

GOKHALE INSTITUTE MIMEOGRAPH SERIES NO. 11

**PROBLEMS OF DEVELOPMENT IN A BACKWARD AREA
A CASE STUDY OF GADHCH ROLI, SIRONCHA
AND RAJURA TALUKAS IN CHANDA DISTRICT**

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FOREWORD

This is one of the series of studies the Institute has undertaken in the problems of area development and area planning. The present study is concerned with three tehsils of Chanda district, the extreme eastern district of Maharashtra. The district is rich in forest and mineral resources and nevertheless has remained relatively undeveloped. Within the district, the three tehsils under report have remained all the more undeveloped and indeed neglected. One reason is that the area is mainly populated by tribals. The purpose of the study is to bring out the nature of underdevelopment and indicate, to the extent possible, the direction of planned effort which will be needed.

One of the major handicaps was the lack of data and information on the resources of the area. Indeed, this is a basic characteristic of under-development so that the first investment in an underdeveloped region has to be in a survey to estimate its resources and assess its development potential. That this has not been done in an area so rich in natural resources as the one under report emphasises how planned development during the past two decades has bypassed areas which are either not in the vicinity of established centres of development or the population of which is politically not important.

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10th April 1971.

PREFACE

In the Agro-Economic Research Unit located at the Institute by the Ministry of Food and Agriculture, Government of India, the study of Gadchiroli, Sironcha and Rajura talukas of Chanda district, the findings of which are embodied in this report, was carried out between November 1967 and December 1968.

The area has remained undeveloped for quite a long time and this fact put severe limitations in collection of necessary information. Without the active co-operation of government officers, both at the State and the District level, and local leaders it would have been difficult for us to move in the area and collect the available data. We would like to record our gratitude to Shri Abdul Shafi President, Zilla Parishad, Chanda, Shri M.N. Maindarkar, the then Chief Executive Officer and Shri K.K. Rangari, the then Planning Officer, for their active interest in the investigation and for providing us with transport which greatly facilitated our work.

We are also thankful to all the Block Development Officers in Gadchiroli, Sironcha and Rajura talukas for supplying us the required available information. We would mention specially Shri Vasant Patwardhan of the Social Welfare Department of the Zilla Parishad whose able interpretation of the Gondi language and its dialects helped us to understand, at least to a certain extent, the problems faced by the authorities in developing the area.

M.G. Kulkarni

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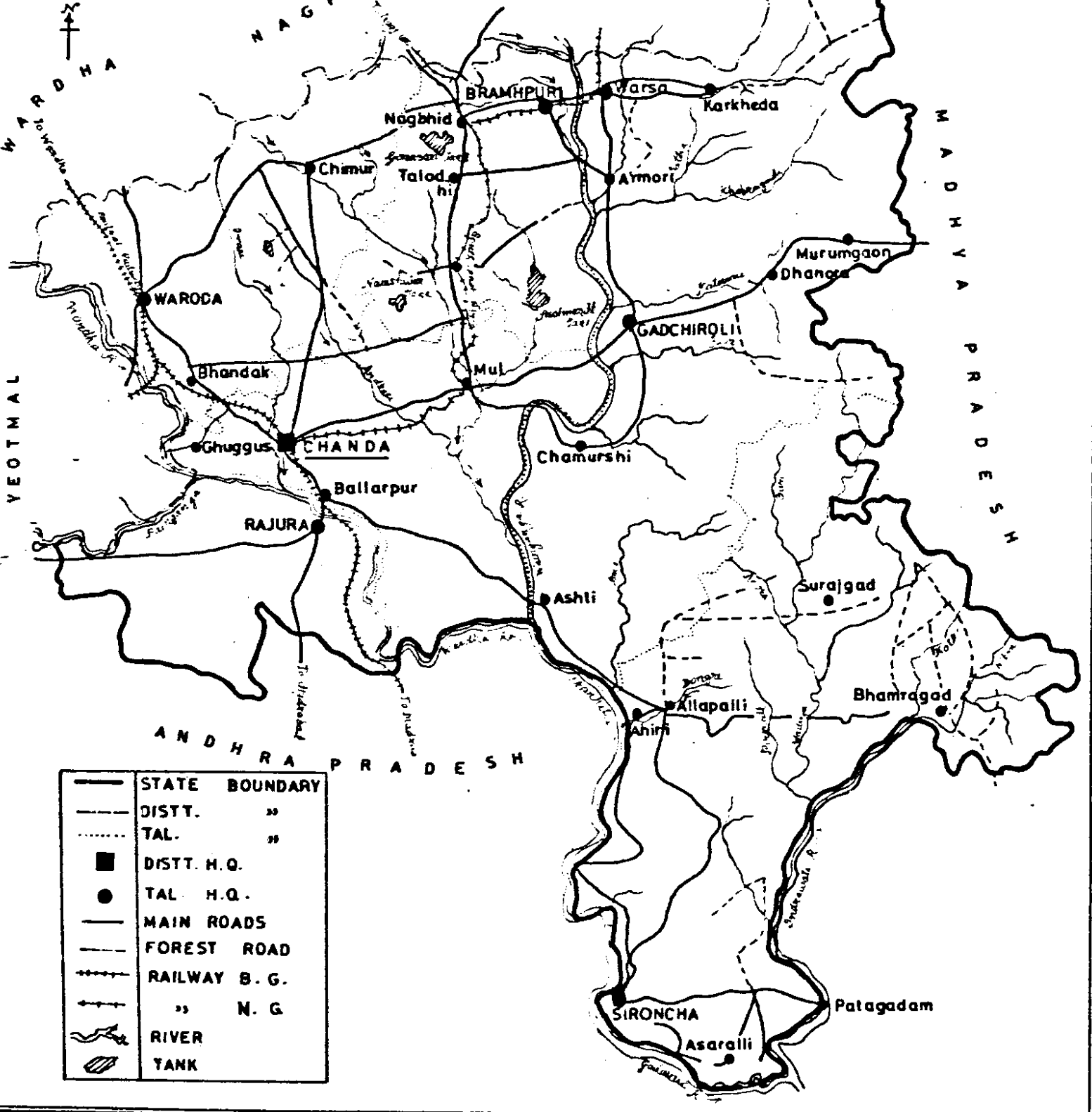
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CHANDA DISTRICT

MAP I

0 8 16 Miles



	STATE BOUNDARY
	DISTT. "
	TAL. "
	DISTT. H.Q.
	TAL. H.Q.
	MAIN ROADS
	FOREST ROAD
	RAILWAY B. G.
	" N. G.
	RIVER
	TANK

CHAPTER 1

INTRODUCTION

This study of Gadchiroli, Sironcha and Rajura talukas of Chanda district in Maharashtra was undertaken in order to see how far and why these talukas have remained backward as compared to the other three talukas of the district, namely, Chanda, Warora and Brahmपुरi, even after fifteen years of planned development. The study had a special significance in the context of the resource complex in the area, particularly the mineral resources. The area is richly endowed with iron and limestone deposits, and the report of the Dastur & Co. to the Government of India on site selection for pig iron plants has recommended a site in this area for a plant which can be developed into a large integrated steel works. In addition, the forests in this area are one of richest in Maharashtra State, the land is fertile and water resources are adequate. In spite of this the area has remained relatively under-developed and backward.

The relative under-development and backwardness of an area is generally reflected in the prevailing economic, social, cultural and technological conditions in the area. Usually a very high proportion of the working population is engaged in primary occupations like cultivation, animal husbandry, forestry and mining, other employment opportunities being very meagre or almost non-existent. The overall investment of capital per head is very little, indicating a primitive technology. As a result, per acre yield is low and the existence is almost near the subsistence level. Consequently the savings are practically nil, and whatever savings exist are usually by a landholding class. Generally these savings do not get invested in industry or commerce. There is absolute over population in agriculture, in the sense that it would be possible to reduce the number of workers in agriculture and still obtain the same total output. There is also evidence of considerable under-employment. The agricultural production is made mostly of cereals, and the family budgets indicate a large proportion of expenditure on food and other necessities. If there is export it is mostly of foodstuffs and raw materials. Conditions in agricultural production show preponderance of small holdings, lack of modernization, absence of good credit and marketing facilities, widespread prevalence of high indebtedness relative to assets and income, and difficulties of transport and communications, especially in rural areas. The social and cultural characteristics of the population indicate, generally, high fertility and mortality rates, inadequate nutrition, and lack of public health and sanitary facilities. The facilities for education are inadequate and hence existence of high degree of illiteracy. The status of women is generally inferior and there is likely to be extensive prevalence of child labour because of subsistence living. The behaviour of the bulk of population is determined by the traditionally laid down customs and norms.

More or less all these characteristics should be reflected in the data for the areas concerned. But the fact of under-development of the area and backwardness of the people, set down certain limitations for collection of adequate and reliable information regarding many aspects. In fact, in the three talukas of Gadchiroli, Sironcha and Rajura, these limitations were very serious. These three talukas covered nearly 6,000 sq.miles of area, relatively sparsely populated, with large forests, without adequate transport and communications facilities, and inhabited mostly by tribals. Within the time available for investigation, it was not possible, therefore, to collect detailed information in respect of all the characteristics of under-development and backwardness, mentioned above. The three talukas were divided into ten panchayat samitis for the purpose of administration of development. In many respects panchayat samitiwise information was not available. For instance, panchayat samitiwise information regarding total geographical area, land-use, crop-pattern, production, etc., or information for development schemes undertaken, financial expenditure incurred and physical targets achieved, was not consistently available even for the Third Five Year Plan period. Detailed investigations, therefore, could not be carried out in respect of savings, investment, under-employment, fertility, mortality, etc. However, enough data are presented in the report to indicate broadly the relative under-development and backwardness of the area and the people.

The importance of proper maintenance of records cannot be over-emphasized when we are concerned with planned development. Apart from the purpose of accounting, the most important objective of maintaining records is to feed continuous information to the authorities so that they can assess the impact of development efforts, consider the dynamics of the situation, and take timely and correct decisions in order to achieve the objectives of development. From this point of view, considerable improvement is necessary, and adequate thought, therefore, requires to be given to this aspect.

The main report is presented in seven chapters. Chapters 2, 3 and 4 discuss the availability of resources and their present use. The discussion in these chapters refers to existing patterns of resource use, pointing out wherever possible, the directions of development in order to use the resources properly. Chapters 5 and 6 consider the process of development during the period of the Third Five Year Plan. Here development programmes and schemes implemented during the Third Plan period have been examined on the background of the material presented in Chapters 2, 3 and 4. Though it was not possible to evaluate each and every scheme, and its impact on the area and the people, sufficient data have been presented to indicate the gap in thinking out and also in implementing some of the programmes.

CHAPTER 2

NATURAL RESOURCES AND THEIR UTILIZATION

Chanda district, according to the District Statistical Abstract (1962-63 and 1963-64), comprises an area of 9,977.3 square miles or 63,85,505 acres. This total area is divided into six administrative sub-divisions or talukas, namely, Warora, Chanda, Brahmapuri, Gadhchiroli, Sironcha and Rajura with an area of 1285.1, 1300.0, 1007.7, 2791.2, 2967.6, and 625.7 square miles respectively. Gadhchiroli and Sironcha, forming from north to south the eastern sector of the district together comprise 57.72 per cent of the total area. Gadhchiroli taluka is separated from Brahmapuri and Chanda talukas on its west by the Wainganga river, and Sironcha taluka is bound by the Pranhita river on its west, the Godavari on its south and for a major length on its east by the river Indravati. The Pranhita river is actually the extension of the Wainganga river in its southern course, after it is joined by the Wardha river near the village Ashti in the south-western corner of Gadhchiroli taluka. The river Wardha in its initial southern course (applicable to Chanda district) forms the western boundary of Warora taluka and of the district and then cuts into the district in a south-easterly direction separating Chanda and Rajura talukas. It is clear from this that Gadhchiroli and Sironcha talukas together on the eastern side, and Rajura taluka on the western side are separated from the middle and the north-western sector of the district comprising Brahmapuri, Warora and Chanda talukas by the rivers which form their natural boundaries. This middle and north-western sector of the district is interspersed by two main ranges of the Chimur and Mul hills. The general elevation of the Chimur hills, about 20 miles in length and 6 in breadth, running from Chimur in the north of the Warora to Meharli, is about 450 ft. above ground, and about 600 to 800 feet above sea level. The Mul hills are further to the south, originating at 3 miles west of Mul, a village in Chanda taluka, and with a length of 18 miles and a breadth of 13 miles from east to west, are about 400 feet above the plain. The Pharasgarh hills which run parallel to the Chimur hills are about 13 miles long with an elevation of about 600 ft. above ground. These three ranges are interspersed with numerous small isolated hills. As against these, in Sironcha taluka the hills come up to a height of 2000 to 3000 feet above ground near Aheri, Alapalli, Etapalli and in the east near Bhamragarh, whereas they fall down to 1400 feet in the west towards Sironcha.

The contour of the Chanda district, in short, is "arranged in a dual series of valleys and watersheds running from north to south. The western halves of the Warora and Chanda talukas lie in the valley of the Wardha; they are separated from the central valley of the Wainganga by the watershed which is formed by the Mul and Chimur hills. Beyond this watershed the broad valley of the Wainganga stretches to the east until it meets and is lost in the

highlands and plateaux of the zamindari area. The basins of the Wardha and Wainganga are further sub-divided into more or less numerous smaller valleys which are formed by their tributaries. Sironcha, in both its divisions, repeats the arrangement of valley to the west and highland to the east, but in this case the valley is a comparatively narrow strip, and there is only one valley and one range of hills". 1/

Thus, though the district is divided by the Wainganga river into two major parts, viz., the western part comprising Warora, Chanda, Brahmapuri and Rajura talukas, and the eastern part comprising Gadchiroli and Sironcha talukas, it is clear from the broad topographical features that there are some distinct natural regions in the district. For instance, the western part includes Wardha valley and the northern hilly uplands. The Wardha valley which comprises western half of Warora and Chanda talukas and whole of the Rajura taluka, has rich black soil, rainfall between 45 and 50 inches, and is suitable for producing cotton, jowar and wheat. The northern hilly uplands cover parts of Warora and Chanda talukas and major portion of Brahmapuri taluka. Here the soil is mostly sandy and the rainfall is between 50 and 55 inches, and though the main crop is rice, jowar and irrigated sugarcane are also produced. The eastern parts of Brahmapuri and Chanda talukas adjoin the Wainganga river and together with the western part of Gadchiroli taluka form, what is known as the Wainganga basin. Here the rainfall is rather heavy, between 55 and 60 inches, and the soil being medium heavy, the principal crop of the area is rice. The entire eastern part of the district is again hilly and forms the eastern uplands region which includes major portion of Gadchiroli taluka and whole of the Sironcha taluka. Large part of this area is under forests. The rainfall is heavy, on an average 60 inches, and the soil is medium. The main crop in the area is rice. The talukas of Gadchiroli, Sironcha and Rajura, with which we are mainly concerned in this report form, so far as the natural regions of the district are concerned, parts of the Wardha valley and the Wainganga basin, and whole of the eastern upland region

This part of the Chanda district has remained backward for quite a long time, from the point of view of the development of natural (excluding forests to a certain extent) and human resources. It is interesting to note, in this respect, the remarks in the Chanda District Gazetteer. "...The Wainganga ... enters the District near the Centre of the northern boundary, and slices it into two unequal halves, the western half containing the Warora, Chanda and Brahmapuri tehsils (Rajura tehsil was not a part of the district then) and representing a stage of comparatively high development, and the eastern half being composed of the Gadchiroli tehsil ... and ... the Sironcha tehsil, a tract which may be fairly

1. The Chanda District Gazetteer (1909), p. 4

described as on the whole one of the most backward parts of the Province". 2/ Though Rajura taluka was not a part of the district then, the conditions in this area, so far as the development was concerned, were the same as Gadhchiroli and Sironcha talukas. The meaning of the word development here was probably the provision of infrastructure, mainly transport and communications and administration facilities. That these three talukas are still backward as compared to the remaining three talukas of the district will be seen from the discussion which follows.

Land Utilization

The data on land-use are presented in tables 2.1 and 2.2. Table 2.1 shows the talukawise distribution of total geographical area under different categories of land use, while table 2.2 shows the percentage distribution of each category of land use in different talukas. In the whole of the district, area under forests is the major category which claims 56.48 per cent of the total area. In addition, permanent pastures and grazing lands claim 7.6 per cent. It is not surprising, therefore, that the net area under crops is only 23.71 per cent, i.e., less than one-fourth of the total geographical area. About 75 per cent of the total forests is found in the two easternmost talukas of Gadhchiroli and Sironcha, and of this 44.07 per cent is found in the latter taluka. As we go west from these talukas the incidence of forests appear to be less and less, as is evidenced from the fact that of the remaining four talukas, Chanda and Brahmapuri in the central sector show more of the district forests than the westernmost talukas of Warora and Rajura, the last of them having only 0.85 per cent of the total forests of the district. When the total area of each taluka in relation to that of the whole district is taken into consideration this picture gets modified. This unevenness in the classification of land may further be seen by considering each category of land in each taluka in relation to its total area.

The extent of the forest area in Gadhchiroli and Sironcha talukas is further revealed by the fact that they have 62.39 and 83.69 per cent of their total areas respectively under forests. Brahmapuri and Chanda of the central sector have forests which amount to 45.26 and 40.63 per cent respectively of their total areas. Warora and Rajura, the westernmost talukas, have still less of forests, only 29.43 and 7.67 per cent respectively. As these percentages reveal the extent of forests in relation to the total area in each taluka, the area commanded by each taluka in the whole of the district becomes relevant.

It is seen that Gadhchiroli and Sironcha talukas are the two biggest, comprising together 57.72 per cent of the total geographical area of the district. The smallest of them all is Rajura taluka with only 6.27 per cent of the district area. Chanda, Warora, and Brahmapuri together comprise about 36 per cent of the total area. Both Gadhchiroli and Sironcha

Table 2.1 : Land Utilization in Different Talukas of Chanda District, 1960-61.
(Figures are in acres)

Taluka	Forest	Barren and un-culturable land	Land put to non-agri.use	Culturable waste	Permanent Pastures & other Grazing Land	Misc. tree Crops and Groves
1	2	3	4	5	6	7
Chanda	338010 (40.63)	9987 (1.20)	52673 (6.33)	43210 (5.19)	61784 (7.43)	15232 (1.83)
Warora	242058 (29.43)	16388 (1.99)	35893 (4.36)	30057 (3.65)	58081 (7.06)	5913 (0.72)
Bramhapuri	291901 (45.26)	5392 (0.84)	52317 (8.11)	28595 (4.43)	63081 (9.78)	4770 (0.74)
Gadchiroli	1114508 (62.39)	20914 (1.17)	71945 (4.03)	82721 (4.63)	181694 (10.17)	12195 (0.68)
Sironcha	1589424 (83.69)	10129 (0.53)	35070 (1.85)	24975 (1.31)	106197 (5.59)	4307 (0.23)
Rajura	30710 (7.67)	55830 (13.94)	35734 (8.92)	21709 (5.42)	14590 (3.64)	4412 (1.10)
District Total	3606611 (56.48)	118640 (1.86)	283632 (4.44)	231267 (3.62)	485427 (7.60)	46829 (0.73)

contd.

Table 2.1 : (contd.)

Taluka	Current fallows	Other fallow land	Net area sown	Gross cropped area	Gross irrigated area	Total geographical area
1	8	9	10	11	12	13
Chanda	5750 (0.69)	11533 (1.39)	293816 (35.31)	312431	60571 (19.39)	831995 (100.00)
Warora	3430 (0.42)	6701 (0.81)	423951 (51.56)	433167	31067 (7.17)	822472 (100.00)
Bramhapuri	1696 (0.26)	3454 (0.54)	193707 (30.04)	246064	82210 (33.41)	644913 (100.00)
Gadchiroli	9362 (0.52)	14490 (0.81)	278561 (15.60)	314244	63208 (20.11)	1786390 (100.00)
Sironcha	3526 (0.19)	5717 (0.30)	119935 (6.31)	121534	4339 (3.57)	1899280 (100.00)
Rajura	20073 (5.01)	13637 (3.41)	203760 (50.89)	203760	301 (0.15)	400455 (100.00)
District	43837 (0.69)	55532 (0.87)	1513730 (23.71)	1631200	241696 (14.82)	6385505 (100.00)

Source : District Statistical Abstract, 1962-63 and 1963-64,
Bureau of Economics and Statistics, Govt. of Maharashtra.
(Figures in brackets, except under col. 12, indicate percentages to total
geographical area. Under col. 12, figures in brackets are percentages to
gross cropped area.)

Table 2.2 : Percentage Distribution of Area Under Each Category of Land-use in Different Talukas of Chanda District. (1960-61)

Taluka	Forest	Barren Unculturable Land	Land Put to non-agri- cultural Use	Culturable Waste	Permanent Pastures & Other Graz- ing Land	Misc. Tree Crops & Groves
Chanda	9.37	8.42	18.57	18.68	12.73	32.52
Warora	6.72	13.81	12.65	13.00	11.96	12.63
Bramhapuri	8.09	4.54	18.45	12.36	12.99	10.19
Gadchiroli	30.90	17.63	25.37	35.77	37.43	26.04
Sironcha	44.07	8.54	12.36	10.80	21.88	9.20
Rajura	0.85	47.06	12.60	9.39	3.01	9.42
District	100.00	100.00	100.00	100.00	100.00	100.00
(Total)	(3606611)	(118640)	(283632)	(231267)	(485427)	(46829)

contd.

Table 2.2 : (contd.)

Taluka	Current Fallows	Other Fallow Land	Net Area Sown	Gross Cropped Area	Gross Irrigated Area	Total Geographical Area
Chanda	13.12	20.77	19.41	19.15	25.06	13.03 (831995)
Warora	7.82	12.07	28.01	26.56	12.85	12.88 (822472)
Bramhapuri	3.87	6.22	12.80	15.08	34.01	10.10 (644913)
Gadchiroli	21.36	26.09	18.40	19.26	26.15	27.98 (1786390)
Sironcha	8.04	10.29	7.92	7.45	1.80	29.74 (1899280)
Rajura	45.79	24.56	13.46	12.50	0.13	6.27 (400455)
District	100.00	100.00	100.00	100.00	100.00	100.00
(Total)	(43837)	(55532)	(1513730)	(1631200)	(241696)	(385505)

talukas have a very large portion of their area under forests. Brahmapuri, Chanda, Warora and Rajura have less and less of forests in relation to their share in the total area of the district.

The forests have to be viewed in relation to the kind and the number of the trees and the terrain on which they are situated if they are to be treated as resources. Among the trees that are commercially important, the principal ones are teak (Tectona Grandis), Bijasal, often known as the bastard teak (Pterocarpus Marsupium), and shisham, the black wood or rosewood tree (Dalbergia latifolia), which all yield timber of extreme value as building wood and for the manufacture of furniture. The teak of the Aheri and Alapalli forests in Sironcha taluka of the eastern half grows to larger dimensions, and according to the Chanda District Gazetteer (1909) was then being exported to Rajahmundry in the then Madras Province, where it was preferred to Burma teak. The Shisham also grows to a large size in the forests of Aheri, Alapalli, and Moharli. The saj or yan (Terminalia tomentosa) attains a girth of 8 to 12 feet in Aheri, Alapalli, and Moharli forests. It is the principal housebuilding material of the District and is the chief tree used locally for rearing the tasar silk worms. There are other trees like Haldu (Adina cordifolia), kalam or kaini (Miltragyna parvifolia), Anjan (Hardwickia binata), and the satinwood tree, the bhira (Chloroxylon swietenia) found usually in the forests throughout the district, but at their best in the forests of Aheri, Alapalli and Moharli, which are situated in the eastern half of the district.

It may be seen from this that the terrain of the eastern half is covered with forests predominantly, that it does not as readily yield to communications across its rugged and hilly surface as in the western half, and that its forests abound in the commercially important trees more extensively and intensively. The western half, interspersed with the beds of the Wardha and the watersheds created by the Chimur and Mul hill ranges, has broader and more widespread valleys than in the eastern sector. Therefore, although it is a fact that Brahmapuri and Chanda talukas have quite a sizeable part of their geographical area under forests it should be noted that they are much less in proportion to the total forests of the district, that they are proportionately less in relation to the proportionate size of the two talukas in the district, and that their forests are not as dense as those of the eastern sector.

The area under cultivation in each taluka /^{obviously} appears to be more or less, in inverse relation to the area under forests. Warora and Rajura talukas which show the least area under forests show more than half of their areas under cultivation (Warora 51.55 per cent, Rajura 50.88 per cent). Chanda, Brahmapuri, Gadchiroli and Sironcha talukas with increasing proportions of forests show less and less areas under cultivation (35.31; 30.04; 15.59 and 6.31 per cent respectively).

As for other categories of land Sironcha and Rajura talukas stand at two extremes, except in the category of land under permanent pastures and other grazing lands which both of them have in lowest proportion in relation to their total areas. Sironcha has least of them because of the predominance of forests which have left little land to be covered by sparse and smaller species of vegetation. On the other hand in Rajura the land has not yielded much to any vegetation other than cultivation, not to speak of forests. This can be seen by the fact also that whereas Sironcha shows least of its area that can be categorized as barren and uncultivable, culturable waste, miscellaneous tree crops and groves other than forests, current fallows, and other fallow land, Rajura has the largest proportion of its area under these categories, among all the talukas.

Between Sironcha and Rajura the two extremes, we find that from Gadhchiroli to Warora the land slowly departs from the Sironcha pattern to merge ultimately in the Rajura pattern. In Gadhchiroli taluka, to north of Sironcha forming along with the latter the eastern half of Chanda district, whatever land has been left out by forests is distributed, apart from the little land (15.59 per cent) that is brought under cultivation, mainly as land under permanent pastures and culturable waste. Just as in Sironcha here as well there is little land (in proportion to its total) under miscellaneous tree crops and groves, and fallow land. As these two talukas are the two biggest ones in the whole district, these categories of land which are less in relation to their respective totals take a sizeable share in the total land of the district under these categories. The opposite of this may be seen in the case of Rajura. This is so because all the three deviate in their sizes much more from the average size.

Brahmapuri, Chanda, and Warora are the three talukas that are nearer to the taluka average size of the district, their sizes varying from 10.1 per cent in the case of Brahmapuri to 13.03 per cent in the case of Chanda. Between Brahmapuri and Chanda which are the two talukas in the central sector, Brahmapuri which is the northern taluka encompassing the major part of the network of the Wainganga and its tributaries, has less of barren and uncultivable land, permanent pastures, culturable waste, and fallow land. Brahmapuri and Chanda alternately take the characteristics of Gadhchiroli on the east and Warora on the west.

Warora taluka, as has been noted earlier, has little of forests and more than half of the total area under cultivation. Except that it has a slightly disproportionate land which is barren and uncultivable, in all other categories it ranks much below among the three talukas of the western half barring the Rajura taluka. In all of them it more or less conforms to the district average.

Area under different crops

The land utilization may be seen among the six talukas in yet another aspect; this refers to the area under cultivation and its utilization for different crops. The differences in the area under different crops may reveal the differences in the factors that are conducive to the cultivation and growth of different crops. The data are presented in tables 2.3 and 2.4. Table 2.3 indicates the manner in which cropped area is used for different crops in each taluka of the district, while table 2.4 gives the talukawise percentages of food crops to the total area under food crops in each taluka.

Of the total area under cultivation in the district 84.27 per cent is under food crops, of which the major portion (67.33 per cent) is under cereals, and 15.73 per cent is under non-food crops. As against this average of the whole district, the two westernmost talukas, Warora and Rajura, stand out as having more area allotted to the cultivation of non-food crops. Respectively they have 71.69 and 66.88 per cent under food crops and 28.31 and 33.12 per cent under non-food crops. It is really these two talukas that have modified the district average. All the other four talukas have their areas under food crops more than the district average, the lowest among them, Chanda taluka, having 87.69 per cent.

How is it that Warora and Rajura have such a large acreage under oilseeds and fibres? Doubtless, some of the important factors must be soil and weather conditions, water-supply etc. If it is presumed that switching on to non-food crops denotes the commercialization of crops, then one has to see as to whether there are other factors conducive to commerce, the important among them being the infrastructure, in the two talukas, Warora and Rajura. Even in the infrastructure the basic factor is that of transport network. Although the infrastructure will be discussed later under a separate head it is pertinent here to note some remarks made in the District Gazetteer regarding the fact that more and more area in the district was being brought under cotton about the beginning of the 20th century.

"At the settlement of 1869, an area of some 57000 acres was estimated to be under cotton; prices had gone up sky-high as a consequence of the American War, and even Chanda, remote though it was, was tempted into a liberal extension of its cotton cultivation. Prices came down as America recovered from the effects of the war and Chanda was forced to abandon an unequal competition with better developed tracts. Untill 1900, the cotton area of the District was barely 20,000 acres, and was often much lower. Prices have however again gone up, and the area under cotton is now nearly as large as it was in the sixties, having averaged over 52000 acres in the last decade. But the state of communications has hitherto practically limited the area of production to a radius of 40 or 50 miles/Warora station, since it does not pay to cart cotton /from over a longer lead. Thus soils naturally adapted for the

Table 2.3 : Area Under Different Crops in Each Taluka of Chanda District, 1960-61
(Figures are in acres)

Taluka	Rice	Wheat	Total Jowar	Other Cereals	Total Cereals	Total Pulses	Other Food Crops	Condi- ments and Pulses
Chanda	76747 (24.56)	8502 (2.72)	140770 (45.06)	724 (0.23)	226743 (72.57)	41917 (13.42)	1122 (0.36)	4179 (1.34)
Warora	39762 (9.18)	61768 (14.26)	152590 (35.23)	24 (-)	254144 (58.67)	45129 (10.42)	723 (0.17)	10527 (2.43)
Bramhapuri	122468 (49.77)	10199 (4.14)	41429 (16.84)	126 (0.05)	174222 (70.80)	59443 (24.16)	1897 (0.77)	1733 (0.71)
Gadchiroli	190584 (60.65)	6527 (2.08)	40202 (12.79)	7233 (2.30)	244546 (77.82)	53197 (16.92)	1217 (0.39)	2977 (0.95)
Sironcha	72637 (59.76)	154 (0.13)	28958 (23.83)	3658 (3.01)	105407 (86.73)	8196 (6.74)	133 (0.11)	920 (0.76)
Rajura	5344 (2.63)	7215 (3.54)	79518 (39.02)	1175 (0.58)	93252 (45.77)	37085 (18.20)	86 (0.04)	5845 (2.87)
District	507542 (31.11)	94365 (5.79)	483467 (29.64)	12940 (0.79)	1098314 (67.33)	244967 (15.02)	5178 (0.31)	26181 (1.61)

(Figures in brackets indicate percentages to total cropped area).

contd.

Tabl3 2.3 : (contd.)

Taluka	Total Food	Total Oil-seeds	Total Fibres	Others	Total Non-food Crops	Total Cropped Area	Area Sown More than Once	Net Cropped Area
Chanda	273961 (87.69)	37247 (11.92)	989 (0.32)	234 (0.07)	38470 (12.31)	312431 (100.00)	18615 (5.96)	293816 (94.04)
Warora	310523 (71.69)	89582 (20.68)	32601 (7.53)	461 (0.10)	122644 (28.31)	433167 (100.00)	9216 (2.13)	423951 (97.87)
Bramhapuri	237295 (96.44)	8477 (3.44)	115 (0.05)	177 (0.07)	8769 (3.56)	246064 (100.00)	52357 (21.28)	193707 (78.72)
Gadchiroli	301937 (96.08)	10828 (3.44)	140 (0.05)	1339 (0.43)	12307 (3.92)	314244 (100.00)	35683 (11.36)	278561 (88.64)
Sironcha	114656 (94.34)	5448 (4.48)	39 (0.04)	1391 (1.14)	6878 (5.66)	121534 (100.00)	1599 (1.32)	119935 (98.68)
Rajura	136268 (66.88)	36783 (18.05)	30538 (14.99)	171 (0.08)	67492 (33.12)	203760 (100.00)	- (-)	203760 (100.00)
District Total	1374640 (84.27)	188365 (11.55)	64422 (3.95)	3773 (0.23)	256560 (15.73)	1631200 (100.00)	17470 (7.20)	1513730 (92.80)

Table 2.4 : Area Under Different Food Crops in Each Taluka of Chanda District as Percentage of Area Under Total Food-crops (1960-61)

Taluka	Rice	Wheat	Jowar	Others	Total Pulses	Other Food Crops	Condi-ments & Spices	Total Food Crops
Chanda	28.01	3.10	51.38	0.26	15.30	0.41	1.54	100.00 (273961)
Warora	12.80	19.89	49.14	0.01	14.53	0.23	3.40	100.00 (310523)
Bramhapuri	51.61	4.30	17.46	0.05	25.05	0.80	0.74	100.00 (237295)
Gadhchiroli	63.12	2.16	13.31	2.40	17.62	0.40	0.99	100.00 (301937)
Sironcha	63.35	0.13	25.26	3.19	7.15	0.12	0.80	100.00 (114656)
Rajura	3.92	5.29	58.35	0.86	27.22	0.06	4.30	100.00 (136268)
District (Total)	36.92	6.86	35.18	0.94	17.82	0.38	1.90	100.00 (1374640)

growth of cotton, such as those of Kothari and Ghatkul groups in the Chanda tehsil, have so far not been utilised for its production". (Chanda District Gazetteer, 1911, p. 154.)

The above remarks together with the present picture of land-utilization reveal the fact that the district as a whole has not been able to catch up with its acreage under cotton even with the lapse of a century. It is to be noted that in the then Chanda district Rajura taluka was not included and much of the area in Gadchiroli and Sironcha talukas was under zamindaris. In 1960-61 the total area under fibres in the whole district was 64,422 acres of which Rajura taluka claimed 30,538 acres; this meant that in the five talukas that formerly belonged to Chanda district the total area under fibres came to 33,884 acres only of which Warora taluka claimed 32,601 acres, the remaining four talukas, Chanda, Brahmapuri, Gadchiroli and Sironcha together claiming 1,283 acres, with 989, 115, 140 and 39 acres respectively. Even if it is presumed that the total area under cultivation over a century has remained the same in the district - there being no probability of its decrease - the fact that the total area under fibres and naturally under cotton, the dominant fibre crop, has gone down showed that proportionately more area is brought under food crops out of 'necessity'. This necessity may be either because there is more demand for food crops or there is less 'scope' for non-food crops. The case of cotton has been pointed out here only as an illustration. The scope for the alternative use of land for non-food crops may be spelt in terms of factors facilitating their efficient, economical, and competitive production. It is stressed here that the infrastructure is an important factor. May be that Warora and Rajura are blessed with this factor more than the other talukas. This is to be borne in mind while the same as obtaining in the six talukas will be discussed later.

The other differences in the crop patterns among the six talukas are revealed in the differential allotment of area for the different food crops.

Between cereals and pulses, the area allotted to the latter is the highest in Rajura taluka, 27.21 per cent of the total area under food crops, closely followed by Brahmapuri in the Central sector, 25.05 per cent. In Sironcha it is the lowest, 7.24 per cent. These differences seem to suggest wide variations from Sironcha to Rajura in the factors responsible for the alternate allotment of land between cereals and pulses. The district average of land under pulses is 17.82 per cent of the total land under food crops. Among the cereals the talukas show alternate preferences between rice and jowar, wheat showing a fairly large area (19.89 per cent) only in Warora. The district as a whole has only 6.86 per cent of its total area under food crops under wheat. The district shows rice and jowar as the two major cereals both covering almost an equal area (36.92 and 35.17 per cent respectively). The six talukas are equally divided in showing preferences to either of these

two cereals. Sironcha, Gadhchiroli and Brahmapuri show more area under rice, with 63.35, 63.12, and 51.61 per cent of the total area under food crops respectively, while Rajura, Chanda and Warora show more area under jowar, their respective area percentages for jowar being 58.35, 51.38, and 49.14. These percentages refer to the crop-pattern of only 1960-61. There are bound to be variations by small margins in the area allotted to the major crop and preferences given to one or the other among the other crops. But it is interesting to note that within the 60 years from 1901 Sironcha taluka appears to have changed its major crop from jowar to rice. Both Sironcha and Warora talukas as per the Imperial Gazetteer of India (Vol. X, 1908) had jowar as their chief crop in 1901-02. This is so because both Warora and Sironcha perhaps then had black soil "in the tracts adjoining the Wardha river, and in the doab between the Wardha and Erai comprising most of the Warora tahsil", and "on the banks of the Godavari flowing along the western boundary of the Sironcha taluka", as their major category of land under cultivation. The picture in 1960-61 has remained more or less the same in Warora whereas Sironcha has turned out rice as its major crop instead of jowar. This may be because much land in the interior to the east of the Godavari has been brought under cultivation during the intervening 60 years. Brahmapuri and Gadhchiroli even then reported rice as their major crop.

While the foregoing description reveals the differences in the crop pattern among the six talukas it also reveals shifts in the area allotted to different crops within a taluka the extreme case being that of Sironcha. These differences are, doubtless, connected to, besides the growth conditions of the crop, many other socio-economic factors, the principal ones being the growth and distribution of population and infrastructure.

Water resources and Irrigated crops

The description of the use of water resources and the crop pattern, so far as irrigated crops are concerned, will further reveal differences of land utilization between Chanda Warora and Brahmapuri talukas on the one hand, and Gadhchiroli Sironcha and Rajura talukas on the other. In table 2.5 information is presented regarding area irrigated according to different sources of irrigation and area under different irrigated crops. In 1961-62, i.e., at the beginning of the Third Five Year Plan total gross area irrigated in the district was 226,415 acres, about 13.8 per cent of the total gross cropped area. It can be seen from the table that the three talukas of Chanda, Warora and Brahmapuri accounted for almost 78 per cent of the total gross irrigated area. Of the remaining three talukas, Gadhchiroli irrigated about 21 per cent of the total gross irrigated area, which in turn meant that there was very little irrigation in the two talukas of Rajura and Sironcha. So far as irrigation was concerned, therefore, it was concentrated in Chanda, Brahmapuri and Gadhchiroli talukas.

Table 2.5 : Irrigated area in different talukas of Chanda district by sources of irrigation and under different crops (1960-61)

(Area in acres)

Taluka	Sources of Irrigation						Gross Irrigated Area
	Govt. Canals	Tanks	Wells (Other than tube wells)	Other sources	Net Irrigated Area	Double Cropped Area	
Chanda	19875 (32.98)	38030 (63.11)	409	1947	60261 (100.00)	310	60571
Warora	-	29531 (95.59)	502	862	30895 (100.00)	172	31067
Brahmapuri	20188 (24.73)	59621 (73.03)	341	1488	81638 (100.00)	572	82210
Gadhchiroli	-	60006 (96.66)	318	1755	62079 (100.00)	1128	63208
Sironcha	-	3450 (81.54)	171	610	4231 (100.00)	209	4439
Rajura	-	139 (46.18)	88	74	301	-	301
District (Total)	40063 (16.73)	190777 (79.69)	1829	6736	239405 (100.00)	2391	241796

contd.

TABLE 2.2 (continued)

Taluka	Area under different irrigated crops										
	Rice	Total Cereals	Total Pulses	Sugar-cane	Chillies	Other Food-crops	Total Food Crops	Cotton	Other Non-food	Total Non-food	Gross Irrigated area
	9	10	11	12	13	14	15	16	17	18	19
Chanda	59486 (98.21)	59636	-	27	308	758	60569	-	2	2	60571 (100.00)
Warora	29670 (95.50)	29743	1	14	35	1253	31046	6	15	21	31067 (100.00)
Brahmapuri	80606 (98.05)	80744	-	434	162	860	82201	-	9	9	82210
Gadhchiroli	60388 (95.54)	60556	-	122	2176	352	63206	-	2	2	63208
Sironcha	3835 (86.39)	3848	-	13	336 (7.57)	71	4268	-	171	171	4439
Rajura	301 (100.00)	301	-	-	-	-	301	-	-	-	301
District	234286 (96.89)	234848	1	610	3017	3114	241591	6	199	205	241796

(Figures in brackets are percentages)

i.e., mainly in the Wardha valley and the Wainganga basin area. The source of irrigation, in all the talukas, was mainly tanks, except in Chanda and Brahmapuri talukas where 33.0 and 24.7 per cent of the irrigated land respectively received water from government canals. The contribution of wells and other sources, as sources of irrigation was negligible. The most important irrigated crop was rice, except in Sironcha taluka where about 9 per cent of the gross irrigated area was under chillies.

At the time when the Zilla Parishad came into existence there were in all 12184 irrigation tanks in the district, excluding those in Rajura taluka. These tanks irrigated about 1.91 lakh acres. Of these irrigation tanks 15 major or state tanks were managed by the Minor Irrigation Department of the State Government, 3425 tanks were transferred to Zilla Parishad as they were ex-malgujari tanks, and the remaining were presumably private tanks. Minor or state tanks irrigated more than 250 acres each. The number of private tanks was much more than that of public tanks, but those irrigated a proportionately small area. However, on an average, private tanks irrigated not more than 6 acres each. It seems that there were about 170 private tanks which irrigated nearly 100 acres each. It was observed that though the main irrigated crop was paddy in all the talukas, in Brahmapuri and Gadchiroli talukas, it was mainly the government tanks which irrigated a large proportion of the area, and that in Warora taluka, and to a certain extent in Chanda taluka also, it was the private tanks which were relatively important in this respect. In Sironcha and Rajura talukas, though the irrigated component of the crop pattern was insignificant, major portion of the irrigated area in Sironcha taluka received water from government tanks, and that in Rajura taluka from wells and bodis. The location of tanks depended mainly on the topographical conditions, and therefore, it seems that these conditions being suitable in Brahmapuri, Gadchiroli and part of Chanda taluka, majority of the large tanks were located in these areas. It may be mentioned here that majority of the new tanks were also being constructed in these areas.

Livestock

According to the 1961 livestock census the number of livestock in Chanda district was 13.04 lakhs, that is, about 20 livestock per 100 acres of area. The detailed talukawise information about the number of cattle and other livestock is presented in table 2.6. The forests, however, constituted a large part of the total geographical area. Therefore, so far as the cultivated land was concerned, the density of livestock was about 88 per 100 acres of cultivated land. Gadchiroli and Sironcha talukas had very high density, 139 and 162 respectively, so far as cultivated area was concerned, whereas Warora and Rajura had about 58 livestock per 100 acres of cultivated area. The number of male working cattle over three years was 4.21 lakhs and the area cultivated per pair

Table 2.6 : Number of livestock in different talukas of Chanda District (1961 Census)

Taluka	C a t t l e						Young stock	Total Cattle
	Males over 3 years			Females over 3 years				
	Breeding Bulls	Working Bullocks	Total	in milk	Dry	Total		
Chanda	773	74,854	77,432	15,407	21,108	48,061	40,547	1,60,267
Warora	571	75,885	80,173	18,980	25,557	50,785	51,361	1,79,195
Brahmapuri	226	65,129	66,740	9,796	18,456	37,220	32,632	1,32,148
Gadhchiroli	619	96,141	98,775	20,021	37,149	68,584	72,147	2,39,506
Sironcha	607	37,687	40,766	9,436	21,642	41,660	43,082	1,25,528
Rajura	23	34,765	35,340	5,499	13,769	24,826	16,599	76,765
Total district	2,819	3,84,461	3,99,226	79,139	1,37,681	2,57,775	2,56,408	9,13,409

contd.

Table 2.6 : (contd.)

Taluka	B u f f a l o e s							
	Males over 3 years			Males over 3 years			Young stocks	Total Buffaloes
	Breeding Bulls	Working Bullocks	Total	In milk	Dry	Total		
Chanda	200	824	7,341	4,768	4,042	10,628	10,467	28,436
Warora	186	297	696	3,003	3,429	8,252	7,816	16,764
Brahmapuri	72	3,181	3,528	2,692	1,870	5,520	5,735	14,783
Gadhchiroli	84	22,477	23,111	2,456	2,675	6,205	6,769	36,085
Sironcha	84	9,269	10,566	933	1,848	3,347	3,288	17,201
Rajura	79	59	188	1,657	2,889	5,947	3,814	9,949
Total District	705	36,107	45,430	15,509	16,753	39,899	37,889	1,23,218

contd.

Table 2.6 : (contd.)

Taluka	Livestock other than cattle and buffaloes				Total Livestock
	Sheep	Goats	Pigs	Other livestock	
Chanda	11,054	30,540	1,094	36	2,31,427
Warora	4,939	40,360	499	470	2,42,227
Brahmapuri	7,681	26,316	440	53	1,81,421
Gadhchiroli	8,714	64,635	5,195	87	3,54,222
Sironcha	3,527	34,529	6,096	49	1,86,930
Rajura	1,051	18,933	138	51	1,07,787
Total District	37,866	2,15,313	13,462	746	13,04,014

of working cattle was about 7 acres, varying in different talukas between 5 acres to 11 acres according to the crop pattern. The number of female bovines over three years was 2.98 lakhs, but so far as the milch cattle was concerned, there were 76 heads (63 cows and 13 buffaloes) per thousand of population. In different talukas milch cattle per thousand of population varied between 55 to 95. Consumption of milk was very low, considering the fact that in many parts of the district cows were not milked, and that wherever they were milked the milk production, as also the milk production of buffaloes, was very low. Most of the animals were of non-descript type, though among the bullocks and cows Gaolao, and among the buffaloes Nagpuri, were seen prominently. The availability of fodder could not be exactly assessed, but if we took into account the permanent pastures and area under fodder crops, it seems that about three quarters of an acre of land was available per head for fodder under the existing crop system. This, however, excluded the grazing lands under forest department. So far as the forest areas of the district were concerned, no shortage of fodder was generally reported, but in areas like Warora and Rajura talukas and part of Chanda taluka also, considerable shortage was reported, especially during the period from March to July. The point regarding the availability of veterinary services is discussed later along with the provision of other services, since it is more relevant as a total framework of infrastructure in the area.

Fishery

Chanda district, being situated as it is, fishing activity was restricted to inland water only. There were almost 3,000 perennial and 8,000 seasonal tanks which afforded about 40,000 acres of water spread area for fisheries development. These included deep reservoirs also viz. Ghorejheri tank, Asolamendha tank, Nelleshwar tank, and Nava talao. In addition, Wardha, Wainganga, Pranhita, Indravati and Godavari, the five important perennial rivers with their total length of more than 600 kms. in the district also afforded good area for development of the industry. According to the 1961 census, 4416 males and 415 females, in all 4831 persons, were engaged in fishing activities. Almost all of these belonged to the communities known as Dheemar, Bhoi and Kahar. Naturally, since the scope of fishing activity was limited, majority of them were engaged in subsidiary occupations like agricultural and other labour. Many varieties of fish of commercial importance were found in the district, but most of these were not of fast growing type. Fishing was generally done with the help of gill nets, cast nets, drag nets and long lines. Cotton twine was used to prepare and repair the nets. Fishing activity was spread almost all over the district with a few fishermen at one place. The catch was meagre and was consumed locally.

Mining and Industries

Chanda is the richest district in Maharashtra so far

as mineral resources are concerned. It has large reserves of high grade iron ore and second grade coal, and moderate reserves of white clay, limestone, ochres, copper, mica etc. The district is also bestowed with other minor minerals like building stone, and brick earth. The important coal fields in the district are situated at Bandar, Warora, Majri, Ghugus, Chanda and Ballarpur. These deposits are generally of a lower quality and of a non-coking variety. The total reserves in this area are estimated at about 2300 million tons. It is also likely that coal reserves may be found at Shioni in Brahmपुरi taluka where investigations are being conducted. During 1960-61 the production of coal was 6.07 lakh metric tons. The known iron ore deposits are located at Lohara, Asola, Deolgaon, Pipalgad, Fuser, Ratnapur, and Bhisli, mainly in Gadchiroli and Warora talukas. The reserves are estimated at about 23 million tons. Also the surveys carried out by the Department of Geology and Mining have shown the existence of iron ore deposits at Masel and Zendapur in Gadchiroli taluka and in Surjagadh hill in Sironcha taluka. Only a few thousand metric tons of iron ore have been exploited so far. The white clay and limestone deposits occur mainly in Chanda and Warora talukas. The production of a white clay in 1960-61 was 3,518 metric tons. Limestone has occurred in Brahmपुरi taluka also. The estimated reserves of limestone are about 10 million tons. However, these deposits are yet to be worked. Ochres which are used for manufacture of paints are found near Chanda town, while copper deposits occur at Govindpur and Thanewasna in Chanda taluka.

It will be seen that except iron ore all the minerals are found in the western part of the district. Apart from the availability of resources this part has other locational advantages like transport, communications, electricity, water etc. and therefore, all the large scale and most of the small scale industries are located in this area. For instance, all the collieries, the paper mill and the pottery works are located at Ballarpur. Glass works is located at Chanda, oil mill at Warora, and cement factory at Ghuzus. The small-scale factories included general engineering, soap, tiles, glass manufacturing, wooden furniture, cotton ginning and pressing, oil mills, saw mills, rice mills and bidi-making. Except a few oil mills, saw mills and rice mills and bidi-making, all the factories are located in Chanda, Warora and Brahmपुरi talukas. The three talukas of Gadchiroli, Sironcha, and Rajura, therefore have no industries except the traditional crafts like carpentry, pottery, cane and bamboo works, oil ghanis, etc. These three talukas accounted for 30 per cent of the total workers in household industries and 15 per cent of those in manufacturing industries, according to 1961 census. So far as manufacturing industries were concerned, these were located at Desaiganj, Armori, and Gadchiroli in Gadchiroli taluka, Sironcha, Allapalli, and Aheri in Sironcha taluka and Rajura in Rajura taluka.

Summary

To summarize the description in this chapter, it seems that the two talukas of Gadhchiroli and Sironcha with their predominance of forests and food crops production, mainly rice, form a distinct part of Chanda district. Rajura taluka, which was transferred to this district from Nanded in 1959, resembles more or less with Chanda and Warora talukas. Whole of this area has remained backward for quite a long time. The District Gazetteer (1909) has emphasized this fact. The talukas of Gadhchiroli and Sironcha cover a very large area (nearly 6,000 sq. miles), almost as large as many other districts in Maharashtra. Gadhchiroli, Rajura and Sironcha talukas account for almost 58 per cent of the total geographical area of the district. The terrain in Gadhchiroli and Sironcha talukas is covered with forests and hills and does not easily yield to communications across its rugged surface. The forests in this part are of a very high quality. Only food crops are grown in this area, though recently some cash crops are being experimented with. Of the total gross area irrigated in the district (226,415 acres) Warora, Chanda and Brahmapuri accounted for 78 per cent, and Gadhchiroli 21 per cent. There was very little irrigation in Sironcha and Rajura talukas. Even the development of irrigation was, to a certain extent, confined to Chanda, Warora and Brahmapuri talukas. So far as cattle were concerned, the milk yield was very low, and there was fodder shortage, particularly in summer in Chanda, Warora and Rajura talukas. Development of suitable breeds had just started. Fishing activity was restricted naturally to inland water only and was spread over a large area with a few fishermen at one place. The catch was meagre and was consumed locally. There were large possibilities of developing mineral resources, mainly iron ore, in Gadhchiroli and Sironcha talukas. Since these were not being developed at present, whatever industries existed in the district, they were concentrated in Chanda and Warora. The important bottlenecks for development, it seems, were the lack of transport and communications facilities, and the tribal population. We shall now examine this latter aspect.

CHAPTER 3

PEOPLE

Distribution of Population in Different Areas of the District

The total population of Chanda district, according to the 1961 Census, is 12,38,070. Of the six talukas in which the district is divided for the purpose of administration, Chanda taluka includes a major single share of the district population, namely, 23.97 per cent followed closely by Gadchiroli which has 22.4 per cent; the remaining four in the decreasing order of their percentages are Warora (19.24 per cent), Brahmapuri (18.32 per cent), Sironcha (8.79 per cent) and Rajura (7.24 per cent). More than 61 per cent of the total population of the district is found in Chanda, Warora and Brahmapuri talukas which form, as indicated in the previous chapter, the middle and the north-western sector of the district. Talukawise information about population and density in Chanda district is presented in Table 3.1. The density per square mile in the district as a whole is 124 against 334 of the Maharashtra State as a whole in 1961. It is clear that the district as a whole is very sparsely populated as compared to the whole of Maharashtra. Within the district, however, this density differs from one taluka to the other. Chanda taluka, as is expected, shows the highest density, 228, closely followed by Brahmapuri, the density of which is 225. Warora and Rajura, the westernmost talukas, come next with their densities as 185 and 143 respectively. Thus all these four talukas forming a contiguous area of the western sector appear to be highly populated in comparison with the two talukas of the eastern sector, namely, Gadchiroli and Sironcha, the densities of which are 99 and 37 only, respectively.

The discussion about the total population in relation to the total area of different panchayat samitis in Gadchiroli, Sironcha and Rajura talukas would have highlighted their peculiarities in this respect. But this comparison is not possible in the absence of correct figures of the geographical area of different panchayat samitis. However, the distribution of population can be seen in another respect, that of the number of villeges and towns and their size, in the six talukas of the district, and in the panchayat samitis in Gadchiroli, Sironcha and Rajura talukas. It may be mentioned here that though Rajura taluka is divided into two development blocks, namely, Rajura and Dewade, it was not fully separated administratively, and in many respects data were not available separately for two blocks. Rajura taluka is, therefore, being treated here as one block.

According to the 1961 Census only five places are classified as urban areas in the district. Of these, two are in Chanda taluka, one in Warora taluka and two in Rajura taluka. The average population of the three urban places is

Table 3.1 : The Area, population, density and percentages of area and population for each taluka in Chanda district

Taluka/District	Area in square miles	Population (1961)	Percentage of area	Percentage of population	Density per square mile
(1)	(2)	(3)	(4)	(5)	(6)
Chanda	1,300.0	296,807	13.0	24.0	228
Warora	1,285.1	238,323	12.9	19.3	185
Brahmapuri	1,007.7	226,924	10.1	18.3	225
Gadhchiroli	2,791.2	277,398	28.0	22.4	99
Sironcha	2,967.6	108,994	29.7	8.8	37
Rajura	625.7	89,624	6.3	7.2	143
Chanda district	9,977.3	1,238,070	100.0	100.0	124

Source : District Census Handbook, Chanda, 1961. Area figures are adjusted to the figures of total geographical area given in District Statistical Abstract (1962-63 and 1963-64), Bureau of Economics and Statistics, Government of Bombay.

Chanda and Warora talukas is 22,661, while that of the two places in Rajura taluka is 4,854. Brahmapuri, Gadhchiroli and Sironcha talukas have no towns, according to the 1961 Census. This, however, is a matter of definition of urban area: If we take into account only the size of population, then one village in Chanda taluka, two in Gadhchiroli, and four each in Brahmapuri and Warora talukas are larger than the towns in Rajura taluka. The important point to be noted here is that urban growth, which accompanies the process of development, has been almost nil in the major part of the area in the district, particularly in the talukas of Gadhchiroli and Sironcha. This aspect of urban (and market) centres will be dealt with again while discussing the problem of infrastructure in the area.

The size of the villages in different talukas and different panchayat samitis of Gadhchiroli and Sironcha talukas reveals interesting differences. The relevant information is given in Table 3.2. The district average comes to 415 persons per village. Against this average Armori panchayat samiti in Gadhchiroli taluka and the three talukas in the western sector, namely, Brahmapuri, Warora and Chanda together, show averages (655 and 586 respectively) which are much higher. The average size of villages in Gadhchiroli panchayat samiti as well is higher (468) than that of the district. It should be noted, as is clear from the map that

Table 3.2 : Showing the size of villages and percentage of scheduled tribe population to total population, in different talukas of Chanda district and in different panchayat samitis of Gadhchiroli, Sironcha and Rajura talukas

Taluka/Panchayat Samiti	Rural population (1961)	No. of occupied villages	No. of occupied villages per 100 sq.miles of area	Average population per occupied village	Scheduled tribes population as percentage of total population
(1)	(2)	(3)	(4)	(5)	(6)
Chanda taluka	224,972	376	32	598	-
Warora taluka	224,175	442	35	507	-
Brahmapuri taluka	224,926	335	37	677	-
Kurkheda PS	44,801	195	-	230	64.5
Armorli PS	79,902	122	-	655	19.3
Gadhchiroli PS	47,732	99	-	482	18.9
Dhanora PS	37,511	249	-	150	77.7
Chamorshi PS	69,452	178	-	390	24.7
Gadhchiroli taluka	277,398	843	29	329	35.9
Aheri PS	40,718	185	-	220	52.5
Yetapalli PS	34,987	250	-	140	89.2
Sironcha PS	33,289	95	-	350	18.5
Sironcha taluka	108,994	530	17	206	53.3
Rajura taluka	79,917	229	30	349	27.1
Chanda district	1,142,380	2,755	27	415	14.8

Source: District Census Handbook, 1961.

these two panchayat samitis adjoin the river Wainganga which forms their western boundary. The Chamorshi panchayat samiti, forming the southwestern or southern part of the Gadhchiroli taluka and which is adjacent to Chanda taluka, besides being flanked by the Wainganga river on its west has an average village size of 390 persons followed by Rajura, with its average size of 349 persons, and the Sironcha panchayat samiti in the Sironcha taluka, with an average village of 348 persons. The Sironcha panchayat samiti also is the southernmost part of the taluka and is flanked on its

west and south by the rivers Pranhita (formed by Wardha and Wainganga rivers) and Godavari respectively. The panchayat samitis which show the smallest size of villages are Kurkheda and Dhanora in Gadchiroli taluka and Aheri and Yetapalli in Sironcha taluka with 233, 149 and 227 and 138 persons per village respectively. The talukas and panchayat samitis therein which are interspersed by river-beds and form the western sector or are otherwise inclined towards it by communication means appear to have villages of a larger size. The panchayat samitis which are in the interior and away from the communication means show smaller villages. The eastern sector, as observed earlier, is more rugged and comprises a hilly terrain. The easternmost panchayat samitis, Dhanora and Yetapalli, therefore, show the lowest average size of villages. The Rajura taluka although in the western sector for different reasons resembles more to the Chamorshi and Sironcha panchayat samitis.

This feature has another notable aspect. The panchayat samitis which are adjacent to the western sector, and show a higher average size of villages have comparatively more of non-tribals and less of tribals (Table 3.2). Conversely all the panchayat samitis which show a smaller village have more of tribals than the other panchayat samitis. It is but natural that Aheri, Kurkheda, Dhanora and Yetapalli which are in the interior and show smaller villages have respectively 52.5, 64.5, 77.7, and 89.2 per cent of their population as tribals. Rajura taluka among other talukas and Blocks has the highest proportion (27.1 per cent) of tribals. It is to be noted that Rajura which is in the western sector and has an average size of its village which, although much less than the district average, is higher than that of the easternmost panchayat samitis, has a fairly large proportion of tribals. It appears, therefore, that villages having a larger proportion of tribals are smaller in size and that most of the bigger river-beds are populated more by non-tribals. The tribals still appear to resort to the rugged terrains avoiding the plains. This is also true of Rajura in the western sector.

Occupational Structure

The district as a whole shows 57.8 per cent of its population as engaged in one kind of occupation or the other and 42.3 per cent as non-working dependents. The labour participation rate and males is 61.6 per cent, while that among females is 53.9 per cent. The data regarding the proportion of workers and non-workers, sex-wise, in the talukas and some of the panchayat samitis in Chanda district, are presented in Table 3.3. In fact, the labour participation rates are higher in the district than the State averages, the latter being 47.9 per cent for total population, 57.1 per cent for males and 38.1 per cent for females. As the Table shows, the participation rates, so far as the total workers and male workers are concerned, are relatively high in all the talukas and in the panchayat samitis of Gadchiroli,

Table 3.3 : Percentage proportion of workers and non-workers, males and females, in Gadchiroli, Sironcha and Rajura talukas and their panchayat semitis

Block/Taluka/District	Percentage proportion of			
	Workers			Non-workers
	Total	Males	Females	
Armori	58.4	60.5	56.4	41.6
Kurkheda	63.2	65.3	61.0	36.8
Gadhchiroli	60.0	60.6	59.5	40.0
Dhanora	62.6	65.0	60.1	37.4
Chamorshi	62.0	64.2	59.8	38.0
Gadhchiroli Taluka	60.9	62.8	59.0	39.1
Aheri	56.7	64.4	49.9	43.3
Yetapalli	54.4	63.1	45.4	45.6
Sironcha	56.5	65.2	47.8	43.5
Sironcha Taluka	55.8	63.9	47.8	44.2
Rajura	58.6	63.1	54.0	41.4
Chanda Taluka	53.6	60.0	47.0	46.4
Warora Taluka	57.6	60.5	54.7	42.4
Brahmapuri Taluka	60.2	61.6	58.8	39.8
Chanda District	57.8	61.6	53.9	42.2

Sironcha and Rajura talukas. This higher participation is due to very high dependence on agriculture, lack of urban development as shown by a small proportion of urban population to total population, and comparatively depressed agriculture in the areas which are occupied by tribals. Female participation rates are comparatively high in Gadchiroli and Brahmapuri talukas, mainly because of the predominance of rice in the cropping pattern of these talukas. Sironcha taluka, however, shows the lowest participation rate of females, in spite of its crop pattern being dominated by rice. Its female participation rate is almost equal to that of Chanda taluka. The phenomenon may be explained partly by the fact that the population of this taluka is predominantly tribal, and that forests occupy major portion of the area. In the settled areas the tribal women work in agriculture, but in the interior they do not participate in the work for which they have to go away from the village. They may collect wood from nearby area, or pound the paddy, and look after children. This difference between different areas may be further probed by breaking up the number of workers among the different categories of occupations.

That the district as a whole is depending predominantly on agriculture is clear from the fact that 82.1 per cent of all the workers in the district are found either as cultivators or agricultural labourers. In the three talukas Brahmapuri, Warora and Chenda together they are 79.1 per cent. The workers in the other primary occupation of mining, quarrying etc., are 3.8 per cent in the district as a whole whereas they are 4.2 per cent in the three talukas mentioned above. This means that 85.9 per cent of all workers in the district and 83.3 per cent in the three talukas are engaged in primary occupations. The relevant data are presented in Table 3.4.

Kurkheda, Dhanora and Yetapalli, the three tribal development blocks show the highest proportion of their workers engaged in either agriculture or primary occupations as a whole. Gadchiroli, Armori and Chamorshi panchayat samitis, and Rajura taluka come next in showing the proportion of workers engaged in these occupations, which is higher than the district average. Aheri and Sironcha panchayat samitis have much less of their workers engaged in these occupations, those in the latter panchayat samiti ranking below the other three talukas together. This is explained by the fact that these are the two panchayat samitis where those engaged in 'services' are the highest in the whole of the district compared with the other talukas or panchayat samitis either singly or collectively. In Aheri they are 7.6 per cent, and in Sironcha 13.9 per cent, whereas in the district as a whole they are 5.5 per cent and in the other talukas 6.2 per cent. Even here Gadchiroli, Armori, Chamorshi, the panchayat samitis in Gadchiroli taluka, and Rajura taluka go together in having more or less the same percentage of workers, as the three tribal development blocks Kurkheda, Dhanora and Yetapalli go together in having the least proportion of workers in the 'services'. Aheri and Sironcha also show comparatively larger proportion of workers in household industry. In this they resemble more the other talukas and the panchayat samitis of Armori, Gadchiroli and Chamorshi. The tribal development blocks, Kurkheda, Dhanora and Yetapalli, and Rajura taluka have a less proportion of workers in this category.

It appears that the distribution of a much larger proportion of workers in the category of 'services', which is mainly filled in by males, and which occupation is not a family occupation and which therefore has the females in the family as non-working dependents, that has been instrumental in showing a much less proportion of workers among the females. All the tribal development blocks, however, show much less proportion of workers in the non-agricultural category of occupations. Even if it is considered that the district as a whole lacks in avenues for non-agricultural occupations, the tribal development blocks suffer more acutely from the lack of any scope for non-agricultural occupations.

The proportion of cultivators and agricultural labourers in comparison with the gross cropped area might give us

Table 3.4 : Percentage Distribution of Workers in the Different Industrial Categories

Name of Block and Taluka	Occupational Categories																
	Working as Cultivator I			Working as Agricultural Labour II			Working in									Workers engaged in agriculture	Workers engaged in primary occupation
	Males	Females	Total	Males	Females	Total	III Mining, Quarrying, Forestry, Fishing, etc. Total	IV Household Industry Total	V Manufacturing Other than IV Total	VI Construction Total	VII Trade and Commerce Total	VIII Transport, Storage, and Communication Total	IX Other Services Total				
Armori	60.2	64.7	62.4	16.2	26.5	21.1	2.5	5.6	0.8	0.1	2.5	0.3	4.7	83.5	86.0		
Kurkheda	63.2	71.2	74.1	18.2	23.4	20.7	1.3	2.1	0.2	0.1	0.9	-	2.1	94.8	96.1		
Gadh-chiroli	62.4	68.9	65.5	18.6	26.6	22.5	2.0	3.3	0.3	0.2	1.6	0.3	4.3	88.0	90.0		
Dhanora	76.4	78.4	77.3	14.6	19.0	16.7	1.9	0.9	0.2	0.1	0.4	-	2.5	94.0	95.9		
Chamorshi	62.2	66.7	64.4	18.8	27.6	23.0	3.8	4.0	0.3	0.3	0.7	0.1	3.4	87.4	91.2		
Aheri	56.6	57.1	56.9	17.8	33.1	24.5	4.3	3.9	0.6	0.5	1.6	0.1	7.6	81.4	85.7		
Yetapalli	81.0	80.9	81.0	12.7	17.6	14.7	1.0	1.2	0.1	-	0.3	-	1.7	95.7	96.7		
Sironcha	44.7	38.2	41.9	24.0	39.6	30.7	5.0	5.5	1.0	0.3	1.6	0.1	13.9	72.6	77.6		
Rajura	53.9	61.4	57.4	23.4	34.2	28.3	5.1	2.5	0.5	0.1	1.1	0.5	4.5	85.7	90.8		
Other Talukas	49.2	56.5	52.6	19.8	34.2	26.5	4.2	5.1	1.6	0.5	2.4	1.1	6.2	79.1	83.3		
District Total	54.3	60.2	57.0	19.4	31.7	25.1	3.8	4.4	1.2	0.4	1.9	0.7	5.5	82.1	85.9		

further information regarding the favourable or unfavourable conditions prevailing in the six talukas. The same is shown in Table 3.5.

If the talukas are considered as whole Gadchiroli appears to have the largest proportion (61.27 per cent) of its workers engaged in agriculture, and Chanda the lowest (37.98 per cent). There is comparatively little difference between the next highest in Brahmapuri (57.42 per cent) and the next lowest in Sironcha (46.5 per cent). The people depending upon agriculture show different proportions among the six talukas when the workers are viewed in relation to the gross cropped area. The district as a whole shows 4 acres per cultivator and 9.1 acres per agricultural labourer. In view of this average of the district there appears to be more cultivators or labourers engaged in agriculture in Brahmapuri, Gadchiroli and Sironcha talukas. There are more of cultivators and less of labourers in Chanda. And in Warora and Rajura there are less of both the cultivators and labourers, the latter in Rajura being much less in relation to the cultivated area. Warora and Rajura are the two talukas in the western sector which have jowar, wheat and cotton as their food and commercial crops and Brahmapuri, Gadchiroli, and Sironcha have rice as their main crops. Chanda combines the features of both these groups. Paddy fields are smaller and require a larger seasonal labour whereas the fields where jowar, cotton and wheat are grown (in Warora and Rajura) are mostly found in a flat countryside are larger in size of holding, and require less number of seasonal labour. That is why, perhaps, Warora and Rajura show less proportion of cultivators and labourers than Gadchiroli, Sironcha and Brahmapuri. Chanda appears to strike the golden mean. This is still clear when the cropped area is considered in relation to the total number of workers engaged in agriculture including both the cultivator and the labourer. The district average of land per person engaged in agriculture comes to 2.78 acres and Chanda shows 2.77 acres. Warora and Rajura show 3.82 and 4.53 acres respectively whereas Brahmapuri, Gadchiroli, and Sironcha show 2.11, 1.85, and 2.4 acres respectively.

Among the backward talukas, Gadchiroli, Rajura and Sironcha, therefore, Gadchiroli and Sironcha are alike in having less per capita land under crops and Rajura and Sironcha are alike in having less number of persons depending upon agriculture. The factors that lead to the small size of per capita land in Brahmapuri, Gadchiroli and Sironcha might be the same but they may not be the same in effect. Similarly the incidence of less proportion of workers in agriculture might not mean the same in implication in Chanda, Sironcha and Rajura. Because although we know from this the size of landholding and the distribution of the population in agricultural and non-agricultural occupations we do not know the extent of their returns. Therefore, it is difficult to say anything conclusively from these data, on their implications to the population. Perhaps the occupational

Table 3.5 : Distribution of Cultivators and Agricultural Labourers in relation to Gross Cropped Area

Talukas	Gross cropped area in acres	Total population	Culti- vators in per- centage to total popula- tion	Agri- cultural Labourers in per- centage to total popula- tion	Cropped area per culti- vator in acres	Cropped area per Agri. Labourer in acres	Cropped area per person engaged in agri- culture	Per capita cropped area in acres
Chanda	312,431	296,807	27.38	10.60	3.85	9.93	2.77	1.05
Warora	433,167	238,323	27.89	19.64	6.52	9.25	3.82	1.82
Brahmapuri	246,064	226,924	35.36	15.96	3.06	6.79	2.11	1.08
Gadhchiroli	314,244	277,934	40.94	20.33	2.76	5.56	1.85	1.13
Sironcha	121,534	108,864	33.50	13.00	3.33	8.59	2.40	1.12
Rajura	203,760	89,624	33.60	16.57	6.77	13.71	4.53	2.27
District	1,631,200	1,238,070	32.94	14.48	4.00	9.10	2.78	1.32

distribution of the scheduled tribes, their peculiar attitudes if any towards different occupations, and their social characteristics are responsible in modifying the occupational distribution of the population in the district. It might help us, therefore, to look into the occupational distribution of the scheduled tribes in the district as a whole, and in Gadchiroli, Rajura, and Sironcha talukas. The relevant data are presented in Table 3.6.

In all the three talukas shown above in Table 3.6 the workers among the tribals are proportionately more than the number of workers in the total population. But in Sironcha, the tribals too show much less proportion of workers. In the two agricultural occupational categories the tribals in Gadchiroli taluka have more cultivators, and the agricultural labourers are slightly less than their district average. In Sironcha taluka both the cultivators and labourers among the tribals are fairly less than their district average. In Rajura, however, there are much less of cultivators, whereas there are much more of agricultural labourers than the district average. Of the total population including the scheduled tribes there 61.27, 50.17 and 46.50 per cent workers engaged in agriculture in Gadchiroli, Rajura and Sironcha talukas respectively (Table 3.3). Therefore, in Rajura and Sironcha talukas the tribals are found more in agricultural occupations, whereas in Gadchiroli the non-tribals are found more in agricultural occupations, their respective percentages among the tribals being 59.9, 53.6 and 59.8. The workers in household industry and services therefore appear to have been drawn from among the non-tribals in these talukas.

Literacy in Different Areas

Information about literacy percentage among males and females in different talukas and some panchayat samitis of Chanda district, based on 1961 Census, is presented in Table 3.7. In fact, there has been considerable improvement in the rate of literacy during the decade 1951-61, mainly as a result of rapid increase in the facilities of primary and secondary education. The percentage of literacy in the district in 1951 was 10.90 for total population, 19.20 for males and 2.50 for females. In 1961, the respective percentages were 17.27, 28.58 and 5.79. No doubt these literacy rates lag very much behind the averages for Maharashtra State, namely, 29.82, 42.04 and 16.76 respectively, for total, male and female population. But the achievement in Chanda district is significant, if we consider the improvement in the context of a large population of Scheduled Tribes (about 15 per cent of the total population), large inaccessible areas, and addition to the district in 1959 of educationally backward taluka of Rajura.

Chanda and Warora talukas seem to be the most literate areas of the district. The rate of literacy drops as we move eastward, except in case of males in Gadchiroli and Armori

Table 3.6 : Percentage Distribution of the Scheduled Tribes into Different Industrial Categories

Teluka	Total Population	Total Workers	Working in									Total workers in total population including non-tribals
			Working as Cultivators Total I	Working as Agricultural Labour Total II	Mining, Quarrying, Forestry, Fishing etc. Total III	Household Industry Total IV	Manufacturing other than IV Total V	Construction Total VI	Trade and Commerce Total VII	Transport, Storage and Communication Total VIII	Other Services Total IX	
Gadh-chiroli	99,708	63.83	46.0	13.8	1.2	1.2	0.09	0.04	0.1	-	0.04	60.9
Rajura	24,059	63.86	36.3	23.6	1.9	0.4	0.07	0.04	0.07	-	0.06	58.6
Sironcha	59,140	57.42	42.5	11.1	1.1	0.3	0.06	0.05	0.03	-	0.02	55.8
District	183,431	61.77	43.5	14.2	1.3	0.8	0.08	0.04	0.08	-	0.03	57.8
Rural	182,907	61.77	43.6	14.2	1.3	0.8	0.08	0.04	0.08	-	0.03	
Urban	524	64.12	7.8	14.9	5.0	1.5	-	1.3	2.9	-	0.4	

Table 3.7 : Literacy among Males and Females in Different Talukas and Some Panchayat Samitis of Chanda District (1961 Census)

Taluka/ Panchayat Samiti	Percentage of literate males and females								
	Total			Rural			Urban		
	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
Chanda taluka	21.81	33.84	9.34	14.62	24.86	4.24	44.33	66.65	26.11
Warora "	21.14	34.15	7.83	19.45	32.12	6.55	47.92	65.06	29.00
Brahmapuri "	18.05	31.42	4.71	18.05	31.42	4.71	-	-	-
Kurkheda PS	13.30	23.68	2.95	13.30	23.68	2.95	-	-	-
Armorli PS	19.33	31.89	4.58	19.33	31.89	4.58	-	-	-
Gadhchiroli PS	15.10	26.59	3.56	15.10	26.59	3.56	-	-	-
Dhanora PS	7.84	14.24	1.42	7.84	14.24	1.42	-	-	-
Chamorshi PS	9.83	17.84	1.86	9.83	17.84	1.86	-	-	-
Gadhchiroli Taluka	13.44	23.83	3.04	13.44	23.83	3.04	-	-	-
Aheri PS	9.21	15.12	3.29	9.21	15.12	3.29	-	-	-
Yetapalli PS	3.50	6.18	0.76	3.50	6.18	0.76	-	-	-
Sironcha PS	10.78	18.09	3.61	10.78	18.09	3.61	-	-	-
Sironcha Taluka	7.78	12.98	2.56	7.78	12.98	2.56	-	-	-
Rajura Taluka	13.39	22.44	4.13	11.58	20.07	2.94	28.32	41.45	14.24
Chanda District	17.27	28.58	5.79	15.10	25.87	4.24	43.24	59.39	25.31
Maharashtra	29.82	42.04	16.76	21.46	33.51	9.34	51.07	61.62	37.90

panchayat samitis. Still, as seen from the Table, the eastern and southern parts of Gadchiroli taluka, namely, the Kurkheda, Dhanora and Chamorshi panchayat samitis, and almost the whole of the Sironcha taluka have the lowest literacy rates. Rajura taluka also falls in this category. Warora taluka has the highest literacy rates for male population, as well as for the total and female population in rural and urban areas. Chenda taluka shows the highest literacy rate for male population. The urban population of Warora taluka is smaller than that of Chenda taluka, and hence the average literacy rate of the former taluka is lower than the latter taluka. The spread of education among females is almost negligible in Kurkheda, Dhanora, Chamorshi and Yetapalli panchayat samitis. Except Chamorshi, other panchayat samitis are inhabited predominantly by tribal population.

This discussion about literacy brings forth the important point of provision of facilities for education, mainly primary and secondary. This, however, is discussed along with the discussion of the availability and provision of infrastructure facilities.

Linguistic Distribution of the Scheduled Tribes in Gadchiroli, Rajura and Sironcha Talukas

The linguistic distribution and bilingualism among the tribals are here considered in order to understand and estimate the extent to which the tribals are able to communicate with the non-tribal majority in the district in general and in the three talukas in particular. Language thus paves the way for cultural affinity, communication of ideas and values, and for the gradual assimilation of the tribals in the general population. It is, therefore, necessary to know the facts prevailing among the tribals in this respect. Table 3.8 gives the distribution of tribals according to their mother-tongue and other languages or dialects known to them.

Non-tribal languages appear to have been adopted as mother-tongue much less in Sironcha than in the other two talukas, where more or less one-third of the tribals have declared one or the other of the non-tribal languages as their mother-tongue. Among the non-tribal languages thus adopted Gadchiroli and Rajura have mainly adopted Marathi, the language of the State, whereas in Sironcha they have adopted Telugu. Sironcha is on the border of Andhra Pradesh and many of the villages in the south of the taluka along the banks of Godavari and Pranhita rivers have Telugu-speaking people in the majority. The little incidence of Hindi is because of the fact that the district was formerly a part of Madhya Pradesh where Hindi is the principal language. Sironcha taluka comparatively appears less open to outside contact as a result of which people there have been unable to learn or adopt any non-tribal language. This will be more clear when bilingualism among them is considered.

Table 3.8 : Distribution of Tribals according to Their Mother-tongue and Subsidiary Languages

	Gadhchiroli	Sironcha	Rajura
<u>Languages or Dialects as Mother-tongue in Percentage to the Total</u>			
Total population of Scheduled Tribes	99,708	59,140	24,059
Tribal	66.58	91.56	68.32
Telugu	0.35	6.27	5.37
Gujarati	0.04	-	-
Marathi	30.83	2.13	26.31
Pardeshi	-	-	-
Hindi	2.20	0.04	-
Total of non-tribal languages	33.42	8.44	31.68
<u>Languages or Dialects Declared as Subsidiary</u>			
Total population	99,708	59,140	24,059
Tribal	3.31	5.61	6.03
Telugu	1.02	20.04	1.17
English	-	-	-
Marathi	29.72	4.17	30.11
Urdu	-	-	0.18
Hindi	1.86	0.61	0.43
Total	35.91	30.43	37.92

It is in one way heartening to note that from among the tribals who have adopted non-tribal languages as their mother-tongue there are less people who know a tribal dialect than those who know a non-tribal language from among those who have returned tribal dialects as their mother-tongue. This means that more and more tribals are learning non-tribal languages and from among those who have already adopted them as their mother-tongue there are less returning to their tribal dialects. Only in Sironcha this is the other way. There, those who are learning or are conversant with a non-tribal language are less and they still have retained their acquaintance with their tribal dialects. It is to be noted, however, that a predominant number of tribals in Gadhchiroli and Rajura talukas are conversant with one or the other of the non-tribal languages. If we add up the number of those that have declared a non-tribal language as their principal language or mother-tongue and of those that have declared it as a subsidiary language known to them we get 66.02 per cent in Gadhchiroli, 63.57 per cent in Rajura, and only 33.26 per cent in Sironcha who know a non-tribal language either as the principal or a secondary language. Sironcha taluka, therefore, appears to have been still cut off from any

meaningful outside contact. Even in the case of the subsidiary language it is more connected with Telugu rather than with Marathi, the language of the State.

Summary

The discussion above which brings out some important differences between the two parts of the district, one comprising Chanda, Warora and Brahmapuri talukas and the other comprising Gadchiroli, Sironcha and Rajura talukas, can be summarized briefly. Gadchiroli and Sironcha talukas are relatively sparsely populated, have relatively smaller villeges, and no urban areas. Areas inhabited by tribals particularly show smaller villeges. Labour participation rate is very high, showing almost complete dependence on primary occupations, mainly agriculture and agricultural labour. Female participation rate is low in tribal areas, mainly because of forests. Though the district as a whole lacks in avenues for non-agricultural occupations, the tribal development blocks suffer more acutely in this respect. Even workers in household industries in many of these blocks seem to have been drawn from non-tribals. All the three talukas of Gadchiroli, Sironcha and Rajura have lowest literacy rates in the district. The tribal population in this respect is still backward. This is mainly because communication with tribals is rather difficult. Though majority of them in Gadchiroli and Rajura talukas understand Marathi, they speak their own language, mainly Gondi and its dialects. In Sironcha taluka majority of the tribals do not understand Marathi. They speak either Gondi or Telugu.

CHAPTER 4

FACILITIES OF SOCIO-ECONOMIC OVERHEADS

It is usually observed that development starts initially at certain centres and then cogeners or trickles down to other areas, if the conditions are suitable for such coverage. These conditions include mainly existence of minimum socio-economic overheads, or a minimum physico-geographic framework, meaning thereby establishment of a system of transport and communications reaching out to all areas and locations, facilities of water, power, marketing, credit, storage etc., and provision of services like education and health. Without adequate transport and communication facilities it becomes difficult for people in one area to get into contact with those in other areas, and as a result the entire socio-economic complex, namely, production, marketing, exchange etc., remains undeveloped or underdeveloped. Development gets concentrated at certain places and some areas fail to receive the benefits of development. Several instances can be cited where, because of the lack of these facilities, producers, especially in the sphere of agriculture, have not been able to receive in time the requisite aids and assistance for production, like seeds, fertilizers, technical advice, etc., and have not been able to market their produce. It is from this point of view, therefore, that some of the aspects of physico-geographic framework, as these existed at the beginning of the Third Five Year Plan, are examined here. The data used are mainly from the District Census Handbook (1961) and the District Statistical Abstracts.

Transport and Communication Facilities

The exchange of socio-economic give and take that obtain between one village and another and between villages of one area with those of another that may further lead to the increase in the socio-economic activity of the villages, both in its nature and scope depends, among other factors, on the inter-connections among the villages, facilitated by roads and railways. The total length of roads and railways in the district in 1961 was 1246 and 300 kms. respectively. That is, per 100 sq.kms. of the area the road length was 4.8 kms. and the length of railways was 1.2 kms. Railways, however, benefited parts of Warora, Chanda, Brahmपुरi and Rajura talukas. The data regarding roads are presented for different talukas and for the district in Table 4.1. As between the two regions, the one comprising Chanda, Warora, and Brahmपुरi talukas and the other comprising Gadchiroli, Sironcha and Rajura talukas, it could be seen that the latter three talukas, with only 3.7 kms. of roads per 100 sq.kms., were considerably behind the former three talukas which had 6.8 kms. of roads per 100 sq.kms. Among the three talukas of Gadchiroli, Sironcha, and Rajura, the last one was almost

Table 4.1 : Road Facilities Available in Chanda District and in Gadhchiroli, Sironcha and Rajura Talukas, 1961

District/Taluka	Total geographical area (sq.kms.)	Length of Roads 1961 (kms.)	Roads per 100 sq.kms 1961 (kms.)
Chanda District	26,129	1,246	4.8
Gadhchiroli taluka	7,433	289	3.9
Sironcha taluka	8,001	296	3.7
Rajura taluka	2,010	29	1.5
Total (Gadhchiroli, Sironcha and Rajura talukas)	17,444	614	3.5
Total (Chanda, Warora and Brahmapuri talukas)	8,685	632	7.3

without any transport facilities for major part of its area. No doubt, the Nagpur-Kazipeth broad-gauge line passed along the eastern boundary of this taluka, thereby making railway facilities available to some of the villages in this part. But the only road from Rajura to Adilabad in Andhra Pradesh also passed through the eastern part of the taluka. Thus at the beginning of the Third Plan the taluka had 1.8 kms. of roads and about 2 kms. of railways per 100 sq.kms. of the area, both serving the same part of the taluka. This resulted into leaving out almost two-thirds of the taluka, that is, its entire western part, without any transport facilities. The fact that the taluka was transferred to Chanda district in 1959 from Nanded district, and that there was no proper road communication between the district headquarters and the taluka headquarters till an important bridge on the Wardha river was completed during the Third Five Year Plan period, must have hampered the development of transport facilities in the taluka. At the beginning of the Third Plan, Sironcha taluka was served only by Chanda-Sironcha, Sironcha-Aseralli, and Sironcha-Pattagudam roads. These roads covered to a certain extent, only western and southern parts of the taluka, leaving major portion of the area without sufficient road communication. Even then at many points on these roads there were no bridges and culverts, which fact considerably reduced the usefulness of the roads during rainy season. Similarly, in Gadhchiroli taluka the only transport facilities available, in 1961, were the Chanda-Gadhchiroli-Murumgaon road, Gadhchiroli-Wadsa road, and Wadsa-Kurkheda road, and a very small part of the Gondia-Chanda Fort narrow gauge line which passed through the extreme north-west corner of the taluka. Here again, the roads covered only some of the

western and central parts of the taluka, leaving most of the north-eastern and southern portion without any means of transport. In this taluka also the lack of major/minor bridges and culverts made communication very difficult during the rainy season, so much so that throughout the rainy season almost the entire taluka remained cut-off from all other talukas of the district. Both these talukas are prominent forest areas in the district. In Sironcha taluka about 85 per cent, and in Gadhchiroli taluka about 61 per cent, of the total geographical area is covered by forests. These forests were worked by the forest department, and for that purpose the department has constructed fair weather roads. These roads were also used by the population in the respective areas. The network of forest roads was, however, more pronounced in Allapalli and Bhamregadh divisions in Sironcha taluka than in other areas of Sironcha and Gadhchiroli talukas.

It is interesting to look into the number of villages which could be said to have been provided with transport facilities at the beginning of the Third Five Year Plan. The information is presented in Table 4.2.

Table 4.2 : Number of Villages with Road Connections in Different Panchayet Samitis in Gadhchiroli, Sironcha and Rajura Talukas, 1961

Panchayet Samitis/ talukas	Total No. of occupied villages		No. of villages within a distance of approx. 5 kms. from a road	
	Above 500 popula- tion	Below 500 popula- tion	Above 500 popula- tion	Below 500 popula- tion
Kurkheda PS	20	175	8	7
Armori PS	49	73	19	8
Gadhchiroli PS	31	68	18	26
Dhanora PS	8	241	3	56
Chamorshi PS	44	134	5	22
Gadhchiroli taluka	152	691	53	119
Yetapalli PS	4	246	-	1
Aheri PS	18	167	9	55
Sironcha PS	17	78	10	40
Sironcha taluka	39	491	19	96
Rajura PS and taluka	62	167	6	22

Since the source of information is the maps given in the District Census Handbook (1961) of the Chanda district, the figures of the number of villages in the Table are approximate. Thus, at the beginning of the Third Plan period, in Gadchiroli and Sironcha talukas, slightly more than 20 per cent of the total occupied villages were within a distance of about 5 kms. from a main road. In Rajura taluka only 28 villages out of the total 230 were within a reasonable distance of the main road. These villages, however, exclude those which were within a reasonable distance from the railway stations. In fact, the objective of the Nagpur Road Development Plan was to bring all the villages with more than 500 population within a distance of 5 to 6 kms. from a main road, and it was to be achieved by the end of the Second Plan. However, as the Table shows, in Gadchiroli taluka out of 152 villages with more than 500 population, only 52 were within a distance of 5 kms. from a main road by the end of the Second Plan. In Sironcha taluka the number of such villages was 19 out of 39, and in Rajura taluka only 6 out of 62. The proposed length of roads in Chanda district, according to the Nagpur Plan was 3,800 kms. As we have seen, the total road mileage in the district, at the beginning of the Third Plan, was only 1246 kms. Therefore, from the point of view of the coverage of villages, as also from that of the length of roads, the achievement was very much short of the targets set down. In spite of this experience the 1961-81 Road Plan target for the district was set down as providing road facility to every village having more than 300 population, for which purpose the total targeted road length was more than 5200 kms.!

Weekly Market Facilities

Weekly markets are places where people from surrounding areas gather on a particular day to purchase the commodities required by them and/or to sell their produce. To the people in rural areas weekly market is a place of socio-economic contact with the people of other villages. As such these places have their own importance in the rural economy. Some of these places are large enough to form a centre of influence or a growth point which, having grown to a certain level, influences the socio-economic development of the surrounding area.

In Chanda district there were 154 weekly markets in 1961, of which 93 were located in Chanda, Warora and Brahmapur talukas, and the remaining 61 in Gadchiroli, Sironcha and Rajura talukas. Relevant information about these weekly markets, as part of the physico-geographic framework, is presented in Table 4.3. The number of villages depending upon each weekly market, as can be seen from the Table, is larger in Gadchiroli, Sironcha and Rajura talukas than in Chanda, Warora and Brahmapur talukas. In Sironcha taluka each weekly market is required to serve, on an average, 76 villages. The average area per village can be taken as an index of the average distance between any two villages, in

Table 4.3 : Facilities of Marketing in the Talukas and Some Panchayat Samitis in Chanda District (1961)

Taluka/ Panchayat Semiti	Total No. of occupied villages	Rural area in sq.miles	Total No. of weekly markets in rural and areas	Number of villages per weekly market	Rural area per weekly market (sq. miles)	Average rural popula- tion per weekly market	No. of regulated markets in the area	Average con- grega- tion at the weekly market	Average rural area per weekly market (sq. miles)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Chanda taluka	376	1,285.5	30	13	42.9	7,499	2	8,600	3.3
Warora "	442	1,278.8	35	13	36.5	6,405	1	3,000	2.8
Brahmapuri "	335	1,007.7	28	12	36.0	8,104	3	1,800	3.0
Kurkheda PS	195	-	11	18	-	4,068	-	2,400	-
Armor PS	122	-	12	10	-	6,658	2	4,250	-
Gadhchiroli PS	99	-	6	17	-	7,725	1	4,800	-
Dhanora PS	249	-	9	30	-	4,165	-	2,800	-
Chamorshi PS	178	-	7	25	-	9,922	-	3,300	-
Gadhchiroli taluka	843	2,791.2	45	19	62.0	6,164	3	3,400	3.3
Aheri PS	185	-	2	92	-	20,015	-	3,250	-
Yetepalli PS	250	-	1	250	-	35,789	-	N.A.	-
Sironcha PS	95	-	4	24	-	8,261	-	2,400	-
Sironcha taluka	530	2,967.6	7	76	423.9	15,571	-	2,700	5.6
Rajura taluka	229	620.0	9	26	68.9	8,880	-	450	2.7
Chanda District	2,755	9,950.8	154	18	64.6	7,418	9	2,400	3.6

Source : District Statistical Abstract of Chanda District, 1961-62.

that the smaller the average area per village the nearer the villages are situated to one another. In Sironcha, therefore, people from a much larger number of villages have to trek a much longer distance to reach a market place. In the three western talukas of Chanda, Warora and Brahmapuri a weekly market serves less number of villages which are situated at a shorter distance than in the other three talukas. Rajura taluka shows a relatively smaller average distance between two villages. But the average congregation in the weekly markets of Rajura taluka is less than 500 persons which indicates that these markets are very small, though they are required to serve, on an average, nearly 9,000 persons. In this respect, weekly markets in Chanda are relatively large. This, however, may be because two urban centres in Chanda taluka are included in the weekly markets. It seems that markets in Brahmapuri taluka, and Kurkheda, Dhanora and Chamorshi panchayat samitis in Gadchiroli taluka, and Sironcha panchayat samiti in Sironcha taluka are relatively small.

So far as these panchayat samitis in Gadchiroli and Sironcha talukas are concerned, Dhanora and Chamorshi in the former and all the three panchayat samitis in the latter taluka, suffer from inadequate weekly market facilities. In fact, Sironcha taluka may be said to be almost completely lacking in weekly market facilities, because whatever weekly markets are there, they are situated within a distance of 15 to 20 miles of each other, thereby leaving a very large area of the taluka without a single weekly market. In Sironcha panchayat samiti, the weekly markets are located at Sironcha, Ankisa and Asarali, places which are very near to each other along the bank of Godavari in the southernmost corner of the taluka. Similarly in Aheri panchayat samiti, the only two weekly markets are located at Aheri and Allapalli, places with a distance of four miles between them. Added to this, both the talukas include large forest areas and also large tribal population. Armori, Gadchiroli and Kurkheda panchayat samitis in Gadchiroli taluka are slightly better in this respect than other areas in the eastern sector of the district.

Many of the weekly markets, being relatively small places, do not have that impact on the surrounding areas which a growth centre is expected to have. Regulated markets, however, can be said to be either growth points or growth centres as such in the sense that to a certain extent, they influence the growth of surrounding areas. There were nine regulated markets in the district, some for cotton but majority for food crops like rice and jowar etc. Of these six regulated markets were located in Chanda, Warora and Brahmapuri talukas, three in Gadchiroli taluka and none in Sironcha taluka. Many of these markets, particularly those in Gadchiroli taluka, were not functioning properly at the beginning of the Third Five Year Plan.

Co-operative Societies

The presence and extension of statutory co-operative societies denotes an awareness among the people of their socio-economic needs and their deficiencies in view of their needs, and an organized effort to meet these needs in an efficient manner. So far as production efforts are concerned these needs express themselves as demand for production aids and assistance. In respect of agricultural production, in which majority of the workers are engaged, the co-operative organizations are fulfilling an important purpose of supplying seeds, fertilizers, implements, etc. to the cultivators. In this respect, co-operative societies form an important aspect of the physico-geographic framework in the area.

Of the 1307 co-operative societies in the district, at the beginning of the Third Five Year Plan, 1270 were agricultural credit societies. Spread of co-operation in non-agricultural and/or non-credit sphere was negligible, except in Chanda taluka. The information is presented for each taluka in Table 4.4. The coverage of villages, as can be seen from the Table, is larger in Brahmपुरi, Warora and Chanda talukas than in the other three talukas, Sironcha lagging very much behind Gadchiroli and Rajura talukas. Again, the spread of co-operative societies is more intensive in Chanda, Brahmपुरi and Warora talukas than the other three talukas. The number of members per society is much less in Sironcha taluka. Gadchiroli and Rajura talukas showed a slightly better position. The differences in cultivating population covered by these societies were also significant. It appears, therefore, that the talukas of Gadchiroli, Sironcha and Rajura differ from the other three talukas in this respect, and that they have been unable to bring in awareness of the advantages of collective efforts for agricultural improvement to their people to the extent of awareness among the other three talukas. Here it has to be remembered that large parts of Gadchiroli and Sironcha talukas are covered by forests and inhabited by tribals. This meant that both the terrain and the people form formidable bottlenecks for the spread of co-operative movement. In Rajura taluka also a large part of the area is inhabited by tribals.

Power

Supply of electricity appears to have been undertaken in the district first in 1952 in Warora taluka when Warora town was electrified. It was next introduced in Ballarpur, an industrial town in Chanda taluka, in January 1953. Two more villages in Warora taluka, namely, Bhadravati and Majri where industrial establishments were installed, were electrified in 1955 and Ghugus, the colliery town in Chanda, was electrified only in May 1958. From then onwards electricity is carried to many more villages but on the whole the progress has been meagre. By the end of March 1962

Table 4.4 : Distribution of Different Types of Co-operative Societies and Their Members in the Six Talukas of Chanda District (1961)

Taluka/ District	Agricultural Credit Societies					Non-agri- cultural Societies		Agricul- tural non- credit societies		Non-agri- cultural non-credit societies		Total No. of societies	Total No. of members
	Number of societies	Number of members	Number of villages per society	Number of members per society	Members as per cent of cultivating population	Number of societies	Number of members	Number of societies	Number of members	Number of societies	Number of members		
Chanda taluka	208	11,603	1.8	56	14.3	12	2,556	2	52	7	184	229	14,395
Warora "	243	15,737	1.8	65	23.7	2	97	2	94	2	49	249	15,977
Brahmapuri "	249	15,071	1.3	62	18.8	1	23	1	31	3	109	254	15,234
Gadhchiroli "	355	13,841	2.4	39	12.2	2	48	-	-	1	48	358	13,937
Sironche "	114	2,221	4.6	20	6.1	-	-	-	-	2	85	116	2,306
Rajura "	101	2,766	2.3	27	9.2	-	-	-	-	-	-	101	2,766
Chanda District	1,270	61,239	2.2	48	15.0	17	2,724	5	117	15	475	1,307	64,615

electricity supply was available in Chanda and Ballarpur in Chanda taluka and in Warora and Rajura, the headquarters of the talukas, among the towns of the district. Besides these towns there were four villages in Chanda taluka, two (Bhadrawati and Majri) in Warora, nine villages (including Brahmapuri) in Brahmapuri, and three in Gadchiroli taluka where electricity was introduced. Electricity had not reached Sironcha taluka.

Though per capita consumption of electricity was much lower than the State average, since only 25 villages and towns were electrified, the total consumption was, however, larger than many of the adjoining districts, because of industrial establishments in the district, mainly in Chanda taluka. The use of electricity for the purpose of irrigation was mainly confined to Warora and Chanda talukas, in that of the total number of electric pumps (for irrigation purpose) in the district (21) in 1961, majority were located in Warora (15) and Chanda (4).

Facilities for Education

Facilities of education which were available in the district and in the six talukas of the district, in 1960-61, are shown in Table 4.5. Higher education facilities were available only in Chanda town. There was one teachers' training college and one arts and science college. Since primary and secondary education facilities were very inadequate government efforts were concentrated mainly on making provision for these. In 1951, that is, at the beginning of the First Five Year Plan, there were only 336 primary schools and 16 secondary schools in the entire district.

During the two plan periods the facilities for primary and secondary education increased very rapidly, in that, at the beginning of the Third Plan, the number of primary schools increased more than three times, and that of the secondary schools, more than four times. Even with this progress in the facilities for education, it will be seen, that as compared with the three talukas in the western sector, namely, Chanda, Warora and Brahmapuri, the other three talukas were considerably behind in this respect. Whereas in Chanda, Warora and Brahmapuri every primary school served, on an average, 1.5 villages, in Gadchiroli, Sironcha and Rajura talukas 3 to 4 villages had one primary school. In these latter talukas, the area served by a primary school was also much larger. If we take into account the facts that the terrain was difficult, the availability of facilities for transport and communication were relatively very inadequate, and that tribals formed a major part of the total population, then the difference becomes more pronounced. It is felt that similar spatial imbalance could be observed if we relate the number of pupils in the primary schools in these talukas with the number of children in 6 to 10 age-group. However, taluka-wise data for this age-group are not available.

Table 4.5 : Facilities for Education in the Six Talukas of Chanda District, 1960-61

	No. of occupied villages	Primary Schools			Secondary Schools			No. of Colleges		
		No. of schools	No. of villages served by a school	Area served by a school (sq. miles)	Population served by a school	No. of schools	No. of primary schools served by a secondary school		Area served by a school (sq. miles)	Population served by a school
Chanda	376	247	1.5	5.3	1,202	26	9.5	50	11,415	-
Warora	442	241	1.4	5.3	989	13	17.0	99	18,333	-
Brahmapuri	335	206	1.6	4.9	1,102	10	20.6	101	22,692	-
Gadhchiroli	843	226	3.7	12.3	1,230	6	37.6	465	46,322	-
Sironcha	530	139	3.8	21.3	783	6	23.1	495	18,144	-
Rajura	229	78	2.9	8.0	1,149	4	19.5	157	22,406	-
Chanda District	2,755	1,137	2.4	8.8	1,089	65	17.5	153	19,053	2

Source : District Census Handbook, Chanda District, 1961.

The same was the case with the provision of secondary education facilities. It will be seen that these facilities have increased rapidly in all the talukas. Whereas, in 1951, the number of secondary schools in Chanda, Warora and Brahmmapuri talukas was 13, in 1960-61 it increased to 49. In the remaining three talukas the number of secondary schools was only 3 in 1951, and increased to 16 in 1960-61. However, the provision of facilities for secondary education depended mainly on the development of primary education. Because, whenever a primary school attained a certain stage, middle and high school facilities had to be provided. Since the development of primary school facilities in Gadhchiroli, Sironcha and Rajura talukas started late, it was but natural that development of secondary schools was also late. Therefore, we see that the average number of primary schools covered by one secondary school is quite large in these talukas as compared to Chanda, Warora and Brahmmapuri talukas.

The location of both the primary and secondary schools, so far as Gadhchiroli, Sironcha and Rajura talukas were concerned, was in those areas only where the facilities of transport and communications were relatively better. Since these were extremely inadequate in the interior parts, the schooling facilities were meagre in these areas. In addition this area was inhabited by the scheduled tribes. The scheduled tribes were, therefore, very much behind in literacy and education as compared to the total population. Gonds were the most depressed group in this respect, because they included a large number of Madia Gonds who lived in the most primitive conditions in Bhamragadh area, the easternmost part of the Sironcha taluka.

Medical and Health Services

It seems that during the period of the two Five Year Plans the talukas of Gadhchiroli and Sironcha did not receive much attention from the Government so far as the provision of health and medical facilities was concerned. In fact, in 1950-5 the number of all types of public establishments providing medical facilities, that is, those establishments run by Government and other aided institutions, was only 18 in the district. These included 12 hospitals, 1 maternity home, and 5 dispensaries. Of these, 11 establishments were located in Chanda, Warora and Brahmmapuri talukas, and the remaining 7 were in Gadhchiroli and Sironcha talukas. During the first two Five Year Plan periods, the total number of establishments increased to 41, of which 24 were located in Chanda, Warora and Brahmmapuri talukas, and 17 were located in Gadhchiroli, Sironcha and Rajura talukas. The relevant information about these facilities is presented in Table 4.6. By the end of the Second Five Year Plan, each establishment served about 28,000 people in Chanda, Warora and Brahmmapuri talukas, and about 26,000 people in Gadhchiroli, Sironcha and Rajura talukas. This, however, does not explain the total situation. Because, as stated earlier, the talukas of Gadhchiroli, Sironcha and Rajura were almost devoid of proper transport and communication facilities, and the density of population was much less as

Table 4.6 : Talukawise Medical Facilities in Chanda District (1961)

Taluka/ District	No. of hospi- tals	No. of mater- nity homes	No. of dispen- series	No. of PHCs.	Total No. of esta- blish- ments	No. of indoor patients	No. of outdoor patients	No. of indoor patients for each establi- shment (exclud- ing disp.)	No. of outdoor patients per establi- shment	Popula- tion covered by each establi- shment	Area covered by each establi- shment (sq. miles)
Chanda	2	3	5	1	11	8,232	133,155	1,372	12,105	26,982	117
Warora	4	-	2	1	7	218	62,820	44	8,974	34,046	184
Brahmapuri	2	-	3	1	6	156	47,232	52	7,872	37,821	148
Gadhchiroli	2	1	3	1	7	179	57,527	45	8,218	39,705	399
Sironche	3	-	2	1	6	33	32,475	8	5,412	18,144	495
Rajura	1	1	1	1	4	9	21,396	3	2,377	22,406	157
Chanda District	14	5	16	6	41	8,827	354,605	353	8,649	30,207	243

Source : Socio-Economic Review and District Statistical Abstract, 1961-62 of Chanda District, Government of Maharashtra.

compared to the other three talukas. So people in these talukas had to travel a longer distance, with inadequate facilities of transport, to reach a place where medical help was available. In addition to this, and because of this, private medical advice was also not available in the major part of these talukas. The area covered by an establishment in Gadhchiroli and Sironcha talukas was relatively larger, and the establishments were inadequately staffed and provisioned. The number of indoor and outdoor patients showed, to a certain extent, willingness of the people to take advantage of these facilities. As the Table shows, the number of patients treated was very small in Sironcha and Rajura talukas. In Gadhchiroli taluka also, it is felt that, similar situation existed in the interior areas. These areas were inhabited by tribals, and we can safely assume that the incidence of diseases was at least as high as that in other areas of the district.

Supply of Drinking Water

For the settlement and continuance of any population, engaged in agricultural or non-agricultural occupations, at a given place, supply of drinking water is the prime necessity. The number of villages among the six talukas of Chanda district, and the panchayat samitis of Gadhchiroli, Sironcha talukas, where drinking water is inadequate, either in terms of quantity or season, is given in Table 4.7. The Table shows the relative acuteness of the problem in some parts of the district, and indicates its magnitude so far as its solution in each panchayat samiti of Gadhchiroli and Sironcha talukas is concerned. It also indicates a basis for allocation of resources to relieve the shortage of drinking water in respective areas.

It is seen from the Table that, at the beginning of the Third Plan, Gadhchiroli and Sironcha talukas had a much larger proportion of their villages without adequate water supply. Rajura appeared to be in a comparatively favourable position. Kurkheda, Armori and Dhanora panchayat samitis in Gadhchiroli taluka, and all the three panchayat samitis in Sironcha taluka showed a large number of villages without adequate water supply. That is, in the north-eastern part of Gadhchiroli taluka and in the entire Sironcha taluka, the conditions were more pressing than in other parts of the district, though in the latter case also the number of villages having inadequate water supply was substantially large.

Summary

To recapitulate, the discussion of the facilities of socio-economic overheads, or the physico-geographic framework, as it existed at the beginning of the Third Five Year Plan, has brought out certain significant things. The three talukas of Gadhchiroli, Sironcha and Rajura were considerably backward, as compared to the other three talukas, so far as

Table 4.7 : Showing Adequacy of Drinking Water Supply in the Talukas and Some of the Panchayat Samitis in Chanda District (1961)

Taluka/Panchayat Samiti/District	Number of occupied villages	Number of villages with		Percent of Col.4 to Col. 2
		Adequate water supply	Inadequate water supply	
1	2	3	4	5
Chanda taluka	376	309	69	18.3
Warora taluka	442	377	66	14.9
Brahmapuri taluka	335	251	84	25.1
Kurkheda PS	193	90	103	53.4
Armori PS	122	60	62	50.8
Gadhchiroli PS	99	84	15	15.2
Dhanora PS	251	119	132	52.5
Chamorshi PS	178	147	31	17.3
Gadhchiroli taluka	843	500	343	40.7
Yetapalli PS	259	166	93	36.7
Aheri PS	176	130	46	26.1
Sironcha PS	95	70	25	26.3
Sironcha taluka	530	366	164	30.9
Rajura taluka	229	182	49	21.2
Chanda district	2,755	1,985	775	28.1

Source : District Census Handbook, Chanda District, 1961.

the availability of basic aids and amenities were concerned. Only about 20 per cent of the occupied villages in Gadchiroli and Sironcha talukas were within a reasonable distance from the main road, either an S.H., an M.D.R., or an O.D.R. In Rajura the situation was still more unfavourable. There was considerable shortfall in the targets set down for road construction, for the district, in the Nagpur Plan, which were to be achieved by the end of the Second Five Year Plan. In spite of this the targets for the Third Plan were set very high. A careful study of the various technical and administrative bottlenecks was necessary before setting down

definite targets. Ordinary marketing facilities were not available to the major part of the area in Gadchiroli, Sironcha and Rajura talukas. So much so that people in many villages had to walk a distance of 30 to 40 miles to reach a market place. The spread of co-operatives was relatively intensive, both with reference to the coverage of villages and also cultivators, in Chenda, Warora and Brahmapuri talukas. The important bottleneck in this case, in Gadchiroli, Rajura and Sironcha talukas, was the people, in that majority of them being tribals, it was very difficult to impress upon them the necessity of improved agricultural practices, and for that purpose suitability of co-operative organizations. Tribal organization is such that there is always indigenous co-operation among them for one purpose or another. The possibility of taking advantage of their practices in this respect, instead of straightaway imposing upon them the modern co-operative organizations has to be considered very carefully. In respect of other production aids like power, and socio-economic overheads like education, health, medicine, drinking water etc., the area remained considerably backward, both relatively and absolutely.

CHAPTER 5

DEVELOPMENT OF INFRASTRUCTURE

The necessity of developing a minimum pattern of infrastructure in an area so as to facilitate better implementation of resource development and production schemes has been discussed in the last chapter. Some of the broad features of this aspect regarding the availability of the facilities of transport, communications, medicine, health, education, electricity, and weekly bazar etc., at the beginning of the Third Five Year Plan period, were indicated on the basis of the data available in the District Census Handbook of the Chanda district. In this chapter all these aspects of the basic infrastructure, or the physico-geographic framework, are discussed further in order to indicate the developmental efforts, in this respect, during the Third Five Year Plan period, and the resultant picture emerging at the end of this period.

Transport and Communication

During the Third Plan period several road development schemes were taken up, as a result of which the total road length in the district was increased from 1246 kms. to 1564 kms that is, from 4.8 kms. to 6.0 kms. per 100 sq.kms. of the area. But as shown in table 5.1, the road mileage in Chanda, Warora, and Brahmapuri talukas together increased by 1.3 kms. per 100 sq.kms., while in Gadchiroli, Sironcha, and Rajura talukas together it increased by 1.2 kms. per 100 sq.kms. It seems, therefore, that though efforts were made to increase the facilities of transport in the latter three talukas, they have still remained, to a certain extent backward, as compared to the former three talukas. That is, Chanda, Warora, and Brahmapuri talukas benefited slightly more than the remaining talukas from the Third Plan Schemes. It must, however, be remembered that, as stated in the last chapter, the entire district was considerably lacking in adequate (as postulated by the 1961-81 Road Plan) transport facilities.

As a result of the road development schemes during the Third Plan the number of villages which received facilities of road communication increased in all the three talukas. Even then it could be seen from table 5.2 that by the end of the Third Plan period many villages with more than 500 population were without adequate transport facilities. That is, even the Nagpur Plan target was not fulfilled by the end of Third Plan. The Kurkheda and Dhanore panchayat samitis in Gadchiroli taluka, Yetapalli and Aheri in Sironcha taluka, and Dewada in Rajura taluka were predominantly scheduled tribes area. In all these panchayat samitis, except Aheri, not more than 30 per cent of the tribal population could be said to enjoy adequate transport facilities. Aheri being the oldest multipurpose block, more than 75 per cent of its tribal population was within a distance of 5 kms. from a main road.

Table 5.1 : Road facilities available in Chanda district and in Gadhchiroli, Sironcha and Rajura talukas - 1961 and 1966

District/Taluka	Roads per 100 sq.kms. 1961 (Kms.)	Length of roads according to category - 1966 (Kms.)					Total	Roads per 100 Sq.Kms. 1966 (Kms.)
		S.H.	M.D.R.	U.D.R.	V.R.and others	Total		
1	2	3	4	5	6	7	8	
Chanda district	4.8	668	288	278	330	1,564	6.0	
Gadhchiroli taluka	3.9	118	112	26	94	350	4.7	
Sironcha taluka	3.7	155	-	130	110	395	4.9	
Rajura taluka	1.5	69	-	-	-	69	3.4	
Total (Gadhchiroli, Sironcha and Rajura talukas)	3.5	342	112	156	204	814	4.7	
Total (Chanda, Warora, and Brahmapuri talukas)	7.3	326	176	122	126	750	8.6	

(Source : District Census Handbook, Chanda district and the Executive Engineer, Chanda (B & C) Division).

Table 5.2 : Number of villages with road connection in different panchayat samitis in Gadhchiroli, Sironcha and Rajura talukas.

Blocks/ Taluka	Total number of occupied villages		Number of villages within a distance of 5 kms. from a road.				Sch.Tribes population as percent of total	Sch.Tribes population covered by connected village as % of total sch. tribes population.		
	Above 500 population	Below 500 population	At the end of 1961		Addition during 1961-66				At the end of 1966	
			Above 500 population	Below 500 population	Above 500 population	Below 500 population			Above 500 population	Below 500 population
1	2	3	4	5	6	7	8	9	10	11
Kurkheda	20	175	8	7	1	21	9	28	64.7	19.9
Armorli	49	73	19	8	7	12	26	20	19.3	31.0
Gadhchiroli	31	68	18	26	2	6	20	32	18.9	49.2
Dhanora	8	241	3	56	2	-	5	56	77.7	30.3
Chamorshi	44	134	5	22	23	52	28	74	24.7	56.2
<u>Gadhchiroli Taluka</u>	152	691	53	119	35	91	88	210	35.8	33.5
Yetapalli	4	246	-	1	2	77	2	78	89.2	30.2
Aheri	18	167	9	55	6	54	15	109	52.5	75.5
Sironcha	17	78	10	40	5	26	15	66	18.5	72.7
<u>Sironcha Taluka</u>	39	491	19	96	13	157	32	253	54.2	50.7
<u>Rajura taluka</u>	62	167	6	22	16	44	22	66	27.1	38.3

The terrain in these talukas, especially in Gadhchiroli and Sironcha, is such that because of large and small rivers and innumerable streams most of which are perennial, construction of major and minor bridges and culverts has assumed primary importance while building roads. As shown in the map as many as 20 major bridge works require to be undertaken in Gadhchiroli and Sironcha talukas to make the present network of roads fully utilizable. It seems that the problem is not as acute in Rajura taluka. In this respect also the other three talukas seem to have received relatively more attention. The road development schemes undertaken during the three Plans have, therefore, taken this fact into account. For instance, during the Second and the Third Plan the Buildings and Construction Department completed, in the three talukas under reference, as many as four major bridge works, one each on Wardha river near Rajura, Wainganga river near Ashti, Dina river on Chanda-Allapalli road, and Sinoor nalla on Mul-Gadhchiroli road, and has undertaken the work on Wainganga river bridge on Mul-Gadhchiroli road. During the period of the Third Five Year Plan the department spent Rs.49.60 lakhs in these talukas, of which about 40 per cent were on major and minor bridge construction, and the remaining on new roads and improvement of old ones. New roads included those joining Sironcha-Asaralli, Aheri-Sironcha, Rajura-Govindpur, Rajura-Manikgad Railway Station, and Ballarshah-Rajura road, the length of these roads being about 120 kms. The improvements included Allapalli-Sironcha road, Sironcha-Pattagudam road, and Gadhchiroli-Dhanora road, in all about 205 kms. of road length.

In 1962 all district road works were transferred to the Zilla Parishad which undertook development mainly under two schemes, district roads (T. & C. 10), and rural roads (T. & C. 12). During 1961-62 and 1965-66 the Zilla Parishad spent Rs.25.69 lakhs on district roads of which Rs.5.99 lakhs were spent in Gadhchiroli and Rajura talukas. Most of the new construction and improvement to roads were carried on in Gadhchiroli taluka, except Rajura-Manikgad railway station road in Rajura taluka. Construction of new roads in Gadhchiroli taluka included Ashti-Chamorshi, Kurkheda-Panada, and part of Wadasa-Lakhandur road, in all about 43 kms. in length. The improvement included Wadasa-Gadhchiroli, and Gadhchiroli-Chamorshi roads, in all about 67 kms. in length. Under this scheme, therefore, it seems that of the three talukas, Gadhchiroli, Sironcha and Rajura, only the first seems to have received proper attention from the Zilla Parishad. Major part of the expenditure under the scheme, however, was incurred in the other three talukas of the district. Similar picture emerges if we consider the scheme of rural roads. Under this scheme the total expenditure during the Third Plan was Rs.6.06 lakhs, of which Rs.1.20 lakhs was incurred in Gadhchiroli, Sironcha and Rajura talukas. The works undertaken included approach roads mainly, and in all 37 works were carried out in these talukas. Of these 28 were completed in Gadhchiroli taluka, 8 in Sironcha, and only 1 in Rajura taluka. Chamorshi, Armori, and Sironcha Panchayat Samitis seem to have received

the major share of the allotment. In addition to these schemes approach roads were also built under the Community Development, the Backward Class Welfare, and the Social Welfare Schemes. Complete data on these schemes were not available for all the panchayat samitis. But from the available data it seems that in Kurkheda Tribal Development Block in Gadchiroli taluka Rs.0.44, Rs.0.64, and Rs.0.20 lakhs were spent for approach roads from the C.D., B.C.W., and S.W. Schemes respectively, the last amount being for two culverts.

The description of the availability and the provision of transport facilities presented above shows that during the Third Plan period the total expenditure for road works and the total length of roads built in Gadchiroli, Sironcha, and Rajura talukas was as shown in table 5.3. As a result of this effort, a number of villages in all the three talukas were provide with transport facilities. These transport facilities were, however, not adequate even for the part of the area which they were serving, because a number of major and minor bridges and culverts were lacking, and therefore, many of the newly constructed roads could not be used during rainy season. In these three talukas there were eleven panchayat samiti headquarters, including the three taluka headquarters. Three of these eleven panchayat samiti headquarters, viz., Chamorshi, Yetapalli, and Bhamragadh, were entirely inaccessible for almost six months during the rainy season and after. Aheri, Sironcha, Rajura, Dewada, Gadchiroli, and Dhanora were accessible throughout, while Kurkheda and Armori were accessible during rainy season with a little difficulty because of lack of culverts on the roads. This was so far as the accessibility from the district headquarters was concerned. The approach between one panchayat samiti headquarter and another was very difficult during rainy season, except in case of Gadchiroli-Dhanora, Aheri-Sironcha, and Rajura-Dewada panchayat samitis. Similarly, the intra-block communication was also very difficult. Nothing could be said about the quality of the roads, but it was observed that many roads especially between Armori-Gadchiroli, Wadasa-Kurkheda, Chamorshi-Ghot etc. required considerable repairs. It also seems that the programme of road building taken up under different schemes was not co-ordinated at the district level. This was essential to develop a systematic physico-geographic pattern and to avoid cases of improper location of schemes. For instance a four mile road undertaken under the Social Welfare Scheme was to connect a village to the main road, but in fact it was built up to connect two interior villages with one-another, without giving any of them proper connection to main road.

The discussion about the road programme undertaken during the Third Plan period has revealed some significant points. The Nagpur Plan target was not fulfilled even by the end of the Third Plan, in spite of this a large target has been fixed for 1961-81 Road Plan. The programme seems to be mainly concentrated in the western parts of Gadchiroli and Sironcha talukas, and the northern part of the Rajura taluka,

Table 5.3 : Expenditure incurred and road mileage built, during the Third Plan period, in Gadhchiroli, Sironcha and Rajura talukas.

Taluka	Expenditure under		Total expenditure	Total road length built (Kms.)			Expenditure under C.D., B.C.W. and S.W.Schemes (Mostly approach roads)	Road length built under C.D., B.C.W. & S.W. Schemes. (Kms.)
	State and Division level schemes by B. & C.Dept. (National & State Highways & Major roads	Local Schemes by Z.P. (District roads)		New roads	Improvements	Bridge works		
Gadhchiroli	17.30	5.43	22.73	40	141	3	2.08	NA
Sironcha	3.44	-	3.44	99	130	1	0.23	NA
Rajura	28.85*	0.56	29.41	40	-	1	0.17	NA
Total	49.59	5.99	55.58	179	271	5	2.48	NA

* This includes the complete road from Ballarshah to Rajura /

NA - Not available

thereby leaving large areas without proper transport facilities. It should be noted that the areas which do not have proper transport facilities are mainly tribal areas. In some of these areas the existence of forest roads have eased the situation to a certain extent. The lack of bridges and culverts has restricted the use of the major portion of new road works. And there seems to be lack of coordination at the district level, which may have resulted in improper locations of road works.

Regarding communications also the area under study has remained backward. At the beginning of the Third Plan there were in all 215 post offices in the district, which included head office at Chanda, 14 sub-offices, and 200 branch offices. These were mostly located in Chanda, Warora, and Brahmapuri talukas, the western parts of Gadchiroli and Sironcha talukas and the north-eastern part of the Rajura taluka. During the Third Plan 20 additional sub and branch post offices were opened which extended the postal services to some of the uncovered area. Majority of the telegraph offices were located in Chanda, Warora and Brahmapuri talukas. Telephone lines were extended to 8 towns (Chanda, Ballarpur, Brahmapuri, Desaiganj, Mul, Rajura, Nagbhir, and Warora) by 1961. By the end of the Third Plan four more places (Armori, Gadchiroli, Sindewahi, and Bhadrawati) were connected with telephones. Thus, it was at the end of the Third Plan that telephone facilities were provided to Gadchiroli and Armori Panchayat Samitis. For extension of postal services the main constraint was the nonavailability of transport links, whereas extension of telephone services required laying of lines from one exchange to another. Obviously, therefore, the development of communication facilities had to follow, in general, the development of transport facilities. However, even taking into account this factor, it could be stated that in this respect, the area under consideration has remained quite neglected. Similar was the case with communication through radio receiving sets. Though during the Third Plan period 347 radio sets were supplied to grampanchayats, the area which benefited from this scheme was mainly Chanda, Warora, and Brahmapuri talukas. Aheri Panchayat Samiti in Sironcha taluka seems to have covered all the grampanchayats under this scheme. This Panchayat Samiti being a multipurpose development block, it can at least be said that in this block the radio has reached a part of the tribal population, though nothing can be said about its efficacy as a means of communication, since in a predominantly tribal area this would depend on many other factors like the programmes which are broadcast, the languages in which they are broadcast, and the standard of literacy in the area.

Production Aids and Assistance

These include mainly facilities for the supply of credit, improved seeds, fertilizers, and electricity, and services like marketing, extension, veterinary and administration. Credit, seeds and fertilizers were generally channelled to the cultivators through the services cooperative societies,

but the functioning of these societies, especially in Gadchiroli, Sironcha, and Rajura talukas was, reportedly, not as efficient as in other areas of the district, and for seeds and fertilizers the cultivators had to approach the panchayat samiti headquarters. The service cooperative societies have covered majority of the villages in different panchayat samitis in these talukas, but the coverage of cultivators as members was between 35 and 45 per cent in non-tribal blocks and between 16 and 33 per cent in tribal development blocks. There was no significant change during the Third Plan period, so far as the number of societies and coverage of villages was concerned. However, it seems that the efforts were concentrated on increasing the membership of these societies, i.e., in consolidating the previous efforts and making it more intensive. As a result coverage of cultivators as members showed improvement. This can be seen from table 5.4.

The Chanda District Central Cooperative Bank distributed short-term credit to the borrowing members of the cooperative societies through its branches and distribution centres. It had at the beginning of the Third Plan 21 branches and distribution centres, including the head office. During the period of the Third Plan two more branches/distribution centres were opened, both in Warora taluka. Of these 23 centres, 10 were located in Gadchiroli, Sironcha and Rajura talukas. In Gadchiroli taluka all the panchayat samiti headquarters, as also Wadasa in Kurkheda panchayat samiti had branches of the central cooperative bank. Whole of the Sironcha taluka was served by branches at Sironcha and Aheri, while in Rajura taluka there was a branch at Rajura and a distribution centre at Kodashi. The Land Development Bank which supplied medium and long-term credit had only two branches in this area, viz., at Rajura which covered Rajura, Yetapalli, Aheri and Sironcha panchayat samitis, and at Armori which covered Armori, Gadchiroli, Kurkheda, and Dhanora panchayat samitis. The Chamorshi panchayat samiti was served by the branch at Mul. Even taking into account the facts that these talukas were mainly tribal areas where the cooperative movement has not yet taken roots, in the sense that the tribal man has not as yet come to appreciate its usefulness, and that improved agricultural practices were conspicuous by their almost complete absence, the inadequacy of these services could be visualized if we consider the area a branch office of the CFA or LDB is required to serve. For instance, even if cultivators wanted to obtain credit, or use improved seeds or fertilizers, in many cases, apart from other difficulties, they have to travel, on foot, a long way to get these.

Power

It is already stated that only 25 villages and towns in the district were electrified by the end of the Second Five Year Plan and that electricity was yet to reach Sironcha taluka. The number of villages which received electricity increased to 53 by the end of 1964.

Table 5.4 : Information regarding coverage of service cooperative societies.

Development Block (Panchayat Samiti)	Number of occupied villages	Number of service societies (1961)	Number of villages covered (1961)	Number of service societies (1966)	Number of villages covered (1966)	Approximate percentage of cultivators as members
Kurkheda	193	71	187	72	191	33
Armorī	122	81	121	81	121	38
Gadhchiroli	99	48	99	48	99	35
Dhanora	251	84	105	NA	NA	NA
Chamorshi	178	71	109	71	109	45
Yetapalli	259	32	181	32	181	16
Aheri	176	37	128	37	128	30
Sironcha	95	45	79	NA	NA	NA
Rajura	230	80	175	82	178	30

Electricity was supplied mainly from the Ballarshan Thermal Power Station which has a capacity of 22,500 kws. Other places in the Vidarbha area were connected with the grid supply from this power station and the Khaparkheda Thermal Power Station near Nagpur. The spread of electricity, as can be seen, was mainly in the Brahmपुरi taluka. So far as Gadchiroli, Sironcha, and Rajura talukas were concerned, electricity reached only a few places, and was being used mainly for domestic consumption. By the end of the Third Plan, Aheri and Sironcha were receiving electricity from independent generators. Since almost all the major industries like collieries, paper, ordnance were located in Chanda taluka, it was this taluka that consumed a very large part of the industrial power. Consumption of industrial power in Gadchiroli, Sironcha, and Rajura talukas was almost negligible.

Facilities for Marketing

We have seen that so far as common weekly market facilities were concerned the talukas of Gadchiroli, Sironcha and Rajura suffered from relative inadequacy because each market in these talukas served a large number of villages and people were required to travel a longer distance to reach the market. Majority of these markets were small service centres, facilitating the people to purchase their daily necessities. The more important markets were, however, those places where producers, especially the cultivators, sold their produce. Operations of these markets influenced the production in the area and, to a certain extent, they can be called market centres.

There were nine main trading and marketing centres in the district so far as collection and distribution of agricultural produce was concerned. These were Chanda, Mul, Warora, Brahmपुरi, Nagbhir, Sindewahi, Gadchiroli, Wadasa, and Armori. All these were regulated under the C.P. and Berar Agricultural Produce Markets Act, 1935, Warora for cotton and others for grains. Though Chanda and Warora regulated markets were operating during the Second Five Year Plan, the market committees were not properly organized and were not functioning. It was during 1962-63 that market committees at Warora, Mul, and Armori started functioning. During the Third Five Year Plan period godown and storage facilities were provided at some of these markets. So far as Gadchiroli, Sironcha and Rajura talukas were concerned, it was only at Armori that these facilities were available. Cooperative marketing societies were, however, started at almost all panchayat samiti headquarters except Dhanora in Gadchiroli, Bhamragadh in Sironcha, and Dewada in Rajura taluka. In Sironcha the society was dealing mainly in tobacco and chillies. A network of godowns was also being created in order to facilitate the cultivators to store their produce. During the Third Plan period, it was reported,

that 10 godowns were constructed in Gadhchiroli Panchayat Samiti area, 5 in Armori, 8 in Aheri, 3 in Chamorshi and 2 in Rajura. However, except at Armori and to a certain extent at Gadhchiroli and Aheri proper, godowns at all other places remained almost unused so far as the produce of cultivators was concerned. The sale and purchase societies, wherever these were organized, had started working, and except in Armori Panchayat Samiti in Gadhchiroli taluka, they dealt with only a very small portion of the agricultural produce. In Gadhchiroli taluka about 24 per cent of the total production of paddy was purchased by the sale-purchase societies during 1965-66. In Sironcha and Rajura talukas purchase of paddy by the societies was negligible. The jowar purchase through the societies, for the same year, amounted to about 9 per cent of the total produce in Gadhchiroli and about 5 per cent in Rajura.

Veterinary Services

Full-fledged veterinary dispensaries were opened at all panchayat samiti headquarters except Yetapalli, Bhamragadh and Dewada. Under each veterinary dispensary there were two or three aid centres. So far as Gadhchiroli, Sironcha and Rajura talukas were concerned the position of veterinary services at the beginning and at the end of the Third Five Year Plan was as shown in the table below.

Table 5.5 : Showing Location of Veterinary Service Centres in Different Panchayat Samitis in Gadhchiroli, Sironcha and Rajura Talukas.

Panchayat Samiti	1961		1966	
	Veterinary dispensary	Veterinary aid centre	Veterinary dispensary	Veterinary aid centre
Kurkheda	-	Kurkheda	Kurkheda	Malewada
Armori	Armori	-	Armori	Desaiganj Wairagadh
Gadhchiroli	Gadhchiroli	Yeoli	Gadhchiroli	Yeoli Amirza Potegaon Porla
Dhanora	-	Dhanora	Dhanora	-
Chamorshi	-	Chamorshi	Chamorshi	Konsari Ghot
Aheri	Aheri	-	Aheri	Govindgaon
Sironcha	Sironcha	Ankisa	Sironcha	Ankisa Takeda Jinganoor
Rajura	Rajura	-	Rajura	Korpana Khirdi Pardi

It can be seen that during the period of the Third Plan there was a good deal of expansion of veterinary services, in that some of the aid centres were upgraded into full veterinary dispensaries and new aid centres were opened at quite a few additional places. However, considering the area of the talukas and the total livestock population, the number of service centres was inadequate, in that every centre, including the dispensaries, was expected to serve on an average an area of 200 to 700 square miles, and 25000 to 46000 heads of livestock. The inadequacy of the services can be seen from the locational point of view also. Only in Sironcha and Armori panchayat samitis the centres seem to be properly spread out so far as the coverage of the area was concerned. In all other panchayat samitis, as shown in the map, a large part of the area seems to be still uncovered; as for instance, the south-western part of Gadchiroli panchayat samiti and the southern parts of Chamorshi and Dhanora panchayat samitis. In Rajura the location of centres was along the Rajura-Govindpur road, thus leaving out most of the southern and some of the northern part of the taluka. Veterinary services were not available in Yetapalli, Bhamragadh and Dewada development blocks. Taking into account the difficulties due to inadequate transport facilities and shortages of technical staff and other resources the policy of locating and expanding the centres of veterinary services could take any of the two courses. The centres could either be located initially with adequate staff and other requisites at the block or panchayat samiti headquarter so as to provide all types of veterinary services required in a particular area, and then duplicated to cover the entire area, or centres which could provide limited services could be opened at different suitable places to cover the entire area, and then strengthened in due course to provide all the required services. However, the locations of the centres and the reported range of veterinary services provided by them indicated a certain lack of definite policy in this respect. Considering the number of dispensaries, and centres and breeding centres, relatively adequate veterinary services were available in the other three talukas of the district. Here also the initial advantage of transport and communication facilities was obvious.

Extension Services

Adequate facilities, so far as the number of extension staff was concerned, were available at all the panchayat samiti headquarters, except Dhanora, Yetapalli, Bhamragadh, and Dewada. The latter two blocks were recently carved out from Yetapalli and Rajura development blocks and were still being organized. Much of the extension staff was yet to be recruited in Bhamragadh and Dewada blocks and to that extent the work of these blocks was carried out by their parent blocks. In Dhanora and Yetapalli, though the staff was sanctioned, important posts like extension officers of agriculture, animal husbandry, cooperation, and deputy engineers and overseers could not be filled in, mainly

because of the shortage of technical personnel and local living conditions. As stated above, this area was almost cut off from the district and taluka headquarters for the entire rainy season, quarters for the staff were not available at many places, and because of the lack of transport facilities the operational conditions were extremely rigorous. As a result, it was reported that, the staff did not want to be appointed in this area, and once appointed tried to get transferred to other areas. The problem was very acute in certain areas, so much so that in Yetapalli, Dhanora, Bhamragadh, Dewada, and to a certain extent in Kurkheda panchayat samiti also, the extension staff was not able to establish contacts with all the villages in their area, in the sense of initiating some type of extension work in the villages. Added to the above mentioned physical difficulties, the attitude of the population, mostly tribal, created different kind of difficulties, and obstructed the work of the extension staff. This point is, however, dealt with in details, in another chapter.

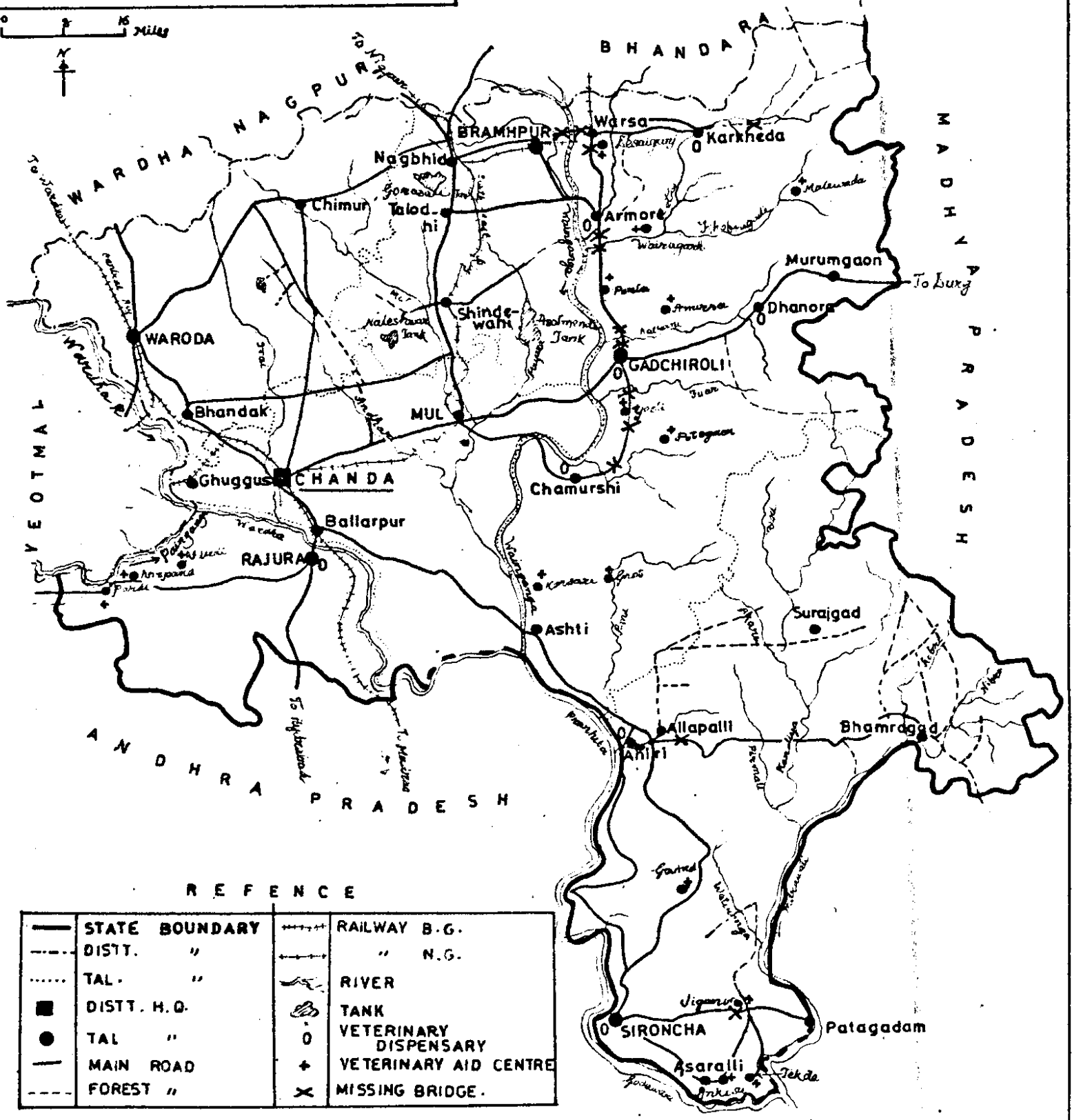
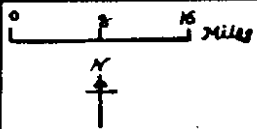
Grampanchayats were established in almost all the occupied villages in different panchayat samitis in Gadchiroli, Sironcha and Rajura talukas. Information about the coverage of grampanchayats is given in table 5.6. The importance of grampanchayats follows from the fact that development programmes like approach roads, drinking water wells, schools and other buildings in the villages were executed through the grampanchayats. However, establishment of grampanchayats, especially in predominantly tribal areas, meant only a literal observance of provisions in the grampanchayat Act. In such villages the grampanchayats were almost inoperative.

Facilities for Education

Only primary and secondary education facilities were available in Gadchiroli, Sironcha, and Rajura talukas. During the Third Five Year Plan period the number of primary schools increased considerably in that by the end of the Third Plan all villages having more than 200 population had primary schools. This could be seen from table 5.7. In itself this was quite a substantial increase in the provision for education. But as could be seen from the table, there were large number of villages, even though below 200 population, which did not have schooling facilities. In all the panchayat samitis in the three talukas of Gadchiroli, Sironcha and Rajura every primary school served about 1.5 to 3 villages. In areas like Armori panchayat samiti or parts of Gadchiroli, Chamorshi, and Rajura panchayat samitis the number of schools could be considered to a certain extent adequate because the average distance between the villages was less than a mile and children could attend nearby schools, for the time being, till every village is provided with a school. But in other areas, especially the tribal areas of Kurkheda, Dhanora, Yetapalli, Aheri, Sironcha and Dewada

CHANDA DISTRICT

MAP II



REFERENCE

	STATE BOUNDARY		RAILWAY B.G.
	DIST. "		" N.G.
	TAL. "		RIVER
	DISTT. H.Q.		TANK
	TAL. "		VETERINARY DISPENSARY
	MAIN ROAD		VETERINARY AID CENTRE
	FOREST "		MISSING BRIDGE.

Table 5.6 : Number of grampanchayats and coverage of villages, in different panchayat samitis in Gadchiroli, Sironcha, and Rajura talukas.

Panchayat Samiti	Total number of occupied & unoccupied villages	Population(1961)		1961			1966		
		Total	Tribal	Number of group panchayats	Number of independent panchayats	Total No.of villages covered	Number of group panchayats	Number of independent panchayats	Number of villages covered
Kurkheda	212	44,746	28,959	43	19	209	43	21	210
Armori	146	79,902	15,448	28	14	142	31	14	142
Gadhchiroli	117	46,350	8,771	35	15	116	31	19	116
Dhanora	272	37,484	29,141	68	1	149	NA	NA	NA
Chamorshi	205	69,452	17,160	37	39	184	38	38	186
Yetapalli	310	35,789	31,911	48	-	311	48	-	304
Aheri	212	40,031	21,000	40	9	205	40	9	206
Sironcha	124	33,044	6,099	23	10	116	NA	NA	NA
Rajura	278	89,624	24,303	70	48	277	68	48	274

Table 5.7 : Primary and Secondary education facilities in different panchayat samitis in Gadhchiroli, Sironcha and Rajura talukas.

Panchayat Samiti-Taluka	Number of occupied villages	Number of villages having more than 200 population	Number of villages having primary schools		Number of villages having secondary schools	
			1960-61	1966	1960-61	1966
Kurkheda	195	78	45	87	1	9
Armor	122	85	52	84	5	17
Gadhchiroli	99	51	39	57	6	10
Dhanora	249	58	35	85	3	5
Chamorshi	178	99	55	97	4	18
<u>GADHCHIROLI TALUKA</u>	843	371	226	410	19	59
Yetapalli	250	55	23	110	3	4
Aheri	185	50	60	72	6	7
Sironcha	95	45	56	59	3	7
<u>SIRONCHA TALUKA</u>	530	150	139	241	12	18
Rajura (P.S.&Tal.)	229	131	78	137	4	25
TOTAL	1602	652	358	788	35	102
TOTAL DISTRICT	2755	1494	1137	1637	123	307

panchayat samitis, the average distance between the villages was between 3 and 5 miles, most of the area was forests, and the facilities of communication between the villages were very inadequate. Under these conditions a primary school for 2 or 3 villages had no meaning, and in fact the school served only one village, thus leaving out large number of villages without any educational facility. In this respect the education department faced a genuine difficulty, in that, on the one hand, in this area because of the distances between the villages and because of the tribal character of the population every village, whether small or big, needed at least a primary school, but on the other hand, many of the villages were so small that the number of children did not warrant a school. The position in respect of the other three talukas, viz. Chanda, Warora, and Brahmapuri was different. Almost every village had a primary school, except very small village, and the distances between the villages were smaller and communication was better.

The provision of facilities for secondary and higher education depended mainly upon the development of primary education, in the sense that at the end of the primary stage students should have facilities of secondary education (i.e., middle and lower and higher secondary) and at the end of the secondary stage they should have facilities for higher education. During the Third Five Year Plan the emphasis was, however, different in different panchayat samitis. In Kurkheda, Armori, Chamorshi, Sironcha, and Rajura panchayat samitis, the primary schools which were already operating had come to a stage when provision of middle and secondary education was pressing, whereas in Gadchiroli, Yetapalli, and Aheri the emphasis was more on provision of primary school facilities. In Kurkheda panchayat samiti there was, on an average, only one secondary school for every 45 primary schools, in 1961. During the Third Five Year Plan, therefore, though the number of primary schools was increased from 45 to 85, the emphasis was more on providing middle and secondary school facilities rather than on extending primary education facilities. The same trend was observed in Armori, Chamorshi, Sironcha, and Rajura panchayat samitis. There was, on an average, one secondary school for every 10, 14, 19 and 19 primary schools respectively in 1961, while in 1966, there was one secondary school for every 5, 5, 8, and 5 primary schools respectively. In Dhanora, Yetapalli, and Aheri panchayat samitis, being predominantly tribal areas, where even the primary school facilities were grossly inadequate, the immediate concern was the extension of these facilities. As a result, therefore, of relatively rapid increase in the number of primary schools in these blocks, there was one secondary school for every 17, 27, and 10 primary schools respectively in 1966, as against one secondary school for every 12, 8, and 10 primary schools respectively in 1961. So far as the location of secondary schools was concerned, since the initial expansion of primary education was confined to the area where non-tribal population was prominent and where communication and transport facilities were available, the secondary schools were naturally establishe

initially in these areas. We, therefore, see the concentration of secondary schools generally in the eastern part of Gadchiroli and Sironcha talukas and the western and northern part of the Rajura taluka. So far as the higher and technical education were concerned no facilities were available in these three talukas. Colleges and technical schools in Chanda, Warora and Brahmapuri served the purpose for the time being.

The tribal welfare department had opened four Ashram schools in the tribal areas. These were located at Aheri, Kamalpur, and Welgur in Aheri multipurpose development block, and Udera in Yetapalli tribal development block. These Ashram schools were multipurpose schools sponsored by voluntary private agencies working in the sphere of tribal development and almost fully supported by the tribal welfare department and supervised by the education department. These were residential schools, providing free instruction and also giving basic training in agriculture and some of the arts and crafts of the local area. The necessity of the Ashram schools in order to provide development facilities to the tribal population, has been recognized by the government as well as by voluntary organizations. In this connection the policy of the government was to open at least one Ashram school for every 20,000 of tribal population. The problem of bringing down this upper limit of population was under consideration. So far as the tribal population of Gadchiroli, Sironcha and Rajura talukas were concerned, it was observed that Ashram schools covered less than 50 per cent of the tribal population in these talukas. As mentioned above, there were three Ashram schools in Aheri panchayat samiti which had a tribal population of 21,000 and one in Yetapalli panchayat samiti with a tribal population of 31,911. Respective tribal population in Kurkheda, Dhanora, and Rajura panchayat samitis was 28,959; 29,141, and 24,303. The locations of the Ashram schools, however, indicated that most of the Yetapalli panchayat samiti, and all the area of the kurkheda, Dhanora, Bhamregadh, and Dewada tribal development blocks were without any ashram schools. We have not considered in details the working of the Ashram schools, but even from the point of view of the coverage of population and area, it could be seen that the number of schools was inadequate. In case of hostels run by the tribal welfare department the same situation existed. There were 11 hostels for tribal students, mainly boys, in Aheri (2), Yetapalli (3), Kurkheda (2) and Dhanora (4) tribal development blocks. These were aided by the tribal welfare department and accommodated in all 360 students.

Medical and Health Services

During the period of the Third Five Year Plan the Zilla Parishad came into being and the demands of the people, particularly with reference to the provision of different services, facilities and amenities, began to be reflected in the planning activities. There was rapid expansion of medical and health facilities during this period. This can be seen from table 5.8. The number of primary health centres, sub-

Table 5.8 : Health and medical facilities in different panchayat samitis in Gadhchiroli, Sironcha and Rajura talukas. 1961 and 1966.

Panchayat Samiti	P.H.Cs.		Sub-centres		Allopathic dispensaries		Ayurvedic dispensaries		Family Planning centres		Leprosy Tech.Units & S.E.T. Units	
	1961	1966	1961	1966	1961	1966	1961	1966	1961	1966	1961	1966
Kurkheda	-	1	-	3	-	1	-	-	-	1	-	1
Armorli	1	-	-	3	2	-	1	-	-	1	1	-
Gadhchiroli	1	-	-	3	1	-	1	-	1	-	1	-
Dhanora	-	1	-	3	-	-	1	-	-	1	-	-
Chamorshi	1	-	-	3	-	-	3	1	1	-	-	-
Yetapalli	-	1	-	3	1	-	1	-	-	1	-	1
Aheri	1	-	-	-	-	-	-	-	1	-	-	1
Sironcha	-	1	-	3	2	-	2	-	-	1	1	-
Rajura	1	-	-	3	1	-	4	-	-	1	1	1
Total	5	4	-	24	7	1	13	1	3	7	4	4
Total Chanda district	10	8	-	53	20	5	33	5	7	12	9	8

centres, allopathic and ayurvedic dispensaries, family planning centres, and leprosy technical units, was rapidly increased, and the operation of the programmes like malaria and small-pox control, and anti-T.B. campaign was expanded to cover the entire district. So far as Gadchiroli, Sironcha, and Rajura talukas were concerned every panchayat samiti had, by the end of the Third Plan, a primary health unit, its three sub-centres, in addition to some allopathic and ayurvedic dispensaries. This, however, did not mean that these talukas were provided with adequate medical and health facilities. Even now one establishment was required to serve, on an average, about 9,000 people, and considering the services rendered by these establishments they can surely be considered as inadequate. For instance, according to the data supplied by the Public Health Department of the Zilla Parishad, during 1965 every PHC, on an average, got about Rs,5,000 annually for medicines, which meant that expenditure on medicines by the Public Health Department was about 40 paise per patient for that year. Moreover, the location of medical facilities was determined, to a large extent, by the availability of transport facilities, and in this respect, situation remained as it was at the end of the Second Five Year Plan. That is, large parts of the Gadchiroli, Sironcha and Rajura talukas were still not properly connected, and therefore, these areas remained without any medical facility.

Supply of Drinking Water

We have seen in Chapter 4, that large number of villages in the north-eastern part of Gadchiroli taluka and in the entire Sironcha taluka were suffering from the shortage of drinking water. In Rajura taluka also the problem was acute, but relatively not so acute as the above two talukas, as far its extent was concerned. It was, therefore, natural that such an important problem should receive due attention from the authorities. Schemes of drinking water supply were sanctioned and executed under different heads. Local development works were undertaken by the State Government. National Water Supply Scheme was introduced by the Ministry of Health, Government of India, which sanctioned special grants to the State Government. The Social Welfare Department financed the construction of drinking water wells in tribal areas. Funds were also allotted for this purpose under Community Development Schemes. Thus every effort was being made to alleviate the difficulties faced by the people in this respect. During the period of the Third Five Year Plan, therefore, we find that the scheme was implemented in a number of villages. However, on the basis of the available information, it seems that the scheme was implemented without realizing the magnitude of the problem in different areas, and also without determining the priorities. The comparative financial aspect of this problem is dealt with in a later chapter, but the physical implementation can be seen from table 5.9.

Table 5.9 : Showing Physical Implementation of the Drinking Water Supply Scheme.

Panchayat Samiti	Number of villages with inadequate supply of drinking water (1961)	No. of villages where drinking water facilities were provided during the Third Plan period	Of which No. of villages which had adequate drinking water supply	No. of villages with inadequate drinking water facilities in 1961, but provided with adequate supply during the Third Plan (Col.3-Col.4)	No. of villages with inadequate drinking water facilities at the end of the Third Plan (Col.2-Col.5)
1	2	3	4	5	6
Kurkheda	103	73	44	29	74
Gadhchiroli	15	51	44	7	8
Chamorshi	31	10	7	3	28
Rajura	49	51	45	6	43

Data in Col. 2 are taken from the District Census Handbook (1961), Chanda, and those in Col. 3 are supplied by the different Block Development Officers. For other panchayat samitis in Gadchiroli and Sironcha talukas the relevant data regarding the physical implementation of the scheme were not available. Assuming that the Census data are reliable, the statement showed that the scheme was not located in proper villages. For instance, in Kurkheda, according to the 1961 census, there were 103 villages which had inadequate drinking water supply at the beginning of the Third Plan. During the Plan period different schemes covered only 29 out of these 103 villages, though actually the scheme was implemented in 73 villages. This meant that 44 villages covered by the scheme already had adequate drinking water supply. Similar was the case in other development blocks. One would expect that the villages where drinking water supply was inadequate should receive first preference so far as the implementation of the scheme was concerned. At least prima facie, therefore, this showed that the implementation was not proper. However, since there are many other factors, like definitions of adequacy or inadequacy of drinking water, reliability of the census data, socio-political pressures, etc., involved in the actual implementation of the scheme, the points raised above require detailed examination.

Implementation of drinking water supply schemes had another very important aspect. These schemes were implemented so that villages with inadequate water supply should have adequate water supply. Was this objective achieved? In this respect, in the absence of sufficient reliable data it would not be proper to arrive at a definite conclusion. On the one hand the officials reported that adequate water facilities have been provided to all the villages wherever the scheme has been implemented. On the other hand, our observations in many villages where the scheme was implemented showed that even after digging new wells the water supply was still inadequate in a number of villages. Here again, detailed investigation is required to understand the situation correctly.

Concluding Remarks

The importance of a proper infrastructure for an area like the talukas of Gadchiroli, Sironcha and Rajura, which have remained backward for quite a long time, cannot be over-emphasized. The discussion above has indicated that in every aspect of infrastructure, or what is otherwise known as physico-geographic frame, due attention has not been paid to this area, may be for various reasons over which the authorities and the people had no control. This fact, however, doubly emphasizes the necessity of approaching the problem in a scientific manner. The main purpose of the development activity in this area is to influence and to a certain extent, direct the activities of small producers many of whom belong to scheduled tribes. Obviously, therefore, no development activity

can be successful unless it reaches all those concerned with it and facilitates them to take part in it. This means an initial provision of basic services and amenities without which growth and diversification of economic activity does not come about. This in turn involves necessary public action regarding the planned provision of utilities and social services.

One point which the discussion in this chapter has significantly brought out is that production services and amenities, as also social services, could not be provided to the area primarily because of the lack of transport and communication facilities. Administration, extension services, credit facilities, supply of seeds and fertilizers, health, education, etc. have followed the provision of transport and communication facilities, which therefore, should take precedence in any development plan in this area. The important problem in this connection is : what should be the pattern of infrastructure in this area in order that growth at some places can smoothly percolate to other areas, so that during a reasonable period no area is left uncovered by development activities. "In the ultimate analysis, no area or territory can hope to profit from the economic development of other parts of the country which is not closely integrated with the economic life of the rest".^{1/} Another factor which requires to be taken into consideration while planning the infrastructure is the necessity of economizing the available resources and obtaining best results from them. If it is taken for granted that growth starts initially at certain places and then, if facilitated, spreads to other areas, then careful planning will involve locating (i) such places where there are signs that growth has already started, and (ii) those places which are potentially capable of being developed as centres. Provision of utilities and services can **then** be arranged in a convenient hierarchy taking into account the costs involved and needs of the area.

So far as the three talukas of Gadchiroli, Sironcha, and Rajura are concerned, we can say that the taluka headquarters (Gadhichiroli, Sironcha and Rajura), some of the panchayat samiti headquarters (Kurkheda, Armori, Chamorshi, Aheri, Rajura, and Dewada) and some other places like Desaiganj and Ankisa have shown signs of growth. However, data are not sufficient to indicate other suitable centres which can be developed so that production and other facilities could be provided and the entire areas brought under effective development programme. This aspect of the plan for infrastructure requires detailed study on the basis of which locations for provision of physico-geographic framework can be determined.

1 D.R. Gadgil, District Development Planning, Kale Memorial Lecture, 1966, Gokhale Institute of Politics and Economics, Poona, p.21.

CHAPTER 6

CONSERVATION AND DEVELOPMENT OF RESOURCES

In a previous chapter (Chapter 2) we have discussed the general availability and utilization of resources in Gadchiroli, Sironcha and Rajura talukas. It was stated that the resource complex in these talukas consisted mainly of land, water, livestock and mineral resources. So far as land was concerned, it was pointed out that in Gadchiroli and Sironcha talukas major portion of the total geographical area, 62.39 per cent in Gadchiroli and 83.69 per cent in Sironcha, was under forests. Correspondingly, about 16 per cent of the total geographical area in Gadchiroli taluka and 6 per cent in Sironcha taluka, were under cultivation. Net area sown in these talukas was 278,561 and 119,935 acres respectively. So far as these two talukas were concerned forests occupied an important position in the resource complex. As regards Rajura taluka, the situation was different. Here land under forests was not more than 8 per cent of the total geographical area, and unlike Gadchiroli and Sironcha talukas, the forests were mostly of very inferior type. Net sown area was 203,760 acres. Thus the problems of development, in this respect, in Gadchiroli and Sironcha talukas were different from those in Rajura taluka in as far as the degree of developmental emphasis was concerned. Regarding land under cultivation, it has already been shown that cropping pattern in Rajura taluka was different from that in Gadchiroli and Sironcha talukas and to that extent the problems of development were also different. In this chapter, we are dealing with the developmental aspects of resources in agriculture and animal husbandry. In respect of forests and mineral resources, in the absence of adequate data, it would be possible only to describe the schemes undertaken by the respective departments during the Third Five Year Plan period.

Development Programme in Agriculture

Various schemes were undertaken for the development of agriculture in the district. These were: establishment of agricultural schools, general horticultural development, development of local manural resources, expansion of plant protection services, intensive cultivation of food crops, distribution of improved seeds, propagation of improved agricultural practices, and improvement in the supply of water by renovating tanks, building new wells, repairing old ones, and by installing pumping sets. So far as Gadchiroli, Sironcha and Rajura talukas were concerned, the important schemes were development of local manural resources, distribution of improved seeds and fertilizers, and improvement in the supply of water.

The standard scheme for the development of local manurial resources was encouragement for composting, i.e., subsidy of a rupee for each compost pit. By the end of the Third Plan period it was reported that about 20,000 tons of compost was produced and used. However, the nature of the scheme was such that it was well nigh impossible to estimate either the quantity or the quality of the compost in the absence of complete physical check which under the circumstances was neither possible nor feasible. So far as the talukas of Gadchiroli, Sironcha and Rajura were concerned, it seems that in spite of more than 8,000 compost pits, the quantity of the compost produced was meagre, because except in the villages around the block headquarters, and except in the case of prominent cultivators, very few paid proper attention to filling the compost pits and preparing compost according to instructions by the extension authorities. In the 18 villages in these talukas, which were visited in order to see the operation of various schemes, it was observed that generally the number of compost pits was exaggerated and the pits which were there were not filled in properly. In fact in the interior tribal areas of Kurkheda, Dhanora, Yetapalli, Bhamragadh, Aheri, Sironcha and Dewada panchayat samitis the operation of the scheme was almost negligible. Similar was the case with the use of fertilizers and improved seeds. Of the total fertilizers and improved seeds distributed in the district during the Third Plan period, the quantity was not more than 13 and 11 per cent respectively. It was only in certain pockets that fertilizers and improved seeds were utilized to a certain extent. For instance, in the western and the southern parts of Sironcha taluka, adjoining Prakhita and Godavari rivers, or in the western parts of Gadchiroli taluka adjoining the Wainganga river, some cultivators used fertilizers and improved seeds. But the proportion of those cultivators using fertilizers and improved seeds was hardly 15 per cent. During the years 1965-66 and 1966-67, efforts were made to introduce high yielding varieties of paddy, jowar and maize, and 20,000 kgs. of high yielding paddy, 525 kgs. of jowar, and 603 kgs. of maize seed were distributed. However, so far as Gadchiroli, Sironcha and Rajura talukas were concerned, the response was very poor. Reportedly, cultivators were unwilling to grow high yielding varieties. A visit to a field in Kurkheda panchayat samiti where a few cultivators had jointly sown high yielding jowar in about 8-10 acres, showed the indifference and the ignorance of the cultivators regarding the cultivation of high yielding varieties. Therefore, though constant efforts were being made to improve agriculture, the area has remained relatively backward so far as the acceptance of improved agricultural methods were concerned.

The acceptance of improved agricultural practices depended mainly on three important factors: (i) effectively convincing demonstrations, (ii) supply of necessary information (i.e., effective extension) and materials like seeds, fertilizers, and implements; and (iii) assurance of adequate / distributed in Gadchiroli and Sironcha talukas

returns to the producers. This last factor was beyond the scope of action by the local authorities and required consideration by State and Central authorities. So far as the demonstration farms were concerned, it was expected that every gramsevak circle would have at least one demonstration farm which would demonstrate improved agricultural methods to the prospective cultivators. Almost all the gramsevak circles had such demonstration farms, but so far as their working was concerned, much more was required to be done, at least in Gadhchiroli, Sironcha and Rajura talukas. It seemed that demonstration farms were not taken seriously either by the local authorities or by the cultivators themselves. It was reported that even in the areas like Armori, Gadhchiroli and Chemorshi panchayat samitis, which were more or less non-tribal areas, demonstration farms were almost ineffective. In tribal areas, most of these farms were not demonstration farms in the sense of the term in which it was understood. There were 8 seed multiplication farms which supplied improved seeds to the cultivators. Of these two were in Brahmapuri taluka, two in Chanda taluka, and one each in Warora, Gadhchiroli, Sironcha and Rajura talukas. It was reported that during the Third Five Year Plan period about 650 quintals of improved seed of paddy, wheat, jowar, tur, grams, and mung was produced and distributed. But as indicated above, it was in Warora, Chanda, and Brahmapuri talukas that use of improved seeds was more pronounced than in other three talukas. Similar was the case with 'intensive cultivation blocks'. These blocks were started so as to encourage the cultivators to cultivate intensively food crops only, by using improved seeds, fertilizers, insecticides, and improved implements. In all 11 such blocks were started in the district during the Third Plan period. Each block covered 20,000 acres of cropped area. Of these 11 blocks, 2 were located in Gadhchiroli taluka (one each in Gadhchiroli and Armori panchayat samitis) and one in Rajura taluka. The remaining 8 were in Warora (2), Chanda (3), and Brahmapuri (3). Apart from the working of these intensive cultivation blocks, which requires detailed examination from the point of view of the acceptance of improved agricultural methods and the resultant changes in agricultural production and earnings of the cultivators, it can be seen that Gadhchiroli, Sironcha and Rajura talukas were considerably behind the other three talukas. Our observations, though these may not be conclusive, have indicated two main drawbacks of the scheme at the operational level. These refer to the supply of requisites and actual extension work. So far as the supply of requisites was concerned, it was observed that improvement was required in respect of the quality and the quantity of seeds and fertilizers, and the method and channels of their distribution. So far as the extension was concerned, it was observed that the extension staff was inadequate in some cases, and inexperienced in almost all the cases. However, this was to be expected, because it was difficult to employ adequate and experienced staff due to acute shortage of trained personnel. There was only one agricultural school at Mul which trained agricultural extension

workers. Now, in each intensive cultivation block there were 10 agricultural assistants and each dealt with, on an average, 2,000 acres of cropped area, or about 200 cultivators. The success of the scheme, therefore, depended on the manner in which the agricultural assistant approached these farmers. So far as the technical aspect of the scheme was concerned, higher officials were there to help him. But so far as the propagation of improved methods was concerned, it was the agricultural assistant who mattered most, and it was observed that in this respect he was, on an average, much below the expectations. However, as stated above, these were general observations, and the scheme required detailed examination.

Different schemes were undertaken to increase the supply of water for irrigation. These schemes included construction and repairs of irrigation tanks, small bandharas and wells. We have seen in Chapter 2 that though a large portion of the irrigated land was irrigated by public tanks, there were quite a number of private tanks which irrigated about 6 acres each, on an average. By the nature of their ownership the responsibility of their management was in the private hands, and there was no scheme to ensure their proper maintenance and use. The problem was important especially in Warora and Chanda talukas, because almost half of the total tank irrigated area in these talukas received water from private tanks. Since this area was substantial (nearly 33,000 acres) and represented utilization of an important resource, it should necessarily receive more attention than what was being given at present. So far as the State and Z.P. tanks were concerned, a number of schemes were taken up during the Third Plan period to improve the supply of water. The minor irrigation department was constructing 28 additional minor tanks with a potential of 18,333 acres of irrigated area. The Zilla Parishad had completed work on the repairs of 197 ex-malgujari tanks and was repairing about 670 tanks. It had completed the construction of 2,475 new wells, 30 small bandharas and a number of bodis (that is, small wells by the side of a nalah or river). It had also repaired 155 old wells and more than 700 old bodis. Twenty-one small bandharas were under construction. Lift irrigation schemes were being taken up at three places in Brahm-puri taluka and at one place in Chanda taluka. The new tanks and bandharas as also wells and bodis, when completed, were expected to irrigate about 40,000 acres of additional land.

As indicated above, the Minor Irrigation Department had undertaken construction of 28 additional tanks of which 18 are located in Brahm-puri, 7 in Gadchiroli and 8 in Chanda taluka. It was quite likely that in Warora, Rajura and western Chanda, because of topographical situation, sites for major or minor irrigation works were not available. These areas are rather flat, and devoid of major catchments. Data on these points were, however, not available. On the other hand, it was likely that the government has not yet carried on detailed surveys to assess the potentialities in

this respect. The soils and the crop pattern had also to do something with it. Warora, Rajura and western Chanda have more of heavy and medium black soils with cotton and jowar as main crops, while Gadchiroli, Brahmapuri and part of Sironcha have morand and inferior soils suitable for paddy cultivation. The requirement of water for paddy being considerable, it was in this region, favoured by topography, that water was being conserved in small and big tanks and was utilized for growing paddy.

On this background it is interesting to see what has exactly happened in the Gadchiroli, Sironcha and Rajura talukas. Information about the figures of area irrigated by different sources in these three talukas as also in the district are given in Table 6.1. The data refer to two points, 1960-61 and 1963-64. During this period of three years, the increase in irrigated area in these three talukas was only about 10 per cent of the total increase in the district, the remaining acreage being accounted for by other three talukas, mainly Brahmapuri. It seems, therefore, that so far as the locational emphasis was concerned majority of the water development schemes were located in Brahmapuri, Warora and Chanda talukas. This was but natural, because these talukas had slightly better transport and communication pattern, and were nearer to the district headquarters. As a result, schemes like construction and repairs of tanks could be planned and implemented within a relatively short time. In Gadchiroli, Sironcha and Rajura talukas, because of lack of proper communication and proper local contact, surveys and preparation of estimates etc. seem to have required more time. As a result, almost all the schemes of construction and repairs of tanks were started, in these talukas, during or after 1963. This meant that increase in the irrigated area in these talukas during the first three years of the Third Plan was mainly due to the completion of work on a few tanks probably spillovers from the last Five Year Plan, and construction and repairs of wells and bodis. This can be seen from Table 6.1. In Gadchiroli taluka, the increase in the irrigated area was due to additional acreage brought under government canals and wells. There was, however, corresponding decrease in area under tanks and other sources, which was probably due to variations in the rainfall in local areas. In Sironcha, irrigated area has increased because of tanks, wells and other sources, while in Rajura taluka the increase seems to be due mainly to the wells, which was more than counterbalanced by decrease in the area under tanks and other sources.

During the period from 1956-60 to 1963-64 the total number of wells in Gadchiroli and Sironcha talukas seems to have increased by 849 and 198 respectively. The number of wells in use, however, increased by only 153 and 94 respectively. Figures for 1959-60 in respect of Rajura taluka are not available, but during this period 95 new wells have been added. It seems that a large number of wells out of the new additions were still not in use. The problem of

Table 6.1 : Area Irrigated according to Sources of Irrigation in Gadhchiroli, Sironcha, and Rajura talukas - 1960-61 and 1963-64

Taluka	Government Canals		Tanks		Wells		Other Sources		Total		Increase or decrease over 1960-61 (Col.11 minus Col.10)
	1960-61	1963-64	1960-61	1963-64	1960-61	1963-64	1960-61	1963-64	1960-61	1963-64	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Gadhchiroli	-	2,030	60,006	58,633	1,318	1,598	1,755	1,559	63,079	63,820	+ 741
Sironcha	-	-	3,450	3,710	171	245	610	709	4,231	4,664	+ 433
Rajura	-	-	139	-	88	245	74	52	301	297	- 4
Total	-	2,030	63,595	62,343	1,577	2,088	2,439	2,320	67,611	68,781	+ 1,170
Total District	40,113	44,159	190,777	198,413	2,829	3,512	7,093	6,521	240,812	252,605	+11,793

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non-utilization of wells was, however, more acute in Chanda and Warora talukas where almost 35 to 40 per cent of the total wells were not in use. The problem of unused wells, therefore, which indicated a large amount of dead investment, requires detailed investigation. Land irrigated per well was less than an acre in all the talukas, except in Rajura taluka. It is in this taluka that well-irrigation is more important than tank irrigation. It may be stated here that during this period a number of oil engines and pumps were distributed in these talukas. Data for Sironcha taluka were inadequate, but in Gadhchiroli and Rajura taluka 47 and 25 oil engines and pumps were distributed respectively. In all 375 oil engines and pumps were installed in the district during this period.

Regarding irrigation facilities, therefore, it can be stated that Sironcha and Rajura talukas received relatively less attention than the remaining talukas. Even by the end of the Third Plan not more than 4 and 0.25 per cent respectively of the total cropped area was irrigated and increase in the irrigated area during the Third Plan period was almost insignificant. That the authorities were not able to do much about this was obvious, the main reason being the conditions of communications within the talukas and with the district headquarters. Bridges on Wardha and Wainganga rivers which were completed by the middle of the Third Plan period established road communication between Rajura-Chanda and Sironcha-Chanda respectively. The southern part of the Rajura taluka was a tribal area and, like other tribal areas in the district, was still more or less inaccessible so far as communication with the people for the purpose of development was concerned.

Other Agricultural Development Programmes

Apart from these important schemes, other schemes, as mentioned at the beginning, were also being implemented in the district. These included horticultural development, expansion of plant protection services, and special Kharif and Rabi crop campaigns. In respect of these schemes, blockwise or talukawise data could not be obtained from the agricultural development officer. (In fact, it was not possible to obtain detailed information from the Agriculture Department of the Z.P. in respect of almost all the agricultural development schemes.) Therefore, whatever is stated here regarding their operation in Gadhchiroli, Sironcha and Rajura talukas refer to our observations only. During the Third Plan period, 9 horticultural gardens, covering an area of about 270 acres, were developed in the district. Majority of these were in Chanda and Brahmepuri talukas. However, efforts were being made to develop fruit-gardening in Gadhchiroli and Sironcha talukas mainly in Gadhchiroli, Armori, Aheri and Sironcha panchayat samitis. Every year, the B.D.Os. were required to plant fruit trees in different areas under their jurisdiction and induce the cultivators, whenever possible to take up fruit-gardening. According to the reports of the B.D.Os.,

Table 6.2 : Information regarding Irrigation Wells in Gadchiroli, Sironcha and Rajura Talukas

Taluka	No. of wells in use	Total No. of wells	No. of wells in use	No. of wells not in use	Percentage of Col. 5 to Col. 3	Works in progress		No. of oil engines and pumps distributed
	1959-60	1963-64	1963-64	1963-64		Tanks (State)	Tanks (Z.P.)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Gadhchiroli	2,654	3,503	2,807	696	20	6	122	47
Sironcha	459	657	553	104	16	1	43	7
Rajura	N.A.	95	N.A.	-	-	-	33	25
Total	3,113	4,255	3,360	800	26	7	198	79
District Total	6,502	9,817	6,836	2,981	30	N.A.	N.A.	375

upto the end of 1964-65, 249 acres in Gadhchiroli taluka, 83 acres in Sironcha taluka, and 49 acres in Rajura taluka were covered by planting different fruit trees. Our observations in this respect indicated a very high mortality of the trees planted. However, the effectiveness of the scheme requires detailed investigation and spot checking from the point of view of the achievement of its objectives.

The scheme to expand plant protection services included subsidized supply of plant protection appliances like sprayers, dusters, and seed-treating drums. Under this scheme 1,100 sprayers, 1,130 dusters and 27 seed-treating drums were distributed to individual cultivators, according to the data supplied by the agricultural department of the Z.P. In addition, more than 1,500 sprayers and 170 dusters were supplied to the cultivators through Panchayat Samitis, at a nominal rental of 25 paise per sprayer or duster per day. Similarly, 50 power-sprayers were also supplied at Rs.2.50 per sprayer per day. In all 20 tons of material for seed-treating and 320 tons B.H.C. and 1,520 litres endrine for spraying were distributed during the Third Plan period. Major portion of this materials and appliances was used in Chanda, Warora and Brahmapuri talukas. However, so far as Gadhchiroli, Sironcha and Rajura talukas were concerned, it was only in Gadhchiroli and Armori panchayat samitis that use of these facilities seemed to have been made. In Kurkheda, Chamorshi, Aheri, Sironcha and Rajura, this use was very much localized in the villages near the block headquarters. In Sironcha panchayat samiti the use of insecticides was reportedly concentrated along the left bank of the Pranhita and Godavari rivers, mainly in Ankisa and Asarali area. So far as Dhanora, Yetapalli, Bhamragadh and Dewada panchayat samitis were concerned, the use of insecticides was very meagre. The remarks made above in respect of the improved agricultural practices in this area also apply to the use of plant protection practices. In the areas like Chanda, Warora and Brahmapuri talukas and some parts of the Gadhchiroli and Sironcha talukas, the cultivators have realized the timely use of plant protection services, and those who could obtain the material and appliances used them. In many cases, however, because of various operational difficulties, the services could not be obtained in time. In the interior and tribal areas, it was observed that there was relatively less realization of the usefulness of plant protection methods and there were difficulties, mainly those of transport facilities and communications, in reaching the material and appliances to those who wanted to use them. For instance, it was observed that plant protection services were utilized in villages and areas like Gurnoli (Kurkheda PS), Arsoda and Kondhela (Armori PS), Porla (Gadhchiroli PS), Ankisa and Arasali (Sironcha PS) and Bhurkunda and, to a certain extent Dewada also (Rajura PS). In tribal and interior villages like Chandona (Kurkheda PS), Nawegaon (Gadhchiroli PS), Dudhmare and Rangi (Dhanora PS), Kurud and Talodhi Mokasa (Chamorshi PS), Korelli Bk. and Perimilli (Aheri PS), Gulpalli and Jaweli (Yetapalli PS) and Kambalpeta

(Sironcha PS), the use of plant protection services was very negligible. These villages were visited for the purpose of investigation, and though they did not represent the entire area, the operation of the schemes in these villages indicated, to a certain extent, the existing conditions of the implementation of various programmes.

In the field of agricultural development the important schemes, as indicated above, were development of local manurial resources, expansion of plant protection services, intensive cultivation of food crops, propagation of improved agricultural practices, and development of water resources. We have seen above the nature of the schemes and, as far as possible, how they were implemented in different areas. It was expected that as a result of the implementation of these programmes per acre production would increase. However, so far as jowar, paddy and wheat, which were the main crops in the district, were concerned, their production during 1960-61 and 1964-65 varied between 350 and 500 lbs., 670 to 940 lbs. and 360 to 410 lbs. per acre respectively, according to data in the District Statistical Abstracts. In fact, during the Second Plan period also the production per acre was at the same level. The general situation in this respect, therefore, does not seem to have changed. However, we have no reliable data to indicate the effects of these schemes on the levels of agricultural production in different areas, and nothing definite can be said about this, except that the point requires a detailed investigation from the point of view of the preparation and the effective implementation of development programmes.

Soil Conservation

The scheme constituted an important aspect of the conservation and development of resources in the district. Almost no work was done in this respect during the first few years of development planning in spite of the fact that the problem of erosion was acute in all the talukas of the district. By the end of the Second Plan, soil-conservation sub-divisions were established in Chanda and Warora talukas. During the Third Plan the work was extended to Rajura and Brahmपुरi talukas. Gadhchiroli sub-division was created in February 1966 and was temporarily shifted for soil-conservation work in rehabilitation camps. No soil-conservation work was, therefore, taken up in the Gadhchiroli taluka during the Third Plan period. Table 6.3 shows the achievement in the district in this respect.

One thing was obvious. That is, even during the Third Plan period conservation work was not taken up in the Gadhchiroli and Sironcha talukas, except in the area where East Bengal refugees were being settled, and in the talukas where the work was carried on, the achievement was less than 50 per cent. However, if we accept that terracing involved more work than graded bunding, and that one acre of terracing was equivalent to ten acres of graded bunding, the ratio

Table 6.3 : Soil Conservation Work Done in Chanda District during April 1961 to March 1966

Sub-division	Target (acres)		Achievement (acres)	
	Graded Bunding	Terracing	Graded Bunding	Terracing
Warora	22,000	-	9,682	40
Chanda	12,500	-	1,322	729
Brahmapuri	-	-	-	69
Rajura	15,500	-	5,268	72
Rehabilitation Camps	1,000	-	732	-
Total	51,000	-	17,004	910

usually used by the agriculture department for the purpose of calculation and estimates, then in Chanda taluka and the rehabilitated area the achievement exceeded 70 per cent. For convenience of operation, the soil conservation work generally starts around the place where a division or a sub-division is established, and then expands into remote areas. It must be partly because of this and partly because of transport and communication difficulties that work was delayed in Gadchiroli and Sironcha talukas and has not progressed much in Rajura taluka.

Forest Development Schemes

The forests in Chanda district occupy about 37 lakhs of acres, which is more than 57 per cent of the total geographical area of about 64 lakhs of acres. Of the total area under forests 17.6 lakhs of acres are reserved forests which are among the well preserved, well managed, and the most valuable forests of the State. The remaining are the protected forests and represent those proprietary forest areas which were transferred to the State in 1951. These are known as ex-malgajari forests. Their extent is not exactly known at present and the department is carrying out a survey and demarcation for the purpose. These forests were also not preserved properly and the authorities were bringing them gradually under planned management. The Chanda forests are managed by the Department of Forests. But so far as the development of the district is concerned, they constitute an important resource which is capable of providing increased employment to the local population, both in primary and secondary production. According to 1961 Census 3,510 persons were working in forestry and logging, as follows:

Branch of industry	Males	Females	Total
Planting, replanting and conservation of forests	1,703	228	1,931
Felling, cutting of trees and transportation	733	50	783
Preparation of timber	95	-	95
Production of Charcoal	310	237	547
Production of fodders	58	1	59
Production of minor products like gum, resins, lac, barks, herbs etc.	44	49	93
Other forest products	2	-	2
Total	2,886	624	3,510

However, a detailed study is required from the point of view of the present utilization and future potentiality of the resource. Here, since detailed data are not available, we are merely indicating the developmental schemes undertaken by the department during the Third Plan period. The revenue from the forest has been steadily increasing. It was about Rs. 50 lakhs per year during the period of the First Five Year Plan. By the end of the Second Five Year Plan, it was about Rs. 105 lakhs. In 1962-63, it increased to Rs. 162 lakhs/in 1963-64 and Rs. 150 lakhs in 1964-65. / and then decreased to Rs.154 lakhs

The development schemes which were undertaken during the Third Plan period referred mainly to the efficient exploitation of reserved forests, and bringing under working plans the protected forests which had suffered considerable damage due to unsystematic fellings. Table 6.4 gives an indication of the schemes undertaken during this period and the reported achievements thereto. In respect of some schemes, the figures of progressive achievements were not available. For instance, by the end of 1964-65, three wet nurseries were established to supply seedlings for plantation of valuable trees. Similarly, in respect of forest communications complete achievement data were not available. The target fixed for the Third Plan period was 272 miles of roads and two bridges. However, by the end of 1963 about 20 miles of roads were constructed. For developing and supplying substitutes for teak it was proposed to establish a saw-mill, a seasoning plant and wood preservation plant

Table 6.4 : Forestry Development Schemes during the Third Plan Period and Their Physical Achievement

Scheme	Physical achievement					Total
	1961-62	1962-63	1963-64	1964-65	1965-66	
Plantation of valuable trees:						
Teak (acres)	-	-	2000	45	1455	3500
Eucalyptus (acres)	-	-	-	400	200	600
Survey and demarcation of forests (sq. miles)	160	-	-	1314	-	1474
Establishment of nurseries (Nos.)	-	-	-	-	-	3
Forest Communications (miles)	-	-	20	-	-	Further progress not known
Development of minor forest produce	-	-	-	-	-	1500 acres of bamboo plantation completed
Development and supply of substitute for teak	-	-	-	-	-	964 m.tons of other timber sold. Saw mill, seasoning plant and wood preservation plant established at Ballarpur.

at Ballarpur. This plant was nearing completion and was expected to go into production by the end of 1966. Considerable effort was also being put into preservation of wildlife and development of national parks. Taroda National Park is an instance in sight. Another important scheme, from the point of view of popular participation in the management of forests, was proposed to be implemented during the Third Five Year Plan period. This referred to the assistance to village panchayats for afforestation and development of pastures. However, the scheme could not come into operation, mainly because, for various reasons, no panchayat was interested in implementing it.

Development of Fishing

Several schemes were taken up during the Third Five Year Plan for the development of fisheries in the district. These included (1) assistance for purchase of fishery requisites, (2) stocking of tank with carp fry, and (3) development of co-operative fisheries. Fishery requisites included cotton and nylon twine, fish hooks and sail cloth. During the Third Plan period about 950 kgs. of nylon twine and about 35 kgs. of cotton twine was supplied under this scheme. Use of nylon twine was increasing. For the purpose of stocking, quick growing Bengal carps were procured and stocked annually in the perennial water tanks. The varieties stocked included Catla Catla, Rohu, Mrizal etc. The seedlings were annually imported from Calcutta and first reared in the nursery units at Chanda, Warora and Sindewahi and then released in perennial tanks. Almost 65 lakhs of carp was stocked during the period of the Third Plan, and about 5 lakh kgs. of fish was netted. During the same period 18 co-operative fishery societies were registered and assisted.

Strangely enough, all the schemes which were included in the Third Five Year Plan for the development of marketing of fish were either not sanctioned or were altogether dropped. As indicated above, by its very nature, the fishery industry in Chanda district was spread over a very large area, with a few fishermen at each place. Therefore, as the development of fishing got momentum, and as the carp was stocked and fish netted, the production was bound to increase in the natural course. May be some of this additional produce would be consumed locally, but a large portion had to supply markets in nearby urban areas. But the commodity being highly perishable, if market organization were not established at an early stage and worked smoothly, then the entire development programme of fishing was likely to get into serious difficulties. This was not only true of fishery development but also of other perishable commodities like milk and eggs. A scheme was included in the Third Five Year Plan for the purchase of a truck and a refrigerated cabinet to provide preservation, marketing and transport facilities to fish producers. This scheme was not sanctioned up to the end of 1965. Similarly, a scheme for granting loans to local bodies for construction of fish markets was also dropped. Considering the availability (or non-availability) of transport and communication facilities at present, especially in Brahmepuri and Gadchiroli talukas where the majority of tanks exist, and along the Wardha, Wainganga and Pranhita rivers, the problem of providing adequate and efficient marketing facilities for the producers of fish was, however, not so easy, and required careful and detailed examination. It is felt that a package of development schemes, complete with all production and marketing aids, over a smaller area would be preferable to an inadequate development programme over a larger area.

Animal Husbandry Development

We have seen in Chapter 2 that most of the working and milch cattle was of mixed variety, though Gaolao bullocks and cows and Nagpuri buffaloes were seen prominently. Milk yield per milch animal was very low. Fodder shortage was experienced mainly in Chanda, Warora and Rajura talukas. Under these conditions which existed at the beginning of the Third Five Year Plan two important aspects needed to be taken into account, viz., the supply of quality working animals to cultivators and the provision of supplementary occupations like dairy, poultry, etc. Both these development aspects required policy decisions in respect of producing working animals and milch cattle. In case of working animals the policy in the area was to introduce the Gaolao breed. But in case of milk production the policy was not clear. Under the conditions existing in the district, development in the animal husbandry sector would have to be with a view to provide subsidiary income mainly to cultivators and agricultural labourers. This presupposed dairy or poultry development on individual family basis, preferably under a co-operative reorganization. A big dairy farm of the Arey Colony type or a large poultry farm with thousands of birds would not benefit the individual cultivators and labourers. So far as breeding was concerned this entailed scientific castration and sterilization, and introduction of quality bulls and cows. Breeding policy could be implemented through key village schemes, state breeding farms, and subsidiary breeding centres. The present policy of introducing Gaolao breed in the district was quite right so far as the supply of bullocks was concerned. But the milk yield of Gaolao cow was very low, and if a thriving dairy industry has to be established, then one has to consider whether another breed of cows which gave higher milk yield was to be introduced, or whether buffaloes were to be used for the purpose of milk production. The problem required pilot experiments in different parts of the district to determine (i) whether Gaolao cow could serve both the purposes of breeding quality working animals and of producing milk; if not (ii) would it be possible and feasible to introduce a breed like, say, Amritmahal or Tharparkar which, to a certain extent, could serve both the purposes; if this was not possible then (iii) would it be advisable to introduce, for the purpose of milk production, high milk-yielding cow breed or to maintain buffaloes. After initial decisions on these points, it would be necessary to think of fodder, aids like veterinary services, and marketing of the produce. It has already been mentioned that for a programme like dairy or poultry development, to be successful, efficient marketing was the most important factor. This meant that the development programme has either to be located at places where marketing facilities were immediately available, for instance, around the urban areas, or if located at other places definite provision has to be made for marketing.

In the context of the above discussion, it is interesting to see the schemes which were undertaken for

the development of animal husbandry in Chanda district during the period of the Third Five Year Plan. These schemes included (i) construction of buildings for the establishment of veterinary dispensaries and veterinary aid centres, (ii) establishment of supplementary cattle breeding centres and organization of breeders' societies, (iii) supply of premium bulls, (iv) organization of cattle shows, and (v) establishment of private and government dairy, poultry, sheep, goat and piggery farms. The opening of additional veterinary dispensaries, A.I. centres and sub-centres etc., and treating and innoculating of animals were done under the regular non-plan schemes. During the Third Plan period veterinary dispensary buildings were constructed at Armori (Gadhchiroli taluka), Sironcha (Sironcha taluka), Rajura (Rajura taluka) and Gondpipri (Chanda taluka). Supplementary cattle breeding centres were started at Sindewahi, and Brahmपुरi in Brahmपुरi taluka, Vithalwada and Chak Bellarpur in Chanda taluka and Soit in Warora taluka. It could be seen that the breeding programme was yet to expand further in Gadhchiroli, Sironcha and Rajura talukas. Twenty-one bulls and 212 Gaolao cows were distributed under the scheme, mostly in Chanda, Warora and Brahmपुरi area, and 43 pure Gaolao calves have been produced. A few breeding societies were organized during the Third Plan period, but none of them was working. Ninety-four premium bulls were supplied during the Plan period, bringing the number of total premium bulls in the district to 107 of which 104 were Gaolao bulls and 3 were Nagpur buffalo bulls. Regarding the distribution of premium bulls, detailed taluka-wise or blockwise figures were available only up to 1964-65. The total number of bulls supplied up to the end of 1964-65 was 71, of which 43 were distributed in Chanda, Warora and Brahmपुरi talukas. As a result of this scheme it was reported that 283 calves of good quality were produced. During this period the number of livestock treated for different diseases was 258,750, that of castrated animals was 40,800, and that of animals innoculated for prevention of epidemics was 10,67,600. So far as dairy and poultry development was concerned, it seems that attempts were made to start a few dairy and poultry societies, but none of the societies was working properly. The poultry centres under the management of the block development authorities, at Bhadravati, Mul, Sironcha, and Brahmपुरi were started recently, and could be said to be working to a certain extent.

It could be seen from the above that majority of the schemes implemented during the Third Plan period emphasized mainly the breeding aspect of the animal husbandry development. It could also be seen that the implementation of the schemes in Gadhchiroli, Sironcha and Rajura talukas had just started, and had yet to cover a very large area. Only two important schemes, viz., the supply of premium bulls and the establishment of veterinary aid centres, were being implemented in this area, apart from the general preventive measures against epidemics and distribution of milch cattle to backward class families under the Social Welfare Schemes.

In the areas where these schemes have been operating during the Second and the Third Plan period, for instance, in Armori Panchayat Samiti, it was reported that the schemes were not co-ordinated in the sense that supply of premium bulls was not followed to the requisite extent by other measures in respect of castration, sterilization and fodder development. No doubt programmes regarding improvement of breeding take a long time to fructify, but if appropriate measures are not taken to eliminate the undersirable elements then the possibility of their being successful is very remote. It was necessary to implement intensive development schemes in certain selected areas, along with extension over a larger area, taking of course into account the available resources. The other aspect of the development of dairy or poultry has not yet received sufficient attention, particularly so in Gadhchiroli, Sironcha and Rajura talukas. It seems that the importance of marketing, so far as these schemes were concerned, has not yet been realized. As stated above, the marketing aspect implied that initial implementation of the schemes should be in areas where demand for these products was, to a certain extent, assured, and this meant mainly urban and peripheral areas. The implementation of this scheme has so far been confined to the distribution of poultry birds to interested individuals through a poultry farm at panchayat samiti headquarters, and formation of dairy co-operative societies. The scheme has not yet been extended to piggery and sheep development, to any appreciable extent. It was observed that both these schemes were not working properly. Dairy societies, though started near the urban areas, were not working mainly because of managerial difficulties. Distribution of poultry birds was yet in its initial stages. But it was so scattered that individuals did not receive the requisite advice and aids as and when required. This was important because the birds distributed were of Rhode Island or White Leg-horn type which required careful breeding. Along with the extended distribution of birds the marketing aspect was bound to assume considerable importance.

Mining and Industries

During the period of the Third Five Year Plan the only schemes undertaken for the development of industries were those regarding the efficient operation of enforcement-cum-inspection machinery, and co-operatives of handicraft workers, and handloom weavers. Work on the establishment of a cement factory was also started at Ghugus, in Chanda taluka. Under the scheme for improvement of tussore silk industry a Research and Production Centre was set up at Armori. Industrial co-operative societies were organized and financial assistance was given to them. The village industries Board has helped to organize the industrial societies, has assisted the societies in their management and working, and has arranged to sell their produce through stores and emporia. However, the impact of these measures cannot be assessed in the absence of detailed data. The

fact which emerges out of this description (and that presented in Chapter 2) is that the three talukas of Gadhchiroli, Sironcha and Rajura have still remained in the background so far as the development of their mineral resources and other industrial potential were concerned.

Summary

The discussion so far has brought out some important points regarding the programmes of conservation and development of resources in the three talukas of Gadhchiroli, Sironcha and Rajura. A general observation in this respect was that the lack of transport and communication facilities has, to a very large extent, hampered the spread of development activities. Apart from this, it was observed that cultivation practices were still traditional even in the areas which were well connected with block and district headquarters, in the sense that cultivators, in general, have not as yet accepted the improved methods of cultivation. Use of improved seeds, fertilizers, or composting was confined to areas near the block headquarters, and to some of the prominent cultivators only. Demonstration farms were not as effective as they should have been. Even in the intensive cultivation blocks the situation was substantially the same. Sironcha and Rajura talukas have so far received relatively less attention with reference to the development of water resources. Plant protection has reached only a few localities. Soil conservation programme was recently started in the area, but the division at Gadhchiroli was shifted to the site where rehabilitation of West Bengal refugees was being done. Some work was done in Rajura Sub-Division. Animal husbandry programmes covered mainly breeding aspects and even these schemes have not been effectively implemented in Gadhchiroli, Sironcha and Rajura talukas. Dairy, poultry and fishery development programmes, though started in some of the areas, lacked co-ordination so far as the marketing aspect was concerned. Mineral development is yet to start in the area.

In a rural economy which is characterized by dominant agriculture, the development programmes have to concern themselves with the natural resources, their conservation, exploitation and development. Soil, water and vegetation are extremely important under these circumstances. In this respect, though the problems of development existed in all the three talukas, they differed from area to area, and therefore, they were highly local. They required detailed investigations, and also detailed local action to solve them. In the three talukas under study we can very well distinguish between forestry and agriculture, between dry crops and irrigated crops areas, between the areas where water resources are available and those where they are not available, and divide the talukas into small homogeneous economic areas in order to consider the problems of conservation and development of resources. All this has to be integrated with the physico-

CHAPTER 7

FINANCIAL ASPECT OF THE DEVELOPMENT PROGRAMME

In Chapters 5 and 6 we have discussed the development programmes, which were undertaken during the period of the Third Five Year Plan in respect of the physico-geographic frame and the conservation and development of resources in the district. There we emphasized only the physical achievements aspect of the development programmes and arrived at certain conclusions on the basis of the data at the district level and the panchayat samiti level, supplemented by our observations and discussions at the local level. In fact, the financial aspect, mainly the expenditure incurred, could have been dealt with in respect of individual schemes while their working was being described. There were, however, two difficulties. Firstly, enough data were not available to indicate the expenditure incurred for every individual scheme in each panchayat samiti. In this respect compilation of data was a labourious process, since more than one department was involved in executing schemes of similar nature, and finalisation of records took quite a lot of time. Secondly, it was felt that the expenditure incurred was not of primary importance in the sense that apart from indicating the size of resources spent for the purpose, it did not show anything else. It was the physical achievements which were important from the point of view of the actual implementation of the development programmes. So far as this aspect was concerned last two chapters have shown how the three talukas of Gadchiroli, Sironcha and Rajura have remained relatively backward. This conclusion can be further examined from the point of view of financial expenditure, indicating how resources were distributed among different areas and among different sectors, particularly in the three talukas concerned. This is done in this chapter, on the basis of the data available at the district and panchayat samiti level.

During the period of the Third Five Year Plan, about Rs.733 lakhs were spent in the district on State and local sector plan schemes. Available information in this connection is presented in table 7.1. The expenditure data for certain schemes have been supplied by the departments concerned, while for others the information was collected from the consolidated statements in the Zilla Parishad. As stated above, because of the complications in maintaining and compiling the expenditure data, it was not possible to obtain the exact amounts, and therefore, the figures presented in the table are near approximations. It must be mentioned here that the expenditure figures taken from the Zilla Parishad cover the period upto the third quarter of the last year of the Third Five Year Plan, while those supplied by the departments cover the entire Plan period. To that extent there is likely to be slight underestimation in the total expenditure. However, it is felt that this will not affect the broad

Table 7.1 : Financial expenditure for Plan schemes during the Third Five Year Plan period in Chanda district.

(Rs. in lakhs)		
Head/Sub-head of development	Expenditure from 1961- 62 to 1965- 66	Percentage to total expenditure
<u>I Agricultural Programmes</u>		
1. Agricultural production	42.53	5.80
2. Soil conservation	9.87	1.35
3. Minor irrigation	89.59	12.23
4. Animal husbandry	2.54	0.35
5. Forests	56.30	7.58
6. Fisheries	2.40	0.33
7. Warehousing & marketing	0.43	0.05
Total I	203.66	27.79
<u>II Cooperation & Community Development</u>		
1. Cooperation	37.96	5.18
2. Community development	124.43	16.98
Total II	162.39	22.16
<u>III Industry and Mining</u>		
1. Small-scale industries	2.24	0.31
Total III	2.24	0.31
<u>IV Transport & Communications</u>		
1. Road development	109.14	14.89
Total IV	109.14	14.89
<u>V Social Services</u>		
1. General education	164.50	22.45
2. Medical Nursing	12.13	1.65
3. Public Health	53.65	7.32
4. Water supply and drainage	3.56	0.49
5. Housing	10.25	1.40
6. Social welfare	11.25	1.54
Total V	255.34	34.85
Grand Total	732.77	100.00

distribution of resources among different sectors, and general conclusions drawn from it.

It can be seen that more than one-third of the resources were allotted to social services. In fact the largest share, about 22 per cent of the total expenditure was taken up by general education. If we add expenditure on transport and communications to that of social service sector, then it can be seen that the development of infrastructure, or physico-geographic frame, has received almost half of the total resources. So far as the schemes coming under infrastructure were concerned, a large share of measures was devoted to road development and general education. Agricultural programmes, which included animal husbandry, forests, and fisheries, received about 28 per cent of the total financial resources, the largest share being allotted to minor irrigation. The main emphasis in this connection was, it seems, on the development of water resources and forestry. No doubt both these are very important constituents of the natural resources in the district and therefore, have received priority considerations in the allotment of financial resources. Animal husbandry and fisheries, however, seem to have received relatively less emphasis.

We have no data to indicate as how whole of this amount was distributed among different panchayat samitis and among different schemes in each panchayat samiti. However, in respect of some of the schemes, on the basis of the data supplied by the departments concerned, we could arrive at broad figures of expenditure for Gadhchiroli, Sironcha and Rajura talukas/on the other. The relevant information is presented in table 7.2.

Table 7.2 : Distribution of expenditure during the Third Plan period for certain development programmes, between two groups of talukas in Chanda district
(Rs.in lakhs)

Development programme	Expenditure incurred in Gadhchiroli, Sironcha & Rajura talukas	Percentage to total expenditure	Expenditure incurred in Chanda, Warora, & Brahmapura talukas	Percentage to total expenditure	Total expenditure
Road development	56.63	54.6	52.51	45.4	109.14
Minor Irrigation	18.58	20.7	71.01	79.3	89.59
Soil Conservation	2.49	25.2	7.38	74.8	9.87
Assistance to industrial cooperatives	0.05	12.5	0.35	87.5	0.45

∟ on the one hand, and Warora, Chanda and Brahmapuri talukas

So far as these particular programmes were concerned, it can be seen that, except road development, a very large part of the total expenditure was spent in Chanda, Warora and Brahmmapuri talukas. Regarding road development, it seems that during the Third Plan period more resources were diverted to Gadhchiroli, Sironcha and Rajura talukas as compared to other three talukas. That the authorities had recognized the gravity of the problem of transport and communication in these talukas can be seen from the fact that these talukas together have received a large share of total resources during the First and the Third Plan periods. During the period of the First Plan about Rs.12 lakhs were spent in these talukas out of the total expenditure of about Rs.15 lakhs, and during the Second Plan period out of the total expenditure of about Rs.33 lakhs, about Rs.10 lakhs were spent in these talukas. That the talukas of Gadhchiroli, Sironcha and Rajura received a larger share of total resources for road development did not mean that the problem was anywhere near the solution, because considering the size of the area and the basic nonavailability of the transport facilities even the expenditure incurred during the three plans was inadequate. As indicated in Chapter 4, the large rivers and the innumerable nalas and streams have considerably increased the cost of road building in the area. As between the three talukas of Gadhchiroli, Sironcha and Rajura, it seems that the eastern part of Sironcha taluka and the southern part of Rajura taluka have yet to receive adequate attention and resources in this respect. As indicated in Chapter 6, soil conservation has yet to take up its work in this area, except in the rehabilitation camps, and minor irrigation works were concentrated mainly in Chanda, Brahmmapuri and Gadhchiroli talukas. It was because of this that financial expenditure in this area was less as compared to Chanda, Warora and Brahmmapuri talukas. So far as industrial expenditures were concerned, they have yet to take roots in the district, though the talukas of Gadhchiroli, Sironcha and Rajura were lagging behind, even in this respect.

About 17 per cent of the total expenditure was on community development programmes. These programmes cover a wide range of production and social service activities. However, the main purpose of these programmes was to activate the people, make them conscious of the necessity of development and encourage them to take active part in it. This could be done only by getting into contact with people, understanding their needs and problems, and trying to solve them in conformity with the general development activities. While doing this the financial resources could be so utilized as to achieve maximum benefits from them. In all the three talukas, Gadhchiroli, Sironcha and Rajura, the main problem was that of providing basic physicc-geographic frame so that production activities could be geared to the best utilization of available resources. These three talukas were divided into 11 development blocks ^{1/} out of which 6 were also tribal development blocks. The

1. Development block is synonymous with panchayat samiti.

other three talukas were divided into 9 development blocks none of which was a tribal development area. Because of this, allocation of community and tribal development funds to Gadchiroli, Sironcha and Rajura talukas was comparatively more. These talukas received Rs.72.91 lakhs out of the total expenditure of Rs.124.43 lakhs. Except Aheri in Sironcha taluka, all the tribal development blocks came into existence during the Third Plan period, and only after the establishment of Zilla Parishad community development received more and more attention.

Apart from administrative expenditure, the community development blocks incurred expenditure on agricultural extension, animal husbandry, irrigation, reclamation, rural crafts, general and social education, communications, health and housing. It is interesting to see from the expenditure pattern of these blocks the type of development activities which were emphasized in the area. In table 7.3 data regarding the expenditure of community development funds for different development activities in different blocks are presented. Adequate information was not available in this respect from Sironcha and Dhanora development blocks. Out of Rs.50.43 lakhs almost 60 per cent were spent for providing infrastructure which included expenditure on transport and communications, general and social education, health and housing. The same pattern could be seen in Gadchiroli, Aheri, Yetapalli and Dewada development blocks. The emphasis was, however, different in different blocks. In Gadchiroli, Yetapalli and Dewada blocks a large portion of expenditure was on education and health. In fact, except Bhamragadh block, which was very recently carved out from Yetapalli block, in all other blocks emphasis seemed to be on health and general education, particularly on the latter. However, the equally important problem of transport and communication facilities has received relatively less attention in all the blocks except Aheri. It seems that after the report of the Study Team on Tribal Development Blocks, at the end of the Second Five Year Plan, Aheri block has paid more attention to the provision of transport facilities. In all other blocks, as far as community development expenditure was concerned this problem did not receive due attention. In Armori, Kurkheda, Aheri, Yetapalli, and Rajura blocks, production schemes in agriculture and animal husbandry were given almost the same importance. That is, so far as expenditure was concerned, the emphasis on different schemes was relatively balanced. Regarding physical achievements the same remarks which we have mentioned in Chapters 5 and 6 hold good for these programmes also. In other blocks production activities did not seem to be emphasized, so far as the expenditure was concerned. In the absence of complete data on the distribution of total expenditure, the general pattern of emphasis could be visualized so far as the overall development programmes are concerned, because as stated in Chapters 5 and 6, both with respect to production schemes and infrastructure, Gadchiroli, Chamorshi, Yetapalli, Bhamragadh, Rajura and Dewada blocks, that is, major parts of Gadchiroli, Sironcha and Rajura talukas have remained relatively backward areas in the district.

Table 7.3 : Community Development expenditure on certain heads of development in different development blocks in Gadhchiroli, Sironcha and Rajura talukas.
(Rs. in lakhs)

Development Block	Animal Husbandry & Agricultural Extension	Irrigation and Reclamation	Rural Arts	General Education & health	Social Education	Housing	Communication & Rural roads	Total
Armorli	1.25	1.89	0.33	1.98	0.57	0.71	0.42	7.15
Kurkheda	1.27	1.84	-	1.23	0.32	0.06	1.13	5.85
Gadhchiroli	0.61	0.80	0.09	1.51	0.32	0.23	0.36	3.92
Chamorshi	-	-	0.15	2.13	0.78	0.19	0.61	3.86
Aheri	1.48	2.44	0.40	3.27	0.91	-	2.97	11.47
Yetapalli	1.09	0.13	0.53	1.24	0.23	0.53	0.98	4.73
Bhamragadh	0.36	0.50	-	0.08	-	0.04	0.02	1.00
Rajura	0.68	3.20	0.24	2.18	0.49	0.12	0.32	7.23
Dewada	1.08	-	0.17	3.08	0.71	-	0.18	5.22
Total	7.82	10.80	1.91	16.70	4.33	1.88	6.99	50.43

CHAPTER 8

CONCLUDING REMARKS AND SUGGESTIONS

The three talukas of Chanda district, namely, Gadhchiroli, Sironcha and Rajura, which are studied in this report from the point of view of their development, presented a variety of important and interesting socio-economic problems which were challenging to those concerned with the development of the area. These problems referred mainly to the conservation and development of natural resources, development of human resources, and provision of basic infrastructure facilities. No doubt these aspects of social and economic development of the people and the area are interdependent, in the sense that natural and human resources get the opportunity to develop when the entire area is spatially integrated with the outside world. This was especially true in case of the talukas of Gadhchiroli, Sironcha and Rajura, because whole of this area has remained backward for a considerably long time. As already mentioned, the Chanda District Gazetteer (1909) states that Gadhchiroli and Sironcha talukas were 'one of the most backward parts of the Province', whereas Chanda, Warora and Brahmपुरi talukas were comparatively more developed, in the sense that they were better provided with transport, communications and administrative facilities. After sixty years which included fifteen years of post-independence planning activity, the situation has remained almost the same, with the difference that the process of reducing the imbalance between the two parts of the district has already started in some areas of Gadhchiroli, Sironcha and Rajura talukas.

The economic and social isolation of this area can be traced to two important factors, namely, lack of adequate infrastructure facilities and predominance of tribal population. The extent of the availability of infrastructure facilities, or the lack of it, has already been indicated. In an area which has remained closed to the outside contact for quite a long time mainly because of inadequate transport and communication facilities, the first priority, in any development programme, has obviously to be given to the provision of these facilities. More than 75 per cent of the villages in Gadhchiroli, Sironcha and Rajura talukas were not properly communicated to a main road. Only about one-third of the target of road mileage in the Nagpur Plan was fulfilled at the end of the Second Five Year Plan. Ordinary weekly market facilities were not available within a reasonable distance to a very large number of villages. Under these circumstances it was but natural that facilities of production aid and assistance, and those of education, medicine and health, followed those of transport and communication. We have seen

that some transport network has developed in the western parts of Gadchiroli and Sironcha talukas along Desaiganj-Gadhchiroli-Chamorshi-Lagam-Ashti line, and along Alapalli-Bamni-Sironcha line. Similarly, in Rajura taluka also transport network has developed in the eastern part. Apart from this, the main roads crossing the talukas are Gadchiroli-Dhanora, Sironcha-Pattagudam and Rajura-Govindpur. It is mainly in these parts of these talukas, along the main transport links, that other infrastructure facilities have been provided. It seems, therefore, that the process of development in this area has followed a general course of first establishment of transport and communication facilities and then provision of production aids and assistance. This sequence did not, however, mean that schemes relating to conservation and development of resources started only after providing complete infrastructure facilities. In fact, implementation of the schemes of infrastructure and those referring to production went hand-in-hand, in the sense that immediately some kind of communication was established with the people production schemes were undertaken, and in due time full infrastructure facilities were made available as and when required.

Two important observations need to be mentioned here. One refers to the entire scheme of providing infrastructure facilities and the other refers to the actual implementation of different schemes. The object of providing infrastructure facilities is to connect different parts of the area with each other, and the whole area with other areas, so that every part should be able to take up its share in the process of development and should be able to benefit from it. This means a systematic provision of transport and communication facilities and production and social services, required to develop the available resources in the area and satisfy the felt needs of the people. In turn, this involves thinking on lines different from what is being done at present. Different areas can be best connected with each other through establishing communications between market centres and joining market centres to surrounding villages. By doing this a hierarchy of centres is built up through which remotest areas are connected with large urban centres, thereby providing them with outlets for their produce and making it easier for the production aids and assistance to reach the producer whenever he requires them.

That while preparing and implementing programmes and schemes of infrastructure, due thought was not given to the above aspect, can be seen from the implementation of some of the schemes. We find that the village markets have not properly been connected either with villages under their influence or with other markets. Many of the panchayat samiti headquarters still remain unconnected with district headquarter during rainy season. Co-operative societies and grampanchayats have been inoperative in many

villages especially in tribal areas. Basic necessities like health and medical services and drinking water facilities have as yet to reach many areas. The scheme regarding provision of drinking water facilities has, at least prima facie, benefited those villages which already had adequate drinking water facilities. Due consideration was lacking regarding the determination of priorities, while implementing different schemes.

Considerable efforts were being made by the authorities to ameliorate the situation, but as stated above they faced bottlenecks which it was impossible to remove by government decrees or circulars. The tribal nature of the population and the impediments to development inherent in it slackened the process of development to a considerable extent. Majority of the tribals are Gonds. A large section of them lives in the plains, mainly the central part of Gadchiroli taluka, the eastern part of Sironcha taluka and the southern part of Rajura taluka. The Hill Gonds live mainly in the hilly parts of Gadchiroli and Sironcha talukas. Those living in the plains have learnt permanent agriculture and other arts and crafts, and are culturally relatively more assimilated with the non-tribals than the Hill Gonds who are trappers and hunters or who practise jhum (shifting) cultivation. Magic and religion still play an important part in the economic life of both the Plains Gonds and the Hill Gonds, though it assumes a different form according to different stages of economic and social development. A Gond will not go on hunting expedition without lighting a lamp or fire, or without reciting omens. He will also not start agricultural operations without making public offerings to the village or earth Mother. The Gonds are highly superstitious people and their economic and social activities are saturated with protective and preventive magical rites. Diseases and sicknesses are very commonly traced to evil spirits. Under these circumstances, it is but natural that adoption of new ideas is a relatively very slow process. New enactments and rules have introduced protection of forests and game, thereby, to a large extent, depriving the tribal of his livelihood. Gond labour has been exploited by the timber merchants in the interior areas. The Gond agriculturist has also been exploited by trader-cum-moneylender. This has created a strong opposition among Gonds even for co-operative credit. However, recently there has been a relatively better response to development activities, especially in Kurkheda and Aheri panchayat semitis of Gadchiroli and Sironcha talukas respectively.

To a certain extent the impact of development measures is visible in the plains where Gonds have gradually adopted better methods of agriculture and have tried to specialize in different crafts. Change from the older crude agricultural implements to new ones necessitated the services of carpenter and blacksmith, and in many villages

Gonds have taken up these occupations. This has resulted in occupational structure akin to that of the non-tribals. Some of the Gonds have opened small shops in many villages in the plains and are doing good business in stock commodities like match-boxes, biris, kerosene, edible oils, salt, soap etc. The adoption of better ways in dress and clothes shows that Gonds are taking over the customs of their non-tribal neighbours. During the last two-three decades the Gonds of the plain seem to have gradually adopted at least the material aspects of non-tribal culture. "This change in the material aspects of life has been responsible for corresponding modification in economic organization and in the technique of production. Assumption of individual responsibility has been more pronounced and the communal system has been pushed to the background. The panchayat system has disintegrated and tribal organization is losing its hold on the people. With all these drastic changes in the economic and social institutions, it is but natural that the headman or the chief as economic leader and priest, or the baiga or gunia as economic adviser, should no longer wield the same authority that they used in the former days. Magic and spells, and their intimate relation with the economic activities of the people are disappearing. The system of communal labour and mutual distribution of the produce of combined economic enterprise have been considerably relaxed and are now rarely undertaken or encouraged. The introduction of Law Courts, the growth of individualism in the possession of land and money economy have all contributed towards the break-down of the kinship group—bhaiband, at one time, a unit of great social and economic importance. It still functions, though in a limited way, when deaths occur or on some ceremonial occasions like marriage, communal dance karma, but it is now more of a social apparatus that has not much to do with the economic life of the people. Development of personality and growth of individualism have made big strides in the districts of the plains. And though neither communal economy has been entirely superseded nor individualistic economy completely established, every man now prefers to cultivate his own field, to sell his own agricultural produce and to spend the income on himself, his wife and children and those who are closely related to him." 1/

The situation in respect of the tribals who are living in the interior is slightly different, in the sense that the impact of contact with non-tribals and that of development is not much, and hence the degree of detribalization process is very low. There are areas in the

1/ Indrajit Singh, The Gondwana and the Gonds (A study in primitive economies). The Universal Publishers Ltd., Lucknow, 1944, pp. 171-2.

interior where tribals leave their villages and go to the hills when they see non-tribals approaching. It is, therefore, necessary that their social and economic transition has to be smooth and regulated. No doubt, this is an extremely delicate task. Segregation of the tribals in special tribal areas will shut them off from the normal process of economic and social change. On the other hand, throwing them open to the exploitation and expropriation by unscrupulous elements will lead to violent disruption of their social and economic organization, without anything replacing it. Therefore, planned protection and planned development on the basis of realistic study of the entire situation, is the only solution.

We have seen that because of the two main factors, namely, the almost complete lack of infrastructure facilities and the tribal nature of the population, there has been very little impact of development programmes, especially in the eastern parts of Gadchiroli and Sironcha talukas, and in the southern part of Rajura taluka, during the three Five Year Plan periods. That is, development measures which are merely affecting the fringe of the situation are practically of no use. A concerted effort towards provision of infrastructure and conservation and development of natural resources is necessary. This has to be done in a way which will ensure smooth assimilation of the tribal population with the non-tribals. For quite a long time the tribals in this area have followed a life which naturally evolved with the environment, without any outside influence. If they are to be introduced to better ways of life, it is necessary that they receive appropriate training suitable to their capacity of assimilation. Special efforts are necessary to develop natural resources in this area. The development of mineral resources, which has been neglected so far, requires to be taken up immediately. Fortunately, the recommendations of M. N. Dastur & Co. who undertook a study for the Government of India, Ministry of Iron and Steel, for selecting suitable sites for pig iron plants, are very favourable. According to them, "Locations considered suitable for pig iron plants which can be eventually developed in large integrated steel-works are the ore based locations, namely and Surjagadh (Maharashtra) in the western region." This "Surjagadh location in Maharashtra based on the newly discovered ore deposits, can sustain a large integrated steel-works. Water will be drawn from the Pranhita river, but the quantity available has to be determined. New rail links have also to be constructed." 2/ The suggested location for this pig iron plant is Ashti, near the south-western boundary of

2/ M.N. Dastur & Co. Private Ltd. Report on Site Selection for Pig Iron Plants, Summary and Conclusions, 1965, pp. 31-32.

Gadhchiroli taluka. Establishment of such a steel complex in the area will undoubtedly give a great impetus to the development of the area. In fact, we have seen that development measures so far have failed to create an appreciable impact in the area. This makes it absolutely necessary to take up immediately projects which can ensure all round development of the area. As to how the entire situation will be affected, in the three talukas particularly, is difficult to visualize, in the absence of data on size, investment, labour component etc. of the pig iron plant. However, a word of caution is necessary. Our experience in majority of the cases of large industrial establishments is that wherever these have been established only some sectors of the economy start developing, other sectors, particularly agriculture, livestock, forestry, fishery etc. lag behind. Bihar is a classic example of this phenomenon. Even with large industrial establishments the State has remained backward. The development process, in this sense, therefore, has to be comprehensive. As we have seen, the problems in this area are really difficult. Large investment is necessary to develop even a basic, minimum infrastructure. The problem of tribal development requires to be handled with considerable patience and understanding. Detailed investigations are necessary to arrive at solutions of problems facing different parts of the area. But the entire area is rich in resources and its development poses a big challenge to the administrators and planners.