Perspectives of Planned New Towns, Its Transformation, Evaluation, Challenges and Problems: Case of West Bengal

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Preface

Cities and towns grow in two ways. The first may be called organic growth, where the rural settlements change their nature in terms of occupation and land use. From natural environment, it changes to a high proportion of built-up environment and with the intervention of government (or local authority) infrastructure like water supply system, drainage systems are built in consequence. The other variant is 'planned' township where the government (or may be a private company) acquires the land, builds the infrastructure (sometimes the residential buildings also) and then the people come to stay there. In India, with the adoption of ideology of planned economic growth, a number of planned townships came up in the post-independence period. The objectives are different and so the functions. Notable among them are the steel township of Durgapur, port-cum-industrial township of Haldia and three residential townships of Kalyani, Bidhannagar and Rajarhat-Newtown.

This discussion paper by Joy Karmakar, research scholar at the Centre for Urban Economic Studies, is an analytical discussion on the five 'planned townships' of West Bengal in the post-independence period. Before going into these townships, the author discusses the origin of the idea of planned township and the experiments and experiences world-wide.

I hope this paper will arouse interest in this particular aspect of urban studies, i.e. the origin and development and performance of planned townships.

Mahalaya Chatterjee

Director,

Centre for Urban Economic Studies

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1. Introduction

1.1 Concept of Planned Town

The growth of cities during the last centuries went on more rapidly than it had earlier. Initially the very concept of new town came into existence when Ebenzar Howard published his seminal book *Garden Cities of Tomorrow* on town planning centuries ago. He tried to solve the disorganized overgrowth of older cities congested by colonizing its excess of population in new centres, limited in area and population.[1] It is should be worthwhile to mention that he actually reinstate the Aristotelian conception that there was a right size of the city, big enough to encompass all its functions, but not too big to interfere with them.[2] It is to be noted that after the Industrial Revolution in Europe several small cities became "Great Town" and that sudden growth of 'great' town lead to several problems. In England towns like London, Manchester, Bolton, Preston, Wigan, Bury, Rochdale, Middleton, Heywood, Oldham, Ashton, Stalybridge, Stockport, etc. became the home of thousands of working class people. Basically, these towns became filthy and uninhabitable.[3] The situation made concern among the urban bourgeoisies over disease, death rates, and the poor health and potential unrest of working class populations. While networked technologies, and scientific practices, became imbued by reformers and urban engineers with the moral power to bring sanitation, cleanliness, rationality and order to the troubled and apparently chaotic industrial metropolis (Boyer[4], 1987; Chatzis[5], 1999). Infrastructure networks, particularly water and sewerage, quickly became associated with curative powers able to 'cleanse' city spaces, so emancipating 'good' working class people from

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[1]Osborn, J, F and Whittick, A (1963) *The New Towns: Answer to the Megalopolis*, McGraw hill Book company, New York

[2]Ibid

[3]Engels, F (1845.) the conditions of the working class in England, Leipzig, accessible www.marxists.org/archive/index.htm (2 of 4) [23/09/20014]

[4]Boyer, C. (1987), *Dreaming the Rational City*, Cambridge MA: MIT Press.

[5]Chatzis, K. (1999), 'Designing and operating storm water drain systems: empirical findings and conceptual developments'. In O. Coutard (ed.), *The Governance of Large Technical Systems*, Routledge, London 73–90.

the risks of immorality (Felbinger[6], 1996). At this juncture Howard introduced his new concept of 'new town' in a book called *"To-morrow: A Peaceful Path to Real Reform"* in 1898. Later it was revised and reissued in 1902 as *'Garden Cities of To-morrow'*. Howard was Politically Liberal and became increasingly interested in emergent socialist ideas, though very much of the voluntary and co-operative kind. In fact, he was a non-Marxist Utopian socialist, looking to achieve socialism without the need for class conflict (Ward[7], 2004). Four fundamental principles that governed his concept of the new town is limitation of numbers and area, growth by colonization variety and sufficiency of economic opportunities and social advantages and control of the land in the public interest. Out of this a new kind of city would emerge, in a balanced, many-sided, interrelated organic unit.[8] Some scholars identified his idea as a Utopian socialist alternative to the evils of existing urban society, specifically the huge urban concentration of London. His vision was to make the Garden city as a form of a social city, a decentralized network, each of 30,000 populations, surrounding a larger central city of 58,000. The garden cities would be slum less and smokeless, with good-quality housing, planned development, and large amounts of open space and green belts separating one settlement from another. It is believed that the key to the whole approach was to be the communal ownership of land purchased cheaply at agricultural values, so that the citizens of the garden cities would collectively benefit by the increment in land values consequent on urban development. Many other aspects of the garden city would also be owned and operated collectively. What need to mention is that Howard did not envisage a complete replacement of private capital (Ward[9], 2004). Therefore, to get relived of disorganized over congestion Europe experienced the necessity of new town development in a different mode (distancing Howard's original thought) since the beginning of the twentieth century and the development of New Towns got momentum

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[6]Felbinger, N. (1996), *'Introduction: In Architecture in Cities: Present and Future*, Barcelona: Centre de Cultura Contemporània de Barcelona,p 11.

[7]Ward, S. V., 2004, *Planning and Urban Change*, London, Sage Publication

[8]Osborn, J, F and Whittick, A (1963) *The New Towns: Answer to the Megalopolis*, McGraw hill Book company, New York

[9] Ward, S. V., 2004, *Planning and Urban Change*, London, Sage Publication

after World War II (Barlow report, 1940; Abercrombie's Greater London Plan, 1945). [10] It is to be noted that by the 1940s the idea of reform had come in urban planning to mean something quite different from what it had meant in the 1890s. There was a major shift in terms of the benefit of underprivileged to a universal concept embracing a wide spectrum of social policy. Significantly, new idea proposed that public intervention and the associated role of the State were to be transformed from something to be resisted, or at least restrained, to a position that became fundamental to the whole idea of social improvement.
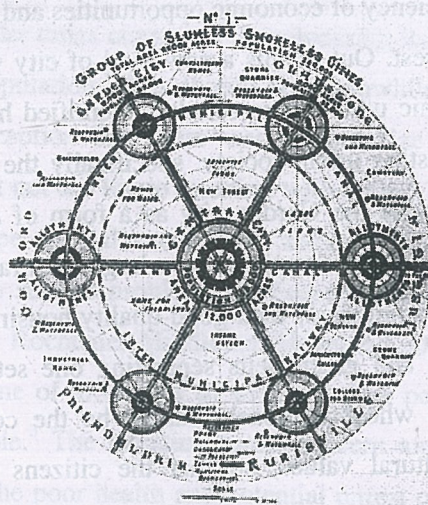

Fig-1 Ebenezer Howard's book To-morrow (1898) articulated a vision of the urban future. The big, continuously built up industrial city was to be replaced by a network of smaller garden cities, collectively known as the social city.

Source: E. Howard, Garden Cities of To-morrow.

In Britain the origin of the New Towns Program came in the New Towns Act of 1946. By 1950, eight sites had been identified in a ring around London to meet the policy of decentralization, plus a further one in the Clyde Valley to decentralize population from Glasgow, which also had

[10] Pacione, M (2005) *Urban Geography: A global perspective*, New York: Routledge, Taylor & Francis Group.

appalling slum conditions. Abercrombie's Greater London Plan of 1944 had put forward ten sites to accommodate inner-city Londoners. The sites identified and the target populations were White Waltham (60,000), Chipping Ongar (60,000), Harlow (60,000), Margaretting (30,000), Stevenage (60,000), Redbourne (60,000), Stapleford (25,000), Meopham (40,000), Crowhurst (60,000) and Holmwood (60,000). The rest were to relocate to existing towns either in the region or more remotely (Abercrombie[11], 1944).

Apart from European town planning tradition Marxist ideas prepared the ground for the development of the socialist city in the Soviet Union as early as in 1920. After the First World War, U.S.S.R had planned 1100 new towns on line of socialist principles. The idea of socialist city was first proposed by Milyutin in 1920s to criticize the existed irrational town planning of the west. However, he noted that socialistic goal would be full filled by developing 'Linear city'. Such planned city is characterized by the parallel belts of housing and industrial plants separated by the green 'sanitary' zone. Parks and water bodies should locate on the windward side while industrial plant would be located on the leeward side.[12] Later in 1930s Ladovskiy propounded some ramifications of it in terms of allocation of function among zones and sectors of the Milyutin's linear city. He gave more importance to the open and recreation space for socialistic town planning.[13] Strumilin developed the theoretical base for idealistic socialist city and believed that communal living is the basis of the society. Micro district would provide urban spatial framework for such communal living.[14]

[11]Abercrombie, P. (1944) *Greater London Regional Plan, Standing Conference on London Regional Planning*, Ministry of Town and Country Planning.

[12]French, A, R and Hamilton, E, F, Ian ed. (1979) *The socialist City*, John Wiley and Sons, New York

[13]Hamilton, E, F, Ian (1976) *'The Moscow City Region'*, Oxford University Press, Oxford.

[14]Strumilin, S. G. (1961) Family and community in the society of the future, *Soviet Review*, II (2), 3-29
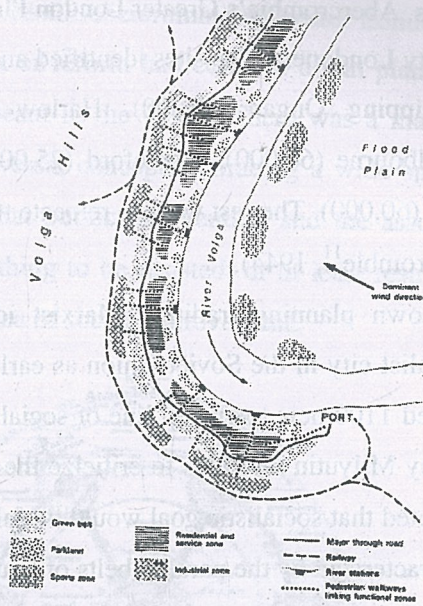
The Linear City: Milyutins concept for the plan growth of Stalingrad in 1930

Source: French & Hamilton (1979)

It may be pointed out that his ideas were never accepted in U.S.S.R or elsewhere in town planning. To manage the disorganized growth of an older and large city, the socialistic idea on town planning recognized the rules of economies of agglomeration. They borrowed the idea of the metropolitan region from the west but did not reproduce it in the U.S.S.R town planning. It was based on the principle of deconcentration of productive capacity of a large city. They identified the two urban forms to handle the situation one is the suburb and another is Satellite town. Both the terms are familiar with capitalist planning process but it was used in socialistic planning on the basis of functional aspect of the city. Satellite towns around the Moscow were the product of decentralized growth with specialized functions than American counterparts.[15]

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[15]Hamilton, E, F, Ian (1976) '*The Moscow City Region*', Oxford University Press, Oxford.

1.2 Ideology of New Town Planning

It is necessary to explore the ideology of twentieth century town planning and its transformation in globalization era to understand the planning processes. In this section a review of town planning and its critical aspect would be analyzed. Broadly speaking, planning is the state intervening and managing of social and economic affairs. To respond the nineteenth century fast-growing industrial city's social problem, urban planning emerges as a modernist project.[16] These cities were unable to cope with industrialization, large-scale rural-urban migration or to accommodate natural population growth.[17] Harvey (1989) tries to link the thread of modernist planning from Haussman's renewal of central Paris in the 1860s through to Howard's Garden Cities from 1898, Le Corbusier in the 1920s and the urban renewals of the 1950s and 1960s. Post-1945 new towns were influenced by the ideas of Howard and by Le Corbusier and the Congress International d'Architecture Moderne[18] (CIAM).[19]

The modernist project emerged from ideals and assumptions associated with the eighteenth century 'Enlightenment' in Western thought (Mautner[20]1996). It believes that benefits of technical and scientific progress might be applied, usually through the state, in every field of human activity.[21] This liberation requires rejection of 'irrational' tradition, myth and religion.[22] Therefore, modernism tends to simplify reality, making it legible and ultimately controllable, and

[16]Cherry, G. (1980) 'Introduction: aspects of twentieth-century planning' in Cherry, G. (ed.) *Shaping an Urban World*, London: Mansell

[17]Holston, J. (1986) *The Modernist City: architecture, politics and society in Brasilia*, Doctoral Dissertation, Yale University, UMI facsimile

[18] CIAM's foundation marks the determination of Modernist architects. For nearly thirty years the great questions of urban living, space, and belonging were discussed by CIAM members. The documents they produced, and the conclusions they reached, had a tremendous influence on the shape of cities and towns the world over.

[19] Harvey, D. (1989) *The Condition of Postmodernity*, Oxford: Blackwell

[20] Mautner, T. (ed.) (1996) *Dictionary of Philosophy*, London: Penguin

[21].Scott, C , J. (1988) *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven, Yale University Press, p 90.

[22]Harvey, D. (1989) *The Condition of Postmodernity*, Oxford: Blackwell

that it sees the past as an impediment to the realization of an idealized future.[23] Harvey (1989) noted this as both destructive and optimistic in its pursuit of a utopian future.[24] The greatest ideological appeal of the Modern Movement was its claim to transcend ideology. During the interwar period (1939-1945), many new regimes and diverse political systems, from socialism in Weimar Germany and post revolutionary Russia to fascism in Italy, embraced the progressive discourse of the Modern Movement.[25] By the time "high modernism"[26] reached its epitome in the post-World War II period, it designated not so much the particular aesthetic canon of the Modern Movement as its larger political project. After 1945 it became universal modernism strongly linked with Fordism, Keynesianism and US hegemony.[27] Urbanization, associated with the rise of industrial capitalism, created a new form of social organisation with connected problems. This provided both an undesirable situation which modernists could reject, but also desirable features to adapt for a new utopian society. Modernism has also impacted upon the urban: faith in scientific and technical progress 'gave to modernist planning the Utopian dream of the rational city'.[28]

The proliferation of the high modernist vision beyond the margins of Europe to other continents and cultures, from postcolonial India to Latin America, shaped much of the history, culture, and built fabric of the twentieth century. The new capital complexes of Chandigarh and Brasilia are only the most ambitious and famous of its numerous expressions in architecture and urbanism.[29] Scholars outside Europe recognized the modernist movement as an imported and "alien" discourse not

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[23] Scott, C , J. (1988) *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven, Yale University Press, p 90

[24] Harvey, D. (1989) *The Condition of Postmodernity*, Oxford: Blackwell

[25] Bozdogan, S and Kasaba, R. (2001) *Modernism and Nation Building: Turkish Architectural culture in the Early Republic*, University of Washington Press, London

[26] High Modernism: It is the most visionary and ultimately devastating ideology of the twentieth century. Harvey describes this ideology as belief in linear progress, absolute truths, the rational planning of an ideal social order, and the standardization of knowledge and production.

[27] Harvey, D. (1989) *The Condition of Postmodernity*, Oxford: Blackwell

[28] Sandercock, L. (1998) 'Framing insurgent historiographies for planning', in Sandercock, L. (ed.) *Making the Invisible Visible: a multicultural planning history*, Berkeley/ Los Angeles/ London: University of California Press

[29] Vale, L. (1992) *Architecture, Power, and National Identity*, Yale University Press, London

indigenous to these societies. They noted it as a "contamination" of their authentic cultural expressions.[30] Therefore "Modern" was assumed to be an exclusively European category that non-Western others could import, adopt, or perhaps resist but not reproduce from within. In India the modernist project started with the construction of New Delhi by Edwin Lutyens. Once British King proclaimed that 'We want not only England, but all parts of the Empire to be covered with Garden Cities' the 'modern' new town first arrived in developing countries in the early twentieth century.[31] Since 1945, new towns have been used as a tool by post-colonial governments for various purposes. Details of Postcolonial planned new towns were analyzed later into three phases.

It is important to understand the urban planners view on the urban planning. Le Corbusier was one of the celebrated modernist urban planners who planned the Chandigarh. He believed that replacement of the tightly knit, insalubrious and oppressive, medium-rise urban neighborhoods is necessary. He proposed the residential skyscrapers widely spaced amid parks and highways. Some scholars have noted that his specific version of Modernism held unique promise for elevating mankind to unprecedented levels of bodily well-being and psychic stimulation.[32] It is worthwhile to note that to build a new town need space. There are to two options, one is the redevelopment of the existed city or identify the new site. Corbusier stated that 'WE MUST BUILD ON A CLEAR SITE!'[33] For Le Corbusier it was essential to clear areas of large cities prior to building the new modernist city. But clearing a large site in an old city may be practically difficult or meet opposition.[34] Creating an entirely new settlement on already 'clear' rural land is more straightforward. Some scholars have noted this development as:

[30] Evin, A and Holod, R (1983) *Modern Turkish Architecture*, University of Pennsylvania Press, Philadelphia

[31] King, A. (1990) *Urbanism, Colonialism and the World Economy*, London , Routledge

[32] Filler, M.(2013) *Makers of the Modern Architecture: From Le Corbusier to Rem Koolhaas*, New York Review of Books, New Yorks

[33] Hall, P. (1988) *Cities of Tomorrow*,: Wiley Blackwell, Oxford

[34] Hobbson, J. (1999) New Towns, The Modernist Planning Project And Social Justice, Working Paper No. 108, Development Planning Unit University College London

'Planning in city centers has to cope with established street patterns, buildings, communities and vested interests, and is thus a politically saturated activity; planning in the city fringe or for outlying sites deals with the replacement of unpeopled countryside by built environments and is largely technical and apolitical ... new towns are the purest cases of late twentieth century greenfield development'.[35]

(Relph, 1987: 153-4)

1.3 Significance of the study

Nowadays, India is experiencing rapid urbanization and urban spatial restructuring. Due to various urban problems in metropolises urban downtown, there is rapidly growing of new towns to decentralize development pressure. The research study has concern with the analysis of some selected planned new towns in West Bengal. Further, this study would also be a review of the ideology of the planned towns and analyze why the development of planned new towns was necessary. A long historiography of planned new town development in India will be discussed to catch the changing context and priority of planned new town development. This study would be beneficial to the academics as well as the urban planners and policy makers. Expectedly, this would help to understand the planned new town development process, problems and its future prospect.

1.4 Objectives

This paper attempts to examine the planned new town development in West Bengal and analyzes new town development in India into three phases. Moreover, it tries to identify the spatial pattern of planned new town development in association with its planning principal and characteristics. It also tries to find out these towns changing social and economic background. Lastly the paper also analysed the problem, challenges and future prospect of planned new town development.

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[35] Relph, E. (1987) *The Modern Urban Landscape*, :Croon Helm, London

1.5 Database and Methodology

The analysis of this paper is mainly based on secondary data and information. The secondary data consists of various official plans which include Basic Development Plan, Area Development Plan, City Development Plan, and Draft Development Plan for each municipal town, Concept Plan, Census Hand Books, Statistical Abstract, books, various research papers and other reports. Simple mathematical and statistical tools and packages have been used for analyzing the data. The attractiveness index has been used to show the relative position of the West Bengal planned new towns with respect to their attractiveness power.

2. New Town Development in India

2.1 Phases of New Town development

Post-war new towns were largely developed by the state and favoured no particular social class or income group as residents.[36] The new town concept, stemming originally from the ideas of Ebenezer Howard on garden cities, became widespread in East and Southeast Asia in the cities of British colonial territories such as India. Garden cities and new towns also became a feature of cities outside Britain's direct sphere of influence such as Tokyo, Seoul and Taipei, as well as those influenced by Soviet planning initiatives, such as Beijing, Shanghai and Tianjin.[37] It is important to contextualize the development of planned new town in India because since 1947 to the neoliberal period number of planned new towns developed. To explore the different political and economic situation with respect to the development of planned new towns over 60 years after the independence we have categorized the span of time into three different periods. This includes Neheruvian Era, Post Neheruvian Era and Neo Liberal Era

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[36]Chen, X. M., Wang, L. and Kundu, R. (2009) Localizing the production of global cities: a comparison of new town developments around Shanghai and Kolkata, *City & Community*, pp. 433–465.

[37]Phillips, D. R. and Yeh, A. G. (1987) New towns: the East and Southeast Asian experience, in: D. R. Phillips and A. G. Yeh (Eds) *New Towns in East and Southeast Asia: Planning and Development*, pp. 3–20. Oxford: Oxford University Press.

2.1.1 Neheruvian Era (1947-1966)

In the post independence years, nationalism expressed as the striving for economic and intellectual independence continued to be instrumental to decolonization. Scholars raised questions on, how did the process of decolonization affect the city and its inhabitants? Some scholars have noted that to understand the decolonization of the city we have to consider the changes in the way the city was being conceived and built in the aftermath of independence.[38] There is very little information about Indian urban policy and the nature of town planning in the early years after independence in 1947. The years 1947–1965 are very important because it was during this time that many new towns were built and key institutions supporting urban growth for the next several decades established.[39] From 1947 to 1966 almost 20 years have been regarded by many scholars as forming a distinct period in the post-independence history of India, both politically and economically (Bardhan[40], 1984; Rudolph and Rudolph[41], 1987). Politically, it was characterized by the leadership of Jawaharlal Nehru, India's first Prime Minister until his death in 1964; thus the period coincides with the "Nehru era." Apart from leadership the period characterized by a very strong centralized state and a broad consensus among leading political parties and interest groups concerning the goals of development (Guha, 2007).[42] This enabled developmental policy implementation by the central government far more efficiently, than in the periods to follow.[43]

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[38] Shaw, A (2009) Town Planning In Postcolonial India, 1947–1965:Chandigarh Re-Examined, *Urban Geography*, Bellwether Publishing, Ltd, pp-858

[39] Shaw, A., (1996) Urban policy in post-independent India: An appraisal. *Economic and Political Weekly*. Vol. 31, 224–228.

[40] Bardhan, P., (1984) The *Political Economy of Development in India*. Oxford, UK: Basil Blackwell.

[41] Rudolph, L. and Rudolph, S., (1987) *In Pursuit of Lakshmi: The Political Economy of the Indian State*. Bombay, India: Orient Longman.

[42] Guha, R., (2007) *India after Gandhi*. Delhi, India: Oxford University Press

[43] Shaw, A (2009) Town Planning In Postcolonial India, 1947–1965:Chandigarh Re-Examined, *Urban Geography*, Bellwether Publishing, Ltd, pp-858

Second World War and the refugee influx caused by the partition of India accelerated the growth of urban population during the decade of 1941-1951, accounting for 6.2 percent of urban growth.[44] People moved steadily from rural into urban areas. The 1941 census reported that it 'is the fact that city life has began really begun to appeal to the ordinary middle class or lower middle class Indians'.[45] In a broadcast to the nation from New Delhi in August 1947 Indian Prime minister Pundit Jawahar Lal Nehru noted that 'we have had to face the refugee problem of such magnitude that I doubt whether any country of the world has had to face anything similar.[46] As in all other countries, house building could not keep pace with the influx of population into the towns.[47] At the time of independence there has been a very heavy influx of refugees who have, on the whole, tried to settle in the urban areas.[48] Of late, it has also been realized that housing for low-income groups, who are not necessarily Government servants, will have to be undertaken, at least in the bigger cities, to cope with the acute shortage of accommodation. Among the State Governments, Bombay took a lead in 1921 by establishing a Development Department to reclaim land, to construct 50,000 one-roomed tenements and to organize the supply and distribution of building materials to cope with the growing shortage of houses in Bombay city. This Department had to be closed down soon after it had built only 15,000 tenements. The cost of construction proved very high and workers could not afford to pay the rent which was fixed by the Department to cover the interest and maintenance charges of these buildings. The Bombay Government resumed their activity in this field in 1949 by setting up a special Housing Board with the object of building houses for industrial workers and other low-income groups, developing land, and assisting in the production and distribution of building materials. Other states also set up Housing Board for house construction, but none of them were

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[44] Bose, A. (1978) India's Urbanization:1901-2001, Tata McGraw-Hill, New Delhi

[45] Government Of India, (1941) Census of India, Vol-1, p-26

[46] Government of India (1958) *Jawaharlal Nehru's Speeches September 1946-May1949*, Ministry of Information and Broadcasting, 2nd edition, Vol-1, pp-64-65

[47] Koenigsberger, H, O., (1952), New Towns in India: *The Town Planning Review*, Vol. 23, No. 2, pp. 94-132

[48] Government of India, (1951) First Five Year Plan, New Delhi.

Available at http://planningcommission.nic.in/plans/planrel/fiveyr/1st/1planch35.html access on 20th June 2015

functioning.[49] However, various authorities were making houses like Improvement Trust of Bombay, Calcutta and Madras. Apart from this, very few municipal efforts were there for house construction in small scale. Both state and Central Government made the houses for their employees only. The Large scale housing programme for persons other than their employees was undertaken by the Central Government in connection with the influx of refugee from Pakistan. The problem has been tackled to a great extent and well-planned colonies and townships in various parts of the country have been developed were not only reasonably comfortable accommodation but also local employment in industry and trades has been provided. The total number of houses completed up until June, 1952, was 94,200 for displaced persons from Western Pakistan. Among major colonies which have been set up are Ulhas Nagar near Bombay and Sardar Nagar near Ahmedabad ; Gobindpur and Hastnapur in Uttar Pradesh ; Chandigarh, Faridabad and Nilokheri in the Punjab. For the displaced persons from East Pakistan, townships are under construction in Fulia and Habra in West Bengal and others in Assam and Bihar. Up to the end of June 1952, 7667 houses had been constructed by the Government for the displaced persons from East Pakistan. Following are the important new towns in Neheruvian period.

Table 1 Town Building in the early Nehruvian era (1947-1952)

Name of the New Town	Name of the State	Close/Far from metropolis	Functional character
Bhadrabati	Karnataka	Far from metropolis	Industrial
Jamshedpur	Jharkhand	Far from metropolis	Industrial
Chandigarh	Punjab	Far from metropolis	Administrative
Bhubeneswar	Odhisa	Far from metropolis	Administrative
Nilokheri	Punjab	Far from metropolis	Refugee colonies

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[49]Government of India, 1951, First Five Year Plan, New Delhi.

Available at http://planningcommission.nic.in/plans/planrel/fiveyr/1st/1planch35.html access on 20th June 2015

Rajpura	Punjab (Patiala)	Far from metropolis	Refugee colonies
Faridabad	Punjab	Close to metropolis	Refugee colonies
Kalyani	West Bengal	Close to metropolis	Refugee colonies
Gandhidham	Gujrat	Close to metropolis	Refugee colonies
Ulhasnagar	Bombay	Close to metropolis	Refugee colonies

Source: Planning Commission First and second Five Year Plan Reports, Compiled by author

There was manifold logic behind the development of planned new towns. Due to the partition Punjab lost its prime city Lahore, so there was urgency to establish a new capital immediately after the partition. It is to be noted that Chandigarh was the biggest planned town during this period. It is believed that addition of capital function to one of the existing cities would not be a good idea because; existed, cities were lack of essential amenities, inadequate infrastructure and reeling under burgeoning populations.[50] Apart from a capital city building number of refugee colonies were built to support the refugee population. What is needed to point out is that all these colonies were not self-sufficient. They depend on the nearby large city.

There was another trend of new town development apart from refugee colony and state capital (Chandigarh, Gandhinagar and Bhubeneswar) establishment. It was commenced with the construction of several industrial townships from the late 1950s. It was part of the National Plan strategy to locate a new industry away from large cities. The Third Five Year Plan, in particular, emphasized the preference for backward areas in the location of public sector projects. It was felt that the lack of facilities in such places could be resolved. There was also a latent hope that the effects of such large projects would trickle down to the surrounding areas.[51] Durgapur, Bokaro, Raurkela is some of the Industrial township, which was proposed and later developed with the above latent hope.

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[50] Kalia, R (1999) *Chandigarh: The making of an Indian City*, Oxford University Press, Kolkata

[51] Taylor, L, J. and William, G, D. ed., (1982) *Urban Planning Practice in Developing Countries*, Pergamon press, Oxford pp- 145

2.1.2 Post Neheruvian Era (1967-1990):

This period saw major change in urban planning and policy aspect. The urgency of new town planning for refugees was dissipated. Central government's development focus shifted from rural to urban area. However, in the Third five year plan anxiety for urban development and the strategy to meet the problems related to urbanization did not go beyond a few general statements and advice for drawing up of the Master plans for major cities.[52] In the early seventies, it was realized that spatial disparity was growing very fast. John P. Lewis during the time discussing regional development pointed out that if appropriate measures are not taken then the situation would be worse.[53] It is because of the metropolitan cities facing huge population pressure due to rural urban migration. Therefore, focus was shifted from planned new town development to management of the metropolitan cities. In 1970 with the appearance of the development authorities recognition of metropolitan identity came. Almost at the same time metropolitan scale was created in all the four regions.[54] The Development Plans of each metro city identified that Population growths in the main cities were one of the important problems in all the metropolitan areas and almost every plan failed to make a correct projection of population growth for next two decades. Growth of the population in the core area of the metropolis was due to migration from the rural hinterland almost bypassing the medium and large towns.[55] To decongest the core city satellite towns were developed around the metro cities with Garden city principle. So the purpose of new planned town development completely shifted in 1970s. Earlier it was developed to absorb the refugee population, administrative purpose and backward region development. Later the new planned town emerges to solve the congestion problem of the core city. This newly

[52]Banerjee, T and Chakravorty, S. (1994) Transfer of planning technology and local political economy – a retrospective analysis of Calcutta's planning, Journal of the *American Planning Association* Vol 60.No 1, pages 71 82.

[53]John PL (1983). "The Quiet Crisis in India", quoted in R.K. Wishwakarma and Gangadhar Jha (eds), *IDSMT-Problems and Strategic Policy Issues*, The Indian Institute of Public Administration, New Delhi pp.76-77.

[54]Regions here include Delhi, Mumbai, Kolkata and Chennai, Sivaramakrishnan C.K. (2015). *Governance of Megacities: Fractured Thinking, Fragmented Set up*, Oxford University Press, New Delhi.

[55]Karmakar, J. (2015) Retrospect of post-colonial metropolitan planning in India: Critical appraisal, *Journal of Geography and Regional Planning,* Vol. 8(6) pp 166-173

planned satellite town is a kind of small or medium sized settlement located around a large metropolis.[56] It is physically separated from the main urban area, but economically they are an integral part of a large urban body.[57]Scholars identified the characteristics' of these satellite towns i.e. developed to decongest the core city. Firstly, the distance of a satellite town from a major urban area differs due to availability of land, accessibility, transportation network, etc., but the distance should be close enough to justify both a rapid commuting distance and the open space needed to separate the town settlements. Also, it should be far enough to give a physical identity to the satellite town.[58] Secondly, satellite towns should be totally economically dependent on the neighboring urban center where the majority of satellite town residents find their jobs.[59] Thirdly, an independent local government should present and run the town to gives it identity so that it is different from normal urban suburb.[60]

The above mention character of satellite towns is very common in India, especially around the four metropolises. One may argue that the satellite town exists in India before the sixties. It is true, but the purposes to build those satellite towns were different. Whereas in early 70's official planning document suggest that there is need for satellite town development around metro cities.[61] This is completely absent in case of earlier satellite town development.

Scholars criticized this new form planned satellite town development as a geographic dispersal and marginalization.[62] In fact, from late 1960's there is a marked change in urban development policy which focuses from metropolitan growth control strategies to diffusing urbanization.[63]

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[56]Golany, G. (1976). *New-town planning : principles and practice*. New York: Wiley.

[57]Weissbourd, B. (1972) Satellite Communities. *Urban Land, 31*(9).

[58]Golany, G. (1976). *New-town planning : principles and practice*. New York: Wiley.

[59]Fisher-Cassie, W. (1943). The satellite town: a study of the problems involved in recentralized development. *Journal of the Town Planning Institute 29*(2), 53-62.

[60]Golany, G. (1976). *New-town planning : principles and practice*. Wiley, New York

[61]Government of West Bengal (1966) *Basic Development Plan for the Calcutta Metropolitan District 1966-1986*, Kolkata: Calcutta Metropolitan Planning Organization, Development and planning department.

[62]The Politics of New Towns in Israel, available at http://efrat-kowalsky.co.il/files/zvi-efrat-text-for-new-towns-conf.pdf

[63]Rondinelli, D, A. (1991) Asian Urban development policies in 1990s: From Growth control to urban diffusion, *World Development*, Vol 19, Issue 7, p-791-803

Green belt and satellite town are widely used to restrain the growth of metropolitan cities.[64] It is to be noted that development of planned satellite town around the metropolitan city was a popular practice in a number of countries in Asia which include South Korea, China, Singapore, Malaysia and Cambodia etc. The purpose for planned satellite town development was same as in India. What is needed to be pointed out here is that Indian planned satellite town development was less successful as noted in newspaper in early 1990s. It noted that the satellite towns in India have, by and large, failed to serve the purpose for which they were originally set up.[65]

2.1.3 Neo-liberal Era

In late 1980s India had undergone a major political and economic change. In 1991 there were two major events. First was the 'liberalization' of the Indian economy. While the other event includes The World Bank major policy shifts city as the centre for economic productivity emphasized a policy perspective to move urban funding away from the basic needs approach of the 1970s and 1980s.[66] It should be mentioned that in 1970 and 1980 Kolkata receives major financial support from the World Bank for Calcutta Urban Development Project (CUDP) which was formulated to improve the condition of the city and is a suburban area. Scholars identify the early 1990s as a period of Urban Reforms Agenda' (URA) organized by the Asian Development Bank, the World Bank, and DFID.[67] Economic liberalization started by welcoming the private sector for urban housing and infrastructure development. Both these developments need space and Neo-liberalism used urban space as an arena for market oriented economic growth and elite consumption practices. What is more important is that to do that it transforms the politico-economic setting in which public plans and projects are implemented. It identifies the urban planning as distortion of market mechanisms, and thus as a threat to private motivation and

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[64] Yeung, Y, M. (1986) Controlling metropolitan growth in East Asia, *Geographical Review*, Vol-76, P-125-137

[65] Date, V.(1994) Out of orbit. *The Sunday Times of India*, August 28, p. 13

[66] See Bank Policy Paper 'urban productivity' WB 1991; Michael. C. (1990). 'Macroeconomic Adjustment and the City', *Cities*, 7 (1): 49–59; Nigel. N (1996) 'Introduction', in Nigel Harris and Ida Fabricius (eds), *Cities and Structural Adjustment*, pp. 1–12. London, University College: London Press.

[67] Benzamin, S. (2010) Manufacturing Neoliberalism: Life styling Indian Urbanity in Bannerjee Guha, S. (ed) *Accumulation by Dispossession Transformative Cities in the New Global Order,* New Delhi, Sage Publication

efficient allocation of resources. So it proposes all economic and social problems have a market solution[68] In October 1994, the Ministry of Finance, the government of India, set up an Expert Group on Commercialization of Infrastructure Projects. The group submitted its report in 1996 and it is called 'The India Infrastructure report: Policy imperatives for growth and welfare' (IIR). This report is widely considered as push towards the liberalization or commercialization of infrastructure. The IIR pointed out that India requires rupees 2803.5 billion in the next ten years of 1994 prices to meet the infrastructure needs of the cities. India was unable to meet such huge expenses for infrastructure. Therefore the IIR expert group suggested "necessitated opening up urban infrastructure to private capital and exploring 'innovative' forms of financing such as municipal bonds because it was assumed to be beyond the capacity of the government to mobilize those kinds of resources for the urban sector. It was also argued that to make cities better prepared for attracting private investment in infrastructure and service delivery it is crucial to bring about a major overhauling of the governance, legislative and administrative framework of cities. The IIR considers privatization and deregulation of infrastructure sectors as "bold new approaches (that) promote improvement in efficiency and service quality".[69]

To give a big push in favour of the entrepreneurial planning central government prepared Urban Reform Incentive Fund *(URIF)* which sought to incentivize urban reforms in the following areas: a) repeal of Urban Land Ceiling Acts and reform of Rent Control Acts; b) reduction in stamp duty; c) revision of bylaws to streamline the approval process for construction of buildings, development of sites etc.; d) levy of realistic user charges and resource mobilization by urban local bodies; e) public-private partnership in the provision of civic services; f) revision of municipal laws in line with the model legislation prepared by Ministry of Urban Development and Poverty Alleviation; and g) simplification of legal and procedural framework for the conversion of agricultural land for non-agricultural purposes. Such reform incentives lead to the formulation of township development policies and repealed of Urban Land Ceiling Acts by the

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[68]Peck, J., & Tickell, A. (2002). Neoliberalizing space. In N.Brenner & N. Theodore (Eds.), *Spaces of neoliberalism. Urban restructuring in North America and Western Europe*, Malden, Mass: Blackwell, p-33-57

[69] Expert Group on the Commercialization of Infrastructure Projects (1996) The India Infrastructure Report: Policy Imperatives for Growth and Welfare, Ministry of Finance, Government of India, New Delhi.

various state governments. Due to such neo-liberal agenda the cities has witnessed, intense contests over land and infrastructure, and much of this is shaped by mainstream politics.[70]The other aspects of this agenda are the empowering of real estate. Thus, while Indian metro cities globalize and urbanize, one of the major issues introduced in the policy discourse was the need for infrastructure to support economic growth.[71]

It is clear that in post 1990 development of new town comes as "support the economic growth" of the state. Empowerment of the real estate and Investment of private capital in township development was a major incident during this period.

3. Case of West Bengal Planned New Towns

Planned new town development in West Bengal has a long history. It was started since the Independence. After the partition state received huge refugee migration from erstwhile East Pakistan. A number of planned new towns developed over six decades with different objectives. This section elaborates the story of the each planned new town separately.

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[70]Benjamin, S., Bhuvaneswari, R., Rajan, P. and Manjunath. 2008. "Fractured" Terrain, Spaces left over, or Contested?—A Closer Look at the IT-dominated Territories in East and South Bangalore', in Mahadevia, D. (ed.), *Inside the Transforming Urban Asia—Policies, Processes, and Public Action*, Ch. 7, pp. 239–85. New Delhi: Concept Books.

[71]See Rakesh Mohan 'A speculative gaze'. Mohan chaired the committee to produce the major policy document 'India Infrastructure Report' in June 1996. (see http://www. india-seminar.com/2000/485/485%20mohan.htm)
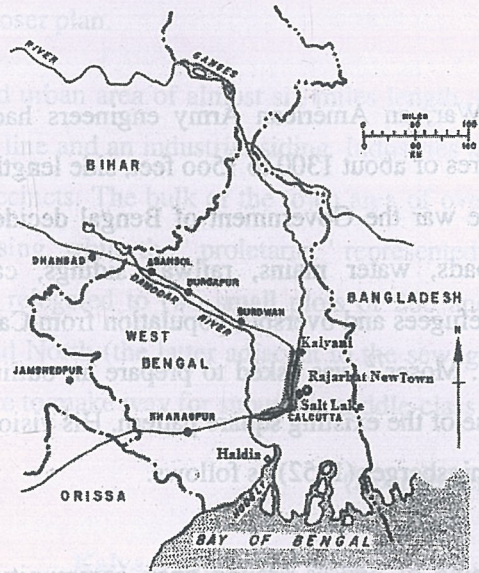
Map 3 West Bengal Planned New Town

Source Taylor and Williams, 1984

Table 2 Selected Characteristics of Selected Towns

Name of the Town	Year of Foundation	Distance from Kolkata in Km	Total Population (2011)	Area in sq. Km
Kalyani	1951	51	100,620	29.14
Durgapur	1962	168	581,409	154
Bidhannagar	1962	7.9	218,323	33.5
Haldia	1977	125	200,762	109
NewTown-Rajarhat	1999	17	40,000	30.75

Source: Census of India 2011, and Development Plan of Kalyani, Haldia, Durgapur, Bidhannagar

Note: Year of Foundation does not indicate the year of municipal body establishment.

3.1 Context of Planned New Town development in West Bengal with Specific Case

3.1.1 Origin of Kalyani

During the Second World War, an American Army engineers had built the army base by subdivided the area into squares of about 1300 to 15oo feet, side length, intersected by a network of well built roads. After the war the Government of Bengal decided to develop the existing installations, particularly roads, water mains, railway sidings, canals and quays for the establishment of a town for refugees and overspill population from Calcutta. The Swiss architect and town planner Werner M. Moser[72] was asked to prepare an outline plan for the new town. Moser's plan makes skilful use of the existing square pattern. His vision of planning Kalyani was elaborately describes by Koenigsberger (1952) as follows.

> He achieves a grouping of houses around open community spaces of varying sizes. The result is an informal open lay-out which suits the always humid and often sultry climate of the Hooghli delta. Existing tree plantations in the West and North are maintained as protection against monsoon storms. An existing lake is used as recreation area. Combined with the public buildings of the civic centre it forms an attractive central feature of the town. A main business and shopping street connects the town centre with the passenger station (of a suburban line of Calcutta). Existing railway sidings and docks are used for an industrial estate which is clearly separa-ted from the residential zones, but lies within convenient reach of all houses. The dull grid pattern of the storage depot has become the basis of a well articulated and imaginative town lay-out.
>
> (Koenigsberger 1952 p-124-125)

It is apparent that Mosers plan was purely based on Howards Garden city principle, but in reality his plan was not accepted by the state government. The engineers of (Bengal) the Local Self

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[72] W.M. Moser was son of Karl Moser, a Swiss architect who was one of the first Swiss modernist. *See* Benevolo, L *(1977) History of Modern Architecture,* Volume 2. MIT Press, pg. 618

Government Department modified and forwarded the plan for implementation. The following changes were made in Moser plan.

It provides a solid urban area of almost six miles length, cut into three unequal parts by the main railroad line and an industrial siding. Industries are squeezed in between two of the residential precincts. The bulk of the town area of over 1 0,000 acres is reserved for middle class housing, while the ' proletariat ' represented in this case by poor refugees and fishermen is relegated to two small plots of 360 and 68 acres respectively in the extreme South and North (the latter adjacent to the sewage disposal plant). The existing tree plantations are to make way for suburban middle-class housing lay-outs.

(Koenigsberger 1952 p-124-125)

Kalyani Municipal Area
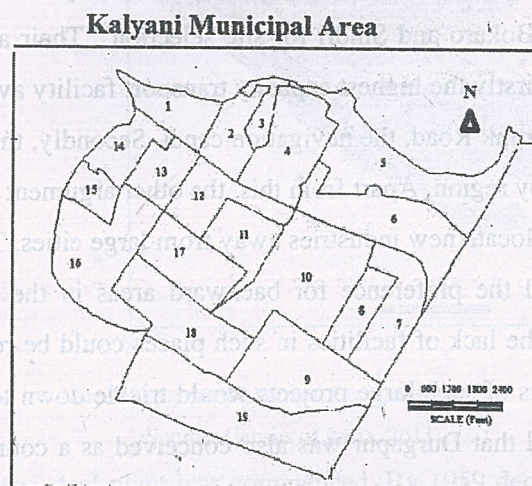
Map 4 Kalyani Municipal Area

Source: Draft Development Plan of Kalyani 2007-2012

Therefore Kalyani was conceived as satellite town and imagine as Garden city of wide variety of choices of living in a planned well served and somewhat in a rural environment.[73] Apart from

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[73] Chakrobarty, R.L.M (1981) Programme for Revitalizing Kalyani and its Environs, Government of West Bengal,

that it was developed to decrease the population pressure of Kolkata. Basic Development Plan published in 1966 by CMPO with 20 years perspective identified Kalyani-Bansberia as a Growth pole (Counter magnet of Kolkata) CMD. It emphasizes the decentralization of population and other activities of the CMD. It should be worthwhile to mention that conception of bipolar growth (Kolkata-Kalyani) of BDP failed because there was no such thinking of integration of Kalyani as a part of the Calcutta Metropolitan District in its inception periods. Now Kalyani is a municipal town falling under Kolkata Metropolitan Area.

3.1.2 Origin of Durgapur

Durgapur was opened up when the plans for the Damodar valley region took shape. The project was commenced at Durgapur in 1952 and Completed in 1955. Eric Coates Mission on August 1955 finally chose the Durgapur for the third public sector steel plant. It is to be pointed out that Mission also visited the Bokaro and Sindri for site selection. Their argument for choosing the Durgapur was manifold firstly the highest capacity transport facility available through four-track railway line, the Grand Trunk Road, the navigation canal. Secondly, there was the availability of land and coal in the nearby region. Apart from this, the other argument was that it was part of the National Plan strategy to locate new industries away from large cities. The Third Five Year Plan, in Particular, emphasized the preference for backward areas in the location of public sector projects. It was felt that the lack of facilities in such places could be resolved. There was also a latent hope that the effects of such large projects would trickle down to the surrounding areas.[74] Jagannathan (1987) noted that Durgapur was also conceived as a counter magnet to the city of Calcutta because the city experienced decay due to its overburden civic infrastructure.[75]

Modernization theory explains this sort of development in the third world countries. It noted that the prime objective of development policy during the immediate postcolonial period was the

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[74]Sivaramakrishnan, C, K. (1984) Durgapur: Case Study of an India New Town in Taylor, J and William, G, D (ed.) *Urban Planning Practice in Developing Countries*, Pergamon Press, Oxford

[75] Jagannathan, V.N (1987) Planning in New Cities: The Durgapur Experience, *Economic and Political Weekly*, Vol-XXII, No-13

modernization of a region's economy through a form of industrialization that closely followed the Western model of development. Former neocolonial powers 'sought to establish some of the essential infrastructure and facilities that the new independent states would require, and which had been ignored or neglected during colonial rule' (Simon, 1996).[76] The intention was to accelerate the newly independent Developing World through an industry transition of rapid modernization (Schiffer, 1997).[77]
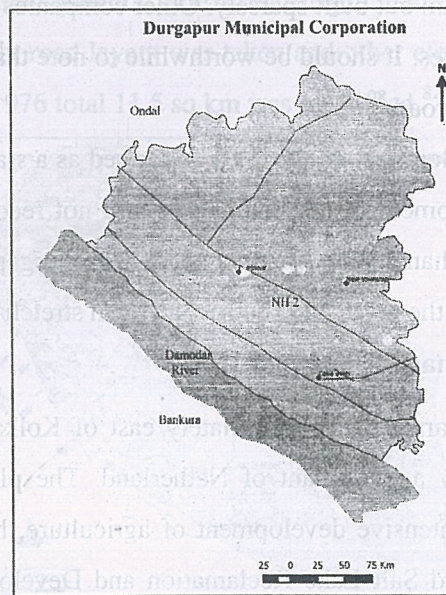
Map 5 Durgapur Municipal Corporation Area
Source: Census of India, 2011

In 1956 construction of the steel plant was commenced. By 1959 decisions had also been taken to locate three other large plants, one for special steel, the second for manufacturing coal mining machinery and the third to produce ophthalmic glass. By 1961 nearly fifty large, medium and small industries had made Durgapur their home this include thermal power plant, coke oven

[76] Simon, D. 1996, *Transport and Development in the Third World*, Routledge, London
[77] Schiffer, S. R. (1997), 'Sao Paulo: the Challenge of Globalization in an Exclusionary Urban Structure'. Institute of Advance Studies, 'Project on Global Cities: Impact of Transnationalism and Telematics'

plant, engineering industry, chemical plant etc.[78] The basic urban plan was simple: the east-west Grand Trunk Road linking Calcutta with Delhi was used as a divider between the industrial and residential areas. While, on the other hand, the residential areas were laid out to the north of the Grand Trunk Road.[79] It is believed that despite an encouraging beginning, the dream of an integrated industrial city did not materialize. The reason behind this was the decision of the larger industries to build separate townships for each. The biggest was the steel plant township covers some 30 square km but built sparsely. Other companies followed suit and set up their own townships of varying sizes. It should be worthwhile to note that all these adjoining towns had no common linkage even a road.[80]

In 1958 Durgapur Development Authority was formed as a statutory body to ensure the planned and coordinated development of the complex. It did not recognize 'disparate developments as serious'. By 1961, less than 5 years from its beginning, Durgapur became a sprawling mixture of factories and housing to the north and south of a 15 km stretch of the Grand Trunk Road.[81]

3.1.3 Origin of Bidhannagar

It was developed on marshy land immediately east of Kolkata. In 1953 government of West Bengal made a plan by a consultant of Netherland. The plan proposed 9.7 sq km of city's expansion along with intensive development of agriculture, horticulture and fisheries. In 1960 state government created Salt Lake Reclamation and Development Board under the Irrigation and Waterways Department of the West Bengal government for reclamation and development of north western part of Bidhannagar. In 1964 Messer a Yugoslavian firm made a sketch plan for Biddhannagar. Messers plan salient features include a town centre with commercial, administrative and other public, semi public building to form the focus of the new community. The provision for few small scale industries had been kept on the periphery of the south west and

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[78]Sivaramakrishnan, c, K. (1984) Durgapur: Case Study of an India New Town in Taylor, J and William, G, D (ed.) *Urban Planning Practice in Developing Countries*, Pergamon Press, Oxford

[79]Jagannathan, V.N (1987) Planning in New Cities: The Durgapur Experience, *Economic and Political Weekly*, Vol-XXII, No-13

[80]Sivaramakrishnan, C, K. (1984) Durgapur: Case Study of an India New Town in Taylor, J and William, G, D (ed.) *Urban Planning Practice in Developing Countries*, Pergamon Press, Oxford

[81] Ibid

North West side and in a sizeable area of the southern tip of Sal Lake. Residential development was categorized as high and low building which were grouped in various residential blocks. The other features include the hospital, the major markets, administrative offices and cultural centres were suitably placed within the centres and sub centres. The roads indicate strong East West axis along the North of the Central park besides town centre supported by North South axis. The Messer plan was not finally implemented. A modified version of Messer plan was prepared by the Salt Lake Reclamation and Development Circle of the Irrigation and Waterways Department, Government of West Bengal. Only road layout was taken and other elements of land use of that plan were radically modified. In 1976 total 11.5 sq km was reclaimed.[82]
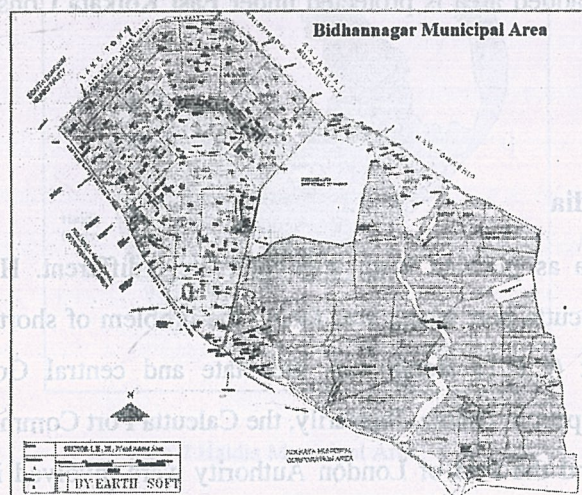
Map 6 Bidhannagar Municipal Area

Source: http://www.bidhannagarmunicipality.org/map

Objectives to set up of this planned satellite township were clearly mentioned in the plan. It includes setting up a self contained high income and middle income residential township for about 2.5 lakh population initially and later it will go up to 3.5 lakh population. Relieve partially

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[82]Calcutta Metropolitan Development Authority (1976) Area Development Strategy for Salt Lake Township(Bidhannagar), Directorate of planning, Report No 6

the congestions in Kolkata and provide a full range of community facility. So Bidhannagar town was set up as a sub centre for decentralization of Kolkata not as counter magnet of Kolkata as in case of Kalyani and Durgapur. What is significant is that Salt Lake begins the process of eastward development of Kolkata which has a strong north south linear development of towns across Hooghly.

People have begun to settle in Bidhan Nagar since late 1970s. In 1995 Bidhan Nagar became municipal board from notified town. Around this time 21 sq km (Large part of the East Kolkata Wetland nearly 32 *Bherris*) were added with the planned town. So now the total area of the town is 33.5 sq km. The added area is protected under East Kolkata Conservation and Management Act 2006.[83]

3.1.4 Origin of Haldia

The story of Haldia as planned town was completely different. Haldia Port was built as a substitute of the Calcutta port which was facing the problem of shortage of water. In 1959, the Calcutta Port Trust (C.P.T) along with the state and central Govt. decided to set up a supplementary river port in Haldia. Primarily, the Calcutta Port Commission, Rendel, Palmer and Triton of London and the Port of London Authority were involved in the Haldia port project. Rendel, Palmer and Triton were advisers to the Calcutta Port Authority. They made a master plan for Haldia in 1962 and it was placed before the World Bank for approval in 1963, with a request for a grant of Rs 14 crores to start with. The World Bank, satisfied with the preliminary report, recommended a detailed techno-economic survey. The World Bank's interest in Haldia was strengthened by Japan's need for a port on India's east coast, which could efficiently handle iron ore exports - vital to Japan's steel - complexes in which the World Bank itself had huge investments. Equally, British tea and jute interests too were strongly in favour of Haldia.[84] The

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[83]Government of West Bengal (2010) Draft Development Plan: Bidhan Nagar Municipality 2007-08 to 2011-12, Main Report, Dept of Municipal Affairs
[84]Still Born? *Economic and Political Weekly*, 1976, Vol. 11, No. 34, pp.1386

Town and Country Planning Department prepared an outline development plan for Haldia in 1975. About 35.84 square km area for port based industrial urban complex in Haldia was prepared.[85] In 1977 government of West Bengal constituted the 'Haldia Development Authority' for accelerating the development of Haldia Industrial Urban Complex. Two years later the Haldia planning area was increased to 326.92 sq km.[86]
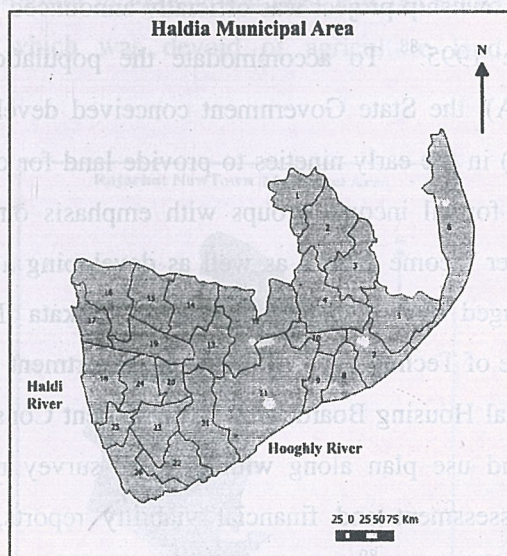
Map 7 Haldia Municipal Area

Source: Draft Development Plan of Haldia 2007-12

According to the master plan, 15.36 sq km was allotted along the Haldi River for residential purpose of different industrial units for their employees. The shipyard in the east and other industries in the further east of residential area were allotted. The private residential and commercial complex started growing at Durgachak, outside the boundary of Calcutta Port Trust,

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[85]Das, S and Gupta, K (2012) A geo-environmental characteristics of a port town: a case study of Haldia town, East Midnapur district, West Bengal, *Geo Analyst*, Vol 2, No 2

[86]Haldia Development Authority (2012) HAD Annual Report 2010-11, Haldia Development Authority, Haldia, available at http://hda.gov.in/uploads/content/pdf/1319350516Annual%20Report,%20Work%20Plan2011-12.pdf

because no area was allocated for private development near the residential township.[87] In 2013 the total area of HDA was increased to 761.26 sq km. An industrial urban complex of Haldia was uplifted as a municipality since 1997 and before that it was a Notified Area.

3.1.5 Origin of Rajarhat New Town

Rajarhat New Town a recently developed major planned satellite township located in the peri urban areas of Kolkata. Township project was officially announced by the government of West Bengal on the 1st June 1995.[88] To accommodate the population growth in the Kolkata Metropolitan Area (KMA), the State Government conceived development of the New Town Project at Rajarhat (NTP) in the early nineties to provide land for construction of houses for a population of 7.50 lakh for all income groups with emphasis on housing for economically weaker sections and lower income groups as well as developing a new Business Centre. The State Government engaged five agencies (includes Kolkata Metropolitan Development Authority; Indian Institute of Technology – Kharagpur; Department of Housing, Government of West Bengal; West Bengal Housing Board; and, Development Consultants Limited) to prepare concept plan, master land use plan along with traverse survey report, draft project report, environmental impact assessment and financial viability reports, internal drawings, urban infrastructure schemes and plans etc.[89]

New Township Project under the jurisdiction of Rajarhat Block under North 24 Parganas District and Bhangore-II Block of South 24 Parganas District in the North-East of Kolkata comprises of 7089.72 acres of land. Until March 2013 total 6839.31 acres of land has been procured by the respective Land Acquisition Collectors, North and South 24 Parganas Districts for the New Town Project. The rest of the land, i.e. 250.41 acres shall be directly purchased from the individual landowner.[90]

[87]Das, S and Gupta, K (2012) A geo-environmental characteristics of a port town: a case study of Haldia town, East Midnapur district, West Bengal, *Geo Analyst*, Vol 2, No 2

[88]Annual Audit Report (Commercial) for the year ended 31 March 2007, Chapter II Reviews relating to Government companies (2007), Kolkata, Available at www.wbhidcoltd.com accessed May 6, 2012

[89]Government of West Bengal (2009) 'Audit Report (Commercial) Chapter II Reviews relating Performance relating to Government companies', Kolkata, Available at www.wbhidcoltd.com accessed on May 6, 2012

[90]Annual report 2012- 2013 West Bengal housing infrastructure development corporation limited, HIDCO

Due to the asymmetry of the bargaining power and disadvantageous position of poor land owner state government appointed West Bengal Housing Board to set the land price regarding land acquisition for poor land owners. More than 68 percent of agricultural land was acquired for the project from the two districts of North and South 24 Parganas. However, 91 percent of the project area's land is under districts of North 24 Parganas. There was complete absence of Cultivable waste land. Distribution of agricultural land was not uniform over the project area. There were some *mouza* which was devoid of agriculture land like Mahisbathan and chandiberia.[91]
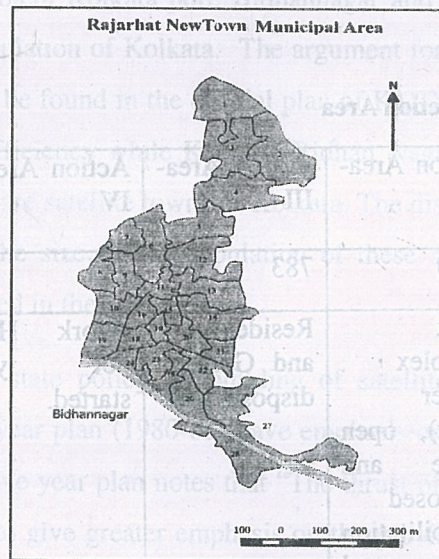
Map 8 Rajarhat New Town Municipal Area

Source Land use and Development Control Plan for New Town Area 2012

Note: Rajarhat New Town Planning Area is bigger than Municipal Area

The State Government had assigned (April 1996) the work of land acquisition for NTP (New Town Project) to the West Bengal Housing Board. Subsequently, West Bengal Housing Infrastructure Development Corporation Limited (Company) was incorporated (April 1999), as a

[91]Karmakar, J (2015) Encountering the reality of the planning process in peri urban areas of Kolkata: Case study of Rajarhat, *Archives of Applied Science Research*, 7 (5):129-138

wholly owned Government company, for the purpose of developing NTP.[92] The work of the NTP was implemented in four phase's *viz. Action Areas (AA) – I, II, III and IV*, cover in. It is to be noted that because of the absence of the civic body within the New Town of operating the administration state government have formed New Town Kolkata Development Authority act 2006 under the under the West Bengal Municipal Act. However New Town Development Authority was formed with effect from 1st January 2009.[93] Each action area has its own characteristics and they are different from each other in terms of the size and also the land use features. The following table will show the major features of the each action area.

Table 1: Characteristics of the Action Area

Location	Action Area-I	Action Area-II	Action Area-III	Action Area-IV	Central Business District (CBD)
Area in ha	667	1310	783	465	183
Land use /land cover	Residential (Planned and Unplanned service village)	sport complex (water sport), open space and Proposed rehabilitation site and unplanned existing settlement	Residential and Garbage disposal area	Work Has not yet started.	Commercial Hub

Source: www.wbhidcoltd.com official website of WBHIDCO Ltd.

3.2 Planning Principles and Characteristics of West Bengal Planned New Town

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[92] Annual Audit report of 2010- 2011, by West Bengal Housing Infrastructure and Development Corporation Limited (2012), Kolkata, available at: www.wbhidcoltd.com accessed on September 18,2012
[93] Ibid

The planning principles of planned new towns in West Bengal cannot be explained by a single town. Over the sixty years different new planned towns established to solve the problems. Golani (1976) noted that planned satellite towns in other countries have been normally economic dependent of neighbouring urban centres for employment, public service, social and cultural amenities.[94] In West Bengal purpose to build planned new towns are diverse. Tracing from the experience of Kalyani to recently built Rajarhat New Town some common purpose to build planned new town can be identified. All the towns are being established as a satellite town of Kolkata. Durgapur and Kalyani were developed as counter magnet of Kolkata. Haldia was developed to solve the problem Kolkata port. Bidhannagar and Rajarhat New Town are being built up to decentralize population of Kolkata. The argument for decentralize urbanization with respect to Bidhannagar can be found in the official plan of KMDA.[95] Durgapur and Haldia have a certain degree of self sufficiency while Kalyani, Bidhan Nagar and Rajarhat are completely dependent on Kolkata. All are satellite towns of Kolkata. The distance of these towns is ranging from 7.9 km to 168km. The size of the population of these satellite towns is ranging from 100000 to 600000 as revealed in the 2011 census.

There was no national or state policy on building of satellite town before the year 2000. However, in the sixth five year plan (1980-85) gave emphasis on the development of small and medium towns. The sixth five year plan notes that "The thrust of the urbanization policy during the next decade would be to give greater emphasis on the provision of adequate infrastructural and other facilities in the small, medium and intermediate towns which have been neglected hitherto in this respect.'[96] It was a major paradigm shift in urban policy making but still there was no guideline regarding planned satellite town building. After the launching of JNNURM[97]

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[94]Golany, G (1976) *New Town Planning: Principles and Practice*, John Wiley, New York

[95]Government of West Bengal (1976) *Development Perspective and investment Plan*, Report no 26, Kolkata, Directorate of planning.

[96] Government of India (1978) Sixth Five Year Plan (1980-85). Planning Commission Para 23.31

[97] JNNURM: 'Jawaharlal Nehru National Urban Renewal Mission was launched by Ministry of Urban Development in December, 2005 for implementation of urban infrastructure improvement programme in a time bound manner in 63 selected cities. The Mission aims at creating economically productive, efficient, equitable and responsive cities in

in December 2005, guidelines for development of satellite town or counter magnet of million plus cities was published. It emphasized the innovative public private partnership model for development of satellite towns. It also noted that the towns may be planned for a population of 3-5 lakh in case of million plus cities and 5-10 lakh in case of Mega cities (4 million plus cities).[98] It advocates that satellite town shall be on the concept of continuity, compactness and self-containment. However, central funding will be given only for basic urban services (includes water supply, sanitation, solid waste management and sewerage) and there would be no central funding for power, health, education and most importantly wage employment programme. Therefore, it gives responsibility to the states for a generation of wage employment programme. It should be pointed out that from self-containment perspective generation of wage employment programme in a satellite town is important. If it is not taken care, then satellite towns will be dependent on its mother city. This can be seen in the case of Kalyani a satellite town of Kolkata.

3.3 Demographic and Economic background of West Bengal Planned New Towns

Population

One of the important aspects of the new town planning was its scheduled population. At the time of planning, planner makes an estimate for schedule population for each town. In Kalyani 60,000 to 70,000 scheduled populations later BDP made a new estimate of 200000 scheduled populations. For Bidhannagar initial schedule population was 2.5 lakh and later it increased up to 3.5 lakh population. In case of Durgapur there was no such schedule population as the number of industries made their own town so it became a 'collection of towns'. In Haldia almost similar idea can be seen where CPT (Calcutta Port Trust) made their own boundary and number of industries made their own residential enclaves. Both towns have a substantial industrial base unlike Bidhannagar, Kalyani and Rajarhat New town. Recently built Rajarhat New town made for a population of 7.50 lakh. Now we can see whether these towns have crossed their estimated

an integrated framework with focus on economic and social infrastructure, basic services to urban poor, urban sector reforms and strengthening Municipal Governments and their functioning'.

[98]Guidelines for Scheme of Urban Infrastructure Development in Satellite Towns / Counter Magnets of Million Plus Cities. Available at http://tcpomud.gov.in/Divisions/MUTP/guideline_satellite.pdf, Access on October 18, 2015

population or not after 40 years. Both Kalyani and Bidhannagar are still not reached their estimated population. Durgapur and Haldia's initial year decadal population growth rate is more that 35 percent, whereas Kalyani's population growth rate at the initial year was nearly 30 percent, but the Biddhanagar population growth rate for the initial year was the lowest. It is to be noted that Haldia took nearly 20 years to reach the peak growth of population.
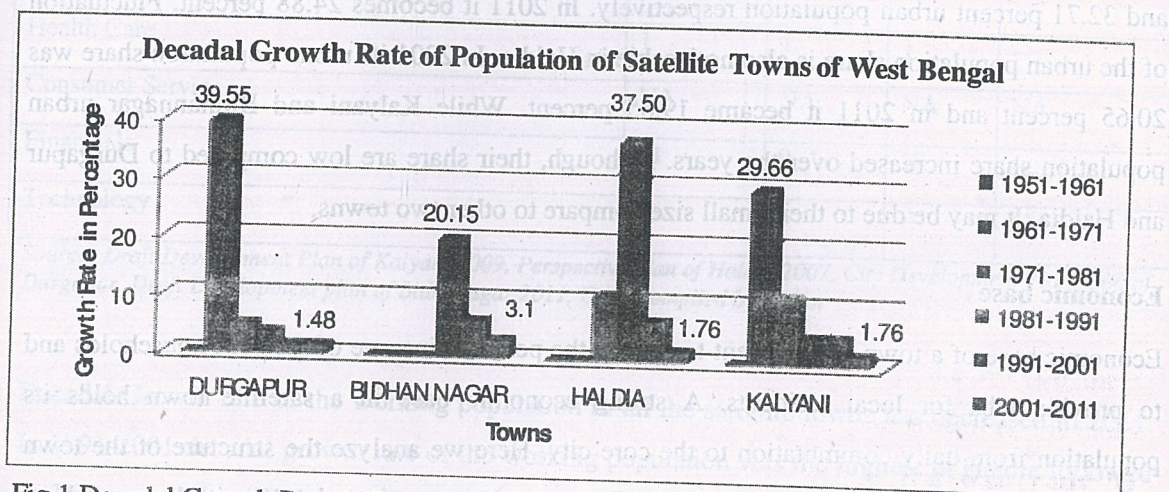

Fig 1 Decadal Growth Rate of Population of Planned New Towns of West Bengal

Over the year population growth rate decreases, but what is notable is the growth of Bidhannagar population is comparatively higher than the other towns.

Table 3 Urban Population Share of the selected towns with respect to their district urban centres

District	Name of the Town	Area in sq Km	1961	1971	1981	1991	2001	2011
Burdwan	Durgapur	154	9.969	29.88	33.44	32.71	24.49	24.88
Nadia	Kalyani	29.14	1.50	4.59	7.32	8.66	10.80	11.79
Medinipur	Haldia	109	0	3.31	4.92	15.77	20.65	19.85

North 24 Pgs	Bidhannagar	31.3	0	0	1.30	3.08	3.52	4.30

Another way to look at these towns is the share of their population with respect to their districts. Durgapur's population share is fluctuating over sixty years. In 80's and 90's it absorbed 33.44 and 32.71 percent urban population respectively. In 2011 it becomes 24.88 percent. Fluctuation of the urban population share is also noticeable in Haldia. In 2001 its urban population share was 20.65 percent and in 2011 it became 19.85 percent. While Kalyani and Bidhannagar urban population share increased over the years. Although, their share are low compared to Durgapur and Haldia. It may be due to their small size compare to other two towns.

Economic base

Economic base of a town is important to sustain the personal income of resident households and to provide jobs for local residents. A strong economic base in a satellite town holds its population from daily commutation to the core city. Here we analyze the structure of the town economy and resident worker characteristics. Durgapur as a town is endowed with large medium and small industry. The principal industries of selected towns are categories according to the Industrial Classification Benchmark[99]. It's apparent that Durgapur has the highest number of industries which include industries of Basic materials and Oil and Gas industries etc. Presences of such industries lead to generate the number of financial companies. Haldia is having large number of oil and gas industry. Consumer goods industries also have good presence in Haldia. In very few consumer and basic materials industry have also presence in Kalyani. Biddhannagar is the only satellite town where most of IT companies situated. Both Kalyani and Bidhannagar have separate industrial block.

Table 4 Classification of Industries in the Satellite Towns

Name of Industry		Durgapur	Kalyani	Haldia	Bidhannagar

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[99]Detail of the Industrial Classification Benchmark Available at
http://www.icbenchmark.com/ICBDocs/Structure_Defs_English.pdf

Oil and Gas	5	2	14	--
Basic Materials	29	4	5	--
Utilities	4	1	--	--
Industrial Goods and Services and Construction Good	13	1	2	--
Consumer Goods	10	4	8	--
Health Care	1	1	1	--
Consumer Service	NA	NA	NA	NA
Financials	31	9	18	--
Technology	1	--	--	41

Source: Draft Development Plan of Kalyani 2009, Perspective plan of Haldia 2007, City Development Plan 2006 of Durgapur, Draft Development plan of Bidhanagar 2011, Data Compiled by author

Decadal Growth rate of the working population in all the satellite towns has decreased in 2011. In 1991-2001 decadal growth rate of the working population was the highest in Haldia followed by Bidhannagar and Kalyani. While Durgapur's decadal growth rate of working population was the lowest in the same period. The scenario has changed completely in 2001-2011 when the highest growth rate of working population occurred in Kalyani followed by Bidhannagar and Durgapur. Haldia occupies the lowest position in terms of decadal growth rate of the working population. It is noteworthy that both Kalyani and Bidhannagar workers have a daily chance commute to Kolkata so they have added benefits of the availability of jobs both in the satellite town and in Kolkata while such opportunity is absent in case of Durgapur and Haldia's worker.

Table 4 Decadal Growth of Employment in Satellite Towns

Towns	1991-2001			2001-2011		
	GWP	GMWP	GFWP	GWP	GMWP	GFWP
Durgapur	3.23	1.95	22.07	2.94	2.32	6.36
Haldia (M)	9.16	7.87	27.45	1.60	1.84	-0.04

Kalyani (M)		7.40	5.68	18.55	4.09	3.47	6.30
Bidhannagar		7.50	6.69	10.38	3.45	3.00	4.75

Source: Census of India 1991, 2001, 2011 Data Calculated by author

Note: GWP- Growth of working population, GMWP- Growth of Male working population, GFWP- Growth of Female working population.

Gender wise working population distribution of these towns shows that decadal growth rate of female working population was very high in all the towns in the year of 1991-2001. But it reduces in the following decade. What is remarkable is that Haldia's female working population growth rate becomes negative in the year of 2001-2011. Male working population growth rate also decreases from 1991-2001 to 2001-2011. Interestingly Haldia occupies the highest growth rate of men working population in the year of 1991-2001 but it holds last position compared to other three towns in the following decade. Therefore, it is apparent that the workers of the Kalyani and Bidhannagar have a greater chance in job availability, compare to Haldia and Durgapur due to their remoteness from Kolkata.

3.4 Evaluation of Planned New Towns Development using Attractiveness Index

After crossing the gestation period of each town it is necessary to evaluate their attractiveness to the people. 'Successful places are defined by the "people" and not the physical form of the place' proposed by the urban magnet theory.[100] Moreover, they also pointed out that the goal is to create a place where real people will be living out loud doing what they love with others who also love it, building relationships and loyalty to the place and a true sense of community. To make a comparative analysis of the attractiveness of the each planned town we have chosen some social, economic and geographical indicator. Social indicators include population density, population diversity, educational institution, availability of Bank, Hospital, housing need, sex ratio, and Hospital Infrastructure[101], recreation facility, and population by aged 25-34. Economic and geographical indicators includes permanent worker, the share of working population, the number

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[100] Urban Magnet, available at http://www.urbanmagnets.com/how-an-urban-magnet-functions/ access on October 13, 2015

[101] Hospital infrastructure includes no of beds available in the hospital

of female employed, per capita GDP share and distance from the Kolkata. Two methods of composite indices have been used to measure the attractiveness of the each city. In the first method we used relative index to measure the social economic performance. Following is the formula of relative index.

$$\text{Normalized value} = \frac{(\text{indicator value} - \text{minimum value})}{(\text{maximum value} - \text{minimum value})}$$

In the second method the observations for each indicator are divided by the mean to get rid of the bias of scale without affecting the relative position of the data in the series. This transformation does not disturb the 'dispersion' of the indicators since the co-efficient of variation (CV) of the original series is retained as the standard deviation (or the CV) of the transformed series.[102] Then we added the scale free value of each indicator of a town and cumulative value represent the social or economic performance score of the town.

Further, these category indicator values are used for developing composite indicator values for various dimensions,[103] i.e. Social and economic and geographic. This provides a single number for comparing the level of attractiveness reached by a city.

$$\text{AI} = \left(\frac{\sum_{j=1}^{J} d_j^2}{J} \right)^{0.5}$$

where, AI= Attractiveness Index

d_j = Dimension "j", j = 1, 2, ..., J

J = Number of dimensions

Source Reddy and Balahandra, 2013

[102]A.Kundu et.al Indexing Human Development in India :Indicator, Scaling and Composition, Working Paper series 83, National Council for Applied Economic Research

[103]Reddy,S,B and Balachandra, P. (2013) Benchmarking urban sustainability-a composite index for Mumbai and Bangalore, Working paper 2013-008, Indira Gandhi Institute of Development Research, Mumbai

Social indicators indicate that Durgapur is a most attractive town while Kalyani is the least attractive. In first method second position occupied by Bidhannagar while in second method, it's Haldia which occupied second position. Economic and Geographic indicators also indicate that Durgapur is a most attractive town while Kalyani is the least attractive. Both methods indicate the same ranks. When we added the two dimensions using particular formula and comparing the four satellite town, it indicates similar result as in the case of social and economic indicators. Durgapur is the most attractive planned town. While Bidhannagar, Haldia and Kalyani occupied second, third and forth positions. What is remarkable is that Durgapur is the most distant satellite town among the four but due its strong economic base and social infrastructure it occupied top position.

4.0 Future Prospect of Planned Town Development

Planned new satellite town development in West Bengal is a spatial reorganization strategy within and outside the boundaries of Kolkata. The main purpose behind the development of the satellite town is to decongest the Kolkata, reduce the rampant growth and its associate environmental problem. Decentralization of urban area is also one of the purposes which emerged late 1980s. There will be a number of challenges that the state will face regarding the set up of new planned satellite towns. In fact, such challenges have been pointed out in a report by WBIDC (2008) stated that "It also needs to be recognized that West Bengal is a land critical State. It has only 2.7% of the total land area in the country with more than 8% of the Indian population. Out of the total land area in the State 61.9% is agricultural land, 13.5% is forest land, 5.0% is fallow or uncultivated land and 19.6% are urban areas. The projects in pipeline involving large investments in manufacturing sector for setting up of modern and environment friendly production facilities will require large tracts of land."[104] Policymakers of the state were opposed to the development of industry at the cost of agricultural land since "a very large number of

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[104]WBIDC (2008) Thirty Years of Left Front Government: A tryst with Challenges and Opportunities., p.24 Available at http://wbidc.com/images/pdf/TThirty_Years_of_left_Front_Government__Final_25.pdf

with respect to its population, economy and its attraction power. Moreover, future challenges to set up the new planned satellite town of the state have identified and how the neoliberal urban reform agenda shaping its space is noted.

Appendix 1

Performance of Social Category across Different New Towns

Towns Name	Method 1		Method 2	
	Composite Value	Rank	Composite Value	Rank
Durgapur	15.84	1	9.60	1
Bidhannagar	10.36	2	3.98	3
Haldia	7.29	3	4.22	2
Kalyani	7.16	4	2.72	4

Source: Data compiled by author

Appendix 2

Performance of Economic & Geographic Category across Different New Towns

Town Name	Method 1		Method 2	
	Composite Value	Rank	Composite Value	Rank
Durgapur	8.95	1	4.03	1
Bidhannagar	4.10	2	2.19	2
Haldia	4.03	3	0.92	3
Kalyani	2.89	4	0.48	4

Source: Data compiled by author

people have to be totally dependent on agriculture and allied sectors. It also remains a fact that land in most cases is the only means of livelihood of this vast section of people" what is remarkable is that in 2011 the new state government came to power and they are also against the land acquisition for the above mentioned purpose. Although they took two major steps to support the 'urban reform agenda' proposed in 1990s. The two steps include enactment of West Bengal Land Reform Act 2014 to provide holding of land in excess of the ceiling of 24.7 acres for setting of the new township.[105] Apart from this new township policy was notified in 2014 by the state government. It mentions that The State government will not acquire any land instead developer would procure land.[106] It is worthwhile to mention here is that recently the state government herself is declaring the formation of six new planned townships which include Debogram (Teesta-84.41 acres) near Siliguri, Bolpur (Gitabitan-127 acres) in Birbhum, Asansol (Agnibeena 50 acres) in Burdwan, Kalyani (Samridhi 50 acres) in Nadia, Dumurjala-50 acres in Howrah and Baruipur (Uttam City-86.2 acre) in south 24 pgs district. Land for these projects will be provided by the state government and the project will be collaborative.[107] Therefore, it's apparent that amount land will be the most challenging aspect to set up new planned towns of the state.

5. Conclusion

In this paper, we try to understand the how does the concept of planned satellite town emerge in Europe and later it spread across the globe. In India, purpose to build a planned satellite town was critically analysed with three phase framework. Planned Satellite town development in West Bengal as a case has been analysed. Four planned satellite towns of Kolkata has been analysed

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[105] CREDAI (2015)Investment Opportunities in Urban Development and Infrastructure in West Bengal, CREDAI, Kolkata

[106] Government of West Bengal. (2014) Formulation of Township Policy, Urban Development Department, Town and Country Planning Branch, Kolkata.
Available at http://www.wburbandev.gov.in/html/notification_downloads.html, Access on August 31st, 2015

[107] Government of West Bengal (2015) Investor Invited: Teesta, Gitabitan, Samridhi, Dumurjala, Uttam City, CMDA. Available at http://www.wbhidcoltd.com/uploads/announcement/Ann286.pdf

Appendix 3

Comparing Attractiveness of different planned New Towns

Town Name	Method 1 (Social and Economic& Geographic)		Method 2 (Social, Economic& Geographic)	
	Composite Index	Rank	Composite Index	Rank
Durgapur	12.86	1	7.81	1
Bidhannagar	7.88	2	3.66	2
Haldia	5.89	3	3.45	3
Kalyani	5.46	4	2.33	4

Source Data compiled by author

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