by pro-farmer governments for over four decades, the administration has failed to implement farm assistance programmes. Mamata Banerjee announced two important farmer schemes in January. First, she announced a 100% premium for crop insurance to protect farmers from bank or private lender debt. The second was the Krishak Bandhu scheme, where the state government gives farmers aged 18 to 60 Rs 5,000 per acre twice a year.

- *Land acquisition and compensation policy:*

Chief Minister Buddhadeb Bhattacharya and then-Tata Group CEO Ratan Tata announced the Nano project in May 2006. The Left Front government acquired 997 acres of land in Singur, 40km from Kolkata, for Tata Motors to build the Nano factory in 2008. It was controversial because the West Bengal government forcibly acquired prime arable land.

- *Farmer eviction and resettlement policy*

Displacement and resettlement caused by urban development and their impact on long-term quality of life. Multiple losses, including homes, livelihoods, and community resources, lead to increased poverty after resettlement. The need to look at both uprooted and resettled households as well as those that remained in place to fully understand the impacts. Starting with living conditions, the resurvey shows continued discontent with small housing units.

- *Agriculture policy*

Individualistic and unorganised, West Bengali agriculture averages 0.82 ha, compared to 1.33 ha nationally. Individual

farmers with small marketable surpluses must therefore pay market prices for all farm inputs, utilities, and consumables. So it is necessary to organise a vastly unorganised farming community to benefit from the market economy. Smallholders can compete in high value agricultural activities because they have access to family labour and can sell locally. However, as production and marketing systems evolve, smallholders will need support to provide efficient input services, links to output markets, and risk mitigation measures. (Singh)

B. Study of Lucknow: Uttar Pradesh

a. Introduction of city:

Lucknow, the state capital, is located in the heart of India. LMC and Lucknow Cantonment[1] make up the urban agglomeration. The city is on the left bank of the river Gomti. It divides the city into two halves: Trans-Gomati and Cis-Gomati. Lucknow has evolved from a small population centre in 1972 to a large urbanised city in 2016. It is India's 11th most populous city and one of the fastest growing in Central India. [2]

b. Urban expansion and farmland loss in Lucknow:

Urban expansion is a natural phenomenon that occurs due to various push and pull factors within a city. Lucknow has seen rapid urbanisation in recent decades. Various factors contribute to urban expansions. These include demographic, physical/spatial (land and infrastructure), social/environmental, economic, and governance factors. [4]

Population:

Lucknow's population has grown significantly since 1971. Lucknow's population grew from 8.13 lakhs in 1971 to 28.80 lakhs in 2011. As the state capital and administrative centre for many districts and divisions, most residents of nearby districts relocate to the capital for better lifestyle, job, and educational opportunities. [3]

Year	Population	Area under city (sq.km)	Density/sq.km.
1950	496177	48	10337.0
1960	655673	79.16	8282.9
1970	813982	80.00	10174.8
1980	1007604	130.11	7744.2
1990	1669204	159.00	10498.1
2000	2245509	212.24	10580.0
2010	2880108	304.00	9474.0
2021*	4500000	414.34	10860.6

Table 5: Population census and city area correlation in Lucknow Source: (City Development Plan,Lucknow, 2006) (Dutta, 2012)(Kumari, 2015)

• Migration

Migration is another major reason for population growth in cities, resulting in increased housing demand. Over the last decade, Lucknow's population has grown 36%. Between 1991 and 2001, the LUA grew by 5.76 lakh, with 2 lakh being migrants. The natural growth was 3.68 lakh. [5]

• Urban sprawl

The two major issues with urbanisation are its rate of growth and the area it consumes. In 1971, the urban geographical area was 80.00 Sq. Km, which increased to 212.24 Sq. Km in 2001. After 1971, urban sprawl began, and in ten years, it increased 130.11 Sq.km (1981), though it was a slow decade.

Farmland loss:

Lucknow's urban sprawl is unprecedented. Many of the fields, wetlands, and forests that made up the Awadh Capital in 1900 have been turned into human settlements in the last century. [6] Out of 70 districts in Uttar Pradesh (2001), Lucknow has the highest non-agricultural land occupation rates in both rural and urban areas. Lucknow, the capital city, is rapidly encroaching on the nearby villages' fertile land. Between 1994-95 and 2007-08, the growth rate of non-agricultural land in Lucknow's rural surroundings was 45.1%. [7]

Agriculture Land use in Lucknow city (1980-2021)	
Year	Area under agriculture land use (sq.km)
1980	80.01
1990	100.83
2000	87.37
2010	35.41
2021*	21.17

Table 6: Agriculture Land use in Lucknow city (1980-2021)Source: (Census of India 2011(UTTAR PRADESH), 2011) (Dutta, 2012)

The relationship between urban sprawl and agricultural land is not well understood. The table below shows the annual loss of agricultural land in relation to the urban area.

Agriculture land loss over the year		
Year	Area under city(sq.km)	Farmland Land loss
1950	48	
1960	79.16	31.16
1970	80.00	0.84
1980	130.11	50.11
1990	159.00	28.89
2000	212.24	53.24
2010	304.00	91.76
2021*	414.34	110.34

Table 7: Agriculture land loss over the year in in Lucknow Source: (City Development Plan,Lucknow, 2006)

c. Displaced farmers in Lucknow:

Cities are expanding on commercially viable land, ignoring the environment and agricultural land. Farmers on the outskirts of cities are forced to sell their land to urban residents, permanently ending their centuries-old farming livelihood. The remaining agricultural land has become unproductive and is in the process of selling with the hope of better prices for the imposed urbanisation. When private parties pay millions of rupees for land, the government pays less than Rs.50,000/- per bigha..[7]

Number Working Population as Cultivators		
Year	Number of Cultivators	Number of Displaced farmers
1980	8706	-
1990	32208	-23502
2000	12783	19425
2010	9194	3589
2021*	6750	2444

Table 8: Number Working Population as Cultivators in Lucknow Source: (City Development Plan,Lucknow, 2006)

d. Planning instruments to control farmland:

In recent years, UP has diverted vast tracts of agricultural land for road, bridge, and expressway construction. The state's first environmental policy would make non-agricultural use of agricultural land difficult. It also makes it mandatory to compensate for lost agricultural land by making fallow and degraded land agriculturally productive. The draught policy says existing cities should be expanded and new cities built on less productive land. Protecting the state's land, water and air resources is a priority in the draught policy. It says the cost of restoring and conserving the environment should be calculated.[8]

e. Policies for Lucknow, Uttar Pradesh:

• *Land use policy:*

To alleviate housing shortages in cities and promote planned development, the GoUP issued a policy (November 2003) inviting private developers to invest minimally. The Hi-Tech Township Policy was periodically amended. From 2005-06 to 2014-15, GoUP selected three developers¹¹ to develop Hi-tech Township. According to the developer's Memorandum of Understanding (MoU) (November 2005), if the developer's chosen site is outside the Master Plan 2021 development area, it must be brought within it, and if land use conversion is required, the developer must pay the GoUP-prescribed land use conversion charges.

• *Zoning regulation*

The Uttar Pradesh government cleared a decision to allow urban land fragmentation in the state. Real estate developers can now convert agricultural land to residential or industrial use.

Officials of the revenue board and the urban development department were ordered by the SP government to disallow the rampant acquisition of fertile agricultural land by the builder and developer lobby. Urban land fragmentation must be done in accordance with regional zonal master plans, not on a short-term basis. The zonal master plan follows a watershed model. It covers wildlife, forests, irrigation, energy, public health, and sanitation. The Uttar Pradesh government approved allowing urban land fragmentation. Developers can now buy small parcels of fertile land from farmers, submit plans to the Zila panchayat, and get approval for their plans under the Uttar Pradesh Consolidation of Holdings Act, 1953. (T. T. India 2014).

• *Master plan principles:*

The Lucknow Development Authority (LDA) has announced the development of a new city master plan for the state capital by 2031. The current plan focuses on 2021 city planning. • Housing and transportation; • road connectivity; • green cover. LDA announced the extension of the city's master plan to 2031. This would allow LDA to approve these maps. Currently, zila panchayats sanction. The UP Urban Planning and Development Act 1973 gives the LDA the power to sanction maps.

Farmland protection policy:

The UP-Revenue Code (Amendment) Bill, 2019, recently passed, has simplified the process of converting agricultural land to non-agricultural land by amending Section 80. Owners of agricultural land in the state can convert it to industrial, commercial, or residential use if their applications for the same purpose are approved. The owner can also lease the land for agricultural purposes or to set up solar energy projects in the state. (RANGANATH 2019)

- *Farmer's right policy:*

The Uttar Pradesh Zamindari Abolition and Land Reforms Act of 1950 prohibited land leasing except for widows, minors, and physically disabled persons. Rather than protecting tenant farmers from exploitation, research shows that leasing prohibitions have harmed agricultural growth, social equity, and rural development investment. Importantly, land leasing restrictions make land access difficult for landless and land-poor marginal farmers. Increasing land insecurity drives many farmers to seek land through informal leases. No access to credit or government input subsidies means they can't demand the minimum support price when selling their crop, say many informal tenants. And they don't have crop insurance if the crop fails. These benefits usually go to the landowner and are not passed on to the tenant.

- **Land acquisition and compensation policy:**

The Uttar Pradesh Infrastructure and Industrial Development Department did not issue guidelines for acquiring industrial land in accordance with the 2012 Infrastructure and Industrial Investment Policy. The authorities have had to wait longer to acquire land. LIDA had four land acquisition cases in Natkur, Miranpur Pinwat, Banthra Sikandarapur, and Kurauni villages totaling 1,985.14 acres. Despite this, it took ten years for it to complete the Master Plan for its notified area, preventing it from achieving its goal of industrial development. LIDA couldn't acquire land because the Department didn't issue a notification u/s 6/17 and didn't prepare a Master Plan. The Special Land Acquisition Officer's deduction of acquisition charges resulted in a loss of 7.06 crore (SLAO). The delay in surveying and planning for the use of Gram Sabha land also cost 6.45 crore. Department of Acquisition for planned industrial development issued notification under section 4/17 and 6/17, LIDA replied. (Authority 2015)

- *Farmer eviction and resettlement policy*

A 2011 study used primary data to analyse how much land farmers lost and how much compensation they received in industrial and housing projects in Ghaziabad and Lucknow districts of Uttar Pradesh. The Land Acquisition Act of 1864 and the Uttar Pradesh Government's Rehabilitation and Resettlement Policy, announced on April 30, 2010, were examined to see how far they resolved the land acquisition and compensation issues. Despite their protests and agitations, the State had shown a cold response to farmers' genuine demands. Households said compensation was inadequate and did not replace lost income. They claimed that the state had cheated them by paying lower compensation rates than they deserved due to their land's high fertility. After several years of land acquisition for industrial and housing projects, many effected farmers,

more than 40%, could not get full compensation due to various reasons. (Fahimuddin, 2011)

- *Agriculture policy*

UP's State Agriculture Policy 2005 projected 4% growth in agriculture. The Agriculture Policy focused on seven thrust areas: extension, irrigation and water management, soil health and fertility, seed management, marketing, research, and agriculture diversification. In the 11th Five-year Plan, the state could only achieve 3.0% growth versus 4% for agriculture. The state's agricultural landscape has changed dramatically since the current agriculture policy was implemented. (ERI, n.d.).

IV. RESULTS AND CONCLUSIONS:

This study looks into why planning approaches fail to protect farmland and farmers' livelihoods in Pune and Bangalore. While urban expansion is considered in the Regional Plan and Development Plan, due to weak policies and unidirectional land implementation, there was no security of agricultural land. Farmers whose land is acquired for planning purposes are compensated in cash, TDRs, or established land unrelated to their current occupations. No attempts are made to resettle displaced people so they can continue farming and earning a living. The needs of rural groups excluded from a new socioeconomic urban context are not considered during planning. Lack of sensitive planning and implementation policies leaves farming communities in poverty. Unplanned land use changes endanger the environment and threaten food security. The study strongly suggests that existing planning, land use change, and zoning policies must be changed urgently to protect farmlands and farming communities' livelihoods.

REFERENCES

- [1] Gugler, J., & Smith, D. A. (1996). Third World Cities in Global Perspective: The Political Economy of Uneven Urbanization. *Contemporary Sociology*, 25(5), 609. doi: 10.2307/2077542
- [2] Balchin, Paul N., David Isaac, and Jean Chen. "Conclusions." *Urban Economics*, 2000, 524–32. https://doi.org/10.1007/978-1-137-06223-9_11.
- [3] Oberai, A. S. (1993). Introduction. *Population Growth, Employment and Poverty in Third-World Mega-Cities*, 1–19. doi: 10.1007/978-1-349-23064-8_1
- [4] Carter, Ronald. "Keywords In Language And Literacy," 1995. <https://doi.org/10.4324/9780203293652>.
- [5] Nuwagaba, Augustus. "Dualism in Kampala: Squalid Slums in a Royal Realm." *African Urban Economies*, 2006, 151–65. https://doi.org/10.1057/9780230523012_6.

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- [6] Foeken, Dick, Wijnand Klaver, Samuel O. Owuor, and Alice M. Mwangi. "Market Forces Threatening School Feeding: The Case for School Farming in Nakuru Town, Kenya." *Markets of Well-Being*, January 2010. https://doi.org/10.1163/9789004201286_005.
- [7] Abdissa, Feyera, and Terefe Degefa. "Urbanization and Changing Livelihoods: The Case of Farmers' Displacement in the Expansion of Addis Ababa." *The Demographic Transition and Development in Africa*, 2010, 215–35. https://doi.org/10.1007/978-90-481-8918-2_11.
- [8] Cernea, Risks Safeguards and Reconstruction: A Model for Population Displacement and Resettlement, *Economic and Political Weekly*, October 7, 2000. <https://doi.org/10.1596/0-8213-4444-7>.
- [9] Sami, Neha. "From Farming to Development: Urban Coalitions in Pune, India." *International Journal of Urban and Regional Research* 37, no. 1 (April 2012): 151–64. <https://doi.org/10.1111/j.1468-2427.2012.01142.x>.
- [10] Jawaid, M.f., Manish Sharma, Satish Pipralia, and Ashwani Kumar. "City Profile: Jaipur." *Cities* 68 (2017): 63–81. <https://doi.org/10.1016/j.cities.2017.05.006>.
- [11] Shukla, Anugya, and Kamal Jain. "Critical Analysis of Rural-Urban Transitions and Transformations in Lucknow City, India." *Remote Sensing Applications: Society and Environment* 13 (2019): 445–56. <https://doi.org/10.1016/j.rsase.2019.01.001>.
- [12] Hemani, Shruti, and A.k. Das. "City Profile: Guwahati." *Cities* 50 (2016): 137–57. <https://doi.org/10.1016/j.cities.2015.08.003>.
- [13] Jiang, Yanpeng, Paul Waley, and Sara Gonzalez. "'Nice Apartments, No Jobs': How Former Villagers Experienced Displacement and Resettlement in the Western Suburbs of Shanghai." *Urban Studies* 55, no. 14 (2018): 3202–17. <https://doi.org/10.1177/0042098017740246>.
- [14] Guha, Abhijit. "The Macro-Costs of Forced Displacement of the Farmers in India: A Micro-Level Study." *The European Journal of Development Research* 25, no. 5 (2013): 797–814. <https://doi.org/10.1057/ejdr.2012.37>.
- [15] Robertson, B., & Pinstrup-Andersen, P. (2010). Global land acquisition: neo-colonialism or development opportunity? *Food Security*, 2(3), 271–283. doi: 10.1007/s12571-010-0068-1
- [16] Sampat, P. (2010). Special Economic Zones in India: Reconfiguring Displacement in a Neoliberal Order? *City & Society*, 22(2), 166–182. doi: 10.1111/j.1548-744x.2010.01037.x
- [17] Dwivedi, R. (1999). Displacement, Risks and Resistance: Local Perceptions and Actions in the Sardar Sarovar. *Development and Change*, 30(1), 43–78. doi: 10.1111/1467-7660.00107
- [18] Wilmsen, B. (2018). Is Land-based Resettlement Still Appropriate for Rural People in China? A Longitudinal Study of Displacement at the Three Gorges Dam. *Development and Change*, 49(1), 170–198. doi: 10.1111/dech.12372