CHAPTER III

The Metropolitan Framework

The location of the urban local bodies under study within a closely knit, almost continuous urbanised area, has added a new dimension to the study of their problems. Situated within the radius of daily communication with the city of Calcutta, and in a far-flung industrial zone, the jurisdiction of all the municipal bodies are organically linked with vast sprawling areas. They can hardly be treated as isolated entities each having its own problems and solutions irrespective of the needs and requirements of contiguous areas lying outside its familiar legal limits. In view of these locational peculiarities, the discussions of municipal problems have yet to be related to the metropolitan framework of which these urban local bodies form, as it were, the mosaics.

The metropolitan area covers an area of about 450 square miles whose focal point is the city of Calcutta. The areas of these authorities contain West Bengal’s industrial structure which has developed mostly northward along both banks of the Hooghly River. It is this Hooghly industrial belt, unified in course of the last quarter of a century by gradual industrialisation along the river and by the spiral communication systems, which has formed, by slight inflation on the east, west and south, the Calcutta Metropolitan District. Certain physical factors such as the
existence of swamps and marshes have restricted the
growth of the industrial belt in the east and the west,
and the communication systems moving north-south have
given it a particularly lineal pattern. Here are located
a complex of industries the more important of which are
jute and cotton mills; chemical, engineering and automobile
works; and glass, soap, pottery and match factories.

The integrated nature of this wide stretch of
territory has, from time to time, found expressions in
such vague and imprecise terms as "Greater Calcutta",
"Calcutta Industrial Region" and "Hooghly Industrial Belt".
In 1959, the World Health Organisation had sent, at the
request of the Government of India, a team of Consultants
to review the environmental sanitary conditions in the
'Greater Calcutta Area'. For their own purposes, the WHO
consultants defined the area as follows:

'It spreads for some 40 miles along the sides of
the Hooghly River, with a depth of three to five miles
from the banks on either side. Some 30 municipalities or
local bodies, including the corporation (municipalities)
of Calcutta and Howrah, comprise the area'.

1. Report on Water Supply and Sewage Disposal
   Greater Calcutta, WHO Project India 70, World Health
Also, in 1960, the World Bank suggested a plan for the reconstruction of 'Greater Calcutta' and the Port of Calcutta. The consultants were more precise in demarcating the area of investigation for their own purposes, and they went further to recommend the creation of a Calcutta Metropolitan Authority with jurisdiction for sanitary functions over urban and industrial areas on both sides of the Hooghly, within approximately 270 square miles.

Soon after, on the lines suggested by these consultants, the Metropolitan Water and Sewage Board was set up by the Government of West Bengal. Keeping in view the natural drainage basin and wider planning needs, the Board worked out an area of over 400 square miles. In 1961, the Board was superseded by the Calcutta Metropolitan Planning Organisation (CMPO). The CMPO was free to delineate its own area of operation. Its study group of geographers, following closely the operational area of the preceding organisation, i.e., the Metropolitan Water and Sewage Board, set about to demarcate the planning region.

It may be pointed out, in this connection, that like the United States Areas of the Census definition of the 'Standard Metropolitan Statistical Area' or the Registrar...


General definition of the 'conurbation' in England, no attempts have yet been made by the Indian census authorities to statistically define urban agglomerations. In the United States of America, a Standard Metropolitan Statistical Area is a county or group of contiguous counties which contains at least one city of 50,000 population or more. In addition to the county or counties containing such a city or cities, contiguous counties are included in an SMSA if, according to certain criteria, they are essentially metropolitan in character and are socially and economically integrated with the central city. The criteria of metropolitan character relate primarily to the attributes of the outlying county as a place of work or as a home for concentration of non-agricultural workers. The eligibility of contiguous counties for inclusion in the SMSA is decided on the following principles:

1. Each county must have 10,000 non-agricultural workers, or 10% of the non-agricultural workers in the SMSA, or more than half of its population residing in contiguous minor civil divisions with a population density of 150 or more per square mile.

2. Each county must have at least two thirds of its total employed labour force engaged in non-agricultural work.

3. Each county must be economically and socially integrated with the county containing the largest city in the SMSA. The criteria of such integration are the following:

(a) 15 per cent or more of the workers residing in the contiguous county work in the county containing the largest city, or

(b) 25 per cent or more of those working in the county live in the county containing the largest city, or

(c) the number of telephone calls from the county to the county containing the largest city average four or more calls per subscriber per month.

The criteria for inclusion of territories within the SMSA, as followed by the U.S. Bureau of the Census, were obviously conditioned by local circumstances. For instance, the use of counties as units has the advantage of getting an abundance of statistical areal data, since the county is an important statistical unit in the United States. Such a procedure led to the rejection of the concept of compact 'urbanized areas', and in fact large chunks of low-density rural tracts came to be included in many of the SMSA's. The SMSA concept has put emphasis on the interrelationship between centre and peripheral regions on the basis of journey to work and daily contacts.
Similar attempts have been made in Britain to delimit urban agglomerations which are named 'conurbations' in the English census. Although, this word is said to have been introduced by Sir Patrick Geddes, a precise statement of its characteristics was made by Professor C.B. Fawcett when he defined a conurbation as "an area occupied by a continuous series of dwellings, factories and other buildings, harbours and docks, urban parks and playing fields, etc., which are not separated from each other by rural land, though in many cases in this country such an urban area includes enclosures of rural land which is still in agricultural occupations." 5 This definition provided the basis for the English census delineation of the conurbation. But, as the Barlow Commission pointed out, it "overemphasized the physical pattern of bricks and mortar," and "in some cases a better test would be how far out from a given centre industry or the industrial population looked to that centre as essential to its life, and as the focus of its business activities." 6 These considerations seemed to have been taken into account by the Registrar General when instructions were issued to define greater London and five other conurbations:

"...... each conurbation should be an aggregate of local authority areas. Three other factors of varying importance were also to be taken into account; first, that the

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conurbation generally should be a continuously built-up area, but on the one hand this should not include ribbon development, and on the other it should not necessarily exclude a built-up area separated by a narrow strip of rural land from the main built-up area to which it was strongly attached for employment or other reasons; second, that a local area should be considered for inclusion in a conurbation to whose local centre it was strongly attached as a centre for work, shopping, higher education, sports or entertainment; third, that some consideration should be given to population density.

These 'procedural criteria' for delimiting a conurbation do take into account the principle of nodality which makes it very similar to a metropolitan area. Also, like the metropolitan area, the conurbation concept uses entire local administrative areas as constituent units. But, as one authority puts it: "The concept's basic limitation is historical. It was originally conceived and defined at a time when the incidence of motor transport on the growth of great cities was far from critical..... The concept of conurbation cannot really apply to a situation where urban populations are flooding the countryside through the use of modern motor transport, which is fast becoming the decisive

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factor in the evolution of the great city. Nor can it readily be used to analyse the web of social and economic interdependence now being spun around dominant city centres.  

Unlike the U.S. Bureau of the Census definition of the SMSA, and the Registrar General's delineation of conurbations in Britain, the Indian census authorities are yet to evolve proper concepts for urban agglomerations. One reason for this lack of adequate attention to urban aggregates in India may be attributed to the fact that the country is predominantly rural and as per the latest (1961) census total urban population of 78.84 million accounts for only 17.97% of the total population of India. Even then, however, as the percentage variations over the census decades show (Table 2), the rate of growth of urban population is much faster than that of rural population. What is more, the distribution of population as between urban areas of different sizes has been very much lopsided. There are six size-classes of urban areas in the census:

<table>
<thead>
<tr>
<th>Classes</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class I (City)</td>
<td>100,000 and above</td>
</tr>
<tr>
<td>II</td>
<td>50,000 - 99,999</td>
</tr>
<tr>
<td>III</td>
<td>20,000 - 49,999</td>
</tr>
<tr>
<td>IV</td>
<td>10,000 - 19,999</td>
</tr>
<tr>
<td>V</td>
<td>5,000 - 9,999</td>
</tr>
<tr>
<td>VI</td>
<td>below 5,000</td>
</tr>
</tbody>
</table>

8. Leslie Green, op. cit., p. 25.
Table 2


<table>
<thead>
<tr>
<th>Census Year</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1931</td>
<td>19.32</td>
<td>9.96</td>
</tr>
<tr>
<td>1941</td>
<td>32.80</td>
<td>11.67</td>
</tr>
<tr>
<td>1951</td>
<td>39.32</td>
<td>9.07</td>
</tr>
<tr>
<td>1961</td>
<td>26.59</td>
<td>20.38</td>
</tr>
</tbody>
</table>


According to the latest (1961) census, 107 class I cities contain 35 million persons or about 44 per cent of the total urban population of India. This shows the extent of population concentration in the bigger cities which are thus to bear the brunt of urbanisation.

So far as the Calcutta Metropolitan District is concerned, the intermingling of the areas of its constituent urban authorities is a consequence of the tremendous population explosion that occurred in this region during the last few decades. The CMD symbolises the extreme lopsidedness of population growth in the State of West Bengal. To illustrate this point further, it may be mentioned that out of the total CMD area of nearly 450 square miles, only about 177 square miles under the municipal authorities contain more than 85 per cent of the total CMD population. As Table 3 shows, the city of Calcutta alone accounts for nearly 44 per cent of the CMD population total. The lopsidedness of

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definition or a methodology of delineation. A number of local areas were included in the Calcutta Industrial Area of the 1951 census. Of these, Tollygunge was subsequently amalgamated with the Calcutta Corporation area, and all the other units form parts of the wider Calcutta Metropolitan District as delineated later by the CMPO geographers.

From the all-India standpoint, the 1961 census is of considerable significance for two important reasons. It laid down certain empirical tests to obtain 'a truer measure of urbanisation'. These tests are:

(a) a density of not less than 1000 per square mile;
(b) A population of 5,000;
(c) three-fourths of the occupations of the working population should be outside of agriculture; and (d) the place should have, according to the (census) Superintendent of the State, a few pronounced urban characteristics and amenities. 9 Aside from this definition of 'urban' areas, the other important contribution of the 1961 census is the introduction of an altogether new concept viz. 'town group', to mark off urban clusters. Since such a concept has important implications for the Calcutta Metropolitan District, the following extract from the 1961 census (p. 62) is presented to reveal its true nature and methodology:

One of the innovations attempted in 1961 in the presentation of urban statistics is by the way certain clusters have been grouped to denote 'town groups'. It was realized that in certain clusters the urban area is not really limited only to the notified boundary of any one or two places but embraces satellite towns and cities, industrial towns or settlements close to this urban area, which may even be surrounded by rural areas. There was, therefore, an attempt from the very beginning to define well-formed clusters and treat them as town groups, the main determinants being facility of road and railway transport, and the interchange of population on account of business and work. These town groups emerged in two types: (a) town groups which were made up of a cluster of neighbouring municipalities only; (b) town groups which were made up of a cluster of municipal and non-municipal localities. In actual practice, in those cases where there was no clear articulation of extension, any town falling within a radius of 2 to 4 and some times 5 miles of the periphery of the main and most populous city was empirically examined in respect of continuity of urban characteristics, communications, possibility of satisfactory communication and economic interdependence of functions to determine whether the town should be incorporated in a town group. These town groups were devised with the intention of marking off areas of conglomerate growth which as a whole rather than the individual units should henceforth receive attention in matters of planning and development.
As is clear from the above extract, the concept of town-group was evolved mainly to indicate conglomerate growth of urban areas. Physical contiguity and urban characteristics are the basic criteria used in this connection. Accordingly, the 1961 census demarcated 132 town groups all over India. So far as the CMD is concerned, it contains as many as 9 town groups which are shown along with their constituent units in Table 4. It can be seen that in the case of two town groups viz. Barasat—Nabapally and South Suburban, municipal towns. In all other cases, the constituents of the town groups are non-municipal towns.

From the standpoint of local government reorganisation, these clusterings are of considerable importance, as they indicate the spatial direction of urban growth which could be utilised to consolidate the tiny local government units. In addition, the growth of non-municipal towns which are still administered locally by rural self-governing institutions, underlines the necessity for remodelling the local government apparatus in conformity with the pattern of urbanisation.

This new census concept will thus be useful for administrative and planning purposes. But it has its important limitations as well. For instance, in the Hooghly industrial area the almost uninterrupted chain of urban local authorities was not considered as a cluster of towns.
The continuous urban growth flowing from the two cities of Calcutta and Howrah should have been treated as a unity. The criteria for defining a town group are equally applicable to the urban areas in the Hooghly industrial area. Even on the basis of the census definition of a town group, it is hardly possible to separate the South Suburban and Kasba town groups from the city of Calcutta. This is true of the town groups on the Western bank as well, which have grown up around Howrah. Thus, the actual demarcation of town-groups does not seem to have followed the criteria for such demarcation in all cases. In the Calcutta Metropolitan District, such a procedure has led to the demarcation of a scattered group of towns unrelated to the overall pattern of urban growth in the region.
<table>
<thead>
<tr>
<th>Constituent Units</th>
<th>Sub-urban Unit</th>
<th>Metropolitan Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Kasba</td>
<td>Santoshpur</td>
<td>South Suburban</td>
</tr>
<tr>
<td>(b) Santoshpur</td>
<td>(a) Sanram</td>
<td>(b) Garden Reach</td>
</tr>
<tr>
<td>(c) Bajapur</td>
<td>(c) Panchur</td>
<td>(a) Bauria</td>
</tr>
<tr>
<td>(d) Bansdroni</td>
<td>(b) South</td>
<td>(c) Bauria</td>
</tr>
<tr>
<td>(e) Gaffa</td>
<td>(c) Uduberia</td>
<td>(d) Birikhalo</td>
</tr>
<tr>
<td>(f) Jadabpur</td>
<td>(d) Chenagall</td>
<td>(e) Banitabala</td>
</tr>
<tr>
<td>(g) Purba Putiali</td>
<td>(a) South</td>
<td>(f) Bauria</td>
</tr>
<tr>
<td>(a) Sankranti</td>
<td>(b) Sarenga</td>
<td></td>
</tr>
<tr>
<td>(b) Manikpur</td>
<td>(c) Jhorhat</td>
<td></td>
</tr>
<tr>
<td>(c) Banupur</td>
<td>(d) Andul</td>
<td></td>
</tr>
<tr>
<td>(d) South Siburban</td>
<td>(a) South</td>
<td></td>
</tr>
<tr>
<td>(M)</td>
<td>(b) Garden Reach</td>
<td>(b) Garden Reach</td>
</tr>
<tr>
<td></td>
<td>(c) Panchur</td>
<td>(a) Bauria</td>
</tr>
</tbody>
</table>

*Note: M stands for Municipal Town.*

Sources: Census of India 1961, op. cit., A-IV Towns and Town Groups.
The 1961 census, to sum up, did not delineate a conurbation, nor did it give any thought to the metropolitan area concept. Under the circumstances, the boundaries of the Calcutta Metropolitan District were demarcated by the geographers of the CMPO, keeping in view the planning and future development pattern of the metropolitan district. It has earlier been mentioned that the integrated nature of a wide stretch of territory along both banks of the Hooghly River was given some precise meaning by the WHO consultants team who had carried on an investigation into the public health and sanitation problems of Calcutta and its environs. Following mainly their recommendations, the Government of West Bengal had set up a Metropolitan Water and Sewage Board which carved out a wider area for its own planning and execution purposes. This Board was subsequently replaced by the CMPO. In delineating the planning area, the CMPO geographers were greatly helped by the work of the preceding organisation viz., the Metropolitan Water and Sewage Board.

Two concepts came to be used by the CMPO geographers in course of delineation of the planning area. One is the concept of the Calcutta conurbation, and the other is that
of the Calcutta Metropolitan District. The former concept
involves the compact built-up area along both banks
of the Hooghly River. In delineating the boundaries of
the conurbation, the geographers had to take into account
important local conditions that vitally affected the
nature and extent of the conurbation. Because of material
differences between living conditions in West Bengal
and Western countries, the conurbation was demarcated by
mapping: (a) all urban local bodies, (b) all rural local
authority areas (locally called mouzas) with more than
sixty per cent of the population dependent on non-agricul­
tural occupations (as per 1951 census), (c) all rural
local authority areas with a density of more than 2,000
persons to the square mile in 1951, and (d) all settled
areas including built-up areas and not distinguishing
between urban and rural settlements, as factory workers
were, in many cases, found to be residing in villages as
well as towns (Fig. 4).

The other concept viz., that of the Calcutta
Metropolitan District involves a much wider area than merely
the built-up area of the conurbation. In delineating this
wider district, attention was paid not only to physical con­
tiguity and continuity of urban characteristics but also
other important factors such as commuting pattern, daily
supply zone of commodities such as milk, fish, eggs, fruits,
vegetables etc., and the area of circulation of daily newspapers.
Other important considerations related to the regulation of potential urbanisation and the need for comprehensive planning. Accordingly, substantial portions of purely rural tract and the areas of three other outlying municipalities have been added to the conurbation area. These additional areas together with the entire conurbation constitute what the Calcutta planners call the Calcutta Metropolitan District (Fig. 5). It cuts across the four magisterial districts of 24 Parganas, Howrah, Hooghly and Nadia. This urban-rural tract of nearly 450 square miles contains over 6 million population whose civic needs are looked after locally by a multiplicity of urban and rural local authorities. The wide metropolitan framework within which the municipal authorities under study operate, calls for a new approach to the study of their problems which is followed in the subsequent chapters.

10. The Delhi planners had also used these factors in delineating the Delhi Metropolitan Area. See Draft Master Plan for Delhi, Delhi Development Authority, 1960, vol. I, p. 8.