

CHAPTER-IV

LAND USE IN BARASAT TOWN

INTRODUCTION:

With advancing civilisation, population explosion and along with the attending problems, the question of land use has received the attention of the geographers, town-planners and administrators. The term, though appears simple in common-sense view, i.e., how land is put to use to serve various needs of mankind, on closer scrutiny, many varied dimensions emerge. Ownership of land and its uses has a long history behind it. In an extract from Mather (1986), we read of an encounter between Ahab and Naboth. Ahab wanted a piece of land from Naboth in exchange of another piece of land, or for money worth the land. But to Naboth land was not tradable; he had temporary rights of use but no permanent right of disposal.

The above story unfolds two contrasting concepts; One; land is a form of property and can be disposed of at will. Two, land is not just a piece of personal possession whose value is to be determined by market force; rather it is a form of common property for succeeding generations, or, in extended term, it is a common property for a community who has invested in it. This has given rise to a fundamental conflict between the land used under individual ownership and that used for the general welfare of the community. But recently the trend is to exert increasing control over individual landed property by central and local Governments. This increasing intervention on the part of the local or state administration has introduced certain checks and balances so that community welfare is assured. This is noticeable in a

country like India. In planned areas like Kalyani or Durgapur town, state acquisition of land is of basic importance. In areas where transition from rural to urban nature is gradually but noticeably present, intervention takes place gradually as the needs arise. This is an ad-hoc approach. It was the general picture in West Bengal till CMDA/CMPO came into being to take over responsibilities. Their functioning requires an extensive survey, probable migration and probable extension of the city area, recognition of fringe areas, the projected profiles for years to come, and advanced planning. Therefore, planned land use is a concept for the development and welfare of the community.

Land use is the surface utilisation of all developed and vacant land on a specific point at a given time and space (Mondal. 1982). The primary uses of land are for crops, forest, irrigation, pasture etc. Later on, land use needed for recreation, industrial and commercial purposes. It is not normally possible to use land for two or more purposes simultaneously, though sometimes this is even possible. Vink (1975) adds, "Land use is the result of a continuous field of tension created between available resources and human needs acted upon by human efforts". Intensive land use is heavily dependent on the concentration of population, the needs of the economy through agricultural production (to account for the paucity of land, high yielding variety crops are encouraged to lessen the over-use of the agricultural land), the concentrated human settlement, industrial, commercial and transport lines, sewage, parks etc. Thus, extensive uses of land depend upon the population, dispersed settlement or the absence of a well-laid network of communication. Urbanisation means systematic and intensive utilisation of land, so that economic and social welfare can be promoted.

The term "land use survey" includes all those surveys used to register the different aspects of land use as they exist by now. This means the survey of present land use depends upon the scale and the purpose of study. The word land use survey initiated by Sir Dudley Stamp under the auspices of International Geographical Union is a typical example of a general land use survey. The investigator refers to Sir Dudley Stamp because in Indian land use, survey is mostly carried out after the pattern initiated by Stamp. It was he who pioneered the land use map in U.K., which enriched food production and agriculture on more scientific basis.

In 1930, Stamp established an independent research organisation "Land utilisation survey in Britain" (Mondal, 1982). During the war of 1939-45, Great Britain, facing an acute food storage, started "Grow more food" campaign and increased the production by 7%. Therefore the efficacy of land use survey is beyond doubt. Improved techniques have referred to the production of land use map. Aerial photography, mapping technique, addition of new dimensions and intensive field survey have made the land use survey theory a useful tool in the hands of planners. As expected, Stamp was the principal inspiration behind it. He attended Indian Science Congress at Calcutta in 1983. The platform became the inventories of a descriptive catalogue of various types of land use, it then gave rise to regional descriptive accounts of land use variation moving further to the quantitative techniques in the analysis of various land use components (Mondal, 1982).

Dr. S. P. Chatterjee was the person for the ordering and systematising of land utilisation survey. In his presidential address before the Geography and Geology Section of the Indian Science Congress Association in 1940, he

pointed out the necessity of the land use survey. He himself conducted a study on districts of 24-Parganas and Haora.

The ultimate goal of land use study, whether in urban and in rural areas, is the optimum use of the available land for the welfare of the community. Land can not be increased in the sense of producing agricultural output through the inputs of improved techniques and technologies. The total quantum of land is static. Moreover, the cities are not growing out of natural process of the society; community plans for it, restricts its growth from within or from without. Hence land use is a primary concern of the geographers and city planners. The broad spectrum can serve as a background level. But suggestions should be specific to accommodate the views of the town planners, urban geographers, the administrators, the demographers, etc. They usually look into the problems of immigration, the exodus, the growth of slum areas, small-scale industries planned and unplanned, the emerging new establishment and decentralisation of Government Departments etc.

4.1 CLASSIFICATION OF LAND USE :

Bertholomew (1955) in the United States forwarded the simplest classification of land use. The investigator sticks to the concept because in India urbanisation follows this pattern excepting the cause of planned centers, e.g., Durgapur, Kalyani, etc., where the plans were made from below, no ad-hoc planing had any room in these cases. Bertholomew divided a town primarily into developed and under-developed areas. The investigator leaves out the question of under developed areas for the present. The developed areas were again subdivided into privately developed and publicly developed area. The former is an area where private

enterprises play the dominant role, though corporation/municipalities, pollution control boards, etc. intervene from time to time. Housing boards, co-operative societies, private developers, etc. usually have key roles there. In publicly developed areas the authority concerned undertake the problems of city planing with the forward looking angle. Apart from housing, they develop parks, amusement centres, streets, schools and colleges, playgrounds, open space, etc. In these days of joint ventures and decentralisation, both publicly and privately developed areas work in conjunction. Therefore, the battle between the planners and urban geographers have narrowed down. They have agreed to a consensus of land use and the classification made by them is as follows and this classification is followed by the author of this study.

TABLE- 4.1 SHARE OF LAND UNDER DIFFERENT USES OF BARASAT TOWN (1999)

SL. No.	Category	Share of Lands (km ²)	Percentage to total
I	Residential	19.904	57.69
II	Public and Semi Public	0.340	0.99
III	Industrial	0.275	0.80
IV	Transport and Communication	0.111	0.32
V	Slum	1.078	3.12
VI	Commercial	0.637	1.85
VII	Mixed use of Residential, Commercial and Industrial	0.648	1.88
VIII	Open space	0.972	2.82
IX	Streets and Roads	3.072	8.90
X	Agricultural	5.664	16.42
XI	Utility Service	0.402	1.16
XII	Water bodies	1.397	4.05
Total		34.50	100.00

A graphical representation is provided along with the table

**SHARE OF LAND UNDER DIFFERENT USES OF
BARASAT TOWN
(1999)**

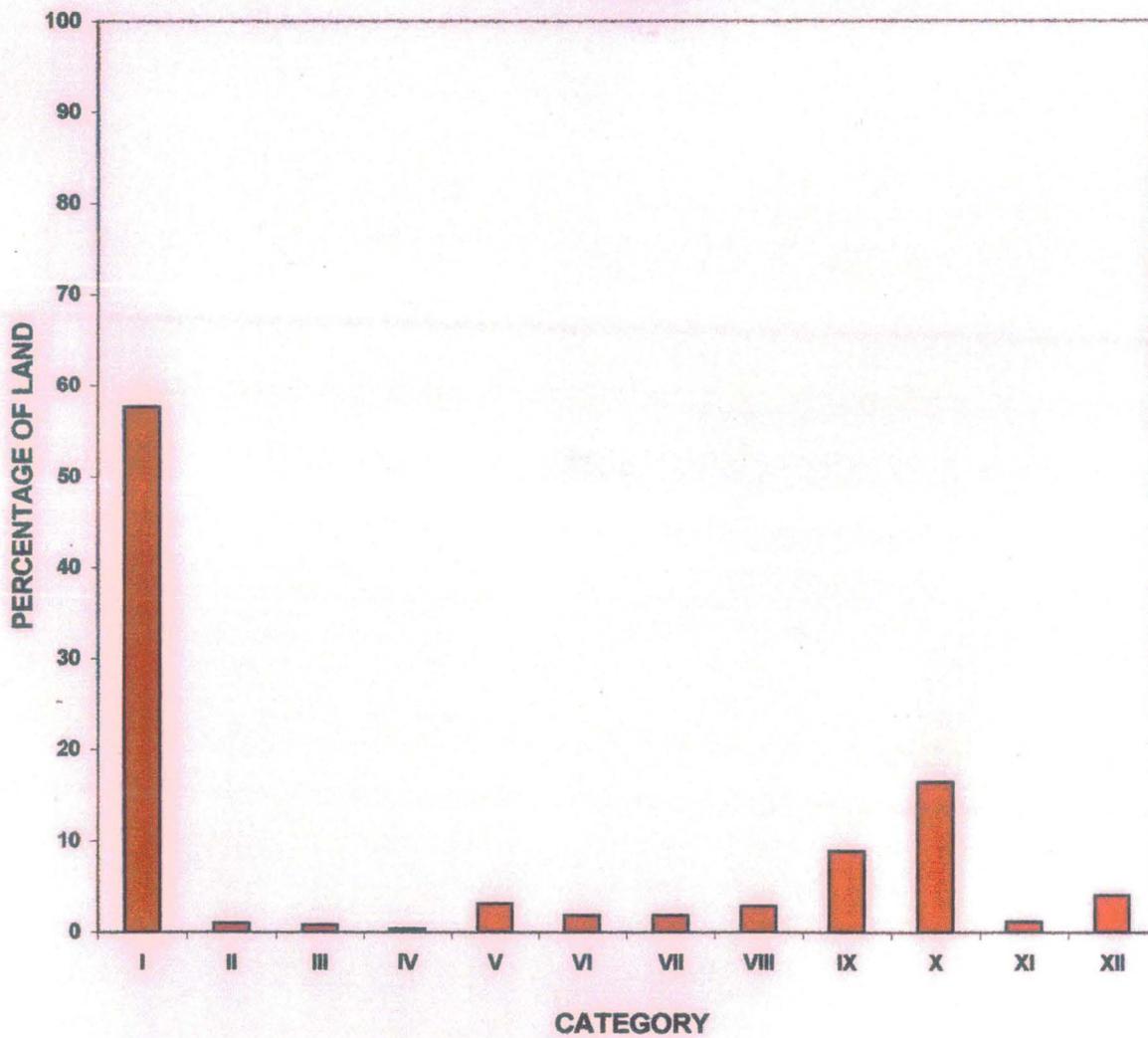


Figure - 4.1

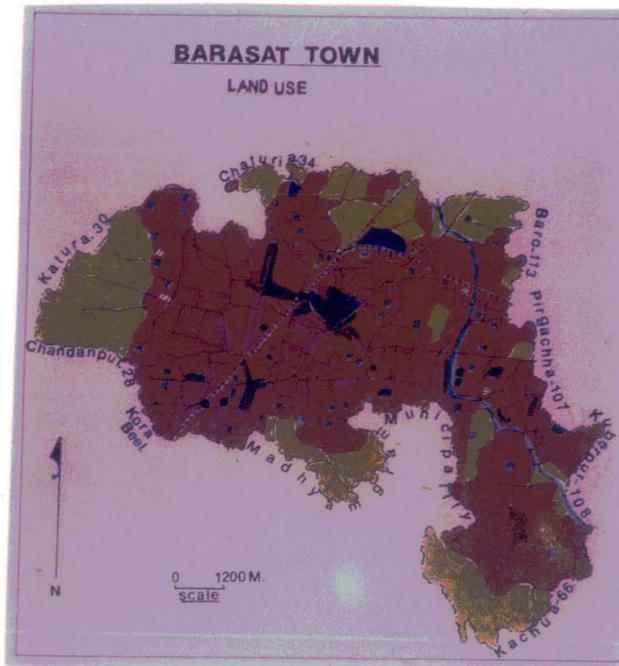


Plate - 8. Land use of the Barasat Town



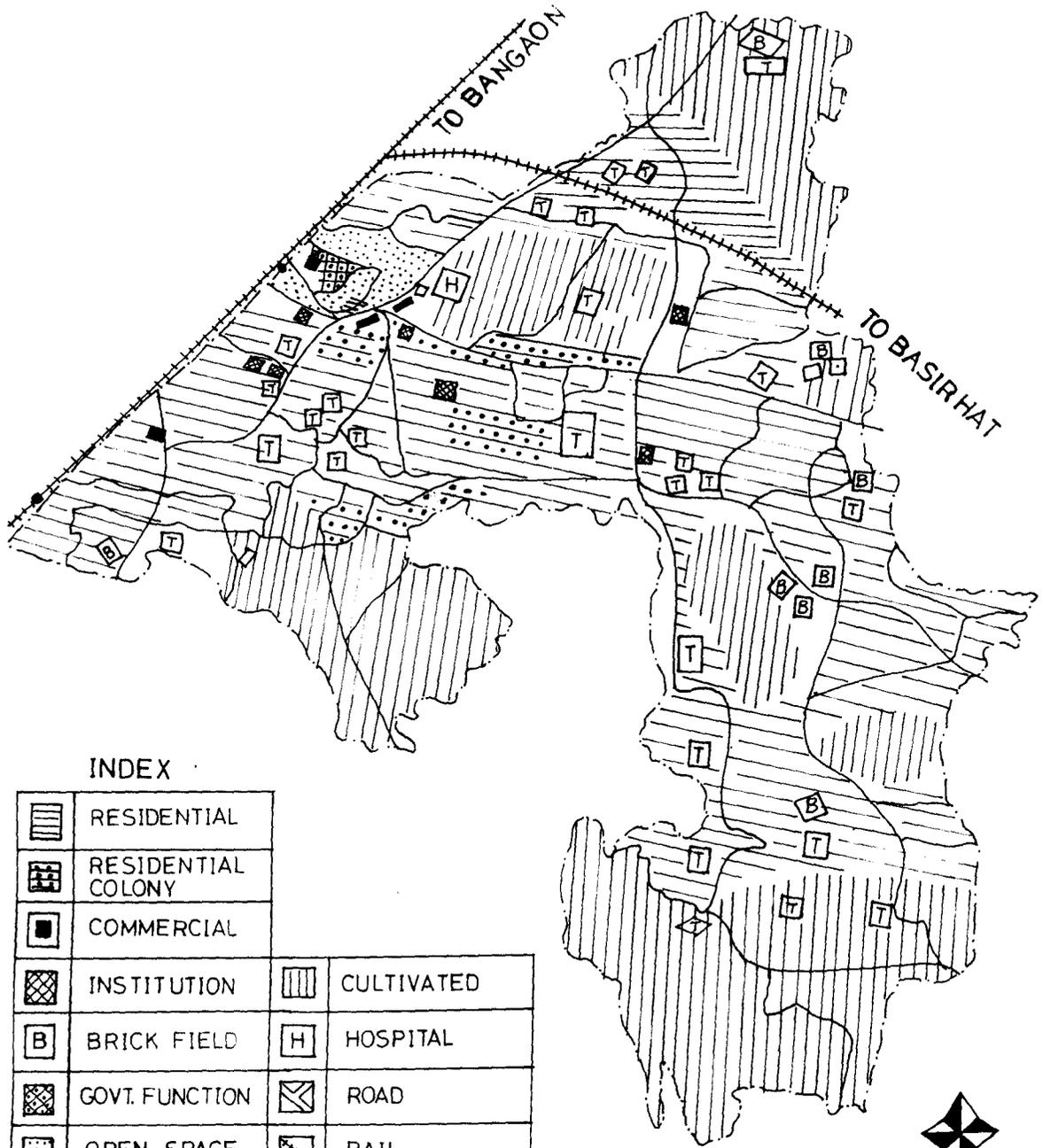
Plate - 9. Index of Land use of Barasat Town

4.2 PAST LAND USE PATTERN:

The study area was not quite congested before partition. In the 1941 census, population was 11,230, but after two decades it increased to 29,281. The congestion was mainly due to the influence of refugees. Numerous colonies sprang up here and there. Some of these were patronised by the government by sanctioning housing loans. Others were established by private initiatives. Though these are mostly new settlements, lack of planing is evident. It is seen towards the south of Taki Road in the erstwhile Prasadpur mouza. There are Vidyasagar Colony, Asutosh Colony, Shktinagar Colony, etc., (Fig-4.2). Saktinagar is situated partly in agricultural land and partly in built-up area, but Vidyasagar Colony was situated in built-up area. Erstwhile Uttarhat mouza, towards its Eastern fringe of the study area there is Kalikapur Colony. Most of the mouzas were covered with agricultural land. So, it appears that some colonies were established outside the already built-up area. Other colonies are Purnanagar Colony, Aswini Colony and Charakdanga Colony. A major portion of Ghola and Uttarjhat mouzas were covered with jungle with old habitation scattered in the area. It was infested with malaria. Today the areas are reclaimed, malaria having been eradicated. The south Vivekananda Road was not congested till 1971. But with rapid development of colonies, the south of the road is gradually being congested.

Ghola is situated towards the south of Uttarhat mouza on the south of Taki Road. It had a different type of land use characteristics. Agriculture was predominant here till 1975. Waste land was also predominant. Agriculture was heavily dependent upon rainfall, with small irrigation facilities from Madhumurli tank. Commercial or large-scale farming was impossible as fragmented ownership of land was the order of the day. Subsistence

PAST LANDUSE OF BARASAT TOWN (1971)



INDEX

	RESIDENTIAL		
	RESIDENTIAL COLONY		
	COMMERCIAL		
	INSTITUTION		CULTIVATED
	BRICK FIELD		HOSPITAL
	GOVT. FUNCTION		ROAD
	OPEN SPACE		RAIL
	TANK		RIVER

600 0 600m
SCALE



Fig.—42

agriculture was predominant with rice, peas, tomatoes etc. These are mostly for local consumption. Around Sunti river some patches of fallow land are available. This area is a part of old Barasat with a mixture of brick-made building and thatched huts. The later is slowly but inevitably being replaced by permanent houses made of bricks. Brick-fields were available around Madhumurli Tank.

Uttarhat is the largest mouza till 1995 with an area of 172 hectares (Fig.- 4.3). It is enclosed by river *Sunti* in the east, Taki Road in the south and a little away towards the east by Jessore Road. Till 1971, It had agricultural lands towards the south with built-up area in the north. Waste lands were also visible at that time. Some scattered tanks were also available. Agriculture was principal occupational activity, with rice and jute predominating the output. Whenever small plots of lands were available pulses, beans, vegetables were shown and harvested. Kalikapur Colony was mostly covered with jungles. Old settlements and scattered houses were visible a few years ago. A local hat is still functioning. The area is gradually yielding to the encroaching urbanisation pressure.

Agriculture and other primitive modes of production, i.e., pottery, smithy, basket-making, jute-coir making, fishing etc. are going away as being incapable of sustaining the livelihood problems. Municipal and other surrounding areas depend on business, service activities, administrative jobs, education, health services and other activities of livelihood.

City mouza towards the north has some brick-fields, a few tanks, residential areas, and the rest was the vacant land (agricultural and orchards etc.). Maheswarpur in the far south is a big area, residential area occupied a chunk of land; more water bodies, tanks and agricultural lands were visible.

ERSTWHILE
DIFFERENT MOUZAS OF BARASAT TOWN

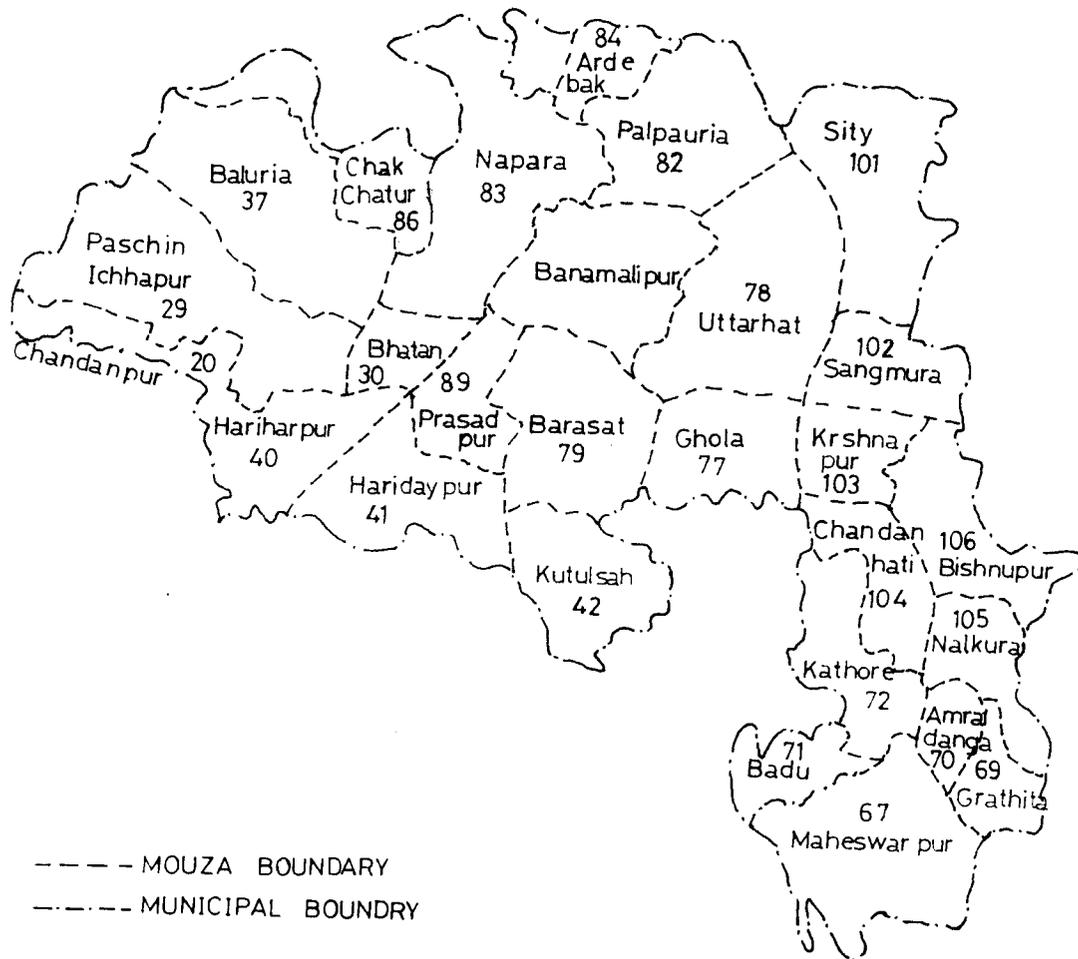


Fig-43

As one moves further away from the central area (Bonmalipur, Prasadpur, Ghola and Barasat mouzas), vast tracts of agricultural land and some brick-fields were noticed. The economic activities around the brick-fields were only fishing and agriculture. Even refugee colonies away from the Barasat station had fewer chances of earning livelihood.

4.3 PRESENT LAND USE PATTERN:

4.3.1 Residential Area:

The town started with an area of 20.25 km². With re-alignments of old wards and the addition of new wards, the net area now becomes 34.50 km². The residential area consists of 19.904 km², which comprises 57.69% of the total area of the town. The different categories of percentages of residential area are shown in table 4.2.

TABLE- 4.2 IDENTIFICATION OF WARDS IN DIFFERENT CATEGORIES BASED ON PERCENTAGES OF RESIDENTIAL AREA TO THEIR TOTAL.

Percentage of Resi. Area to its total	Category	Wards	No. of Wards	Wards as percentage to its total no.
11-30	Very low	II, XXVI, XXVIII	3	10
31-50	Low	I, XV, XVIII, XIX, XXII, XXVII	6	20
51-70	High	III, IV, VI, VII, XI, XII, XVI, XVII, XX, XXV, XXIX, XXX	12	40
71-90	Very high	V, VIII, IX, X, XIII, XIV, XXI, XXIII, XXIV	9	30
Total			30	100

From table 4.2 it is revealed that 71 to 90 percent of the residential areas are covered by 9 wards. The ward no. V, VIII, IX, X, XIII, XIV, XXI, XXIII, and XXIV. High category (51-70%) residential areas include a maximum of 40 percent of the total no. of wards. Low category (31-50%) of residential area as comprise 16.67 percent of the total wards. Such as ward numbers I, XVIII, XIX, XXII, and XXVII. Very low category comprises only 3 wards. Such wards have covered 21 to 30 percent of the total area and these wards are no. II, XXVI, XXVIII and the disproportionate distribution of residential areas is not easy to explain because in demographic studies no one to one relation of cause and effect exist. However a crude explanation can be attributed.

Very low residential area:

Only 3 wards (II, XXVI, XXVIII) i.e. 10% of the no. of wards, of these 3 wards, ward II 36.43% of the area is covered by streets and roads. Commercial area covers 30.18% - thus very little space is left for purely residential purpose. For ward XXVI agricultural land predominates (48.52% of the total area), streets and roads occupy (8.50%). For ward XXVIII, agriculture (56.65%), roads (6.5%) are noticed. Leaving aside public and semi-public areas, and commercial areas, very little is left for residential activities.

Low Residential Area:

Wards I, XV, XVIII, XIX, XXII, XXVII fall in this area. Ward I – Open space (18.64%), streets and roads (18.18%), commercial (10%). This is the old area. The court is here – it is administrative functional area – hence, a large amount of Government acquired open space remains. Very little

provision of private residential space remains. In ward XV – areas for Agricultural (32.98%), and for water bodies (11.43%) are seen. So, residential blocks have little area to be developed. Ward XVIII has 48.80% agricultural land. It is away from the central function and market area. Such areas develop later. Accessibility of the bus and railway routes is low. Ward XIX – shows Agriculture (27.78%), and water bodies (11.56%) - Other areas are occupied by slums, streets and roads etc. Ward XXII – occupies 23.04% for agriculture, 6.74% for streets and roads, 5.87% for water bodies, low percentage of residential area is natural. Ward XXVII has Industrial area (6.27%), slum (6.80%), 24.48% for agriculture and water bodies 5.03%. Low percentage of residential area is expected .

High and very high residential area:

The reason for high and very high percentage of residential areas are almost the same, i.e. the geographical location. A look at the Fig-5.3 will show that ward III, IV, V, VI are situated by the railways. So the wards XXX, XXIX, XXV, etc. are on the opposite side of the railways. Moreover, important roads i.e. Jessore road (NH-35), Krishnagore road (NH-34) run through adjacent to these wards. It is natural the people tend to gravitate to places of easy communication. Some of these wards belong to old Barasat - Glamour, aristocracy, togetherness etc. are the causes of concentration. Apart from ward VI, the others have no agricultural land; So, also wards XXIII, XXIV and XXV.

The cost of land, concentration of offices, transport and administrative headquarter, educational buildings diminish the space for housing. There is an inverse relationship between the size of the town and the space occupied

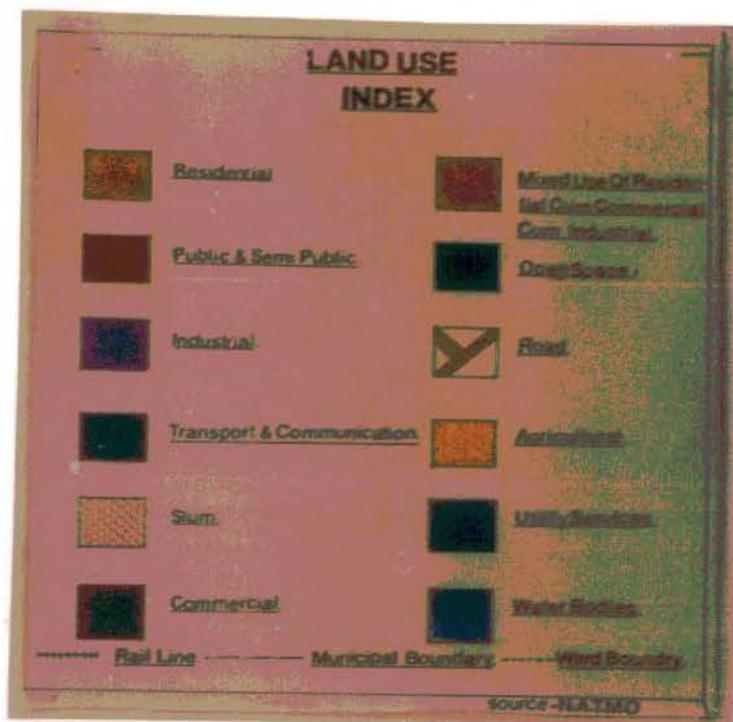


Plate - 10. Index of Land use of Barasat town (wardwise)



Plate - 11(1)

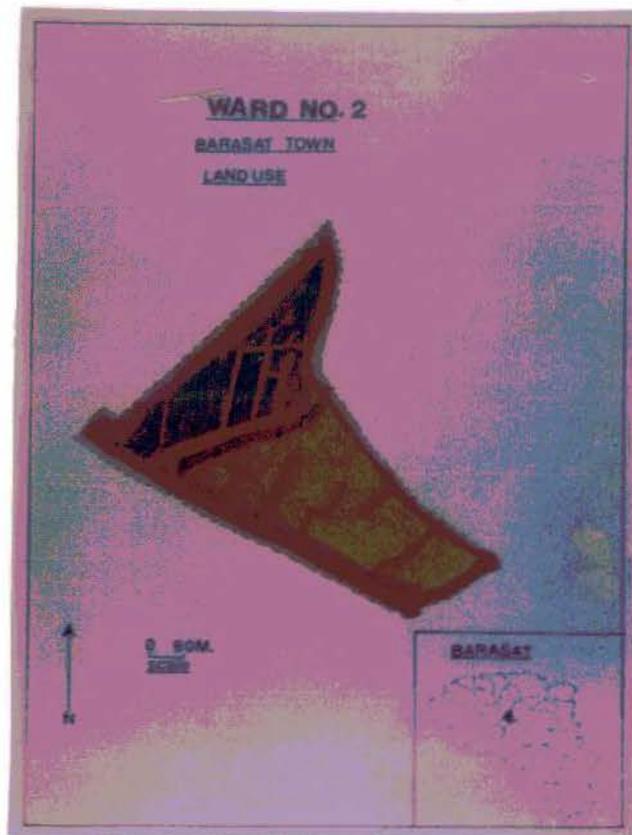


Plate - 11(2)

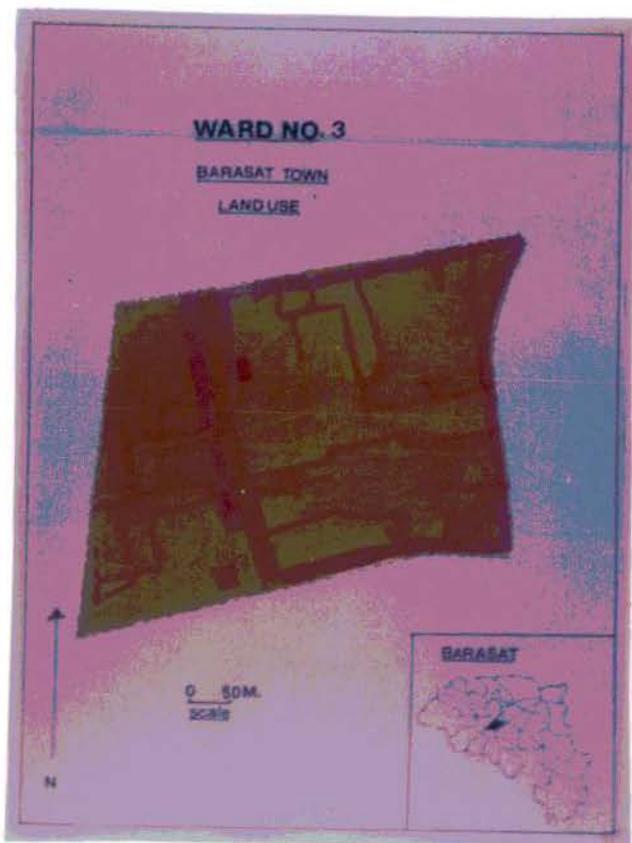


Plate - 11(3)



Plate - 11(4)

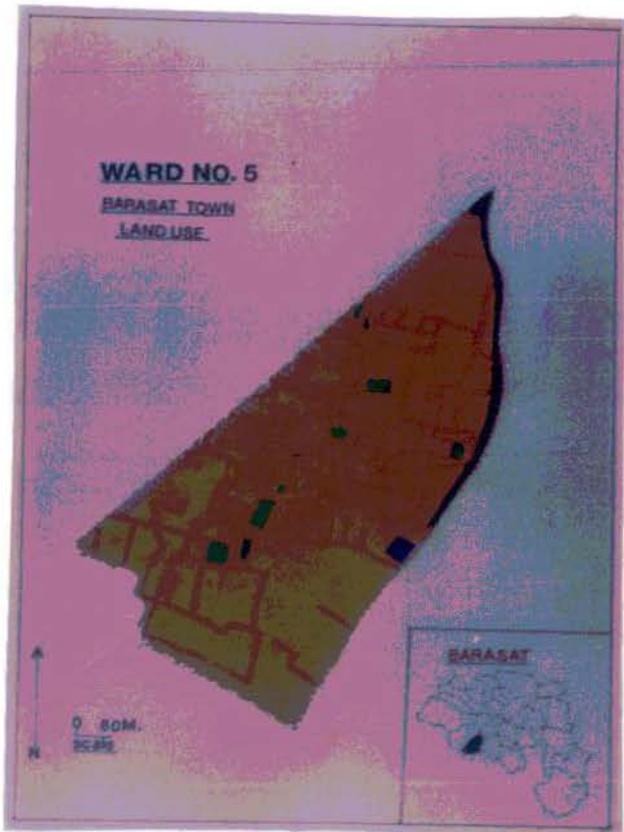


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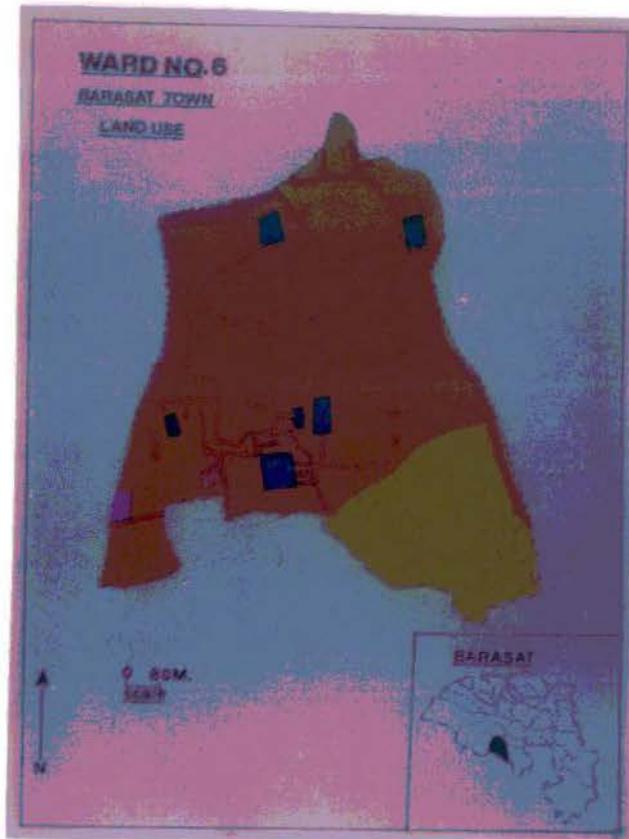


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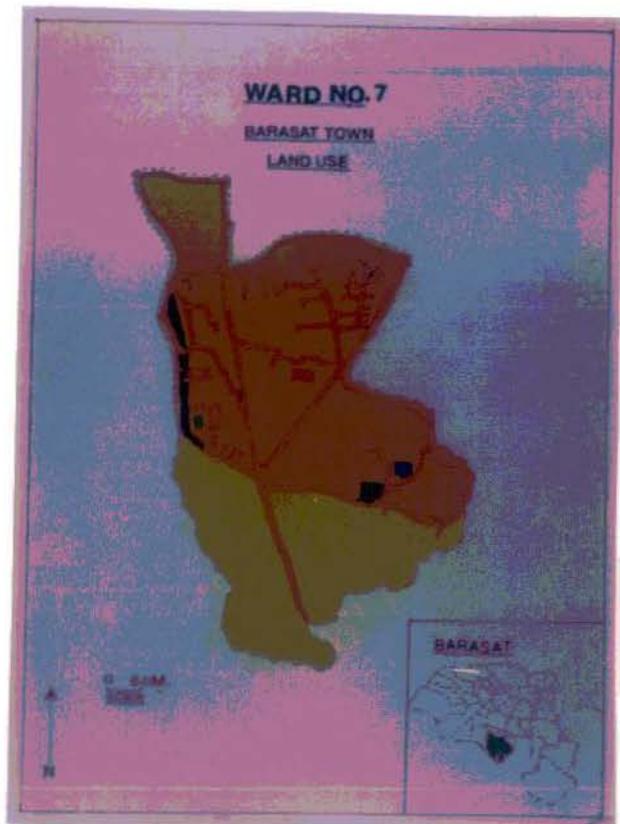


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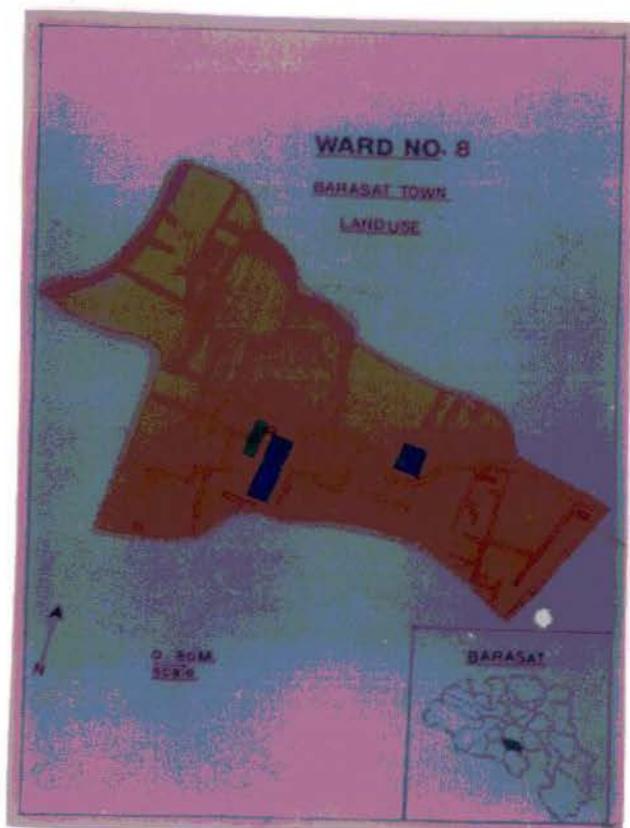


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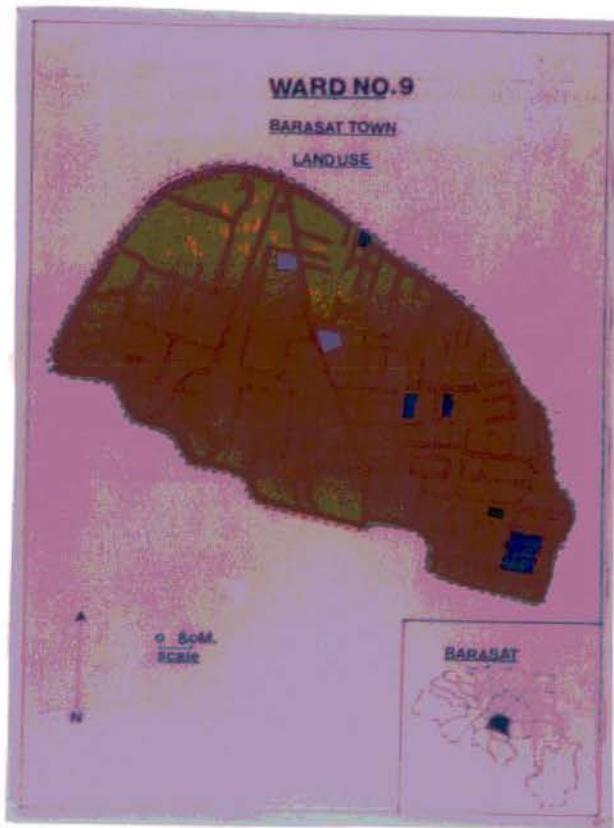


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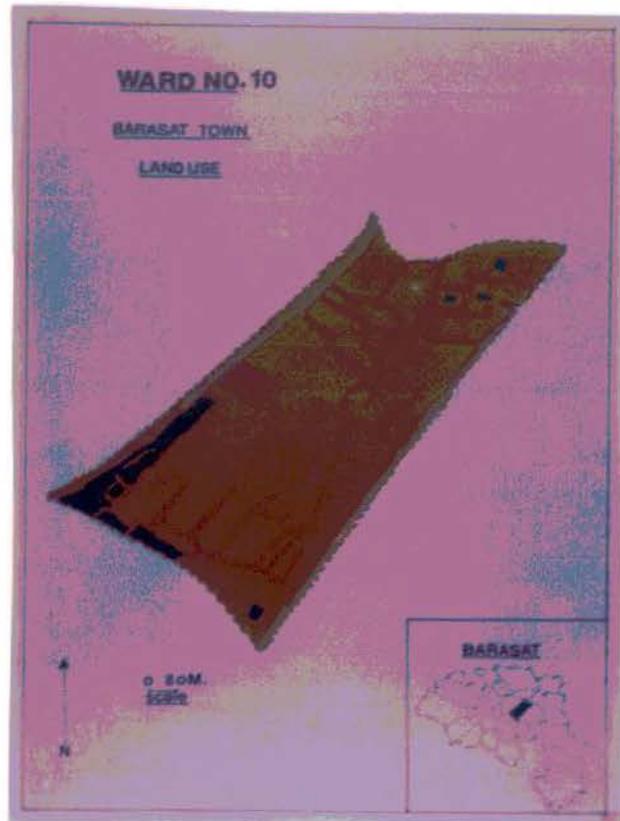


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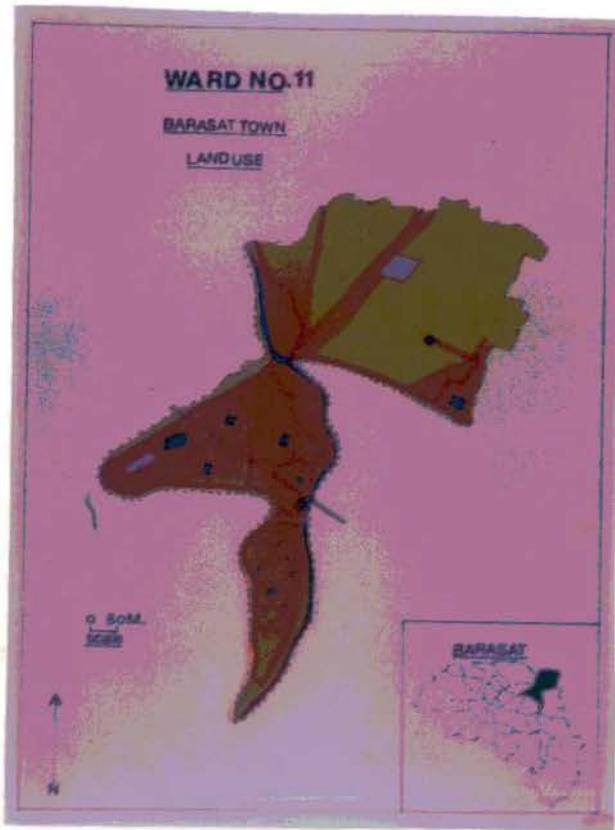


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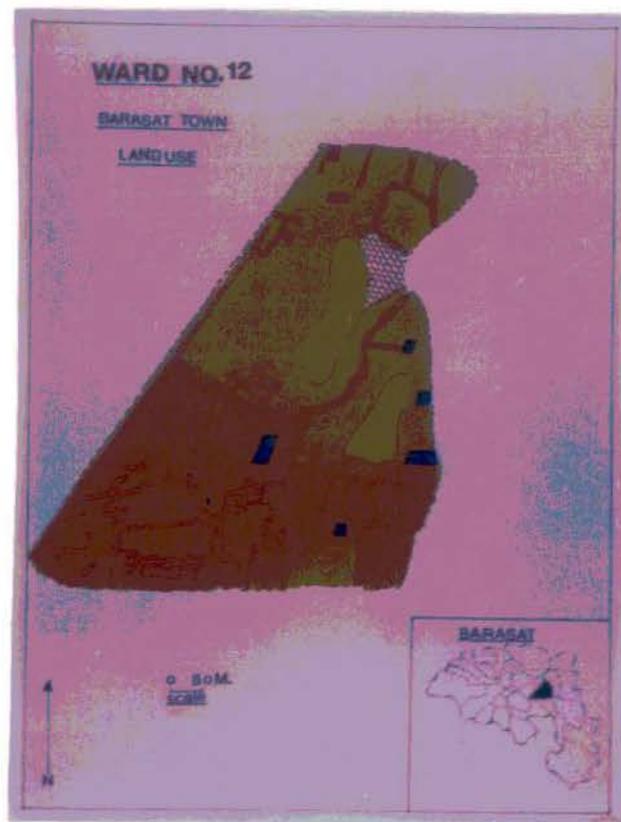


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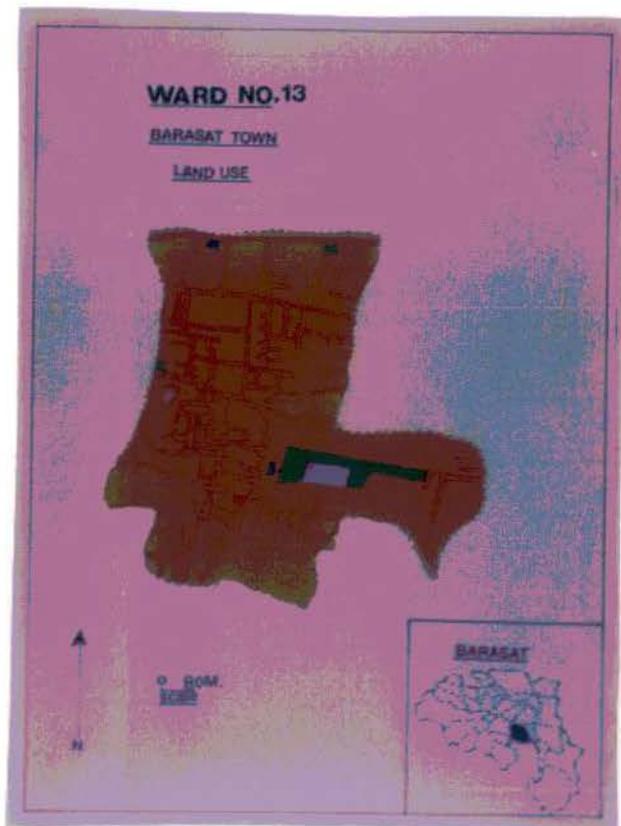


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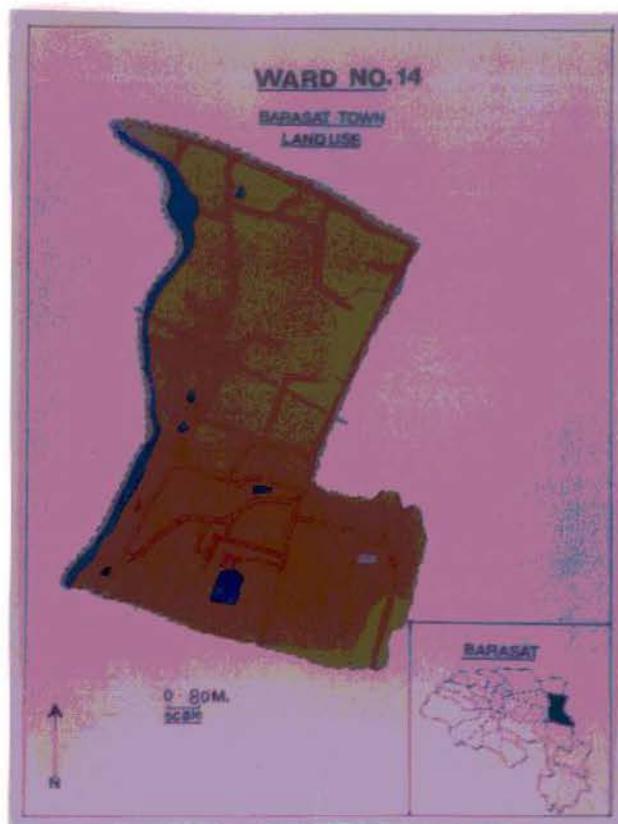


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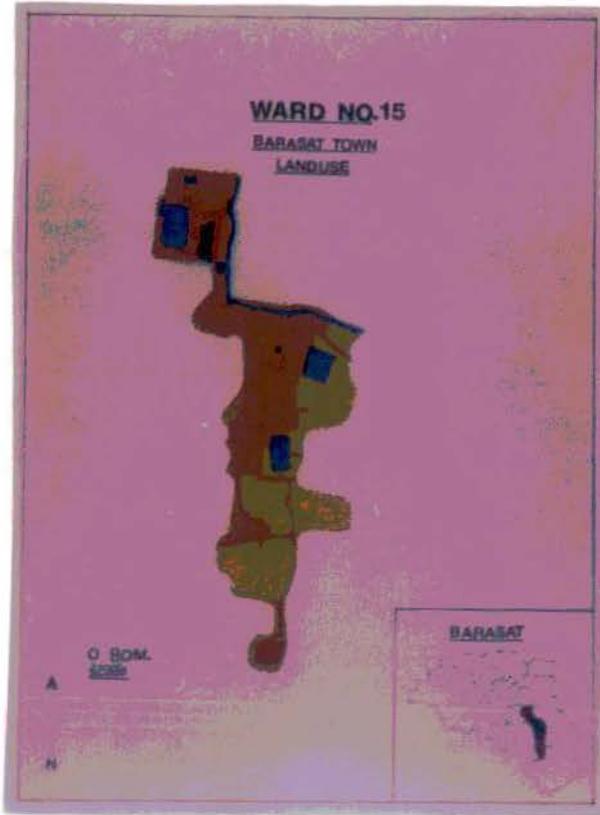


Plate - 11(15)



Plate - 11(16)

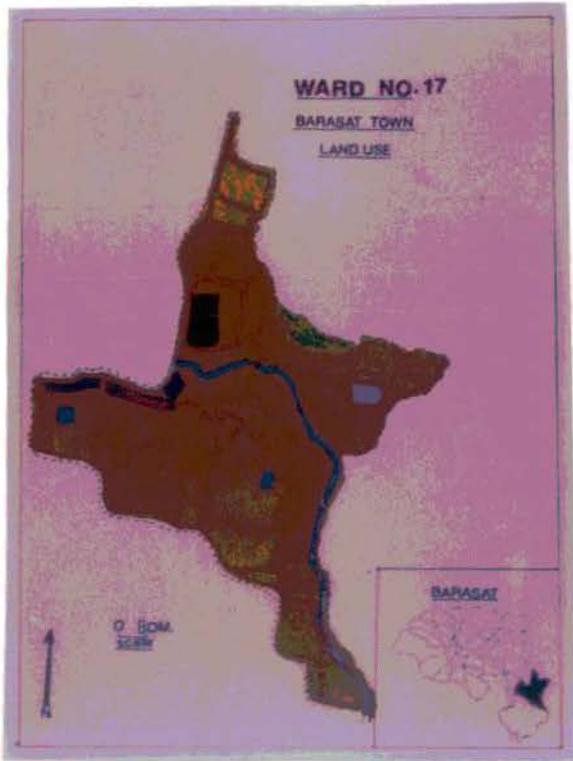


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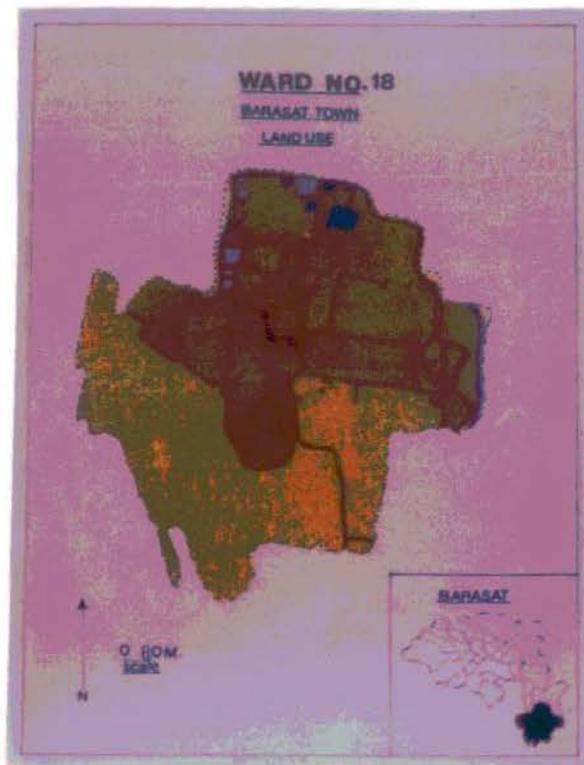


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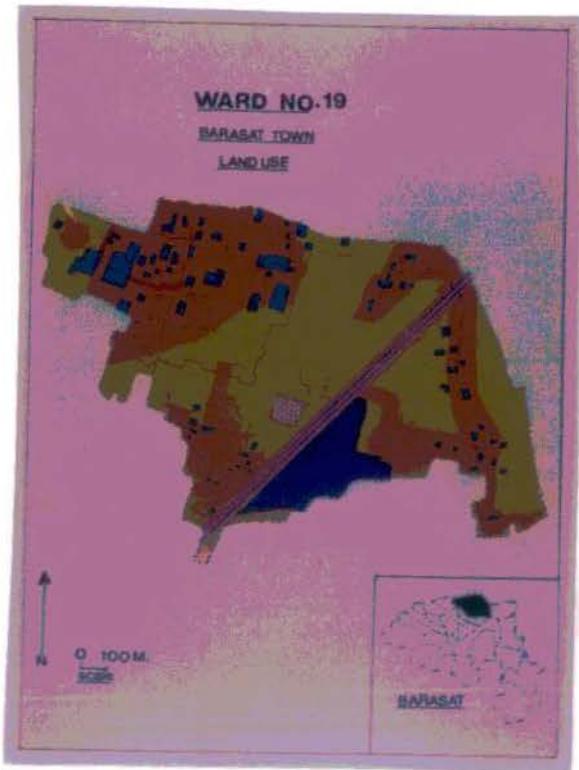


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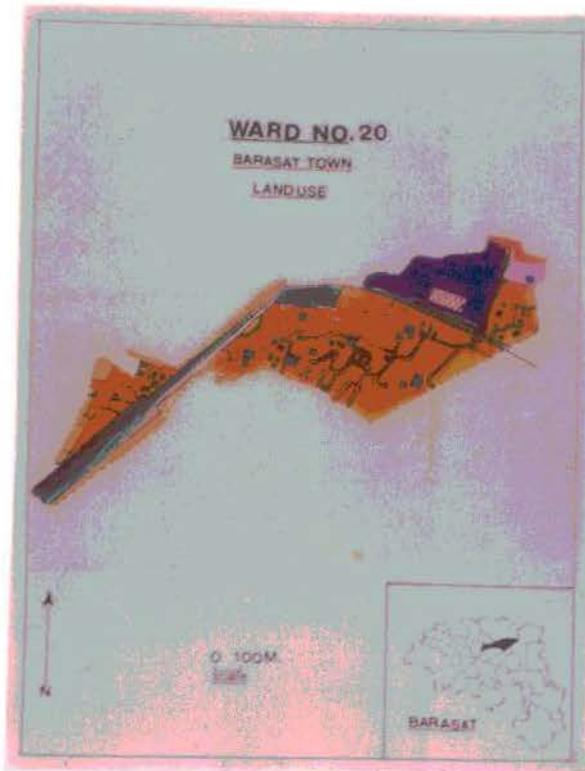


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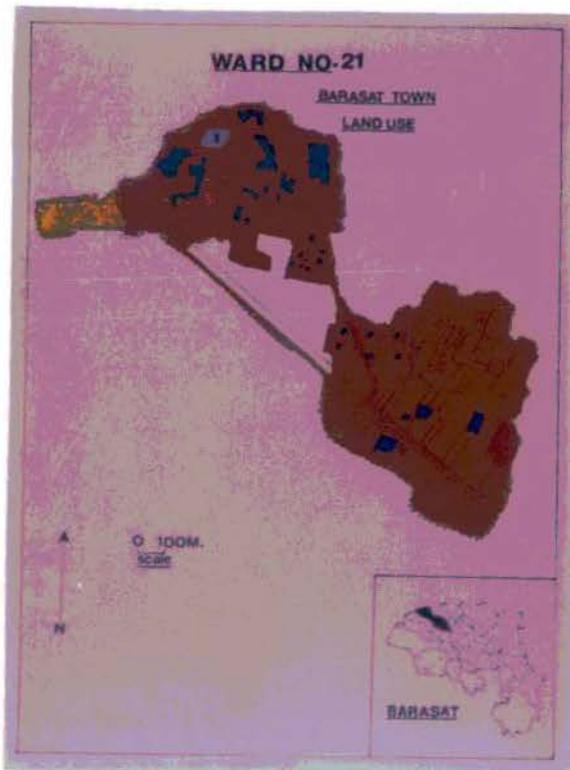


Plate - 11(21)



Plate - 11(22)

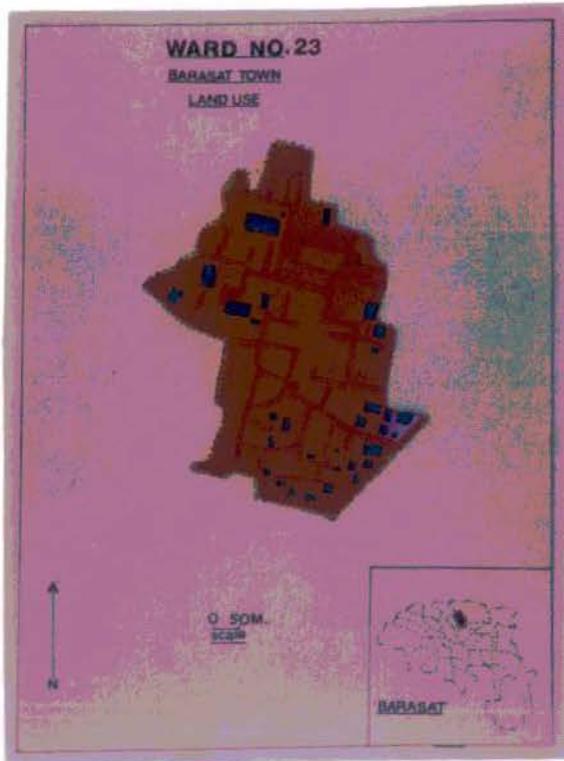


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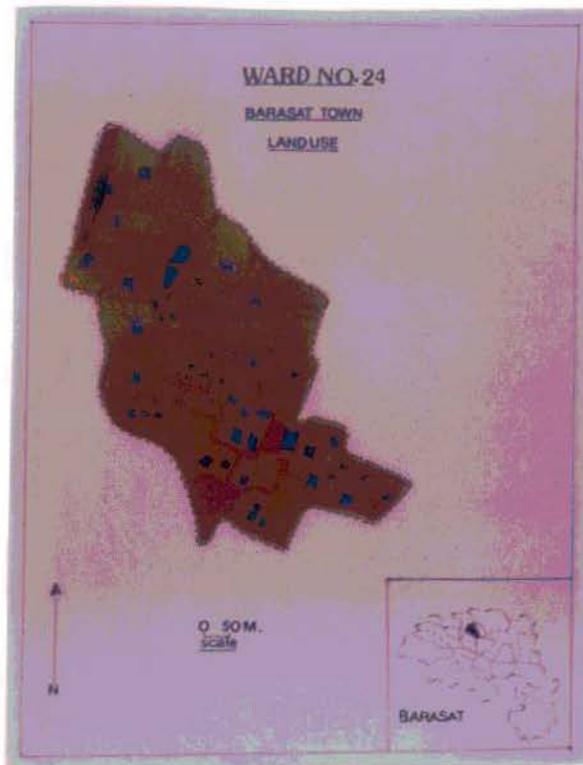


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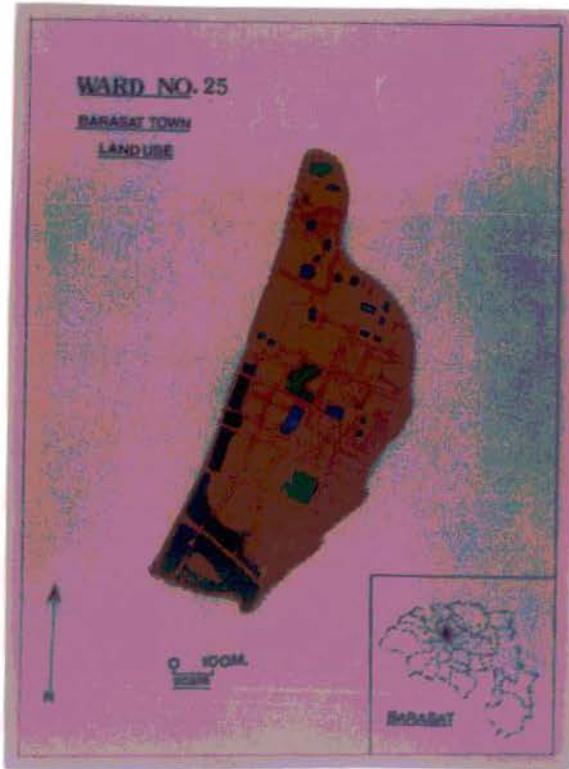


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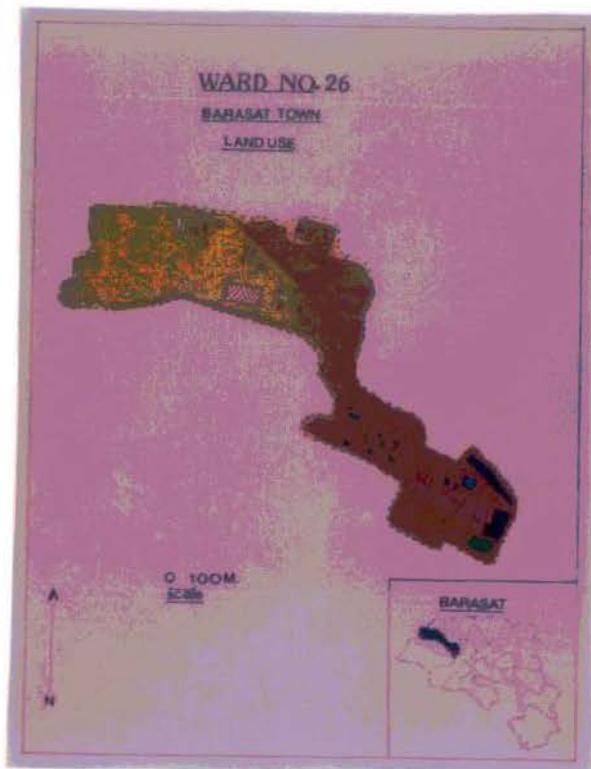


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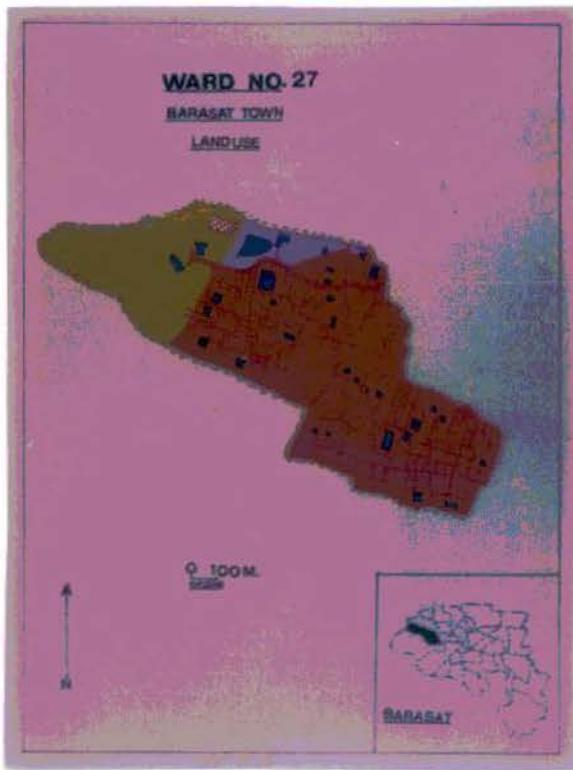


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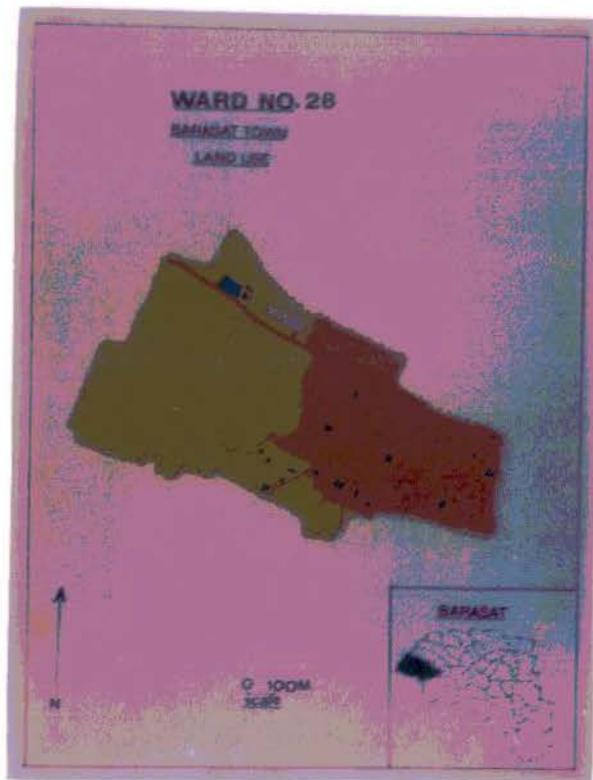


Plate - 11(28)



Plate - 11(29)

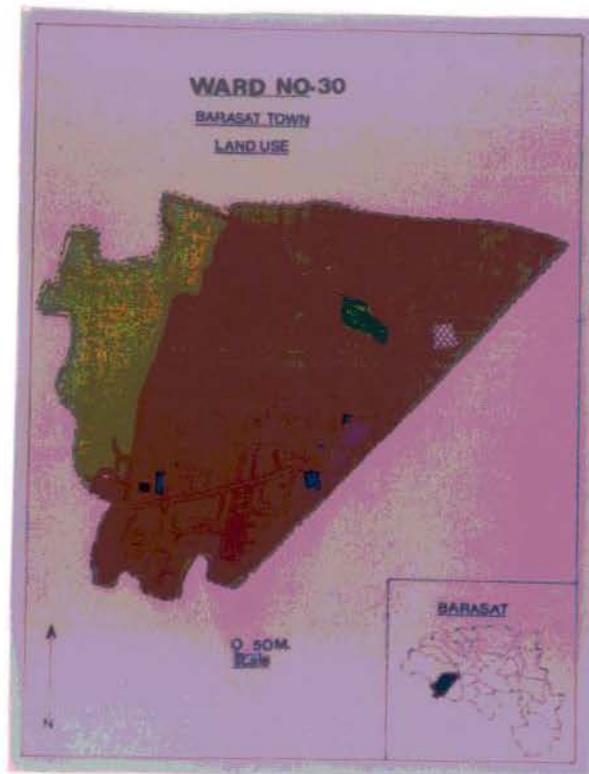


Plate - 11(30)

by its residents. This means the smaller the town the larger the area under residential use (Attaullah, 1985).

4.3.1a Slums:

Slums are eyesores of every urban settlement. This is a paradox in urbanisation process. The city is planned with efficient mapping of settlement for different categories of people of varying socio-economic status. But slum emerges within the stone-throwing distance. Slums are characterised by poor housing (A very low area per capita for living) heavy congestion of houses, poor sanitation - not that poor people of city are evicted and they converge in the slum but migrant rural people ascend in slums. For them towns/cities provide avenues for income but not space for living. It is characterised by insanitary conditions for living and breeding ground of deadly diseases like tuberculosis, hepatitis. etc. and some social vices alcoholism, immorality etc. So urban planning has a compulsion for development of slum area. The study area, from its developmental history, especially after the partition, has seen the growing of slum areas.

Table 4.1 shows share of lands under different uses and gives a picture of slum areas which comprise 3.12 percent under different wards. Slum appeared in 13 of the 30 wards. (Wards III, IV, V, VI, XII, XVI, XIX, XX, XXII, XXVI, XXVII, XXVIII, XXX) i.e. the little less than the 50% of the wards had developed slums. The total area occupied by slums is 1.078 km² much larger than commercial areas, open space areas. Refugee flow is a prominent cause no doubt, but this flow will remain. Neither the C.M.D.A. nor the municipal authorities have drawn any plan worth the name to stop the emergence of slums areas. Slums can not be abolished – the conditions of the slums areas can be improved. C.M.D.A. did not think of removing slums



Plate - 12. A view of slum dwellers



Plate - 13. A view of slum houses

but thought of improving slums. They provide sanitary latrines, removed ordinary latrines with a timeframe, made arrangements for steady supply of drinking water, arranged better municipal services. Barasat should follow the same way. Slums can not be wiped out, it can be bettered.

4.3.2 Public and Semi public:

By public and semi-public land area, it means the space occupied by those institutions and offices which are government or semi-government by nature. Being a district town, schools and colleges are naturally more in number than in other areas. The maximum area covered under government offices, courts, school and colleges are situated in the central area. Increased rate of public and semi-public areas indicates that urban process takes place properly. Though the study area is a district town, but only 0.99% of the total area under this head is not at all satisfactory. It occupies 0.340 km² of the total land.

4.3.3 Industries:

An urban complex can be made by other process. A centre of industrial district around which concentration of settlement of areas, i.e., where the chief industrial area is surrounded by housing area. On the other hand it may also happen that the housing area is centrally located and the industrial area is lying in the peripheries. For sound economic health of the town, the area occupied by industry and the settlement area should be proportionate. In the study area, land occupied by industries is negligible, but various types of small industries are located in the peripheral area. While some light industries have been located in the peripheral areas to gain a larger proportion of land. There are still strong ties between certain light



Plate - 14. *New Administrative Building*



Plate - 15. *Brick Field (Traditional Industry of Barasat)*

manufacturing processes and the central area (Bertholomew, 1955). But Barasat is not such an area. Ward XXI and XXVII located on the side of the Barrackpore road, devote maximum land for industries among all the wards. Several types of industries like brick-fields, oil mills etc. are noticed in the study area. Food processing is another important industrial activity in the study area. Industrial area occupies 0.275km², i.e. 0.80%, which is not a very significant part of the total land. Industries in a classified way is given below. (Table 4.3).

TABLE NO.- 4.3 DISTRIBUTION OF DIFFERENT FACTORIES IN BARASAT TOWN (IN PERCENTAGE)

SL. No.	Type of the factory	Percentage
1	Chemicals	3.67
2	Food Products	8.85
3	Brick Fields	4.75
4	Engineering	25.49
5	Carpentary	13.82
6	Tailoring	23.11
7	Glass Materials	1.73
8	Lamp Manufacturing	1.08
9	Chilling Plants	4.54
10	Husking And Grinding Mills	3.46
11	Oil Mills	4.32
12	Foam Bag Manufacturing	3.46
13	Hand Globe	1.29
14	Fabric	.43
Total		100.00

Source – Field Survey, 1998.

It is revealed that the town possesses maximum number of small engineering industries, i.e. 25.49 percent. But other small industries like tailoring amounts to 23.11 percent, food products to 8.85 percent, carpentry to 13.82 percent. Chilling plants are developed in several wards for the preservation of fishes and raw vegetables, which are mainly distributed from the heart of the town.

4.3.4 Transport and Communication:

In land use, transport is an important consideration for carrying out various economic activities as mobility of people is the core of human activity. Transport and communication occupy 0.11 km² of land, which is 0.32% of the total area. The amount of land use for these purposes depends upon the importance of the settlement. In this transportation network, the location of the area and the economic importance of the complex play important part of the land use (Bertholomew, 1955). The study area of wards I and XIV is significant for the transport terminus. Sealdah – Bangaon rail line along with the Barasat – Basirhat – Hasnabad branch line and two railway stations constitute a most vital part of the study area. The study area is located 45 minutes to 1 hour of time-distance by bus and 30 minutes by train from metro core.

4.3.5 Commercial Area:

The commercial area occupies 0.637 km², 1.85% of the total area. Wards I and II are very significant for commercial activities and their commercial areas cover 0.183 km² and 0.169 km² of the total area, which comprise 10.40% and 30.18% land of the wards respectively. People concentrated towards a particular area. Some time it so happens that



Plate - 16. A view of the Central Bus Terminus near Champadalir More



Plate - 17. Inside the Bus Terminus

settlement has started first, commerce and trade developed later (Sing, 1980). Moreover the nodal point of transport network *Champadalir More* (The crossing of Champadalir) which is located by the side of the border, has offered additional scope for the growth of wholesale and retail market centres. The maximum number of financial institutions among all the wards are located in this region. Hotels and restaurants business flourished here due to concentration of commercial activities. Ward XXV is also important for commercial activities. Though it is located in the added area. This ward, lying on the border of ward II, gets additional infrastructural facilities than that of the other wards. The central business area indicates that maximum commercial and administrative functions are located on the junction of the Jessore Road, Taki Road and K.N.C. Road. Thus it influences the cluster of housing complex and population densities.

TABLE- 4.4 TRADER'S SURVEY OF BARASAT TOWN (IN PERCENTAGE)

Sl. No.	Name of the Traders	Percentage	SL. No.	Name of the Traders	Percentage
1	Grocery	13.24	14	Laundry	1.10
2	Stationary	8.32	15	Rickshaw-Van Repair	1.72
3	Coal	1.06	16	Pan and Biri	3.78
4	Cloth shop	8.84	17	Saloon	1.67
5	Hotel and Restaurant	1.94	18	Rice shop	6.20
6	Shoe shop	1.10	19	Milk	0.97
7	Medicine	7.22	20	Tea shop	5.54
8	Fertilizer	0.84	21	Decorator	5.76
9	Bank	0.57	22	Jewellery	5.98
10	Co-operative Society	0.40	23	Egg shop	3.56
11	Cement-building materials	4.53	24	Cold drinks cake pastry	5.94
12	Iron shop	2.68	25	Other	5.37
13	Book shop	2.02	26	Total	100.00

Source : Field Survey, 1998

From table 4.4 it revealed that there are various types of trade activities, i.e. grocery, stationary, cloth shop etc. Due to absence of big industries, trading, business play vital role for regenerating economic activities and earning livelihood for the people from the town.

4.3.6 Mixed use of Residential, Commercial and Industrial :

This type of classification emphasises on mixed type of land use. It caters to useful needs not requiring sophisticated transactions or productions. It is no longer assumed that there should be a uniform distribution of residential, commercial and industrial sections in unique fashion. Rather it is a trend that mixed use of these are ideal. It is quite obvious that the study area is a district town and people would come there in the early part of the day and exit in the evening. For residents, a modern urban centre can not prescribe that all daily needs are satisfied. But residents want that the locality (Ward or Borough in modern municipal terms) should be self-sufficient. Offices, schools, shoppings, wholesale and retail transactions are to be located within walking distance. A township, planned or unplanned, should try to provide it.

4.3.7 Open Space:

Urban land use is at the expense of depleting the available open space. There is always an inverse relationship between the two. The more is the urban area the less is the amount of open space left. Open space is the lung of the township. This inconvenience is being attempted to overcome by incorporating the outlying areas, where the pressure of population has not been acute. In these days of population consciousness, this factor is



Plate - 18. Champadalir More - an important crossing of the town

receiving greater importance. The open space is 0.972 km². Which is 2.82% of the total area. But this picture is grim, not at all satisfactory. Open spaces are available in only a handful of wards. The maximum area 18.64% (0.320 km²) lying under open space is in ward I (Appendix No. XI). Green fields or pasture-land in some other wards may help the birth of open space.

4.3.8 Streets and Roads:

Streets and roads occupy 3.072 km², i.e., 8.90 percent of the total area. A good network of streets and roads is the basic condition for urbanization. Owing to its unique position, the town possesses very good linkage with the metro-core as well as with the other regions. Two national high ways N.H. 34 and N.H. 35 radiate from the heart of the town and several other regional roads, like Barrackpore-Barasat Road, Babu Road etc. run through the study area. The town possesses 191.70 kms. metalled and 69.10 kms unmetalled roads. Among the 30, ward II occupies a maximum 36.43 percent of its area (Appendix no. XI). Some of wards contribute very little towards share of land under uses for streets or roads.

4.3.9 Agriculture:

There is a paradox of modern day city planning. The town advances at the cost of open agricultural areas. Some sort of compromise is being made now-a-days. In this study the total occupied area under agricultural land is 5.664 km² which is 16.42% of the total area. Out of 30 wards 14 wards have agricultural lands. This figure will dwindle. Wards XXVI have high areas of agricultural lands. The study area is enclosed by other municipalities. This is not a good sign for maintaining agricultural land.

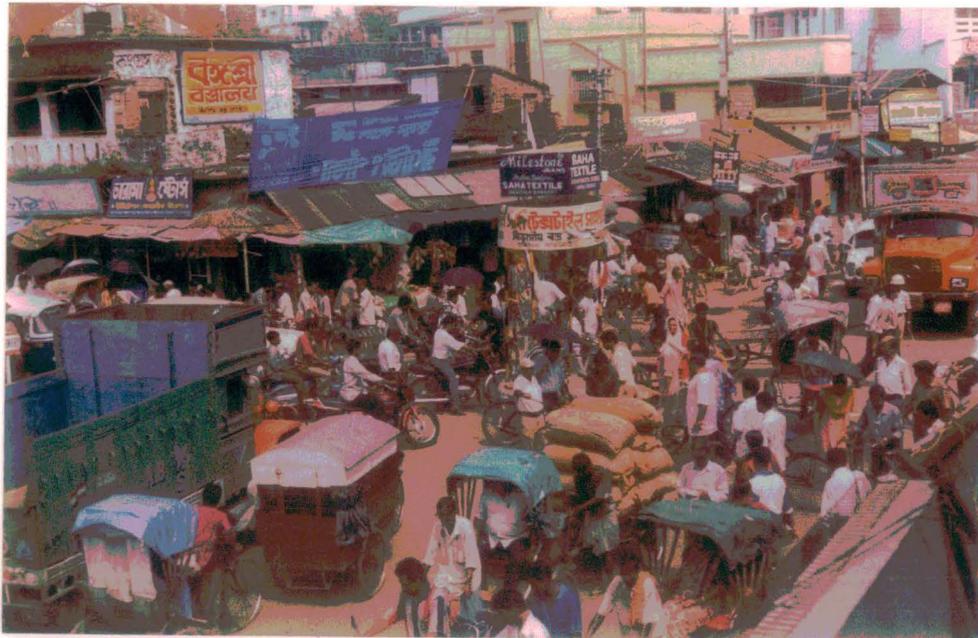


Plate - 19. A busy Commercial centre near Haritala

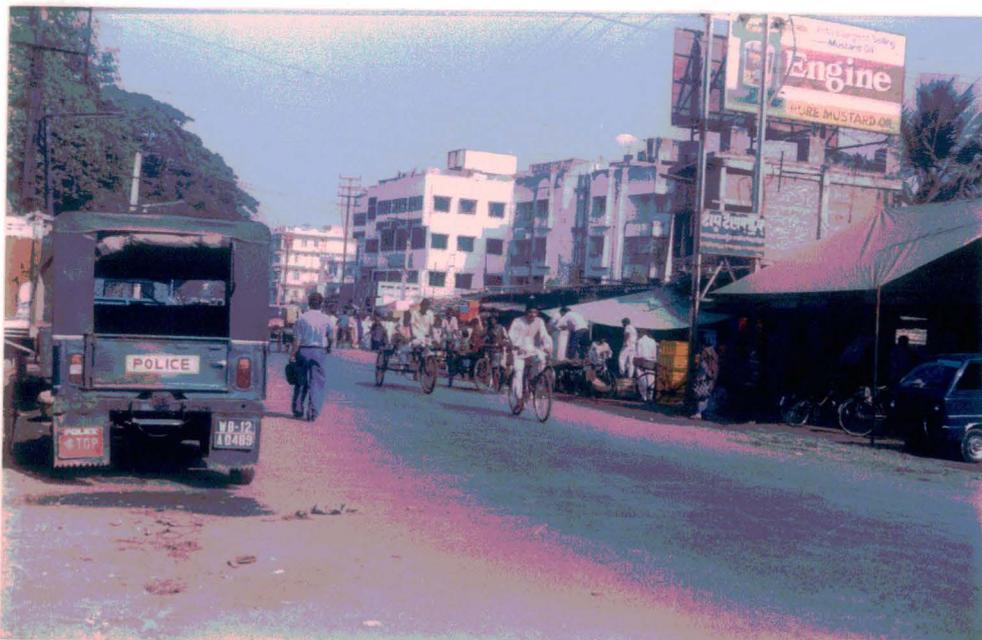


Plate - 20. A view of Jessore Road (N.H. 35) near Champadalir More

4.3.10 Utility Services:

Utility services occupy 0.402 km² area, which is 1.16% of the total land. Maximum land under this head is located in wards XIX and XX (Appendix No. XI). A railway carshed is located there. Utility service comprises hospital, hotel and restaurants services, telephone, electricity, mass transportation, terminus, municipality, etc. The more important is the town or city in terms of political, commercial and industrial sense, more important is the need of utility services.

4.3.11 Water Bodies:

For soaring land-price, the water bodies are dwindling. Unauthorised encroachment and filling up are the chief reasons behind this. Though late, all the municipalities in West Bengal have woken up and imposed a blanket ban upon filling up of water bodies. Some of the tanks, like Madhumurli, Settpukur, Puin pukur, Makosa tank, etc., have some folktales behind them in the study area. Total volume of water bodies occupy 1.397 km² out of 34.50 km² of the total area. It is 4.05% of the total land. Excepting wards I, II & III all the wards have some area under water bodies (Appendix No. XI).

4.4 CHANGE IN THE LAND USE PATTERN (1971-1998):

In the previous two sections (4.2 and 4.3), both past and present land use pattern of the study area are incorporated. "Virgin Soil upturned" means the changes in the pattern of land use. Man is the chief architect here. In the days of old Barasat, the study shows how old Barasat, and new co-existed. There is minimum possible change of landscape and land use.

With urbanisation process sometimes slow and sometimes fast, the modern trends become manifest. Agriculture gradually reduce; indigenous style, mode of population, and types of production have yielded place to the new. As expected, built-up areas in the form of residential complex, commercial complex, roads and avenues, parks and amusement centres have encroached upon open space. "Villages" died and towns emerged. The changed landuse spectrum is the theme of this sub-section.

Table 4.1 shows that the total area of the town is 34.50 km² of which the largest chunk is occupied by residential areas, (57.69% of the total landform). This must have been at the cost of open spaces. This is due to the migration of the people from surrounding fringe areas and the coming of rootless people from East Pakistan (now Bangladesh). Streets and roads are the arteries of town life and occupy about 8.90% of the total area. There are already several roads in existence like NH 34, NH 35, Barrackpore – Barasat Road, Taki Road. But some other roads like Vivekanda Road, K.B. Basu Road, K.N.C. Road, K.K. Mitra Roads have been improved after partition. With increasing residential and commercial areas new link roads, lanes and bye- lanes are made. Agriculture is roughly 16.42% of the total area. This is due to the addition of an area of 14.25 km² of land incorporated since 1995. Out of 30 wards 14 have agricultural lands (Appendix No. XI). This is a proof of encroachment upon agricultural land. As the study area has no large-scale industrial centre, the total area under this head is very insignificant. In old days, some brick-fields were functioning but now they are given up and other small industries like engineering, commercial, oil mills etc. are built-up in different wards as shown in Table 4.3. Public and semi-public headings, shares only 0.99% of the total lands.

Change of land use is noticeable in some sectors. It is predominant in agricultural, commercial, industrial, utility services and public and semi-public categories. In the study area, water bodies dwindle in volume, agriculture gives way to residences and road areas shrink with population growth. Unless further areas are added, proportion of open space and water bodies will further diminish.

CONCLUSION:

A settlement develops means the land available is put to any type of effective use. Dependence on nature, or nature's gift alone is not sufficient to sustain the growing demands of life. Even this, accepted as true, a balanced, proportionate distribution under various use of land is necessary.

The investigator has studied over the concept of land use, the different types of land use, and the changes of land use pattern. This high light upon the need to look over the problems from time to time as nobody can definitely foretell what is to come in future.

A congested population in a limited area invites and creates problems. For want of sufficient space for expansion, high rise structure increases, which is being used for multiple purposes. For a civilised living, life depends on planning and some institutional arrangements are also required. An expert body with technical knowledge used to plan a project, should work with a work force within a time-frame. The next chapter is being devoted to identification of existing socio-economic functions.