

**PLANNING FOR TRIBAL DEVELOPMENT: A
CASE STUDY OF CHANDRAPUR DISTRICT**

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PREFACE

In 1976, Integrated Rural Development (IRD) approach was expounded by the Central Government. Twenty districts from the country were selected to launch the IRD programme on an experimental basis. The aim of IRD was to achieve optimum use of available local resources through purposive inputs of science and technology for the benefit of the rural poor. A working group consisting of various Government and Semi-Government agencies was entrusted with the task of giving these policy directives a shape of detailed programme.

Chandrapur District from Maharashtra State was one of the districts selected for preparing a plan under the IRD programme. Chandrapur is the largest District in Maharashtra State and is well known for its forests and mineral wealth. It has remained backward in infrastructural development, and the people, particularly the tribal population, has remained almost outside the purview of the development planning. Ten blocks from Chandrapur district viz., Gondpipri from Chandrapur taluka and Rajura taluka (1 block), Sironcha taluka (3 blocks) and Gadchiroli taluka (5 blocks) were included in the IRD programme. All these ten blocks except Gondpipri are covered under the Tribal Sub-Plan of the State Government. The Punjabrao Agricultural University, Akola, ICAR, New Delhi, and the Maharashtra State Officials were concerned with the formulation of IRD plan for Chandrapur.

The present authors were associated with a critical evaluation of the IRD plan proposals for Chandrapur. In view of the emerging problems, a scheme for an in-depth

study to assess the socio-economic conditions of the tribals in Chandrapur district, to investigate how far the various development schemes reach the tribal people and to evolve a strategy for improving the levels of living of the tribals was formulated.

A household level survey to collect information on work pattern, kind and cash earnings, level of living, etc., formed the main part of the study. The field investigational work for this purpose was carried out between December 1978 and June 1979. Three hundred and twenty-seven families from 20 villages/hamlets from Sironcha and Gadchiroli talukas where the tribal population is concentrated, were covered in the survey. Supplementary information was collected from the local level officials, social workers and other knowledgeable persons and the Government offices, particularly the Forest Department, the Forest Development Corporation, the Social Welfare Department and the Tribal Research and Training Institute.

In Chapter I, an attempt is made to put together a cohesive perspective on the rural development for the poor. The theoretical aspects of the problem and the IRD approach, and the ethos of developmental efforts under the Five Year Plans are discussed in this Chapter. The geo-physical setting, the demographic characteristics of the population of Chandrapur district, and their occupations, with a special emphasis on the tribal population are presented in Chapter II. The Chandrapur district is noteworthy for the forest wealth and the life of the tribals is intimately associated with this resource. A historical review of the closure of the forests, the forest policy from the British period till the present and the implications of this policy vis-a-vis the tribals are discussed in the third chapter.

In Chapter IV, an attempt is made to reconstruct the political and social history of the Gonds, i.e. the main population group in the study area, with a view to situating the current social and economic problems in a proper perspective. The impact of the policy enunciated by the British in relation to the tribals and the protective and ameliorative measures taken by the Government after independence are reviewed in this Chapter. In Chapter V the economic and social life of the tribals - the land owned, agricultural practices and crop yields, the work pattern and the standard of living, the social customs, education and health status, the links with outside world - etc. is described on the basis of the data collected through field investigations. The chapter also includes a brief assessment of a few developmental schemes that reached the tribals covered in the survey. In the concluding chapter an evaluation of the various schemes launched by the Government after 1947 for the improvement of economic conditions of the tribals is attempted; an alternative approach to planning as well as for the implementation of the plan is suggested so as to achieve a definite improvement in the level of living, education and skills of the tribals through their active participation in the process of planning and plan implementation.

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CHAPTER I

DEVELOPMENT FOR THE POOR : A PERSPECTIVE

In this chapter an attempt will be made to put together a cohesive perspective on the rural development for the poor. Of late, these approaches have been proliferating at a rapid rate; all of these relate to different but yet inter-related facets of development. It is therefore felt that a re-statement would help in the synthesis. Moreover, it is felt that such an exercise would also be useful for interpreting the subsequent chapters of the study. For this purpose the chapter has been divided into two parts. Part I deals with the theoretical aspects of the problem while Part II briefly sums up the ethos of the development efforts in the country upto the present time.

Part I

Development : Some Theoretical Aspects

Development can have many dimensions, for example, social, economic, political and cultural. For the purpose at hand one may define development as an activity, or a series of activities, or a process which either improves the immediate living conditions, social, economic, political, cultural, environmental, etc., or increases the potential for future living, or both. Thus viewed, the development results either in immediate betterment of life of the inhabitants or helps in provision of a better life in future. For the purpose of policy planning the term development refers to some specific area and pertains to a time interval.

The widespread effects and implications of the development process - in terms of time and spatial horizons - may not necessarily be all terminable at appropriate stage in their development. There are certain stages where these programmes and their implications can be terminated with no

or minimum ill-effect and maximum advantages. It is with regard to the determination and the choice of these points of termination that the concept of integrated development is useful.

Integrated Development

When development takes place in the ordinary sense of the term, invariably there are some 'spill-over' effects which cause dislocation in the area and neighbourhood. There are loose and incomplete ends in terms of the project linkages as well as some lags and discontinuities in terms of time linkages of the development effort. These discontinuities may either directly cause some losses to the society or indirectly lead to lopsided developments. In the interest of balanced planned development it is important that the ill-effects of such discontinuities are minimized. The term 'integrated development' refers to such measures in a development plan under which the loose ends of the development project are well tied in, and/or are terminated discreetly at some arbitrary point.

The underlying idea of integrated development is that the package of development contains coordinated projects which are appropriately linked and spaced out. The implementation of the package provides for tying up most of the loose ends, minimizing the periodic and spatial dislocation. It is obvious that this concept of integrated development can be stretched so as to include almost the entire range of socio-economic activities. But that would be impractical as well as uncalled for.

In the ordinary efforts of development usually some key projects are planned, but the rest of the activities (referred to as complementary) are left exclusively to the market forces. Only those efforts are planned whose development cannot be ensured and brought about by the

market forces alone in some desired fashion. In other words, there is some critical aspect which is imposed and it is expected that such efforts will act as a catalyst and the remaining aspects of the development will be automatically taken care of by the free market forces. In integrated development this critical part may be either more prominent or be of a multi-modular nature. For example, some set of objectives may be attempted in each village of the region or a set of different objectives may be attempted as package in a single village. The important fact is that there is an underplanning of linkages among the objectives.

The coverage under the integrated development should explicitly take into account the linkages and provide a closely knit infrastructures which accounts for the process and lags. It will also leave several complementary areas to be provided for by the market but they should be small patches. It is expected that all these 'complementary' sectors taken together would not undo or reverse the main thrust of the envisaged development programme. In other words the direction and gradient conceived in the development plan can be grafted on to the society without the risk of its being aborted by the 'residual unplanned sectors'. To sum up, the main components which distinguish integrated development from the ordinary kind is its modular nature with planned and well-thought out spatial and time linkages. Also inherent in its inception is the impossibility of reversing the development thrust by the unplanned residual sector.

Integrated Rural Development (IRD)

What does IRD mean to a planner in the context of a nation, state or district? What sort of implications IRD has from the point of view of choice of time horizon? Is it necessarily short term planning? How does it fit in

with the long term perspective of the nation? Does it have some limitations with regard to the nature of developmental projects which can be included therein? Are there any limitations imposed upon by the design of development itself?

Without attempting to answer the general questions raised above it is proposed to focus on a more specific issue i.e. integrated rural development (IRD) within a district. Nevertheless the questions raised will serve a useful purpose in the sense that they will keep one apprised and informed about the direction from which the concept of integrated development can be and should be viewed.

Factor Endowment

To start with, it is necessary to have information on the geography, climate, minerals, ecology, agriculture, distribution of land and other resources, etc. One must know the present state of all these aspects, the direction and pace of their use, their promise and their potential. Unless this information is collected it would not be possible to map out the development options for that district. The potential of a given district is crucially ingrained and limited by its known factor endowment. This serves the basis for initiating the development process.

The Choice of Technology

The next thing which is critical for development is technology. The state of technology which can be readily implemented in the area is of crucial significance. The more appropriate is the technology, greater is the effectiveness with which the resources of the area can be harnessed. It should be cautioned here that the word appropriate does not necessarily denote either 'intensive' nor advanced technology. It only refers to the suitability of the

technology to the factor endowment of that given district. This point needs to be elaborated.

The conventional economic analysis in the 'choice of technique' literature suggests that 'optimal' technology be chosen. This optimality is defined in terms of economic efficiency via factor prices and production functions. But the problems inherent in the implementation of such 'stylized' production functions are not taken into account; similarly the non-economic constraints are also not taken into consideration. Consequently, quite often planning efforts yield unfavourable results.

Now a pure growth-theorist may be able to appease his intellectual curiosity with the help of esoteric growth models based upon elegant intellectual constructs but a development-planner can ill afford to ignore the mass of non-economic data, the socio-cultural phenomenon of the place, and the ecological balance. Now it is with this objective in view that a choice of technology from the point of view of development planner becomes critical. The choice has to be such that it ensures not only economic efficiency alone but also takes care of the vital non-economic factors. However, the abandonment of the purely economic efficiency criteria doubtlessly opens up a complex and difficult set of choices. There are various combinations of strategies which can be resorted to by the planner for the purposes of integrated development. As it would not be possible to decide on such choices a priori, considerable faith would have to be placed on the local level planning and on the local planner.

IRD in Practice

For the formulation of IRD programme, first of all, the major problems of the region have to be listed. Keeping in view the focus of the present study poverty can be rightly

termed as the major problem. But the causes of poverty and its manifestations differ from case to case. For the purposes of development planning we need to catalogue both aspects of poverty i.e. its causes and its effects. For example, cause of poverty in a rural/agricultural region could be landlessness, poor soil, no irrigation, bad climate, inferior seed, lack of fertilizer or out-moded techniques, the decay of village industry, and commercialization of trades. All or some of these causes could be at work simultaneously. Similarly manifestations of economic poverty could reflect in poor health, lack of education, bad living conditions, indebtedness leading to social bondage, (lack of social consciousness, and presence of superstitious socio-cultural practices) migration, etc.

Secondly, the next important step is to isolate the critical aspects which should be the immediate targets of the development efforts. Simplest approach is to find out those maladies which affect the largest number of people within the area and affect them substantially. Identifying this aspect provides the beginning for the process of local level development. The main programmes to cure these maladies, for the sake of convenience, may be referred to as the core of rural development programme.

The core plan could have many target groups. It may essentially be modular in its nature and would operate on its target groups from different approaches; for instance, let us spell out that the target groups consist of landless, small farm cultivators, artisans or special groups like women and children. Depending upon the region the size of the rural poor varies from thirty per cent to over half the entire rural population. The past experience of the three decades has revealed that their betterment cannot be directly secured by planning from above, or by sinking financial and

capital resources in the rural areas. This is so because the well off sections in rural areas tend to corner substantial gains for themselves. But the integrated rural development schemes as being suggested in the present study can be used to help the target groups. This is possible under this scheme as development is perceived to be planned at the local level. In such a plan these groups of people can be the direct beneficiaries. It is through them and their increased interaction with the rest of the rural economy that development process is envisaged to take place.

Thirdly, the effects of the 'core' programme need to be assessed. This assessment should begin simultaneously with implementation of the programme. This feedback would help in monitoring and re-aligning the core programme from time to time. There are at least two aspects which need to be taken particular care of in such an assessment: One, dealing with effectiveness of delivering the immediate benefits to the target groups, and second, improving the linkages between target groups and the rest of the economy. While the first aspect can be instrumental in providing relief from the extreme poverty conditions, the second is necessary for ensuring the long term sustained growth.

Fourthly, it is the level at which the planning takes place, which is crucial for successful implementation. In view of the purpose at hand, the focus here will be on integrated rural development within a given district. At that level, integrated development planning implies deliberations which can utilize the spatial features, and employ suitable technology. Planning from above or sectoral planning is hardly sufficient to alleviate the position of the bottom wrung people. The integrated development planner must be based in the region and exploit the spatial features, orienting his efforts primarily towards greater utilization of available resources within the region.

Employment and IRD

Keeping in view the objective of the present study the main concern here is with the amelioration of poverty of large segments of the rural population. The effective means by which such a widespread poverty can be eliminated is gainful employment. It is essential to generate enough employment and at a reasonable level of earnings. In view of this the IRD programmes have to be particularly sensitive to the employment aspect.

But such an employment has to be a genuine economic activity as opposed to being a mere 'ditch-digging' employment for relief purposes. The programme has to stress heavily on the need to employ the labour productively. To a large extent, the level of labour productivity depends upon their own skill and the amount of the resources which can be invested in those works. It is the fruitful interaction between such an investment and their skills which determines effectiveness of the programme in ameliorating poverty. Greater the investment absorbing and skill responsive capacity of the labour force, greater is the likelihood of the success of the programme.

Economic Viability and IRD

It is expected that the tasks in which the employment will be provided will be economically viable. It is interesting to see what economic viability means in this context. The text-book interpretation will be that in the long run average revenue will at least be equal to the average cost. In the short run, however, it may suffice if the variable cost is met out of the marginal revenue. But the fact that this investment is not purely market-motivated investment may have special implications which are explored below. In a way the objective of economic viability is linked with the term 'gainful' employment discussed above. It suggests that the projects have to be productively oriented and would have

to meet all of its cost. In other words, the type of tasks adopted and the scale at which they will be operated has to be commensurate with the efficiency level displayed by the similar projects in the existing market structure. Moreover, the tasks adopted are expected to be organized with comparable degree of operational efficiency at which the usual entrepreneurs in the same market operate. The marketing of the product would have to be ensured and yield secured. Because, only when the overall efficiency of the tasks adopted would be equal to the level of efficiency dictated by the market organization that it might be possible for the programme to become self-replicable; this is the other important objective of the IRD.

At this stage it may be useful to raise some general questions with regard to the concept of economic viability in this kind of scenario. First of all one needs to focus on the nature of the product being envisaged in the IRD programme. Because one cannot understand the market linkages as well as the price behaviour without considering the nature of the product market. Similarly the spatial dimension of the market (local, regional or national, etc.) cannot be determined without looking at the product. So the concept of economic viability has to be given its 'real' context before its implications could be clear for the planning purposes. If the product is local in nature then usually there would not exist any outside market forces to compete with. In those situations the decision with regard to economic viability and efficiency need not be pegged with 'outside' standards. These standards may vary from one local area to another. But if the product belongs to the regional market one might have some pre-set standards to attain. This might effectively cut some degrees of freedom with regard to the choice of technology, and other factor inputs. Moreover

if the target region is handicapped with poor transportation-communication network and other amenities, these features would furthermore squeeze the operational freedom.

The other constraint which the programme imposes upon itself is with regard to the optimal use of the existing local resources. If this were to read as optimal use of 'resources' as opposed to 'existing local resources' the constraint would have been far less critical in narrowing down the choice of task portfolio. But as it is, the onus to use the existing local resources can be quite an effective constraint on the developmental efforts. In a perfect market situation the optimal use of resources would have followed automatically as an implication of the above-mentioned point relating to economic viability. Because only optimal level of resource is used in any perfect market. Going by this interpretation one does not have to put this constraint explicitly as it would have simply followed from the economic viability consideration. But these conditions do not preclude zero utilization of local resources. It is to eliminate this possibility that this constraint has been introduced for it boils down to maximum (as opposed to optimum) use of local resources subject to the constraint of economic viability. As far as it is possible to utilize local resources and yet not be economically 'out-of-sorts' with the given market structure, these local resources would be resorted to. In this context it should be noticed that the spatial dimensions of economic viability may not necessarily be consistent with the local resources.

Regarding the entire programme we have at hand three conditions: (i) maximum employment, (ii) maximum utilization of local resource and (iii) economic viability. The first and second are part of the objective function while the third

is the constraint. Maximum employment, has to be 'local' in its nature. The unit of space being either a cluster of few villages or a taluka in a district. But the economic viability is to be considered in relation to somewhat larger region unless the goods/services produced also get fully utilized in the local area. But the IRD programmes usually do not say anything specifically with regard to this aspect. Hence, it can be interpreted in many ways. It may imply either kinds of products, one which is viable in the local market and the other within the regional market. It may be possible to produce such goods which can suit both the local and the regional market. If one restricts to the local area unit wherein both local employment and resources are being maximized the product may be viable in the local economy. But it implicitly assumes closed area with regard to the programme related variables. The labour force and local resources do not get either sapped out or inundated from outside. The insufficiency of such a condition is quite apparent, more so when the development programmes are implemented across the district. On the other hand if one takes wider interpretation of economic viability, it has already been indicated that one runs into some problems. In the real market situations, any attempt to superimpose economic viability of larger markets on the objective of maximum employment and maximal local resource utilization is going to face a number of problems; what it implies is that the relevant local input of resources is going to match in efficiency with input resource at large. Unless the input resource is either homogeneous (in the local area and the regional at large) or is superior at the local level the production process is not going to be efficient. If it is either homogeneous or superior the constraint is redundant and ineffective. But if the constraint is to be operative

it implies inferior local resources. Now for the local material to become acceptable substitute to 'outside' inputs, envisages some processing which brings it at par with the outside resources. Moreover, it is also implicit that such processing does not cause any economic distortions. Exploring that part has some interesting implications. It presumes that there exists such a technology which can bring local resources at par with the resources available from outside. If so, for each cluster of villages or taluka there would be different type of technologies to undertake such transformation. Besides, such technology would not lead to economic distortions. Rigorously speaking, this technology then becomes the additional variable which helps in providing some room for manoeuvring. In all there are now four variables: (i) employment, (ii) local resource utilization, (iii) technology, (iv) economic viability. The objective is to maximize first and second variables with the help of third and fourth. As viability condition is likely to be exogenously determined, then only the technology gives us the critical degree of freedom for attaining the objective. On the one hand, while this choice provides some elbow room, on the other hand it makes it more difficult to arrive at the decision regarding economic viability and optimal utilization of the local resources. It opens up several new phenomenon which must be considered. This is a very simple version of the proposed IRD model. But it definitely indicates the relative importance of the various variables involved in this exercise. It, hopefully, lays bare that if the objective of economic viability has to be attained, it can be done so only if the technocrats can come up with varying type of technology to suit different types of projects or even the same project in different areas.

Employment in Rural Areas

The problem of unemployment has been turning more critical during the Plan period as the investments made under the Plan programme did not open up sufficient number of employment opportunities in the non-agricultural sector so as to absorb a significant proportion of the incremental labour force. This has resulted in worsening of land-man ratio and increase in the number of landless labourers. In the areas of green revolution the effect has been uneven; while multiple cropping and increased productivity made for some increase in the demand for labour, mechanization, particularly for harvesting purposes has a labour-displacing effect. The increase in the number of small and marginal farms means an increase in the disguised unemployment or under-employment. In addition the artisans had also to join the ranks of rural labour, as their traditional skills were rendered a non-resource under the impact of factory production. The net result of all these factors is that chronic unemployment is forced on a large section of the working population. According to the Planning Commission estimates, the average number of unemployed per day is around 200 lakh while some estimates put the total number of unemployed and under-employed at 400 lakh. (G.O.I., 1982, p. 135.)

Table 1.1 : Unemployment in India in March 1980

	(No. of persons in lakh)		
	Age group		
	5 +	15 +	15-59
Chronically unemployed	120.2	114.2	113.1
Average number of unemployed per week	121.8	116.4	113.6
Average number of unemployed per day	207.4	197.7	191.7

Productivity/Income and Potential Supply

In the above, unemployment is considered only in terms of days and persons available for more work in a year. It can be termed as time concept of unemployment. It essentially centres on the current availability of labour supply. But there is another aspect of the problem which relates to the 'potential' of labour supply. Needless to say that in this sense the question of unemployment becomes far more complex. To begin with, this potential can be either measured in terms of one's productivity or income. If a person is earning less than he is competent to earn he is under-employed. Similarly if one can become more productive with additional resources (capital as well as organization) one is productivitywise under-employed. But as has been pointed in literature even the mis-employed who suffer from job frustration may be deemed under-employed in this sense. This means that the concept of under-employment becomes somewhat open-ended. Moreover, the empirical isolation of precise productivity differentials which can safely be attributed to different individuals, is open to debate.

Consumption Approach

When one takes the consumption approach, the problem of unemployment does not become any simpler. One may be productively working full time, and yet may remain without most of the basic creature comforts. There are several instances where poverty and employment go hand in hand. It may simply be due to the fact that the labour is not organized enough to have its due share from the proceeds of the undertaking. In an obtained market situation the factors get paid as much for their active contribution to production, as much for the way factors are organized and sold in the market. There may be an element of 'rent' in their earnings

or alternatively the labour may be forgoing some of its earned share and continue to be exploited. Hence the need to have a yet another approach to the problem of unemployment i.e. consumption approach. It is particularly a useful perspective when one comes across full time, hardworking people who are unable to procure for themselves even the bare necessities of life. It is in recognition of this aspect that, of late, there have been some move to organize rural labour on the pattern of the trade unions.

At this point it is also interesting to note that minimum desired standard of living is a relative concept which itself keeps on changing in a society. A person may be deemed to be under-employed as he is not earning enough for his basic requirements. Such requirements are essentially a function of the social set up. It is in recognition of this that one has the legal stipulated minimum wages. It should be noted that the concept has two aspects. It has as much to do with increasing consumption as much as with decreasing inequities by reducing wasteful, extravagant consumption. In this rather tenacious way under-employment is automatically related with the 'life styles' a society permits.

One could approach this entire concept as a quality aspect of labour. When the quality of labour does not even provide basic minimum level of consumption to the workers it certainly calls for restructuring of social goals and the resource mobilization.

Employment Generation for the Rural Poor

The above discussion on unemployment and its related aspects leads us to underscore the importance of employment generation programmes in the rural areas. Given the poor, deficient living conditions of the rural poor, they can hardly be expected to exercise any initiative or take risks

for their upliftment. Their abject poverty reduces their initial choices and leads to further worsening of the situation. It is in this mutually reinforcing sense that one mentions the vicious circle of poverty. Employment generation has to be provided for these people on what has come to be known 'as is where is basis' in order to break this circle. This emphasis on employment generation largely follows from the realization that in the long run employment is one of the better ways of providing the target group with purchasing power.

Furthermore it also needs to be taken into account that this micro aspect i.e. poverty condition of the target group is not the only reason for employment generation. Even the macro aspects present some relevant issues to be considered; particular among these being the overall capacity of urban sector for creating employment opportunities and its concomitant implications for growth pattern in general. The pace of employment generation in urban areas, the kind of labour for which such opportunities are generated, the size of unutilized labour in rural hinterland and the severe pressure of in-migration on the cities, are some of the aspects which indicate the importance of employment generation in rural areas itself. Even if it is assumed that the progress in non-agricultural sector would become faster in this regard in the coming years, the problem of providing productive employment to those already born in the last two decades would remain for some time to come.

The only alternative strategy open therefore is to create more employment opportunities within agriculture itself. Since the scope for extending the area under cultivation is limited, this has to be done primarily by increasing the intensity of application of labour to land.

But it requires radical changes in the organisation of agricultural production, and indeed in the structure of rural society. Without such changes, the biases introduced by modern technology are generally in the opposite direction, namely for saving input of labour and merely enlarging profits for the large farmers who have access to finance and what it can buy. (Raj, 1957.)

In addition to agriculture, expansion of agro-based industries, all modes of off-the farm employment as well as some forms of the rural industrialization would be necessary for ensuring increase in the employment opportunities in the rural areas. For developing this line of the argument further elaboration on two aspects related to employment generation is attempted below.

- (i) The first approach emphasizes the weak and unskilled profile of the rural poor households and pleads for measures of social services so as to enable better human resource utilization.
- (ii) The second approach is based on the structural analysis of the economy and discusses how industrial sector remains largely insensitive to the rural poor except in an incidental manner. Further the role that agriculture and the social services at the village level can play to absorb rural labour in gainful employment - is examined.

Human Resources Approach

In this approach two basic problems: (a) under-utilization of human resources and (b) generation of skill, knowledge and talent are considered central. Needless to say that these aspects are inter-linked and feed on to each other. The 'Human Resources Approach' can be defined as

follows: "an approach to national development based upon the simple idea that human resources are the ultimate basis of the wealth of nation. From this perspective, the goals of development are the maximum possible utilization of human beings in productive activity and the fullest possible development of skills, knowledge, and capacities of the labour force. If these goals are pursued, then others such as economic growth, higher levels of living, and more equitable distribution of income are thought to be likely consequences." (Harbison, 1973, Preface.)

Instead of taking the production techniques and sectors as given and then tailoring our resources input (including human resources) to the criteria of productive efficiency (as measured by high yields, low costs), the alternative approach sets the utilization of human resources as the principal aim. It, then, works its way through the entire production system (with all its attendant aspects) always ensuring its principal objective. Once it succeeds in its first round efforts of deploying most of the workforce, it can address itself to the question of productivity (either by intensity of physical capital or greater skill inculcation i.e. human capital) in subsequent rounds. The argument seems to be quite simple and understandable but it seems not to suit the 'Development Planners'. Actually we have been pursuing the policies of entirely reverse order i.e. productivity first and employment as secondary implication. Then the obvious question which comes to mind is: "Why Did We Have the Cart Before the Horse?"

Part of the answer could be the historical coincidence. Development models are essentially by-product of the growth experience of the West European and North American Countries. In the post-war era, when most of the Asian, African countries achieved their political independence, the "developed

countries" were in that phase of economic growth where capital intensity was the focus of attention. Actually the world of C.E.M. Joad depicts how intensively (12-14 hours a day) and extensively (including women and children) these countries deployed their manpower in the early days of factory system. Moreover, the fact of having appended colonial markets (in the case of Western Europe) and advancing frontiers (in the case of North American countries) never allowed the problem of development to be posed in the fashion it is now being faced by the developing countries. So utilizing the focal efforts of the developed countries, and the 'state of art' of social development, "Third World" countries launched on the course of development with the 'transplanted' models of economic growth. (Inayatullah, 1975, 1976.) The plan documents of these countries are full of monumental capital intensive development projects which have created several oases of wealth but have failed to cater to the essential requirements of the majority of its population. The gains of development projects have failed to percolate down to the masses. And during the seventies, there was an abortive attempt on re-ordering of the development priorities. It was suggested that the low income families should be made the prime and the first round beneficiaries of the development efforts. Let us set the horse before the cart! If we fail to use human resources in the first round, it has several implications which follow from the peculiar nature of labour. It costs to maintain labour irrespective of the fact whether the person is employed or not. The argument is usually ignored by pointing out that the overhead cost of harnessing the labour are several times more than the negligible maintenance (which is anyway borne by the unorganized rural sector). But leave alone ethics and morality of the situation,

there are phenomenal socio-political implications of having such a large number of under-fed, under-utilized human resources. The development planners of the Third World countries found that they can hardly afford to ignore the potential risks. Hence, the urgency of having a development policy which takes care of the human resource first.

Towards a Rational Human Resources Policy

As already stated above, there are two critical inter-related aspects which a rational human resource policy should address itself to i.e. development of skills, knowledge, and talent of persons in the labour force, and utilization of their energies and capacities (Harbison, 1973, p. 13). These two aspects are the end products of various other policies which have either several or joint bearing on the human resources. A rational human resources policy will envelop all these related policies, integrate them in some appropriate mix and thus facilitate their bearing upon the above-mentioned objectives. One can expound this notion somewhat more concretely by taking note of the following tributary policies:

Group A:

- (i) Nutrition Policy
- (ii) Health Policy
- (iii) Housing Policy
- (iv) Education Policy
- (v) Communications (media) Policy.

Group B:

- (i) Training Policy
- (ii) Research and Development Policy
- (iii) Employment Policy
- (iv) Wage Policy
- (v) Migration Policy.

The constellations of these policies are set in two sections, one dealing with the service sector (Group A) and the other dealing with the utilization (Group B). Former will lead to greater skill development, knowledge and talent while the latter will facilitate the utilization aspect. It is possible to increase these groups as well other policy aspects within each of the groups.

Group A

The neediest of the needy to whom our efforts are addressed in the first round of deliberations suffer from even the bare provisions of these basic deficiencies. Not only have they been deprived of these things but their attitude, their comprehension and their very basis of interacting with 'outsiders' has also been in shambles. They have been living virtually, the life of serfdom. It is not possible to utilize their services in the productive sector, under completely different working conditions without providing for some smooth transitory phase. It is important to provide them with assured means of survival and generate confidence so that they could accept the change without apprehension and skepticism. Their nutritional standards and weak health will not permit longer endurance (both physical and psychological) of work without sustained intake of a balanced diet and basic health care. These people are largely illiterate which not only makes them skeptical and suspicious but also makes them gullible to the unscrupulous elements of the society. Education policy geared towards making these people literate is an important step in strengthening their defences and infusing new confidence in them. Such an education policy will have to be flexible enough to suit individual villages or the cluster of hamlets. Similarly it will be necessary to have a suitable housing policy to ensure emotional stability and cultural integrity

of these people. Lastly the role of communications media and its impact in the likes of such people must be stressed. Mass media is potentially a very useful tool particularly in the face of illiteracy and varying languages/dialects in the Indian subcontinent. It can be successfully used for building up a meaningful rapport with the people. It can be used for apprising the low income families of their rights and educating them about their surroundings. The service policies can be used to rehabilitate the target population and to provide them with confidence and assurance so that their attitude towards suggested changes is positively receptive. This argument is based on the contention that one cannot straightaway start some employment oriented projects without first ensuring that these suit the peoples' needs and capacities. And one thing which will greatly change their disposition towards planned activity is education combined with demonstrated effects of a 'better' life. It will also weaken their dependence on the traditional chiefs, employers and money-lenders. The only way to weaken the hold of the latter is to assure the low income families of the manifest sincerity of the change agents. That in itself should go a long way in resulting some immediate benefits to the low income families. Moreover, this investment will lead to improvement in their general abilities which will facilitate their utilization in the employment sector. It should be noted that in some areas one may not need such an expenditure for a long duration before opening up the employment opportunities while in others it may have to be incurred on somewhat longer basis e.g. in the case of tribal population.

Group B

The second group of policies deals with the utilization aspect of the low income families. The top place must

be given to the training policies as it is deemed to be of special importance from the point of view of utilization of the labour. It may be possible to use some of the workforce without any training but most of it will have to be trained. Here, preference is given to on-the-job-training and that has been one of the principal reasons for separating it from the educational policy. On-the-job-training will also give some room for the vertical mobility within the productive system which should prove of immense value to sustain the labour force satisfactorily. Moreover on-the-job-training can also cope with the requirement of updating the skills of the labour as the new technological breakthroughs come in. Thus it is expected that it will prove more economic and meaningful. The second policy in this group is related to the research and development. It is one of the more critical areas which are crucial to the success of the entire plan. To be useful the research and development policy will have to perform at least two functions (i) to open the new sectors where gainful employment opportunities could be provided for the utilization of labour, and (ii) to effect changes in the production technologies (both old and new) with a view to maximizing the employment opportunities. So far the ethos of the technological development has been quite contrary to this expected behaviour. This has been essentially due to the fact that technologies have sprung up as a result of quest for more profits, less cumbersome organizations and greater productivity. But in the new policy for the low income families the technology will have to be developed along different lines. Already there are signs that the existing technological shelf can deliver lots of intermediate and employment generating technologies. The emergence of the suitable technological policy essentially rests on the research and development

policy of the nation. Needless to say that none of the policies will be able to deliver the promised goods unless a suitable employment policy spear-heads all the other policies. This is so because it is, only through greater employment opportunity that one can provide stable life style to the worker and enough produce for the society.

The last policy aspect in the second group deals with the migration policy. This is potentially a more difficult area to regulate. So far, the general pattern of the migration of the low income families has been such that the landless labourers have been driven to the urban centres in quest of job and food. Richer families of the rural sectors (and particularly education seeking children) also have been moving to the cities in search of a more "modern" life style. The critical thing to realize is that the migration of the poor, landless labourer needs to be discouraged until suitable opportunities are provided for their placement and residence in the cities. Already most of the big cities of the Third World present a sharp contrast of multi-storeyed towers and the slums. The quality of life in general and the health of poor migrants in particular is often adversely affected when they migrate to the cities. To obviate this, measures to prevent forced migration from the rural areas, forced due to landlessness and lack of gainful work have to be appropriately devised.

Structural Approach

Traditionally, increased utilization of labour is sought in the area of agricultural production and in the small-scale agro-based industries. Needless to say that these two sectors combined provided for large employment opportunities. But due to some structural, technological and institutional factors these two sectors have come up with limitations in generating employment opportunities.

When the objective of a development programme is to optimize the utilization of local human and non-human resources these sectors by themselves are not enough to achieve the objective. It is particularly so when the stipulated employment opportunities are directed towards a particular target group. Most of the rural development programmes which have been promoted during the last few years started with these twin objectives (i.e. local resource utilization and target group oriented benefits). In case of such programme it is not enough to depend upon agricultural and agro-based industries, but social services should be used to supplement the efforts for ameliorating poverty.

Social Services

For the purpose at hand social services are defined in a comprehensive sense. It includes all services - both human and non-human which are jointly provided by the society for the satisfaction of 'social wants' i.e. the wants in satisfaction of those the principle of market exclusion cannot be applied. It also includes all social welfare activities which are largely provided with a view to assist the poor persons in the society. Actually in this report more emphasis will be put on the social welfare activities as these will be particularly helpful in the cause of 'Antodaya'.

Rigidities in the Agricultural Sector

In order to meet our food constraint (or in more general terms food plus industrial raw material constraint i.e. agricultural productivity constraint) it is necessary that research and development (R & D) in the agriculture be continuously pushed. Agricultural technology has to be the most effective if we have to keep pace with our growing needs. This takes away some degrees of freedom for the pursuit of other objectives - particularly objectives relating

to distribution and employment generation. It is customary to argue, that the modern technology in the field of agriculture is size-neutral. What is usually meant is that the technology is applicable to even a small field with similar results. It stresses the divisibility attribute of the modern technology. But as the utilization of this technology entails heavy investment (which is in turn constrained by the resource-base of the cultivator) the modern technology is not resource neutral (Frankel, 1971). Consequently the rural inequities get exacerbated instead of being ameliorated. (Johl and Mudahar, 1974, p. 19.) Similarly the employment generation does not necessarily take place for the target group. There are two more aspects related with the technology which needs to be taken into account. Firstly, that the type of technology used has implications for several related activities which tend to get organized in compatible manner e.g. transportation of grain by trucks or tractor-driven trollies or processing of produce by power-driven machines, etc. These subsidiary activities have a strong displacement effect and hit the poorest sections in the villages. One needs therefore to examine the technology package and then find out if one can accept some parts of technology and reject others. This aspect of decomposibility of technology is very important as it can save us from some of the negative aspects of the modern technology.

As regards the agricultural production technology itself, as noted above, the modern technology, under the institution of private land ownership, is available only to the exceptionally resource-rich regions like the Punjab and in the rest of the country, to the resource-rich landowners. The majority of the cultivators have neither the means nor the capacity to shift to profit oriented

agriculture. They have to continue to operate basically as subsistence oriented farmers. The development measures adopted so far are all designed for the benefit of market oriented agriculture. Even the special measures in the form of SFDA, DPAP, etc., worked out for the small and marginal farmers or the dry farmers, etc., are mainly market-oriented. It must be stressed that efforts to strengthen and stabilize the subsistence base of the weaker sections are lacking. To rectify this two kinds of measures are called for. (i) Comprehensive planning for the micro-region say a small water-shed to achieve resource conservation and optimum utilization of the available resources so to satisfy all the basic needs e.g. food, fodder, fuel, shelter of the population drawing their livelihood on the basis of those resources and (ii) supplement these through a complementary use of Government controlled resources like water, forest, etc. As their resource base is not adequate special measures to ensure the use of national resources e.g. land, water, forest in the favour of this section will have to be devised. Rational planning and use of these resources for their benefit will make for greater productivity and better incomes for the weaker sections. Thus, part of the problem of employment and income generation can be taken care of if effective social control and planning in relation to land and other natural resources is ensured. Instead of strengthening their consumption base, if attempts are made to incorporate them in the market-nexus then the experience has been that there is an increase in the work days and some increase in the cash income; however the level of living does not necessarily improve because of three factors: (a) They lose in the process some of the articles which they traditionally used for home consumption rather than for marketing (e.g.

milk, eggs) and their diet tends to become poorer; (b) There is an increased pressure on the natural resources (water, pasture, etc.) consequently there is a risk of deterioration in the resource-base in the long-run; (c) When they are operating in the market, they being the weaker partners (they do not have sustaining ability, full information on market prices, etc.) the cash income is not often commensurate with the work done. If the same amount of resource and the labour is put in for the production of goods for home-consumption, they might be better off. In addition, when they have ready cash it is possible to sell them country liquor, some trinkets, etc.; as a result milk or butter-milk or home-brewn liquor which traditionally formed a part of their diet is replaced by an inferior product viz. country liquor.

Rigidities of Industrial Systems

The quest for large scale heavy basic industries, entails an advanced and developed technology. The provision for defence equipment also propels one in the same direction. Similarly the capital market also tends to acquire more control on the product as well as input markets. Only very recently the banks have been going out of their way to support the small entrepreneur but quite naturally the survival rate of such propped-up enterprises is rather low. It is important to realize that investment in large scale industries, be they basic machine building machines or defence -need-oriented industries has a long gestation period, hence, is insensitive to the short run strains and stresses of the economy. Moreover, the complex organizational pattern of these industries needs elaborate advance planning. The investment is of such tall order that to protect it from instability it is prone to subsume any potential threat. These deliberations leave the industrial

sector largely insensitive to the more immediate and local eruptions except by the way of pure transfers. What is being implied here is that modern large scale corporations have a certain rigidity as to their design, operations, and manoeuvrability. There are few products to the provision of which they are easily amenable to while there are certain other products where their form is more a handicap than facility. A similar point which was made about the technology in the case of agriculture can be made in the case of 'organization' in the industrial sector. To amplify, 'organization' should be seen as a continuous scale and it should be matched according to the nature of product, technology and the size of the market. Usually, conventional economics does not do much about it as by definition an enterprise will end up with a suitable organization in pursuit of efficiency. But in the real world this needs to be taken note of explicitly, at least on account of two reasons: (1) the corporations tend to control the market in various degrees, and (2) when planned corporations are being transplanted (as opposed to those which evolve as a result of market forces) the resultant organization may not necessarily be commensurate with the market forces. This attribute of the industrial organization upset more than anything else the attempts towards rural industrialization; particularly when it comes to establishing such industrial units which can fend for themselves. Because the units which can fend for themselves hardly, if ever (and that too incidentally), satisfy the local constraints like resource utilization. The efforts of having local resources based rural industries and then attempts to super-impose on them the optimality constraints of much wider markets are inherently contradictory, and those inconsistencies reveal themselves as soon as the subsidies are removed (Brahme et al, 1979, pp. 373-376).

Social Services to Mop up the Slack Variables

In view of the various constraints, some endemic to agricultural technology, and industrial organization, and others to exogenous variables one is left with only a few degrees of freedom with regard to control and regulation of these principal sectors of the economy. As these two principal sectors cannot ensure the complete harnessing of local resources, these slack variables have to be utilized elsewhere. In this bid to find a third sector which could be tailored to the local needs, that one is suggesting the social services as an important vehicle for ameliorating the poverty conditions of the rural sector. In this sector one can plan for providing those services in disposal of which one does not need elaborate market linkages. Hence, all the questions of feasibility, efficiency and the underlying organizations become redundant. So far as the goods produced are useful, and are demanded within village, one can keep the slack variable utilized. Certainly the kind of goods have to be such that do not compete with the market structure. Because if it is so, very soon the village production system will be driven out by its more powerful competitor. With this view, social services like education, health, housing, drinking water, etc., should be organized at the village level.

It is necessary to develop a replicable model of social services which could universally supplement the development efforts of agriculture and industry. One of the important implications of this replicability requirement will be that the amount of resource one can sink in development of social services for each village will be severely limited. Because if a prototype model costs so much that it cannot be transplanted across the regions, it is not worth considering. Hence it must be something which not only

has a low initial cost but also (and more importantly so) low maintenance. Working through this requirement leads us to two important considerations.

(i) Organizationally the structure of the model should be such that, it minimizes the overhead costs. This will be only possible if more grass-root level decisions are made and there is active participation from the people in supervising the services.

(ii) Whatever little resources are obtained they should be efficiently utilized which means that public accountability should be there.

The foregoing two implications of this self-replicable model point out towards more participatory model of development at the local level. The type of local level development so far pursued in our country is of quite different nature from the one which is emerging from the above pattern. In the past, all initiative has been from the government in terms of both resources and efforts. Moreover the high point has been the sectoral capital input rather than low financial commitment.

Part II

Five-Year Plans in India

So far the discussion was restricted to theoretical and analytical aspects of development in general and the rural development in particular. All through the focus has been upon the poor segments of the population. It was stressed how one needs to engineer the interests of the weaker sections specifically if one is keen to help them grow out of their poverty. In its normal functioning the economy tends to obviate their interest. This has been indicated so far on a theoretical plane. Now one proceeds to comment briefly upon the practice of economic development

in India during the several plans from 1951 onwards.

From 1951 to 1966

This period spans the first three Five Year Plans. These three Plans laid down the foundation of planning in India. It began as a novel experiment as the newly liberated country adopted democracy and the Soviet type mechanism of planning for development. These three Plans laid emphasis on heavy industries, machine building machines, and gigantic river valley projects. Total public outlay in these three Plans increased from a modest sum of Rs. 19.6 billion to Rs. 85.77 billion in the Third Plan. As compared to this the Sixth Plan (for 1980-85) is going to be over Rs. 900 billion.

In this first phase of planning some of the most prestigious industrial projects (at least for the developing countries' standards) were completed. Among other things it included setting up of three steel mills, completion of Bhakra-Nangal Project, setting up of machine and tools manufacturing factories, railway coaches and locomotive factories, etc. The performance is impressive when one considers that the country had just emerged from a long spell of colonial domination and was wrought with aftermath of the partition of the sub-continent and the menace of princely states. In spite of this, a foundation of industrial infrastructure was laid down during the period. At the same time, problems like food shortage, growing unemployment, foreign exchange crisis and wayward foreign exchange assistance, etc., had been pressing the economy. Geo-political realities manifested themselves in the form of border wars with China and Pakistan. Inherent contradictions in the design of development had begun to surface. The national economic scene was no more a clean slate for the planners. With the death of arch-planner, J.L. Nehru,

the political as well as planning scene was in for some new stresses.

Table 1.2 : Plan Outlays during the Six Plans

Sector	Percentage distribution of the total outlay						
	Actuals					Esti- mates 5th Plan	Tar- gets 6th Plan
	1st Plan	2nd Plan	3rd Plan	Three Annual Plans	4th Plan		
Agriculture	14.8	11.7	12.7	16.7	14.7	13.0	13.2
Irrigation)	29.7	9.2	7.8	7.1	8.6	9.8	10.6
Power)		9.7	14.6	18.3	18.6	18.7	19.9
Village and small industries	2.1	4.0	2.8	1.9	1.5	1.5	1.8
Organized industries and mining	2.8	20.1	20.1	22.8	18.2	22.8	20.9
Transport and communication	26.4	27.0	24.6	18.5	19.5	17.0	15.9
Social services, etc.	24.1	18.3	17.4	14.7	18.9	17.2	17.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Outlay in Rs. crore	1960	4672	8577	6625	15779	40097	97500

Table 1.2 provides the total as well as the sectoral outlays under the broad headings during the different Plans. It is obvious from the table that the First Plan provided maximum outlay for irrigation, power and flood control followed next by transport and communication. In the Second Plan transport and communication claimed the highest allocation followed next by industry and minerals. In the Third Plan, these same three sectors accounted for nearly seventy per cent of the total investment among themselves.

After 1966

The second phase of the planning did not have a good beginning as the Fourth Plan which should have started during 1966 could not begin till 1969. This gap was filled with three Annual Plans. These Annual Plans mark one of the more severe transitions in the Indian economy. It was largely due to these overwhelming hardships and obstacles that the Fourth Plan could not be launched even on paper. Between the years 1966-69 the country had to recover out of the aftermath of Indo-Pak border war of 1965; death of a Prime Minister in office and the succession problem; severe famine and drought for two successive years in the nation; devaluation of exchange rate as a result of World Bank pressure; liberalization of trade and a more lenient licensing policy in the fertilizer industry, etc.

Preceded by this kind of events the Fourth Plan began in 1969. But even then its performance was far from satisfactory. Internal as well as external factors continued to pose innumerable problems. Emergence of refugee problem and the subsequent Bangladesh war, combined with galloping inflation and break down of stable political systems in the States contributed to the listless performance. The only redeeming feature was the growth rate of food production.

At this stage another vain effort was made in the form of the Fifth Plan to revise the economy, to eliminate 'the poverty and reduce the glaring inequalities' which were partly sharpened by the preceding development efforts. By now the national scene was ablaze with scrambling, by rich for more riches and by poor for means of subsistence. The disappointment with the planning as panacea for the poor was nearly total by then. Trickle-down model had not relieved the stronghold of want and misery. The slogans of promised 'socialistic pattern of society' had been devalued.

One could say that the Fifth Plan made an attempt, however feeble, to take the bull by its horns. It launched the Minimum Needs Programme for the poor who had otherwise very little to look forward to in the 66 sector input-output model on which the Fifth Plan was based.

But the socio-political foundations of this input-output matrix gave way during the Plan. 'Emergency Rule' was imposed with a promise to restore the crumbling structure. But the Government was overthrown in the 1977 elections and with it the Fifth Plan was truncated an year in advance. For us that marks the end of the phase two of Indian Planning. The major achievement of this period being the achievement of high agricultural production due to 'green revolution', somewhat more comfortable foreign exchange position. The industrial structure laid down in the first phase had also come of age by now. Diversification of the industrial production was beginning to grow all around. But on the negative side, the system had exhausted the patience of the poor masses. The political order was changing too rapidly to permit stable economic growth. The emergency crisis threatened to starve the economy.

The allocations given in the Table 1.2 indicate that though high allocations continued to be made for irrigation, power and flood control, industry and mineral, the relative share of allocations for agriculture increased during the three Annual Plans (1966-69) and the Fourth Plan. But in the Fifth Plan it again fell back to the level of the Third Plan. Larger allocations were made for social services during the Fourth Plan. It should be pointed out that during this period the inflationary prices ate into the magnitudes of these allocations. The planning itself became more ritualistic. It was in this period that a new Plan 1978-83

was launched by the newly elected Government. It laid extra emphasis on the rural sector and the poor via the 'target group oriented schemes' and social services. Since these schemes are specially tailored for the weaker sections a critical review of the same is warranted.

Special Programmes for the Weaker Sections

The special programmes organized for promoting agricultural development and for employment generation included (i) The Small Farmers Development Agency (SFDA), (ii) Marginal Farmers and Agricultural Labourers Programme (MFAL), (iii) Drought Prone Areas Programme (DPAP), (iv) Crash Scheme for Rural Employment (CSRE), (v) Employment Guarantee Scheme (EGS), (vi) Food for Work (FFW), (vii) Operation Barga, etc. In addition the Minimum Needs Programme (MNP) aimed at the provision of a minimum level of physical and social infrastructure in the countryside was launched. SFDA, MFAL, DPAP, CSRE, FFW were Centrally initiated while the EGS was initiated by the Maharashtra Government and operation Barga by the West Bengal Government.

What is the experience of these schemes in ameliorating the poverty of the weaker sections? A number of evaluation studies have been carried out to assess the impact of these special programmes. A brief resume of the findings of the various studies will help judge the contributions as well as limitations of this approach. When the schemes are target-group oriented a number of problems are faced; first, in identifying and then in reaching the target groups; secondly, if the target groups are reached then the problem is, do they benefit from the scheme. For example, because of the lack of clear operational identification criteria in the case of SFDA/MFAL programme it is possible for the relatively better endowed sections to take advantage of these

schemes. Similarly in the case of IAD Scheme taken up by the Government of Maharashtra, weaknesses in the definition of small holder led to the leakage of benefits to the non-target sections.¹ In addition if the vested interests are threatened by the operation of a specific scheme, a variety of barriers come up in the implementation of the scheme.

The programmes designed for the weaker sections often do not consider the basic limitations of the beneficiary. For example, whether the beneficiary knows how to handle the improved breed of goats; or the beneficiaries have the resources to feed and maintain a buffalo or whether adequate veterinary services are available so that the beneficiary can ensure the survival of a cross-breed cow. (Shah in Desai, 1979, p. 40.) The programmes are not designed keeping in view the specific needs of the beneficiary. For example, if the wages are not paid on a daily basis, this works as a deterrent to certain sections of agricultural labourers in joining the EGS work, or the provision for only seasonal employment under the EGS keeps away some of the poorer sections (P.E.O., 1977). The schemes often remain beyond the reach of the weaker sections because of the resource constraints. For example, HYV technology or the loan scheme due to the land security required by the banks. Inadequacy of the scheme to meet a given need also defeats its purpose e.g. consumption loan amount does not help see the family through the lean season (Upadhyaya, 1980) or the loan amount to buy a bullock is insufficient.

1 The various problems faced in the implementation of SFDA and the impact of SFDA are brought out in the case studies by Apte, D.P., Maitra, D.K., Sen Indrani, Rao, N. Desinga, Gaikvad, V.R. in Intervention for Development edited by B.M. Desai, 1979. See also the case studies in Developing Adivasis and Small Farmers, M.G. Bhagat, Subhachari Das Gupta, National Institute of Bank Management, Bombay, 1975.

Absence of a planned set of linkages in terms of inputs as well as marketing facility often affects the productive capacity of the beneficiary and defeats the purpose of improving his earnings; when adequate market arrangements are lacking the intermediaries mop up the benefit; when the input links are not provided for the productive activity itself suffers. A package approach is crucial especially for dairying (R.B.I. Study, 1975). Lack of information on the specific provisions of a programme or, inaccessibility of the programme services to the weaker sections restricts the implementation of the scheme. The basic reason why the schemes designed for the weaker sections have largely failed to deliver the goods is that the schemes are all market-oriented. When the weaker sections do not have the basic resource e.g. land, credit-worthiness, skill or education on the strength of which they can take advantage of the scheme and enter the market, the resources supplied will either go waste (cross-breed cow dies or electric pumpset remains idle) or the benefits will be largely captured by the intermediaries.

As regards the Minimum Needs Programme the first problem is that it is designed according to some standard criteria arrived at in the Planning Commission and the actual priorities at the village level are not taken into consideration. The Programme presumes a satisfaction of certain basic needs e.g. food and fuel. However, it is well known that about half the families in India live below the poverty line and malnutrition and even starvation afflicts a section of the Indian population. (Koppar in Ranjit Gupta, 1977, pp. 88-91.) These pressing needs, in fact, must be given a top priority consideration. Even in a particular field covered by the programme say health or education the 'standard schemes' may not be appropriate in

a given situation. The physical and financial resources are expended in the name of meeting the 'minimum needs' of the people but how the benefits will be distributed remains dubious. The other problem is that integration and links between the various programmes are not worked out.

Overview of Development Planning
Experience in India

The major objectives of planning in India was to have quick economic growth, rapid industrialization, and improvement in the levels of living. In the actual plan formulation the emphasis was on the growth of gross national product (GNP), and the distributive aspects of the model of growth were not examined explicitly. It was assumed that the beneficial effects of development will automatically spread to the lower sections. Growth was expected to benefit everyone - rich and poor. Moreover it was almost implicit in their assumptions (due to a historical nature of the model of growth) that interest of the rich and the poor countries are reconcilable and that it is only a matter of time before the backward/developing countries will catch up with the Western countries. This kind of approach naturally led to largely a sectoral approach in development. More and more of the capital was invested in certain sectors with the hope that these sectors will not only grow themselves but also that with their linkages with the rest of the economy will transmit growth to the other sectors of the economy. The precise nature of these linkages was not explored/examined directly. It was only when the experience revealed that the different regions of the country were growing at alarmingly different rates that the causes for the differentiation were explored. This occurred sometimes during the sixties. It resulted in two major developments. One that the decade of the 'sixties

was declared to be the 'First Decade of Development' to launch a concerted effort on poverty. The second was that many of the scholars went back to their desks in search of the 'missing variables' which might have been responsible for not explaining the process of development in its entirety. Subsequently, human factor emerged as the critical variable effecting the performance of the country. It unleashed what is known as "human capital revolution" in the literature. Most of the human services came to be identified for their development contribution; chief among these being the educational activity. Investment in these human services was stepped up with the hope that this will facilitate partaking of the masses in the process of development. It should be noted that human attributes like skill, etc., came to be identified as an alternative form of asset base. In a way the functioning of the process of development became a little bit more broad based. In the process many expectations were raised. It was hoped that the lower sections of the societies will be able to partake in the process of change more effectively only if they could be inculcated with the requisite or the high-priced skills. But towards the early 'seventies a real pessimism set in. Scholars, analysts started questioning the approach. Consequently the monolithic, homogeneous versions of the social growth gave way to more stratified group-oriented approaches to the process of development. It was realized that various groups stand to gain differentially according to the phase of growth. World Bank and other major funding bodies themselves brought around the new evidence from the experience around the world. In this context it is important to realize that for once the design of development itself came to be seen as a choice variable rather than a given historical datum. As more and more attention was

focused on the particular profiles of the various economies it was realized that prescriptions for socio-economic maladies differed according to the stratification and hierarchical structure, of the market systems. Depending upon this structure of the economy, the efficacy of the linkages and their spread effects differed from case to case. And certainly it brought home the obvious point that what might have been good for the Western economies need not necessarily be also good for the developing countries for the same reason. This generated the need to deliberately choose the appropriate means of development in general, and appropriately suitable technology in particular.

For the first time it dawned home that gains from trade were not necessarily to be there for both the parties. That the technology transfer was not necessarily a useful thing for the recipient country. That the aid and other mechanism of help/assistance/aid need to be examined thoroughly before being accepted or administered as catalysts of growth. In other words the development experience of the two decades in the 'fifties and the 'sixties helped in shedding some naivete about the process of development.

Thereafter a process of polarization emerged on the development scene. But before going into that account must be taken of two extraneous developments which furthermore added to the complexity of development situation. One was the resource exhaustion syndrome following in the wake of 'limits of growth' and the other was the energy crisis.

These two major interventions succeeded in substantially transforming the mood of development in the developing as well as developed countries. One can safely combine concern for environment in this list and underline how the climate of development underwent a drastic change during the 'seventies. At this point the theme of development changed

more to the life style of the population rather than their absolute incomes. Quality of life rather than productivity thrust itself forward into the focus. Major international institutions started endorsing the ethos to care for the people on 'as is and where is' basis. The emphasis was on improving their life styles, ameliorating their problems, providing them creature comforts so that they can lead a life of dignity. This viewpoint culminates in the present phrase where it is being advocated that people are the policy for the 'eighties. Like the growth model of the 'fifties, the doctrine of development on the basis of people's participation is the received model of the 'eighties. Since the capitalist model of development had not been able to tackle the widely manifest problem of alienation emphasis is being placed more on the participatory organization and spirit of participation as the basic product of human creativity. The major idea is that due to satisfaction of participation, the harmonious interweaving of the individuals in the social system could be meaningfully achieved.

The present state of art of the development uncertainty hangs thereabout. It is not entirely swearing by growth rate of GNP on the one hand and secondly it is not coming out openly to develop what is meant by the participatory model. There is a bit of inherent vagueness in this concept and by its very nature it is supposed to develop from the grass-root level upwards, but as the things are the major articulation is taking place at the top end. There are very few grass-root organizations which are interested in just speaking and letting the world know what is meant by these terms in their particular case. Due to this inherent problem a lot of anarchy creeps into the working of the development projects. All these cross currents of the approaches and emphasis have resulted in some confusion towards the pursuance of the

development objectives. To this state of floundering if the additional dimension of ecological, environmental resource of crisis criteria is added, the picture becomes all the more blurred. The state of affairs in the development literature is reflecting this lack of direction. Many of the analysts recognize this by renaming development as the problem of 'social change'. Development has become so much a tentative term for these group of people that they are only sure of change to take place and everything else is subject to the context in which one is operating.

The shift of emphasis from pure growth rate to other factors like sectoral composition of growth, or the target group approach to development, or consideration of ecological environmental factors which were hitherto ignored as externalities, etc., have opened the entire pandora box for the social scientists. The moment they decided to divert their attention from the pure growth path, the problems and the despair of the choice become critical. Which sectors should have priority? Which target Groups? Who decides and How? etc., are few of the questions which have become more prominent in the minds of policy planners.

Development programmes in India have been quite markedly affected by this debate and conflict. The sense of loss of direction was rather obvious and the planning process literally got converted into ad hoc patchwork. Although it should be noted that there were some other local causes also which contributed towards the dithering attitude. The fact that there was the absence of traditional single objective made the system more vulnerable to the diverse pulls and pushes. When the single minded growth of the GNP as the sole determinant of the level of development led to some critical crucial problems the criteria was naturally questioned. But it turned out to be easy to abandon the path

and far more difficult to find some alternative. And whatever alternatives seemed to be emerging attracted a strong opposition from the vested interests who wanted to revert to the growth rate ethics. All through the 'seventies this kind of ramblings, oscillations continued and now we are again back on the growth rate model for the Sixth Plan (1980-85).

It is necessary to point out one more economic factor which eased the reversal to this path. It was the energy crisis. In all the uncertainty of this period what was a total certainty was the growing import bill of oil. So large was the amount that a desperate export promotion programme of a long term nature had to be provided for in the structure of the economy. As there was no alternative to oil imports in sight and whatever alternative could have been conjured up to minimize such a dependence, were not palatable to the powers that be, there was a degree of inevitability vis-a-vis the export promotion and paying for oil by more and more commodities and services. This phenomenon proved almost catalytic in reviving the old school of growth theories like massive industrialization, exports as the engine of growth. It decried welfare approaches as 'no panacea for poor'. It criticised once again all redistributive programmes as the sources of redistribution of poverty. Moreover, the oil wealth also opened up several avenues for the export of manpower and other services. These jobs and avenues created a favourable climate in the favour of export oriented ventures. In short, the emergence of energy crisis on the one hand, and the possibility of exports on the other created once again the classical situation and the past theories again reasserted their claim for being the right ones.

Here it is important to point out that the poorer section of the society again ended up being an afterthought of the entire situation. By early 'seventies the poor of the society were becoming the focus of the attention. One was questioning the design of development and even some of the Western scholars had lent their support for such re-examination. But now with the re-emergence of the older school the trickle down theory is back. Yet the problems of the people brought to the forefront by the Naxalbari movement and the people's struggles elsewhere and the fear that the green revolution might prepare a ground for the emergence of a red revolution make it impossible to scratch altogether the ameliorative schemes inducted in the Plans during the 'seventies. The Minimum Needs Programme, the Tribal Sub-Plan and other special schemes for the backward sections have to find a place in the Sixth Plan. How far the schemes are helping the 'target groups' and the factors that restrain their effectivity/utility will be examined subsequently on the basis of investigations carried out among the tribals of Chandrapur District of Maharashtra State.

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CHAPTER II

CHANDRAPUR DISTRICT : THE LAND AND THE PEOPLE

Location and Topography

The District of Chandrapur - earlier known as Chanda - is the eastern-most part of the Maharashtra State. The district is south of Nagpur and almost lies in the middle of Indian peninsula. It is surrounded by States of Madhya Pradesh in the east and Andhra Pradesh in the South. It lies between $18^{\circ} 41'$ and $20^{\circ} 50'$ north latitude and $78^{\circ} 48'$ and $80^{\circ} 55'$ east longitude. It is surrounded by Maharashtra districts of Nagpur and Bhandara in the north and Yeotmal and Wardha towards the west, Bastar district of Madhya Pradesh in the east and Adilabad and Karim Nagar districts of Andhra Pradesh to the south. The district covers a surface area of 26,128 square kilometres and is the largest district in the State of Maharashtra. It has a maximum length of 192 kilometres in the east-west directions and 240 kilometres in the north-south direction.

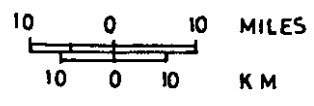
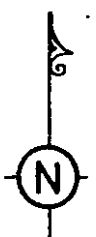
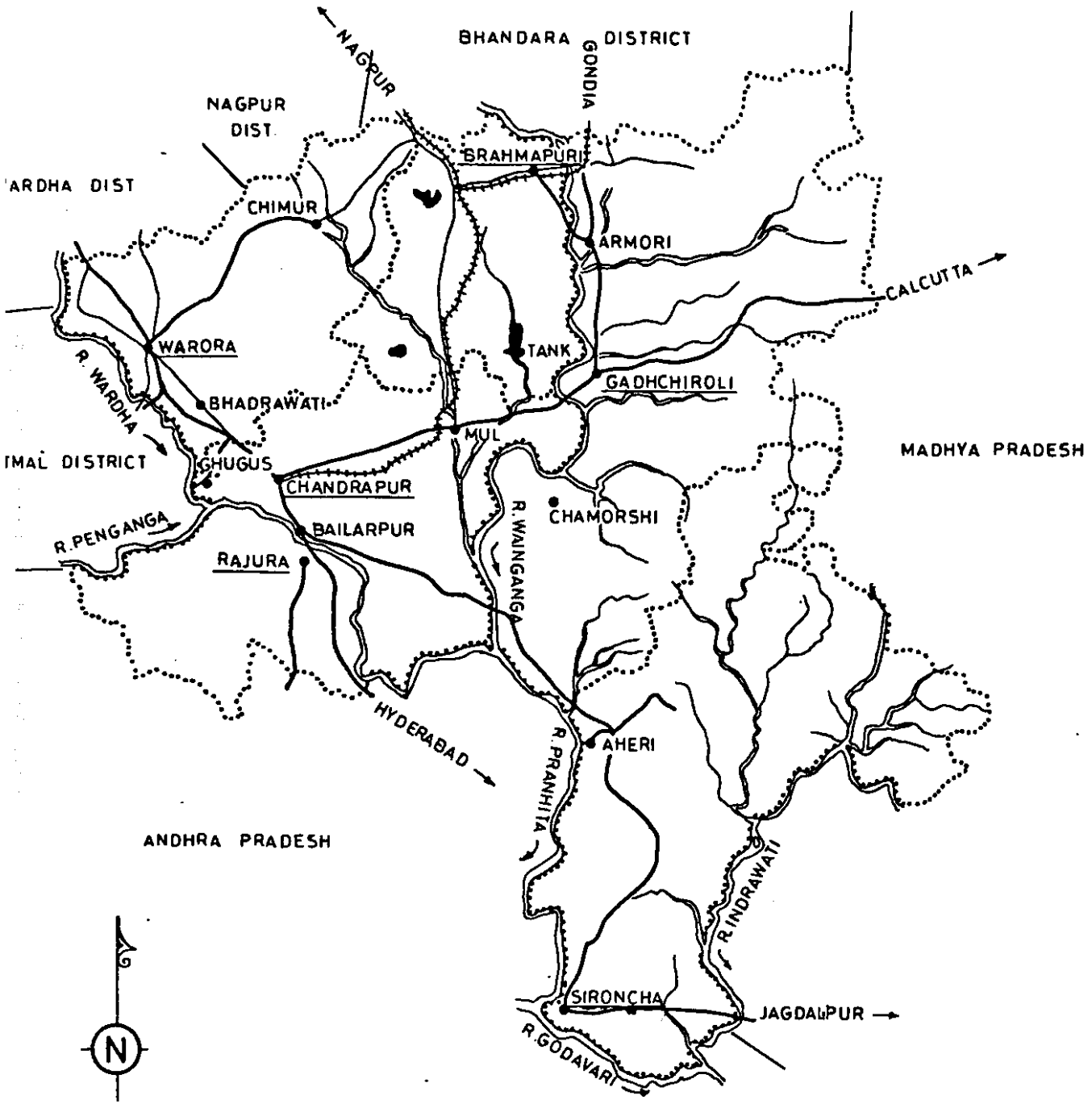
Physiography

In terms of its topography, the district can be divided into the following four zones:

- i) The western plain fertile region in Wardha valley. It has rich black soil and moderate rainfall.
- ii) The western upland hilly region consisting of numerous hills.
- iii) The Wainganga basin consisting of fertile black soil, with good rainfall.
- iv) The eastern uplands comprising hilly forested region with heavy rainfall.

The Wainganga river enters the district near the centre of the northern boundary and divides the district into two unequal parts. The eastern portion accounts for 59.1 per cent of the total area of the district. The

CHANDRAPUR DISTRICT



general height of the plain is about 274 metres above the sea level in the north of the district and 649.6 metres in the south of Sironcha.

The main hill ranges in the district are the Chimur and Mul hills. They serve as watershed between the valleys of the Wardha and Wainganga rivers. The Chimur hills commence east of Chimur in the north of Warora taluka and stretch southwards. At the foot of these hills lies the famous Tadoba lake. The Mul hills lie further to the south of Chimur hills.

East of and parallel to the Chimur hills, runs a range known as the Parasgarh hills, which forms the boundary between the Warora and Brahmapuri talukas. The other important hill ranges lie in the south. They are mainly the Tipagarh range, the Sirkonda range near Sironcha, the Gadulgutta hills, which are a continuation of the Eastern Ghats and the Surjagarh hills. To the south-east of Surjagarh hills, beyond Indravati river, lies the famous Bhamaragad hill which overlooks the confluence of three rivers - Indravati, Parlakota and Pamal Gautam (or Nibra).

River System

The main rivers of the district are the Wardha, the Wainganga, the Pranhita, the Indravati and the Godavari. The whole of the western border is uninterruptedly bounded by the Wardha, Pranhita and Godavari rivers. During its course in the south-easterly direction, Wardha receives Wainganga on the right bank and the Erai on the left. After its confluence with the Wainganga the combined stream is known as Pranhita. The Pranhita joins the Godavari near Sironcha. Further south at the southern corner of Sironcha taluka, the Indravati flows in the Godavari along the south-east boundary of the district.

The Wainganga which runs through the district in the north-south direction is the recipient of numerous tributaries on either bank and ultimately receives the drainage of the entire central portion of the district. About 82 per cent of the total river length in the district is perennial. The perennial rivers of the district are the Wardha, Wainganga, Pranhita and Godavari. Chandrapur district in that sense has the best river system in the State of Maharashtra.

Climate

The district has severe climate in all the three major seasons. It is the hottest district in the State. At the peak of summer the temperature often touches 45°C. Hot days of April, May and June also have high humidity which makes the heat all the more oppressive. The south-western monsoon lash the district from approximately middle of June to August and provide relief from this relentless heat. The average annual rainfall of the district is 1420 millimetre. But, as much as 87 per cent of this occurs in this rainy season of south-western monsoon. The intensity of rain varies from the eastern part of the district to the western part. The maximum rainfall occurs in the western region forest areas while in eastern regions the rainfall is moderate (Table 2.1). The weather during the monsoon season is sultry, damp and humid.

Alternating between these two seasons is the winter. The temperature in its extreme periods is known to dip below 5°C. The nights are particularly chilly and severe for the most part of the season. Thus, all the three seasons in the district are characterized by severe and inhospitable climatic conditions.

Table 2.1.(A) : Annual Rainfall at Various Stations in Chandrapur District

Station	Normal Rainfall	(Rainfall in mm)	
		Annual Rainfall in	
		1977	1978
Chandrapur	1280	1239	1297
Waroda	1216	1046	1435
Brahmapuri	1359	1061	2038
Gadchiroli	1513	1249	1735
Sironcha	1469	1262	1685
Rajura	1294	1352	1204

Table 2.1(B) : Distribution of Rainfall for Gadchiroli and Sironcha Stations

Month	Normal	(Rainfall in mm)			
		1977		1978	
		No. of Rainy days	Rain- fall	No. of Rainy days	Rain- fall
<u>Gadchiroli</u>					
June	221	11	96	14	408
July	364	21	363	25	669
August	355	18	552	24	569
September	297	6	139	8	60
Total for the year	1513	69	1249	72	1735
<u>Sironcha</u>					
June	167	12	113	12	280
July	390	20	457	21	557
August	313	19	408	21	627
September	258	8	120	7	107
Total for the year	1469	74	1262	73	1685

Soils

The soils of the district fall into clearly defined tracts. Each of these tracts displays cropping pattern of a wholly different kind. The most fertile tracts are found in the Wardha and Wainganga valleys. The varieties of soil in the district are numerous, and are known by many local names but they group under the following representative classes, namely Kali Kanhar, Barsi Kanhar, Morand, Khurdi, Wardi, Retari or Bardi, Pandhari and Kachhar.

On the extreme west, on the left bank of the Wardha and subsequently the Godavari, there is a broad strip of black soil, known as Kali, retentive of moisture and suitable for open field crops such as cotton, wheat, gram, jowar and linseed. Further, inland, but immediately adjoining this open tract there is a range of small hills with poorer soil at their foot and in the intervening strips. With irrigation, it could be an ideal soil for rice and sugarcane. Further eastward again, on either bank of the Wainganga, the black loam reappears and is accompanied by a few rice growing villages. East of Wainganga valley, in the hilly region the soil is of poor quality.

Mineral Wealth

Chandrapur is the richest district of Maharashtra in mineral wealth. It has large reserves of high grade iron ore and coal. The hilly and forested areas of Sironcha, Brahmपुरi and Gadchiroli talukas are reported to contain deposits of iron ore, manganese, mica, ochres, clays, etc. The important coal fields are situated at Bandar, Waroda, Majari, Ghugus and Ballarpur. The known deposits of iron ore are located at Lohara, Asola, Deolgaon, Pipalgaon, Fuser, Ratnapur, Bhisli. Iron ore is presently exploited at Lohara and Deolgaon. Reconnaissance surveys carried out in the

Gadchiroli and Sironcha talukas indicate that the areas are promising.

Administrative Set-up

Chandrapur district as is known now took its present shape in May 1960 when the State of Maharashtra was formed. The district has undergone many re-organisation during the past one hundred years before 1960.

The district was taken over from the Marathas by the British in 1853. It was consisting of only three tehsils viz., Mul, Waroda and Brahmapuri and was a part of the Central Provinces. In 1874, Upper Godavari district of Madras was abolished and four talukas were transferred to Chanda district and made into one tahsil with headquarters at Sironcha. In 1895, the headquarters of one of the tahsils was transferred from village Mul to Chanda. A new tahsil with headquarters at Gadchiroli was formed in the year 1905 by transferring the Zamindari estates from Brahmapuri and Chanda tahsils. A small Zamindari tract from Chanda district was transferred to the newly formed Durg district in 1907. An area of about 600 square miles (1,460 sq.kms) consisting of three talukas Cherla, Albaka, and Nagur was transferred from Sironcha tahsil to Madras State in the same year. The Ahiri Zamindari was included in Sironcha taluka in 1907. There were no major changes in the boundaries of the district or its talukas after 1911 till 1955.

With the reorganization of States in 1956, the district was transferred from Madhya Pradesh to Bombay State. Rajura taluka which was a part of Adilabad district of Hyderabad State was transferred to Nanded district in 1956. Subsequently it was transferred from Nanded district to Chanda district in March, 1959.

At present the district is divided into the following six tahsils/talukas:

- | | |
|---------------|---------------|
| 1. Chandrapur | 4. Gadchiroli |
| 2. Warora | 5. Sironcha |
| 3. Brahmapuri | 6. Rajura |

Furthermore, under the Panchayati Raj set up, the district is divided into eighteen Panchayat Samitis. Besides, there are five municipal towns and two non-municipal towns in the district.

Land Revenue Settlement

Chanda, Waroda and Brahmapuri talukas of the district contained Malguzari and Ryotwari villages, while in Gadchiroli and Sironcha talukas Zamindari predominated. In the district as a whole, about 45 per cent of the area was under Zamindari. The Zamindari areas included extensive forest tracts and the population in these areas was sparse. In 1921 only about 13 per cent of the population of the district was residing in the Zamindari areas (Table 2.2). The overall density of population for the district was 27 persons per sq.km., the corresponding figure for West Chanda was 52 persons and it was about 22 persons for the Khalsa areas of East Chanda; for the Zamindari areas it was 13 persons in Gadchiroli taluka and as low as 5 persons in Sironcha taluka.

Under the Gond rulers, the patil of the village acted as the agent of the ruler for apportioning and collecting the revenue assessed on the village and he received one-fourth to one-sixth of the Government demand in lieu of his service. After the district lapsed to the British in 1853, regular settlement operation commenced in 1862-63. Proprietary rights were conferred on the revenue farmers, village patils and malguzars. Malguzar was allowed to manage the village on payment of revenue to the Government leaving

Table 2.2 : Area and Population in Different Talukas of Chandrapur District

Taluka	Area (sq.km)	No.of villages	Popula- tion in 1891	Popula- tion in 1921	Density Popula- tion per sq.km. (1921)
Chanda	3040	320	132477	159274	52
Waroda	3325	419	144580	155723	47
Brahmapuri	2323	342	144157	139911	60
Gadchiroli (Khalsa)	3773	307	97920	95118	25
Gadchiroli (Zamindari)	3693	472	54629	49376	13
Sironcha (Khalsa)	1282	495	25029	25368	20
Sironcha (Zamindari)	6734	349	26703	35860	5
Total	24170	2304	625495	660630	27

Source: Central Provinces, District Gazetteers, Chanda District, B Volume, Statistical Tables, Nagpur, 1929, pp. 6-7.

about one-third of the gross rentals as his remuneration. Besides, certain estates were managed by the Jagirdars and Zamindars since long (even prior to Maratha conquests of 1740-55). The Zamindars and Jagirdars enjoyed full proprietary rights in their estates. They paid to Government only quit rent and had the right to divide and alienate their lands. It was only in 1951, that all the proprietary rights in an Estate, Mahal, alienated village or alienated land were abolished under the Madhya Pradesh Abolition of Proprietary Rights (Estates, Mahals, Alienated Land) Act, 1950. Malguzari, Zamindari and Jagirdari systems were abolished and ryotwari land system was introduced in these areas.

Population

The population of Chandrapur district increased from 5.7 lakhs to 20.5 lakhs during the eight decades of the present century. During this period the share of the urban population in the district increased from five per cent to about 13 per cent (Table 2.3). According to the 1981 Census,

Table 2.3 : Population in Chandrapur District at Decennial Census - 1901-1981

Year	Total population	Urban population
1901	574323	28429
1911	729347	41704
1921	715365	50363
1931	823321	62833
1941	942053	79396
1951	1052975	96435
1961	1238070	95690
1971	1640137	167100
1981	2054286	261403

the total population of the district was 20.54 lakhs (Tables 2.4 and 2.5). With the density of 78 persons per square kilometre, (in 1921, it was 27 persons per square kilometre) Chandrapur emerges as one of the most sparsely populated districts of the State.

About 14 per cent population of the district belongs to the Scheduled Tribes. The Scheduled Tribes of the district are Bhil, Binjhar, Gond, Halba, Kavar, Khairwar, Kolam, Korku, Koya, Nagesia, Pardhan, Pardhi and Thoti. The Gonds are the most prominent tribe from the point of view of its separate cultural identity and the numerical strength. They account for about 90 per cent of the tribal

Table 2.4 : Talukawise Area and Population of Chandrapur District

Taluka	Area in sq.km.	Total Popula- tion (1961)	Total Popula- tion (1971)	Total Popula- tion (1981)	Percentage share		No.of Villages(1971)		No.of Towns (1971)
					in Area	in Total Popula- tion (1981)	Inhabited	Un- inhabited	
Chandrapur	3040.7	296807	400781	549493	11.6	26.7	388	82	3
Waroda	3320.4	238323	309798	370398	12.7	18.0	445	159	1
Brahmapuri	2323.2	226924	281394	330080	8.9	16.1	342	82	-
Gadchiroli	7433.3	277398	381723	457394	28.5	22.3	860	89	1
Sironcha	8005.5	108974	140506	179257	30.6	8.7	556	94	-
Rajura	2010.6	89624	125935	167664	7.7	8.2	249	27	2
District Total	26133.7	1238070	1640137	2054286	100.0	100.0	2840	533	7

Table 2.5 : Talukawise Population of Chandrapur District in 1981

Taluka	Rural Population			Urban Population		
	Male	Female	Total	Male	Female	Total
Chandrapur	182021	175411	357432	100905	91156	192061
Waroda	170353	163969	334322	19153	16923	36076
Brahmapuri	165321	164759	330080	-	-	-
Gadchiroli	221875	220014	441889	7694	7811	15505
Sironcha	91746	47509	179257	-	-	-
Rajura	76534	73369	149903	9215	8546	17761
District Total	907852	885031	1792883	136967	124436	261403

population of the district.¹ The tribal population of the district is localized in Gadchiroli, Sironcha and Rajura tahsils (Table 2.6).

It is difficult to examine the trend in the growth of the tribal population and their relative strength in the total population prior to 1961 because of the lack of comparable statistical data. Firstly, there is the problem of the coverage under the generic term 'Scheduled Tribe'. In 1956, certain changes were made in the President's 1950 Order. Some sub-tribes or synonyms not mentioned in the 1950 Order were shown against many of the Scheduled Tribes. The addition of as many as 38 names of the sub-tribes against Gond appears to have brought in many more people in the Gond group; there was also reportedly a better enumeration of the population of Scheduled Tribes during the 1961 Census.

¹ In 1911, the population of the forest tribes viz., Gond, Gowari and Pardhan was 139916, accounting for 22 per cent of the total population of Chanda district. The population of the Gond tribes was 110977. (Rajura taluka was not then included in Chanda district.)

Table 2.6 : Tribal Population in Chandrapur District

	1961			1971			1981	Growth Rate		Sex Ratio	
	Male	Female	Total	Male	Female	Total	Total	1961-71	1971-81	1961	1971
Gadchiroli	49644	50064	99708	62265	60969	123234	155967	2.35	2.65	1008	979
Sironcha	29685	29455	59140	38145	36186	74331	94632	2.57	2.73	992	949
Rajura	12236	12347	24583	16823	17014	33837	43512	3.76	2.85	1009	1011
Chandrapur District	91565	91866	183431	117233	114169	231402	294111	2.61	2.70	1003	974
Total Population (Tribal + Non-Tribal)			1238070			1640137	2054286				

As a result, the population of the Scheduled Tribes in Chandrapur district jumped from 130694 in 1951 to 183431 in 1961 Census. Another noteworthy fact is the better enumeration of female population. In 1951, there was a marked under-enumeration of the females; the number of males among the Scheduled Tribe was 70900 as against only 59794 females. In 1961 the corresponding figures were 91565 males and 91866 females (yielding a growth rate of 53.6 per cent in the case of females for the period 1951-1961).

It is only from the 1961 Census that the population statistics can be used to examine the trends. The proportion of the tribal population in the total population was 14.8 per cent in 1961, 14.1 per cent in 1971 and 14.3 per cent in 1981. The rate of growth for the two periods 1961-71 and 1971-81 was 3.2 per cent per annum and 2.5 per cent per annum respectively for the total population, while it was 2.6 per cent and 2.7 per cent respectively in the case of tribal population.

Sex Ratio

If the sex ratios for the rural areas are considered it is noted that in 1981 the number of females per 1000 males was 993 both in the general and in the tribal population. For the district as a whole the sex ratio was 985 in 1961, 970 in 1971 and 966 in 1981 (Table 2.7).

The number of males and females was nearly equal in all the talukas of the Chandrapur district in 1961; by 1981 it is noted that while in Brahmapuri and Gadchiroli the relative number of men and women is about the same, in other talukas, particularly in Sironcha taluka there is a considerable decline in the relative number of women. In Sironcha, the sex ratio was 995 in 1961 while in 1981 it was 954 only.

Table 2.7 : Talukawise Sex-ratio* in Chandrapur District

Taluka	1961		1971		1981	
	Rural	Total	Rural	Total	Rural	Total
Chandrapur	987	964	978	949	964	942
Waroda	982	977	965	952	963	955
Brahmapuri	1002	1002	995	995	997	997
Gadchiroli	1000	1000	989	988	992	992
Sironcha	995	995	980	980	954	954
Rajura	983	978	969	963	959	955
District Total	993	985	981	970	975	966

* Number of Females per 1000 males.

Age Distribution

For the district as a whole, the population in the age group 0-14 increased from about 39 per cent in 1951 to nearly 42 per cent in 1971; the provision for schooling and training facilities as well as the expansion in the non-agricultural employment opportunities must keep pace with these growing numbers in the younger age-groups. In the case of the tribal population (covered by the sample study) the age distribution broadly approximated the distribution noted for the total population; however, the relative number of non-adults was somewhat higher among the tribals (Table 2.8).

Marital Status

The tribal population in Chandrapur shows some difference as regards marital status when compared to the total population. The incidence of child marriage is somewhat higher in the total population as compared to that among the tribals. If the distribution of the population aged 14 years and above is examined by marital status (Table 2.9)

Table 2.8 : Chandrapur District: Distribution of Population by Age-group (1971)

Age Group (Years)	Rural Population in '00	Per cent	Urban and Rural Population in '00	Distribution of the Population in Surveyed Villages (per cent)
0 - 14	6161	41.8	6826	42.5
15 - 19	1065	7.2	1224	7.6
20 - 24	1091	7.4	1258	6.0
25 - 29	1202	8.2	1352	7.8
30 - 39	2005	13.6	2220	12.3
40 - 49	1389	9.4	1535	9.8
50 - 59	925	6.3	1012	6.7
60 +	890	6.1	972	6.3
	14728	100.0	16401	100.0
Not Given			2	

Table 2.9(A) : Population (14 Years and Above) in Chandrapur District by Marital Status (1971)

Marital Status	Percentage distribution of population (14 +) by marital status			
	Total population		Tribal population	
	Male	Female	Male	Female
Never married	21.80	6.89	19.88	8.24
Married	73.11	71.26	74.40	74.90
Widowed	4.32	20.83	4.91	16.16
Divorced	0.77	1.02	0.81	0.70

Table 2.9(B) : Age at Marriage for Rural Women in Maharashtra State (1971)

Age at Marriage (Years)	Percentage distribution of rural women by age at marriage	
	Total population	Tribal population
- 13	24.91	17.56
13 - 17	57.80	57.19
18 - 22	15.73	23.76
23 +	1.56	1.49

it will be noted that among the tribals about 75 per cent of the adults are married both among the males and females. The major difference between the sexes is in the proportion of widowed persons; the incidence is only about 5 per cent among the men while it is 16 per cent among the women. Thus even among the tribals, though widow remarriage is accepted and practised, the proportion of widows is considerable. The proportion of widows is large in the total population (about 21 per cent) and those never married somewhat smaller (about 7 per cent) as compared to that among the tribal population.

Literacy

The level of education is markedly low among the tribals, as compared to that in the total population. In 1971, only about 16 per cent men were literate among the tribals while for the ^{Total} (non-tribals) the corresponding proportion was 38.6 per cent. Among the tribals less than half a per cent of the men had progressed beyond primary education. In the case of women only 3 per cent of the women were reported to be literate (Table 2.10). The inaccessibility of school from the remote villages, the fact that even when the schools are opened they do not run properly, the problem of the medium of instruction and the poor economic conditions of the family make it nearly impossible for the tribals to send their children to schools and the incidence of illiteracy remains extremely high. This also keeps the tribal population out of the urban job market. Despite reservations, few tribal families have migrated to the urban centres and secured work in non-agricultural vocations. The tribals, thus, remain tied almost exclusively to the land.

Table 2.10(A) : Educational Level of the Total and Tribal Population in Chandrapur District (1971)

Educational Level	Percentage distribution of population by educational level			
	Total Population		Tribal Population	
	Male	Female	Male	Female
Illiterate	61.4	85.5	84.3	96.8
Literate	14.4	6.7	8.7	1.9
Primary School	13.7	5.2	6.7	1.3
Middle School	7.5	2.0	0.3	ng.*
Matriculation	2.5	0.4		
Above Matriculation	0.5	0.1		
Total Literates	38.6	14.5	<u>15.7</u>	<u>3.2</u>

* Only 18 matriculates

Table 2.10(B) : Literacy in Different Talukas of Chandrapur District (1981)

Taluka	Percentage of Literate population in total population			
	Urban		Rural	
	Male	Female	Male	Female
Chandrapur	67.76	47.87	43.24	19.50
Waroda	75.72	55.88	54.13	28.93
Brahmapuri	-	-	50.08	20.95
Gadchiroli	59.16	35.58	39.94	13.60
Sironcha	-	-	24.53	8.63
Rajura	60.00	47.56	37.87	16.29
District	67.87	47.48	43.58	18.71

Size of the Villages

The size of most of the villages in the tribal region is extremely small. In the lowest category of less than 200 persons there were about four hundred villages in Gadchiroli taluka, and 345 in Sironcha taluka according to 1971 Census. In both these talukas, many villages have a population of less than one hundred persons per village. Forty-seven per cent of the villages in Gadchiroli taluka while in Sironcha taluka as many as sixty-two per cent of the villages had a population below one hundred persons each. If one includes the second category of villages i.e., 201-499 persons, then seventy-five per cent of the villages in Gadchiroli and eighty per cent of the villages in Sironcha taluka get accounted for by these two lower size groups (Table 2.11). The fact that these small villages are arche-typical tribal villages and are found only in the tribal segments of district can be discerned from the fact that seventy per cent of the small villages of the district (i.e., with less than one hundred population) are found in these two talukas. Only eight per cent of the villages in Gadchiroli taluka and 6.5 per cent in Sironcha taluka are completely non-tribal villages. Otherwise all the villages have some tribal population. Furthermore, twenty-five per cent of the villages in Gadchiroli taluka and thirty-four per cent in Sironcha taluka are exclusively tribal villages (Table 2.12).

It may be noted that the size of the household in the Gadchiroli taluka for villages with 100 per cent tribal population is quite large, the mean value being 6.86 persons while the average family size for the total rural segment of the taluka was noted to be 5.19 persons. The corresponding averages for the Sironcha taluka were 5.66 and 5.24 persons respectively. For the rural segments of the district as a whole the average family size in 1971 was 5.47 persons.

Table 2.11 : Distribution of Rural Population in Chandrapur District by Size of Village (1971)

Size of village (No. of persons)	Gadchirali taluka		Sironcha taluka		Chandrapur District	
	No. of villages	Population ('000)	No. of villages	Population ('000)	No. of villages	Population ('000)
1- 199	400	363	345	317	1057	1005
200- 499	238	745	146	431	835	2672
500- 999	142	1013	49	323	595	4196
1000-1999	58	788	10	121	260	3381
2000-4999	19	530	5	159	17	2168
5000-9999	3	260	1	54	13	940
10,000 +	-	-	-	-	3	368
Inhabited villages	860	3699	556	1405	2840	14730
Uninhabited villages	89	-	94	-	533	-
Total villages	949		650		3373	
Rural Population		369940		140506		1473037
Urban Population		11783		-		167100
Total Population		381723		140506		1640137
Rural Population as percentage of total population		96.9		100.0		89.8

Table 2.12 : Distribution of Villages in Gadchiroli and Sironcha Talukas by Size of Population and Proportion of Tribal Population (1971)

Tribal population as percentage of total village population	Size of village						(Percentage distribution)	
	Upto 50	51-100	101-250	251-500	501-1000	1001 and above	Total villages	Per cent
Gadchiroli Taluka								
Nil	19.12	10.29	14.71	23.53	22.06	10.29	100 = 68	7.91
0.1 - 40.0	0.40	4.82	14.86	19.28	34.14	26.51	100 = 249	28.95
40.1 - 60.0	-	4.41	20.59	30.88	36.77	7.35	100 = 68	7.91
60.1 - 80.0	2.27	10.23	36.36	35.23	13.64	2.27	100 = 88	10.23
80.1 - 99.9	5.17	16.67	44.83	30.46	2.87	-	100 = 174	20.23
100.0	40.85	27.70	28.16	3.29	-	-	100 = 213	24.77
Total	13.02	13.84	26.86	20.47	16.51	9.30	100 = 860	100.00
Sironcha Taluka								
Nil	27.77	5.56	30.56	13.89	19.44	2.78	100 = 36	6.47
0.1 - 40.0	5.88	2.94	27.94	20.59	26.47	16.18	100 = 68	12.23
40.1 - 60.0	2.86	22.86	22.86	37.14	8.57	5.71	100 = 35	6.30
60.1 - 80.0	6.98	9.30	25.58	32.56	20.93	4.65	100 = 43	7.73
80.1 - 99.9	4.32	14.05	53.52	21.62	6.49	-	100 = 185	33.27
100.0	35.45	34.39	29.10	1.06	-	-	100 = 189	34.00
Total	16.73	19.24	36.51	15.83	8.81	2.88	100 = 556	100.00

Economic Activity

In 1961 the proportion of economically active population was 61.6 per cent for males and 53.9 per cent for females in the district as a whole, while for the tribal population the corresponding percentages were 65.1 per cent and 58.5 per cent. The lower rate of school attendance and participation of the young children in the gainful economic activity from a relatively younger age accounts for the higher proportion of the economically active population among the tribals. Both men and women of the working age have to labour from an early age, given the poor resource base of the tribal families. In 1961 it was noted that among the tribals 70 per cent of the workers were cultivators and 20 per cent of the male workers and 26 per cent of the female workers worked as agricultural labourers (Table 2.13). The proportion of non-agricultural workers was negligible in the case of women and quite small in the case of men. Apparently there is a sharp fall in the participation of females in the labour force as per 1971 Census. The fall is particularly marked in the case of cultivators (Table 2.14), a large number of women working on own farms got classified as non-workers in 1971 due to the change in the definition of a worker.

If one compares the occupational distribution of the male workers for the 100 per cent tribal villages (which are mostly very small in size and depend almost exclusively on primary economic activity for their livelihood) with the mixed villages (having tribal + non-tribal population) for Gadchiroli and Sironcha talukas it is found that in 1971 about 83 per cent of the male workers in the tribal villages from Gadchiroli taluka were cultivators and about 15 per cent were agricultural labourers, the corresponding proportions for Sironcha were 77.5 per cent and 20 per cent. In

Table 2.13 : Occupational Distribution in Chandrapur District (1961)

Category of Economic Activity	(Percentage distribution)				
	Total Population			Tribal Population (Rural)	
	Total	Male	Female	Male	Female
Cultivation	57.02	54.26	60.22	70.97	70.12
Agricultural Labour	25.06	19.35	31.68	20.02	26.33
Mining, Quarrying, Livestock, Forestry, etc.	3.83	6.66	0.55	3.41	0.56
Household Industry	4.38	5.66	2.90	1.45	1.07
Manufacturing other than Household Industry	1.16	1.87	0.33	0.22	0.02
Construction	0.35	0.57	0.11	0.10	0.04
Trade and Commerce	1.93	2.88	0.82	0.20	0.05
Transport, Storage and Communication	0.73	1.32	0.04	0.11	neg.
Other Services	5.54	7.43	3.35	3.52	1.81
Total Workers	100.00	100.00	100.00	100.00	100.00
Percentage of Workers in Total Population	57.77	61.56	53.92	65.05	58.49

Table 2.14 : Distribution of Workers by Economic Activity for Total Population and Tribal Population in Chandrapur District (1971).

Economic activity	(Percentage distribution)							
	Total population				Tribal population			
	Rural		Urban		Rural		Urban	
	Male	Female	Male	Female	Male	Female	Male	Female
Cultivators	54.61	34.48	6.31	6.48	67.06	47.60	10.46	6.67
Agricultural labourers	26.59	60.13	4.65	20.89	26.97	49.99	21.18	24.24
Livestock, forestry, fishing, hunting, plantations, orchards and allied activities	3.73	0.58	3.96	1.77	2.10	0.52	7.77	3.03
Mining and quarrying	0.66	0.17	8.53	2.95	0.03	0.01	0.80	-
Manufacturing, processing, servicing and repairs:								
(a) Household industry	3.95	1.54	4.28	7.43	0.35	0.39	13.67	36.37
(b) Other than household industry	1.50	0.35	18.80	9.89	0.49	0.24	2.95	-
Construction	0.89	0.50	3.17	5.84	0.28	0.08	8.58	15.15
Trade and commerce	2.01	0.53	15.27	10.11	0.23	0.03	8.85	3.03
Transport, storage and communication	0.48	0.10	9.05	2.92	0.13	0.04	9.65	1.21
Other services	5.58	1.62	25.98	31.72	2.36	1.10	16.09	10.30
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total Workers (1971)	416075	199226	42854	6341	72809	33906	373	165
Percentage of workers in total population	55.95	27.31	48.16	8.12	62.46	29.87	56.34	24.22

the mixed villages the proportion of cultivators was relatively less. About 18 per cent of the male workers in both the talukas belonged to the category of "non-agricultural workers" in the mixed villages, while the corresponding percentage for the tribal villages was less than three per cent (Table 2.15).

1981 Census : Only the provisional population totals and occupational classification into four classes viz. cultivators, agricultural labourers, workers in household industry, processing, servicing and repair and other workers are available for the 1981 Census. The definition of worker adopted in the 1981 Census is (a) main worker is one who worked for the major part (more than 6 months) of the year and (b) marginal worker is one who worked for less than six months during the reference year. Comparison with earlier censuses is again ruled out because of the modifications in the definition of a worker.

The data on occupational distribution for the district are presented in Table 2.16. Among the women in rural areas the proportion of economically active women increases from about 35 per cent to 47 per cent if the marginal workers are taken into consideration. In 1971, the proportion of working women in rural areas was noted to be only 27 per cent, whereas in 1961 it was about 57 per cent. The census data are thus rendered, because of changes in definitions, unutilizable for comparative purposes so far as women's employment is considered.

So far as the occupational distribution of the male workers in the rural areas is concerned, the distribution noted in 1981 broadly approximates that recorded in 1971 for the district as a whole, while for Sironcha taluka considerable increase in the number of cultivators and some

Table 2.15 : Occupational Distribution and Some Demographic Characteristics of Tribal Villages and All Villages in Sironcha and Gadchiroli Talukas (1971)

	Gadchiroli taluka		Sironcha taluka		Chandrapur District (All villages)
	100 per cent tribal villages	All-villages	100 per cent tribal villages	All villages	
Average size of village (population)	97	430	87	253	519
No. of villages	213	860	189	556	2840
No. of households	3005	71338	2897	26832	270131
Average size of household	6.86	5.19	5.66	5.24	5.32
Percentage of literate persons in total population	3.92	20.99	3.08	11.23	24.07
Total persons	20622	369940	16400	140506	1473037
Total workers	8316	158663	6784	57437	615301
Male workers	5556	106860	5028	41841	416075
Female workers	2760	51803	1756	15596	199226
Cultivators:					
Male	4640	67947	3899	24598	227224
Female	1781	25900	998	4974	68699
Agricultural labourers:					
Male	809	24300	925	9807	110631
Female	964	23648	730	9438	119779
Percentage of workers in total population	40.32	42.89	41.36	40.88	41.77
Among total male workers, percentage share of:					
Cultivators	83.5	67.3	77.5	58.8	54.6
Agricultural labourers	14.6	15.3	19.8	23.4	26.6

Table 2.16(A) : Occupational Distribution in Chandrapur District (1981)

(Percentage distribution)

Economic Activity	Chandrapur District						Gadchiroli Taluka						Sironcha Taluka		
	Rural Workers			Urban Workers			Total	Male	Female	Total	Male	Female	Total	Male	Female
	Total	Male	Female	Total	Male	Female									
Cultivation	50.68	54.30	44.68	4.72	4.19	8.31	61.95	65.10	56.96	61.00	63.80	54.98			
Agricultural Labour	31.83	23.74	45.28	5.01	3.33	16.31	27.26	19.95	38.94	19.07	13.29	31.63			
Household Industry	5.27	5.10	5.57	3.10	2.78	8.12	1.87	2.35	1.09	2.31	2.66	1.55			
Other	12.22	16.86	4.47	87.17	89.70	67.26	8.97	12.60	3.01	17.62	20.25	11.84			
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00			

Table 2.16(B) : Workers in Gadchiroli, Sironcha and Chandrapur District (1981)

	Chandrapur District											
	Rural Area			Urban Area			Gadchiroli Taluka			Sironcha Taluka		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total Workers	809476	505080	304396	70981	62062	8919	203386	125093	78373	79948	54713	25235
Agricultural Workers	135388	21068	114320	3471	1347	2124	34656	5616	29094	16162	1628	14534
Percentage of Workers in Total Population	45.15	55.63	34.39	27.15	45.31	7.17	46.03	56.34	35.62	44.60	59.63	28.84
Working Population including Marginal Workers as percentage of total population	52.70	57.95	47.31	28.48	46.29	8.87	53.86	58.87	48.82	53.62	61.40	45.44

decrease in the number of agricultural labourers is noted. However, one is again faced with the problem of the definition of the groups - cultivators and agricultural labourers and whether the statistics compiled at the two censuses are strictly comparable. If the total agricultural population is considered it is noted that for the district as a whole the proportion of agricultural workers records a small decrease from 80 per cent to 77 per cent while for Gadchiroli and Sironcha talukas it has remained around 86 per cent.

Agriculture in Chandrapur District

Land Use: Gadchiroli and Sironcha talukas constitute 58 per cent of the area of the district. A large segment of the land area in these two talukas is under forest (62 per cent in Gadchiroli and 84 per cent² in Sironcha Talukas). In the rest of the district only 35 per cent of the area is under forest. In terms of pasture land, Gadchiroli taluka has 7.6 per cent, the district, as a whole, has 6.3 per cent and Sironcha taluka has 4.8 per cent of its land under pasture (Table 2.17).

Only 6.6 per cent of the land constitutes net sown area in the case of Sironcha taluka. The corresponding percentage for Gadchiroli taluka is nearly three times (18.5 per cent) while in rest of the district it is as much as 43.9 per cent. If one takes into account the double cropping, Sironcha taluka has almost no area under double cropping while Gadchiroli talukas like the rest of the district, has 3 per cent of the land under double cropping. Thus, the gross sown area in Sironcha taluka remains around 6.6 per

2 It may be noted that in 1976-77 the area under forest was shown as 5965 hectares and 498 hectares were shown under the category of barren and unculturable land while in 1977-78 the corresponding figures were 6477 hectares and 35 hectares.

**Table 2.17 : Land Use Pattern in Chandrapur District
(1977-78)**

	(Area in 00 hectares)		
	Gadchiroli taluka	Sironcha taluka	Chandrapur District
Total Geographical Area	7229	7686	25834
Area under forest	4496	6477*	14750
Area not available for cultivation	389	163	1324
Culturable waste	283	95	787
Permanent pasture and other grazing land	548	371	1634
Land under miscellaneous tree crop, etc.	27	5	145
Fallow land	172	74	550
Net Area Sown	1340	506	6644
Gross Cropped Area	1549	510	7225

* In 1976-77, 498 hectares were shown as barren and unculturable and 5965 hectares as forest land while in 1975-76 and 1977-78, 6402 and 6477 hectares as forest land and 43 and 35 hectares as barren and unculturable land respectively.

cent while it goes up to 21.4 and 47.3 in the case of Gadchiroli taluka and rest of the district respectively.

The gross sown area per person for the rural population comes to 0.30 hectares in the case of Sironcha, while for Gadchiroli and the rest of the district, it is 0.36 and 0.41 hectares respectively.

Crop Pattern: In terms of the cropping area 94 per cent of the gross sown area in Gadchiroli taluka and 91 per cent in Sironcha taluka is utilized for various kinds of food crops (Table 2.18). In the total cropped area 60 per cent in Gadchiroli taluka and 57 per cent in Sironcha taluka is utilized for the rice crop. The corresponding proportion for the total district was 32 per cent. While the rest of

Table 2.18 : Crop Pattern in Chandrapur District (1977-78)

Crop	(Area in hectares)		
	Gadchiroli taluka	Sironcha taluka	Chandrapur District
Rice	93133	28983	234433
Wheat	3684	25	37056
Jowar	17272	12090	200948
Total Cereals	119374	43026	481648
Total Pulses	23339	2688	93836
Total Food-crops	144926	46232	592332
Cotton	-	-	39651
Total Oilseeds	9371	4057	88227
Gross Cropped Area	154873	50999	722520

the district has about 6 per cent of its area under wheat, Gadchiroli taluka has only 2.4 per cent and Sironcha taluka has less than 0.5 per cent under the wheat crop. The area under non-foodgrain crops is small in the district. About 12 per cent of the gross cropped area is put under oilseeds and 5.5 per cent under cotton in the district as a whole. Cotton crop is not grown in Gadchiroli and Sironcha talukas, while the proportion of the area under oilseeds in these talukas was 6 per cent and 8 per cent respectively in 1977-78; the main oilseeds grown are sesame in Sironcha taluka and linseed and sesame in Gadchiroli taluka. Part of the rice produced is marketed and some pulses and oilseeds are marketed. The rest of the production is oriented towards home-consumption.

If the change in the cropping pattern in the district as well as in the two talukas of Gadchiroli and Sironcha is

examined for the period 1960-1978 it is noted that even though there is an increase in the cropped area, the crop pattern has remained almost the same for the district (Table 2.19). The total area under cereal production registered a positive growth for the district, as also for Sironcha and Gadchiroli talukas. The production of pulses seems to have suffered a definite decline in the above talukas as well as in the district as a whole. Oilseeds, on the other hand, registered an increase in Sironcha and Gadchiroli talukas as well as at the district level.

Table 2.19 : Changes in Cropping Pattern in Chandrapur District

Crop	Percentage distribution of gross sown area by crop in					
	Gadchiroli Taluka		Sironcha Taluka		Chandrapur District	
	1960-61	1977-78	1960-61	1977-78	1960-61	1977-78
Rice	60.6	60.1	59.8	56.8	31.1	32.4
Wheat	2.1	2.4	0.1	n.g.	5.8	5.1
Jowar	12.8	11.1	23.8	23.7	29.6	29.0
Total Cereals	77.8	77.1	86.7	84.4	67.3	66.7
Total Pulses	16.9	15.1	6.7	5.3	15.0	13.0
Oilseeds	3.5	6.0	4.5	7.9	11.6	12.2

The increase in the area under cereals is accounted for mainly by the increase in the area put to rice cultivation. Among the non-foodgrain crops some increase in the area under cotton and oilseeds is recorded. For the district as a whole the gross cropped area recorded an increase by about 10 per cent in the last two decades. The productivity of all the cereal crops has also increased during this period

while that of pulses shows some decline (Table 2.20). The estimated production of cereals was 311000 tonnes in 1959-60 while it was 472900 tonnes in 1977-78. The per capita cereal production declined by about 3 per cent in this period, yet the total production is more than adequate to meet the cereal requirements of the district population. In the case of pulses the decline in the total production is nearly by 10 per cent. The production of pulses is currently not adequate to meet the requirements (calculated on the basis of recommended nutritional standards) of the total district population.

Table 2.20(A) : Crop Production in Chandrapur District (1977-78)

Crop	Production in tonnes	Crop	Production in tonnes
Rice	3104	Gram	56
Wheat	260	Tur	42
Jowar	1316	Black Gram	36
Maize	31	Green Gram	37
Total Cereals	4729	Total Pulses	251
		Oilseeds	161

Table 2.20(B) : Crop Productivity in Chandrapur District

Crop	Yield per Hectare in kg.	
	1959-60	1977-78
Rice	941	1257
Wheat	384	607
Jowar	495	609
Total Cereals	705	921
Total Pulses	281	214

Irrigation: Sironcha taluka almost totally lacks any means of irrigation while Gadchiroli taluka uses tanks as the major source of irrigation. In Gadchiroli taluka about 23 per cent of the gross sown area receives irrigation; the major crop under irrigation is rice; about 3 per cent of the irrigated area was under chilli and 1 per cent under wheat. For the district as a whole, about 17 per cent of the area was covered by irrigation facility, about 70 per cent of the irrigated area being watered through tanks (Table 2.21).

Table 2.21 : Irrigation Facility in Chandrapur District (1977-78)

Source of irrigation	(Area in hectares)		
	Gadchiroli taluka	Sironcha taluka	Chandrapur District
Government Canal	8078	-	26688
Tanks	26242	2009	86209
Wells	901	438	3200
Other Sources	944	367	3787
Net Irrigated Area	36165	2814	119884
Gross Irrigated Area	36261	2954	122048
Gross Cropped Area	154873	50999	722520

Agricultural Implements: In terms of implements of agricultural production while the district has about 247 tractors Sironcha taluka did not have any. (Table 2.22) Out of the small number of electric pump sets (377 in 1972) in the district these two talukas had less than 10 per cent of the total. This must be also reflecting on the lack of power-grids in the area. The number of oil engines is also small. The energization of wells has not proceeded afar in this district. In the case of ploughs, wooden ploughs are in common usage. For rice tract wooden ploughs are

Table 2.22 : Agricultural Implements in Chandrapur District (1972)

	Number of				
	Wooden Plough	Iron Plough	Oil Engines	Electric Pumpsets	Tractors
Gadchiroli taluka	58345	487	247	26	37
Sironcha Taluka	25846	221	29	7	-
Chandrapur District	203732	1657	977	377	247

well-suited. The area cultivated per plough came to 3.5 hectares in the district as a whole and about 2 hectares in Sironcha taluka.

Livestock: The cultivated area per pair of bullock is relatively low in the district; the average for the district was 3.48 hectares while for the State it was 6.48 hectares. For the rice growing districts like Bhandara the corresponding average was 3.44 hectares. In Gadchiroli and Sironcha talukas it was 2.92 hectares and 2.05 hectares respectively. The rice growing area is larger in these talukas where the requirements of draught animals is generally higher than in the other tracts. The bullocks are also used for transportation purposes in the forest area.

The cattle population is relatively large in the district. The district has over 7 per cent of the total cattle population in the State. This is commensurate with the geographical area; however a large part of the area is under forest and a considerable proportion of the forest area is not accessible. The district has a share of only about 3 per cent in the total population of the State while it accounts for 7 per cent of the cattle population (Table 2.23).

Table 2.23 : Livestock in Chandrapur District (1972)

	Gadchiroli Taluka	Sironcha Taluka	Chandrapur District	Maharashtra State
Bullocks (over 3 years)				
Used for work	114710	55978	436781	6002185
Total bullocks	117179	57607	445579	6205941
Cows (over 3 years)				
In milk	36934	21469	129965	1673495
Dry	40136	32963	179471	2852537
Total Cows	82165	60403	316772	4586778
Percentage of cows in milk to total cows	44	35	41	36
Total Cattle	278820	174890	1079202	14705147
Buffaloes Female (over 3 years)				
In milk	3444	1465	21338	954884
Dry	4604	2335	27903	888832
Total	8258	3877	50373	1870529
Total Buffaloes	35606	20664	134794	3300746
Sheep	5563	4115	48609	2128036
Goat	73643	34714	264100	5910554
Total Poultry	266753	85074	820029	12216567

The cattle population in the district has shown a steady trend of increase from 1951 whereas in the State as a whole the cattle population has more or less stagnated from 1961 onwards.

In Gadchiroli and Sironcha talukas the cattle population is relatively larger in relation to the human

population. The two talukas have a share of 22.2 per cent and 8.7 per cent in the total population, whereas the respective shares of cattle population in 1972 were 25.7 per cent and 16.2 per cent. Sironcha taluka had as high a share as 19.0 in the case of cows. In addition to this, these two talukas have 25 and 15 per cent of the total buffaloes in the district. Their share in terms of goats was 29 and 13 per cent respectively. The tribals thus continue to rely relatively more upon the cattle wealth. The livestock is considered a valuable asset, it can be sold to raise some ready cash in case of contingency or slaughtered for meat in case of need. The fact that the tribals are in the immediate proximity of the forests makes the maintenance of livestock an easier task. The livestock is generally obtained from the home-stock and since grazing areas are freely accessible the cost of maintaining the livestock is negligible.

Land Holding: According to 1961 Census data, the majority of tribals (43 per cent) owned land between 1 and 3 hectares (Table 2.24), The median size of the holding being 2.7 hectares. This is comparable to the median size of holding in the total population. However the proportion of extremely small as well as large holdings in the general population is higher than that noted in the case of tribal population. In other words the concentration ratio or the inequality of the land holdings is relatively less in the case of tribal population than in the case of general population.

In 1970-71 agricultural Census, it was observed that the proportion of small land holdings (below 1 hectare holding) was about 25 per cent and the median size of holding was 2.4 hectares.

Table 2.24(A) : Distribution of Households Engaged in Cultivation by Size of Land Cultivated for Chandrapur District (1961*)

Size of holding (in acres)	No. of households (Scheduled Tribes only)	Per cent	No. of households (all population)	Per cent
Below 1.0	63	1.2	1068	3.4
1.0 - 2.4	618	11.7	4958	15.9
2.5 - 4.9	1163	22.0	5955	19.1
5.0 - 7.4	1134	21.5	5194	16.6
7.5 - 9.9	595	11.3	2973	9.5
10.0 - 12.4	628	11.9	3186	10.2
12.5 - 14.9	230	4.4	1483	4.8
15.0 - 29.9	677	12.8	4611	14.8
30.0 - 49.9	124	2.3	1279	4.1
50 and above	49	0.9	510	1.6
Total	5281	100.0	31217	100.0

* 20 per cent sample.

Table 2.24(B) : Distribution of Operational Holdings by Size Class for Chandrapur District (1970-71)

Size of operational holding (hectares)	Number of holdings (%)	Area held (%)
Below 1	24.29	3.38
1 - 2	20.07	7.89
2 - 3	14.28	9.40
3 - 4	10.44	9.70
4 - 5	7.83	9.37
5 - 10	15.98	29.80
10 - 20	5.90	21.16
20 and above	1.21	9.30
Total	100.00	100.00

Infrastructure

Chandrapur district is one of the most backward districts of Maharashtra in the development of infrastructural facilities, viz. roads and communications network, electrification, medical and educational facilities. Gadchiroli and Sironcha talukas are all the more backward. The comparative data for the district as a whole and for developed districts like Sangli and Nashik and for the entire State given in Table 2.25 bring out this fact clearly. The proportion of electrified villages and towns was 20 per cent in Chandrapur district while the State average was 60 per cent. The road length per 1000 sq.km is as low as 11 km in Chandrapur district as against 37 km in Nashik (which is in part backward and tribal) and 70 km in Sangli. However, if the road length per unit of population is considered the discrepancy is not glaring. The fact that the settlements - particularly the tribal settlements are very small in size makes it difficult to provide the services within a convenient distance from each settlement. While on an average the standard of service is more or less the same on the basis of population served in the case of posts and telegraph offices there are a large number of villages in Chandrapur district, without easy access to this facility.

The infrastructural facilities are particularly underdeveloped in Gadchiroli and Sironcha talukas. Most of the villages in these talukas are not connected by even a metal road. They are totally inaccessible during the rainy season. Even in the fair weather season only a small proportion of the villages can be reached by the State transport bus service. Lack of transport facilities means that there is a lag in the development of all the other facilities.

Table 2.25 : Selected Indicators for Nashik, Sangli, Beed, Bhandara and Chandrapur Districts

1	District					Maha- rashtra State 7
	2	3	4	5	6	
Density (Population per sq.km.) (1971)	174	204	132	194	75	188
Percentage of urban population (1971)	28.6	18.6	11.6	11.4	10.2	31.2
Average size of village (1971)	1039	2325	1106	937	519	970
Percentage of Scheduled Tribe population (1971)	24.0	0.5	0.4	12.1	21.7	7.6
Literacy (1971)						
Male	48.5	51.0	36.3	50.0	38.6	51.0
Female	23.4	23.2	11.2	20.6	14.5	26.4
Area sown as per cent of total Geographical area (1977-78)	56.5	70.5	72.3	41.6	25.7	59.2
Average No.of working cattle per 100 hectares of net sown area (1972)	40	21	30	76	66	
Average strength of livestock per 100 human population (1972)	52	54	67	53	80	
No.of wooden ploughs per 100 hectares of sown area (1972)	16.5	4.1	0.2	39.4	30.7	

(continued)

Table 2.25 : (continued)

	1	2	3	4	5	6	7
No. of iron ploughs per 100 hectares of sown area (1972)		4.8	5.3	3.4	0.4	0.3	
Percentage of towns and villages electrified (1977)		63.6	78.2	54.5	56.0	20.5	60.4
Average road length per 1 lakh population (in km) (1978)		238.9	398.2	262.0	82.6	177.4	185.8
Average road length per 100 sq.km. of geographical area (in km) (1978)		36.8	69.7	30.3	14.3	11.1	30.4
Average No. of posts and telegraph offices per 1 lakh population (1978)		21	27	17	15	18	20

If the area with predominantly tribal population is considered the conditions are still worse. The information collected for the Integrated Tribal Development Project (ITDP)³ area from Gadchiroli and Sironcha talukas in 1982 through a Tribal Bench Mark Survey by the Tribal Research and Training Institute (Pune) is presented in Tables 2.26 to 2.28. Table 2.26 gives the distribution of the total

³ ITDP - I or Etapalli is coterminus with Sironcha taluka and covers 100 per cent population of the said taluka; ITDP - II or Dhanora covers 56.8 per cent of the total population of Gadchiroli taluka and 84.4 per cent of the tribal population of the said taluka. Hamlet, instead of a village is taken as the unit of reference. There were 643 hamlets in ITDP - Chandrapur I and 798 hamlets in ITDP - Chandrapur II.

hamlets according to the distance from the nearest primary school, medical facility, post office, Adivasi Cooperative Society, supply depot of agricultural inputs, weekly market and liquor shop. A primary school is located within a distance of 2 kilometres in the case of over 50 per cent of the hamlets. However it is not often easy to reach the school because of physical barriers. This is particularly true during the rainy season when the streams are overflowing. It was also noted that in many cases the school teachers are not regular in their attendance and the schools are not run properly in the remote or inaccessible areas. In Sironcha taluka, most of the other facilities are beyond a distance of 20 kilometres in about 40 to 50 per cent of the hamlets and they are within a reasonable distance (upto 5 kilometres) only in about 15 to 20 per cent of the hamlets. The situation is somewhat better in Gadchiroli district in the case of postal service and Adivasi Cooperative Societies. However, in the case of Adivasi Cooperative Societies the problem of regularity and the quality of service comes up in the remote areas, both because of the difficulties that arise due to the lack of accessibility e.g. goods being out of stock, irregularity in attendance by the staff, etc., and the lack of outside control or local pressure to maintain a certain standard in the service.

In Table 2.27 information about the distance in relation to Government functionaries like Patwari, village level worker, Forest pass vendor and Forest guard is presented. They are stationed at places within 3 kilometres in the case of about one-third of the hamlets and within 3 to 10 kilometres in another 35 per cent of the cases or more in both Gadchiroli and Sironcha talukas. However, whether the functionaries are in fact available at these places when approached is always uncertain.

Table 2.26 : Percentage Distribution of the Hamlets in ITDP - Chandrapur I and II according to the Distance from the Nearest Primary School, Medical Centre, Market and Other Amenities

ITDP - Chandrapur I (Sironcha)

Amenity	Distance from the hamlet in kilometres							
	Upto 1	1-2	2-3	3-5	5-10	10-15	15-20	20 or more
Primary School	41.8	9.0	7.3	12.4	17.8	5.1	2.8	3.8
Medical institution:								
1) Curative centre	5.0	3.9	4.4	4.5	14.3	11.5	5.7	50.7
2) Sub-centre	5.4	3.6	4.1	5.6	17.6	13.1	7.2	43.4
Weekly market	5.1	3.9	4.4	6.1	14.5	13.6	6.2	46.2
Liquor shop	5.9	4.4	3.7	5.4	14.6	14.6	6.9	44.5
A.C.S.	8.6	4.8	4.8	8.2	18.0	15.0	9.0	31.6
Post office	8.5	5.1	6.5	9.1	17.6	14.0	7.4	31.8
Supply depot of agricultural inputs	5.4	2.2	2.5	4.0	12.6	9.6	7.2	56.5

(continued)

Table 2.26 : (continued)

ITDP - Chandrapur II (Gadchiroli)

Amenity	Distance from the hamlet in kilometres							
	Upto 1	1-2	2-3	3-5	5-10	10-15	15-20	20 or more
Primary school	42.0	16.0	12.4	10.0	12.0	4.7	1.9	1.0
Medical institution:								
1) Curative centre	4.4	1.5	4.7	6.9	13.5	12.8	18.9	37.3
2) Sub-centre	5.5	2.4	6.6	11.8	14.2	15.5	16.9	27.1
Weekly market	9.5	5.1	11.3	15.4	23.9	15.8	9.7	9.3
Liquor shop	3.4	2.3	5.9	7.6	16.9	12.8	12.4	38.7
A.C.S.	11.2	6.0	10.7	12.0	18.8	16.0	9.4	15.9
Post office	13.3	9.2	13.4	21.4	17.9	10.5	5.8	8.5
Supply depot of agricultural inputs	5.1	2.4	5.6	7.5	11.7	11.4	16.2	40.1

Table 2.26(A) : Distribution of the Hamlets in Different Panchayat Samiti Areas in ITDP Chandrapur I by Distance from Various Amenities

(No. of hamlets)

Panchayat Samiti →	Distance from the hamlet in kilometres																							
	Upto 1			1-2			2-3			3-5			5-10			10-15			15-20			20 and more		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C			
Amenity																								
Medical institution:																								
Curative centre	7	21	4	7	13	5	12	12	4	6	16	7	24	49	19	14	29	31	3	13	21	37	61	228
Sub-centre	15	13	7	12	3	8	12	7	7	10	9	17	34	26	53	21	13	50	2	10	34	4	133	143
Weekly market	11	20	2	11	9	5	12	14	2	13	19	7	30	37	26	18	34	36	4	16	20	11	65	221
Liquor shop	11	24	3	10	18	-	9	11	4	6	19	10	27	42	25	19	35	40	9	19	16	19	46	221
Adivasi cooperative society	18	30	7	9	16	6	12	15	4	11	26	16	29	32	55	15	31	51	2	13	42	14	51	138
Post office	20	28	6	7	19	7	17	19	6	12	25	22	19	37	57	12	32	46	5	19	23	18	35	152
Supply depot of Agricultural inputs	2	28	5	5	2	7	6	4	6	5	6	15	15	20	46	15	8	39	5	9	32	57	137	169

A - Sironcha Panchayat Samiti.

B - Aheri Panchayat Samiti.

C - Etapalli Panchayat Samiti.

Table 2.26(B) : Distribution of the Hamlets in Different Panchayat Samiti Areas in ITDP Chandrapur II by Distance from Various Amenities

Amenity	Distance from the hamlet in kilometres																				(No. of Hamlets)
	Upto 1					1 - 2					2 - 3					3 - 5					
	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	
Medical institution																					
Curative Centre	-	-	23	3	9	-	-	2	7	3	-	-	7	20	10	4	5	7	21	18	
Sub-centre	2	1	17	11	13	-	-	1	11	7	-	1	8	26	18	3	11	11	42	27	
Weekly market	-	2	26	30	18	2	2	2	24	11	3	2	12	47	26	6	13	18	48	38	
Liquor shop	-	2	12	5	8	-	-	6	9	3	-	-	8	28	11	2	9	12	16	22	
A.C.S.	7	8	16	36	22	3	4	5	22	14	7	3	12	36	27	6	7	13	24	46	
Post office	4	6	24	37	35	2	4	14	25	28	10	3	18	42	34	7	14	26	78	46	
Supply depot of agricultural input	5	-	13	19	4	-	-	3	13	3	-	-	3	26	16	-	-	10	34	16	

A - Gadchiroli Panchayat Samiti.

D - Kurkheda Panchayat Samiti.

(continued)

B - Armori Panchayat Samiti.

E - Dhanora Panchayat Samiti.

C - Chamorshi Panchayat Samiti.

Table 2.26(B) : (continued)

Amenity	Distance from the hamlet in kilometres																			
	5 - 10					10 - 15					15 - 20					20 and more				
	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E
Medical institution																				
Curative centre	7	15	21	54	11	5	6	16	33	42	9	6	31	59	46	22	19	47	54	156
Sub-centre	10	19	27	24	33	8	7	25	32	52	3	7	27	55	43	21	5	38	50	102
Weekly market	9	25	43	35	79	10	6	21	32	57	11	-	14	31	21	6	1	18	4	45
Liquor shop	8	19	48	34	26	4	9	23	28	38	1	8	20	47	23	32	4	25	84	164
A.C.S.	2	25	50	27	46	11	2	25	52	38	3	2	14	30	26	8	-	19	24	76
Post office	12	24	29	35	43	10	-	22	19	33	1	-	13	12	20	1	-	8	3	56
Supply depot of agricultural input	5	1	15	50	22	5	5	8	44	29	10	12	30	54	23	22	33	72	11	182

A - Gadchiroli Panchayat Samiti.

D - Kurkheda Panchayat Samiti.

B - Armori Panchayat Samiti.

E - Dhanora Panchayat Samiti.

C - Chamorshi Panchayat Samiti.

Table 2.27 : Percentage Distribution of the Hamlets in ITDP - Chandrapur I and II according to the Distance from the Government Functionaries

Government functionary	Distance from the hamlet in kilometres							
	Upto 1	1-2	2-3	3-5	5-10	10-15	15-20	20 and more
<u>ITDP - Chandrapur I</u>								
Patwari	18.3	8.6	10.4	14.6	28.5	10.4	5.0	4.2
Village level workers	19.1	8.1	8.2	16.6	28.2	10.4	5.3	4.1
Forest pass vendor	12.0	8.9	8.1	12.6	27.1	14.0	5.6	11.7
Forest guard	28.9	11.8	12.4	16.0	20.7	6.4	1.0	2.8
<u>ITDP - Chandrapur II</u>								
Patwari	17.4	10.5	15.3	20.2	20.0	6.3	4.8	5.5
Village level worker	21.4	14.4	17.0	13.7	22.8	4.6	4.3	1.8
Forest pass vendor	12.4	7.4	12.5	17.9	21.1	9.7	11.2	7.8
Forest guard	21.9	13.5	17.4	16.3	23.5	3.6	2.5	1.3

Table 2.27(A) : Distribution of the Hamlets in Different Panchayat Samiti Areas in ITDP Chandrapur I by Distance from Various Government Functionaries

Government functionaries	Distance from the hamlet in kilometres												(No. of hamlets)											
	Upto 1			1-2			2-3			3-5			5-10			10-15			15-20			20 and more		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Patwari	41	44	33	11	29	15	14	24	29	17	25	52	17	42	124	6	32	29	-	13	19	4	5	18
Village level worker	38	49	36	15	23	14	11	16	26	20	40	47	20	43	118	4	27	36	2	9	23	-	7	19
Forest pass vendor	14	45	18	10	31	16	16	21	15	14	37	30	33	43	98	18	22	50	4	8	25	1	7	67
Forest guard	36	80	70	14	32	30	17	25	38	19	32	52	16	36	81	7	5	29	1	1	4	-	3	15

A - Sironcha Panchayat Samiti.

B - Aheri Panchayat Samiti.

C - Etapalli Panchayat Samiti.

Table 2.27(B) : Distribution of the Hamlets in Different Panchayat Samiti Areas in ITDP Chandrapur II by Distance from Government Functionaries

Government functionaries	(No. of Hamlets)																			
	Distance from the hamlet in kilometres																			
	Upto 1					1 - 2					2 - 3					3 - 5				
	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E
Patwari	6	5	24	66	38	2	6	7	40	29	7	8	10	51	46	7	12	16	67	59
Village level worker	13	14	33	65	46	6	9	12	47	41	11	7	11	58	49	10	9	19	18	53
Forest pass vendor	4	4	25	39	27	-	1	11	33	14	7	5	18	44	26	10	8	21	59	45
Forest guard	9	8	24	63	71	5	7	11	40	45	9	7	17	61	45	12	11	32	26	49

A - Gadchiroli Panchayat Samiti.

B - Armori Panchayat Samiti.

C - Chamorshi Panchayat Samiti.

D - Kurkheda Panchayat Samiti.

E - Dhanora Panchayat Samiti.

(continued)

Table 2.27(B) : (continued)

Government functionaries	Distance from the hamlet in kilometres																			
	5 - 10					10 - 15					15 - 20					20 and more				
	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E
Patwari	17	5	34	17	87	6	-	16	6	22	1	3	21	2	11	-	12	26	3	3
Village level worker	5	12	32	51	82	2	-	12	6	17	-	-	26	2	6	-	-	13	-	1
Forest pass vendor	14	18	40	11	86	7	2	7	21	40	1	6	22	27	33	4	7	10	17	24
Forest guard	11	16	43	50	87	1	2	4	9	13	-	-	15	2	3	-	-	8	-	2

A - Gadchiroli Panchayat Samiti.

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B - Armori Panchayat Samiti.

D - Kurkheda Panchayat Samiti.

C - Chamorshi Panchayat Samiti.

E - Dhanora Panchayat Samiti.

**Table 2.28 : Electrification in ITDP - Chandrapur I and II
(No. of hamlets)**

Use of electricity for					
	Agricul- tural purposes	Domestic use	Street light- ing	Number of electri- fied hamlets	Total hamlets
ITDP - Chandrapur I					
Panchayat Samiti:					
Sironcha	24	13	19	24	110
Aheri	8	10	9	10	214
Etapalli	5	4	2	7	319
Total	37	27	30	41	643
ITDP - Chandrapur II					
Panchayat Samiti:					
Gadchiroli	3	3	3	3	47
Chamorshi	2	4	5	6	154
Armorli	-	-	-	-	51
Kurkheda	8	14	16	16	251
Dhanora	13	16	14	19	295
Total	26	37	38	44	798

As regards electrification, only 41 out of 643 hamlets from Sironcha and 44 out of 798 hamlets from Gadchiroli taluka were electrified. The drinking water supply was generally available within two kilometres. It was found to be insufficient particularly during the summer months in the case of 108 hamlets from Sironcha and 185 hamlets from Gadchiroli taluka. No information on the potability of the drinking water is available.

CHAPTER III

**FOREST POLICY, AND FOREST EXPLOITATION IN
CHANDRAPUR DISTRICT**

Forest Policy during the British Period

"So lately as 1853, when the great trigonometrical Survey of India had been at work for half a century ... the Gondwana highlands and jungles comprise such a large tract of unexplored country that they form quite an oasis in our maps."¹

It was only after the revolt of 1857 when the Crown rule was imposed on the Indian subcontinent that this situation changed rapidly. In 1861, the Central Provinces were constituted a Chief Commissionership under Sir Richard Temple. One of the first steps taken by Sir Temple was to organize a Forest Department for detailed examination and conservation of the timber-bearing tract. Mr. Pearson (the first conservator of forests) commenting on the ruinous state of the then Gondawana forests pointed out, "It was only necessary for a contractor whether European or native to obtain a parwana² or order from Civil Authorities to cut timber and then he started work and as every Gond carried an axe, the forests were soon filled with fallen logs." (Stebbing, I, 1921, p. 394.) The announcement that the forest would be brought under the Government management proved to be a death blow to the remainder of teak. Railway contractors and numerous speculators went into jungles with

1 Sir Erskine Perry, addressing the Bombay Branch of Royal Asiatic Society, quoted in The Highlands of Central India, Forsyth, J. (1919, Chapman and Hill Ltd., London) p. 13.

2 "It may be of interest to mention that the granting of these parwanas was not without its after-use, as when the rights of Government to the forests and timber in them were questioned they helped to prove a claim." Quoted in The Forests of India, Vol. I, Stebbing, E.P. (1921, John Lane, The Bodley Head Limited, London) p. 394.

bags of rupees and spread them broadcast among the wild tribes with instructions to slay and spare not to fell every teak tree. This was only too faithfully done. Then came the delay in the construction of railways, the cut timber was abandoned, the jungle fires occurred as usual and much of the timber was burnt. The injury done could hardly be rectified. (Forsyth, 1919, p. 27.) Thus, with the advent of the British rule the nature of demand for timber changed qualitatively. Traditionally timber was in demand for building purposes, agricultural implements, carts and fuel-wood for domestic and industrial use. However, since the demand for industrial purposes was limited there was no pressure on the forest resource. With the coming of the European companies began the commercial exploitation of the forests. Timber was in great demand for ship-building, gun-carriage factories and other military purposes, building construction and from the mid-19th century there was the evergrowing demand for the railway sleepers.

Teak timber³ formed the main demand of the Government, and the forests were viewed purely from the point of extraction of valuable timber. Sir Munro maintained, that "the merchants and agriculturists were too good traders not to cultivate teak or whatever wood is likely to yield profit. ... To encourage them no regulation is wanted, but a free market."

With such a 'free market' policy, the situation soon came to a head. The Governor General in Council in his

3 The most valuable timbers for railway construction and other purposes were the teak and the sal. No other timbers were considered to be really lasting. Actually the great Indian Forests comprised a number of fine useful timbers; but, no effort was made to ascertain the value of the rest or their capabilities of replacing for many purposes the few which custom had come to consider as the only commercial and utilisable timbers.

dispatch to the Secretary of State sent in November 1862 on the subject of forests stated "... until quite the last few years no Forest Administration in truth existed. ... Latterly, however, while the supply of timber has been steadily diminishing from want of proper conservation, the demand both for State and private purposes had been rapidly increasing and the enormous requirements of the different railways for sleepers has especially brought the matter into very prominent notice, and has now made the subject of forest conservancy an important administrative question. The circumstance that forests have till now been reckoned as waste and their produce treated as miscellaneous revenue, could not fail to be pernicious and has very probably conduced no little to the present state of things. A primary object to a collector of land revenue is to remove land from the class that pays no revenue to that which pays and his tendency will be to sacrifice forest for cultivation. The forests, when set aside as such, should be made to assume a distinct plan of their own in the departments producing revenue and the success or failure of the administration should be made at once apparent from the state of the balance on the forest budget." (Stebbing, I, 1921, pp. 522-530.)

The Government accepted the need to make specific provisions for forest administration. A charter for protection and preservation of forests was first drawn up in 1865. The Forest Law (1865) dealt only with the Government forests and attempted to define what those forests were and to set out Rules for the management and preservation of the forests.

Indian Forests Act VII of 1865

The Governor-General of India in Council within the provinces under his immediate administration and the Local

Governments within the territories under their control, may, by notification in the official gazette, render subject to the provisions of this Act, such land covered with trees, brushwood or jungle, as they may define for the purpose by such notification: Provided that such notification shall not abridge or affect any existing rights of individuals or communities.

Rules made in pursuance of this Act may provide for the following matters:

First - The preservation of all growing trees, shrubs and plants within Government Forests or certain kinds only by prohibiting the marking, girdling, felling and lopping thereof and all kinds of injury thereto; by prohibiting the kindling of fires so as to endanger such trees, shrubs and plants; by prohibiting the collecting and removing of leaves, fruits, grass, wood-oil, resin, wax, honey, tusks, horns, skins, hides, stones, lime or any natural produce of such forests by prohibiting ingress into and passage through such forests except on authorized roads and paths; by prohibiting cultivation and the burning of lime and charcoal and the grazing of cattle within such forests.

Second - The regulation of the use of streams and canals passing through or coming from government forests.

Third - The safe custody of timber the produce of government forests - by regulating the manner in which timber, being the produce of government forest, shall be felled or converted; ...

Fourth - The regulation of the duties of the Government officers and establishment charged with the management and conservancy of government forests and with the levy of forest dues and revenues;

Under the Act, the local Governments were empowered to draft local rules for their respective provinces for the

better management and preservation of forests.

However, as one forest official put it, "many years were to elapse before the organisation proved adequate to the real needs of the country. ... In the more backward provinces, the more or less uncivilised jungle tribes had to be gradually weaned from views which were the natural outcome of their immemorial usage of the forests and educated upto a realisation, of the value of protection. ... In the more densely inhibited parts of the country ... there was an added factor in the opposition experienced from the timber merchants. ... Moreover progress was retarded in some provinces by misdirected zeal of forest officers themselves, who endeavoured to put the rules in force with uncompromising vigour amongst a population and under conditions where compulsion was an impossibility; the inevitable consequence being a setback to the very cause which their enthusiasm was designed to forward." (Stebbing, II, 1922, pp. 13-14.)

The Act of 1865 had not provided for interference with the existing rights and privileges of the people. According to the official view, "It drew no distinction between the forests which required to be closely reserved, even at the cost of more less interference with private rights and those which merely needed general control to prevent improvident overworking. It also provided no procedure for enquiring into and settling the rights."⁴

Finding the Act of 1865 inadequate a new Act (Act VII of 1878) was promulgated. This Act provided for the

⁴ Mr. Hope thus enunciated the deficiencies of the Bill in the Viceregal Council on 6-3-1878, quoted in The Forests of India, Vol. II, Stebbing, E.P. (1922, John Lane, The Bodley Head Limited, London) p. 469.

constitution of 'Reserved' forests and 'Protected' forests. A Reserved forest once notified was safeguarded against any possible infringement of private rights and secured a permanent settlement whereas in the Protected forest existing rights were recorded but not settled.⁵ Such rights might increase and new ones arise without any limitation. In view of this problem Protected forests were gradually converted into Reserves.

The basic problems experienced after the enforcement of the Forest Act of 1878 can best be summed up, in the words of a forest official.

Forests and People

"Even after a Forest Law had been promulgated and when the boundaries of the forests had been clearly laid down on the ground, the aligned boundaries did not first convey anything to the neighbouring population. People looked up to the forests as a class of property in which although they did not possess the ownership, they could enter and hack, burn or graze their cattle at will." "The prosecutions which had to be instituted for offences committed against the new Forest Law brought the forest officers into bad odium with the natives for a considerable period of years. ... The officers of the department had to commence the work of introducing fire conservancy in the face of actively hostile population more or less supported by the district officials who regarded the new policy of fire conservancy as an oppression of the people." (Stebbing, II, 1922, pp. 533-534.)

Forest Management

With the accelerated exploitation of the forests - the idea was held that the destroyed forests could best be

⁵ For details vide, Forest Law, Baden Powell B.H. (1893, Bradbury Agnew and Co., London) pp. 273-278.

replaced by the formation of plantation. Quite early in the 19th century this idea took shape and was given effect to. By 1870, however the idea of the subject of future of plantation gave place, in view of the costs involved and the failures experienced, to the one of improving the existing devastated forests. (Stebbing, II, 1922, pp. 563-565.) For the great bulk of the forests, silvicultural treatment and natural regeneration, combined with certain assistance had to be relied on for maintenance. In addition, there was the problem of waste lands. "The problem of treating these lands has been scarcely touched by the Department. The strength of the staff was altogether insufficient and funds were not available to grapple with the giant task of turning these wastes into productive areas, both as a source of supply for the peoples' requirements and as a producer of revenue. This work formed one of the most important, but at the same time of the most difficult, tasks awaiting the Indian Forester of the future (Stebbing, II, 1922, p. 574).

Forest Research: At the end of nearly half a century's work the Department knew very little of the silviculture of even its principal trees. Special research work by officers deputed for the purpose had not been attempted. Too great a stress had been laid upon the financial side of the operation of the department as a purely commercial and revenue-making concern to the detriment of progress in work of a professional nature.⁶ ... At the commencement Brandis had to justify the inauguration of the Department by something more than covering the cost of its maintenance. ... but the history of the Department through the period tends to show

⁶ In 1906 the Imperial Forest Research Institute was established for scientific research in connection with the Indian forests and to give best available training to the candidates for the forest services.

that this policy become fixed and remained too long a guiding factor in the administration of the forests." (Stebbing, II, 1922, pp. 463-464.)

The conditions and the problems obtaining over a century back are briefly described above. It may be noted that even today the situation basically remains the same, the major problems being: (i) conflict between the interests of the people and that of the Department. (ii) Neglect of the waste lands and concentration on commercial exploitation of the existing stock. (iii) Great stress on financial side to the detriment of progress in the work of professional nature.

Impact of the New Forest Policy

Traditionally, the villagers were accustomed to go into neighbouring wastes, to cut wood, to graze cattle or even to break up plots for tillage. The forest villagers would clear a forest patch for shifting cultivation. Certain valuable timber and fruit trees were generally preserved and the State lay claims to the revenue from these.

However, the new alien Government established by law their right to all waste lands not owned or occupied in proprietary right and enforced rules and regulations on the use all forest lands. The prescriptive rights of the people, the right of way, right to water courses, right of easement were codified with respect to purposes and to persons.

When the Forest Department began its work its chief duties were considered to be the preservation and development of large timber forests such as the teak forests, the sal forests and the deodar forests. Its success was gauged by fiscal considerations; the Department was to be a revenue paying one. "Indeed one may go so far as to say that its interests were opposed to agriculture, that its interest was, rather to exclude agriculture than to admit it to participation

in the benefits."⁷ Thus the earlier symbiotic relation between the forest lands and agricultural lands was snapped disrupting the rural economy.

The government rationalized such reservation of forests in the name of scientific management. However, sustained, painstaking scientific investigations are necessary to arrive at the scientific basis of harvesting the forest resources. One needs to know all about the composition and dynamics of the forest ecosystem and how it responds to different modes of management and harvesting. It is necessary to know how the soil, the water regime and the plant community respond to the gaps created in the canopy, how saplings of different species respond to the openings in the canopy of various sizes, the rates at which they grow, the rates at which canopy is closed and so on. There was a theory⁸ developed in Germany and based on this theory and many guesses, prescriptions were laid down by the Forest Department for forest management and this was styled as scientific. Though in principle the basis of exploitation was the use of resources on a sustained basis in actual fact the forests were cut down

7 For details see: Report on the Improvement of Indian Agriculture, Voelcker, J.A. (1893, London) p. 135.

8 The theory of growth and dynamics of forests developed in the continental Europe served as the basis of the framework for managing India's forests. This was largely inappropriate since the temperate zone forests are dominated by one or a few species and are very much simpler in their functioning. The complex multi-species tropical forests are very different in many ways, for instance in possessing poorer soils with most of the nutrients locked up in plant biomass. Little scientific work has been done on and no adequate framework developed for managing the tropical forests. Instead the emphasis was on converting them to single species stands dominated by a few commercial species without appropriate experimentation. Furthermore, little reliable information was available on the growing stock, dynamics and growth rates of the tropical forest species. Since the basis of any "scientific" management is such empirical information and experimentation it would be no exaggeration to say that there was no scientific basis for managing the forests in India.

and the resources vastly depleted as and when the demand grew e.g. for railway sleepers. Furthermore as Forsyth succinctly put it, "In the cry for great timbers for our railways we totally forgot, or neglected, the demand of the masses of the population for small timber and their houses and many other purposes. We shut up every acre of the teak-producing country we could and referred them to inferior sorts of wood, all the best species besides teak having been tabooed along with it. The other species of timber when young, mostly decay in a year or two in an Indian climate; and so the people were put to a vast unnecessary expenditure of labour in renewals, while we strove, by pruning and preserving, to make large timber grow out of the scrubby coppice wood which had before supplied their wants, and as it proved, strove entirely in vain. What we should have done was to reserve the best forests for timber purposes and apply to the rest - the vastly greater part of them only such measures as would ensure the best and quickest production of coppice wood for the requirements of the people". (Forsyth, 1919, p. 174.)

Thus, no consideration was given to the requirements of the people and the area that need to be kept accessible for their use. As years passed, the pressure on the area available for public use increased leading to over-exploitation and progressive deterioration of these areas. The people were at times forced to encroach upon the "Government forests" to meet their basic needs. Consequently there arose a direct confrontation between the interests of the people and the interests of the government. The Forest Law turned the people into thieves and criminals for exercising their customary rights. Protection of the vast stretches of forest-area through force, however, proved to be well-nigh impossible. Illicit exploitation of forest resources could be carried out

with impunity by the commercial and other moneyed interests while the poor and the illiterate would be beaten up or fined heavily even for a small offence against the forest regulations.

Serious efforts at improving the existing stock were lacking on the part of the Government as the stock appeared to be extensive; the forest represented a resource to be made available for the cost of extraction (the entire stock was taken over by the Government as a free gift of nature and no costs were involved in raising the stock) to the contractors or to the industry and other commercial interests. As the people were deprived of their customary rights over the use of the stock they did not have any stake in the preservation of the forest resources but were interested in the immediate benefits. Under these circumstances the vast forest resources got more and more depleted as decades passed by after the enactment of the Indian Forest Act of 1865.

Chanda Forests

There is little description of the Chanda Forests before the colonial government took them over, but the rareness of stands of large trees indicated that they had been long exploited. Shifting cultivation, and iron industry which consumed much fuel reduced large areas of forest to coppice; only the central block was dense as it was too malarial for settled villages; except for the aboriginal tribes there was little human habitation in the forest region.

The reservation of forests in Chanda followed the settlement of Chanda district by Major Lucie Smith in 1869. Smith recommended reservation from sale of all government wasteland. The reservation of these forests was effected in 1879. Prior to 1904 all the Government forests of the district were included under one division, however the heavy work responsibilities in the district led to the creation of two divisions - northern and southern.

Management: Since the reservation of forests, commutation system was in force till 1888 when it was replaced by the licence system; upto 1893 purchasers were permitted to visit any part of the forests they pleased and to select and cut their own material. From 1893 fellings of timber, green fuel and bamboo were permitted only from localised areas while grass, dry fuel and minor produce could be obtained from the forest in general.

The preparation of working plans was taken up in 1895. The method mostly adopted was improvement fellings. This was subsequently changed into coppice-with-standards in some felling series. Several felling series originally proposed in the old working plans could not be worked out due to the lack of demand and shortages of labour. Fire protection was introduced in 1873 and was extended to the entire division by 1897. The principle object in managing the forests after they were declared the Government property was to manage them on a financial basis with a view to securing the greatest possible sustained or expanding annual revenue.

North Chanda: The management was dictated by a consideration of "the kind of produce which can be grown and the market demands which operate now or can be forecasted. In all forests which can be worked, the aim is to convert them to a uniform system, consisting of a normal series of age classes in even-aged stands with normal reservation". This was to be applied to teak forests. For bija forest a system of two-storeyed forest, with bija as upper story on a long rotation and other species on a short rotation was considered appropriate. Teak was spreading and it was expected that given the proper treatment many low forests or mixed forests could be converted to teak high forests. The following working circles were constituted in North Chanda: high forest, coppice with standard, bamboo and low forest unworked circle.

The bamboo working circle overlapped with other working circles.

South Chanda: Prior to the acquisition of the forests by the Government the forests were exploited under contracts given by the zamindars. The contractors removed the best and the easily accessible materials. Certain parts of the forest were disturbed by shifting cultivation. The immediate phase after the acquisition of the forests by the government was departmental working largely to feed the former Allapalli saw mill; there being no established market, wide price fluctuations were experienced. After the disposal of the old mill, working through contractors was again introduced. Departmental working resumed in Allapalli range in 1918 and in Pedigudam range in 1922.

Working Plans⁹: In 1925, a working plan branch was formed for the first time and C.M. Harlow was appointed as the superintendent of working plans. The working plan branch was active from 1925 to 1932. The first task was to divide forests into compartments, as these permanent units of management were not formed earlier. The average size of a compartment was one square mile. The stock mapping of the whole forest into types and qualities was also a new feature. Four quality classes were formed, based on the average height of mature trees in the area. Forest with more than 20 per cent teak or sal was classed as 'teak' or 'sal' and the remainder was considered 'mixed'.

In Central Provinces the earlier approach was light felling. Harlow considered that the sooner the present inferior stock was replaced by vigorously growing young woods, the productivity would improve. He therefore advocated a

⁹ For details see: (i) E.P. Stebbing's The Forests of India, IV, edited by Champion, Harry and Osmaston, F.C., (1962, Oxford University Press) pp. 250-253; (ii) Annual Reports on the Forest Administration of Central Provinces.

short conversion period and energetic steps to liquidate the unsatisfactory standing crop. The better quality forest was placed under the system of conversion to uniform (with 60 year period). The forests of lower quality were put under coppice working circles with rotation of 30 to 40 years. Overlapping working circles were formed for bamboos. The forest areas too remote or too poorly stocked, were retained under improvement fellings on felling cycle of 20, 30 years. An integral part of each plan was the grazing settlement. Areas under main fellings were closed to grazing for 5 to 10 years. The whole forest was divided into grazing units and the number of cattle seeking admission was restricted as per the capacity of the forests.

Before 1930 two cycles of selection and improvement fellings had passed over a greater part of the better quality teak forests. In 1930 conversion system with regeneration under shelter wood with successive regeneration fellings was applied to the teak forests. The result was a total failure. Subsequently, clear felling and re-planting replaced the above method. However, plantations did not receive adequate attention due to the shortage of labour and were far from satisfactory. The area not allotted for conversion was opened up too drastically.

In 1930 the considerations for future management were: (a) Owing to the underdeveloped nature of the county the local demand for their products is petty. Grazing requirements are inconsiderable. (b) The long road lead to railhead makes transport of small sized timber unprofitable. (c) Timber of species like ain, bija, haldu, shisham is restricted by the cost of conveyance to the railhead. (d) The production of large teak timber is therefore indicated and a high forest system is essential. The general treatment prescribed was conversion to uniform high forest with regeneration. If

natural means of regeneration did not prove successful, combination of artificial and natural regeneration was to be resorted to.

The working plans reached a high standard of intensive management. Each working plan would have five to ten high forest felling series of 8,000 to 10,000 acres and thirty to forty coppice felling series of 3,000 to 5,000 acres. The plans were for twenty years but were to be revised if necessary at the end of ten years. The areas under various management systems in 1927 and in 1946 are given in Table 3.1.

Table 3.1 : Forest Management System in Central Provinces and Berar

Year	(Per cent)				
	High forest	Coppice systems	Improvement felling	Thinnings	Total
1927-28	3.0	21.9	75.1	-	100.0 = 1.56 lakh acres
1946-47	17.0	35.8	21.1	26.1	100.0 = 2.11 lakh acres

It will be seen that in 1927-28 improvement fellings accounted for three-fourth of the forest area worked in the Central Provinces and Berar while in 1946-47 coppice systems accounted for 36 per cent of the area worked, high forest for 17 per cent and thinnings for 26 per cent of the worked area, due to the fact that an entirely new approach to silviculture was introduced around 1927. "This was not based on planned experimental work and was rather a leap in the dark. When the new working plans incorporating these ideas were put into practice, the results did not always agree with what was anticipated." (Stebbing, 1962, IV, p.244.)

In relation to the regeneration of high forest a quotation from the Annual Report on silviculture working

plans and research for 1933-34 is revealing: "In the valuable Allapilli Teak Forests the results of clear felling have been so disastrous that artificial regeneration has now been introduced over large areas while in North Chanda the treatment of the rank growth of dense bamboo of poor quality has presented such a difficult problem that a drastic revision of the plan is contemplated."

It was thus found that (a) natural regeneration could not be induced by manipulation of the overwood; (b) successful conversion depended on the presence of advance growth; (c) the undergrowth, dense bamboos, grass, or shrubby plants such as Lantana, Petalidium make natural regeneration of teak almost impossible and that teak regeneration was usually abundant in forests where the overwood contains a large admixture of miscellaneous species giving shade sufficient to reduce the growth of grass; and (d) the advance growth had to be cut back to give results. The resulting crop was "seedling coppice".

As regards coppice working circles, in the early Harlow plans the system prescribed amounted to clear felling. This was found too drastic. A more elastic set of prescription viz. coppice with reserves was later introduced. Thus, both in High Forests and coppice forests the experience was that the prescription must be elastic; a composite form of treatment was often needed, in view of the object of management viz. supply of poles and fuel in poorer quality areas, medium-sized timber in better localities and protection in under-stocked areas.

Fire Protection: New fire protection rules were drawn in 1926. This was a compromise between the rigid fire protection introduced in the early days of Forest Department and the "early burning" method advocated by some officers. Forest was divided into three classes: (1) Special protection - All

forests under regeneration were closed to grazing. These were to be isolated from the surrounding country. Fires to be immediately dealt with. (ii) Rest of the area under regular working areas - line burning to be completed by February and fires after that to be reported. (iii) Protected by law only.

The arrangements continued unchanged upto 1947. It was experienced that the improvement in density of forest achieved due to rigid fire protection from 1880-1920 was being lost. After 1947, much larger areas were placed under special protections and more rigid protection was reintroduced in the new working plans.

Grazing: A rotational system for controlling grazing was in operation. However, restriction on grazing was always resented and in the 1930 Civil Disobedience Movement it became an issue for agitation.

In 1933 a reclassification of reserved forests was introduced. This in effect amounted to more remote and better quality forest with little demand for grazing being restricted while in forests close to the villages there was some relaxation of restriction. Forest Department, however, argued that this system was harmful and in 1946 new classification was accepted as follows: (a) Protection forest i.e. areas with steep slope - such areas were to be closed to grazing. (b) Tree Forests - Where production of timber was the main object. In such forests grazing was to be regulated according to the requirements of the tree crops. (c) Minor forests - Provision of grazing to be made. (d) Pasture lands - Pasture to be maintained by periodic and seasonal closures.

Concessions in Reserved Forests: In the reserved forests of the district (reserved under Indian Forest Act, VII of 1878 by Central Provinces Gazette Notification No.917 dated 14-2-1879 and No. 3796 dated 29-8-1895), there were

no rights; concessions were extended to agriculturist for grazing at privileged rates and to forest villagers for their domestic requirements. The rates prevailing in 1927, for obtaining different types of forest produce are given in Statement I.

Zamindari Estates: Apart from the forests taken over by the Government there were considerable forest areas under the control of zamindars in the Chandrapur district. Aheri estate in South Chanda was one such major area. In 1902 Aheri estate was placed under the Court of Wards; in 1916 a working plan covering a part of the estate viz. Gatta block was prepared. Under the working plan of 1916-1936-37 very light felling consisting of the removal of marketable mature trees was prescribed, without endeavouring to introduce any improvement possibly due to the weak financial position of the Estate. Under the plan, mature trees, particularly teak was exploited from the worked coupes but the prescribed operations to open up reproduction, to tend the young crop, climber cutting, etc., were not attended to. Consequently the natural reproduction of the species suffered a considerable setback. There was no systematic management in other blocks, except Gatta block and selective fellings continued.

The situation was not much different in other zamindari estates. The best timber was exploited through contractors. Young poles were cut which resulted in mal-formed coppice. Damage due to annual fires was widespread. Shifting cultivation and overgrazing also affected certain forest areas. The forests were infested with heavy and tall grasses.

The rights and concessions enjoyed by the villagers in the zamindari areas were governed according to custom recorded in Wazib-ul-urz (village administration paper). The position according to Wazib-ul-urz was as under: (1) Tenants and agricultural labourers could take out the

following kinds of forest produce for nistar free of charge from their village areas only (a) minor produce - fencing material, fuel, grass, creepers, roots, leaves, flowers, fruits, (b) bamboos if available in their village forest, (c) any timber or wood below 2 feet in girth except teak, shisham, haldu, tinsa, bija, fruit bearing trees e.g. mango, mahua, hana, tendu. (ii) Villagers were entitled to graze their cattle anywhere in their village area. (iii) Commutation dues were levied on rozgars at ans. 8 per house and ans. 4 per kotha (small house) annually for meeting up their requirements in respect of fuel, thatching grass, roots, leaves, fencing material, etc. (iv) The artisans had to pay special dues for articles of nistar required in connection with their individual occupation: Blacksmith - Rs. 2; Chamar, dhobi, carpenter, kumbar - Re.1; Sonar - Ans. 8.

Forest Utilization: One of the distinctive features of the Forest Administration in the Central Provinces was the great increase in departmental working in the place of sale of standing trees to contractors. The initial impetus was given by the lack of contractors with sufficient capital to work the more distant and valuable forests. The local contractors often defaulted on their contracts.

The first area in which departmental working was introduced was Allapalli in South Chanda. The departmental working commenced in 1922. The logs were hauled to the well-constructed road by elephants or buffaloes and carted to Ballarshah Depot, some 125 kilometres or so. A new sawmill was erected at Allapalli, where part of the logs were sawn. From 1931 transport by motor lorries was introduced, which reduced much of the employment provided by the bullock-cart transport in the slack agricultural season.

The timber was graded, measured and disposed of by periodic auctions at Ballarshah. Merchants from Bombay,

Delhi, Calcutta, Madras and other major cities competed at the auction. During the War years large quantities of timber were also supplied to the Defence Department. There was a marked increase in the export of charcoal to Bombay. By 1941 about 50,000 tons of charcoal were exported from the Central Provinces Government and Malguzari forests; this represented about 45 per cent of the consumption of Bombay City. There was a three-fold increase in this quantity during the War period.

From 1940-1945 all the work on the working plans was suspended as the Department had to concentrate on the war supplies. By 1945, the preparation of new plans was due. The economic position of the Department had improved as large developmental funds were built up from the surplus revenue earned during the war period through war supplies. (Stebbing, IV, 1962, pp. 257-259.)

National Forest Policy

After independence the National Forest Policy was formulated in 1952. It was proposed to classify forests on a functional basis into protection forests, national forests, villages forests and treelands. The policy laid emphasis on (a) weaning the tribal people from shifting cultivation, (b) increasing the efficiency of forest administration by having adequate forest laws, (c) controlling grazing in the forest, (d) providing adequate facilities for the management of forests and for conducting research in forestry and forestry product utilizations, and (e) the need for promoting the welfare of the people.¹⁰ The policy in relation to the needs of the people was, however, quite restrictive. It was viewed that (i) even though the village communities in the neighbourhood

¹⁰ For details vide Report of the National Commission of Agriculture, Part IX, Forestry, (1976, Government of India, New Delhi) pp. 16-36.

of a forest will make a greater use of its products, it should in no event be permitted at the cost of 'national interests'; (ii) the scientific conservation of a forest inevitably involved the regulation of rights and the restriction of the privilege of user depending upon the value and importance of the forest; (iii) while, therefore, the needs of the local population must be met to a reasonable(!) extent, 'national interests' should not be sacrificed because they are not directly discernible nor should the rights and interests of future generations be subordinated to the improvidence of the present generation.

Thus, in the name of 'national interest' emphasis was put on the 'productive forest' i.e. the forests were to be exploited for the supply of raw material to the industry on the one hand, and on the other hand large forested areas were destroyed for the construction of major dams, mining and industrial complexes, and related works. At the same time, the 'customary rights' traditionally enjoyed by the people that were turned into 'rights and privileges' by the British were reduced to 'rights and concessions' by the Indian Government. The New Policy put restrictions on peoples' rights in a variety of ways: For example, the concessions as regards release of forest land for cultivation were withdrawn (b) fees were introduced for grazing and grazing was sought to be kept to the minimum, (c) the supply of villagers' need from the outlying areas of reserved forests was disallowed, (d) control was applied to the private forests of the tribals.¹¹

Regulation of Forests in Chanda District

While preparing the working plan for the Allapilli-Pedigundam ranges of South Chanda for the period 1946-47 to

¹¹ For detailed discussion of forest policy vis-a-vis tribals, see, Report of the Scheduled Areas and Scheduled Tribes Commission, Chairman U.N. Dhebar, (1961, Government of India, New Delhi), Chapter 12.

1960-61, the objectives of management were stated as:

- (i) To manage the forest as a High Forest with special regard to the silviculture of teak with the object of producing large sized timber.
- (ii) To manage the forest in the hilly areas as protection forests.
- (iii) To satisfy all local demand for forest produce and conserve as far as possible those tree species which produce edible fruits and flowers for the benefit of the aboriginal population in times of scarcity.
- (iv) To maintain a judicious mixture of miscellaneous species with teak in the growing stock and a suitable understorey to protect the soil and to improve the density of the stocking of the regenerated woods.

Even though the stated objective was to satisfy the various needs viz. (a) production, (b) protection, (c) peoples' needs the modus operandi for the same was not spelled out. Historically, the organization and orientation of the Department had been so moulded as to restrict 'the rights' of the people and to increase 'the revenue' of the Department through commercial exploitation of the forest stock. It must be noted that the process of cutting and removing commercially valued trees amid dense foliage and on delicate soils of the tropical forests wreaks far more destruction of vegetation and wildlife than the bare statistics of extracted timber would suggest. No changes in the rules and regulations and operational methods were effected in view of the objectives (b) and (c) stated above. In fact with the development of roads more and more areas which were earlier 'protected' due to inaccessibility were opened up for commercial exploitation.

Position of Private Forests

With the enforcement of the Madhya Pradesh Abolition of Proprietary Rights Act of 1950 (Act I of 1951) the ownership of the forests in the zamindari areas got transferred to the State Government. Indiscriminate felling was spurred by the declared intention of the Government to abolish zamindari and malguzari rights. The proprietors tried to make as much money by exploiting the forest wealth as they could before their rights were abolished. There was reckless felling and enormous wastage of valuable timber. In Chandrapur Circle, private forests extending over some 11163 sq.km. were taken over by the Revenue department in 1951 and subsequently these were handed over to the Forest Department. In 1954 nistar officers were appointed to enquire into the rights and propose Wazib-ul-urz and Nistar Patrak for each village. In 1955 part of these forests were declared as protected forests and in 1959 the rest were included under protected forest. There were certain leases like the lease to Ballar Shah Timber Syndicate (for the period 1-1-1947 to 30-9-1959) for exploitation of hardwood species, or the lease for exploitation of tendu leaves; these "rights" remained operative after the take over of the forests by the Government. The loyalty was as small as 4 Ans. per cubic foot of timber that was measured at the depot.

In 1956 it was decided to prepare working schemes for the management of all the ex-proprietary forests transferred to the forest department. Work on survey, demarcation and preparation of maps was started. Most of the Working Schemes set apart forest areas for Nistar by constituting 'Minor Forest Working Circle' to restrict felling of trees for Nistar to specific areas under the working circle and to prevent indiscriminate grazing over the area. 'Rights of Nistar' i.e.

the right of inhabitants of the villages in the protected forests of removing therefrom forest produce for their bonafide use, either free or on payment as provided in the Nistar Patrak were regulated by the Bombay Protected Forests (Vidarbha) Rules 1958. (Details in Statement II.)

It was stipulated that all forest produce removed from a protected forest shall be covered by a pass issued by the person duly authorized in that behalf. According to the scale prescribed by the Government, 30.75 hectares of forest area per 100 cattle is to be set aside for grazing. From the same area, small timber for bonafide use is permitted by felling trees upto 60 cm except teak, bija, haldu, fruit trees, etc. With a view to constitute all surplus forest area as 'Reserved Forest', forest settlement work as required by the Indian Forest Act was initiated.

Forest Area: In 1951 the area under Reserved Forests in Chandrapur district was 6400 sq.km.; by April 1961 the area of Reserved Forests increased to 7135 sq.km. and the area under protected Forests was 11163 sq.km. (Table 3.2). The total area under the control of the Forest Department was 18298 sq.km. and an area admeasuring about 556 sq.km. was under unclassified forests.

Table 3.2 : Area Under the Control of Forest Department in Various Divisions of Chandrapur District (1961)

Division	Total Forest area (1961) in sq.km.	Reserved Forest area as on 1 April 1961 in sq.km.
South	6224	920
West	2836	2165
East	4439	1090
Central	4043	2204
Rajura	756	756
Total	18298	7135

In 1971 the area under Reserved Forests was 7238 sq.km. and that under Protected forests was 10713 sq.km. (Table 3.3). The forest area of the district under the charge of the forest department is divided for administrative purposes, into 6 divisions with 41 ranges, with the headquarters at Allapalli for the three Southern divisions and at Chandrapur for the Central, West and East Divisions (Table 3.4). The forests are considered commercially the most valuable forests in the State. The 'teak' with a reputation for decorative veneer in large sizes and an important construction timber is the most valued tree.

Table 3.3 : Forest Area in Chandrapur District and Maharashtra State (1970-71)

	(Area in sq.km.)		
	Chandrapur District	Maha-rashtra State	Share of Chandrapur in Maharashtra (per cent)
Geographical Area*	25834	307684	8.4
Forest Area (Total)	18507	62311	29.7
Forest Department:			
Reserved Forests	7238	36914	19.7
Protected Forests	10713	16616	64.5
Unclassed Forests	-	2661	-
Total	17951	56191	31.9
Revenue Department:			
Reserved	-	2779	-
Protected	-	187	-
Unclassed	556	3154	17.6
Total	556	6120	9.1

* By village papers.

Table 3.4 : Administrative Divisions of Chandrapur Forest Circle

Forest Division	No. of ranges	Headquarters	Area under working plan (1978-79) in sq.km.
South Chanda	6	Allapalli	2752.66
Allapalli	7	Allapalli	2641.66
Bhamragad	5	Allapalli	3824.65
Central Chanda	6	Chandrapur	1233.58
West Chanda	7	Chandrapur	2415.80
East Chanda	10	Chandrapur	4428.39
Chandrapur Circle	41		17296.74

Forest Composition

(1) Allapilli-Pedigundam Ranges: The Forests of this range belong to the type 'South Indian tropical moist deciduous forest'.¹² Within the above type considerable local variations are observed depending on the nature of soil, topography, past treatment. The local types may be distinguished: (1) Teak (2) Mixed Forest.

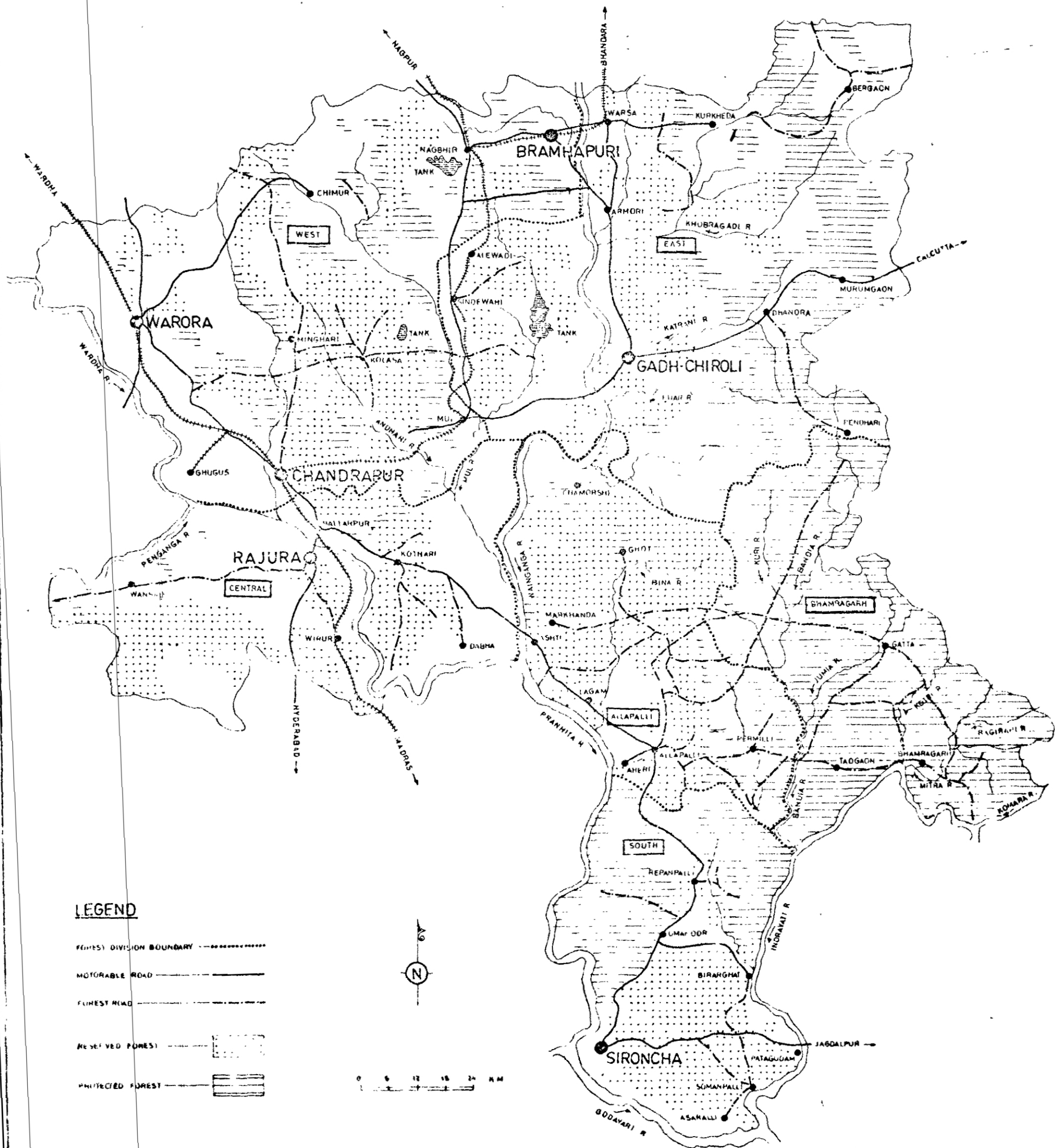
1) Teak - (a) Plains - It is characterised by high percentage of teak. The main associates of teak are ain, dhaura, shisham, haldu, lendia, semal, kusum, mowai, karam, bija, tendu; in the understorey which is incomplete are found garadi, gholi, palas, bamboos. The undergrowth consists of Petalidium barlerioides, other acanthaceous shrubs and Triumfetta rhomboidea.

2) Mixed forest type - The composition varies considerably and the density is poor with blanks. The main species are ain, tendu, garadi, rohan, mahua, dhaura, salai,

¹² For details see, Gazetteer of India, Maharashtra State, Chandrapur District (1973, Revised edition, Bombay), pp. 43-46.

FORESTS OF CHANDRUPUR DISTRICT

II



LEGEND

- FOREST DIVISION BOUNDARY ————
- MOTORABLE ROAD ————
- FOREST ROAD ————
- RESERVED FOREST [Dotted pattern]
- PROTECTED FOREST [Horizontal lines pattern]



0 6 12 18 24 M

achar, khair, gongal, kusum, bhirra, mokha, palong, ghont. Along the nala banks, bija, shisham, suria, haldu, anjan occur. The undergrowth is usually grassy. Natural reproduction of syria, lendia, tendu, garari, bija, shisham is noted to be satisfactory.

Reproduction of teak occurs only under favourable conditions viz. (a) sufficient high shade to keep down undergrowth (b) not too much underwood viz. garadi, bamboo (c) good drainage so that grass growth is checked.

(ii) North Chanda: In this region about 100 trees and shrub species are common and at least twenty may be found in any locality. In moist fertile places trees may attain a height of 90 feet but the usual height is under 50 feet. Under the main canopy formed of ain, garadi, dhawra, avala, lendia, tendu, mahua, rohan, bhirra, salai, is the second storey of bamboo, Gardenia lucida, Calycopteris flaribunda and other species. Woody climbers are found everywhere. On laterite soils garadi is the most common tree, on hilltops salai, gongal, bhirra are typical associates, on black loam soils, ain, hiwar, phetra and bael are the usual species. Koha is never found far from rivers. In unprotected forest, teak is at disadvantage as it is exploited more than any other species. Reservation and fire protection therefore benefit teak more. In forests with dense bamboo shade, teak seedlings alone can live in the restricted light and when such forests are clear-felled the most common regrowth is that of teak.

The composition of the Chanda Forests worked out on the basis aerial photographs and ground sampling given in the Report of Preinvestment Survey (Government of India) is presented in Tables 3.5 and 3.6. In South Chanda ain predominates, the other major species being tendu, mahua,

dhawda, garadi and teak; in North Chanda the important species are ain, avala, tendu, dhawada, mahua, garadi and bija.

Table 3.5(A) : Major Species in the Forests of North Chanda

Sr. No.	Species	Volume per hectare in cubic metre	Per cent share of each species in the total
1.	Cleistanthus Collinus (Garadi)	4.538	8.05
2.	Terminalia Tomentosa (Ain)	7.412	13.15
3.	Emblica Officinalis (Awala)	5.720	10.15
4.	Diospyres Melanoxylon (Tendu)	5.404	9.59
5.	Madhuca Longifolia (Mahua) Var-Latifolia	4.997	8.87
6.	Anogeissus Latifolia (Dhawada)	4.416	7.84
7.	Pterocarpus Marsupium (Bija)	3.988	7.07
8.	Boswellia Serrata (Salai)	2.309	4.10
9.	Lannea Coromandelica (Shemat)	1.716	3.05
10.	Tectona Grandis (Teak)	1.402	2.49
11.	Lagerstroemia Parviflora (Lendi)	1.182	2.10
12.	Rest of species	13.260	23.54
Total		56.344	100.00
			= 6809.84 sq.km.

Table 3.5(B) : Major Species in the Forests of South Chanda

Species	Volume per hectare in cubic metre	Per cent share of each species in the total
1. Cleistanthus Collinus (Garadi)	5.182	7.68
2. Terminalia Tomentosa (Ain)	11.937	17.68
3. Diospyros Melanoxylon (Tendu)	6.870	10.18
4. Madhuca Longifolia (Mahua) Var-Latifolia	5.892	8.73
5. Anogeissus Latifolia (Dhawada)	5.748	8.51
6. Pterocarpus Marsupium (Bija)	3.222	4.77
7. Boswellia Serrata (Salai)	3.330	4.93
8. Lannea Coromandelica (Shemat)	1.346	1.99
9. Tectona Grandis (Teak)	5.083	7.53
10. Lagerstroemia Parviflora (Lendi)	1.368	2.03
11. Xylia Xylocarpa (Surya)	1.604	2.38
12. Rest of species	15.924	23.59
Total	67.506	100.00 = 9028.66 sq.km.

Forest Management

The area under reserved and protected forests in Chandrapur Circle was 17297 sq.km in 1976-77. Both are covered by working plans and working schemes¹³ prescribing systematic management. The objectives of management are: (i) to conserve site conditions and improve these as far as possible, (ii) to meet the local bonafide requirement of the people, and (iii) to aim at progressively increasing yields.

¹³ Details given in this section are obtained from the Working Plans and Working Schemes for the various Ranges/ Divisions of North and South Chanda prepared by the Forest Department.

FORESTS OF SOUTHERN CHANDRAPUR

Forest types and Bamboo areas

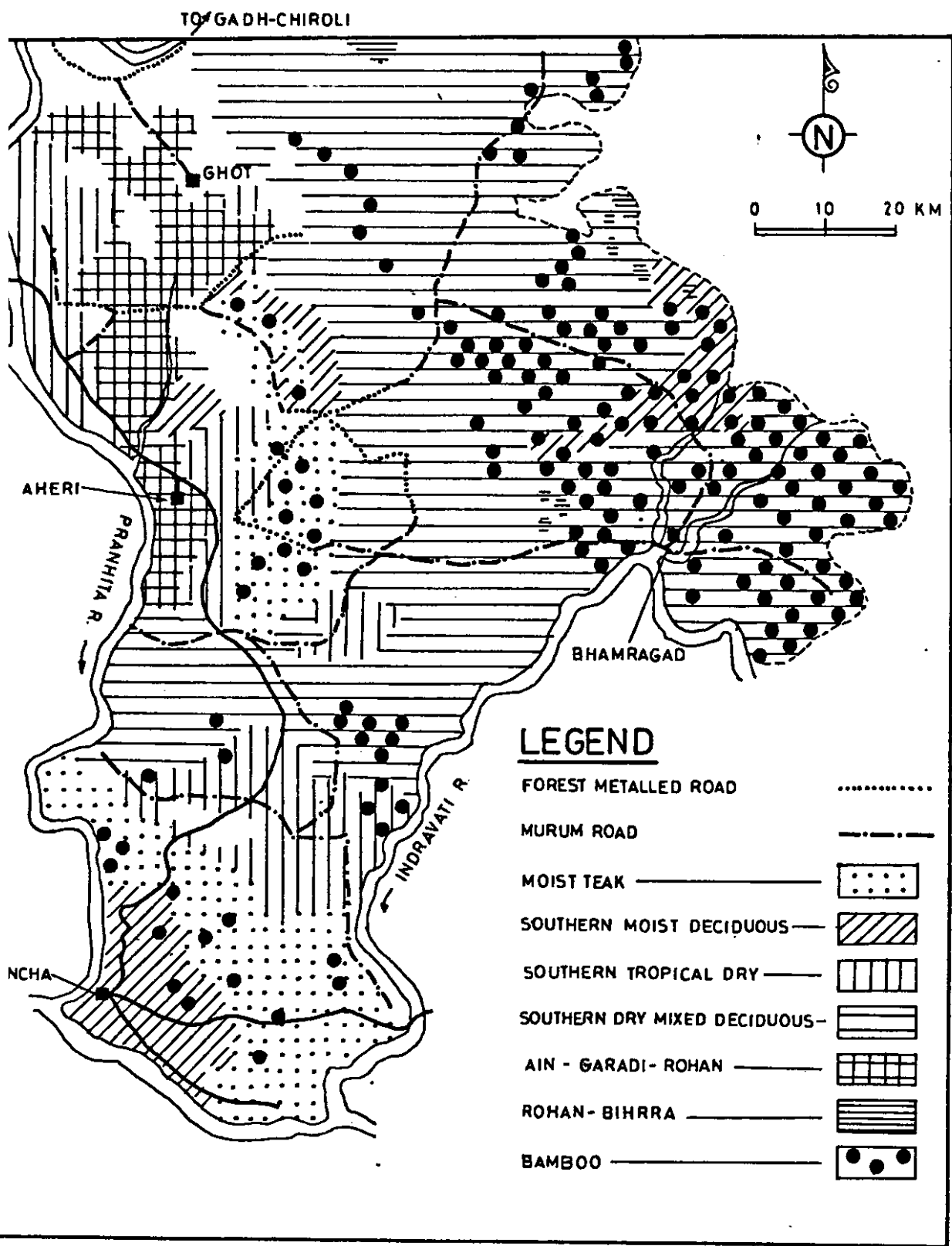


Table 3.6 : Average Number of Stems of Important Species in Forests of South Chanda

	(No. of stems per hectare)			
	High density forest	Medium density forest	Low density forest	Average
Area (Per cent)	54.4	31.3	14.3	
Species:				
Cleistanthus Collinus	71.4	58.2	23.3	60.3
Terminalia Tomentosa	44.5	40.6	19.1	39.6
Diospyros Melanoxylon	35.1	31.5	13.1	30.8
Anogeissus Latifolia	30.2	24.8	14.3	26.2
Tectona Grandis	19.5	10.5	10.7	15.4
Lagerstroemia Parviflora	13.6	10.4	5.9	11.5
Xylia Xylocarpa	12.7	8.8	10.3	10.9
Buchania Lanza	12.6	9.5	7.3	10.9
Pterocarpus Marsupium	12.1	9.6	7.8	10.7
Madhuca Longifolia	9.4	10.5	6.8	9.4
Emblica Officinalis	8.6	6.3	3.7	7.2
Boswellia Serrata	7.5	9.1	17.2	9.4
Lannea Coromondelica	6.5	5.3	4.0	5.8
Chloroxylon Swietenia	5.7	8.9	10.3	7.3
Acacia Catechu	9.6	7.0	8.4	5.9
All Species	359.4	301.5	214.8	320.1

The area worked under various schemes is indicated in Table 3.7.¹⁴ As compared to the 1947 position, the working plans appear to be conservative. Of the total area worked in 1975-76, about 16 per cent was worked under coppice with reserve, 13 per cent under conversion to uniform, 6 per cent

¹⁴ The data presented in Tables 3.7 to 3.16 are obtained from (i) the records of the Forest Department, Maharashtra State and (ii) Annual Reports on Administration, Silvicultural Research and Utilization Activities and Economic Research, Forest Department, Government of Maharashtra.

FORESTS OF SOUTHERN CHANDRAPUR

Present Stocking

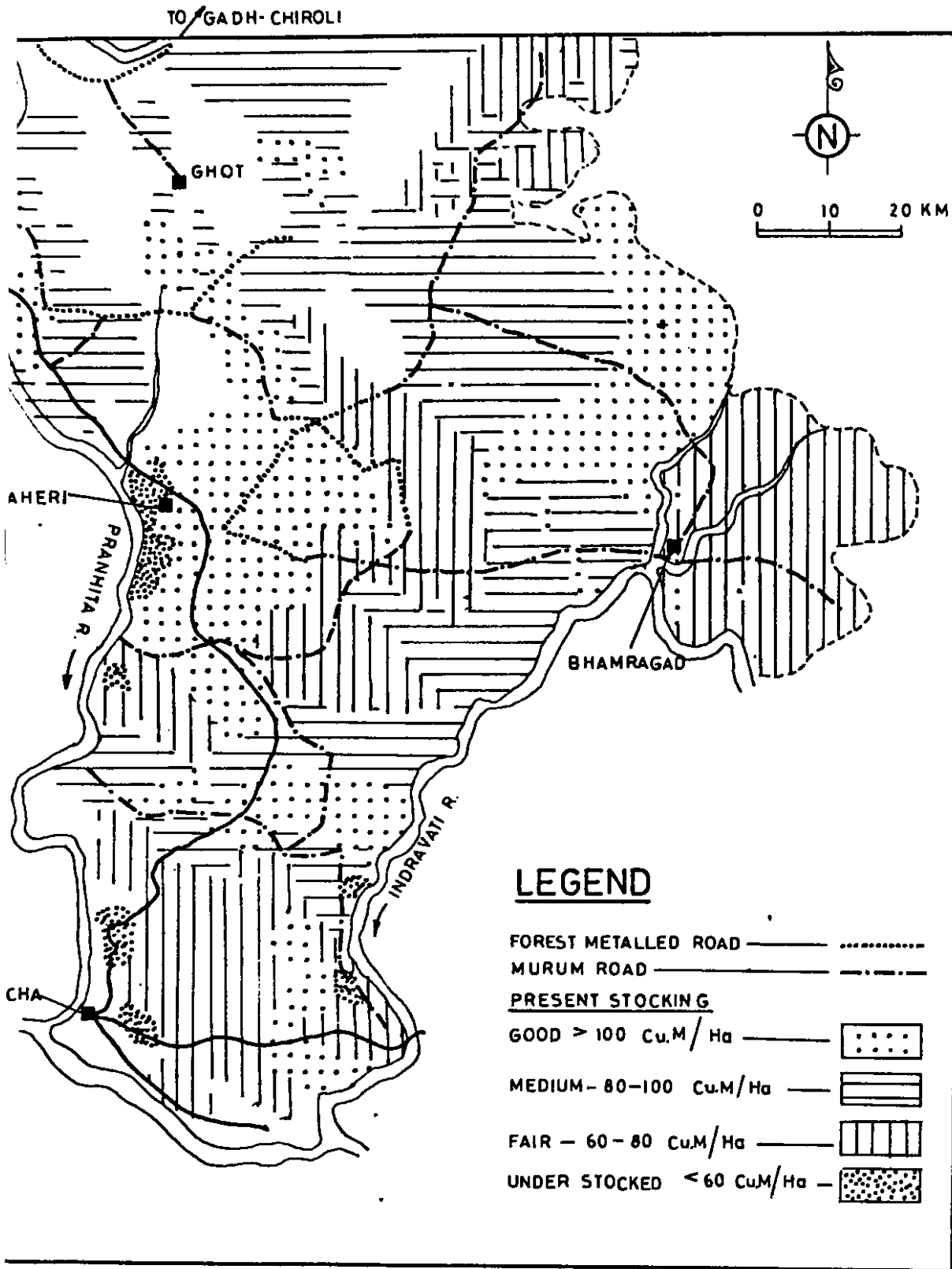


Table 3.7 : System of Working the Forests in Chandrapur

System of working	(Area in hectares)				
	1972-73	1973-74	1974-75	1975-76	1976-77
Selection-cum-improvement	10193	14418	16632	15850	29174*
Conversion to uniform	5569	-	5883	3132	1491
Clear-felling	324	1058	751	1615	1482
Coppice with reserve	4747	3192	3952	3851	10024
Other	1765	-	-	-	-
Total	22598	18668	27298	24448	42171*
Teak plantation by F.D.	-	-	1804	1380	977
Bamboo plantation by F.D.	-	-	25	-	-
Area clear-felled by F.D.C.	-	-	N.A.	2307	4671
Area put to teak plantation by F.D.C.	-	-	370	1728	3782

* Provisional.

F.D. = Forest Department.

F.D.C. = Forest Development Corporation.

was clear-felled and the rest was under selection-cum-improvement system.¹⁵ However, a major point of change in the recent years is the handing over of parts of forest lands to the Forest Development Corporation of Maharashtra (FDCM) for clear-felling. The details of this operation will be considered in the next section. Each working plan/scheme groups the forests into working circles each having a distinct silvicultural system.

Teak Conversion Working Circle: The aim is to convert the irregular teak forests into even aged stands ensuring

¹⁵ In 1946-47 coppice system accounted for 36 per cent and High Forest for 17 per cent, of the area worked in the Central Provinces and Berar.

sustained yield. Forests are divided into periodic blocks carrying trees of approximately similar age classes. The oldest block is taken up for clear felling and regeneration, either by relying on natural reproduction of teak or resorting to plantations and the blocks are closed for grazing for a ten year period.

Selection-cum-Improvement Working Circle: Trees of saleable timber species over certain exploitable girth are felled, in a specified proportion. Improvement fellings help the regeneration of economically valuable species and removal of dead, diseased and malformed trees. Natural reproduction is resorted to. A felling cycle of 20-25 years is adopted. Since felling is scattered over a large area exploitation turns to be expensive. The average yield per hectare is relatively small viz. about 3.0 m³ (Table 3.8). The coupes are closed to grazing for a period of five years.

Table 3.8 : Average Yield in Different Working Circles in Chandrapur District

Working Circle	Average yield per hectare		
	Timber (m ³)		Fuel-wood (m ³)
	Teak	Other	
Teak conversion			
Clear felling	9.5	4.5	6.5
Tending and thinning	4.5	4.5	
Selection-cum-improvement	2.0	1.0	3.5
Coppice with reserve	3 to 4		50

Coppice with Reserves Working Circle: Low quality miscellaneous forest with fairly high stocking and located close to markets are included in this working circle. Reserves of young trees of valuable species are retained, to

form a part of the future crop. The remaining is clear-felled. Reliance is chiefly on coppice regeneration, supplemented by seedling growth and reserves. The rotation is usually 40 years.

Plantation Working Circle: It comprises of better quality miscellaneous forests in accessible areas. Mostly pure teak is planted in these areas. -

Protection Working Circle: It includes hilly eroded and denuded areas. No fellings are prescribed.

Overlapping Working Circles: These overlap those exploited for bamboo, khair, semal. Natural regeneration is expected to restock the area. A three year felling cycle for bamboo and 20 year for other species is adopted.

A working circle is sub-divided into a number of felling series which are distributed over the working circle resulting in scattered operations. This helps people obtain their requirements within reasonable leads and enables department to procure labour more conveniently. It however makes exploitation more expensive.

Methods of Forest Exploitation

The main agencies operating in the Chandrapur circle for the exploitation of timber and fuel-wood are the Forest Department, Forest Labour Cooperative Societies (FLCS) and forest contractors. The number of coupes sold and worked by the different agencies is given in Table 3.9.

Forest Department: After marking and enumeration of the trees to be felled, felling is done either by the logging units or by the concerned Range Forest Officer. Modern logging methods and partial mechanization has been introduced in the departmental working. Timber is extracted to jungle depots using tractors, elephants, bullock-carts. It is transported for sale, either to the central depot or timber depot at Ballarshah by departmental trucks or private haulage contractors.

Table 3.9 : Working of Forest Coupes in Chandrapur District according to Agency

Year	Coupes due for sale		Coupes worked by		Depart-mental working	Unsold or un-worked	FDB
	Curr-ent	Arrear	Contr-actor	FLCS			
1969-70	201	43	137	56	22	51	-
1970-71	198	42	70	62	77	31	-
1971-72	238	39	63	49	113	52	-
1972-73	194	52	70	48	44	84	-
1973-74	247	23	99	62	52	57	-
1974-75	254	21	43	55	104	63	8
1975-76	244	8	41	47	111	45	-
1976-77	281	13	59	47	150	28	-

Note: FLCS - Forest Labour Cooperative Society.
FDB - Forest Development Board.

The remaining wood is felled and made into stacks of 2 x 1 x 1 m and sold by auction.

FLCS: Annual coupes within their area of operation are allotted to the Forest Labourers' Cooperative Societies every year. The societies today are more or less reduced to departmental wings. After the coupe allotment they undertake only the felling work and that too under the supervision of Government officials. Carting and auction are effected by the Government. The society is reimbursed all the logging costs as per wage board rates. Of the net revenue realized [gross revenue minus (working expenditure + supervising officers' pay)] 80 per cent is retained by the Government and 20 per cent is given to the society. The society is obliged to use half of this amount for working capital and half for welfare activities.

Forest Contractor: Standing trees in coupes or fuel-wood stacks are sold to forest contractors either by calling tenders or in open auction. A certain lease period is fixed for extraction and removal of material from the coupe area.

Leases: Bamboo areas have been given on long lease to Ballarpur Paper and Straw Board Mills on recovery of royalty for the quantity of bamboo removed on Air Dry Metric Ton (ADMT) basis. Bamboo is felled on a three year felling cycle from annual coupes laid in each division. The mills do the job of felling, extraction and transport of bamboo to the mill site.

Individuals: People collect forest produce for their use and for minor sales on payment according to the rates approved by the Government. This generally includes small timber, fuel-wood, bamboo, grass, fruit, bark, gum, thorns.

Operating Agency: In the case of exploitation of timber the share of the Government was 53 per cent, that of private purchasers was about 23 per cent and that of Forest Labour Cooperatives 14 per cent in 1977-78. The timber obtained by the local people under 'rights and privileges' accounted for only about 0.3 per cent of the total production (Table 3.10). In the case of exploitation of bamboo, Government and the paper mills had about an equal share and the quantum under rights and privileges was less than one per cent. The estimated value of total forest produce given away free or at concessional rates by the Forest Department during the year 1978-79 was approximately Rs.23.5 lakh while the gross revenue of the Department was Rs.52 crore and the net revenue was Rs.23.5 crore.

Exploitation of Bamboo: It is estimated that the yield of bamboo on a sustainable basis is about one lakh tonnes in Chandrapur District. Ballarpur Industries Limited

Table 3.10 : Outturn of Major Forest Produce in Chandrapur District by Agency (1977-78)

Agency of Exploitation	Timber (000m ³)	Per cent	Firewood (000 tons)	Per cent	Bamboo per cent share in value
Forest Department	52.9	63.4	150.0	46.0	52.6
Purchasers	18.9	22.7	114.1	35.0	46.7
FLCS	11.3	13.6	57.2	17.6	-
Right and privilege holders and free grantees	0.3	0.3	4.7	1.4	0.7

is the major consumer of bamboo in Chandrapur. A small part of the produce is used by the villagers for fencing, housing, etc. The Buruds work on bamboos to make baskets, mats, etc. There were complaints that they can get the bamboos only at the Government depots, where they are not supplied with bamboos of right quality and maturity and their work suffers. The price charged to Buruds is also considerable, while the paper mills have been given the right to extract bamboo on a nominal royalty.

The Ballarpur Industries Ltd. has a daily capacity of 200 tonnes and a scheme to expand the capacity to 250 tonnes. The mill works on a three shift basis. The mill is permitted to obtain bamboo from specified areas of the district at stipulated royalty.

Royalty per tonne

- | | |
|---|--------|
| 1) Central Chanda
(Rajura division only)
Etapalli, Allapalli
(easily accessible areas) | Rs. 60 |
| 2) South Chanda
Bhamragad
(Hill areas) | Rs. 30 |
| 3) West Chanda
(old lease) | Rs. 15 |

The rates are subject to revision every five years. The quantity of bamboo obtained was as follows:

	1976-77 (tonnes)	1977-78 (tonnes)	1978-79 (tonnes)
Ballarpur Industries Ltd. (excluding 1947 agreement)	75128	70575	70508
Shirpur Paper Mills	1003	4083	8335

About 75000 to 80000 tonnes of bamboo and 60000 tonnes of hardwood obtained from Chandrapur circle are consumed by the paper mills. The paper mills exploit the bamboo through their managers who recruit labour and make payment on a piece rate basis. The bamboo is transported by bullock-cart or truck according to the quality of road. The rate per bundle of 100 bamboos was Rs.25 (1977) for cutting and tying the bundle. The work is available between the months of December and April. It was estimated that in 1978 about 2.8 lakh mandays of work were provided in the bamboo cutting work.

Forest Produce: The outturn of timber and fuel-wood from forests exploited by the Forest Department in Chandrapur district is shown in Table 3.11. In 1977-78, 83,000 m³ of timber and in 1978-79, 121,000 m³ of timber was extracted. Including the outturn of the FDCM the total timber production was of the order of about 1.8 lakh m³. The local need was estimated to be about 64 thousand m³ of poles and 27 thousand m³ of sawn log.¹⁶ However, the effective demand is likely to be much less, in view of the difficulties in obtaining timber; consequently the needs for renewal often remain unsatisfied. The fuel-wood production of the Forest Department was 567000 tonnes in 1978-79. Including the exploitation by the FDCM

¹⁶ On the assumption that a wooden plough lasts for 3 years and needs 0.0566 cubic metre of timber per plough; bullock-cart (expected life 10 years) needs 0.5 cubic metre of timber and for house (10 year life) construction 1.76 cubic metre timber would be needed per house, the total need for the rural population of the district has been worked out.

Table 3.11(A) : Outturn of Major Forest Produce in Chandrapur District by Division (1978-79)-F.D.

Division	Timber in 000m ³	Fuel-wood in 000 tons
East Chanda	12.90	334.44
West Chanda	5.02	42.71
Central Chanda	7.81	45.69
South Chanda	40.72	70.80
Bhamragad	19.62	22.30
Allapalli	34.93	51.42

Table 3.11(B) : Outturn of Major Forest Produce in Chandrapur District for the Period 1974-75 to 1978-79-F.D.

Year	Timber in 000m ³	Fuel-wood in 000 tons
1974-75	83.46	170.58
1975-76	72.25	213.30
1976-77	79.94	250.65
1977-78	83.43	326.03
1978-79	121.01	567.42

the official figure of fuel-wood production was about 7.8 lakh tonnes. In addition villagers collect small branches, dried material from the forest area and obtain part of the fuel-wood from the village woods, etc. The estimated consumption of fuel-wood of the rural population of the district was about 3 lakh tonnes.

Minor Forest Produce: Under the provision of Maharashtra Minor Forest Produce (Regulation of Trade) Act, 1969, Government of Maharashtra handles the trade in tendu and apta leaves and regulates it by way of monopoly purchase and disposal of

leaves. The work of collection of leaves, handling, sorting, sales, etc., is carried out by a special organization viz. Tendu Circle with headquarters at Nagpur. In 1976-77, for tendu leaves 598 units were sold by tender, 39 by negotiation and 2 units were allotted to a cooperative society. The collection of tendu leaves was 5.33 lakh standard bags and that of apta leaves was 5421 quintal for the State as a whole. The sales realization was Rs. 4.70 crore and the expenditure was to the tune of Rs. 2.16 crore. About half of the units were in the Chandrapur circle. In Chandrapur, the gross value of sales of tendu leaves was Rs.2.60 crore and the net revenue amounted to Rs.1.40 crore. The work of collection of tendu lasts for about one month around April. Men, women, children participate in the collection of leaves. A bundle of 80 leaves is tied and the rate was Rs.3.50 for 100 bundles. The estimated mandays of work in a season was 30 lakh. It was reported that considerable damage is done to the forest during the activity of collection of tendu leaves. There is a tendency to cut branches, to facilitate the work of plucking the leaves. Because of the belief that the growth of young leaves is luxuriant if the area is fired, the collectors often set fire, resulting in a damage to young seedlings, shoots, etc.

Forest Revenue and Expenditure

Information about the revenue collection from the various sources is presented in Table 3.12. For the State as a whole, timber accounted for about 60 per cent of the total forest revenue, bidi leaves for 16 per cent, firewood for 11.5 per cent and bamboo only for 4.6 per cent. In Chandrapur district, the respective shares of timber and bidi leaves were 45 and 28 per cent. The revenue from the minor forest produce like grass, gum, etc., is negligible. The net receipts in Chandrapur district were Rs.5.57 crore .

Table 3.12 : Revenue from Forest Produce by Type of Produce (1976-77)

Produce	Maharashtra State		Chandrapur Circle	
	Revenue (Rs.lakh)	Per cent	Revenue (Rs.lakh)	Per Cent
Timber	1754	59.5	415	45.3
Firewood	340	11.5	102	11.2
Bamboo	135	4.6	79	8.6
Bidi leaves	470	16.0	260	28.4
Grass and Grazing	32	1.1	3	0.3
Gum	17	0.6	7	0.8
Other	198	6.7	49	5.4
Total	2946	100.0	915	100.0

in 1976-77 (Table 3.13). There are considerable year to year fluctuations in the total revenue receipts. This is because of the dues with the contractors which may pile up in one year and are recovered in a subsequent year. The sudden increase in 1970-71 is due to the monopoly procurement of tendu leaves and the rise in 1976-77 is due to the revenue from clear-felling of the forests by the FDCM.

In the total departmental expenditure, about 35 per cent is absorbed by administration, 35 per cent is accounted for by forest exploitation and the rest by regeneration work, survey, settlement, revision of working plans, soil conservation work, roads, bridges and building construction, etc. It was estimated that in 1976-77 the total payment to labour was about Rs. 50 lakh or about 15 per cent of the total departmental expenditure. The mandays of work come to about 16 lakh (excluding FDCM work). The daily wages in force in 1976-77 were Rs.3 to Rs. 4 for adult men, Rs.2.75 to Rs.3.25 for adult women and Rs.2.25 to Rs.2.75 for non-adults.

(Table 3.14)

Table 3.13 : Revenue and Expenditure of the Forest Department for Chandrapur Circle

Year	(Rs. lakh)		
	Total Revenue	Total Expenditure	Surplus
1960-61	79.4	34.7	44.7
1961-62	97.3	30.9	66.4
1962-63	195.9	50.7	145.2
1963-64	160.4	66.2	98.7
1964-65	164.9	79.5	85.4
1965-66	205.0	122.1	82.9
1966-67	215.0	122.4	92.6
1967-68	276.2	121.2	155.0
1968-69	257.0	130.0	127.0
1969-70	209.0	138.0	71.0
1970-71	325.0	181.0	144.0
1971-72	470.0	263.0	207.0
1972-73	619.0	302.0	317.0
1973-74	527.0	289.0	238.0
1974-75	677.0	320.0	357.0
1975-76	710.0	324.0	386.0
1976-77	915.0	358.0	557.0
1978-79	1252.0	523.0	729.0

The department completes some of its work under the Employment Guarantee Scheme. The activities included are plantation, afforestation, soil conservation, departmental exploitation, improvement and maintenance of roads, etc. During the year 1976-77, an expenditure of Rs.2.39 crore was incurred on forestry work under this scheme. In Chandrapur circle the amount spent under the scheme was Rs.36.48 lakh.

Table 3.14 : Wage Rates in Chandrapur Forest Circle (1977-78)

(A) Felling of Trees: Piece Rates in Rs.

Breast Width	With saw (100 trees)	With axe (100 trees)
20 to 30 cm	10	8
31 to 45 cm	18	15
46 to 60 cm	25	20
61 to 75 cm	38	25
76 to 90 cm	50	35
91 to 105 cm	70	50
106 to 120 cm	90	70
121 to 135 cm	145	105
136 to 150 cm	170	135
Above 150 cm	265	205

(B) Transportation by Bullock-cart

Distance	Rate
0 - 5 kms	Rs.15.25 per m ³
5 - 30 kms	Rs.1.75 per m ³ per kilometre

(C) Daily Wage Rates

	8 hours Rs.	6 hours Rs.
Heavy unskilled work (men)	4.00	3.10
Light unskilled work (women)	3.25	2.50
Non-adults below 18 years	2.50	2.00

Various forestry works are undertaken by the department under the Tribal Sub-Plan. The works include afforestation work, nursery establishment, forest roads, nature conservancy, construction of wells, etc. In 1976-77 total amount of Rs.40 lakh was spent under the Tribal Sub-Plan for Chandrapur district; the break of the amount spent is given in Table 3.15.

Table 3.15 : Forest Schemes under Tribal-Sub-Plan in Chandrapur District

Nature of work	Revised budget provision 1978-79 (Rs.lakh)	Actual expenditure (Rs.lakh)	Estimated percentage of wage expenditure in total expenditure
1) Establishment of Central Nursery	1.25	1.15	60
2) Plantation of GUT	3.00	2.91	98
3) Plantation of quick growing species:			
a) Bamboo	1.36	1.28	98
b) Tree species			
4) Extension Programme: Nursery seedlings for supply to tribals	1.56	1.43	60
5) Forest protection	0.94	0.91	-
6) Development of fodder resources	0.52	0.49	98
7) Forest exploitation	4.64	3.60	-
8) Forest communication	17.13	10.45	70
9) Forest labour welfare	1.35	1.05	60
10) Nature conservation and wild life preservation	1.62	1.55	70
11) Mixed plantations on waste land, panchayat lands, Centrally sponsored schemes	0.23	0.23	98
12) Departmental working of coupes	24.22	20.43	70
13) Departmental collection of gum	4.18	3.57	98

GUT = General Utility Timber.

Changes in Area of Forests Under
the Forest Department

In 1970-71 the area of Reserved Forest in Chandrapur district was 7238 sq.km. and that of Protected Forest 10713 sq.km. while in 1976-77 the area under Reserved and Protected Forests was 6597 sq.km. and 10700 sq.km. respectively. The area under forest was reduced because of the release of some land for cultivation for the rehabilitation of the refugees from the erstwhile East Pakistan and the distribution of land for cultivation to the landless.

Pursuant to the recommendations of the High Power Committee appointed by the Government to go into the problem of land for landless cultivators, forest areas satisfying certain criteria relating to gradient, stocking and continuity to agricultural lands (after carrying out surveys in 1960 and 1965) were made available for cultivation and were transferred to the Revenue Department for distribution to the landless cultivators. However, the demand for culturable land still remained unsatisfied. District Survey Committees under the chairmanship of respective Zilla Parishad Presidents were, therefore, set up in 1970 to assess additional forest area that could be made available. Upto 1976-77 area of about 86,000 hectares was transferred for distribution to the Revenue Department.

	Land to be transferred (ha.)		
	Survey 1960	Survey 1965	1970
Chanda	2944	3279	16762
State	52618	19598	50036

Certain reduction in the forest area was reported to be due to the 'encroachments' on the forest lands. Government has been taking measures such as posting of protection staff, mobile squad, etc., to prevent encroachment. The recorded encroachment in Chandrapur is as follows:

	1973-74	1974-75	1975-76	1976-77
Area (ha.)	24530	34203	19802	19592

Attempts were made particularly in 1973-74 to remove the encroachment by destroying the crops and removing the cultivators in Manikgad region (Rajura taluka), and other districts of the State. There was a considerable resistant and a wide public debate ensued on the issue. Subsequently the Government had to agree to regularize the encroachments in certain districts. In Nashik and Thane districts encroachment on forest lands as were under cultivation for at least one year between the period 1955-56 and 1959-60 were regularized. In Chandrapur district, encroachments on forest lands prior to 31-12-1958 were regularized. There is a constant pressure to regularize the area brought under cultivation by issuing 'patta' to the cultivator, whereas the forest department has been carrying on the operation of 'eviction'. Consequently considerable hardship and uncertainty is faced by the cultivator. Under such conditions it is not possible to effect any improvements to get a better crop; nor does the land get cloathed with forest cover. For a resolution of this conflict a new approach to the organization and management of the forest lands is called for. This aspect will be considered in the concluding chapter (Chapter VI).

The other areas of conflict are in relation to grazing of cattle, cutting of bamboos and timber, collection of fuel-wood and minor forest produce. The Department has a machinery for the protection of forests. Mobile squads operate to detect forest offences and check nakas to detect illicit removal of forest products. In Chandrapur there are 5 mobile squads and 31 check nakas over an area of 18,000 square kilometres. All the 'illicit' operations cannot be detected with this machinery. In 1976-77, about 70,000

cases of offences were recorded for the State as a whole, of these 44,645 were of unauthorized felling, 11,039 of unauthorized grazing. In this area also there is a need to reconsider the approach keeping in view the needs of the local population and the conservation of forest resources. This issue will also be dealt with in Chapter VI.

Forest Development Board

In March 1969, the Government of Maharashtra set up a high power Forest Development Board, consisting of Minister, Deputy Minister, Secretary, Deputy Secretary of Forest Department, and Chief Conservator of Forests. It was stipulated that, "The Board will undertake felling, plantation, conservation and all other forestry activities in compact blocks of mainly miscellaneous forests and convert them within shortest period possible into valuable stands, yielding high returns."¹⁷ It was considered that the constitution of the FDB would help overcome the problems arising in the routine departmental working; for example, extensive jurisdictions of the existing administrative and protective charges, lack of adequate finances on a long term basis and the normal departmental procedures were some of the impediments which hampered concerted efforts necessary for the intensive working of selected potentially productive areas which could lead to enhanced forest revenue in Maharashtra.

The Board started its working in June-July 1969. About 96,000 hectares of forests area was set apart for the working of the Board with the object of converting these forests into valuable teak forests: 50 sq.kms. Reserved forest area from Central Chanda and 60 sq.kms. from West Chanda were handed over to the Board. The total area given to the FDB was 205 sq.kms. in the State as a whole.

17 For details see Annual Report of the Forest Development Board, 1969-70, pp. 48-49.

In view of the 'promising' experience of the pilot project under the FDB established in 1969, extension of teak plantation to interior areas was under consideration. "At this point, Ford Foundation consultants to the Planning Commission visited the FDB operations and also potentially productive areas of the south-eastern part of the Chandrapur district. The idea of preparing a detailed "Project Plan within a 'Sound' economic framework for the intensive development of this area caught the imagination of the Planning Commission and the Maharashtra Government. The Project Planning Organization (PPO) started functioning in May 1972. The Pre-investment Survey of Forest Resource was the information source on soils, forest types, species-wise volume of the growing stock and forest maps. The State Industrial and Investment Corporation of Maharashtra (SICOM) contributed a market study.

The project report entitled "Formulation and Economic Assessment of An Intensive Forestry Project in Eastern Maharashtra"¹⁸ concludes, "Several decades of Silvicultural experience show that man-made forests of high physical and economic productivity can be grown over most of region. ... The selection of alternatives, is based, on the one hand, on the current silvicultural knowledge with respect to the species suitable to the area and on the other, on certain economic assumption, when selecting among technical alternatives, the profitability rating is based on the cost-benefit analysis of a typical hectare for each of the alternatives. This rating is value at project level only if other things like infrastructural requirements, supervision of overheads,

¹⁸ The report was prepared by P.G. Sathe (Maharashtra Forest Department) and Eladio Susaeta (Planning Commission), and was brought out by the Ford Foundation, New Delhi in September 1973. (Hereinafter referred to as IFP Report.)

seasonal distribution of labour requirement and the like remain constant. Taking this assumption as legitimate, a rating based on an internal rate of return shows that pure teak plantations are the most profitable alternative at 50 year rotation. Yet since this alternative is only marginally more profitable than a mixed plantation of teak, bamboo and semal, but both biologically and technologically less desirable, the mixed forest alternative is selected for the project." The recommendation made was to begin with a conversion of 1000 hectares for the project year three and escalate progressively to 16,000 hectares by year 14 and subsequent. (IFP Report, 1973, pp. 121-122.)

So far as the demand is considered it is maintained that "High quality hard wood logs find ready markets in India and abroad". Sharp price increases of teak logs in recent years seem to reflect a growing scarcity. (From 1969 to 1972, the real saw log prices increased by about 20 per cent) and provide a ground to contend that demand cannot be considered a constraint for sawn wood production." (IFP Report, 1973, p. 124.)

The Report does not refer to any specific silvicultural studies that have been used as the technological input; the assumption made for pure teak are: Espacement 2 x 2 m standard, technique of planting and care during the first three years; Cleaning operation in the 4th year; survival expectation 70 per cent. Thinning cycle 7, 15, 25, 35; Final felling 50 years. Yield as per All India Teak site Quality III. (IFP Report, 1973, p. 58.)

Forest Development Corporation

In view of the recommendations of the Expert Team and the needs of finances on a large scale in the initial stages and of bringing further similar chunk of forests for conversion to valuable stands an autonomous corporation - Forest

Development Corporation of Maharashtra was established in April 1974. The area already handed over to the FDB was merged in October 1974 into FDCM. The total areas earmarked for the activities of FDCM amounted to 4211 sq.km. as follows:¹⁹

Circle	No.of divisions	Forest Area (sq.km.)
Thana	2	707
Nasik	3	918
Nagpur	3	734
Chandrapur	7	1852

The physical possession of forest area required for immediate operations was to be assigned to the FDCM from time to time. The areas transferred in the period 1969-70 to 1976-77 were as follows:

	Area transferred (sq.km.)	
	Up to 1975-76	Up to 1976-77
Thana	24.99	39.79
Nasik	28.71	35.83
Nagpur	235.31	235.31
Chanda	436.25	504.12
	<u>725.26</u>	<u>815.05</u>

The Forest Development Corporation started its operations in Chandrapur in 1974-75 with clear felling of the forests and plantation of pure teak. In 1974-75, an area of 370 hectares was put under pure teak plantation. The performance in the subsequent years was as follows:

¹⁹ The data given in this section were obtained from the head office of the Forest Development Corporation of Maharashtra.

Year	Area exploited (ha.)	Area planted (ha.)
1975-76	2307	1728
1976-77	4671	3782
1977-78	4310	3385
1978-79	2825	3836

The teak seedlings raised in the nursery are planted at 2m x 2m distance; about 2,500 seedlings are planted per hectare. For the first three years weeding is done. The expected performance is as follows:

	Trees thinned (No.)	Saleable (No.)
8th year - 50% removal	900	600
15th year - 50% removed	600	390
25th year - Selected thinning	200	200
40th year - Clearing	322	322

The clear felling of large forest tracts is bringing in huge revenues. In 1976-77 the receipts of the Government from FDCM amounted to Rs.7 crore. The operations of the FDCM are considered to be commercially successful, the success being based on eating up blocks of age-old forest reserves with the hope that in a distant future, these will be replaced by valuable teak forests that would fetch a net revenue of over Rs.25,000 per hectare as against a revenue of about Rs.3,000 obtained today.

Evaluation of Teak Plantation

The British introduced the system of clear-felling to raise teak plantations in the Peninsular India. At the time the forest cover in the country was relatively extensive and the population much smaller. Even then it evoked strong

protests from the local population as it imposed considerable hardship on the people. Yet during the 'seventies the same policy is being vigorously propagated, under the conditions when (i) there are no more extensive tracts of natural forests in the country as a whole, (ii) there are very extensive tracts of the so-called forest lands crying for reforestation, (iii) teak is more expensive than metal, hardboard and other functional alternatives. It is a pure 'luxury' timber. Blocks of lands with a good forest stand are being clear-felled to grow this luxury timber when there is a growing shortage of small timber, fuel-wood and the like to meet the daily needs of the masses of rural population.

This is justified on the profitability grounds. The Projections of profitability are made on the basis of certain assumptions regarding the growth and survival rates of teak. There is, however, little scientific data base to justify the assumptions. No systematic information base has been generated over time. Under the circumstances the limited available information is examined here to get some guidelines.

Survival Rates: The Central Evaluation Unit of the Forest Department carries out systematic evaluation of new teak plantations. The procedure for evaluation is as follows. Each plantation site called a unit is serially numbered and 25 per cent of the units are selected for systematic enumeration by randomization. For these sampling units, the intensity of enumeration is kept at 10 per cent. While enumerating the survival, height and girth measurements are recorded of every 20th plant. The remaining 75 per cent plantations are evaluated by ocular estimation. The survival and growth data are analysed to work out survival percentage, maximum and minimum and average heights and girths.

The teak plantations are raised at the interval of 6' x 6' and the number per hectare counts to 3,025 plants. The work of evaluation of plantation is envisaged to be carried out every 10 years. The results of the Evaluation Work carried out in respect to the plantations made by the Forest Department between 1961 and 1970 in west, central, east Chanda and Allapalli divisions are presented in Table 3.16. For Chandrapur district as a whole the successful plantations i.e. survival rate of 60 per cent and over, were reported in 40 per cent of the area examined, the partially successful plantations (i.e. survival between 30 and 60 per cent) accounted for 30 per cent of the area and failures were noted in about 30 per cent of the area. In Allapalli, the corresponding proportions were 36 per cent, 33 per cent and 31 per cent respectively. The reasons for failure were poor rains, soil not well suited (water logged or poor and shallow), fire, grazing, etc. The overall average survival rate came to only about 37 per cent.

Yield: As regards the yield, investigations on the teak plantations carried out in the Uttar Kannada district of Karnataka compare the actual versus projected yield of teak poles. The data for 25 forest ranges of the Kanara Circle indicate that the actual yield varied from 14 per cent to 51 per cent of the projected yield, the average being 33 per cent of the expectation.²⁰

The above findings indicate that the possible monetary gains of teak plantation are likely to be substantially lower as compared to the projections presently made.

Costs of Teak Plantation

(a) Imposing Privatisation on the Tribals: When the area

20 Forest Management in India: A Critical Review,
Madhav Gadgil, S. Narendra Prasad, Raut Ali (1982, C.T.S.
Indian Institute of Science, Bangalore, Mimeo.), p. 34.

Table 3.16 : Evaluation of Teak Plantation in Chandrapur District**(A) Distribution of Area Under Teak Plantation by Survival Rate**

Survival Rate (per cent)	West Chanda		Central Chanda		East Chanda		Allapalli	
	E	O	E	O	E	O	E	O
Over 60	44.6	34.4	53.8	62.0	42.9	48.9	36.6	15.7
33 - 60	36.9	48.1	18.8	25.9	38.0	40.6	32.7	37.1
Less than 33	18.5	17.5	27.4	12.1	19.1	10.5	30.7	47.2
Area under Plantation (Ha.)	158	647	245	540	106	578	653	1149

E - Plantations subjected to systematic Enumeration.

O - Plantations subjected to ocular Inspection.

(B) Distribution of Area Under Teak Plantation in Allapalli Division for Plantations subjected to Systematic Enumeration

Survival Rate (per cent)	Number of Plantations	Area under Plantation (hectares)	Per cent
Negligible	4	185	28.3
Upto 35	3	64	9.8
36 - 50	7	222	34.0
51 - 70	2	39	6.0
71 and above	5	143	21.9

(1852 sq.km.) earmarked in Chandrapur district for the FDCM is handed over the ratio of area taken by the FDCM and the area under Reserved Forests will work out to about 1:3. A quarter of the forest and that too the better quality forest is planned to be clear-felled. This means a serious loss to the people in terms of the valuable forest produce viz. mahua flowers, tendu and other fruit, char, birds and other game, grass and leaves, and fuel-wood. Even though this will not run into crores of rupees if estimated at the current market prices, the loss in terms of the human deprivation is severe since it means taking away a major source of sustenance of a population living at the margin of survival. Trees like mahua, tendu are particularly valuable in times of scarcity as they supply the people with food and the cattle with fodder. The increase in the money income due to the employment created in the forest work cannot compensate the loss, because the employment is created only for a short period viz. 3 to 4 years i.e. when the work of clear-felling and plantation is underway. Subsequently the work would shift to new sites not be within the reach of the people from a given village but the loss of the forest area in their vicinity will be permanent.

As the Dhebar Commission put, "The tribals have thought in terms of the forest as the provider of fruit, fuel, timber and labour and the Government has thought in technical and commercial terms. ... We feel that if a rational approach is made, it will be found that there need be no such conflict. ... The Forest Department, as a branch of government should consider itself responsible for the development of tribals as well as the forest areas. Development of the forest and the betterment of the tribals ... have to go hand in hand. ... This calls for a partnership rather than an exclusive approach which arises from the policy enunciated in 1892

and 1952 and the manner in which it has been implemented." (Dhebar, I, 1961, p. 135.)

(b) Luxury Timber versus Utility Timber: Another major question which is totally ignored in accepting the policy of clear-felling the forests followed by teak plantation is the problem of priorities in planning. Teak is obviously a luxury timber. The demand for teak is mainly confined to luxury buildings, furniture, etc., while in the low price constructions other timber or metal is being used. When there is a growing scarcity of timber needed for rural housing, of fuel-wood and fodder, should the plan give precedence to the social needs or to luxury commodities? It must be stressed that there is a symbiotic relation between agriculture and forestry and therefore forests and wooded tracts must be preserved, developed and used in relation to the interest of agriculture. The policy of growing great forests of large timber is against the interest of the masses. Their needs could be supplied by sapling poles and branches, by fruit and shade of trees that they and their cattle can get access to. It is much better to secure a triennial supply of shoots say for 50 years than to wait for 50 years to get at the close of which one single log as timber. The requirements of small timber for house construction, wood for making implements, and the major need of firewood must be met through the forest resources. In view of the fact that Maharashtra State is very poor in forest resource, the State must plan the use of its forests in view of the needs of her rural population. In fact, just as the Government recognizes the difficulties of the people in supplying themselves with water and has included the responsibility for the provisions of drinking water supply in the Minimum Needs Programme so also the supply of fuel should be recognized by the Government as their responsibility

and be included in the "Minimum Needs Programme". As Voelcker put it in 1893: "I regard the provision of fuel as the most potent means of maintaining prosperity not alone to the cultivator but to the State itself. If wood could be made to take place of dung for fuel we should soon come to realise that more wood means more manure and that more manure means more crops; and more crop means increasing revenue to the State." (Voelcker, 1893, p. 137.) At the same time it makes for the preservation of soil quality that would ensure the future fertility of the soil. It is unfortunate that the people are not able to combine to protect their interest. They passively bow to a policy necessitating abstention on their part and sacrifice the essentials of their very existence for an object incapable of benefiting even their descendants in any remote way. Who will profit by the teak plantation is obvious though how large the profit will be is quite dubious. Yet the government has accepted the policy of clear-felling large tracts of forests to grow teak plantations.

In formulating the forest policy, no consideration is given to the type of end-use but only the monetary profit to the Department is taken into account. Consequently, at present bamboo is being given to the paper industry at throw away prices on the plea that if the price is raised, much bamboo will remain unexploited. The possible uses of bamboo and the ways and means of using this versatile plant to its best advantage are not even thought about. To illustrate, bamboo can replace timber to a considerable extent. It is estimated that short length bamboo structures joined and kept together by small dimensional wood pieces and high tensile wire can take 300 kg./cm^2 stress while the corresponding figure for teak is 80 kg./cm^2 . The relative cost

of bamboo is substantially lower than that of teak.²¹ While teak is long maturing (about 40 years) bamboo matures in 5 years. Bamboo can be used on an extensive scale for building purposes and if appropriate methods for its exploitation, and processing are developed it need not be sold to the paper industry at throw away prices. At the same time, bagasse, agricultural waste and residual material from forests can replace bamboo as pulping material. Instead of burning bagasse as fuel, suitable application of solar energy in the sugar factory (which operates between November and May) needs to be explored. Thus if the forest management is not viewed in isolation, but considered in relation to the other sectors of the economy and the priorities and needs of the people, then a rational policy can be involved.

Ecological Aspects

The forests of Chandrapur are a mixed dry deciduous type covering an area with two major rivers, viz. Vainganga and Wardha, forming the water-shed of the region. The major balancing of the ecological factors has resulted in the present-day forests of Chandrapur. A few hills and these water-sheds support certain types of vegetation and specific kinds of animals. Both these life forces depend upon each other for the proper functioning of that environment, which intertwines with the water requirements, land gradients and climatic conditions.

The cutting up of mixed forests would have adverse effects on wild life. Trees like mango, jamun, tamarind, char, hirda, neem, pipal, banyan, and other Ficus species, zizyphus, grasses and a variety of other fruit bearing plants

21 For details relating to the above technological alternatives see paper by Dr. K.R. Datye (1983, Shankar Brahme Samaj Vidnyana Granthalaya, Pune, mimeo.).

support herbivores like monkey, bears, Nilgiri, deer, Barasinga, barking deer. Polyculture is desirable not only from animal point of view but also for keeping parasites and pests separated from the timber bearing plants.

A proper ecological survey of the region must be made before a decision is taken to destroy parts of the forest. This will include the observation of the forest plant wealth designating the extent of timber bearing plants, their water requirements, the kinds of trees in the mixed forest that support wild life and the effects of removal of trees on the dispersal of animals. The hydrology and drainage system may be affected if forests are cleared and exotic species are grown. It is necessary to study the forest and water wealth in all its aspects to project possible implications of human interference.

The clear-felled tracts are being replanted with teak plantation. Despite the silvicultural prescription that it is necessary to have 30 to 40 per cent of the other species in the growing stock to minimize the danger of outbreak of epidemic and to prevent deterioration of soil, the policy accepted is to go in for pure teak plantation. Teak being a soil depleter and not a soil improver there are long-run risks of soil exhaustion, lowering of water-table, changes in streamflows, etc., i.e. problems of ecological imbalance. However, no systematic studies from ecological point of view viz. effect of different mix on soil formation, checking of soil erosion and silting, regulation of streamflows, retention of minerals, etc., have been made which can form a basis before accepting pure teak plantations. In fact the experience so far indicates that the conversion of large-scale biologically diversified forests to monoculture run the risk of creating an ecosystem that is exceedingly vulnerable to disease and insect infection, and can also trigger intensified soil deterioration.

In view of the serious lacunae in existing knowledge on the possible ecological impact of the present strategy of going in for teak plantation and its intergenerational welfare consequences and particularly because of the irreversibility of the action (clear-felling) and lack of knowledge of values to be placed on the uniqueness of the pristine sylvan tract and the hazards of economic valuation, particularly under the conditions of highly skewed income distribution, the present departmental policy appears to be highly short-sighted. Since forest is viewed as a revenue yielding stock, the approach is to maximize the static supply gains, and in the cry ~~for~~ for 'great timber' the policy of clear-felling (which yields huge revenue from the existing stock) and teak plantation is being pursued. It is high time that the government awakens to the long-term needs of the nation and gives up the short-sighted view of looking upon the forests mainly as a cash yielding resource, and formulates the policy with due consideration to the question of ecological balance, sustained agricultural growth and the forest resource based needs of the people.

STATEMENT IRates Prevailing in 1927 in Central Provinces for
Obtaining Different Types of Forest Produce

For firewood, the licence fee was Ans.8 per cart-load wherever the system of rated passes existed. Where departmental exploitation was taking place, the felled material was sold directly to the consumer, the incidental charges and costs of establishment being added to the royalty.

For bamboo the rates charged were -

	Rs.As.Ps.
Karkas	
Cartload	1- 4- 0
Headload	0- 1- 6
Bamboo -	
Green or dry per 100	
Outsiders	4- 8- 0
Residents	2- 8- 0
Green per cartload	3- 0- 0
Residents	
Dry per cartload	5- 0- 0

At the time the duty in zamindari areas was 8 annas per 100 green bamboos. The cost of 100 bamboos from government forest came to Rs.4-8-0 (Royalty Rs.2-8-0 + cutting charge Rs.2-0-0). The market rates were Rs.4 to Rs.7 per 100 bamboos according to distance of the market.

For timber and minor forest produce the following rates were operative.

Timber 48" and under per cartload	3-4-0
Timber 24" and under per headload	0-2-6
Mahua, Toti and edibe fruit - <u>kawar</u> load	0-1-3
Fodder grass - <u>kawar</u> load	0-1-6
Thatching grass - headload	0-1-6
Leaves for dyeing and tanning - <u>kawar</u> load	0-3-0

Grass taken before 31st December was considered fodder grass and was charged Ans.8 per cartload and taken thereafter considered thatching grass and charged Re.1 per cartload.

Grazing -

	Privileged		Ordinary		Commercial	
	Buffa- loes	Oxen	Buffa- loes	Oxen	Buffa- loes	Oxen
Government rates	0-4-0	0-1-6	0-12-0	0-6-0	1-8-0	0-12-0
Malguzar (average)			0-12-0	0-6-0		

STATEMENT II

Statement Showing the Rates for Different Items of Forest Product for NISTAR for Sale of Rates Passes

Particulars of produce	Rates
	Rs.As.Ps.
Bamboos	
Karka per cartload (for residents)	0- 9- 0
Karka per cartload (for outsiders)	1- 0- 0
Green bamboos	
Per 100 (for resident)	0- 8- 0
Per 100 (for outsiders)	2- 0- 0
Per cartload	0- 8- 0
Katang bamboos	
Per 100 (for cultivators)	2- 0- 0
Per 100 (for outsiders)	4- 0- 0
Bamboo ballas per 100	1- 0- 0
Minor forest produce	
Thorns per cartload	0- 1- 0
Fodder grass	
Per headload	0- 0- 3
Per Kawarload	0- 0- 6
Per cartload (green)	0- 3- 0
Per cartload (dry grass)	0- 8- 0
Timber (II Class)	
Wheels per pair	2- 0- 0
Wheels per Rozgari	4- 0- 0
Wheels naves	1- 4- 0
28 Spokes or 10 Faloes	1- 0- 0
'Naves' II class timber	1- 0- 0
Shaffs pair II class timber	0- 6- 0
Other timber except 1st class timber*	0- 4- 0
Fuel including rotten bamboos,-	
Per headload	0- 0- 3
Per kawar-load	0- 0- 9
Per cartload	0- 1- 0
For Rozgari - per cartload	0- 2- 0
Fuel green per headload	-
Fuel green per kawar-load	-
Fuel green per cartload	0- 2- 0

(continued)

Note: * Timber upto 2 feet girth is permitted. One cartload is restricted to 20 poles upto 2 feet girth or 3 timber pieces over 2 feet to 3 feet girth.

Particulars of produce	Rates
	Rs.As.Ps.
Fuel	
Per cartload, monthly ticket	0- 8- 0
Thatch grass	
Per headload	0- 0- 3
Per cartload	0- 0- 3
For Rozgari	0- 4- 0
Barks	
Per headload	0- 0- 6
Per cartload	0- 4- 0
Chiend broom and such leaves which are not used for tapping -	
Per kawar-load	0- 0- 3
Per cartload	0- 1- 0
Grass for Mats	
Per headload	0- 0- 3
Per cartload	0- 1- 0
Other leaves which are used for dyeing and tanning -	
Per headload	0- 2- 0
Per kawar-load	0- 3- 0
Per cartload	1- 4- 0
Earth and Murrum	
Per head and kawar-load	0- 0- 6
Per cartload	0- 2- 0
Per 100 cft	0- 4- 0
Stores for Gitti	
Per 100 cft	0- 6- 0
Per cartload	0- 3- 0

Subject to any restriction which the Divisional Forest Officer may, by special or general order, impose in that behalf, every person holding land in the village, the village artisan and agricultural labourer shall be entitled to collect minor forest produce (other than harra, lac, rusa grass, tendu leaves and gum) and minor minerals, ~~viz.~~ grass, leaves of mahua and teak, bakkal, edible roots and edible

fruits and flowers, sand, clay and stones from the protected forest of the village.

Nothing in this rule shall debar a person from collecting harra, lac, rusa grass, tendu leaves and gum and produce of mahua trees found in his own land in a protected forest.

(1) The cultivators (including malik-makbuzas), village artisans and labourers shall, subject to the provisions of sub-rule (2) and the provisions of Chapter XVIII of the Madhya Pradesh Land Revenue Code, 1954, be entitled to graze their cattle kept for agricultural purposes, free of charge in a protected forest, as follows:-

(a) cultivators - 2 plough cattle per plough plus 4 others including one she-buffalo;

(b) agricultural artisans and labourers - 4 cattle including one she-buffalo;

Provided that a calf under one year shall not be counted:

Provided further that all animals in excess of those specified in clauses (a) and (b) shall be charged at such rates as the State Government may from time to time sanction in this behalf.

CHAPTER IV

TRIBAL DEVELOPMENT : A HISTORICAL REVIEW

Gonds appear to have occupied a large area in the heartland of India, known as Gondawana, which may be considered as lying between latitude $19^{\circ} 15'$ and $24^{\circ} 30'$ and longitude $77^{\circ} 38'$ and $87^{\circ} 20'$ comprising the districts of Seoni, Betul, Chhindwada, Durg, Raipur, Bastar, and Mandla of Madhya Pradesh, Chandrapur of Maharashtra and Adilabad of Andhra Pradesh. The tract is hilly, comprising within its limits the eastern portion of the Vindhya and Mahadeo mountains and traversed by Godawari, Indravati, Mahanadi and their tributaries. Gonds are thus associated with the major rivers of Central India. Dense forests and high rainfall characterise the region inhabited by the Gonds. The Gond settlements are small in size and are usually not situated in the valley region but are located on the mountainous tracts.

Gonds through History

The social history of the Gonds can be reconstructed, though in a very sketchy manner (due to the lack of direct sources of information) on the basis of the knowledge of the nature of the eco-system they inhabit, their social organisation, rituals and traditions and some information from anthropological studies. This will help situate the current social and economic problems of the Gonds in a proper perspective.

The Gonds inhabited an ecosystem of a simple type - the South Indian tropical moist deciduous forests. As hunters and gatherers, they used bows, arrows and spears and nets for hunting game. The women and children collected mahua flowers, fruits of achar, tendu, jamun, mangoes. They also gathered various leaves, flowers and seeds as vegetables. The men were adept in collecting honey. Hunting was carried out collectively. The whole village would turn out all their

able-bodied men and beat over a stretch of jungle with wide nets, the spearman standing ready behind to slay any animal that escaped the arrows of the beaters. After the hunt, the produce was shared and shared alike.¹

Thus in the hunting-gathering stage the land was being used solely for the extraction of the necessities of life. The use of land as a subject of labour fosters a type of instantaneous production, whose output is immediately available, allowing a process of sharing which takes place at the end of each hunting round. The hunters, once they share the common produce, are free from any reciprocal obligations. The process thus gives little ground for the emergence of a centralised power or a social hierarchy. The basic social unit is an equalitarian but unstable band with little concern for biological or social reproduction.

Kinship and family relations, such as they were, play a secondary role in the production because work was divided according to sex and generation, similarly the authority was divided according to generation and sex. The deaths of all adults were accompanied by ritual and festivity. The festivals were communal that helped foster the cooperative ethos and ease tensions that might have arisen during the productive work. The bands or clans were exogamous; this helped ensure relations with outside clans and also intra-clan cooperation.

The decline of the hunting period could be traced to a variety of factors like, disease among animals, sharp decline in times of scarcity and emergency, etc. As forest could provide only a part of the subsistence it was

1 Even today the practice noted is, "When Madias kill an animal, they distribute the pieces of meat equally to every person. A pregnant lady would get an additional piece for the child in her womb." (S.S.A.S., 1983, p. 24.)

supplemented through shifting cultivation. Shifting cultivation or penda system involved cutting of trees or brushwood in the forest in the month January-February. The cut-trees were spread and left to dry and fired in May. The ashes were spread over the soil and the seed sown by broadcast after the rains broke. These lands could be cultivated normally for two years. In the first year the undergrowth was cut and some trees were felled in situ while some of the bigger trees were girdled and felled in the second year. The Gonds did not range through the forests clearing patches for cultivation at random. They had a more or less definite rotation, and the clearings after two or three years' cultivation would get 12-14 years rest at the end of which they would have a dense forest growth. The choice of site for the penda was decided usually by the village elders. Before the felling of the forest a ceremony took place. There was no formal allotment of land, but the villagers divided up the land by mutual discussion, the size of each plot depending upon the number of persons in the household to be fed and capable of doing a full days work with axe and hoe. There were ample lands for all and any man was free to cultivate a larger plot if he wanted to. Each family felled its own penda plots; the villagers did not join together to clear up each plot in turn as they combined in harvesting. The work of felling took two-three weeks, the man doing all the heavy work, the women and children assisting in cutting small trees and under-growth. Any fruit trees were carefully spared. Much timber was reserved for fencing. When the wood got dry, the villagers combined to fire all the penda plots. The firing took three-four days. After firing the villagers had to work at fencing. There were no fences between individual plots,

the plots were generally marked off by lines of till at sowing. Sowing began after the first showers.² The date was fixed at the meeting of the elders. Sowing was also preceded by a ceremony — a public offering to the village Mother. The rains would bring out shoots from stumps of trees felled for the penda and before these got too big a day was appointed for all villagers to cut them. As soon as the ears would form on the growing crops it was a taboo for man to sleep in the village. This taboo remained in force until they celebrated the new urad-kogsar festival. Then the men returned to their houses and were free to resume marital relations. While the taboo lasted the men lived in the fields and the women in the village, bringing the day's food every morning to the men. No ceremony preceded reaping. All men, women and children participated in the reaping operation, using small iron sickles. The women prepared the threshing floor while all the men and boys in the village would combine to thresh. They would thresh millets like kondon, kutki, ghatka, chikma, and the women would pick up ears of grains like kang, bajra and rub them in their hands to extract grain. The cultivator whose grain was being threshed was expected to feed all the villagers helping him and give them a good drink of salphi, the fermented sap of sago palm. The threshed grain was winnowed by men. There

2 The following grains were raised in penda cultivation.

kondon - *Paspalum scrobiculatum*
kutki - *Panicum miliaceum*
ghatka or amā - *Panicum frumentaceum*
chikma or sika - *Panicum miliare*
kang - *Setaria italica*
Madia - *Eleusine coreacana*
bajra - *Penicillaria spicata*
haruna - light mountain rice
pupal or urad - *Phaseolus radiatus*
sem or jata - *Dolichos lablab*
kulthi - *Glycine hispida*
arhar or tur - *Cajanus indicus*.

was a taboo on eating any new crops until the new-eating festival was celebrated. There was also a taboo on cutting grass and bamboos. Amu Korta Tindana i.e. new eating festival for amu or ghatka would be held in the middle of August. Korta Tindana festivals for other crops like Kutki, mountain rice etc. followed. The last Pupal (urad) Korta Tindana was combined with Koqsar, the clan Gods festival, the dates of the festival varying from January end to April in different clan areas. All the youths of the neighbouring clans would go to dance at each others' Koqsar and many a marriage arose from the meeting of the youth at these dances.

The land was thus the land of the clan-god; the main ceremony for the whole clan would take place before the clan god. Deputation from the various villages assembled at the shrine of the clan god. They would carry with them the new grain and a cock or two. After the return of the village delegation from the clan festival, the local bhum-gaita or kasyeg-gaita performed a ceremony on the smaller scale before the village Mother. Offerings were also made to the Departed. (Grigson, 1938, pp. 130-140.) After koqsar, till the next season all the taboos were lifted. It was a season of new marriages and conjugal life in the home. Hunting, gathering, fishing activity followed the activity of shifting cultivation. The cycle of economic activity, was thus worked out in view of the natural cycle. There were for example prohibitions on bamboo cutting during the season when young shoots were just growing. The festivals would help keep a definite schedule according to the season and the smooth collective working needed for the various economic activities. Even the personal life was regulated to fit in the yearly work schedule. There was no crystalization of land ownership and because of the shifting of the settlement every six years or so, the houses consisted of temporary

types of utility structures. The production got regulated in consonance with the working hands and a limitation to the economic activity necessary to obtain enough produce for the subsistence of the family was not reached so long as there was no resource constraint. About 4-5 acres of penda land were enough to provide sustenance for an average family.

The use of land as an instrument of labour introduced certain changes in the social and political structure. Unlike the hunting band, the agricultural team gets linked together at least until the time of cropping in order for every member to benefit from their joint labour. A material and temporal base for emergence of family as a productive unit was created. The feeding of cultivators during the non-productive period of labour when the crop was growing could not be solved unless enough of stored grains/food was available. The members of agricultural party were consequently linked not only to one another during the non-productive period of work, but also to the working party that produced the food during the previous cycle. Time and continuity became essential features of the economic and social organisation. The oldest group owned his subsistence to his dead ancestors, while among the living, a basis for hierarchy by age got created. The elder would logically receive and manage the product of his junior partners to whom he would advance seeds and food till the next crop. Thus, developed the notion of seniority, cult of ancestors, respect for age, fecundity cult, concern for reproduction. Social control over the community was exercised through control over subsistence. Control over subsistence was not the control of the means of production but of the means of physiological reproduction used to reproduce life of the human producer; at this time the

number of working hands was the determining factor in production there being little constraint on the land available. The reproduction of the unit both biologically and structurally was to be assured through the control of women. The control of women and matrimonial policy generated a new pattern of circulation between communities. The matrimonial policy encouraged kinship to develop as the model pattern of all social relation.

Kinship Organization: The basic structure of the Gond society was constituted of four exogamous patrilineal descent groups - Saga (in Gondi) or Gotra. They share a common mythical history traced back to their original ancestors (Wen). As the myth goes, the ancestors, 21 in number travelled to Dhanegaon, their first home in this world. They cultivated the land and reaped millets. To perpetuate their race they set out in search of wives. They succeeded in capturing the daughters of four sheks (the rulers of underworld). Then the question arose how the society should be organized. Lingal (the leader) bade them fetch four biradar sale (or sacred spearheads) and install them as Persa Pen (great god). Then Lingal allotted to each group one sale and instructed them in the cult of the Persa Pen. The worshippers of one sale were to regard each other as brothers and of other saga as soira. The four sagas are known as Yerwen, Sarwen, Siwen and Nalwen i.e. seven-wen, six-wen, five-wen and four-wen saga. The men were not to marry the girls (who were their sisters) from their own saga but must find them from the other three sagas. All the four sagas dwelt at Dhanegaon, but as time passed there arose disputes between the sagas and they decided to settle in separate villages. (J. Haimendorf, 1979, pp.80-81.) The subsequent emergence of clans or padi is woven around a set of key personages and not traced to the Gond mythology.

Each clan as a segment of saga was strictly exogamous. The evidence suggests that the village organization was earlier clan-based; there was bhum or clan land and clan solidarity was evident both in the productive activity (hunting, shifting cultivation) and in defence. So long as the villages were single-clan villages there was village exogamy and the girls had to leave their natal village on marriage. All the men of a clan were permanent members, while a woman was accepted into the clan through marriage rites and considered a member as well as 'the property' of her conjugal clan. If widowed or separated she was expected to marry another man of the same clan. Social control was exercised through clan panchayat - a panchayat of elders that dealt with day to day offences in relation to marriages or other matters. The social and economic life of the Gonds was thus organized through kinship regulations and religious rites and rituals; allegiance of the members to the set regulations was easily secured as breaking of any custom amounted to a loss of community.

A marked transformation of this type of economic organization came about when the relations of production that existed between individuals became relations between socially defined groups. Through contact with Rajput and other feudatory rulers the segmentary organization of clans and sagas got disrupted. For example, the Raj Gonds assumed for its members the status of seniors in relation to other groups. The clan cohesion and autonomy lessened with the break up of the territorial village system under the pressure of outside settlers and settled plough cultivation.³

3 In 1938, Grigson noted that, "The Hill Maria still regards the crops as the result of the combined labours of the village rather than of the labours of individuals." The collective ethos lasted till the practice of shifting cultivation continued. (Grigson, 1938, p. 125.)

The ideology of kinship had a major function in this transformation. The economic and social prerogatives of the elder got transferred to the dominant class. Prestations due to elder became tributes due to the king who also gained control over the land. Thus there co-existed the clan organization which is equalitarian together with a system with a well-defined hierarchy of feudal chieftains who occupied a place in a rank system additional to their ascribed status as members of their clan. The clan organization continued to exist for the social regulation and religious purposes, while the feudal system had a territorial and a political basis.

Political History: Reliable information on the early history of the Gonds is scanty. From old coins and inscription it is noted that Rajput princes ruled in various parts of Madhya Pradesh from 6th to 12th century A.D. Evidence for the rule of Gond dynasty in Gondwana is available from the 14th century. Gond kingdoms were established at Kherla in Betul, at Deogarh in Chindwada, at Garha-Mandla including Jubbulpore country and at Chanda.

Absence of documents and other evidence makes it difficult to reconstruct the genesis and growth of Gond power and the emergence of Gond kingdoms in the Gondwana area. There is reason to suppose that with the fall of the two mighty kingdoms, the Yadavas of Devgiri and the Kakatiyas of Warangal at the hands of Ala-Ud-din-Khilji, the Gonds emerged as a political power. The hilly terrain and the dense forests of the Gondwana afforded them a measure of security. While to the north and to the south of Gondwana lay plains over which invading armies marched unchecked by natural obstacles, plundering rich cities, annexing fertile lands, the highlands of Gondwana continued under the occupation of the Gonds whose object was protection rather

than exploitation, who prized the natural ramparts of their country more than the corn bearing valleys. While the Hindu dynasties of the Deccan were succumbing to northern invaders, the Gonds gradually and quietly attained a development and organization that gave it a place among the independent powers of India. (Russell and Hira Lal, III, 1916, p. 45.)

From the documentary and other historical evidence, the history of the Gond kingdom in the Chandrapur region as reconstructed traces its beginnings to Kol Bhilla - a Raj Gond who rallied around scattered Gond tribes and imparted the art of smelting iron (which is plentiful in the region) and making weapons. Sometime around 1340 A.D. Gond kingdom was founded by Bhim Ballal Singh, with capital at Sirpur, 20 miles south-west of Chandrapur on the southern bank of Painganga. The capital was moved to Ballarshah, 8 miles south of Chanda by Adiya the 4th king and to Chandrapur by Khondkya (1470-1495) (10th king). The headquarters of the Gond kings seem to have been located in a position strengthened for defence either by a hill or a great river and adjacent to an especially fertile plain tract, whose produce served for the maintenance of rulers' households and headquarters' establishment. The site was bordered by dense forest which would afford shelter in cases of attack.

No information about the administration and the land system, the strength of the army, etc., is available for the earlier period. Hir Sing, the third Gond king levied a tax on occupied lands and Dinkar the 7th king patronized Gond bards and learned men. He invited Marathi literati to reside at his capital and encouraged the study of religion and philosophy.

In the region of Hir Shah (1496-1521) special encouragement was given for bringing new land under

cultivation. Those who cleared up forests and brought new lands under cultivation were granted a sanad as zamindar of that tract. Their status was raised to that of a nobleman - a sardar. Anyone who constructed a tank was awarded the entire tract of land brought under irrigation. It is reported that 20 new zamindaris were established during his regime. The raja constructed an irrigation tank at Junona, six miles to the east of Chanda.

In Kondya Shah's regime influence of Brahmins seems to have increased considerably. He granted rent free land and inam villages to Telagu Brahmins and also provided for varshasan. Upto this time the rulers did not interfere with the disputes between individuals. They allowed the operation of the tribal regulations and customs. However, Kondya introduced some new regulations. At his court the cases of dispute were given a hearing and accused was reprimanded and released if he confessed; after the third crime, however, the guilty would be banished from the kingdom.

In Babji Ballal Shah's reign who succeeded Kondya (1570-1595) Akbar subjugated the Gond kings and Babji became a feudatory to Akbar. It is mentioned in Ain-i-Akbari that Babji had 10,000 horsemen and 40,000 soldiers in infantry. Allowing for retinues, and personal retainers it can be seen that a considerable proportion of Gond people must have been in service of the king and petty chieftains. As the Moghals were content with obtaining from the rajas of these rugged kingdom a submission which was sufficient to prevent any break in the continuity of their vast dominions, the internal administration of these regions remained practically unaffected during the Muslim regime.

Babji was succeeded by Dhyndya Ram, Krishna and Bir Shah. Dhyndya prohibited human sacrifice and later on, Krishna banned sacrificing cow in the honour of Bada Dev.

goat was to be sacrificed instead. The importance of settled plough cultivation seemed to have necessitated such a regulation to secure a steady supply of draught animals. In this period construction of a number of temples, tanks, wells and growth of Chandrapur as a prosperous trading centre with a large number of weavers, metal workers, etc., suggests that a substantial surplus could be generated in agriculture and a large part of which could be extracted in terms of revenue.

During the reign of Ramshah, two knights rose in mutiny at Surjagad in Sironcha Tahsil and Ramshah sent one of his relatives—Kokshah to break the mutiny. When Surjagad was captured, Kokshah was awarded some area around Surjagad. Kokshah selected Aheri as his chief seat. The Aheri Zamindari⁴ was thus established in 1703.

In 1708, after Aurangzeb's death the Gond Rajas re-established their independence, that lasted till 1749 when the Marathas invaded their kingdom. The loose tribal system, which had so easily survived in times of peace, failed to respond when united action was required. Nilkanth Shah was easily defeated by the Marathas and he agreed to hand over 2/3 of the total revenue to Bhosales but he did not fulfil the promise. Consequently, Raghuji Bhosale imprisoned Nilkanth in 1751, and with that the history of independent Gond Raj came to an end.

Under the Gond rajas the district for the most part seems to have been distributed among several feudatory chiefs, bound to attend upon the king at his capital with a stipulated number of troops to be employed whenever their

⁴ The Aheri Zamindar is considered even today the traditional chief and revered by the Gonds. Vishveshwarrao is the present Maharaj who was a Member of Parliament and presently an M.L.A.

services might be required, but to furnish a little or no revenue in money. These chiefs were Gonds, often related to the royal family. In addition to it, the Raja was also annually offered some jungle produce, tiger skin, etc., by his subordinates.

The Rajas had their own territorial domain from where they received the revenue. A system of begar operated within the kingdom. The tribes were allowed the freedom of the forest with little disturbance. In lieu of this right, they had to provide free labour service to the zamindars. The wells, tanks, ramparts could be built with the use of begar labour.

During this period families of Brahmins, Rajputs, Kurmis, Marathas, from the north and northwest, oppressed by famine or distracted by the feuds, emigrated to these parts and sought a peaceful and permanent settlement on the soil. They could obtain well-chosen tracts of lands from the feudatory Gond chiefs who found that the tax on surplus produce of such large estates was a great help to maintain their revenue income. The deep rich soils of the plain were gradually cleared and occupied by a yearly increasing number of migrant farmers. As these families increased and spread over the plains, the Gond population receded to the interior tracts. In fact the Gonds were the pioneers of the more settled races in their advance against wilderness. With his capacity to toil, endurance of malaria, fearlessness of jungle Gonds could break new grounds but the fruits of his labour were often lost to the settled people of the plains. This process was accelerated after the clamping of the Maratha Rule. The Gond patels of the villages were replaced by the Marathas by others who agreed to pay a higher rent and rent extraction became oppressive. The grant of

villages to military leaders to maintain troops or for other services also brought about a great pressure on the cultivators for enhanced revenue. Rather than put up with alien Patels and landlords Gond tenants often abandoned their tenancy. The Gond cultivators were driven to upland valley and hilly tracts. Some lived in the plains near the banks of rivers and the jungle. The land revenue and other extractions proved so oppressive that many cultivators were driven from the land. Added to this was the turbulent period of Pindari risings (1800-1815). This anti-feudal uprising involved Bhils, Rajputs, Muslims, Gonds, Korkus, Gavlis. Soldiers who were not paid regularly in the Maratha armies also joined them. The Pindaris were well organized and operated from their camps in the Narmada valley. They spread terror with their raids in the Khandesh, Central Provinces and Berar districts. In 1811 they carried sword and fire in Berar. It was after 1818 that the warring period came to an end. With the disposition of Bhosales in 1818, Chanda came under the British protectorate. The British crushed the rebelling Gond chiefs who were gradually brought to submission. In 1830, Chandrapur was handed over to Raghuji Bhosale (III) but in 1854 the Bhosale Raj was annexed to British India by the 'doctrine of lapse'.⁵

The zamindars were yet to be reconciled to the British rule that commenced in 1854, when the uprisings of 1857 swept the Indian subcontinent. Inspired by the news of the risings of zamindars of the neighbouring areas, the zamindars of Molampalli and Adapalli and Ghot revolted. They gathered Gonds and Rohilas and waged a fierce battle. The

⁵ The information given in this section is drawn from (a) The Gazetteers of Central Provinces of India, edited by Charles Grant, (II edition) Nagpur, pp. xiv to xxvii, (b) The Gazetteer of India, Maharashtra State, Chandrapur District (Revised edition) Bombay, 1973, pp. 75 to 92.

British, unable to meet this challenge resorted to a subterfuge. They contacted the zamindarin of Aheri and with her timely help were able to crush down the revolt. Subsequently Aheri zamindarin was handsomely rewarded with a grant of several villages, from Adapalli and Ghot zamindari.

After the 1857 rebellion the colonial system followed the dual policy of strengthening the feudal crust of the tribal societies, formed by rajās, chiefs and zamindars and simultaneously created conditions in which the tribal economy was undermined by the rampaging market forces.

Colonial Policy vis-a-vis the Tribals

Quelling the tribals concentrated mainly in the inaccessible hilly and forested regions of India was quite a challenge to the British rulers. Several tribes lived in remote areas not accessible by roads and therefore difficult to monitor and control; besides, the tribals were armed. The first step taken in this direction was to pacify the turbulent Paharias of Raj Mahal Hills; the tribal leaders were granted sanads on condition that they were to report on all outbreaks. The leaders living near the lines of communications were paid a fixed sum to protect the mail runners. Pensions were allotted to leaders who were assigned with duties involving reporting on and control of the tribal masses. The Rajmahal Hills tract was withdrawn from the jurisdiction of the ordinary courts in 1782. The hereditary leaders of the tribes were organized into a Hill Assembly. After the Kol mutiny of 1831, the Government put the entire province of Chota Nagpur under the charge of an officer, designated Agent to the Governor General. The Mewasi estates, the Bhil tract in the Bombay Province were excluded from the ordinary laws by Act XI of 1846 and special rules were framed for its civil and criminal administration. (Ghurye, 1943, pp. 78-97.) In short, in view of the experience

that the tribals could not be brought under control with the help of the newly introduced legal and administrative system it was considered expedient to introduce paternalistic rule of an individual - a district officer and treat the tribal areas as specially protected areas. The protective measures included (a) exclusion of the tribal areas out of the operation of the regulations and laws considered alien to the tribal ethos, (b) laying down a set of simple rules to settle disputes among the tribals, (c) regulation of entry of aliens into the tribal areas, (d) strengthening of tribal institutions and tribal leadership, etc. In 1874 the Scheduled Districts Act (Act XIV of 1874) was passed whereby the Local Government was empowered to declare in respect of tracts specified in the Act what enactments were or were not in force and to notify the application with modifications or restrictions if necessary of any enactment in force at the time in any part of British India.

The Gonds, the Korkus, the Baigas were not specially protected except in three zamindari areas. However, whether protected or not, as was subsequently noted by many, little positive change was registered in the conditions of the tribals. In fact, except for putting down certain customs like human sacrifice the British rule led to immiserization, depression and demoralization of the tribals due to a variety of factors. As Forsyth put it succinctly, "Legislation has never yet enabled an inferior to stand before a superior race, but it has frequently done much to put a weapon in the hands of the aggressors without which the invaded might have held their own. There are flaws in our law relating to the occupation of land and to the legal enforcement of obligations which it may be feared arm the Hindu irresistibly against the aborigine. ... Again our administration of civil justice which is perhaps sufficiently suited to the

requirements of settled districts is practically a negation of all justice to the aborigine in his jungle". (Quoted in Ghurye, 1963, pp. 85-86.)

Much of the plunder of the tribals world remains unrecorded as no chronicles were maintained by the tribals. The records were maintained only by those who stood to gain by the new system. Yet a few passages from the records of the government officials (viz. The Deputy Commissioners of Nagpur, Amraoti, and Hoshangabad) reporting from the Gond districts cited below give a glimpse of the plight of the Gonds.

(1) "The land revenue policy of Government adopted in the eighteen sixties was ill-considered so far as Gonds were concerned. A limited number of Gonds were given proprietary rights in the 'sixties, but ever since their number have steadily fallen owing their ignorance of the civil law and the ease with which they have become a prey to moneylenders. For no sound reason the Land Alienation Act was not extended to the district and there are now only half a dozen Gond malguzars. ... At the present time the tendency is also to expropriate Gond tenants. ... Many Gonds are abandoning their tenancy land rather than put up with alien landlords. Several of them go to forest villages, where they are fairly happy, but most are degenerating into landless labourers."

(2) "The ordinary law of contract operates harshly owing to the poverty, ignorance and honesty of the tribals. Being illiterate they are unaware of the terms of the bonds into which they enter for repayment of loans. They are generally inclined to trust sawakars to be honest as they are themselves. They will always pay whatever is demanded to the utmost of their power. The moneylenders, of course, take advantage of their ignorance and impose exorbitant rates of

interest to put down more in the bond than actually advanced and so on. The Usurious Loans Act does not give much protection because the tribal debted will not plead it and as he is unable to calculate the amount of his interest, he accepts the moneylenders' word as to the amount he owes him."

(3) "I think it is true to say that the aboriginal is handicapped in the court by the system of law and procedure of which a rich man can reap advantage which a poorer man because of his poverty, cannot. A rich man can brief pleaders who by means of the rules of procedure can frequently defeat justice. This a poor man cannot do and an aboriginal is a poor man. How many poor men are acquitted of a murder charge? On the contrary how difficult it is to convict a rich man of murder. For one thing, the rich man is able to buy prosecution witness and suborn the defence witness.

"On the civil side, what a small chance a poor man has against an unscrupulous moneylender? These considerations are so notorious that it is unnecessary to quote instances."

(4) One of the most remarkable features of the Bastar was the extent to which tribal, village and caste panchayats regulated the religious and social life of the people, acted as intermediaries between them and the State and its Zamindaris in meeting state demands for taxes, labour and supplies and in protecting the ryots from undue exactions, and exercised much de facto criminal and civil jurisdiction. But with the introduction of the new legal system "any exercise of criminal jurisdiction, even in petty crop theft cases was regarded as usurpation of the authority of the police and courts, and persons who had already made ample amends under tribal custom were arrested and sentenced all over again by the tahsildars, while headman and elders not

infrequently were punished for not reporting the offences. A badly trained police, ... would descend on a village and waste days in pointless investigations of petty cases expecting not only to be fed on rice, mutton and poultry by the villagers, but also to be provided with stores of grain under the old bisaha system ... and would rarely be given even the nominal payment prescribed under the old bisaha rules. Then would follow a protracted trial at the still more distant tahsil headquarters. ..." (Grigson, 1938, p.284.)

(5) Among the Gonds, particularly in the wild tracts of Chanda and Bastar Marriage by capture was formerly the rule. But the magistracy treated this social custom as offence against the Penal Code and inflicted punishment upon the so-called wrong doers. This alarmed the simple forest people. The practice was generally resorted to in order to avoid the bride price. When the practice got restricted the eligible men and women faced the problem of forming matrimonial alliances, and the age of marriage was further pushed up.

(6) Another great check upon the freedom of the tribes was the prohibition of cultivation by the dahia or bewar process. It was the habit of these people to cut down trees, burn them and sow seed in the ashes instead of ploughing the land. When the Government found it expedient to limit this extravagant mode of agriculture, the people in forest tracts regarded it as a great grievance. They neither had the means nor the knowhow to shift to settled agriculture. The forest conservancy laws in effect robbed the tribals of their means of subsistence.

(7) "According to ancient tradition the Gods of the tribe required offering of liquor distilled by the family worshipping them. The excise rules now prohibit such distillation and the majority of tribesman yield to the Law and now offer to

their Gonds liquor purchased from a licensed shop, but many continue stealthily to distil their own and to satisfy their gods." The excise policy in effect deprived the tribals of a valuable source of dietary requirement - the home brew liquor.

To sum up the consequences of the colonial rule on the tribals, the Gonds settled in the multi-caste villages were gradually depeasantized because of the penetration of the market forces. The increased demand for ready cash to pay the land revenue, or to buy liquor (as excise laws made it illegal to brew liquor at home but offered instead ready intoxicants for cash) forced the tribals into the debt-trap. Armed with the Law protecting their interests the moneylenders could easily acquire the tribal lands. As Fuller described their position in 1892, "They are now reckoned amongst the lowest classes of the community, banished to the most hilly and infertile tracts or where clinging to the open country holding the most inferior position in the village economy". (quoted in Ghurye, 1963, p.52.) Even the well-to-do Gond zamindars and big land-owners were at the mercy of the moneylenders. The Gonds cultivators who were fairly good cultivators also got into the grip of the moneylender. They patiently raised the crops, the profits of which went into the coffers of the moneylenders.

The village society in the plains thus got differentiated with the feudatory chiefs and the village headmen at the top, a class of middlemen - the merchants and moneylenders who were mostly non-tribals and the mass of tenantry and agricultural labourers.⁶ As a result of increased

⁶ Yet the bond of kinship and ethnicity among the tribals inhibited the development of intra-tribe contradiction; this was also overshadowed because of the contradiction between the tribals and the non-tribals.

contact with the non-tribals most of the tribals in the plains became Hinduized and settled down in the Hindu fold as landless labourers and a depressed class dominated by the non-tribal landlords, merchants, moneylenders, professionals and bureaucrats.

Adoption of the material aspects of the life of Hindus, brought about considerable changes in the economic organization and technique of production among the Gonds. Settled agriculture implied assumption of individual responsibility and subsequently the communal organization lost its earlier vigour. The panchayat system got dis-integrated and the headman no longer wielded the supreme authority. Kinship group, formerly the unit of great social and economic significance, functioned in a limited way mainly on ceremonial occasions.

The old life was lost but the new did not offer any creative avenues. With permanent cultivation some had taken to cash crops in a small way to earn ready cash to buy cloth, trinkets, etc., or to buy liquor. The common practice with liquor contractors was to exploit the ignorance of the tribes by selling him liquor on credit and then to charge prohibitive interest rate. The poor got reduced to great straits in trying to liquidate the petty debts incurred to buy a drink.⁷

7 "Badly off as the poor Gond was in the hands of agricultural moneylender, he was at least paid in wholesome grain or hard coin"; The situation worsened with the penetration of Kular or the spirit dealer. With them "the practice was to pay the Gond in liquor all except the pittance necessary to keep body and soul together in way of food and raiment. Often the Kulars united the three trades, making the Gond cultivate an autumn crop of grain for his own subsistence and the trader's profit at a season when forest operations were impossible, exchanging his surplus grain for liquor immediately after, until he had him deep in his books again and then sending him out to the forests to cut wood to repay him and to purchase back some of his own grain for subsistence. He was clean done and cheated at every turn, having to labour like a horse and getting out of it nothing but a scanty subsistence and as much vile liquor as he could swallow without interfering too much with his working power. (Forsyth, 1919, p. 130.)

The Gonds in the remote areas clung to their social customs and rites and festivals but their economic situation deteriorated because of the reservation of the forests, the depletion of the forest resources through the commercial exploitation of the forests and the arrival of the liquor merchant and the other rampaging market forces. As regards the hill tribes, Fuller observed "Judging from appearances these jungle tribes are the poorest of the poor—they go almost naked and for large part of the year eat no grain whatever. But for them grain is rather a luxury than necessity and merely supplement the jungle roots and berries which are the main-stay of their lives." (Ghurye, 1943, p. 55.)

Thus, despite the policy of providing special protection to the tribals, the pressure of market forces disrupted the economic life of the tribals leading to their impoverishment.

But the debate over the issue of segregation versus assimilation continued.

Assimilation versus Segregation

The principle that the normal laws of the country should not automatically apply to the tribals formed the basis of the Scheduled Districts Act of 1874 and the concept of Backward areas in the Government of India Act of 1919. This principle was hotly debated in the early 'thirties when provincial autonomy and self-government was on the agenda. The nationalist saw in the protectionist outlook, the continuation of the imperial policy of 'divide and rule' and opposed the segregationist approach. However, the tribal areas were partly or fully excluded in the Government of India Act of 1935.

During the 'thirties the two notable protectionists were Dr. Hutton the Census Commissioner (1931) and Dr. Elwin.

Dr. Hutton was of the view that the tribals needed protection and for this purpose it was necessary to create self-governing tribal areas with free power of self-determination in regard to surrounding provincial units. In 1939 Dr. Elwin writing on Baigas felt that life has gone from many villages and he suggested a remedy. "The first necessity is the establishment of a sort of National Park in which not only the Baigas but the thousands of simple Gonds might take refuge." (quoted in Ghurye, 1963, p.144.) The area should be put under the direct control of a Tribe's Commission and the internal governance was to be effected through the headmen of the tribes. The entry of non-tribals into the tribals area was to be regulated. Such protective measures were considered necessary so as to arrest the growing economic impoverishment, loss of land, emasculation, psychological apathy among the tribals. There was thus a school strongly advocating segregation and protection of the tribals while such a policy was viewed as conflicting with the national integration by many politically conscious Indians. It was contended that many problems faced by the tribals like bonded labour, land passing into the hands of merchant-moneylender, insecurity of tenure, etc., were faced by the backward and weaker sections among the non-tribals as well and the solution lay not in bolstering the separate identity of the tribals but strengthening the ties of the tribals with other backward classes around their common problems.

The tribal question, particularly the problem of providing special safeguards to the tribals was debated again in the Constituent Assembly. The nationalists considered that after independence, protectionism will not breed fissiparous trends but would help smooth and gradual

assimilation of the tribals into the mainstream. In the meantime certain safeguards are necessary for the preservation of the tribal social customs from sudden erosion and for protecting their traditional vocations from the onslaught of outsiders. At the same time special developmental programmes were to be evolved for the benefit of the tribals for improving their educational level and standard of living. Special provisions were made for the safeguard of the tribal interest in the Constitution of India. These can be briefly summed up as follows:

Article 244(1) - provision as to administration and control of Scheduled Areas and Scheduled Tribes.

Article 244(2) - provisions as to the administration of Tribal Areas.

Article 339 - control of the Union over the administration of Scheduled Areas and welfare of Scheduled Tribes.

Article 275(1) - provision for payment of grant-in-aid to enable the states to meet the cost of such schemes of development for the purpose of promoting the welfare of Scheduled Tribes or raising the level of administration of Scheduled Area is made.

Article 342 - specifying the tribes and tribal communities as Scheduled Tribes.

Article 330 - reservation of seats for the Scheduled Tribes in the House of the People.

Article 335 - claims of Scheduled Tribes to services and posts.

Article 46 - promotion of educational and economic interests of Scheduled Castes, Scheduled Tribes and other weaker sections.

Fifth Schedule - provisions as to the administration and control of Scheduled Areas and Scheduled Tribes.

Sixth Schedule - provisions as to the Administration of Tribal Areas (in the States of Assam and Meghalaya and in the Union Territory of Mizoram).⁸ Besides, there is a constitutional provision for the appointment of a special officer to report on the working of the protective provisions and the said Report is to be laid before the House of Parliament.

Economic Development

Article 46 of the Constitution of India lays down that "the State shall promote with special care the educational and economic interests of the weaker section of the people and in particular of the Scheduled Castes and Scheduled Tribes and shall protect them from social injustice and all forms of exploitation". In accordance with this policy a number of programmes were prepared; one of which was to set up special Multipurpose Tribal Blocks in the most underdeveloped parts of tribal India. There was a criticism that the schemes designed for other parts were being put into operation in these blocks without taking into account the special needs of the tribals. A Committee was set up by the Government of India in May 1959 under the chairmanship of Dr. Elwin to examine the work of these Blocks. In the Report of the Committee it was noted

⁸ Certain doubts were, however, raised when the above provisions for securing protection to the Scheduled Tribes were passed. For example, an Assamese Congress member observed, "I do most regretfully observe that what Dr. Ambedkar is doing in regard to Schedule VI is that he is closely, absolutely closely following, except in some cases, the British method ... Do you want an assimilation of the tribals and non-tribals or do you want to keep them separate?" And another veteran Congressman warned, "The British conquered the country from the hill tribes. As they leave, the sovereignty lapses back into the hands of the tribes. ... I think we are heading to a difficult situation and if the tribes cause disturbances to us we have to thank ourselves. ... You will thus be creating a Tribalstan just as you have created Pakistan." (quoted in Ghurye, 1963, p. 382.)

that in the case of Aheri multipurpose block (which was formerly the Aheri zamindari ruled by Raj Gonds), most of the area is forested and villages are small and scattered and inaccessible particularly between May-November; consequently the greater part of the benefits had gone to places around Aheri while the interior villages have remained neglected. (Elwin, 1960, p. 209.) It was recommended that there is a need, as in other Blocks for greater cooperation between the Development and other Departments of the State Government; need for choosing officials more carefully and to avoid transfers wherever possible; need for additional staff in order to cover the remoter villages and a need for closer contact with the people through acquiring knowledge of their language, customs, and ideas.

It was stressed in the Report that "of the many tribal problems the greatest of all is poverty; some have no land at all and are little better than serfs, many have been robbed of their land; the rest struggle with primitive tools to scratch a living from an unfriendly soil. They are poor in knowledge. ... The harsh struggle to survive becomes too great a strain and life itself seems nothing much to lose."

"And much of this is the fault of us, the civilised people. We have driven them into the hills because we wanted their land. We have taken away their food by stopping their hunting. We sell them spirits which are far more injurious than the home made beers. ... All this must stop and so on." (Elwin, 1960, p. 192.)

However, when it came to the programmes of economic development the recommendations made did not break any new ground. Several routine ameliorative measures were suggested e.g. provision of at least 2.5 acres of wet land or 5 acres of dry land, establishment of colonies, enactment

of social legislation to prevent moneylenders in tribal areas and introducing an effective system of giving credit to the tribals; service cooperatives to be formed and care to be taken to see that the influential sections of the people do not dominate the cooperative and monopolise their benefits and so on. (Elwin, 1960, pp. 45-47, 136.) The Committee was aware how (so very often), a recommendation sinks into soulless obscurity of an official file and is heard no more; it was noted that the Commissioner for Scheduled Castes and Scheduled Tribes more than once complained that his recommendations are ignored. Yet the Committee earnestly hoped that the suggestions put forward by the Committee would be seriously considered.

Tribal Development Blocks

In 1960 Scheduled Areas and Tribes Commission was appointed by the Government and the important recommendations of the Commission were, "we feel that it is no longer necessary to pursue the question whether tribal area should be declared scheduled or a scheduled area should be descheduled. The Fifth Schedule was conceived as a temporary expedient and its objective can be achieved by our alternative approach which is simply that Government should undertake a plan which would protect Scheduled Tribes and ensure development of areas within a stated period. ... All tribal areas should be grouped under Tribal Development Blocks so that the bulk of the tribal population is brought under intensive development schemes. With the fulfilment of the targets in all Tribal Development Blocks and the passing and implementation of protective legislation (in relation to the rights of tribals in land, forest and from exploitation by moneylenders) the objects of the Fifth Schedule should have been achieved and it could conveniently be abrogated." (Dhebar, 1961, pp. 69-70.)

The programme of Tribal Development Blocks was started during the Second Five Year Plan and the programme was extended to cover all the tribal areas with more than 66.6 per cent tribal concentration. By the beginning of the Fifth Plan about 38 per cent of the total tribal population spread over 504 Tribal Development Blocks was covered under the intensive development programme.

The tribal scene was reviewed at the beginning of the Fifth Plan. It was found that what was expected to be supplemental investment in tribal areas through the Tribal Development Blocks tended to become the exclusive investment. The benefits of normal programmes hardly reached many of these areas. The difference in the level of development in the tribal area and the general area therefore tended to increase. It was also found that in the case of states having less than fifty per cent tribal population it was necessary to pay special attention to the tribal development. Consequently separate plan, tribal sub-plans were to be prepared for areas of tribal concentration. The Tribal Sub-Plan envisaged all round development of the tribal areas in an integrated manner. It comprised the flow of investment from the State Plan, Central Ministries/Departments, special Central Assistance controlled by the Ministry of Home Affairs and institutional finance. It was stipulated "As the development of the people has to be the central point of attention of the sub-plan, in many cases, it may be necessary to look at the problems unfettered by the existing formal, procedural or legal frame." (S.P.T.R., 1975, p. 9.)

Thus, a policy frame and financial support were provided. As regards evolving a suitable system of administration it was found, "It will be necessary to review the working of the various organisations in the region. ...

Multiplicity of agencies has resulted in diffusion of responsibility, inadequate control, lack of coordination and from the people's angle difficulty in identifying the official concerned with specific programmes. The pattern of administrative organisation will have to be worked in detail for achieving functional coordination and efficiency."⁹ Subsequently the tribal welfare departments were strengthened and Tribal Commissioners were appointed.

The development of the country is based on the sectional approach; this approach was sought to be modified for the tribal areas as it was considered that the tribal is not used to sectoralized approach, but has a wholistic view of life. A problem-solving approach covering a large spectrum, from protection to welfare was to be adopted. With this view a project authority has been constituted for each Integrated Tribal Development Project (ITDP) and this authority is responsible for the all round development of the area. It is expected that ITDP could gradually subsume functions of all the diverse agencies in the concerned area. A "totality concept" at the project level, cutting across the sectoral boundaries, is being evolved. The Tribal Welfare Department is assigned the role of coordinator, providing leadership and direction. B.D. Sharma, writing in 1977 concluded his paper on "Administration for Tribal Development" on the optimistic note, now that we have found a solution to the tribal question a definite headway will be made. (Sharma, 1977, pp. 537-539.)

Tribal Sub-Plan

Elimination of exploitation of all forms and speeding of the process of socio-economic development were the immediate objectives of the tribal sub-plan.

⁹ For details see, "Preparation of Sub-Plans for Tribal Region," Guidelines issued by the Planning Commission, New Delhi, 1975.

Protective Measures: The Tribals have been exploited for generations on account of practices like money-lending and consequential indebtedness, land alienation, etc., therefore, the removal and prevention of exploitation of tribals have been accorded high priority in the State Government's Tribal Sub-Plan. More specifically this exploitation takes the following forms:

- 1) Land alienation
- 2) Lending by private moneylenders at exorbitant rate of interest thereby forcing the tribals into perpetual indebtedness.
- 3) Malpractice in trading like under-weighting or giving less rates for a particular commodity.

In order to check the sale of Tribal Land to the Non-Tribals, State Government enacted a legislation; The Maharashtra Land Revenue Code and Tenancy Laws (Amendment) Act, 1974, came into force from 6th July 1974. Under this Act restrictions on transfers of Tribal's land have been further tightened up.

Government has enacted another Legislation namely 'The Maharashtra Restoration of Land to Scheduled Tribes Act, 1974' which came into force with effect from 1st November 1975 and provides for restoration to the original tribals their land:

- (1) Which have gone into the hands of non-tribals between the period from 1st April 1957 to 6th July 1974 as a result of transfers (including exchanges), and
- (2) Which are purchased or decided to have purchased by non-tribals between the aforesaid period under the provisions of the Tenancy Act. (These also include acquisitions of land which have been regularised on payment of penalty under the tenancy law.)

Under the Maharashtra Restoration of Land to Scheduled Tribes Act, 1974, 3,00,794 cases were registered out of which (by April 1978 end) 13,539 cases have been decided and 5,117 tribals have been given 91,006 hectares land in their possession. Out of this 3,393 tribals have actually taken possession of 5,521 hectares of land.

Whereas the first Act enables the Tribals to secure the lands illegally usurped by the non-tribals, the second one goes further and provides for restoration of their land acquired by the non-tribals by legal methods.

Removal of Traditional Exploitative Elements: In the tribal areas there has been for generations an unholy alliance between the moneylenders and traders. It was, therefore, important that the nexus between the traders and the moneylenders is broken in order to enable the tribals to really benefit from the schemes planned for them by the State Government. In order to achieve this objective Maharashtra Tribal Economic Condition (Improvement) Act was passed in 1976. The Act envisages -

- a) Prohibition on moneylending
- b) Banning trade by private traders in selected commodities grown by the Scheduled Tribes.

This Act originally included agricultural commodities but from October 1977, minor forest produce has also been brought under its purview.

The Government of Maharashtra is wielding two instruments for removal of exploitative practices in the Tribal Sub-Plan Areas and to concretise the guidelines given by Ministry of Home Affairs, Government of India, in respect of assuring fair price for the agricultural and minor forest produce of the tribals. These instruments are (a) statutory provisions for banning the purchase of important agricultural and minor forest produce of the tribals in

the selected Tribal Sub-Plan Areas and (b) creation of an alternative agency in the cooperative sector to undertake purchase and sale of the banned commodities mentioned at (a) above and also to provide, over a period of time, consumption finance to satisfy the needs hithertofore satisfied by private moneylenders, who are legally prohibited from lending money as pointed out in (a) above.

Adiwasi Cooperative Societies: In order to implement the above-mentioned policy decisions, Government chalked out a programme of establishment of Adivasi Co-operative Societies in the Tribal Sub-Plan Areas of the State. There are 258 such societies in the State. In brief this society would make available all the credit needs of its members and serve as the centre for the purchase of commodities produced by the Tribal Members and sale of consumption and production requisites to its members. This society being at the base tier, is linked to the middle tier of District Central Cooperative Bank for the purchases of credit, and to the apex tier in respect of purchase and sale operations to the Maharashtra State Co-operative Tribal Development Corporation. The above-mentioned Co-operative Societies provide an alternative agency for the replacement of the trading channel provided by the traders. The second instrument i.e. statutory provision for banning the purchase of important agricultural and minor forest produce of the Tribals in the selected Tribal Sub-Plan Areas so also prohibition of moneylending in these areas is forged by enacting of Maharashtra Tribals Economic Condition (Improvement) Act, 1976.

Consumption Finance : In addition to the creation of an alternative agency and enacting statutory measure to ban moneylending and trading it is necessary to offer the same economic services as offered by the moneylenders and

traders to their Tribal clients to make the scheme of removal of exploitative practice a success. One of the critical services offered by the moneylenders and traders in the Tribal Areas is to advance money to the tribals to meet the daily necessities in the lean period when crops are yet to be harvested and work on farms or public assets has not started. As a matter of fact, it is through this advance that the moneylenders and traders start the economic process of binding a loanee in the ensuing economic season so that the recovery of the advance is assured by exchanging a charge on the future crop and/or labour of loanee and this charge always works adversely as far as the loanee is concerned leading to his exploitation. Nevertheless availability of consumption finance is an essential service required by the tribals and since it will not be made available by moneylenders and traders when the above-mentioned Act is brought into force, Government has to offer this service to remove hardships to the tribals and initiate totality of action required to remove exploitative practices in the Tribal Sub-Plan Area.

In the circumstances explained above the Government decided to provide consumption finance to the tribals in those Tribal Sub-Plan Areas where the provisions of the Maharashtra Tribals Economic Condition (Improvement) Act, 1976, are to be brought into force. For this purpose Government had sanctioned Rs. 3 crores for the creation of 'Consumption Finance Disbursement Revolving Fund'. The scheme of consumption finance is implemented by the Tribal Development Corporation through the Adiwasi Co-operative Societies. The consumption finance loan is to be paid once in a year to the members of Adiwasi Co-operative Societies at the interest rate of Rs.7.5 per cent per annum and not more than 30 per cent of the amount will be in cash, the

remaining portion being paid in kind. The kind portion will generally consist of (1) foodgrains, (2) kerosene, (3) cloth, (4) salt, and (5) edible oil. The scale of finance under the consumption finance scheme is as under:

- i) A sum upto Rs.250 to a Scheduled Tribe family which is not a defaulter to any institution including Government on all loans excluding long term loans,
- ii) A sum upto Rs.125 to a Scheduled Tribe family which is a defaulter to any institution including Government on all loans excluding long term loans,
- iii) A sum upto Rs.100 to a Scheduled Tribe family which does not possess any land and whose principal income is derived from a labour of any type of village artisanship.

Thus, removal of exploitative practices was accorded the highest priority in the Tribal Sub-Plan Areas during the Fifth Five Year Plan. Having achieved some progress in this field, the Sixth Plan placed emphasis on raising the economic conditions of tribals. Plans for economic development were prepared for various compact areas of tribal concentration in the State, and administrative machinery was geared up to face the new challenge. However, as Deogaonkar finds:

"Though the projects have started functioning, due to lack of proper coordination of various governmental agencies working in the same area, development work could not gather momentum. The Directorate of Tribal Welfare, the Project-cum-Block Development Officer and the Block Staff, the Maharashtra State Tribal Development Corporation all function independently in the area simultaneously with

the project officers. The Forest Department has its own programme and style of functioning.

Thus there is a lack of coordination leading to duplication of efforts, loss of human and material resources, overlapping of efforts and even rivalry between departments at the operational level. The Collector is over-burdened with duties and has little time to supervise and streamline the functioning. The Adivasi Cooperative Society has three bosses—the Project Officer, the Tribal Development Corporation and the Registrar of Cooperative Societies. This creates confusion and bottlenecks. The project officer has no arms to work. The working group on Tribal Development During Medium Term Plan (1978-83) appointed by the Ministry of Home Affairs in its Report (July 1978) has categorically pointed out that all such special programmes (S.F.D.A., M.F.A.L., D.P.A.D.) should be interwoven within the I.T.D.P. frame." (Deogaonkar, 1982, pp. 87-88.)

Tribal Sub-Plan for Sironcha

In the light of above expectations, it will be useful to examine how far the Tribal Sub-Plans are innovative and depart from the routine sectoral plans. With this view the Draft Sixth Five Year Plan for Sironcha is briefly examined. The Plan Document¹⁰ identifies the problems for the tahsil as follows:

Communication: According to 1972 census of the 556 villages there were only 54 villages communicated with all weather road, lying mainly on Dina-Allapalli-Aheri-Sironcha-Ankisa Road. 204 villages were communicated with kacha road and the presence of a number of nallas make these villages

¹⁰ For details vide, Project Report for Sironcha, Integrated Tribal Development Project, Chandrapur District, Draft Sixth Five Year Plan 1980-85 and Annual Plan 1981-82. Government of Maharashtra, 1981.

inaccessible during June-December. More than half the villages were not communicated with either pakka or kacha road. To overcome this difficulty new road links of 1165 km were proposed.

Health: The tribals are generally depending upon the treatment given by their traditional pujari. There are three Public Health Centres at Sironcha, Aheri and Etapalli and three more centres were opened up at Bhamaragad, Kamalapur and Ankisa respectively. The health services available at these centres are, however, accessible only to a small proportion of the tribal villages, and the rest of the population has to resort to traditional remedies.

Education: In 1971, 5.33 per cent of the tribal population was literate. There were 131 primary schools in Etapalli Panchayat Samiti, 83 in Aheri Panchayat Samiti and 79 in Sironcha Panchayat Samiti. Since the beginning of Tribal Sub-Plan two new schools were opened up and the number of Ashram Schools increased from 4 to 16 (Table 4.1).

Table 4.1 : Educational Facilities in Sironcha Taluka

Educational Institution	No.	No. of pupils
Primary Schools	431	13,320
Ashram Schools	16	1,950
Secondary Schools	5	820
Junior College	1	95
Balwadi	10	407

Language is the basic problem in imparting instruction. It is therefore proposed to start 100 per cent education in Madia language in the 1st standard, introduce 30 per cent Marathi in the 2nd, 70 per cent Marathi in the 3rd and shift to Marathi medium in the 4th standard.

Agriculture and Allied Subjects: The problems identified are lack of inputs, traditional method of cultivation, single crop economy, indebtedness due to heavy borrowing from sawkar, cooperative, no repaying capacity, lack of extension support, inadequacy of infrastructure,

absence of supporting business, non-availability of cultivable land among forests of hilly area.

After identifying the problems, the Plan Document describes the various schemes and details the sectorwise and schemewise allotment of funds.

For supporting agricultural development, the requirements of seed and fertilizer are provided on a subsidy basis. Scheme of Gobar Gas Plant is introduced. A medium irrigation project "Summe Nala" near Etapalli is proposed. It is proposed to provide inputs with 30 per cent subsidy and oil engine and electric motor pump on 100 per cent subsidy.

Animal husbandry programme is to be implemented by strengthening the present veterinary aid and by introducing a programme for improving the genetic structure of the local livestock, to help tribal to take to milk, mutton, pork production on a commercial basis. Forest-based cottage and village industries: (a) manufacture of tamarind seed powder, (b) gum grading and processing, (c) manufacture of brooms, (d) supply of edible oil against the collection of Mahua seed, are suggested. Adiwasi cooperative societies are to be organized to meet credit requirements, marketing of produce and supply agricultural inputs and consumer goods.

The other schemes include: (a) Distribution of fruit plants and vegetable seeds for kitchen gardening - with the aim of enriching their diet and the surplus is to be sold out in the market. (b) Plantation of fruit trees on the lands belonging to the tribals - to help generate additional income (plant trees like Mango, Papai, Phanas, Charoli, Tembhra, Coconut). (c) Supply of bullocks and bullock-carts - Grant a loan on 50 per cent subsidy for the purchase of bullocks and bullock-cart to help tribals

engaged in the trade of transport.¹¹

It will be obvious from the above that the approach and the schemes included under the Plan are in no way different from the routine schemes that were being prepared under the different plan heads till the acceptance of "Integrated approach" to the Tribal Sub-Plans. The problem is that the entire planning and administrative machinery of the Government is so designed and organized that it is not possible to introduce any changes even though a need is felt to approach the problem in a different way. The schemes basically try to bring the tribals into the market nexus where despite all the Government support the tribal remains weak and disadvantaged and the fruit of his labour is enjoyed more by the outsiders - the trader, the petty official than the tribal himself. The basic assumption is that the tribal should be provided with various inputs at subsidy and their productive activities will become economically viable. The Plan Document does not examine whether he has the adequate land resource to profit from the various schemes. Only a brief reference to land holdings is made and the following distribution is given:

Table 4.2 : Distribution of Landholders in Sironcha by the Size of Landholding

Size of landholding (in hectare)	Percentage of landholders
0 - 1	41.05
1 - 2	19.65
2 +	39.30
Total	100.00

¹¹ It is stated that this scheme has already been executed and was 100 per cent successful.

Apart from the size of land holding which is small in most cases, the factors like what is the quality of the land under cultivation, whether the land is level, free of stones, whether it is irrigable, etc., are not examined. The only observation made is that "the land owned by non-tribal is fertile rich soil and properly level (where they grow tobacco, chilli and other cash crops) in comparison to that of a tribal". In the absence of any analysis of the basic causes for his backwardness and poverty the schemes formulated for his 'benefit' fail to deliver the goods. An attempt will be made in the following chapter to examine the present conditions of the tribals and the causes for their relative backwardness drawing upon the survey data and also to indicate the inherent limitations of the 'development schemes', in reaching the tribals.

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CHAPTER V

**SOCIO-ECONOMIC CONDITIONS OF THE TRIBALS
IN CHANDRAPUR DISTRICT**

Survey Methodology

The tribal population in Chandrapur district, as noted earlier, was pushed over time into the hilly and forest tracts of the district and the plains were occupied mainly by the non-tribals. The tribals today are concentrated in Gadchiroli and Sironcha talukas, which together account for 90 per cent of the tribal population of the district. The proportion of tribal population is high in the remote forest region of these talukas, whereas the proportion is relatively less in the bigger sized and accessible villages. It was noted (1971 Census) that in Sironcha taluka about 33 per cent of the villages had 100 per cent tribal population and another 33 per cent had more than 80 per cent tribal population. These villages are generally very small in size. (Average size of these villages was noted to be 107 persons in 1971 while the overall average in Sironcha taluka was 253 persons.) In Gadchiroli taluka, 25 per cent of the total villages were inhabited exclusively by the tribals and in another 20 per cent of the villages the tribals constituted more than 80 per cent of the respective village population.

It was decided to cover in the survey a few clusters of villages with predominantly tribal population; the clusters were so selected as to represent variations in (a) accessibility, (b) crop seasons, (c) proximity to Forest Department (FD) or Forest Development Corporation (FDC) work or bamboo cutting work, (d) the major tribal population groups viz. Raj Gond, Madia Gond, Gayate Gond. The factor of accessibility is important from the point of any developmental programme reaching the tribal population whereas the availability of wage work is a major economic factor determining their level of living. The villages being small

in size a cluster of 3 to 6 villages within a radius of 3 to 5 kilometres was included in the survey and attempt was made to cover all the families in the selected village. It was not possible, in the case of three villages from Gadchiroli taluka to reach all the families, because some of the families had outmigrated temporarily for work during the summer season. In two villages from Gadchiroli taluka the non-tribal families were not covered.

The survey covered 10 villages from Sironcha taluka and 10 from Gadchiroli taluka. The villages from Sironcha taluka are distributed in three clusters and those from Gadchiroli in two clusters. (Table 5.1.)

Table 5.1 : The Villages and the Number of Families Covered in the Survey in Chandrapur District

Cluster	Taluka	Village	Total families	Main community
I	Sironcha	1. Tekampalli	21	Raj Gond
		2. Buruk Mallempalli	39	"
		3. Yenkapalli	29	"
II-a	Sironcha	4. Motukpalli	14	Raj Gond
		5. Rengulwahi	26	"
		6. Karancha	23	"
II-b	Sironcha	7. Ambezara	17	Raj Gond
		8. Lankachen	25	"
		9. Karneli	17	"
III	Sironcha	10. Zareguda	20	Madia Gond
IV	Gadchiroli	11. Waghbhumi, Mardantola	17	Gayate Gond
		12. Kohakabodi, Alondi, Pitesoor	30	"
		13. Botezari, Rankatta	19	"
V	Gadchiroli	14. Mutnoor, Fuser, Bawanchuha	30	Madia Gond

The accessibility to various amenities and facilities, the crops grown and the availability of forest work in and around the clusters is indicated in Table 5.2. Cluster I is the only cluster which is located near the developed centres

Table 5.2(a) : Distance upto Various Amenities from the Surveyed Villages

Approximate distance in kilometres								
	Primary school	Dispensary	Veterinary service	Post office	Market place	Place where S.T. bus service touches	Paper mill work	F.D. work
	1	2	3	4	5	6	7	8

Cluster I	Upto 2	2 to 5	5 to 9	2 to 5	2	2 to 5	2 to 5	2 to 10
Cluster II-a	Upto 3	9	45 to 50	9	9 to 15	10	12	2 to 8
II-b	Upto 3	6 to 10	50 to 56	6 to 10	6 to 10	18 to 25	20	3 to 10
Cluster III	3	3	3	3	3	3	9	2 to 5
Cluster IV	7 to 10	16 to 20	16 to 20	7 to 10	5 to 10	40 to 50	5 to 8	4 to 10
Cluster V	10	15 to 20	25 to 30	6 to 9	9	9 to 15	Not available within reach*	

Note: * Coal merchants were felling trees in the forest areas 2 to 5 kms from these villages.

Table 5.2(b) : Agricultural Seasons and Main Crops in the Surveyed Villages

	Seasons	Main crop	Other crops grown
Cluster I	Khariff, Rabi	Paddy, Jowar	Maize, green gram, <u>wal</u> , <u>popat</u> , chilli, tobacco
Cluster II	Kharif, Rabi	Paddy, Jowar	Maize, green gram, <u>wal</u> , <u>popat</u> , chilli, tobacco
Cluster III	Kharif	Paddy	Maize, <u>wal</u> , <u>popat</u>
Cluster IV	Kharif	Paddy	<u>Kodo</u> , <u>Kutki</u> , <u>Mandia</u> , <u>Kultha</u> , black gram
Cluster V	Kharif	Paddy	Chilli

viz. Allapalli and Aheri and hence various civic amenities are available within 2 to 5 kms from these villages. In the case of Cluster III, amenities like marketing facilities, veterinary and medical services are available at Bhamragad and Hemal Kasa. However, these centres themselves are virtually cut off from the rest of the district for about 6 to 7 months of the year and the villages in the Bhamragad region face several problems in relation to the supply of provisions and other necessities, access to government offices, etc. The rest of the three clusters are located at about 10 kilometres or more from the places where State Transport (S.T.) bus service is available and that too only between January and May. The nodal centres can be reached by bullock-cart or bicycle in fair weather and only on foot during the rainy season.

The selected villages were reached mainly on foot and at times by bicycle for the field investigational work. The tribal families approached to obtain the family-level information were generally cooperative but somewhat shy and brief in their response. Unlike the villages in the plains where general discussion ensues when the subject of developmental schemes or political factions in the village is

broached, the tribals were by and large reticent; they are unaware of the wider economic-political happenings, party politics or developmental programmes and schemes. The basic information about the members of the family, work pattern - agricultural and forest-related work, housing, consumption, etc., could be obtained though the quantitative information was generally a rough estimate. We did not meet with any refusal to give information in response to any of the questions included in the schedule. A few respondents expressed a hope that as an outcome of the study their village would get some attention and receive facilities such as drinking water supply or pucca road. The field investigational work was carried out between December 1978 and June 1979 and the reference year for collecting information on agricultural production, work pattern, etc., was from November 1977 to October 1978.

The Ecological Setting

The economy and life of Gonds has been shaped by his habitat - the forest. Most of the economic activity pertaining to food quest, shelter, fuel is dependent on the forest. Foodgrains grown in the fields and some beans and vegetables grown in the courtyard are the only cultivated items of food, the rest is obtained from the forest. The important trees that provide food materials to the Gonds are: Madhuka Indica Gmal. (Mahua): It is a large ever-green tree (12-15 m high) and of common occurrence in the south and west Chandrapur forests. The fleshy succulent carollas of the flower are eaten raw, cooked or dried in the sun and ground and mixed with millet flour to make bread. About 40 kg of carollas (100 ~~to 150~~ kg of flowers) can be obtained from a mature tree (after the 10th year). Mahua flowers are gathered early in the morning in the month of April and form an important supplement to the food during

the summer and early monsoon months when the new harvest is yet to come. The flowers are sweet and nourishing. The flowers are also used for distillation of spirit that adds buoyancy and enjoyment to the otherwise monotonous tribal life. Produce of mahua trees is obtained from the trees planted/preserved in the fields and also from the trees in the nearby forest region. Mahua fruit, ripe and unripe, is eaten and the fruit kernel yields oil.¹ The oil is expelled in a simple wood crusher and the oil yield is about 35 per cent. The oil is used for cooking for which young fruit is preferred (the oil content is less but the oil is less bitter when the fruit is young). It is also used for lighting oil lamps. The oil is commercially used in soap making. The oil-cake is used for poisoning fish. The leaves of the trees serve as a fodder. The bark is used as an adjunct in dyeing where dark colours are desired. Leaves are also used as a tan. The bark yields gum which is sold as gum arabic.

Mahua thus forms a part of the regular diet of the Gonds and a standby in a scarcity year. It is of great importance for liquor distillation. Government restrictions on the stock of flowers held by the Gonds are much resented. Preservation and propagation of mahua is considered vital by the Gonds, as it is a versatile tree.

Buchania Lanzan Spreng. (Char or charoli): It is a moderate sized deciduous tree; and is valued for the kernel of the fruit called charoli which is sweet and wholesome. The bark is used in tanning. The gum it yields is used medicinally and also in dressing textiles. It also provides

¹ In Cluster IV villages it was estimated that the mahua trees contributed to the extent of about 10 per cent of the total food material consumed by the tribals.

fodder for the cattle. Charoli is valued commercially and is used in confectionary. It is a valuable tree for covering the hill slopes in dry tracts as it is not readily browsed and natural reproduction is plentiful.

Diosphyros Melanoxylon Roxb. (Tendu or Temru): It is a middle sized tree which is hardy, drought resistance and can stand shade or browsing. The fruit is globose and is eaten when quite ripe. It contains sweet, soft and astringent pulp and is highly appreciated during the hot season (the fruit is available in summer). Leaves are eaten by the cattle. The wood is used for making shafts, poles, sticks.

The tree is commercially very valuable. The leaves of tendu are collected in the month of May and are used for wrapping of bidis. This provides gainful work to the tribals during the slack month of May. The branches are, at times, cut to facilitate plucking of leaves; there is also a practice of setting fire around the area with the belief that this promotes the growth of young leaves; such fires cause damage to saplings. However, as the payment for the collection of tendu leaves is by piece-rate such practices are followed to speed up the work.

There were complaints about the tendu trees being cut down in areas where tenders for charcoal-making were given. Restrictions/prohibition on charcoal-making activity in the interest of the conservation of the forest wealth needs to be considered.

Mangifera Indica Linn. (Amba) A large ever-green tree the fruit of which is valued both in unripe and ripe stage. The leaves are used to make platters and serve as a fodder also. Twigs are useful to make toothbrush. When the fruit is plentiful raw mangoes are dried and preserved.

Tamarindus Indica Linn. (Chinch): It is a large ever-green tree, the dried fruit of which is used in cooking, and the leaves are eaten by the cattle.

Embllica Officinalis Gaertn. (Avala): A middle sized tree the fruit of which is relished and is highly valued medicinally; the leaves are eaten by the cattle.

Zizyphus Jujuba Lamk. (Bor): A small tree, the fruit of which is meaty and sweet; the fruit is also dried and pounded and eaten with vegetables. It is also provides fodder.

Syzygium Cumini Skeel (Jambhul): It is a large ever-green tree yielding fruit; the leaves are used for fodder and the bark for dyeing, tanning.

Feronia Limonia Swingle (Kavath): The fruit is eaten, the seeds yield oil used against itch; the leaves yield on distillation a small quantity of essential oil.

Anona Squamosa Linn. (Sitaphal): A small tree, the fruit of which is relished.

Borassus Flabellifer Linn. (Tad): A large erect plant which is highly valued for its versatality. The unripe seeds called tadgola are eaten during the hot weather; they are very cooling. The inflorescence is tapped for toddy which is fermented and used as liquor. Gur is also manufactured from toddy. One gallon of sap yields 1.5 lb of gur. The seedlings of the plant are eaten and valued particularly during famine times. The leave stalk of the tree is highly fibrous and contains a large number of strong, wiry fibres of considerable length. The fibre is used for making ropes for country craft, twine, mats, brooms and brushes. The leaves are used as a roofing material. The hollowed stem is used as a water pipe. The tree yields black gum. The wood is useful for making rafters.

Phoenix Sylvestris Roxb. (Shindi): This is also a versatile plant like tad. The fruit of this palm is edible; sap is gathered from the stem - the fresh sap - neera is sweet and wholesome. The juice is used to make jaggery or arrack. Leaf bud and leaf stalk is also eaten and valued in times of scarcity. The leaves are used for making baskets and mats; the leaf-stalks are beaten and twisted into rope. The fibre obtained from leaves is plentiful, soft and well adapted for paper-making.

Dendrocalamus Strictus Nees. (Bamboo): Another highly valued tree is the deciduous densely tufted bamboo with a strong stem. It is commercially valuable as the stem yields fibre suitable for paper-making. It is valued by the tribals; the stem is used for house-construction, for fencing, for rafts. It is the basic material for making mats, baskets and is used by the Buruds (the basket-makers). Young shoots of bamboo are highly relished; the grain of bamboo is used as food and bamboo provides fodder for the cattle.

Azadirachta Indica Juss. (Neem): The tree is considered important for oilseed. The oil is valued medicinally.

Pongamia Pinnata Pierre. (Karanja): The seed yields oil which is used for lighting purpose and also for medicinal purposes. The oilcake is used as manure and a remedy against white ants.

Besides the above described trees yielding fruits, flowers, oilseeds, a variety of roots, tubers are collected from the forest, and leaves of trees are eaten in times of scarcity.

Terminalia Chebula Retz. (Hirda): It is a moderate sized deciduous tree; the kernel yields oil which is used medicinally. It is commercially valuable as the dried fruit is used as a dye; the fruit is the most important tanning

material of the Pyrogallol class. Whole fruits and crushed myrabolans are exported in large quantities. Young fruits are valued for medication by the tribals and used for relief from cough, asthma. It was reported that due to commercial exploitation the trees are becoming scarce.

Butea Monosperma Lam. Kuntz. (Palas): The root bark yields fibre which is used for making ropes and cordage. Dried flowers yield a dye and the leaves are used as platters. The tree is valuable for the production of lac.

Salmalia Malabarica Schot. and Endl. (Savar): The inner bark of the tree yields a good fibre suitable for cordage. The seed yields silk-cotton which is largely used for stuffing cushions. The wood is used for splints in the match industry. The seed yields oil.

Terminalia Belerica Roxb. (Behda): The seed yields a fatty oil which is valuable medicinally. It yields dyes, tans, gum and the leaves are eaten by the cattle.

Terminalia Tomentosa W & A (Ain): The gum is used as incense; bark gives dye-stuff, and the leaves are eaten by the cattle.

Acacia Leucophloea Willd. (Hiver): The tree yields gum and resin of medicinal value. The bark and leaves are useful in tanning, and the fibre is valued for making fishing nets. Young pods are eaten as vegetables. In scarcity times, bark is mixed with flour and eaten. The leaves are eaten by goat. Timber is useful for making implements.

Butea Superba Roxb. (Palasvel) and Tectona Grandis Linn. (Sag): The leaves are used for making a rain-cover.

Forests also supply the Gonds with all the material needed for house construction, fencing and the shelter for animals, e.g. bamboo, timber, thatching grass, fibre and clay. Some of the important trees used to obtain timber for house construction are Xylia Dolabriformis (Suria),

Acacia Catechu (Khair), Dalbergia Sissoo (Shisvi),
Hardwickia Binata (Anjan), Gmelia Arborea (Shivan), Adina
Cordifolia (Haldu), and for agricultural implements:

Acacia Catechu, Anogeissus Latifolia (Dhawda), Acacia
Leucophloea (Hiver), Chloroxylon Swietenia (Bhera), etc.

The specific purposes for which these various trees are used are as follows: for bullock-cart - Dhawda, Tendu; for cart wheel - Anjan, Dhawda, Teak; for yoke - Shivan; for plough - Khair, Dhawda, Bhera, Teak; in house construction - for beams - Ain, Tendu, Teak; for doors and windows - Shivan, Haldu, Teak; for poles - Ain, Suria; for fence - Garadi, bamboo; for thatch - Palas and teak leaves, grass. Most of these trees are valuable in other ways also. For example, Acacia Catechu yields Cutch and gum, Anogeissus Latifolia is a fodder plant; the bark yields tanning, the stem gives gum and resin.

In addition several plants are considered useful to heal sprain, wound, to cure fever, cough, stomach pain, digestive disorder, etc. For example:

- | | |
|-----------------|---|
| Snake bite | - Root of <u>Ricinus Communis</u> (Erand). |
| Fever | - Juice of bark of <u>Azardirachta Indica</u> . |
| Urinary trouble | - Bark and flowers of <u>Butea Monosperma</u> . |
| Piles | - A preparation from fruit of
<u>Aegle Marmelos</u> (Bel). |
| Stomach ache | - Preparation from flowers of <u>Holarrhena</u>
<u>Antidysenterica</u> (Kuda) its pods are
considered antibiotic. |
| Bleeding | - <u>Bauhinia Variegata</u> (Kanchan). |
| Wound | - Leaves of <u>Zizyphus Jujuba</u> + turmeric. |
| Cough | - Young fruit of <u>Terminalia Chebula</u> . |
| Diarrhoea | - Juice of bark of <u>Madhuca Indica</u> ,
<u>Zizyphus Jujuba</u> . |

Similarly barks, leaves are used for medicinal purposes to treat the cattle and other domesticated animals (e.g. bark of Ran Amba (wild mango) is used to cure the feet of a cattle when hurt or a variety of white tuber is used if a bullock is wasting).

For fish poisoning following material is used: Juice of the fruit of Casearia Tomentosa, Casearia Graveolens, oil cake of Madhuka Indica or pounded bark of Randia Dumaforum, Ougeinia Dalberioides.

Honey is collected where Terminalia Tomentosa, Tektona Grandis, Anogeissus Latifolia, Cleinstanthus Collinus (Garadi), Madhuka Indica, etc., trees are plentiful.

The fuel wood needed for cooking purposes and also to keep the house warm is collected from the forest. Considerable quantity of fuel wood is needed for cooking roots, tubers or meat. The Madia Gonds wear very scanty clothing and keep warm at night by keeping a fire burning. Small wood obtained from the trees like Dhawda, Ain, Lendi (Lagerstroemia Parviflora) is considered useful for a slow fire (shekoti). Fire is lighted during the night to ward off the wild animals.

The grazing lands and the fodder trees support the cattle. Trees like Schleichera Oleosa (Kusum), Pterocarpus Marsupium (Bibla), Terminalia Arjuna (Arjun), Albizia Procera (Kinhai), are valued for fodder for the cattle and Bor, Hiver for sheep and goat. Forests afford the necessary shade and the water supply for the animals. Natural spring is the main source of drinking water supply for many Gond settlements. The forest canopy stabilizes the water supply and prevents the stream from drying up during the summer months.

Forests act as an effective cushion in times of scarcity. With the help of a variety of roots, tubers, known to Gonds as substitute for foodgrains together with leaves, fruit, etc., the tribals are able to survive through the famine period.

Some cash income is afforded by the collection of forest produce e.g. tendu leaves, gums and resins, wax, lac, mahua flowers, hirda fruit, honey. The wild animals from bear to mouse and birds are now very scarce and an important items which enriched their diet traditionally has nearly vanished. Fish, a delicacy in the Gond diet are caught in streams and small rivers, generally by damming the stream and setting up fish traps.

It will be apparent from the above that the Gonds depend on the forest wealth for most of the supplementary food, for liquor, for grazing his livestock, for all the material necessary for housing, fence and other shelter, for fuel and lighting, for baskets, mats, rain-covers, rafters, water pipes, for agricultural implements and carts, and for earning part of his cash income. The major problem is that the forest wealth, particularly the valuable trees like mahua, tendu, char, is getting depleted due to commercial exploitation, and as a result the tribals are not getting adequate timber, bamboo for housing, fencing, etc., and game which has become very rare due to deforestation.

The Population of the Surveyed Villages

As indicated earlier the villages included in the survey were almost exclusively tribal villages. A few scheduled caste families (mainly Mahars) were covered in one village viz. Lankachen. Almost all the tribals were Gonds and among them Raj Gonds were the most numerous. In the total sample, Raj Gonds accounted for about 44 per cent of the total families, Madia Gonds for about 20 per cent, Gayate Gond and Naik Gond for 18 and 13 per cent respectively (Table 5.3). There were a few Dhadwe Gond and a few Mahar families in the surveyed villages. Among Gonds, Raj Gond is considered an aristocratic sub-division; they were feudatory chiefs, zamindars, large proprietors and today

Table 5.3 : Distribution of the Families Covered in the Survey by Community

Village	(No. of families)					Total
	Community					
	Raj Gond	Madia Gond	Gayate Gond	Naik Gond	Others	
1. Tekampalli	19	-	-	1	1	21
2. Buruk Mallempalli	24	9	-	4	2	39
3. Yenkapalli	14	-	-	12	3	29
4. Motunkpalli	14	-	-	-	-	14
5. Rengulwahi	23	3	-	-	-	26
6. Karancha	12	-	-	11	-	23
7. Ambezara	2	-	-	15	-	17
8. Lankachen	13	-	-	-	12	25
9. Karneli	16	-	-	1	-	17
10. Zareguda	-	20	-	-	-	20
11. Waghbhumi-Mardantola	6	1	10	-	-	17
12. Kohkabodi-Alondi-Pitesoor	-	-	30	-	-	30
13. Botezari-Rankatta	1	-	18	-	-	19
14. Mutnoor-Fuser-Bawanchuha	-	30	-	-	-	30
Total	144	63	58	44	18	327

most of them are land owning cultivators. Gaita was traditionally a village priest or headman and Darwe or Naiks were soldiers/leaders. Gonds belonging to these various communities are localized in different parts of Gadchiroli and Sironcha talukas. Most of them are cultivators. Madia Gonds are concentrated in Sironcha taluka and are mainly found in the southernmost part of the district. Their name Madia or Maria is derived from Mara or Mad which means a tree or a

forest, indicating their habitat. They had been forest-dwellers, and still continue to live in the same habitat.

The Gonds speak dialects of Gondi-a Dravidian dialect and the language is influenced according to the location by the neighbouring Telugu, Hindi or Marathi speaking region. Madia - a dialect of Gondi has strong influence of Kannada and Telugu languages. Gondi is only a spoken language and has no script.

Migration

Over 50 per cent of the families covered in the survey are migrant families (Table 5.4). They have migrated to the present place of residence from the interior parts of the same taluka and partly from the adjoining talukas of Andhra Pradesh. In 40 per cent of the cases the head of the family has moved to the present place of residence and in another 38 per cent cases the father of the present head (Tables 5.5 and 5.6). The main reason for migration was the lack of land at the native place; the patta made available by the Aheri Zamindar for cultivation attracted a number of tribal families. The other important reason is the availability of wage work mainly in the forests near some of the surveyed villages. About 20 families reported that they left their native villages and moved to their wives' village as gharjawai; they stay at the wives' house and work on her family land (Table 5.7). Some had migrated from Madhya Pradesh due to famine conditions and some from Andhra Pradesh due to the oppressive rule of Nizam.

Family Size

The average family size for the surveyed families came to 5.64 persons as against 5.13 and 5.32 noted for Sironcha and Gadchiroli talukas respectively in 1981 Census. If the data for 1971 are examined it is noted that the family size for exclusively tribal villages is somewhat higher than

Table 5.4 : Distribution of the Families Covered in the Survey by Place of Origin

Village No.	Non-migrants	Migrants						(No. of families)	
		Place of origin in						Total migrants	Grand Total
		Sironcha taluka	Gadchiroli taluka	Andhra Pradesh	Madhya Pradesh	Other Places	Not specified		
1	4	14	-	1	-	-	2	17	21
2	2	15	-	14	4	-	4	37	39
3	2	11	-	7	1	-	8	27	29
4	6	6	-	1	-	-	1	8	14
5	-	18	-	8	-	-	-	26	26
6	12	9	-	2	-	-	-	11	23
7	9	7	-	-	-	-	1	8	17
8	18	2	-	3	-	-	2	7	25
9	8	7	-	1	-	-	1	9	17
10	20	-	-	-	-	-	-	-	20
11	8	-	5	-	2	1	1	9	17
12	21	-	5	-	3	1	-	9	30
13	16	-	2	-	1	-	-	3	19
14	13	1	15	-	1	-	-	17	30
Total	139	90	27	37	12	2	20	188	327

Table 5.5 : Distribution of Migrant Families by Relation of the Person Migrating to the Present Head of the Family

Person Migrating	(No. of families)				
	Village cluster				
	I	II	IV	V	Total
Grandfather	8	4	-	-	12
Father	21	35	10	5	71
Mother	2	-	-	-	2
Self	43	12	10	11	76
Husband	2	4	-	-	6
Other Relative	7	9	1	1	18
Not given	-	3	-	-	3
Total	83	67	21	17	188

Table 5.6 : Distribution of Migrant Families by Period of Migration

Period	(No. of families)				
	Village cluster				
	I	II	IV	V	Total
1900-1939	28	29	2	1	60
1940-1959	13	17	5	4	39
1960-1969	15	8	3	7	33
1970 +	10	1	5	4	20
Not given	17	12	6	1	36
Total	83	67	21	17	188

that noted in the sample in both Gadchiroli and Sironcha talukas. If the distribution of the total rural families for Chandrapur district (1961) and the distribution of sample families is compared by family size, it will be seen that the small-size families are markedly less among the tribals.

Table 5.7 : Distribution of Migrant Families by Reason for Migration

Reason for migration	(No. of families)					Total
	Village cluster					
	I	II	III	IV	V	
No land at native place	30	40	-	3	1	74
No pasture at native place	3	1	-	-	-	4
Work availability at the new place	12	6	-	9	7	34
Climate at native place not congenial	1	6	-	1	2	10
As son-in-law	9	4	-	-	7	20
Other reasons	12	3	-	5	-	20
Sub-total	67	60	-	18	17	162
Reason not given	16	7	-	3	-	26
Total migrants	83	67	-	21	17	188
Grand Total	89	122	20	66	30	317

Table 5.8 : Average Family Size in 1971 Census and in the Sample Survey

	(Average No. of persons per family)		
	1971 Census		Sample Villages (1978)
	All villages	Villages with 100% Tribal population	
Chandrapur District (rural)	5.47		
Gadchiroli taluka	5.19	6.86	6.54
Sironcha taluka	5.24	5.66	5.26

In the socio-economic survey of Gonds of Satpura mountains (Tamia block, Chindwada district, M.P.) carried out in 1957,²

² The survey included 270 Gond families; for details see Gonds of Satpura Mountains, B. N. Mehta, N. Viswanathan, Tata Institute of Social Sciences, Bombay, 1963-64.

Table 5.9 : Distribution of Families by Number of Persons in a Family

No. of persons in a family	1961 Census Chandrapur District (Rural area) Families (per cent)	Present Survey (1978) No. of families	Per cent	Sample Survey Tamia block (1957) families (per cent)
1	6.0	5	1.5	10.4
2 - 3	26.1	45	13.8	
4 - 6	47.6	190	58.1	55.0
7 - 9	15.8	64	19.6	25.0
10 and more	4.5	23	7.0	9.6
Total	100.0	327	100.0	100.0

the average family size came to 6.2 persons. The percentage of large-size families (7 or more persons) was about 35 in the Tamia block sample while it was 20 per cent in the district; the proportion of joint families was reported to be as much as 47 per cent in the Tamia block.

If the villagewise information is taken into account considerable inter-village variations are noted; the average family size ranged from 4.43 to 7.37 persons (Table 5.10). The number of joint families were relatively more in cluster IV while in clusters I and II where the family size was relatively smaller, the proportion of nuclear families or single person or two-three person units, (widower, widower with children) was higher (Table 5.11). So far as the number of living children per family unit are considered it is noted that there are not large variations between the clusters. The average number of living children per family come to about 3 (Table 5.12). Of the total children reported to be born the proportion of surviving children was 82 per cent (Table 5.13). The number of children born varied from nil to 9; if the distribution of women who have passed the child-bearing age is

Table 5.10 : Distribution of the Families Covered in the Survey by Family Size

Village No.	Family size (Number of persons)												(No. of families)		
	1	2	3	4	5	6	7	8	9	10	11-15	16 and above	Total families	Total persons	Average family size
1	-	-	2	3	3	4	4	2	-	3	-	-	21	131	6.24
2	3	1	3	9	7	10	-	5	1	-	-	-	39	194	4.98
3	-	1	5	7	8	4	4	-	-	-	-	-	29	137	4.72
4	-	-	3	3	4	-	1	2	-	1	-	-	14	74	5.29
5	1	-	5	8	-	6	5	-	1	-	-	-	26	128	4.92
6	1	1	4	8	5	-	3	-	1	-	-	-	23	102	4.43
7	-	-	3	2	5	4	1	1	1	-	-	-	17	90	5.29
8	-	-	1	3	5	7	4	2	1	1	1	-	25	156	6.24
9	-	2	1	2	6	4	1	-	-	-	1	-	17	90	5.29
10	-	-	2	5	3	5	2	1	1	-	1	-	20	113	6.65
11	-	1	-	6	1	2	2	-	1	1	2	1	17	118	6.35
12	-	-	6	5	7	5	1	1	2	2	1	-	30	171	5.70
13	-	1	1	2	2	2	1	4	-	3	3	-	19	140	7.37
14	-	-	2	6	4	8	5	2	1	-	-	2	30	199	6.65
Total	5	7	38	69	60	61	34	20	10	11	9	3	327	1843	5.64

Table 5.11 : Distribution of the Families Covered in the Survey by Family Type

Family type	(No. of families)					Total families
	Village cluster					
	I	II	III	IV	V	
Nuclear	52	75	11	25	15	178
Joint-lineal	12	11	6	8	2	39
Joint-lateral	1	1	2	4	2	10
Couple with other relatives	10	17	1	16	7	51
Widow with relatives	5	4	-	1	-	10
Widower with relatives	6	9	-	4	4	23
Unmarried male with relatives	-	3	-	8	-	11
Single person (male)	3	2	-	-	-	5
Total	89	122	20	66	30	327
Average family size	5.19	5.24	5.65	6.50	6.63	5.64

Table 5.12 : Distribution of the Families Covered in the Survey by Number of Children Born

No. of children born (to the present head of the family)	(No. of families)					Total families
	Village cluster					
	I	II	III	IV	V	
1	9	13	2	11	3	38
2	14	10	5	8	2	39
3	12	15	6	6	4	43
4	15	25	2	12	9	63
5	14	17	4	6	6	47
6	7	14	1	7	4	33
7	4	6	-	4	-	14
8	5	9	-	3	-	17
9	-	4	-	-	-	4
No children	9	9	-	9	2	29
Total families	89	122	20	66	30	327
Total children	313	497	64	217	109	1200
Average No. of children born	3.52	4.07	3.20	3.29	3.63	3.67
Average No. of Living children	2.86	3.22	2.75	2.62	2.93	2.95

Table 5.13 : Total Number of Children Born and Number of Surviving Children for the Families Covered in the Survey

Village cluster	No. of families	Total No. of children born	No. of children who died	No. of living children	Percentage of surviving children to No. of children born
I	89	313	58	255	81.5
II	122	497	104	393	79.1
III	20	64	9	55	85.9
IV	66	217	44	173	79.7
V	30	109	21	88	80.7
Total	327	1200	236	964	82.0

examined by the number of children, it is noted that they are about equally distributed in the classes nil to 8 children except for the groups of four and six children where there is a higher frequency (Table 5.14).

Family Composition

A married male was the head of the family in nearly all the cases. There were a few cases of widower or unmarried male head. Only in 10 families a widowed woman was reported to be the head of the family, there being no adult male member in the family (Table 5.15).

In 21 cases the son-in-law was staying at his wives' family, whereas the daughters-in-law were staying with their husbands' family in 55 cases. In about 54 per cent of the families the family unit was nuclear, and in 30 per cent of the cases it was joint.

Sex Ratio

The number of women per 1000 men was 973 in the surveyed villages; for the rural areas of the district the sex ratio was noted to be 975 in the 1981 Census. In

Table 5.14 : Distribution of Married Females of Age 25 Years and Above by Age Group and Number of Children Born for the Families Covered in the Survey

Age Group of Females	Total number of children born to self										(No. of females)		
	1	2	3	4	5	6	7	8	9	No child	Total	Total No. of children	Average No. of children per female
25-34 years	11	19	16	27	16	6	-	3	-	6	104	345	3.32
35-44 years	8	3	10	15	19	12	3	6	2	3	81	358	4.42
45-54 years	8	4	6	12	6	10	5	5	1	3	60	256	4.23
55 and above	3	5	6	5	4	4	3	3	1	7	41	149	3.63
Total	30	31	38	59	45	32	11	17	4	19	286	1108	3.87

Table 5.15 : Distribution of the Families Covered in the Survey by the Sex and Marital Status of the Head of the Family

Village cluster	Head of the family				Total
	Male married	Male widower	Male unmarried	Female widow	
I	77	5	2	5	89
II	105	11	2	4	122
III	18	2	-	-	20
IV	51	7	7	1	66
V	27	3	-	-	30
Total	278	28	11	10	327

Zareguda (the total number of families was only twenty) the sex ratio was 1173. It was about 1000 in the case of adults, while in the case of non-adults, there were only 12 male children as against 21 female children.

Age Distribution

The information on age has considerable limitations. In the case of children the age had to be judged, mainly keeping in view the number of children born and the spacing between the children. For women, the age could be estimated on the basis of the age of the children and for adult men in relation to the age of their children and wife. The proportion of children appears to be somewhat higher among the tribals as compared to that in the total rural population. (Table 5.16.)

Workers

The adult population in the working age group (15 to 55 years) constituted 50 per cent of the total population in the surveyed villages. It was noted that some of the children between the ages of 10 to 13 and some of the adults above 55 years of age were returned as working members.

Table 5.16 : Age Distribution for Rural Population and Tribal Population

Age Group (years)	(Per cent)				Present Survey (1978)
	Maharashtra - Rural (1961)		Chandrapur district - Rural (1971)		
	Total popula- tion	Scheduled Tribes	Total popula- tion	Scheduled Tribes	
0-14	42.09	43.40	41.8	43.0	42.5
15-44	41.90	42.88	41.4	41.2	40.0
45 +	16.01	13.72	16.8	15.8	17.5

Consequently the proportion of earners was noted to be about 60 per cent in the total population covered in the sample.

The proportion of workers was not much different in the various villages covered in the survey; only in the case of Zareguda, a Madia village in the remote hilly area the proportion of workers was as high as 77 per cent among men and 66 per cent among women; 72 out of 79 adults were engaged in gainful work and in addition, 8 children between the ages of 11-13 were returned as working.

Table 5.17 : Proportion of Workers in the Total Population for the Village Clusters

Village cluster	No. of persons			No. of workers		Percentage of workers	
	Male	Fe- male	Sex ratio	Male	Fe- male	Male	Fe- male
I	239	223	933	143	134	59.8	60.1
II	323	317	981	186	179	57.6	56.5
III	52	61	1173	40	40	76.9	65.6
IV	218	211	968	130	125	56.6	59.2
V	102	97	951	62	57	60.7	58.7
Total	934	909	973	561	535	60.1	58.7

As compared to the general population the proportion of workers is higher among the tribals and particularly so, among the women. According to 1981 Census the respective proportions of working men and women (including marginal workers) in the total population were 58.9 per cent and 48.8 per cent in Gadchiroli taluka and 61.4 per cent and 45.4 per cent in Sironcha taluka and it was 57.9 per cent and 47.3 per cent in the rural areas of Chandrapur district.

Education

All the women among tribals were illiterate, while among the adult men the proportion of literacy was about 7 per cent. Of the 37 men who had some schooling only 5 persons had completed their education upto the 7th standard. The proportion of literates among the adult men was about 10 per cent in clusters I and IV, about 2 per cent in clusters II and V and in cluster III there was not a single literate person. Among the male children, about half of the children (i.e. in the age group of 6-13 years) from cluster I were enrolled in a school. In other clusters the number of school-going children was small; 9 out of 46 in cluster IV, 2 out of 76 in cluster II and none in clusters III and V. The tribal girls were not even enrolled in a school.

Economic Activity and Levels of Living in the Surveyed Villages

Village Cluster I

Three villages viz. Yenkapalli, Tekampalli and Buruk-Mallempalli in the vicinity of Allapalli-Aheri were covered in the survey and these are grouped under cluster I. Allapalli is a large sized village with a population of 3155 in 1971; it is the headquarters of the Allapalli forest division and is the entry point into the rich teak forests of south Chanda. A saw mill unit and timber depot are located at Allapalli.

Both the Forest Department and the Forest Development Corporation have their offices at Allapalli and forest operations are carried on extensively in the Allapalli region. There is a primary school, high school, dispensary and post office at Allapalli. The village is electrified. A district level road connects Allapalli to Chandrapur; state transport bus service operates between Chandrapur and Allapalli and also Nagpur and Allapalli all round the year; though during the rainy season certain delays are experienced en route. Aheri, the erstwhile seat of Aheri zamindari is located about 3 km from Allapalli. Aheri had a population of 5375 in 1971 and facilities like primary school, middle school, health and family planning centre, post and telegraph office. Within 5 kms of Allapalli are located villages of Nagepalli, Tekampalli, Buruk-Mallempalli, Yenkapalli, Dodepalli, Modumadgu, Godaheri, Cherpalli, Pusukpalli. The terrain is hilly and the soils of the villages are generally shallow and poor; the soils are better near the streams. The forest areas are located within 2 to 4 kms. of these villages. The villages have attracted, because of the title to land that the Aheri zamindar offered, a number of tribal families from the remote forest tracts of south Sironcha and the adjoining Andhra Pradesh talukas. Nagepalli has a number of non-tribal families also.

Land Use and Crops Pattern

The major part (nearly 90 per cent) of the village lands at Tekampalli are under forests, while at Yenkapalli and Buruk-Mallempalli the erstwhile forests have been reduced to a culturable waste; (over 50 per cent of the village lands). In kharif season paddy, maize, green gram, are sown while in rabi season jowar, wal, pawata are grown. In Buruk-Mallempalli two electric pumpsets have been fitted on a nearby stream

and one cultivator - the sarpanch of the cluster - reported cultivation of tomato, brinjal, chilli which he marketed at Allapalli. The details of the programme under which the pumpsets were fitted and the consequent problems would be considered later. Apart from this, all the cultivation is rainfed. Paddy is grown near the stream bed, where proper paddy fields are carved; for the cultivation of other crops the land is not much developed. Improved varieties of seeds are not in use and application of fertilizers was not reported. The cultural practices continue to be traditional. A Loka Biradari centre³ is located at Nagepalli. The social workers are propagating the use of better seeds, vegetable growing, milk production, etc.; the problems in the spread to these 'New' techniques would be detailed subsequently.

In this cluster of villages, about two-third of the land under cultivation was under jowar, about 30 per cent under paddy and a small proportion (4 per cent) was under maize. Wal, pawata, dudhi-bhopala are grown along the fence around the house. Only one farmer reported cultivation of til and one farmer grows some vegetables. Work in logging operations, transport of timber as well as nursery and weeding work in plantations and bamboo cutting-tying work is available in the nearby forest areas. Men, women and children work in the forest, there being a division of work according to sex and age. The men do the work of felling the trees and sawing, the women tie up the bundles and load the carts and the work of transportation of the logs by bullock-cart is a man's job. The children help cut branches, collect oddss and ends. Roots,

³ A voluntary organization run under the leadership of Baba Amte, a social worker concentrating on rehabilitation of lepers with the main leper colony being located at Anandavan near Waroda and Somnath near Mul (Gadchiroli taluka) and a dispensary-school complex headed by Dr. Prakash Amte at ~~M~~ Hemalkasa (near Bhamragad) in Sironcha taluka.

some fruit like temru, mango, Avala, etc., are collected seasonally from the forest. Fishing on the nearby stream is also done seasonally.

From the distribution of families by land ownership⁴ presented in Table 5.18 it will be noted that about half the families from Buruk Mallempalli and Yenkapalli did not own any land, the corresponding proportion in Tekampalli is about a quarter. Majority of the families owned less than 7 acres each. Only five families owned more than 10 acres of land. The largest landowner was the sarpanch of the cluster; he owned 20 acres of land of which 12 acres were under personal cultivation and 8 acres were leased out on a share-cropping basis. In addition to the land owned by the families, the forest waste land has been brought under cultivation by a number of farmers; the size of jabranjot pattas was between 2 to 6 acres (Tables 5.19, 5.20, 5.21). Of the total 49 land owning families in the cluster, 17 families reported jabranjot land and 13 non-landowning families reported possession of jabranjot land. The total cultivating families were 68 out of 89 families in the cluster. The size of cultivated holding varied between 3 to 10 acres, the average size being 6 acres (Table 5.22). Fifty-seven out of 68 cultivating families reported ownership of wooden plough and a pair of bullocks. Some of the non-landowning families also owned bullocks and a bullock-cart which they used for transportation work available in the forests nearby (Tables 5.23, 5.24, 5.25). A scheme of extending loans under the DIR scheme to the landless families for purchase of a pair of bullocks and a bullock-cart was taken up in 1978. The working of the scheme will be

⁴ The information about land owned/cultivated was given by the families surveyed in terms of acreage; it was therefore preferred to present the data in this chapter in that unit rather than convert it to fractions of a hectare.

Table 5.18 : Distribution of the Families Covered in the Survey by Size of Owned Land-holding

Village No.	Total land owned (in acres)																	(No. of families)	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16-20	21 and above	No land owned	Total families
1	5	-	1	1	2	1	2	-	1	1	-	1	-	1	-	-	-	5	21
2	-	5	3	3	1	1	2	2	1	1	-	-	-	-	-	1	1	18	39
3	1	1	3	2	4	1	-	1	-	-	1	-	-	-	-	-	-	15	29
4	-	-	2	1	2	-	-	-	-	-	-	1	-	-	-	-	-	8	14
5	3	2	5	1	3	2	1	-	-	1	-	-	-	-	1	1	-	6	26
6	-	2	2	-	4	-	-	1	-	1	-	-	-	-	-	-	-	13	23
7	3	2	3	-	1	3	-	1	-	1	-	-	-	-	-	-	-	3	17
8	2	1	3	1	9	-	-	-	-	1	-	1	-	1	-	1	-	5	25
9	1	2	2	1	-	-	-	-	-	2	-	-	1	-	-	-	-	8	17
10	3	8	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	6	20
11	-	-	-	1	1	1	1	1	-	2	-	1	-	1	-	2	-	6	17
12	-	3	3	-	3	2	-	2	1	3	-	2	1	-	1	3	3	3	30
13	1	-	4	1	2	1	-	-	1	1	-	-	-	1	-	1	3	3	19
14	-	3	4	3	2	1	-	-	1	-	-	2	-	-	-	2	-	12	30
Total	19	29	36	16	34	13	6	8	5	15	1	8	2	4	2	11	7	111	327

Table 5.19 : Distribution of Families by Size of jabranjot Land-holding

Size of <u>jabranjot</u> land-holding (acres)	(No. of families)					Total
	Village cluster					
	I	II	III	IV	V	
1	-	13	-	1	1	15
2	9	15	-	7	5	36
3	4	7	-	5	2	18
4	2	4	-	2	3	11
5	10	6	-	1	1	18
6 or more	5	2	-	3	1	11
Total	30	47	-	19	13	109

Table 5.20 : Number of Families With or Without Owned Land and jabranjot Land

	No. of families owning land	No. of families without owned land	Total families
1 (a)	12	2	14
(b)	4	3	7
2 (a)	4	10	14
(b)	17	8	25
3 (a)	1	1	2
(b)	13	14	27
4 (a)	1	5	6
(b)	5	3	8
5 (a)	1	1	2
(b)	13	2	15
6 (a)	7	-	7
(b)	13	5	18
7 (a)	5	3	8
(b)	4	5	9
8 (a)	14	1	15
(b)	6	5	11
9 (a)	4	5	9
(b)	6	8	14
10 (a)	-	-	-
(b)	14	6	20
11 (a)	1	5	6
(b)	10	1	11
12 (a)	7	-	7
(b)	20	3	23
13 (a)	3	3	6
(b)	13	-	13
14 (a)	4	9	13
(b)	14	3	17

(a) = Families reporting jabranjot land

(b) = Families without any jabranjot land

Table 5.21 : Land Owned and Land Under Cultivation by Village Cluster

Village cluster	Land owned				Jabranjot land		Operational holding (acres) *	Jabranjot land as percentage of operational holding	Total land cultivated (acres)
	Upto 15 acres		Above 15 acres		No. of families	Land (acres)			
	No. of families	Land owned (acres)	No. of families	Land owned (acres)					
I	49	243	2	52	30	120	423	28.4	411
II	77	368	2	36	47	132	524	25.2	479
III	14	36	-	-	-	-	36	-	36
IV	42	291	12	348	19	66	712	9.3	671
V	16	79	2	36	13	43	158	27.2	140
Total	198	1017	18	472	109	361	1853	19.5	1737

Operational holding = Land owned - leased out + jabranjot + leased in.

Table 5.22 : Distribution of Families by Size of Cultivated Holding

Size of cultivated holding (acres)	(No. of families)					Total
	Village cluster					
	I	II	III	IV	V	
1 - 2	8	17	11	8	5	49
3 - 4	17	22	2	10	10	61
5 - 6	14	27	-	12	6	59
7 - 10	20	13	1	12	1	47
11 and above	9	6	-	23	5	43
Total	68	85	14	65	27	259
Average size of cultivated holding	6.0	5.6	2.6	10.3	5.2	6.7
Non-cultivating families	21	37	6	1	3	68
Total families	89	122	20	66	30	327

considered in detail subsequently. Most of the cultivators maintained cows (Table 5.26) mainly for the reproduction of bullock-power. Milk yield was usually very low (1 litre or so per day) and the lactation period was short. The milk, whenever available, was consumed at home. The cattle was occasionally sold if there was an urgent need of cash or slaughtered for ceremonial purposes. Goats were reported only by 32 families, half of these families did not own any land (Table 5.27). The goats were useful to raise some cash income in case of need and for the purpose of meat. The other by-product of the livestock, the dung, was the only manure available for maintaining the soil fertility. Some poultry was reported by nearly all the families, again maintained for home consumption (Table 5.28). The problem of fodder supply was sometimes faced as the kadba production in the village was inadequate and there were considerable restrictions on grazing the cattle in the forest area.

Table 5.23 : Distribution of Families by Size of Owned Land-holding and Ownership of Bullocks

Land owned (acres)	Village cluster														
	I			II			III			IV		V			
	No. of families	Total No. of bullocks	No. of families	Total No. of bullocks	No. of families	Total No. of bullocks	No. of families	Total No. of bullocks	No. of families	Total No. of bullocks					
	With- out bullock	With bullocks	With- out bullock	With bullocks	With- out bullock	With bullocks	With- out bullocks	With bullocks	With- out bullock	With bullocks					
N11	17	21	56	33	10	23	4	2	3	4	8	17	9	3	12
1 - 2	5	7	12	6	12	27	2	9	24	2	2	3	2	1	4
3 - 4	4	9	23	7	14	29	1	1	8	2	7	14	-	7	14
5 - 6	3	7	17	2	22	64	-	-	-	5	5	16	2	1	2
7 - 10	2	9	48	5	4	8	-	1	2	3	9	25	-	1	1
11 or more	2	3	8	-	7	33	-	-	-	4	15	89	-	4	17
Total	33	56	164	53	69	184	7	13	37	20	46	164	13	17	50

Table 5.24 : Ownership of Bullocks by Size of Owned Landholding and Number of Bullocks Owned

Land owned (acres)	No. of bullocks owned							Total
	1	2	3	4	5	6	7 or more	
(No. of families)								
Cluster I								
No land	2	15	-	2	-	-	2	21
1 - 2	2	5	-	-	-	-	-	7
3 - 4	1	6	-	1	-	1	-	9
5 - 6	1	4	1	-	1	-	-	7
7 - 10	-	-	-	5	-	1	3	9
11 and more	-	2	-	1	-	-	-	3
Total	6	32	1	9	1	2	5	56
Cluster II								
No land	2	5	1	2	-	-	-	10
1 - 2	2	7	1	2	-	-	-	12
3 - 4	4	6	3	1	-	-	-	14
5 - 6	2	9	2	8	-	1	-	22
7 - 10	-	4	-	-	-	-	-	4
11 and more	-	2	-	1	-	3	1	7
Total	10	33	7	14	-	4	1	69
Cluster III								
No land	1	1	-	-	-	-	-	2
1 - 2	1	6	1	1	1	-	-	9
3 - 4	-	-	-	-	-	-	1	1
5 - 6	-	-	-	-	-	-	-	-
7 - 10	-	1	-	-	-	-	-	1
11 and more	-	-	-	-	-	-	-	-
Total	1	8	1	1	1	-	1	13

(continued)

Table 5.24 : (continued)

Land owned (acres)	No. of bullocks owned							Total
	1	2	3	4	5	6	7 or more	

(No. of families)

Cluster IV

No land	2	4	1	1	-	-	-	8
1 - 2	1	1	-	-	-	-	-	2
3 - 4	2	4	-	1	-	-	-	7
5 - 6	1	3	-	-	-	-	1	5
7 - 10	2	3	1	2	-	1	-	9
11 and more	-	1	-	5	-	3	6	15
Total	8	16	2	9	-	4	7	46

Cluster V

No land	-	2	-	-	-	-	1	3
1 - 2	-	-	-	1	-	-	-	1
3 - 4	-	7	-	-	-	-	-	7
5 - 6	-	1	-	-	-	-	-	1
7 - 10	1	-	-	-	-	-	-	1
11 and more	-	1	-	-	3	-	-	4
Total	1	11	-	1	3	-	1	17

Table 5.25 : Number of Families Reporting Ownership of Ploughs, Harrows and Bullock-cart by Size of Owned Land-holding

Land owned (acres)	(No. of families)														
	Bullock-cart					Wooden Plough					Harrow				
	I	II	III	IV	V	I	II	III	IV	V	I	II	III	IV	V
Nil	7	11	-	1	6	19	19	-	11	9	8	8	-	3	-
1 - 2	2	8	-	1	2	8	17	10	4	3	8	8	-	1	-
3 - 4	4	11	-	-	5	10	21	2	8	7	10	15	-	2	1
5 - 6	3	20	-	2	-	8	24	-	9	3	7	23	-	3	-
7 - 10	9	7	-	4	1	8	7	1	11	1	7	6	-	-	1
11 or more	3	7	-	10	4	4	7	-	19	4	4	5	-	10	3
Total	28	64	-	18	18	57	95	13	62	27	44	65	-	19	5

Table 5.26 : Distribution of Families by Size of Owned Land-holding and Ownership of Cows

Land owned (acres)	Village cluster														
	I		II		III		IV		V						
	No. of families		Total No. of cows		No. of families		Total No. of cows		No. of families		Total No. of cows				
	With- out cow	With cows	With- out cow	With cows	With- out cow	With cows	With- out cow	With cows	With- out cow	With cows	With- out cows	With cows			
N11	16	22	67	24	19	53	4	2	8	2	10	21	3	9	35
1 - 2	8	4	18	6	12	45	4	7	23	1	3	8	-	3	11
3 - 4	5	8	16	5	16	45	-	2	5	1	8	14	1	6	27
5 - 6	4	6	9	3	21	98	-	-	-	2	8	24	-	3	13
7 - 10	-	11	52	3	6	11	1	-	-	1	12	44	-	1	5
11 or more	1	4	12	-	7	56	-	-	-	1	18	81	-	4	35
Total	34	55	174	41	81	308	9	11	36	7	59	192	4	26	126

Table 5.27 : Distribution of Families by Size of Owned Land-holding and Ownership of Goats

Land owned (acres)	Village cluster														
	I		II		III		IV		V						
	No. of families		Total No. of goats		No. of families		Total No. of goats		No. of families		Total No. of goats				
	With- out goat	With goats	With- out goat	With goats	With- out goat	With goats	With- out goat	With goats	With- out goat	With goats	With- out goat	With goats			
Nil	22	16	44	38	5	15	3	3	11	9	3	9	5	7	21
1 - 2	11	1	3	12	6	23	7	4	8	3	1	1	2	1	6
3 - 4	11	2	11	13	8	35	2	-	-	5	4	9	4	3	15
5 - 6	8	2	8	10	14	49	-	-	-	7	3	14	2	1	3
7 - 10	1	10	56	6	3	5	1	-	-	8	4	13	1	-	-
11 or more	4	1	5	3	4	25	-	-	-	12	7	39	-	4	32
Total	57	32	127	82	40	152	13	7	19	44	22	85	14	16	77

Table 5.28 : Number of Families Reporting Ownership of Chickens by Size of Owned Land-holding

Land owned (acres)	No. of reporting families				
	I	II	III	IV	V
Nil	28	27	6	11	12
1 - 2	9	17	11	4	3
3 - 4	12	19	2	8	7
5 - 6	8	24	-	10	3
7 - 10	10	8	1	11	1
11 or more	3	7	-	19	4
Total	70	102	20	63	30

Most of the families complained about the grazing restrictions that resulted in considerable harassment and corruption. The other major problem reported was the occupation of the village pasture land by the FDC. It was reported that the FDC has encroached on the village pasture lands at Mallempalli and despite many deputations and memorials the Government has not made any alternative arrangement.

Work Pattern

The farmers who cultivated 10 acres or more reported that all the family labour was generally required to attend all round the year a variety of cultural and other tasks on the farm that demand attention from time to time. They could not look for outside work for any stretch of time also because they were tied to the work of tending the cattle. The traditional division of labour between the sexes - the men doing ploughing, harrowing, carting, etc., and the women weeding, both men and women participating in harvesting work continues. The men worked for about 6 to 7 months and the women about 5 months during a year on their own farm. If there were more than two workers in the family, they depended

mainly on the forest work. Hired labour was reported for harvesting work only. The farmers with cultivated holding of 6 acres or less reported that the men spend about 5 months on own farm and 5 months for forest work, the women 3 months for farm work and 5 months in the forest work. The forest work is available more or less continuously from about November to May; the workers have to move from one area to another located within 2 to 10 kms. or so from their villages. They walk upto 10 to 15 kms. to reach the work place. The landless families reported that they - both men and women - could get work in the forest for about 7 to 8 months in the year and some of them reported agricultural labour work at the harvest time. One family was engaged in the work of attending the cattle of a number of cultivators, on an annual basis.

The workers are required to carry their own axe, sickle, saw, etc., for the Departmental work in the forests. A scheme for loans to buy mechanical saws was sponsored by the FDCM. The work in the Forest Department is usually obtained through making enquiry with the forest guard or the contractor who has purchased the coupe. The work involves felling the trees, cutting the branches, sawing and transportation. The usual working hours are from 10 in the morning to 4 in the evening. The workers have to set out for work very early in the morning if the coupe that is being worked is located at a distance. The entire village is empty, except for small children and the old people after 8-30 or so as the villagers set out in groups for the forest work and return only by the dusk.

In addition, work of bamboo cutting, tying and transport is also available through the paper mills. The agents appointed by the paper mills, visit the villages near the

area that is being worked and notify about the work of bamboo cutting. The rate in 1978 was Rs.25 for a bundle of 100 bamboos. The payment is usually made every week. It was reported by a few families that they, at times, do not receive payment on time or there is some manipulation in the accounts and they are underpaid. The effective rate in the forest work was reported to be between Rs.3.50 to Rs.4 for men and Rs.3 to 3.50 for women.

For agricultural labour work the wage rates were Rs.3 to Rs.3.50 per man and Rs.2.50 to Rs.3 for woman, or a kind equivalent in terms of jowar/paddy.

The cultivation is not intensive, the soils are medium to poor in quality and the application of manure is in small doses. The average productivity of jowar was somewhat lower as compared to the district average, but in the case of paddy the productivity was considerably lower.

(Table 5.29) The rice plots are not well-levelled and

Table 5.29 : Average Yield of Cereals in Village Clusters I and II

Size of cultivated holding (in acres)	Yield - Kg. per Hectare		
	Jowar	Maize	Paddy
<u>Cluster I</u>			
Up to 2	415	494	472
Above 2	509	529	850
Total	484	521	709
<u>Cluster II</u>			
Up to 2	509	514	558
Above 2	553	805	817
Total	534	665	709
Chandrapur district average (1977-78)	609	1033	1257

shortage of water is often experienced due to the lack of any water storage facility, no fertilizer is used and only the local varieties are sown and not the improved ones. It was noted that the productivity was relatively higher on the larger (above 5 acres) farms mainly because of the larger doses of manure and higher labour input used for cultural operations. The large-size farmers were joint family units which made for the availability of larger number of working hands and this facilitated timely attention to the various cultural operations. Most of the family units were however, nuclear, the usual practice is that the son sets up a new home after marriage and cultivates his own land.

Nearly all the produce is used for home consumption and some for payments in kind. Only in four cases a part of the paddy crop was marketed. It was estimated that for an average family of 5 persons a land-holding of about 10 acres (or two acres per person), is needed to meet the subsistence needs.⁵ Barring two cases none of the families had that much land (neither could two adult persons manage to clear and develop a new piece of land and bring it under cultivation because of the limitations of working hands. In the off season they have to look for a wage employment as the production from own farm would last only for 4 to 5 months.) It was reported that apart from some slack weeks during the rainy season, wage work was available within

5 The cereal requirement is put at 600 grams per day per person; this much quantum is essential to meet the calorie requirements (put at 2800 for a reference person) obtained from a diet with accentuation on cereal consumption. An equivalent amount is added to make allowance for the consumption of pulses, oil, salt, gur, etc., other essential food items. For an average family of five persons the quantum needed for subsistence comes to about 2200 kg. in terms of cereals.

10-15 kms of the villages. The major problem however was of the low wage rate. It was complained that at the ruling wage rate they cannot earn subsistence income even if all the adult members and the children above 10/12 years of age worked all round the year for 8 hours a day. This can be illustrated by one typical example.

Take the case of J.K. J.K. owned 3 acres of land, and has taken 2 acres on jabranjot. The soil is poor. In 1977-78, he put 4 acres under jowar and 1 acre under paddy. The produce in 1977-78 was reported to be 8 quintals of jowar and 2 quintals of rice. He owns two bullocks and a plough, one cow and a few chickens. The cow was not in milk; they got 30 eggs during the year. The family has two working hands, JK and his wife. They have four non-adult children, aged 11, 8, 5 and 3. The cereal production is adequate for home consumption; but there is little marketable surplus. JK and his wife have to take up the forest work to meet his other food expenditure and the purchase of non-food articles. They had reportedly worked for about 6 months each in the forest logging work and earned a total income of Rs.960 during the period. Their monthly purchases of pulses, oil, chilli-salt, gur, kerosene, tobacco and liquor amounted to Rs.70. Taking together their kind and cash income they were able to get the following diet and were left with an income of about Rs.120 for the purchase of clothes and other necessities.

Grams per adult unit per day

Cereals	600
Pulses	25
Oil	8
Gur	30

It will be noted that despite the labour put in, day in and day out, it is not possible for these families

to eke out even the barest subsistence. The above does not also take into account the work put in for the collection of fuel wood, fetching water, grinding, cooking, cleaning, the time spent to walk to the market place to buy a few necessities, repair and maintenance of the house, fence, etc. The work day is thus very long, involving all along arduous physical labour, for all - men, women and children.

Level of Living

As against the work schedule, the diet of the tribals may be juxtaposed to understand the severity of their hardship. The diet is extremely monotonous; all the meals consist of rice and millet gruel with pulse or vegetable dish being added occasionally. Seasonally some fish caught from the nearby stream or some small game like a rabbit, or a piece of mutton adds some taste or variety to the diet. Otherwise the daily meal is very poor in taste and inadequate for proper nourishment.

Villages do not produce enough to meet the needs of the basic cereals of the village families. It was noted that the families with over 5 acres of land-holding could grow enough cereals for home consumption, those with 2 to 4 acres could meet about 40 to 80 per cent of their needs from home production. The labouring families received only a small quantity in kind; for the villages as a whole about 30 per cent of the cereals had to be brought from outside. The other production at the village includes wal, pawata and some vegetable, roots and fruits collected from the forest area, some oil extracted at home from mahua seed and the home brewed mahua liquor preserved mainly for ceremonial purposes; the other items of consumption had to be purchased. The cash incomes being meagre the purchases were mainly restricted to some pulses, sweet oil, gur, salt, turmeric, chillis. A few families reported purchase of sugar and tea.

The fuel-wood was collected from the forest and for lighting purposes kerosene was usually used. The other major items of consumption were tobacco and liquor for which considerable amount of cash earnings were spent. The men usually had country liquor on the pay day and the incidence of drunkenness on these days was considerable, leading to quarrels, wife beating, etc. A social worker staying at Nagepalli attempted to regulate/control the use of country liquor through public censor. The attempt was ridiculed in the beginning, however with the active support of the women folk it was possible to get some acceptance for the campaign. However, when the social worker left the area after two years' stay things returned back to normalcy.

Diet

It was noted that the landholders with above 5 acres of land are able to get adequate quantity of cereals while in the case of landless even the quantum of cereals is not adequate to give the requisite calories (Table 5.30). The rainy season is particularly hard; there is not enough work and they have to manage with some roots, tubers and millet gruel. Half-starvation during this period was reported by a few landless families. The major reasons why they are below the subsistence level is the low rate of wages given for the forest work, and the loss of some of the forest produce which they used to get earlier from the nearby forest areas because of the reduction in the forest flora and fauna over time. The loss in the forest produce is not made up by improved agriculture. The land development work, water conservation and storage, and fertilization are beyond their means. In the absence of these developments and lack of working capital, the agricultural productivity remains low. Three measures are thus indicated (i) land and water conservation, (ii) restocking of the forests such that forest produce

Table 5.30(A) : Annual Earnings and Pattern of Consumer Expenditure for Cultivating and Non-Cultivating Families Covered in the Survey

	Cluster I			Cluster II			Cluster III		Cluster IV			Cluster V		
	Non-cultivating families	Cultivating families		Non-cultivating families	Cultivating families		Non-cultivating families	Cultivating families	Non-cultivating families	Cultivating families		Non-cultivating families	Cultivating families	
		Land holding upto 5 acres	Land holding over 5 acres		Land holding upto 5 acres	Land holding over 5 acres				Land holding upto 5 acres	Land holding over 5 acres		Land holding upto 5 acres	Land holding over 5 acres
No. of families	21	33	35	37	51	34	6	14	1	26	39	3	18	9
No. of persons	89	168	205	160	277	203	35	78	5	145	279	17	108	74
Annual cash income per family(Rs.)	1700	1920	1460	915	1010	1000	2200	1660	530	710	895	1180	1400	1440
Annual cash income per earner(Rs.)	660	652	363	405	305	232	500	405	170	180	100	380	360	110
No. of earners: Male	24	52	67	48	80	58	13	27	2	43	85	5	32	25
Female	28	48	58	44	78	57	13	27	1	39	85	4	30	23
Total	52	100	125	92	158	115	26	54	3	82	170	9	62	48
Percentage distribution of consumer expenditure incurred in cash:														
Cereals	57.1	34.0	-	32.2	46.1	-	60.5	23.6	63.2	23.1	-	76.7	29.4	16.7
Pulses	6.4	10.5	15.1	10.0	11.4	15.4	9.5	15.3	-	8.1	10.0	-	4.0	4.4
Oil	4.3	7.3	11.3	6.5	7.2	11.7	6.4	8.4	-	11.6	19.0	2.7	12.0	16.0
Gur, sugar	3.4	6.1	8.0	3.1	3.2	6.0	-	0.4	-	10.4	15.1	2.7	10.2	10.8
Chilli, salt, etc.	6.6	10.2	14.2	8.0	8.8	15.5	7.6	12.7	18.2	16.2	21.3	6.9	16.2	15.2
Kerosene	1.6	2.0	3.4	1.0	2.6	2.5	0.8	0.9	-	3.2	5.6	-	4.0	1.6
Tobacco, liquor	12.0	17.7	24.5	9.8	10.2	23.9	9.5	25.8	8.8	8.1	6.7	5.5	16.4	11.5
Other	8.6	12.2	23.5	9.4	10.5	25.0	5.7	12.9	9.8	19.1	22.3	5.5	7.8	23.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total consumption in terms of grams per day per person:														
Cereals	500	570	700	470	520	700	400	610	310	350	700	300	510	660
Pulses	22.0	34.3	39.0	15.6	18.6	23.3	31.1	39.0	-	8.7	11.7	-	8.0	6.9
Gur	23.0	37.3	30.0	9.2	10.8	17.2	-	2.2	-	21.1	29.5	8.0	37.2	24.0
Oil	7.8	13.9	13.6	5.9	6.8	10.1	12.0	12.4	-	7.5	12.0	3.0	13.7	13.9
Percentage share of home-produced cereals in total cereals consumed														
		61	100		65	100		85		85	100		75	93

Table 5.30(B): Retail Prices of Major Commodities Purchased by the Surveyed Families

	Rice	Wheat	Jowar	Madia	Kultha	Lakh	Other Pulses	Sweet Oil	Gur	Sugar	Chilli	Meat	Kerosene (per litre)
Price in Rs. per kilo	2.00 to 2.50	3.00	1.00 to 1.50	1.00 to 1.25	1.50 to 2.00	3.00	4.00 to 5.00	7.00 to 8.00	2.00	3.00	10.00 to 12.00	10.00 to 12.00	1.50 to 2.00

availability improves, (iii) increase in wages for the forest labour work. A detailed discussion of these will be attempted in the last chapter.

Indebtedness

The tribals have to resort to borrowing for meeting the consumption needs during the lean period or to meet some contingency like medical expense or marriage expense. Loans, for productive purposes are beyond their capacity both because of the lack of capacity/knowledge and the supportive infrastructural facilities. It is only after the Fourth Plan when a number of special schemes were devised for the tribals and extension agencies have reached some of the accessible areas that a few cases of long-term loans for productive investment are noted. The major need of the tribals is the need for consumption loan. A scheme of consumption finance has been introduced by the Government to free the tribals from the dependency on money-lenders, (the details of the scheme are given in Chapter IV). The loans are supplied through the Adivasi Cooperative Societies (ACS). One ACS is located at Aheri and one at Allapalli and many tribal families from Cluster I are members of the ACS. Consumption loans were obtained from the ACS by the majority of the families from the Cluster I villages. It was noted that the proportion of borrowing families was about 40 per cent among the landless while it was about 75 per cent among the landowning families. The loan amount outstanding varied between Rs.100 and Rs.300 per family (Table 5.31). The families from Tekkampalli obtained loans from the ACS at Aheri and the ACS was the main source of obtaining the consumption loans. In Yenkapalli the families depended both on the ACS at Allapalli and private money-lenders to obtain short-term loans. It was reported that the ACS did not always disburse the loans on time and they had to resort to

Table 5.31 : Distribution of Families by the Amount of Outstanding Loan

Vil- lage No.	Total fami- lies	No. of fami- lies report- ing outst- anding loan	(No. of families)						
			Amount of outstanding loan (Rs.)						
			Upto 100	101- 200	201- 300	301- 400	401- 500	501- 1000	1000+
1	21	12	1	11	-	-	-	-	-
2	39	22	9	6	4	-	1	1	1
3	29	20	9	2	5	1	1	-	2
4	14	10	1	-	1	1	4	3	-
5	26	15	-	2	4	-	2	5	2
6	23	13	5	1	4	2	-	-	1
7	17	17	4	10	2	1	-	-	-
8	25	24	1	8	2	4	3	6	-
9	17	11	2	1	3	2	1	2	-
10	20	-	-	-	-	-	-	-	-
11	17	-	-	-	-	-	-	-	-
12	30	20	7	3	-	-	3	4	3
13	19	-	-	-	-	-	-	-	-
14	30	22	12	5	2	-	1	2	-
Total	327	186	51	49	27	11	16	23	9

borrowing from private sources. So far as the loans for productive purposes are concerned there were three families from Tekkampalli who had obtained long-term loans from a Bank. Two families reported a loan of Rs.10,000 each for well-digging purpose. One family had drawn a loan of Rs.1,500 for the purchase of bullock-cart and bullocks for taking up transportation work in the forest.

Housing and Other Amenities

The villages are small in size with about 20 to 40 households in a village. The houses are located in a compact area, in two/three rows. The material generally used for housing is pele stockading, bamboo matting and mud plaster. The roof is covered with straw. The house consists usually of two rooms and a verandah; an enclosure of bamboo serves as a cattle-shed. The sheep, goat are usually tied nearby in the open.

In Tekkampalli and Mallempalli drinking water is fetched from wells, constructed by the Government and for Yenkapalli the source for water supply is a nearby stream. Problem of water shortage is faced during the summer, while during the rainy season the water is muddy and the incidence of digestive disorders is high. The tract is malarious and debility due to frequent attacks of malaria was reportedly considerable.

Facilities for medical treatment are available within 2 to 5 kms from the villages - a Government dispensary is located at Aheri and there are private practitioners at Nagepalli, Allapalli and Aheri. However, a private doctor is seldom approached. It was reported that they prefer Laxmidev to a doctor as it is quite expensive to approach a private doctor. Resort to Government dispensary was taken by a number of families in cases of major illness (Table 5.32). But there were complaints about the time they had to spend waiting for their turn. Some of the families reported that they found the medicines not very effective. The village dai usually helps during a child birth. As far as birth control is concerned it was reported that during 1977-1979 seven men had to undergo sterilization compulsorily; otherwise they do not have much knowledge of the family planning programme. In difficult cases they do approach private

Table 5.32 : Distribution of Families by the Type of Treatment Used for Major Illness

Village cluster	Mantric	Vaidya	Government Dispensary	Lokbiradari Dispensary	Private Doctor	Home-Remedies	Non-reporting	Total	Remarks
I	4	2	11	-	2	2	68	89	Treatment used in the case of major illness during the year of reference
II	14	6	2	-	3	3	94	122	
III	-	-	-	17	-	-	3	20	Usual practice
IV	10	41	-	-	11	4	-	66	
V	20	2	-	-	2	3	3	30	
Total for III to V	30	43	-	17	13	7	6	116	

doctors or rush to the Government dispensary. In 1978, 13 such cases were noted. The expenditure involved varied from Rs.25 to Rs.75. It was reported that such contingency invariably landed them into debt (Table 5.33).

Table 5.33 : Expenditure Incurred for Medical Treatment during the Reporting Year by the Surveyed Families

Medical expenditure (Rs.)	(No. of families)				
	Village cluster				
	I	II	III	IV	V
- 20	1	-	-	3	-
21 - 30	2	2	-	2	-
31 - 40	-	-	-	2	-
41 - 50	4	2	-	1	-
51 - 60	2	-	-	2	-
Above 60	10	2	-	3	-
Total	19	6	-	13	-

The durables in the house comprise a few utensils; a few families, like that of the village sarpanch who owned 20 acres of land and 20 cattle heads, had a bicycle, a radio and a wrist watch. Two more families reported ownership of a bicycle. The major changes noted with the increase in the cash income is the change in the clothing. Shirts, pyjama, shorts are gradually replacing the short dhoti, women wear a blouse and buy some trinkets. The material conditions otherwise have not changed in a significant way with the increased contact with the urban markets, banks, cooperative societies and governmental agencies, and some increase in the cash income.

Education

Spread of formal education is one of the major instruments to incorporate the weaker sections into the development process. A network of primary schools and

special Ashram Schools for the tribals (where the children can reside and learn so that they are relieved of the house work and the other work to earn their own bread, which is provided for by the Government) has even reached the backward districts. Educational facilities near the cluster are quite extensive. There is a primary school at Nagepalli, Ashram School at Yenkapalli and primary school and high school at Allapalli and Aheri. However, it was reported that the Ashram School at Yenkapalli does not provide proper food and other residential conveniences. The school at Nagepalli operated relatively regularly and some boys were enrolled in the school at Nagepalli. The major problem however was that the boys were required to tend the cattle and the girls to look after their younger siblings so that the parents were reluctant to send their children to school. They also did not see much use of formal education. However, among all the clusters the number of children attending school was relatively larger in this group of villages. Twenty-seven out of 54 male children between the ages of 6-13 were enrolled in the school. However, the attendance was not very regular; if there was some other urgent work, the school was skipped. None of the tribal girls had even been enrolled in the school. Among the adults, of the 239 male adults, 15 were literate, of these 6 persons had completed education upto the 4th standard and 3 upto the 7th. All the women were illiterate. The educational achievement was considerably higher in this cluster located in the close proximity to educational facilities, as compared to the situation in the other villages.

Developmental Schemes Reach the Adivasis!

(a) Bank-loan: The Nationalized Banks have designed a special scheme of providing loans to the weaker section

at differential interest rate. In the case of rural landless families with annual income below Rs.2,000, the beneficiaries can get a loan upto Rs.5,000 at 4 per cent rate of interest. A social worker who had moved to Nagepalli in 1978 considered this a good scheme to help the tribals to purchase a pair of bullocks and a bullock-cart to transport timber from the forest coupes to the depots. The tribals working in the forest were getting Rs.3 to Rs.4 for a days work. If a loan of Rs.1,500 is available at 4 per cent with repayment to be made in 20 instalments, the monthly instalment would be about Rs.80. If the tribal owned a bullock-cart he could earn per day about Rs.15 in the transport work and would thus be a net gainer. The social worker approached the Bank agent of a Nationalized Bank at Allapalli in July 1978; to begin with the agent said that they did not have the requisite forms; later the agent informed that they had already fulfilled the D.I.R. 'target' and the borrowers had defaulted so he was not ready to advance further loans under the scheme. When the social worker approached the Headquarters the agent was further upset and he asked the social worker to send the applicants themselves. The tribals were unwilling to go as they were doubtful about the prospects of meeting a bank official. The social worker pressed and he organized the applicants desirous of obtaining a loan for bullock-bandhi into a group. He selected the families from different villages of the cluster, and took care to include in the scheme both the tribals and non-tribals. Fourteen persons were included in the group. The applicants approached the bank manager on 9-10-1978 when they were asked to come the next day. Since they could not afford to lose a day's wage only two from the group tried to meet the bank agent the next day, when he told them that they better come all together. On 12-10-1978 they

were told that since the sarpanch had defaulted he did not wish to consider their case. There was a mix up with the sarpanch of a neighbouring cluster. To make the position clear the group had to visit the bank, along with the sarpanch; then the agent informed that the branch had run out of the requisite forms. The tribals thus spent 6/7 days, lost their daily bread but to no avail. The social worker approached the agent again and was again told that he did have the forms and there were no funds under the scheme, the target being fulfilled. The social worker moved the divisional office at Nagpur and the Headquarters and ultimately he could get the loans sanctioned in December 1978. An amount of Rs.1,460-Rs.1000 for a pair of bullocks, Rs. 400 for the cart, Rs.40 towards insurance, of bullocks and Rs.20 for opening an account with the Bank, was sanctioned per applicant. The social worker arranged for the purchase of the bullocks and the cart, completed all the insurance procedures and thought he got the scheme going. He had suggested that the group should work in a team of five each for the FDCM. However the location of the work was not found convenient by the cart-owners and they set to work on individual basis in the forest departmental or the paper mill work in the nearby areas. The social worker had planned to collect the money and make repayment of Rs. 20 per week for each applicant. In the initial period it was possible to collect some money and an amount varying between Rs.80 and Rs.160 was repaid till the end of the working season i.e. April 1979 by the individual members. Repayment was not possible after the end of the working season. In the meantime the social worker left Nagepalli and there was no one to persuade them to repay the loan. One of the applicants died in the meanwhile. Two

applicants lost one bullock each, and the social worker tried to help get the insurance people pay the assured sum, however again the red-tape intervened and the social worker did not succeed. Of the eleven other borrowers, it was reported that only two were making repayments in 1979-80 season and the bank agent thought that the social worker unnecessarily landed the bank into trouble and has himself left the area with no further responsibility. The problems in relation with the working of the scheme were discussed with three tribal families who had taken loans under the scheme. They had no idea about the amount they had borrowed and the amount they repaid; as far as the improvement in income is concerned, firstly some expenditure for the maintenance of the bullock had to be incurred, secondly they did not get carting work continuously, so they are not quite sure about the net additional earnings and if there was some extra earning one has a few more drinks on the pay day! One of the family, however, reported that it was possible for him to get his house repaired in 1979. The bank manager finds it difficult to trace the borrowers, he cannot reach them, as it involves walking over quite some distance and hence does not feel interested in extending loans to the weaker sections, particularly the tribals.

(b) Gift of Electric Pumpsets: The block development officer of Aheri Panchayat Samiti was upset over the fact that many good schemes included in the development Plan remain shelved due to the ignorance of the tribals. He explained the scheme of distribution of electric pumpsets to the tribals with a 100 per cent subsidy in a meeting which was arranged with the tribal landowners. The pros and cons of the scheme of fitting the pumpset to lift water from the stream, to ensure assured water supply particularly for the

the paddy crop were discussed. The tribals were reluctant, they are always suspicious of Government schemes, they did not so far have any experience of a scheme that worked and benefited them. Ultimately the sarpanch together with two others were persuaded to receive the 'Gift'. In April 1974, the pumpsets were fitted, but there was no electricity! The owners were not explained the working of the pumpsets and the obligations involved once they agreed 'to own' the pumpset. Subsequently the electrification work was completed and the meters were fitted. The stream was overflowing in the rainy season and fearing damage the sarpanch moved the equipment to a safe place. In September the sarpanch and others received a show cause notice from the MSEB ordering them to explain why they shifted the meters. The meters were subsequently confiscated. The bills for the 'minimum charge' were duly sent and for the non-payment of bills 'fine' was added. Between 1974-1977 the dues mounted while the pumpsets were lying idle. The tribals were scared; the social worker approached the chairman of the MSEB in 1977 who agreed to take proper action in the matter. However, no action was forthcoming. In October 1978, notices for Rs.1000 were served on the 'Gift receivers'. The social worker had to move the matters at Bombay and after spending a considerable amount of energy, time and money he could get the issues sorted out. The social worker helped the sarpanch to repair and get the pumpset going, spending some money borrowed from his friends. The sarpanch planted some vegetables - tomato and brinjal - and marketed it. However, the net income was quite meagre (after meeting the electricity charges, the seed, insecticide and fertilizer expenses) and it was not possible to repay the loan obtained for repairing the pumpset. Later in 1978 the sarpanch worked as an investigator on a research project and the extra income was useful to repay the loan!!

Village Cluster II

Six villages viz. Motukpalli, Ambezara, Lankachen, Karneli, Rengulwahi and Karancha are grouped together under cluster II. The villages are located to the west of Allapalli-Sironcha road, about half way between Sironcha and Allapalli; the distance to Allapalli is 55 to 65 kilometres. State Transport Bus service operates on Allapalli-Sironcha road, though during the rainy season there are interruptions in the service when the streams en route get flooded. The village where S.T. service reaches viz. Umanur, is at a distance of about 10 kilometres from Matukpalli, Karancha and Rengulwahi and about 10 to 25 kilometres from the three villages located near the border. The villages can be reached by bullock-cart from the main road during the fair weather season while the cart tract becomes muddy during the rainy season and the villages can be reached only on foot. The weekly market is located at Venkatpur about 25 to 35 kilometres from these villages. The nearest post office is at Muyaboinapeta located at about 6 to 10 kilometres from Karneli, Ambezara, Lankachen. The grocery shops at Jimalgatta are visited by the villagers for the purchases of provisions. None of the villages have access to a flour mill and grinding is done at home manually. The taluka place viz. Sironcha is about 40 to 55 kilometres to the south of the villages from cluster II. Primary school is located at Karneli and Lankachen, however it was reported that the teachers absent themselves frequently and the classes are not held regularly. Some of the children from these villages are enrolled in the school but they get little instruction. The other villages do not have any conveniently located schooling facility within their reach. Ashram schools are located at Venkatpur, Bamani, Kamalapur. However, these are not within

easy reach and it was reported that the villagers do not send their children to Ashram schools. Only 4 male adults out of 191 were literate. Reading of newspaper or any contact with the outside world is almost absent. Veterinary service is available at Aheri and thus is not within their reach. Medical service is not easily accessible; moreover the villagers find it rather expensive, and they continue to rely on the traditional local pujari. Electricity supply has not reached any of the villages from the cluster. It will be thus apparent that the villagers do not get benefits of any of the modern amenities and facilities which have been extended to the rural areas during the Plan period.

The villagers from Karancha draw their water supply from 3 drinking water wells and a stream and in Karneli the water is fetched from a nearby river. In other four villages the villagers depend for their water supply on the streams located within a kilometre from these villages. In summer water is obtained from deeper portions of the river and the water is not so clean, due to decomposition of fallen leaves and other organic matter.

Agriculture

The terrain is hilly; the soils are shallow, coarse and red and not very fertile. There are no irrigation facilities available. In the lower ridges (about 20 per cent area) paddy cultivation is possible during the rainy season. Nearly 70 per cent of the land under cultivation is put to the cultivation of jowar, 10 per cent to maize and 20 per cent to paddy. Beans like popat and wal and some vegetables like egg plant, gourd and some chilli and tobacco are grown in small patches, usually near the house. All the produce is used for home consumption. Wooden plough is used for ploughing and the intercultural operations and harvesting is

done manually using the traditional implements like hoe, sickle, etc. The productivity is low in the case of paddy viz. 7.1 Qn per hectare. It was about 5.3 Qn per hectare in the case of jowar and 6.7 Qn per hectare in the case of maize.

About half the total families did not own any land in Motukpalli, Karneli and Karancha. Some of these landless families however had acquired land through encroachment. There were in all 37 or one-third of the families in cluster II who did not own or possess any land. Eighty families were cultivating families, the mean size of cultivated land holding being 5.6 acres, the median size being 4 acres. Only 4 families owned 11-15 acres, and 2 families 16 to 20 acres of land. These were joint families with larger number of working hands. About 25 per cent of the cultivated land was jabranjot land.

Twenty cultivating families did not own bullock/plough. Most of the other cultivating families owned a pair of bullocks and a wooden plough. Cultivation practices continue to be traditional. Except for dung no other manure is applied. Ownership of chicken was reported by all the families and goats by 40 families. The agricultural and livestock produce is supplemented by some forest produce; roots and tubers are collected from the nearby forest area. The material for house construction viz. timber, bamboe, leaves, the fuel-wood and the fencing material is also collected from the forest. So far as the minor forest produce is concerned the main produce is gum. Seasonal fishing and fish trapping in the nearby stream is carried on for about 2 to 4 weeks.

Work Pattern

It was noted that in the case of those who owned more than 5 acres of land and/or cultivated paddy and jowar,

work on own farm was available for about 5 to 6 months for both men and women. Those who cultivated only jowar (these were generally smaller landowners (2 acres or so) or owners of relatively inferior jabranjot land) had 3 to 4 months work on own farm. Work in the forest was available mainly from the month of November to May. Departmental logging work was available within 3 to 4 kilometres from most of the villages except Lankachen, where the work site was about 7 kilometres away. The forest guards informed the villagers in the vicinity of the work-site when the work was to commence. The workers had to carry their own equipment - axe, saw, sickle, etc. - for the forest work. The working hours were usually from 8 a.m. to 5 p.m. with a lunch break. For felling, logging and dragging operations they were paid on the basis of piece rates. It was reported that the effective daily earnings were about Rs.3 for men and Rs.2.50 for women. Work of bamboo cutting and transportation of bamboo in bullock-cart was also available within about 3 to 6 kilometres from Karancha, Ambezara and Motukpalli. The labourers are notified about the work by the diwanji of the paper mill, the payment is on piece rate, the rate being Rs.5 for cutting 25 bamboos and Rs.2.50 for tying a bundle of 100 bamboos. The men cut the bamboos and women tie the bundles. The accounts are maintained by the diwanji and the villagers are not able to check the accounts. Complaints about underpayment were frequent. The effective rate was Rs.3 to Rs.3.25 for men and Rs.2.50 to Rs.2.75 for women. When they carried out the transportation work as well the gross earnings came to about Rs.15 per day. In cases where work was not available within 10 kilometres or so, the men alone go to the work site for seasonal work while the women stay back in the village. The landless families were engaged in agricultural labour work for a month or two only as they

were employed mainly for harvesting work. The rate of payment was Rs.3 per day for men or its equivalent in terms of paddy/jowar.

Table 5.34 : Work Pattern for the Landless and Landowning Families from Cluster II

Families with	Average No. of earners per family	No. of months of work in			
		Culti- vation of own land	Agricul- tural labour work	Work in forest	Collection of forest produce
<u>Men</u>					
No land	1.8	-	2.5	3.4	0.5
Upto 5 acres of land	1.6	2.5	1.0	3.0	0.5
Above 5 acres of land	2.0	3.8	-	3.5	0.2
<u>Women</u>					
No land	1.2	-	3.0	4.2	0.8
Upto 5 acres of land	1.5	2.9	1.8	3.0	0.4
Above 5 acres of land	1.0	4.5	-	2.0	0.5

In a year, gainful work was available for about 7 to 8 months for adults. The children aged 10 or more helped the parents in agricultural and forest work. Younger children engaged themselves in the collection of fuel-wood or minor products from the forest like antnest, berries, etc. There were certain variations in the work availability depending upon the location of the village. The average pattern however represents the bread work situation in the area. During the rainy season, agricultural work is the only work available which is not continuous and there is a considerable under-employment in that period. The forest work starts after the rainy season and the exact duration is

uncertain, so also the distance at which the work opens up. The villagers have to start very early in the morning to reach a distant work place and come home by the dusk. Apart from the uncertainty of the total period for which work is available and the problem of distance, the major complaint was about the wage rate. Despite putting in very heavy work for the whole day the earnings work out to about Rs.3 per day.

Level of Living

The average cash earnings in this cluster worked to about Rs.1,000 per family; the non-cash income of the landless families was small while the landowning families obtained from their farm cereals - paddy, jowar, maize. The cereal production could meet the cereal requirement of the family for about 6 to 8 months for families cultivating less than 5 acres of land and for the entire year for those owning more than 5 acres of land. The usual diet was rice and jowar gruel; it was reported that when there is a shortage of foodgrains less flour is used while making the gruel. Some home grown beans, vegetables, some fish or meat piece (usually salted and dried) are added to the meal only occasionally. The purchases consist of jowar, rice, pulses, cooking oil, gur, kerosene, tobacco, liquor and clothing. Home-brewn liquor as well as country liquor is consumed. The diet is thus poor in variety and not balanced. The supplementary items of food earlier obtained from the forest, notably game were reportedly getting scarcer and the cash income does not always go in mainly for the purchase of nourishing food (to make up for the loss of game, forest produce, etc.) but for the purchase of country liquor, tobacco, a few items of clothing, trinkets, etc.

Eighty-eight out of 122 families reported outstanding loans; the loan amounts except for 12 cases (where the

amount of loan was between Rs.1000 and Rs.1500; this was obtained to meet marriage expenditure) were between Rs.100 and Rs.500. The loans were obtained from money-lenders usually by pledging some ornament or utensil and drawn to meet the consumer expenditure. As ACS is not located within reach from this cluster the villagers have to depend solely on private money-lenders.

The house generally consists of 2 rooms and a verandah. Bamboo, wood and mud is the main material used for walls and the houses have a thatched roof. They are better suited for the extreme climatic conditions of the district; they are warm in winter and relatively cool in summer as compared to the concrete structure with tin or cement concrete roofing. Before the rainy season they have to be properly covered with grass/leaves so that they do not leak. There are separate enclosures for cattle, goats, etc., located near the house.

The incidence of malaria, fever, headache and diarrhoea is considerable; particularly young children succumb due to malaria or diarrhoea. All the child deliveries are attended to only by the village midwife. Family planning programme has not reached these villages.

Village Cluster III

Hill Marias inhabit the Abjmar ranges falling mainly in Madhya Pradesh and marginally in Maharashtra. The mountain mass was split administratively (by the British), the south-western corner above Bhamragarah and Lahir was in the British territory, part of the Aheri zamindari of Chanda district and the rest of the territory was in the Bastar State. The hill mass is cracked and seamed with valleys running in all directions. In this hilly tract of about

1500 square miles, Grigson⁶ noted (1938) that there were about 150 to 160 villages with 11,500 Hill Maria population. The density was $7/mile^2$, with on an average, one village for every ten square miles. In this tract, "The scenery varies; on the edges of the hills there are often time fine views of the plain below, while on the northern and eastern slopes there often are fine patches of sal and other ever-green trees. On the hill-tops and slopes exhausted by shifting cultivation, high grass and stunted trees make the country monotonous. Where the slopes are newly cleared for shifting cultivation often a small grove of trees is left on the summit. But the moment you descend off the rocky plateau you meet green glades and hurrying streams. Good water is everywhere available from clear perennial springs. The hills are far freer from mosquitoes than the plains below. There are no cart tracts and no carts." (Grigson, 1938, p.28.) Grigson noted that Hill Marias from Aheri zamindari migrated in significant numbers to the Bastar state owing to zamindar's oppression.

Grigson recorded that the Hill Maria wears nothing but a loin-cloth of coarse cotton though an occasional man may have a piece of similar cloth big enough to wrap over his shoulder at night. In house, in field-hut, he sleeps on a platform of criss-crossed bamboos with a fire beneath it. It is a taboo for a woman to sleep on a platform. She must sleep on the ground by the side of the fire. The women wear mudang (an under-dress) and a loin cloth that hangs all round over the loins and buttocks, without being passed between the legs. Occasionally women wear a small sheet thrown carelessly across the breasts and over the left

6 For details vide, The Maria Gonds of Bastar, W.V. Grigson, Oxford University Press, London, 1938, Chapters II, III.

shoulder; a cloth of this kind is used for supporting a baby who rides on mother's hip. The Marias use taghate or bark cloak for warmth or primarily for protection against heavy dew and rain. Hill Maria regards the woman as the natural carrier, as may be seen when he goes with her to the market. Young Hill girls and women carry heavy baskets or leaf boxes of grain; logs of wood, water pots on their heads with loads of grain for sale and perhaps piles of baskets, brooms or mats. The Hill Maria housewife will go once a month to the bazaar, miles away, while the menfolk often carry nothing but bow and arrow. And their route is no easy one, but uphill and downdale along rough mountain paths. The chief commodities they purchase from the market are salt, beads and rings, and cloth (Grigson, 1938, pp.62-64, 71). As to the housing, "the walls are generally made of verticle pole stockading. The inner partititions are made either of lighter pole stockading or of bamboo wattle work. The floors and walls are plastered with mud. The grass thatch rests on bamboos tied across the roof-beam and is secured against wind by bamboos criss-crossed outside the thatch. The men rethatch houses, granaries, pig-sties every year before the break of the monsoon." (Grigson, 1938, pp. 114, 115.)

If the conditions of Hill Marias described by Grigson some 40 years back are compared with the situation in 1980 it is observed that the dress and ornaments, the house structure and village layout, and the lack of contact with the outside world remain virtually unchanged.

The economic activity of the Marias is described by Grigson thus: "The whole life of Maria is primarily directed towards the raising of food from the earth, either by cultivation or by gathering the fruits of the forest or by fishing, hunting or trapping. His agriculture determines

the sites of his village and regulates his relation with his wife. His festivals are designed to ensure benevolence of the earth and ancestors and the clan-god towards the crop about to be sown or to celebrate the first eating of each of the main crops and the final harvest home in a spirit of communal thanksgiving. ... The Hill Maria still regards the crops as a result of the combined labours of the village rather than of the labours of individuals." (Grigson, 1938, p.125.)

The favourite method of cultivation with Hill Maria has been the penda or hill slope cultivation. The forestry enthusiasts lament the cutting of the forest for shifting cultivation, foretelling erosion and disiccation. But Grigson comments that "(The forestry enthusiast) forgets that in most of this area the forests have been too remote and inaccessible ever to be exploited, ... The Maria does not range through his forests clearing patches for cultivation at random, he has more or less definite rotations and the clearings after two or three years' cultivation may get twelve or fourteen years' rest at the end of which they have a dense forest growth. Few signs are apparent of erosion ... and there are no signs of any reduction in the heavy rainfall." (Grigson, 1938, p. 128.)

Ban on Shifting Cultivation

When in 1873 forest department took possession of 20,000 acres of the forest tract from the Aheri zamindari, the Government set about to prepare a scheme of 'conservation'. The scheme restricted shifting cultivation in Aheri zamindari to areas within the village lands which were at least two miles away from forest boundaries. The prohibition did not however prove successful as the tract was too inaccessible to enforce any regulations.⁷ Shifting of

⁷ Sir Richard Temple was very pragmatic in approaching the problem of shifting cultivation. He opined "It may be hoped that by degrees these hill people will learn a better

village sites and areas of cultivation continued during the British period.

In 1952 National Forest Policy was enunciated and the necessary legislation banning shifting cultivation was passed. Little active efforts were made in this regard till the Second Plan period, when a scheme of rehabilitation of the families practising shifting cultivation was drawn up under the Centrally Sponsored Programme.

The scheme of rehabilitation envisaged settlement of 25 families per year with a total target of 200 families in south Chanda. The scheme was put into operation in 1959-60. The social welfare department was the implementing agency. Under the scheme each tribal family was given: (1) Land - roughly 10 acres each; (2) (a) land to be cleared, terraced and bunded (at a cost of Rs.100), (b) one pair of bullocks (at a cost of Rs.300), (c) plough, implements, bullock-cart (at a cost of Rs.200), (d) cows or goats, poultry (at a cost of Rs.200), (e) seed and fertilizers (at a cost of Rs.50); (3) khavati in terms of grains, etc., till the harvest is reaped (worth Rs.300); (4) material for hutment (worth Rs.500).

Thus, an amount of Rs.1650 was to be spent per rehabilitated family. A provision for Rs.1 lakh under the Centrally Sponsored Scheme was made for the rehabilitation

(Footnote 7 from last page continued)

mode of cultivation. ... If by a prohibition of their favourite culture they were reduced to distress, they would resort to plunder and especially to cattle stealing; and if they were not in the country the last state of forests would be worst than the first, for then the traces of human habitation, settlement and clearance would disappear. The foresters and the woodmen could no longer live in or even enter into the wilderness (the great pasturage where cattles from the plains resort would be lost) rank and malarious with uncleared jungle and overrun with wild beasts. These animals are already so destructive as to constitute a real difficulty. The only check upon their becoming masters of the forests is the presence of the hill tribes."

purpose. The families were to be settled in a colony of 20 to 25 families each. The Forest Department was to provide for each colony, 500 acres of land free of cost. Each colony was to be provided with a school. In addition facilities for drinking water were to be provided. In Bhamragad region settlements at Koyar, Murangal, Laheri, Bangodi, Gundenhod, Gotpadi, Poerkuti, Tadpari, Bedange and Hiddur were established (Table 5.35). A demonstration farm was set up at Laheri.

A study for the evaluation of the Scheme of Rehabilitation of Shifting Cultivators in Chanda district was taken up by the Tribal Research Institute in 1969.⁸ The study covered the resettled families as well as the families practising shifting cultivation. The comparative position of these families is presented in Table 5.36. It was noted that the resettled families even though they were allotted 10 acres of land, were not in a position to clear up all the land and bring it under cultivation. They could cultivate about 3 to 4 acres and get an income between Rs.200 and Rs.400 from cultivation. In the off season they could not spend time for land-clearance, land improvement, etc., and bring more land under cultivation, as they had to take to wage labour for survival. In Laheri it was noted that the major source of income was forest labour work; on an average Rs.100 were earned per earner. The families engaged in shifting cultivation could bring under crop about 10 acres of land, the earnings from the land amounted to about Rs.500 to Rs.700; they did not generally resort to forest labour work, but supplemented their income in a small way by collection of minor forest produce, fish, small game, etc. Considering the conditions under which the Marias

⁸ For details see Report on the Evaluation of the Scheme of Rehabilitation of Shifting Cultivators in Chanda District, Tribal Research Institute, 1969.

Table 5.35 : Rehabilitation Programme for the Tribals of South Chanda (1959-1965)

Year	Name of the village	No. of families resettled
1959-60	Koyar Marangal	13
	Marangal	12
1960-61	Laheri	5
	Bangodi	11
	Gundenhod	9
1961-62	Gotpadi	25
1962-63	Poyarkoti	25
1963-64	Tadpari	15
	Bodange	10
1964-65	Hiddur	10
	Koyar	4
	Murangal	4
	Bodange	3

worked, shifting cultivation provided them with a better livelihood than the settled agriculture. They also found the routine more varied and the food they obtain more diversified when they combined shifting cultivation with food gathering. They collected roots, tubers, fruits of tendu and char. They tap pedgorga and palm trees for liquor; in addition they distilled liquor from mahua flowers. They grew their own tobacco, kosra, walbeans, ambadi, etc. However, the prohibition on shifting cultivation has become more effective in the last twenty years or so and they have to accept settled cultivation. Given the undeveloped nature of land, the shift to settled cultivation has led to a deterioration in their level of living. They were also not happy with the choice of location selected for colonization. They complained that the location is malarious, they do not

Table 5.36 : Income from Agricultural and Other Sources for Families Engaged in Shifting Cultivation and Settled Cultivation

	Shifting cultivation						Settled agriculture
	Binganguda	Permel	Kuwakudi	Temmewahi	Pungasur	Turmarka	Laheri
No. of families	17	16	16	9	6	20	5
No. of persons	70	85	85	28	35	79	27
No. of workers	47	58	60	22	24	56	14
No. of cows	-	9	21	-	-	-	10
No. of bullocks	-	-	-	-	-	-	5
Income per family:							
From Agriculture (Rs.)	870	787	975	568	980	735	266
Labour (Rs.)	39	21	6	-	-	-	298
Forest produce (Rs.)	31	9	10	5	9	7	-
Total* (Rs.)	940	832	991	573	989	742	564
Expenditure on Food (Rs.)	736	640	779	389	625	472	516
Clothing (Rs.)	63	71	89	51	101	68	64
Total [@] (Rs.)	839	731	885	441	741	565	600

* Including other sources.

@ Includes bidi, tobacco, kerosene, ceremonial and other expenses.

have a proper source of drinking water and have to carry it up from the lower reaches. They said that when they decide upon a site they select sites which are convenient from the point of the water supply and general habitability. They were not however consulted when the resettlement programme was drawn up.

Zareguda: The Surveyed Village

In 1979 one village viz. Zareguda was covered in the survey from the Bhamragad region. There were 20 households in Zareguda. All the families in the village are Madia Gonds. The village is located about 3 kilometres southwest of Bhamragad near the river Indrawati. However, to reach Bhamragad two rivers have to be crossed and there is no bridge. The tract is hilly and well-forested. Water for drinking and for domestic use is fetched from the river which is within 1/2 kilometre of the village. The basic amenities viz. a school, post-office, grocery shop are available at Bhamragad. However, it was reported that children are not attending the school at Bhamragad because of the problem of crossing the rivers. Medical facilities are available at Hemalkasa where a dispensary is run by a voluntary organization viz. Lok Biradari. Registered qualified doctors and well-equipped dispensary with facility for indoor patients are available at Hemalkasa and the villagers take advantage of the facility. Traditionally they would approach the village pujari who would treat the patient using some rudimentary knowledge of herbs but depending mainly on charms and black magic. The pujari is still approached occasionally but the Madias have now started accepting the new medicine available easily and free of cost at the Lokbiradari dispensary. Child delivery is attended to by the local midwife and the umbilical cord is cut using a sickle.

For purchases of provisions and cloth they visit the shops at Bhamragad. It was reported that the home grown cereal is adequate for about 2/3 of the year and the rest of

the cereals have to be purchased. The items of purchase are rice, jowar, pulses, chilli, salt, gur, tobacco, bidi, match-box, kerosene, liquor, clothing, and ornaments. The purchases are usually made on cash payment.

Economic Activity

Fourteen out of 20 families were cultivating families and 6 landless families. The total cultivated land was 36 acres. There was no encroachment on the forest land. Eight families owned and cultivated two acres of land each and three one acre of land each. Only three families owned more than 2 acres, owning respectively 3, 4 and 10 acres of land. The family reporting 10 acres of land was a joint family with father and two sons jointly cultivating the land. There is no irrigation facility in the village. Agricultural season is confined only to the rainy season, and all the land under cultivation is put to paddy crop. The improved practice of paddy cultivation viz. plough the land after spreading some dung manure and then transplant the paddy seedlings in the fields thus prepared is followed only by a few families, while the others just sow the paddy in the bunded muddy plot. Eleven of the cultivating families owned a pair of bullocks and a wooden plough. No family owned a bullock-cart. Nine families owned 2/3 cows each. Cows are maintained mainly for the supply of bullocks and partly for the dung. All the families had some chicken and half of the families had goats. The average yield of paddy in Zareguda was about 900 kg per hectare while the average for the district was noted to be 1257 kg per hectare. Some leafy vegetables and beans like wal, papadi are also grown. After the agricultural season the villagers usually work in the forest nurseries near Bhamragad. Work is available within a distance of about 2 to 6 kilometres from the village. The average daily wages were reported to be Rs.3.20 for men

and Rs.2.20 for women. They engage in collection of resin/gum from the forest and are able to earn Rs.40 to Rs.50 from the sale of gum. They engage in fishing in the river nearby and collection of tubers and roots and mahua, temru (tendu) and char fruits from the forest area to supplement their diet. Ritual hunting which was traditionally conducted collectively is still carried on, but it was reported that after a 2/3 day hunting expedition they rarely secure any game. Whenever they get any game or some domestic animal is butchered, the meat is usually salted and dried and preserved. A piece of dried meat is occasionally added while making the rice gruel.

The problems of settled agriculture were discussed at Hiddur. Lokbiradari unit is located at Hiddur and the volunteers of Lokbiradari are trying to popularize vegetable cultivation among the tribals. The volunteers working in the field were, however, realizing that the main problem is not so much the lack of education and resistance to change but the lack of the necessary asset base. The lands are still not properly bunded and terraced and the problem of soil erosion is serious. The methods of cultivation are primitive. The main problem is to increase the production of cereals. The families drawing upon a variety of resources e.g. livestock - cattle, sheep, pigs, some fishing and snaring of birds, collection of forest products like roots and vegetables, mahua flowers, temru fruit, char, and the crops they grow, are still not able to obtain the basic necessities of life.

Work Pattern

The Maria Gonds thus continue to live in the hill tract that they have been inhabiting for centuries. They have been forced to shift from shifting cultivation to settled agriculture, but are not able to get larger quantum

of cereals on the basis of their family labour which is almost the only major input that they are able to put in. Given the primitive technique of cultivation due to the lack of capital, shifting cultivation is more profitable than the settled cultivation. They prefer agricultural work to forest work; they are reluctant to take up the heavy work of bamboo cutting or tree felling; they prefer the lighter work viz. work in the nursery or the work of collecting leaves, gum or other forest produce. Even if bamboo cutting work is carried on by the paper mill in the forest tract about 6 to 10 kilometres from the village the Maria Gonds usually do not join it. If the distribution of work over the year is considered it was noted that in the case of families owning land a total period of about 2 to 3 months was spent for cultivation work, about 2 months in collection of forest produce, fishing, etc., and 3 to 5 months in wage work in the forest department. The landless families spent about 2 to 3 months in the collection of forest produce, fishing and 5 to 6 months in wage work in the forest.

Levels of Living

The daily diet of Madia consists of gruel and rice. Some pulses, a meat piece is added to the gruel occasionally. Otherwise the diet is mainly a cereal diet. Home brewed liquor of mahua flowers or todi as well as country liquor is frequently taken. About a quarter of the total cash expenditure goes in for the purchase of liquor. The other items of purchase are pulses, oil, salt and chilli. It was estimated that the land owning families are able to get adequate amount of cereals (about 600 grams per day per person) while the landless families are not able to get even the foodgrains in adequate quantity. They could get about 400 grams of cereals per day per person and 30 grams of pulses.

Gur or sugar are not the items of daily consumption but are used only for preparing some sweet dish on special occasions. For lighting purposes most of the families use home-crushed oil and purchase of kerosene was reported only by a few families. Match box is seldom used. The families usually have in their house some fuel-wood burning and at night it is the fire rather than clothing that is used to get some warmth. They use very scanty clothing, mainly a loin cloth or a waist cloth. The general complaint was that the supply of even the few things that they have to buy in the market viz. some cereals, pulses and kerosene, is irregular and not dependable. The hardship is very acute particularly during the rainy season. They do not have the ready cash to make in advance some provision for the rainy months and do not at times have even any salt to add to the gruel. They have to depend on the shop in Bhamragad and complained of exorbitant prices charged during the rainy season. For the sale of rice, gum or some other produce they have to approach the A.C.S. (because of the provision of the monopoly purchase by the Government). There were complaints regarding the weighment of the produce and pricing of the produce. Despite the creation of the official machinery undue advantage of the ignorance and the weak position of the tribals is still being taken. It is difficult to have a machinery to check and supervise the working of the A.C.S. and Maria Gonds are still too uneducated and unorganized to put an effective check.

Housing: The material generally used for walls is pole stockading and bamboo wattle work and a slanting roof of bamboo frame covered with grass or shindi leaves. The house usually consists of two rooms and a verandah. The walls and floor are mud-plastered. There are separate enclosures for the cattle with bamboo fencing, a separate shelter for

goats which is elevated from the ground and the fallings are collected from the ground and used as manure. The pig sty is a small low enclosure made of wooden logs. Only a few utensils (mainly earthen) are needed by the family for cooking. Earthen pots are used for storing drinking water. For eating purposes leave cups are usually used. The other containers e.g. gourd water-bottles, bamboo tube of oil, gourd ladles, bamboo tobacco-tube, bamboo baskets to store grain, forest fruits, etc., are all made using local plant material.

Social Customs

Among Maria Gonds marriage is prohibited within the same clan or devak. A son must not take wife from the fathers' clan or any clan that is brother clan-dadabhai to it. He must marry a wife from some clan that is a wife-clan or akomama. There is a high proportion of cross cousin marriages. Pre-puberty marriages do not occur. The age of marriage was noted to be 15 to 20 years for boys and 12 to 16 years for girls. The youth and girl enjoy certain freedom in decisions regarding their marriages; but in majority of the cases it was reported that the parents had arranged the marriage (Table 5.37). The custom of bride-price is universal; the amount ranged from Rs.200 to Rs.1000. Instead of paying the bride-price, the bridegroom can serve his future father-in-law for a period of say 3 to 8 years. When an unmarried woman lives with a man and becomes pregnant, the man has to give his fellow clansmen a dinner and pay the usual bride-price. A deserted husband can claim from the new husband, the bride-price which he had paid. When the parties are too poor to afford the marriage expenses they start living together and may perform marriage ceremony later or else just distribute small cakes to their clan-fellows. Widow remarriage is common. A widow must not

Table 5.37 : Mode of Arranging Marriage in Various Clusters

Village cluster	(No. of families)							Total
	Arranged by parents	Arranged by self	Through Elopement	Serving as son-in-law	Marriage by customary right	Other methods	Non-reporting	
I	44	9	-	7	-	1	28	89
II	83	19	-	7	-	-	13	122
III	17	-	-	-	-	-	3	20
IV	24	5	12	4	2	5	14	66
V	16	2	4	6	-	-	2	30
Total	184	35	16	24	2	6	60	327

marry as second husband a man whose clan is brother to her father's clan. The woman's marriage relations are regulated throughout her life by the clan in which she is born.

The reported marriage expenditure ranged between Rs.2000 and Rs.3000 (Table 5.38) and the money was raised through loan, sale of cattle or labour service in case it was not possible to raise the amount for paying the bride-price. The disputes in relation to marriage, quarrels, etc., are usually resolved by a group of village elders. The usual practice is to charge some fine if the guilt is established. The fine is used by the villagers for drinking or for feasting.

Table 5.38 : Expenditure Incurred for Marriage Celebration by the Surveyed Families

Expenditure incurred per marriage (Rs.)	(No. of cases)				
	Village cluster				
	I	II	III	IV	V
Upto 300	-	1	-	20	7
301 - 500	9	8	-	7	6
501 - 1000	27	48	-	11	8
1001 - 1500	16	10	-	4	-
1501 - 2000	6	14	4	1	1
2001 - 2500	4	-	5	-	1
2501 - 3000	-	2	11	1	1
3001 - 5000	-	-	-	2	-

Of the total 20 families, 11 were nuclear; in 7 cases sons, daughters-in-law, grand children were staying with the parents and in 3 of these cases married daughter and son-in-law stayed with the head of the family. The average family size was 5, the size of family generally ranging between 3 and 7. All the heads of the family were

male, 18 married and 2 widowers. The number of children per couple ranged from 1 to 5 the average number being 3. Family Planning programme has not reached the village. It was noted that in Zareguda the proportion of children in the total population was relatively smaller; this could be partly because of the high infant mortality and partly because the average number of children born per couple was relatively less (it was reported that there is a practice of breast feeding till the age of 2 or more and the spacing between the children was noted to be 3 to 5 years).

Social Control: The tradition of tribal council of the Madias in Aheri Zamindari had remained in operation during the British period. There were 4 pattis - Laheri, Vennasugar, Jarawandi, Ghat - consisting of 50 to 100 villages each. Every Madia village has a village headman or patel called the Gaita. In addition to his office as a gaita he generally exercises also the hereditary function of a bhumia or religious headman of the village. The man enjoying the double office is therefore the patriarch of the whole village community. The post is hereditary. The caste has no standing panchayat or governing body. It is called together when required. The village gaita, on receiving a report of a misdemeanour or other occurrence in the village calls two or three elders of the village together ... and after hearing the two parties decides the case with the help of the village elders. The jurisdiction of the village panchayat is confined to village itself and a local village panchayat is never referred to for the decision of a case by persons at a distance. A group of 50 to 100 villages is constituted into what is locally called a patti and this patti acknowledges the authority of the chief religious and social headman of the group who is called the sendhia. Sendhia is the chief priest and judge of patti. Every

marriage contracted, every case of social misdemeanour involving the penalty of a fine and every other social and religious function performed in any village of the patti yields the sendhia a fixed fee in cash ranging from Rs.20 to Rs.100. The office of sendhia is also hereditary. The authority of the sendhia (for purposes of panchayat) is evoked only in exceptional cases involving interests of a number of villages and in such cases the decision of the sendhia on appeal being made to him by or against a village panchayat, or a number of village panchayats is final. For purposes of a panchayat therefore each patti forms a distinct unit, the internal composition of which is as follows: (a) Each village holds its own panchayat composed of a few village elders and presided over by the village headman (gaita); (b) Each group of villages acknowledges the authority of the sendhia, who is the court of appeal for difficult or intricate intra-communal disputes; (c) Each sendhi's patti is, as a rule, a compact block of country, sharply defined by prominent natural geographical boundaries and the sendhia's authority is confined to his own patti.⁹

It is impossible for a village to alienate itself from patti or to disregard the authority of a sendhia. Despite the extension of the State Government judicial and administrative apparatus to this area, the Madias still respect the gaita, the panchayat and the Maharaj and prefer the traditional system of resolving differences and disputes; they are quite reluctant to go to the courts. The gaita and sendhia are locally available, they know the customs and the problems of the people and the disposal of the cases

⁹ For details see Central Provinces and Berar Census Report, 1911, p. 230.

is speedy. It was reported that the social control thus exercised within the community is quite effective and the social relations are generally cordial and smooth.

The Madias have little contact with the outside world. Whatever little contact they had, there were always some problems. There were complaints about the forest regulations and its enforcement by the guards; this made it difficult for them to get the necessary bamboos/wood from the forest area. The working of A.C.S. also is not satisfactory. Barring the block-level government machinery and the forest personnel they have hardly any dealings with the outside world. They have not moved beyond Bhamragad, except for some families who had gone to Aheri to attend the Dasara Ceremony which has traditionally been performed with great pomp by the Gond Raja and the people would attend the ceremony with gifts for the Raja. Barring this no family has visited any place outside their hilly tract and there is no occasion to go anywhere. They derive their livelihood from the land and forest resources in the vicinity and rarely market any produce. The earnings from the wage labour are used to buy a few necessities of life.

The Madias are totally illiterate. Newspapers do not reach them; listening to the news on the radio does not interest them. In fact any news about the outside world is totally irrelevant to them. Yet they do exercise their voting right. The village sarpanch of a group of villages (Bhamaragad, Tola, Zareguda, Golaguda, etc.) guides them in the matter and when asked whom they voted they hardly know the name of the person; some would remember only the picture they stamped. Since the Gond Raja was the candidate for the Lok Sabha some of the tribals from Bhamaragad knew that they voted for the Raja.

Their major problem is the low level of earnings. They want continuous but light work and the preference is for a Government job. Some suggested that they would like to get a bullock-cart so that they can take up the work of transportation of bamboo or timber. There were many complaints about the low wage rate prevailing and a demand for an increase in the wage rate was put forth. The other major problem relates to the difficulties in the supply of the few items that they buy from outside and the prices charged. They expressed a need for educating their children but unless the school is located nearby the children cannot possibly attend the school. Good medical facility is available because of the Lok Biradari unit, otherwise hardly any of the Government Welfare schemes have reached the Madia Gonds. They continue to live in the thatched huts, clothed scantily and their staple diet is gruel. They celebrate their traditional festivals Pola, Pindi-Padam, Dasara, Divali, Holi, celebrating the festivals with offering and traditional dancing to the tune of drum. The internal social organization, regulation of marriage by customary more remains basically unaltered. Thus the distance between the Madia Gond world and the modern world remains wide and there are but few bridges built so far that can help narrow down the distance in any significant measure.

Village Clusters IV and V

Ten villages from Gadchiroli taluka were covered in the survey. Of these six villages viz. Kohakabodi, Alondi, Pitesoor, Botezari, Rankatta and Mardantola are located near the Madhya Pradesh border situated in the north eastern part of the taluka and village Waghbhumi is situated about 10 kilometres to the west of these villages. The trunk road from Chandrapur through Gadchiroli to Calcutta is about 60

kilometres away from this group of villages. There is no road except a cart track upto Pitesoor; the villages can be reached by bullock-cart or on foot in fair weather. In the rainy season the villages get almost totally cut off as a number of rivers and streams en route get flooded. The taluka place viz. Gadchiroli is about 100 kilometres away. The nearest place, Kotgul, with some marketing facilities like weekly market, grocer's shop is 12 kilometres away. For veterinary service, medical service or for purchase of clothing, utensils, etc., the villagers have to go upto Mohala in Madhya Pradesh (about 27 kilometres). Such a long distance is usually covered on foot; the visits to market place, etc., are naturally quite seldom. State transport bus service operates along the trunk road only in the fair weather season i.e. between December-January to May; for the rest of the year there is no passenger service. The villages are thus totally cut off with little access to civic amenities, marketing facilities, etc. Ashram school is located at Kotgul and Garapatti which are within 10 kilometres of these villages. Two students were studying in the Ashram school at Kotgul. The villagers were unwilling to send their children to the Ashram school at Garapatti as there was a belief that the school is ghost infested. The parents told that the children catch fever soon after they join the school and would get well if they come home. A detailed enquiry indicated that the possible reason for this was that the school building was tin-roofed; it was very hot in summer and cold in winter whereas the children are used to live in mud houses which are better-suited to the extreme climate of Chandrapur district.

Three villages viz. Mutnoor, Fuser and Bawanchuha,¹⁰

¹⁰ It is not possible to locate Bawanchuha village in the District Census Handbook.

are located to the east of Chamorshi about 25 kilometres away. The distance upto Gadchiroli is about 40 kilometres. The State transport bus service (which is seasonal) reaches upto Talodhi about 10 to 15 kilometres from this group of villages. Grocer's shops and private dispensary are located at Talodhi; for veterinary service and public medical facility the villagers have to visit Chamorshi. Educational facility is not available within accessible distance and no child is enrolled in the school. A post office is located at Muranda, about 7 to 9 kilometres from the cluster.

The villages from both the clusters, like the majority of the villages from Gadchiroli taluka, are, thus, devoid of any transport and communication facilities, educational and health facilities, marketing facilities, etc., and continue to make their living mainly on the basis of the local resources. However, whenever they come into contact with outside agencies either for seasonal work or to buy a few manufactured items like clothing, kerosene, etc., they are at a great disadvantage because of their ignorance and very weak position.

Physiography and Crops: The villages are located in hilly forested regions and the soils vary from medium to poor. There is no irrigation facility and agricultural season is restricted only to kharif crop. Paddy is the main crop grown in these villages and inferior millets like kodo and kutki are grown in the poorer soils. Cultural practices are primitive and yields are low. The per acre yield of paddy was about 1.5 quintals and that of kodo, kutki, madia about half a quintal per acre. Some small pieces of land were put to the cultivation of pulses like black gram, kulith and some to chillis. For ploughing wooden plough is used; most of the cultivating families owned a plough and one or two bullocks.

Cluster IV villages were under the Kotgul zamindari, which was under the Nabab of Porla. The land right vested in the zamindar; the tribals were allowed to cultivate patches of land and in return they had to provide free labour service as and when the Zamindar demanded. The rule of zamindar was supreme and his power absolute. When the Nabab visited the forest tract on hunting expedition, the tribals had to offer their best cattle as a bait for tiger, failing which they would get a merciless beating. The village youth and the elderly men had to wait on the Nawab and Nawab could take away into his harem any young girl he fancied. The only privilege the tribals enjoyed in return was the use of the forest tract; they could carve a small piece of land and put it to cultivation of inferior millets like kodo, kutki; they had free access to timber, bamboo for housing, fencing, etc., and they would occasionally sell a few bamboos. There was no restriction on the use of forest produce; they would collect roots, tubers, mahua flowers, fruits like temru, char and get some small game from the forest area. They could freely graze their cattle. All this provided them with a livelihood. Cash needs were minimal and met through the sale of bamboo or other forest produce.

The tribals found it hard to adjust to the new regime wherein the direct oppression was reduced but it was replaced by intricate laws and restriction of rights, particularly the rights on forest produce. They still consider themselves free to use the forest to meet their needs, but the laws and regulations irk them at every step. There are a number of prohibitions on cutting of bamboo and timber, on cattle grazing, etc., and the forest guard imposes regulations which do not even exist in the Law taking advantage of their ignorance. They are thus harassed and have to offer a chicken or some liquor to the forest guard for maintaining

cordial relations. There was a general complaint that the supply of housing and fencing material is very much restricted and it is difficult for them to maintain properly their houses and animal enclosures. The other major problem voiced by the tribals is the diminishing supply of minor forest produce. It was maintained that the exploitation of the forest by charcoal merchants has led to a reduction in the valuable fruit bearing trees, particularly temru and char; deforestation also means that game is no more available.

The forest area near cluster IV villages is leased to Ballarpur paper mill for exploitation of bamboos and the villagers complained that if they take a single bamboo, a fine is imposed without proper procedure and receipt. The tribals are afraid of the Law and the government officials and dare not lodge a complaint against irregularities perpetrated by the forest guards.

Land Distribution

In cluster IV, over 80 per cent of the families owned some land; there was a large variation in the size of landholding. In cluster V, 12 out of 30 families did not own any land but 9 of these families reported jabranjot land so that the number of cultivating families was 27. Paddy is almost the only crop grown in these villages. In cluster IV about 92 per cent of the cultivated land was under paddy and the remaining was put under kodo, kutki, madia, kultha. The average yield of paddy per hectare was as low as 375 kg in cluster IV and it was about 500 kg in cluster V. There was little variation in the average yield between different land-size groups in the case of cluster IV, while in cluster V, the average yield for the families with cultivated holding below 2 acres was about 90 per cent of the overall average while it was above the average by about 6 per cent in the case of cultivated holdings, with more than two acres of land.

The productivity of land being very low, the villagers have to seek wage work to supplement their meagre earnings from farming.

Work Pattern

In cluster V wage work is available only for a short duration. It was reported that the forest departmental or FDC work is not available nearby. Some parts of the forests in the vicinity of the cluster is taken by the coal merchants and work of tree-felling, dragging is available between the months February to May, however, the exact period over which the work continues is variable and the quantum of work is quite limited. In 1978, it was noted that the work available per earner lasted for less than a month. The workers are notified by the divanji of the coal merchants. The work is done on a piece rate, the per beat rate being Rs.4.50 to Rs.5.00 for felling of trees and Rs.3 to Rs.6 for dragging depending upon the distance. The daily earnings were reported to be Rs.3.50 for men and Rs.2.50 for women. Agricultural labour work was available chiefly during the harvesting season and about one-third of the total workers reported agricultural work for a period of 1 to 2 months. The wages were given either fully in kind or partly in kind and partly in cash, the rate being Re.1 together with rice gruel or 1 kg of paddy and rice gruel. Two male workers were employed as attached annual servants by the bigger land owners, one of whom was working as a farm servant and the other was tending the cattle. No other work was available in this tract.

The agricultural work lasted for a period of about 3 to 4 months. The families in this cluster spend considerable amount of time in collecting forest produce, fish trapping, hunting, etc. The season for collection of tendu leaves lasts for about two or three weeks, in the month of May. All

the family members engage in this activity. The rate for collection of tendu leaves was Rs.4 per 100 standard bundles (of 70 leaves). An adult could collect about 100 to 140 bundles and a child about 50 bundles a day. It was reported that the effective earnings of an adult varied between Rs.3.50 to Rs.4.00 as various cuts are imposed rejecting 10 to 20 per cent of the leaves collected as faulty (and later these were reportedly mixed with the other lot and sold). The entire family working for the season (about two weeks) earned about Rs.90 to Rs.150 depending upon the number of working hands. The other major forest based activity is the collection of mahua flowers. The flowers are collected from mid-March to April, the activity lasting for about 3 weeks or so. The flower is dried, pounded and eaten cooked or used to make liquor; part of the flowers is at times sold to raise some cash income; it is however sold at a very low price (.25 per kg). The season of mahua seed collection stretches from Mid-June to July. The seed is crushed by the villagers in a primitive wooden handpress and the oil is used for cooking as well as to light oil lamp. The seed is sold partly. There are large year to year fluctuations in the yield (flower and seed) of the mahua tree and the seed prices fluctuate violently. The trade in tendu leaves and in mahua flowers is controlled by the government. There were complaints that the tribals do not always get their payment at the official rates.

Fish trapping was the other activity taken up after the rainy season, it lasted for about two months viz. November and December. A trap made of split bamboo is put across a stream to catch fish. Certain plant materials like milky juice of the fruit of a small tree, *Casearia Tomentosa* Roxb. (Modi) or *Casearia Graveolens* Dalz. (Bokhra), oil cake of *Madhuka Indica* Gmel. (Mahua) or pounded bark of *Randia*

In cluster IV the work situation was somewhat better as compared to the conditions obtained in cluster V. Between November and May, particularly during the summer months bamboo cutting work was available in the forest within a distance of 5 to 10 kilometres from the surveyed villages. The work was notified by the divanji of the paper mill and was given on a piece rate. Work of tree cutting was also available during the summer months. The quantum of work was limited. Near Alondi and Kohakabodi road work was available on a piece rate. It was reported that the workers do not get more than Rs.3 for a full day's work either in the forest work or the road work. There is no provision for first-aid if the workers get hurt or wounded during the work. In case the work is executed by a private party (a paper mill or a road contractor) there is no guarantee that they will get the full payment for the work done. They were reportedly cheated in measurement. In Kohakabodi and Botezari there was a complaint that the contractor delayed the payment and did not pay them at all for the last ten days' work. The workers feel totally helpless and do not know how to seek redress against such malpractices and cheating.

In addition to this non-agricultural wage work, agricultural labour work was available in preparatory tillage and harvesting. At Alondi some bunding work at big landowners was reported during the summer months.

The villagers spend about one month in the collection of forest produce viz. mahua flowers, tendu leaves (for sale) temru and char fruit, tubers for home consumption. At Ranakatta gum was collected for sale. Seasonal fishing activity on a nearby stream was also reported.

Even though, agricultural work was reported for about 6 months, there was considerable under-employment during that period, especially during the rainy season. Most of

Table 5.40 : Work Pattern for Men and Women from Cluster IV Villages

	(No. of months)			
	Agricultural work		Non-agricultural wage work	Collection of forest produce
	Own farm	Labour work		
Men	5.8	0.4	1.2	0.7
Women	5.5	0.6	0.8	0.6

the agricultural produce was used for home consumption, only four large land-owners sold a part of the paddy produced. By collection and sale of tendu leaves the families earned about Rs.60 to Rs.120 during a season.

Consumption pattern

The families with land-holdings above 5 acres were in a position to get adequate quantum of cereals, but the consumption of pulses was low even in their case. The smaller landowners and the landless families could not even get an adequate cereal diet. In cluster IV relatively less amount was spent for purchasing tobacco/liquor. The liquor was mainly home-brewn, in case of many families from this cluster. The landless families were so poor that they subsisted just on gruel. No purchase of pulses, oil, gur, etc., was reported as they did not have the means to buy these. The daily meal consisted of rice gruel or boiled kodo-kutki or mahua flour depending upon the season. Salt and, if available, some chilli is added to the gruel. Occasionally sprouted kultha or popat or some vegetable preparation is made or some pulses or meat piece is added to the gruel. On festival days sweet chapati (from flour sweetened with gur or mahua juice) or rice flour dough cooked in a leaf cup and soaked in mahua juice, breaks the monotony of the daily diet of gruel in the morning, gruel for lunch and gruel for the dinner.

Indebtedness

No ACS is located within accessible distance from the cluster IV villages and the villagers have to depend on private money-lenders for consumption loans. There was only one case where long-term loan was obtained from a bank for the purchase of oil engine.

Many families obtained loan in kind - in terms of paddy and after the harvest returned the amount which was 1.25 or 1.50 times the original quantity. In money terms the average amount of outstanding loan came to Rs.300 per borrowing family and Rs.100, if averaged over all the families.

ACS is located at Muranda and is within a reasonable distance from two villages viz. Mutnoor and Bawanchuha from cluster V. However only a few of the families availed of this facility. The main complaint was that the loan is not available on time. It was also reported that some consideration has to be given for getting the loan sanctioned and in effect the interest rate is not much less than the market rate. About 10 families obtained loan in terms of paddy from private merchant-cum-money-lender. It was noted that the debtors often feel obliged to the money-lender for giving them loan thereby meeting their need. Taking advantage of their dependency, cases were noted where the money-lenders extracted work (gratis) from the debtor. The annual rate of interest ranged between 24 per cent and 48 per cent.

Housing-Clothing

The houses are made of bamboo plastered with mud and have a thatched roof. A few large land-owning families had houses with roofing of country tiles and walls of brick and mud. The walls are plastered and painted white or yellow and are often decorated with designs in red colour. The houses are kept clean. For cattle, there is a separate

shelter with bamboo fence for protection from the wild beasts. Creepers like beans or white gourd, are grown in the court-yard of the house. If an epidemic visits a village, the villagers move to another site. A brass thali, lota (drinking vessel), a few earthen cooking pots are the only household goods they possess. So far as agricultural and other implements are concerned most families owned a wooden plough, hoe, harrow, sickle, axe, etc. A few families owned bullock-carts.

There is a definite change in clothing. The men who traditionally had only a loin cloth now use loin cloth or short dhoti and vest or shirt and the women wear a saree, use of blouse has also spread, particularly among the younger women; coloured saree is now being used even by married women whereas traditionally they would wear a white saree.

Migration

About 30 per cent of the families in cluster IV and nearly 60 per cent of the families in cluster V have migrated mainly from the villages from Gadchiroli taluka and a few from the adjoining Madhya Pradesh districts. The migration is mainly for economic reasons e.g. families from Madhya Pradesh out-migrated due to famine conditions. In cluster V, seven out of seventeen migrant families have reported that they have moved to the present village after marriage as a son-in-law.

Social Composition

Nearly all the families in cluster IV villages were Gayate Gond. In cluster V all the families were Madia Gonds. Compared to cluster III in Sironcha taluka where the Madia Gonds continued to have more or less the aboriginal way of life till recent times, the Madia Gonds in cluster V have been influenced by the Hindu culture and life style due to the contacts with the settled communities.

Marriage

The cluster IV villages, as noted above were within Kotgul zamindari under the Nawab of Porla and thus came under the influence of Muslim feudal culture; the Nawab had the privilege to carry away any woman (married or unmarried) into his harem. Consequently the women came under more restrictions than was customary among the tribals. The houses are so constructed that they are closed from all the four sides and the courtyard is in the interior, again a protective measure. The cluster V villages were within the domain of a Gond Raja. The zamindars and his retinue were free to take away any unmarried girl they fancied. There was in fact a belief that the young girls have a divine element till they are married and they should be available for enjoyment without restrictions. Therefore, a young girl will not be rescued even if she is taken away forcibly. Once married there were stringent restrictions; it was considered a serious offence if a stranger talked to a married woman or even wished.

It is considered a point of honour to "capture" a girl for marriage. It is difficult to distinguish between the marriage by capture and 'Gharghushi' i.e. the girl runs from her paternal home and comes over to the bridegroom's house. The most common practice is that the parents arrange the marriage. It is usually the boy's parents who make a proposal to the girl's parents and the marriage is fixed by mutual agreement. Bride price has to be paid by boy's parents and in case the sum cannot be raised, the son-in-law works at girl's paternal house to pay the bride price in terms of labour. If the families are too poor to bear the marriage expenses, the couple stays together; often times the marriage is performed when they can raise the necessary funds. If a young boy makes advances to an unmarried girl, he is asked

to marry her and in case he refuses he is excommunicated. If a boy offends a married woman, he is fined and failing to pay the fine he is excommunicated. If a boy violates the traditional regulations in the choice of the partner he has to dissolve that marriage and pay the fine imposed; if he disobeys, he is excommunicated. The age of marriage is about 12-13 years or above for girls and above 15 years for boys.

Disputes arising in relation to marriage are usually decided by the village elders. It is customary to enforce a fine on the guilty. For theft the stolen goods are to be returned, for abuse the fine is from Rs. 2 to Rs. 5; for beating Rs. 50; for irregularities in relation to marriage Rs.100 to Rs.150; and if a man leaves his wife, Rs.1,000. If the fine is refused the person will be excommunicated; it is difficult to stay in the village in such cases; the person is often forced to leave the settlement.

Within the family set-up certain prohibitions are enforced, e.g. women are not permitted to speak with husband's elder brother; and some fine or at least serving tea to the panch is necessary if the regulations are not adhered to.

The social customs and mores are stringently enforced and an individual cannot challenge any regulations unless he is ready to leave the community. The social cohesion is thus maintained and interference from outsiders is kept minimal. They see to it that the disputes do not reach the court of law. Consequently the power of the police Patil or panch and the village elders is considerable. No one dares challenge their decision. Some instances were noted where the police Patil took undue advantage of their position e.g. in the village 'x', the contractor won over the police Patil by serving him tea daily. With his cooperation he left the

village without making full payment to the labourers; the labourers were helpless when the Patil let go the contractor. The police Patil was also the pujari in the village and used black magic to keep the people in check.

The community level cooperation was very important when shifting cultivation and hunting was the way of life and strict control on all the individuals had to be enforced for ensuring harmonious team work. However, with a shift to settled agriculture the collective activity is considerably reduced. The cooperative working is now restricted mainly to social, religious occasions and in economic sphere, there is not much basis for cooperation, except for mutual exchange of labour or bullock exchange. When a representative of the village attends the Kotgul fair (for worship of Budal Pen) the villagers make contribution to food and puja material. In case a cohabiting couple is poor and cannot raise money for marriage and requests the villagers to help they would contribute and arrange the marriage feast (bundo).

The traditional hierarchy was the pujari/headman at the village level and zamindar at the regional level and king at the apex, who was in communion with the Nature; the king was offered gift at Dasara to propitiate Nature/God so that the nature is benevolent, the pujari serving as the intermediary. Thus, in the name of God the pujari who was often the intellectual, religious leader and the medicine man in the village maintained his control. It was noted that the pujari-police Patil retain their power now in the name of the Government. The forest guard or other petty officials in cooperation with the village headman are in a position to hold the villagers to ransom. In the name of law or a Government order they can charge arbitrary fine, impose restrictions, influence voting pattern, etc. The tribals are afraid of the

Law and punishment and are too uneducated to understand the intricacies of the Government regulations. The formalization of legal system and reform in the judiciary introduced by the British actually worked to the advantage of the outsiders, without giving any protection to the tribals. New regulations are being introduced for the welfare of the tribals. For example, the monopoly procurement by the Government and the restriction on private trade, etc. However, it was reported that as the ACS is not often in a position to make prompt payment on receipt of the produce the tribals are forced to sell the produce to a private trader who in co-operation with ACS manages to operate in the area and continues to collect the produce paying a rate much lower than the stipulated price. It was reported from two villages from cluster V, that the merchants bought the produce from the tribals at lower than the government stipulated price and sold it to the ACS at a profit.

The major problems faced by the people is inadequacy of land and low productivity of land so that even the cereal production is not sufficient to meet their consumption requirements. Demand for more land and irrigation was therefore generally voiced. Severe difficulties are faced in obtaining the few essentials that they have to purchase; the supply was very uncertain particularly in the case of kerosene; the prices of cereals, pulses, gur, etc., are pushed up particularly in the rainy season and during the festival time. Cloth is very costly and since their clothing needs have increased a larger amount of their cash income goes in for the purchase of cloth.

The other major complaint was that they do not get the necessary forest produce e.g. timber, bamboo and fruit, tuber, etc., due to indiscriminate commercial exploitation of the forest by the coal merchants and other contractors and

the harassment by the forest guard when they obtain some timber, bamboo, etc. They feel that they must have a free access, as they enjoyed earlier, to the forest produce.

Gonds vis-a-vis the Larger World

The Madias are reluctant to mix with the outsiders. Their mobility is much restricted and they are generally unwilling to leave their forest abode. Except for two cases they had not moved out of Aheri zamindari. In nine cases they had sometimes visited the Aheri town for Dasara celebrations. Only one person had visited the taluka headquarters viz. Sironcha and one reported that he accompanied an official of the ACS on his visit to Chandrapur, the district headquarters. (Table 5.41.)

About half of the families from cluster I and II had visited Chandrapur mainly in connection with some work e.g. to receive payment for work or truck unloading. Only in a few cases visit to Aheri or Chandrapur was reported for personal reasons viz. attending Dasara celebrations at Aheri or visit to Chandrapur for sight-seeing.

In cluster IV, 40 out of 66 families reported that they frequent Mohala (M.P.) across the border for purchasing the daily necessities or for the sale of some produce. If these families are excluded only about one-third of the total families had moved out of their native village. These visits were mainly in connection with some Government work. The contact with the outside world is thus minimal. There is hardly any occasion to move out of the village cluster; except for cluster I, the villages seldom receive any visitors from outside. There was a radio-set with the Grampanchayat in a few villages; however in most cases it was out of repair. Only in Tekampalli it was reported that the villagers listen to the special programme for the farmers and to film songs. The villagers do not read any newspapers. They have

Table 5.41(a) : Distribution of Families by Towns/Cities Visited

Towns/cities visited	(No. of families)					Total
	Cluster					
	I	II	III	IV	V	
Chanda	42	58	-	9	14	123
Sironcha	1	3	1	-	1	6
Gadchiroli	-	-	-	9	9	18
Aheri	-	4	9	-	-	13
Wardha-Nagpur-Gondia	4	1	1	2	1	9
M.P. towns	-	-	-	40	-	40
Bombay etc.	-	-	-	-	2	2
Did not visit any towns/cities	42	56	9	6	3	116
Total	89	122	20	66	30	327

Table 5.41(b) : Distribution of Families by Reasons for Visiting Towns/Cities

Reason for visit	(No. of families)				
	Cluster				
	I	II	III	IV	V
Truck unloading	20	6	-	-	-
To receive payment	11	26	-	1	2
Government work	6	5	2	11	-
Purchases	3	5	-	26	13
Sales	1	-	-	14	-
Casual visit	6	14	9	8	12
Total	47	66	11	60	27

thus virtually no contact with the outside world and can hardly have any interest in the larger events. They are unaware of the Indian national events, national symbols or leaders. The only contact is at the time of voting - it is also a kind of a ritual - on an appointed day they would visit the voting booth as advised by the gaita, patel and stamp a symbol. When the candidate was Raje Vishweshwar Rao then some of them knew that they had voted for the Raja. The other factor by which they were persuaded to go for voting was the lure of a carrot. It was reported from some villages in cluster IV, that the patels said that they would be given a house if they stamped as advised the symbol "X"; in the subsequent elections when they were totally disillusioned, the 'stick' was used; it was announced that if they fail to stamp the symbol "Z" they would be taken in a police custody. They were alarmed and walked several miles to the polling station for voting.

The tribals remain restricted to the narrow precincts that they have been inhabiting for decades and they are but formally incorporated in the wider political and legal system. So far as the issues concerning their day-to-day life, they still depend on the traditional village leaders and the panchayat of the elders; the disputes relating to land, offences like theft, quarrels or irregularities in relation to marriage are all decided at the village level. All the respondents opined that the village level problems should be handled by the panchayat and consider it not right to take these to some outside agency. There are, however, aware that there is some authority called the Government (like the Raja) which can dictate, punish and they are afraid of this unknown authority. It was noted in some villages that the village patels had taken disadvantage of their ignorance. The villagers are totally dependent on the village community and

dare not face the risk of ex-communication and thus remain bound by the traditional socio-political regulations and norms.

The disruptions are noted mainly in the economic life. Traditionally the economic life was well-integrated with their habitat. All the basic necessities (except for some salt, metal and clothing) were obtained from their immediate environs. They worked using simple tools and could procure from the forest and the forest land food, fodder, liquor, fuel, timber for implements and housing. The work and the leisure - the festivals and other celebrations were woven together to match the nature's rhythm of seasons. For example, among the Madia Gonds, Pinu Pendum (Rain festival) is celebrated after the first rains, Bija Pendum is the festival of sowing of seed, Kurum Pendum is the first food eating festival when the new crop is gathered. Cattle festival (Kodu Pendum) or Pola is also celebrated among the Gonds. After the kharif harvest Diwali is celebrated by worshipping clan-gods, and dancing - merry making; cattle is also worshipped on this occasion. Holi is celebrated after the rabi harvest. Dasara is the occasion to make offerings to the traditional chief. Gonds from different parts of Aheri Zamindari area pour into Aheri - the residence of the Aheri zamindar who is worshipped as their Raja. They bring offerings for Raja. Old silver coins are purchased from the money-lenders and offered to the zamindar. Sacrificial offerings are made and merry-making goes on throughout the night.

In Kotgul zamindari (Gadchiroli taluka) the festival navo tihar is celebrated collectively in a group of some 28 villages. The festival is celebrated in the village and the village elders attend the pooja at Kotgul; they carry with them offerings for the Budal Pen collected from their

respective villages. This is the festival to mark the gathering of the new crop and offerings are made to Daivai, Mariai, Thakurdevi, Budal Pen and after this festival the new crop can be eaten.

Many of the traditional festivals are still celebrated and these celebrations are occasions for community gathering, to make sacrificial offerings to the Gods so that the nature is kind and bountiful. Mahua liquor is distributed and there is dancing and rejoicing. For such celebrations home-brewn liquor is reserved and country liquor is not considered appropriate.

The work and leisure pattern is not thus basically altered. However, there is one difference. The return to labour is diminishing because the resources are becoming scantier. Yet despite increased hardship and deprivations they prefer the traditional way of life in order to preserve that autonomy and freedom which they traditionally enjoyed. When asked about the choice of work they would prefer, almost all the responding families (with or without land) indicated that they prefer to be agriculturist (Table 5.42). Those without land or inadequate piece of land expressed that they should be given land adequate for the sustenance of their family. The major reasons given for this choice were: (i) It enables them to retain their independence and relative self-sufficiency so that they can organize their own work and leisure schedule and not dictated by others. (ii) Agricultural work is varied and relatively light and not so hard, heavy and monotonous like the bamboo cutting or tree felling work. (iii) Since they can meet many of their family needs if they have adequate land, the hardships arising due to shortages in supplies, high prices, etc., could be avoided.

Only in cluster I, some of the families indicated a preference for forest work also. These are the families who

Table 5.42 : Distribution of Families by the Type of Work Preferred by the Head of the Household

(No. of families)												
Cluster												
Work preferred	I			II			IV			V		
	Families			Families			Families			Families		
	With land	With- out land	Total	With land	With- out land	Total	With land	With- out land	Total	With land	With- out land	Total
Cultivation	22	21	43	64	35	99	52	10	62	14	7	21
Forest work	17	13	30	-	3	3	-	-	-	-	-	-
Government job	7	-	7	-	-	-	2	-	2	-	-	-
Other work	4	2	6	3	1	4	-	2	2	1	2	3
Non-reporting	1	2	3	12	4	16	-	-	-	3	3	6
Total	51	38	89	79	43	122	54	12	66	18	12	30

have been in contact with the non-tribal economy and society and are ready to shift to an alternative work pattern if they are likely to get assured income from that work. Some of those who opted for the forest work indicated a preference for the light work in the nursery and some preferred the work of transporting the timber by bullock-cart. In view of the limited production from agriculture, some expressed a preference for combining agriculture with the forest work.

The tribals do not have either the necessary education or the experience of working in the manufacturing or in the service sector. Those who have migrated to cities like Chandrapur/Nagpur are engaged mainly in the very low-income occupations. In cities, men are working in large numbers as cycle ricksha pullers and the women as domestic servants. But those in the villages expressed a strong preference for primary occupations, particularly cultivation, and said that they would prefer to continue to live in their native habitat, and not migrate to the cities. Many stressed that adequate and developed land must be made available to them and provision for irrigation facility must be made. In addition, the need for consumption finance and employment during the lean season was also emphasized.

As regards the amenities and facilities, cluster I villages have access to most of the basic amenities; the villagers from cluster I indicated a need for electrification and proper drinking water supply and schooling facilities. The villagers from the other clusters do not have access to most of the basic amenities. In cluster II villages, the major felt need was for accessibility - a proper road connection, followed by a demand for school and electrification of the villages. In two out of six villages drinking water supply was emphasized as a priority need. The other amenities

needed in order of priority were bus service, medical service and flour mill. In Zareguda the emphasis was on drinking water supply followed by marketing facilities and educational facility. In the villages from clusters IV and V, drinking water supply was considered a priority need. In two villages a need for provision for storage of drinking water for the cattle was expressed. The other services considered essential were medical facility and a school. In two villages a need for all-weather road and bus service was expressed.

Conclusion

Unlike the other target group populations e.g. agricultural labourers, certain sections of artisans, the tribals in Chandrapur are not yet reduced to total dependency on the landed sections. Most of them are still cultivators, though the quantum of land is inadequate and the quality of land is poor so that they have to serve as wage labourers to supplement their income. By and large wage work is taken up either with the Forest Department/Forest Development Corporation or with the paper mills i.e. the wage work is mostly forest-based. In addition they engage in the collection of tendu leaves, gum etc., for sale and also obtain a part of their food and other necessities from forests. The extent of sale of the agricultural produce or forest produce is small and most of their productive activity is still oriented towards home consumption. In other words their integration with the market economy is partial. The tools they use are simple and their needs are met by the rural artisans; they do not use inputs like fertilizers in agricultural production. Their purchases in the market are mainly for satisfying their consumption needs like salt, kerosene, clothing, trinkets.

It was estimated that of the total agricultural produce about 10 per cent was marketed, the rest was retained mainly

for home consumption and partly for kind payment and seed purposes. The income from cultivation accounted for about 45 per cent of the total income, while that from the collection of the forest produce (food, fuel, timber, etc.) and sale of some produce like tendu leaves, etc., made for another 20 per cent of the income; the rest was obtained through wage work, primarily in the forest. On an average about half the income was obtained by working on land and half by working in the forest.

In the total income a little over 50 per cent of the income was in kind and similarly in consumption about 50 per cent of the expenditure was in kind. Nearly all the cash purchases were made for meeting the consumption needs of the family. The cash component for satisfying the consumption needs is increasing. Commodities like oil, liquor, tobacco are largely purchased; expenditure on clothing has increased because new items of clothing have come into use. It will be, thus, seen that the increased cash expenditure hardly entails any improvement in the basis of life of the tribals.

Considering both the cash and kind income the annual average income per family was estimated to be about Rs.2400 while the poverty level income in 1978-79 as worked out by the Planning Commission come to Rs.3400 for an average-size family, and the income required to meet the critical minimum needs was estimated to be Rs.5100. About 75 per cent of the families were below the poverty line among the total families covered in the survey. The problems of semi-starvation, malnutrition, lack of proper drinking water supply, diseases arising due to under-nourishment/malnourishment, are indeed serious. Unless special measures are devised to strengthen their asset base their economic distress is likely to deepen.

In the social sphere, most of the tribal villages continue to retain a considerable amount of their traditional

autonomy. The village level problems are attended to, by large by the panchayat or village elders and certain forms of cooperation e.g. helping with draught animal in agricultural work, collection of forest produce, hunting expedition, performing rituals and festivals are still observed. The community is not yet automatized or differentiated into clear-cut groups/divisions. As a consequence the individual has to abide by the dictates of the community. In certain villages it was noted that the police patil - the village head was taking undue advantage of his privileged position. There is thus the problem of oppression by the 'elders' in the community that goes unchecked and the problem of exploitation by the 'outsiders' like contractors, merchants, paper mills, petty officials, etc.

The tribals are still too weak and unorganized to resist the various forms of oppression and exploitation. Certain protective and welfare measures have been devised by the Government to ameliorate the situation. The limitations of such measures have been indicated above through a few case studies. The question of alternative approach to fulfil the immediate objectives of (i) ensuring a minimum level of living for the tribals (ii) upgrading of skills, education and providing a resource base so that they can plan, manage and utilize the resources available in their environs in a better way and improve their quality of life will be considered in the following chapter.

CHAPTER VI

RESUME AND RECOMMENDATIONS

Evaluation of Schemes Launched for the Improvement
of the Economic Conditions of the Tribals1. Forest Labour Cooperative Societies

The life of the tribals has been traditionally integrated with the forests. There was a disjunction in this when the British closed the forests, restricted the rights of the tribals and prohibited shifting cultivation. The tribals were reduced to forest labourers where the enforcement of the new regulations was strict. The forests were exploited by the government mainly through the agency of private contractors and the contractors used to exploit the tribal workers by employing them at very low wages. Since forest work was a major source of income to the tribals attempts were made after independence to improve the terms and conditions of work in the forest. It was decided to eliminate progressively the agency of forest labour contractor and to give a fair wage and a share in the profit to the forest labourers. The Forest Labourers Cooperative Societies (FLCS) were to take the responsibility of the work in forest exploitation. Coupes were allotted to FLC Societies at fixed prices and they were given financial assistance towards share capital. The number of FLC Societies recorded an increase during the 'fifties and early 'sixties and in 1976-77 there were 409 FLC Societies in Maharashtra with 59,294 members. In 1971-72 out of 1,861 coupes exploited 876 were exploited by the Societies, 664 by the forest contractors and the rest by the Forest Department.

In Chandrapur district there were 51 FLC Societies with 4,985 members in 1978-79. In Gadchiroli (East Chanda) and Allapalli and South Chanda there were 19 FLC Societies (Table 6.1).

Table 6.1 : Forest Labour Cooperative Societies in Gadchiroli and Sironcha Talukas

Forest Division	No. of FLC Societies	No. of members	No. of working societies	No. of coupes worked	No. of tribal members	No. of tribal members working in coupe operations
East Chanda	12	1339	12	42	821	694
Allapalli	4	511	3	3	365	111
South Chanda	3	144	1	1	44	28

In 1978-79 the total number of tribal members of the FLCs in Gadchiroli and Sironcha was 1230 as against about 45 thousand tribal families. Thus, a very small proportion of the tribals have joined the FLCs. As to the benefits derived, the various evaluation studies bring out the following problems: (1) There are a variety of organizational, structural, administrative and financial problems faced by the societies. They are plagued with malpractices and inefficiencies, e.g., bogus attendance, theft of material, false vouchers, extravagancy in coupe operation, making less than the stipulated payment to the labourers. (2) The financial position is unsatisfactory because of the delays in coupe operation and in the disposal of the material. (3) The coupes are often small in size, not conveniently located and hence not viable units to operate. (4) At times the coupes are given by the societies to contractors and the contractors usually operate as transport agents. (5) The quantum of employment generated and the earnings secured are small. (6) The societies are often dominated by the non-tribals.¹

¹ For details vide, Gare, G.M., Berari, D.T., Forest Labour Cooperative Societies in Maharashtra and Gujrat - Their Significance in Tribal Development, Tribal Research and Training Institute, Pune.

It is reported that the major achievement of the societies is the rationalization of wage rates.

2. Adivasi Cooperative Societies

During the 'seventies new programmes were introduced to protect and help the tribals. After the passing of the Maharashtra Tribal Economic Condition (Improvement) Act in 1976, certain special measures were taken. These prohibited the private money-lending business and trading in the specified agricultural commodities and forest products and provided for monopoly procurement of these products through government agency, extension of consumption finance to the tribals, supply of agricultural requisites, loans and consumption goods. A special agency - the Adivasi Cooperative Society (ACS) - was created and entrusted with these functions. The hope was that the provision of integrated credit-cum-marketing and other services through the ACS will free the tribals from the clutches of private trader-cum-money-lender and increase his earnings as the intermediary will be eliminated. An elaborate bureaucratic structure was created to replace the private intermediaries. However, a number of problems are inherent in the very structure of the new set up.

The ACS replaced the primary credit cooperative societies (PCCS) and it was expected that the problems earlier faced, viz., dominance of non-tribals in the PCCS, their inability to meet consumption needs, limited and inadequate financial resources and lack of qualified staff could be overcome after organizing ACS.

One ACS was to cover about 2500 households with 4 to 5 branches, each catering to about 500 families. The management committee elected from the members is in theory the executive organ of the ACS. The manager - a full-time paid officer appointed by the Tribal Commissioner is responsible for the administration of the society. The finance is

CHART 1 : Adivasi Cooperative Societies and Their Links

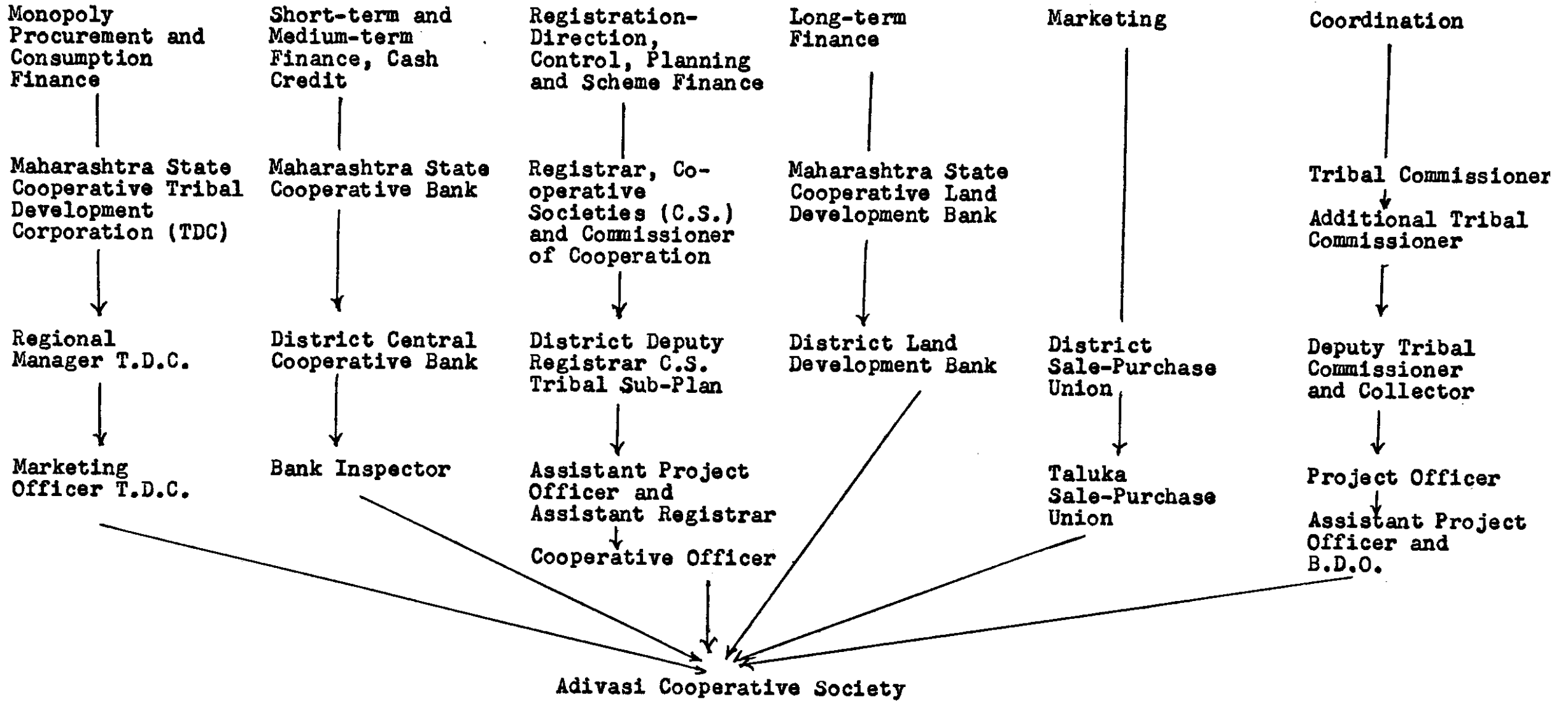
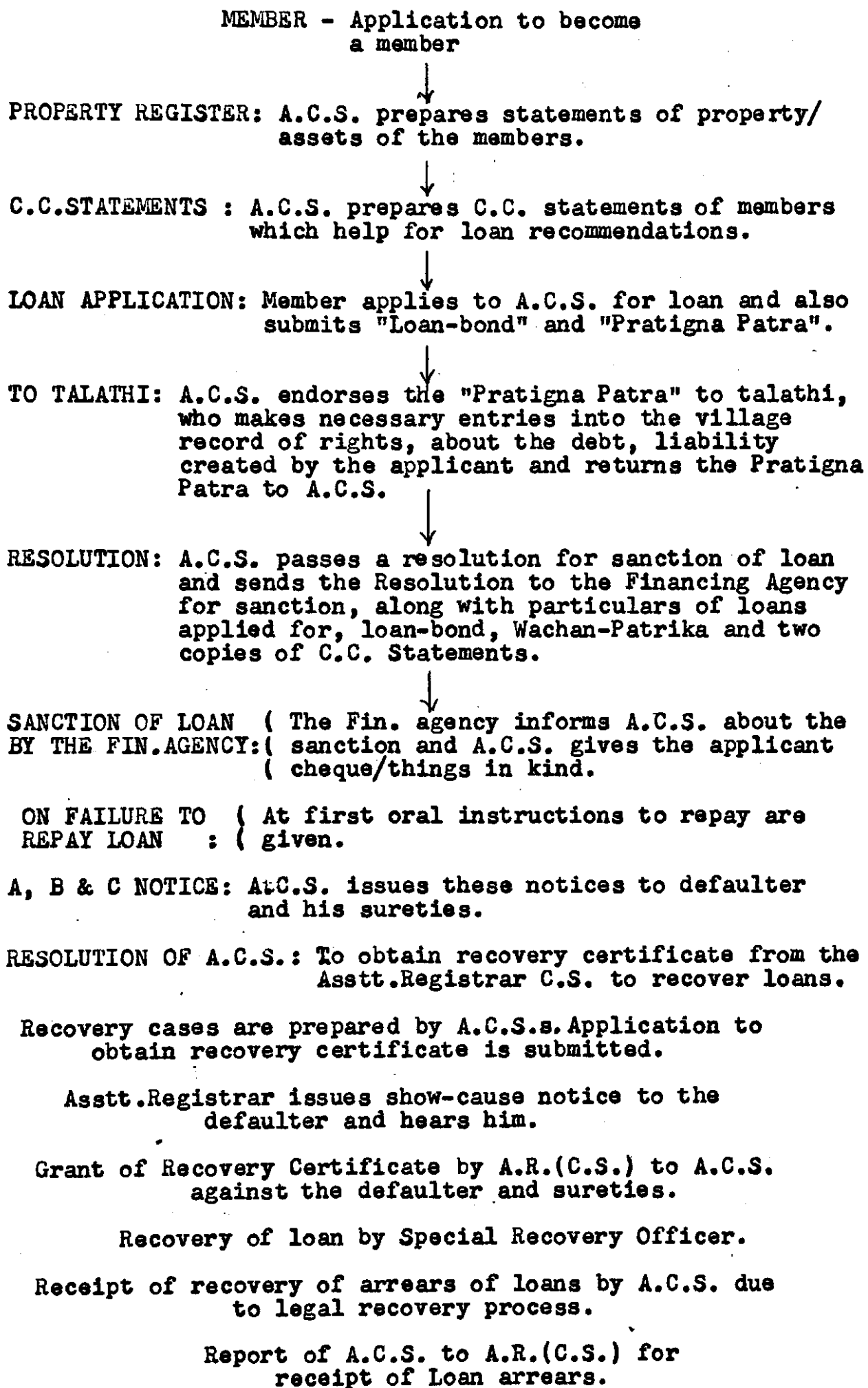


CHART 2 : Process of Sanction and Recovery of Loan



obtained through the District Central Cooperative Bank, Co-operative Department, District Land Development Bank, Tribal Development Corporation, District Sale Purchase Union for operating various schemes, viz., loan disbursement, scheme finance, monopoly procurement and consumption finance, marketing, etc. The process of sanction of loans and recovery of loan is quite elaborate. The society is expected to provide for all the services related with the productive activities as well as consumption needs of the tribals. The design is thus ambitious and naturally fraught with several difficulties.²

Consumption loan (Rs.100 to Rs.250 depending on the category) at the interest rate of 7.5 per cent per annum is given to meet the consumption need during the monsoon period (when work is lacking and the crop is yet to come in). To be successful it is essential that (i) the finance is given on time, (ii) the disbursements in kind include all the necessary articles in requisite amount, quality, and delivered on time, (iii) location of the disbursement centre is convenient, (iv) prices charged are not higher than the market prices, and weighing, etc., is properly done, (v) and the amount is adequate to meet the consumption needs of the entire lean period that extends over 4 to 5 months.

If the location of ACS is considered it is noted that in 1979 there are only 12 centres in Sironcha taluka and 16 in Gadchiroli (Table 6.2); these two talukas are vast in size, most of the villages are not connected by proper roads and there is no vehicular transport available. The service extended by ACS is therefore just not within the reach of many of the tribal villages. (See Maps V and VI.)

² For discussion on various problems see, Organisation and Development of Adivasi Cooperative Societies in Tribal Sub-Plan Area of Maharashtra - A Study, 1978-79, Tribal Research and Training Institute, Pune.

Table 6.2 : Adivasi Cooperative Societies in Gadchiroli and Sironcha Talukas (1979)

Taluka	Villages with ACS
Gadchiroli	Potegaon, Kurkheda, Malewada, Ramgad, Koradi, Murungaon, Rangi, Angara, Karwafa, Markanda (Pewa), Muranda, Regadi, Amgaon, Bori, Adyal, Delanwadi.
Sironcha	Sironcha, Assaralli, Bamani, Aheri, Kamalpur, Allapalli, Perimili, Etapalli, Gatta, Kasansoor, Bhamragad, Vitthalraopeta.

If the experience of the families who had access to the service is considered the following difficulties were faced. Because of the vast area to be covered and the lack of roads there are often considerable delays in stocks reaching the ACS and if there are some shortages, it is not possible to replenish the stocks, particularly during the rainy season. Because of the bureaucratic procedure involved in the purchases, there are delays in the supply of requisite commodities; it was reported that kerosene and edible oil are often out of stock. Besides there are the problems of malpractices at the grass-root level units. There were complaints about short weighment and high prices. The costs of operation of the ACS are high as the units are non-viable because of the small size of operation; and transport costs and other overheads are considerable. Hence the prices are at times even higher than the prices charged by the private trader who operates on low overheads and adjusts his margins as the traffic would bear. His knowledge of the type and kinds of goods needed by his clients is also better. He does not have to depend on a single agency e.g. the Sale Purchase Union for replenishing his stocks but can tap a variety of sources. ACS also find it difficult to carry the

requisite stocks because of inadequate godown facilities. Besides, the employees of the ACS are often inexperienced, reluctant to stay in the remote areas and not interested in the job. The lack of skilled personnel makes for mismanagement and losses. Apart from all the above organizational and management problems, the consumption loan given to the member is worked out on the basis of his repayment capacity and not related to his need. It is noted that the amount barely covers his consumption needs if most of the articles are to be purchased. The private money-lender, on the other hand, generally meets his essential needs against the security of his produce. The indebted tribal has usually to deliver over 50 per cent of his produce after the harvest to meet the debt obligations. Consequently he is forced to approach the money-lender for a fresh loan within a few months after the harvest, particularly if adequate wage-work is not available. Despite this debt-trap the tribal approaches the private merchants as he is not restrained by rules and regulations which are very rigid. As the amount of consumption loan is not adequate (even if assuming that the amount is given on time, in proper mix, etc.) it cannot possibly replace the private trader.

There is a provision for monopoly procurement of the agricultural and forest produce, so that the tribals get a fair return. Here again the problems of malpractices in weighing, pricing, etc., lapses in management and accounting, lack of adequate funds to make prompt payment and the like are faced. In addition, if the tribal continues to depend on the trader for the consumption finance he pledges his produce to the trader-cum-money-lender and though prohibited, he has to hand over the produce to the private trader.

The ACS is also expected to extend short and medium term loans to their members to help improve agricultural

productivity. However, the procedure for obtaining the loan is very lengthy and complicated and the tribals find it hard to cope up with it. If the ACS is not located within the walking distance he cannot afford to spend the time needed to fulfil the procedural formalities. Again ACS have problems of inadequacy of funds, inexperienced staff, malpractices and the problem of recovery of loan.

ACS run fair price shops, kirana shops, cloth shops. However the turnover is small and the units are not viable. The prices are often above the ruling prices in the bazars, and the shops are often not properly stocked. The sales are effected on a cash basis and not on credit. The problems of shortage of working capital, mismanagement and malpractices also come up. In short, the management is inept and the overhead costs are high. Even if on paper, all the services are to be provided in an integrated manner, in practice there is no effective integration as is achieved by the private trader.

In contrast, the private trader is ubiquitous, he is present even in the remote villages, he knows his client and strives to satisfy his needs; in the process he secures a good profit, this he ensures by integrating the various services. Goods are sold on credit. Loan is extended against the pledge of the produce which is collected on the spot after the harvest.

ACS extends consumption loan but there is no mechanism to recover the loan. In 1979 it was noted in a study³ that the recovery was about 6 per cent in Chandrapur district. Even though there is a provision of monopoly procurement there is no tie between the consumption loan and monopoly

3 A Survey Report on the Scheme of Consumption Finance, 1978-79 (Government of Maharashtra, Tribal Research and Training Institute, Pune) p. 41.

procurement. As the number of defaulting members increases, the number of beneficiaries will decline. In that case the tribals will have to resort again to the private trader for obtaining consumption loans.

The failure of the scheme is rooted in its basic approach viz. to replace one agency viz. private trader-cum-money-lender by a bureaucratic agency which also does not prove to be very effective in providing the requisite services. In fact, even if, the extension of loans and provision of the necessities of life are effectively organized so as to meet the immediate subsistence need of the family, this does not touch the basic problem, the problem of economic viability of the tribal occupations like agriculture. When the tribal lacks the basic resource the provision of supplementary inputs does not improve his earning capacity and his level of living.

The weakness of the tribals, like that of the scheduled castes and other asset-poor families lies in the fact that they do not have either the land or any other property on the basis of which they can take advantage of the various development schemes. In addition, as the schemes are market oriented, a number of basic infrastructural facilities are necessary for taking advantage of the same. It was noted that when the land is not well developed, advantage of better seeds could not be taken, or in the absence of the facilities for veterinary service and for collection of milk, distribution of milch cattle did not help. In the fisheries programme in Gadchiroli taluka it was experienced that because of the difficulties in delivery of the fish-seed on time due to the blockages of roads during the rainy season the programme could not take off. The supply of pumpsets without adequate service facilities resulted in disuse of the pumpsets within a short period; thus the resources were wasted.

3. Rehabilitation Programme for the Tribals

Even when the scheme attempted to strengthen the basic resource base of the tribal families, e.g., the scheme of rehabilitation of the tribal families who traditionally practised shifting cultivation a variety of problems cropped up.

The Rehabilitation Programme was taken up by the Social Welfare Department in 1959. As noted earlier during the period 1956-1965, land was allotted to about 150 families. About 10 acres of land was given to each tribal family, and in addition some provision for clearing up the land and for the purchase of bullocks, plough, seed, etc., was made. No systematic survey of the area and the tribals practising shifting cultivation was undertaken before establishing the colonies. The major problem faced when the tribals received the land was that the land had to be terraced, bunded, cleared of stones, etc., and brought under cultivation. This was impossible with a meagre sum of Rs.100 provided to improve the land. The tribals could not afford to put in their own labour and take up the work of improvement in the absence of any provision for their subsistence during that period. A demand was therefore voiced that the work of land development should be taken up under the Employment Guarantee Scheme, so that they are paid adequate wages for the work done. In the absence of any such provision the tribals could bring only a small portion of land under cultivation (2 to 4 acres).

The amount provided for the purchase of bullocks (Rs.300) being inadequate, bullocks of minor age, not fit for work were reportedly given to the tribals. In addition the cost of transportation of bullocks from the cattle market (which is located about 250 kilometres away) was also considerable. The lack of land development and adequate provision for proper tillage made for very low returns from

cultivation. Some of the families abandoned the colony and returned to the hills. The comparative returns secured by the tribals under shifting cultivation and settled agriculture were noted in a study.⁴

It was found that in Timewahi (shifting cultivation) each family cultivated about 10 acres of land and obtained a gross income of about Rs.700 while in Laheri (settled agriculture) only about 4 acres of land could be cultivated earning a gross income of about Rs.300. It was reported that the families were given patta order but the rights were not entered into the land records and subsequently the landowners could not obtain any loan against the land.

Limitations of Bureaucratic Planning

The limitations of the bureaucratic infrastructure created to meet the needs of the tribals and the Plans prepared at the Headquarters may be briefly summed up. Firstly, the average cash dealings of the tribals are so small that the overhead costs of the formal institutional structure prove to be exorbitant, be it credit institution, fair price shop, agricultural input supply depot. In addition the tribal settlements are small in size and scattered in location and many of the settlements are inaccessible. Subsequently the transport costs for the movement of a small quantum over a long distance turn out to be quite high. Secondly, the bureaucratic rules and procedures are highly formalized and do not permit consideration of the grass-root level problem so as to avoid, at least, obvious injustice. As noted in Buruk-Mallempalli, even though the electric pumpsets were inoperative, the minimum electricity charge was automatically levied; considerable time and money had

⁴ Report of the Evaluation of the Scheme of Rehabilitation of Shifting Cultivators in Chanda District, 1969,
Tribal Research Institute, Pune.

to be spent to clear-up the issue through the headquarters at Bombay, an issue which could have been easily handled at the local level but for the rigid application of the rules.

Thirdly, the approach tends to be segmentary, be it protective legislation or some development scheme. Even though some kind of integration is attempted on paper in the ACS scheme, it is not effective. When the total needs are not viewed as a whole, despite the plethora of programmes the scheme fail to deliver the goods. For example, there are schemes to support production of milk, vegetables, etc., which are to be marketed to get some cash income. There is a scheme to provide supplementary nutrition to the school children. These schemes entail high costs for transportation and service personnel, because the inputs are to be brought from outside or the output is to be marketed. Besides the cash earned, if any, through the sale of milk may not be used to buy food-items but spent to buy a drink. The supplementary food given to the school children may not be relished. If certain schemes do not show the expected results new schemes are added and at times even more funds are allocated without going into the reason why the tribals are not able to take advantage of the welfare or developmental schemes. So also a number of agencies are created to operate a variety of schemes without taking into account the basic problems of reaching the tribals. Local level participation and consultations with the people are not provided for; the schemes are by and large prepared at the headquarters and hence many errors and lacunae creep in. For example, in the resettlement scheme even the location of the colony was wrong as little consideration to the grass-root level conditions was given.

Wider Developmental Projects Affecting the Tribals

A Development Project which is designed not for the benefit of the tribals but for the generation of electricity and extension of irrigation but in which a number of tribal families (about 6,000) from Sironcha taluka will be uprooted is considered briefly as an illustration to indicate how the tribals get affected by different developmental projects.

The Inchampalli Irrigation Project

A joint major irrigation project of the three States of Madhya Pradesh, Andhra Pradesh and Maharashtra on the river Godawari, downstream of the confluence of Indravati with Godavari, near the village Inchampalli in Manthani Tahsil of Karimnagar district is being taken up. This project has a water spread area of 1008 sq.km. under which 148 villages will be submerged; so also extensive forest area from the Sironcha tahsil will be submerged. Sixtyone revenue villages and three forest villages from the Sironcha Tahsil fall within the area of submergence. The total population of these villages was 38,117 according to 1981 Census; of these 5,944 were tribals. Tribal population is found in 49 out of 64 affected villages. In 14 of these villages⁵ nearly all the inhabitants are tribals.

The gross area under submergence is 39,333 hectares in Sironcha Tahsil. Sironcha, the tahsil headquarters would be submerged, so also Ankisa and Asarali. The tract near Ankisa and Asarali is very fertile and valuable commercial crops like tobacco and chillis are grown in this area.

A survey of selected tribal villages in the area of submergence was carried out by the Tribal Research and

⁵ Viz., Todka, Birhadghat, Karjelli, Patagudam (FV), Pendelaya (FV), Raigudam (FV), Kottur (R), Somanpalli, Gollagudam, Somnur, Aipeta (R), Karaspalli (CH), Ramanpeta, Tamandala. (FV = Forest village; R = Raiyyatwari; CH = Clearance.)

Training Institute in 1982.⁶ The survey covered 26 villages with predominantly tribal population. The number of households in these villages was 685 with a total population of 3,333. Of the surveyed families, 591 families owned land. The main crops grown are paddy, jowar, maize, black gram, green gram, kultha and wal. Ninety-four families were landless who mainly work in the forest, collect forest produce, etc. The average monthly income of the surveyed families was Rs.212 per family.

The composition of the families was as follows:

Naikpod	Raj Gond	Madia Gond	Gond	Pardhan	Total
44	508	58	68	7	685

Due to submergence 560 hectares of irrigated land and 805 hectares of non-irrigated land will be lost. In addition, the loss of huts and houses will amount to about Rs.9.8 lakh and the loss of trees on the lands of tribals will come to Rs.3.8 lakh.

It is reported that in Sironcha taluka about 11,300 hectares of Reserved Forest, containing teak, bija, ain, anjan, khair, shivan, haldu, dhawada, tendu, mahua, char, behada and other miscellaneous species will be submerged. The loss in terms of timber, fuel-wood and bamboo is estimated at Rs.3372 lakh (SIP, p. 38). However, the loss of such extensive forest tract cannot be assessed only in terms of timber yield. Forest constitutes a biological community. The loss of forest will also mean a loss of abode to wild animals e.g. tiger, panther, bear, deer, bison, and small animals and birds. It also means that the ecological balance will be

6 See, Sociological Survey of the Area under Submergence under Joint Inchampalli Project in Sironcha Tahsil of Gadchiroli District of Maharashtra State, 1983, Government of Maharashtra, Tribal Research and Training Institute, Pune. (Referred to as SIP in the text.)

disturbed. However no study was taken up to evaluate the likely impact of such extensive deforestation when the project was formulated. The cost/benefit ratio of irrigation project appears favourable since all these real costs, the cost of forced displacement on the native inhabitants of the tract, and the cost due to ecological disturbances is not taken into account. It is important to consider these factors and if these are given the due weight the project may not remain viable or desirable. The implementation of the project will be a death-blow to the inhabitants, particularly the tribals. Not conversant with the acquisition proceedings they accept whatever cash compensation is paid. The cash gets spent in a short period and they are left without home, without land and are turned into paisaless refugees. They are thrown out from the membership of a small closed society, and find it difficult to adjust to the new world and to obtain even bare sustenance due to the lack of education, skills and assets. In view of these adverse socio-economic implications of the displacement of the tribal population and the need to preserve with at most care whatever forest wealth that is left in the country the area of submergence should be reduced and Sironcha taluka should be saved from submergence. Or else the 'so-called' development would be at the cost of the weaker sections - the tribals whose welfare is in theory on the priority list.

Exploitation of Natural Resources

Chandrapur district as noted earlier is rich in mineral and forest resources. The exploitation of these resources is being carried on without considering the implications for the local population particularly the tribals. When mining becomes a major economic activity, it implies development of a road network, establishment of related industrial activity and supporting trade and commerce. A

large number of migrants get attracted because of the fast tempo of the new activities. The level of technology, the skill requirement, the work routine is so different that the local population viz. the tribals are forced to occupy the lowest sub-stratum in the new job spectrum or are pushed to poorer eco-system, dislodged from their homes. If exploitation of the forest resources is the central activity as is presently the case in South Chandrapur, with Forest Development Corporation clearfelling in blocks the standing forests and resorting to teak plantation, it involves construction of forest roads, importation of outside labour for forest cutting operations; the tribals can at best work as wage labourers, and derive no other benefit. In fact they lose an important source of food, fuel-wood, housing material, etc., when the forest wealth near their village is destroyed. This is the price paid for the so-called "national good"! The indiscriminate exploitation of the natural resources begun by the British during the last century, is still continued as the basic requirement of the development planning as conceived today is to tap more and more regions for resource exploitation and bring these within the organized market economy.

Chandrapur Forests: The Chandrapur forests are a valuable resource which are significant not only for the State of Maharashtra, or the neighbouring States of Andhra Pradesh and Madhya Pradesh, but also for the entire nation. While this realization has been stated off and on and occasionally even certain measures have also been taken, the story of Chandrapur forests nevertheless remains a story of indiscriminate, wasteful exploitation and degradation. From the petty illicit felling on the one hand to large scale destruction for immediate gains in the commercial sector on the other, the issues of ignorance, inadequacy, complicity

and corruption are galore in the realm of forest operations. There are some structural reasons, some endemic to forestry, some related to its use and other to its spatial aspect which may help in explaining the plunder or utter neglect of this at once wealthy and beautiful resource.

One might begin by noting the three critical aspects which are involved: (a) the forest, (b) the tribals, living in/around these forests, and (c) the lack of infrastructure around forest regions (which to a large extent remains responsible for their survival in spite of all kind of predatory forces).

The question regarding the use of the forests needs to be examined in light of all these three aspects. But it is worth re-stating that in the entire country, the forests have disappeared at such a rapid rate, that whatever remains is not only extremely valuable in terms of yield but also as a fast appreciating wealth base.

Secondly, the tribal who has been quite often maligned as the enemy and destroyer of forests because of shifting cultivation and other practices, is potentially the only "natural" guardian of the forests. But in this connection the modus operandi of the tribal economy needs to be taken into account. As the tribals largely operate within the non-monetized economy their utilization of the forest and forest produce is mainly confined to their needs and sustenance. But once the monetized economy reaches upto the foot of the forest ranges, the same tribal is vulnerable to the unscrupulous use by the vested interests. He becomes an unwilling conduit through which the precious forest products find its way to the markets. He himself may still not get much out of such transactions but the pilferage in such situations assumes tremendous proportions. This brings him directly into conflict with the forest guard and other officials.

This boils down to a situation where the buyer of forest products wants maximum quantity to increase the profits (as the price which he pays is already ridiculously low); the forest official while minimizing leakages would hardly be indifferent in forgoing a steady flow of extra-revenue; the tribal requiring this product for the very survival of his life, is perennially caught in the crossfire of his own sustenance and the optimization of the other two.⁷

Lastly, the provision or absence of infrastructure has been a critical factor which may be described as being quite responsible in determining the survival of the forest. In fact, its absence has contributed towards whatever forest resources are left today. But that is not to say that that is the only way in which we can maintain our forest wealth. As opposed to this what is intended is that the provision of the infrastructure should be accompanied with other necessary measures which would be helpful in the maintenance and growth of forest yield and wealth. If these measures are not developed then there is the inherent danger of forests being wiped out. It is in relation to these three above-mentioned aspects that the question of forest must be viewed. Before getting into discussion of specific cases let us develop a taxonomic frame for the question at hand.

7 As Dhebar Commission Report put it, "The emphasis on realisation of maximum annual revenue placed in the 1952 policy increased the importance of the contractor. The contractors have become a source of uncontrolled exploitation for the tribals. The contractor has become a law unto himself. ... Innumerable complaints were made to us by the villagers that the contractors were preventing them from gathering tendu leaves from plants on their own land. In Vidharbha village the tribals complained that they used to get bamboos free up to a limit for their craft. They were now required to pay for them at prohibitive rate. ... The punitive machinery of the Forest department also work for the disposal of the contractor, for he can easily get those who oppose him 'framed' for alleged infringement of the forest rules". ... "They (the tribals) related how the contractors stray outside the contracted coupes, carry loads in trucks in excess of their authorised capacity and otherwise exploit both the forests and the tribals." (Dhebar, 1961, pp. 131-132.)

Forest Stock and Yield

(i) Forest is an economic wealth, like a stock, and at a given point in time has a certain value.

(ii) Forest yields a steady flow of yield which is some proportion of its stock value.

(iii) In addition to this there is an unpriced component of forest wealth and yield which does not enter into economic reckoning.

Forest Produce

- (a) Wood (Timber) - furniture, construction, etc.
- (b) Wood and Bamboo - Pulp for paper, strawboard, etc.
- (c) Grass, leaves, fruit, flowers, gum, lac
- (d) Fuel-wood, charcoal
- (e) Medicinal outputs
- (f) Bee-keeping/tussore silk making
- (g) Wildlife - Tourism.

(1) Looking at the listing of the products it will be noted that in the appropriation of products like grass, leaves, fruits, flowers, gum and lac, etc., i.e. forest yield, the stock value of the forest does not get reduced at all. It remains unaltered and consequently the unpriced contribution of the forests also continues to remain as before.

But another thing which probably needs to be kept in view is that if the value of yield is too low, then it may lead to "killing the goose itself". The process of disinvestment takes place in that situation. On the other hand if the value of yield is high, the maintenance of the forest wealth will be ensured far more enthusiastically. If for some reasons the disinvestment of resource (felling of forest in this case) takes place, the unpriced component of the wealth also disappears.

(2) If one takes the timber as the main product, and fells a certain proportion of it in a rotational manner, one

has a special case of multiple cropping where the cycle stretches upto 40-50 years rather than a solar year. In addition the questions of optimization and allocation efficiency also become extremely difficult to solve due to the complexities of a long term problem, particularly as these relate to the unpriced aspects of the problem. It is due to this reason that feasibility of long-term forest farming has not been demonstrated.

(3) So often forest clearing for other purposes is also seen as a productive endeavour. Such clearing not only eliminates yields for all time to come, but the wealth base, both priced and unpriced also vanishes with it. However, this enormous loss is usually not recognized. This kind of clearing is necessitated by resettlement/colonization, industries, mining, dam construction, etc. The proposed activities are meant to diversify the economic base so that greater employment and growth opportunities could be created. In the context of the tribals inhabiting the area, the selection of activities for the purposes of economic diversification may have to be constrained such that it generally matches with the skill availability of the region. However, since the activities like mining, dam construction are seldom governed by the local level considerations, the adverse implications for the local population are not taken into account. Consequently "There is feeling amongst the tribals that all the argument in support of preservation and development of forest are intended to refuse them their demand. They argue that when it is a question of industry, township, development work - all these valuable arguments are forgotten and vast tracts are placed at the disposal of outsiders who mercilessly destroy the forest wealth, with or without necessity." (Dhebar, 1961, p. 132.)

Forest Management: There are three kinds of approaches to forest management. First, dealing largely with yield (or the bureaucratic model of the Forest Department) second, dealing with forest farming (i.e. the FDC approach based on the Ford Foundation Report) and third, with forest diversification. As noted earlier, the first, though it professes to work on the model of sustained yield, is leading to progressive destruction of the forest resource. Firstly because a scientific basis for operating the model of sustained yield is lacking. Secondly and more importantly illicit commercial tree felling is rampant. In the second approach there is a pure and one time total destruction of the existing forest wealth. Both these are inflicting great deprivations on the tribal population as it involves loss of valuable trees and game in the forest. The third approach speaks of diversification. Certain kinds of forest resource-based activities e.g. tussore silk, mats and brushes, lac, tamarind seed, mahua seed processing, etc., are suggested. In addition dairying, goat-rearing and such other supplementary activities are included. It must be noted that the activities like a varieties of crafts are not expanding activities. While taking the approach of diversification the activities have to be so selected that there are definite developmental possibilities.

When the aim of planning is incorporation of larger and larger resources in the market economy to promote commercial/industrial profit the first two approaches get acceptance. However, if the aim is welfare of the poorer and weaker sections, the first two approaches are harmful and must be rejected and a new approach must be sought.

The Tribal Problem

The fact that the conditions of tribals are deteriorating due to ecological disequilibrium resulting in shortage

of food, deficiencies in diet, a variety of health problems and the inroads made by the outsiders have given rise to such problems as spread of new diseases like V.D., social disorganization, exploitation by trader-moneylender and the like is long acknowledged. It is also recognized that when a weak group gets integrated into the market economy, it is the stronger group that benefits at the cost of the weaker group; attempts are therefore made to protect the tribals from the trader-moneylender and other outside exploiters. However, the machinery to protect the tribal is provided in the form of bureaucratic apparatus; the limitation of this apparatus have been noted in the earlier section. Secondly, the problem is not attacked at its root-cause. It is not examined whether the tribals have adequate the productive resource to meet his basic requirements. Any development exercise must begin with this basic question. However, all the plan documents formulate a variety of schemes without examining whether the tribals have the wherewithal to benefit from the schemes. In the formulation of these schemes several assumptions viz. the availability of basic infra-structural facilities, basic skills and education among the beneficiaries, factor mobility, etc., are implicit. When the schemes fail, stress is put on the urgency to improve the infrastructure, to impart education, etc., without examining the factors that are inherent in the market economy itself and that operate against the weaker sections under the conditions of extremely unequal asset distribution. In view of the above factors a process of gradual assimilation has to be involved, a process which will strengthen the bargaining/ assertive power of the tribals. It is important to see that the process of assimilation is guided and well-planned, such that it will strengthen the asset base, education and skills of the tribals so that their incorporation in the wider

economy does not work totally to their disadvantage as is the case today. If the nation has to direct its development efforts for effecting improvement in the life of its people it is necessary to take into account the existing level of development, the factor endowments and needs and aspirations of the people and not get dictated by the international market forces. The development strategy and technology imposed from outside on a weaker partner like India is leaving the economy riddled with acute problems of growing inequality, unemployment, poverty and unrest. Similarly with the onslaught of market forces in the form of increasing activities like mining, clear-felling of forests, etc., the tribals are getting pushed to the lowest socio-economic rung. It is, therefore, necessary to build an adequate base - economic, social, political, cultural - through special efforts to facilitate transition.

PART II

Suggested Approach for Tribal Development

To initiate the process of economic development that will be of direct benefit to the tribals, it is essential to strengthen their economic base. To achieve this the basic necessary steps are:

- (i) to augment their productive assets,
- (ii) to improve their existing skill and knowledge base and to impart new education and skills,
- (iii) to protect them in the intermediate period from the outside forces through some positive measures e.g. assured supply of necessary goods that cannot be produced locally and prohibitive measures e.g. not to open up the area quickly for commercial/industrial exploitation.

Productive Base

Compared to the other parts of Maharashtra, the tribals in Chandrapur are in a fortunate position; the man-land ratio is not high and the forest resources are not yet destroyed. The tribal population of Gadchiroli and Sironcha talukas is about 2.5 lakh (1981) and the area of these two talukas is 15 thousand sq.km; of this over 10 thousand sq.km. area is under forests.

The immediate aim of planning should be to attain as much self-sufficiency in the basic requirements of the tribals as possible. In the pre-British period the tribals were able to obtain most of their daily necessities from their immediate environs; their dependency on outside products has increased over time because of two factors: (i) restrictions on their resource base e.g. prohibition on shifting cultivation, home-brewn liquor, hunting rights, etc., and destruction of the forest resource base that provided them with fruit, game, etc., because of commercial exploitation of the forests (ii) Introduction of new items of clothing, trinkets, country liquor, etc., as a result of the increased contact with the outside world.

Agricultural Land: It is necessary to have a land-holding of 2 hectares to meet the foodgrains requirements of an average-size family.⁸ If the distribution of the families by land-holding is examined it is observed that the land-holding is inadequate in about 40 per cent of the families. If there is a possibility of developing irrigation facilities through traditional forms e.g. bodi, bund, tank it should developed. Schemes like irrigation wells fitted with pumpsets, etc., should not be introduced at the early stage of

⁸ A family of five persons requires about 9 quintals of cereals and one quintal of pulses per annum. The average yield was noted to be 5 quintals per hectare.

development i.e. in the absence of proper service facilities. Attempts should be made to work out the possibility of growing a variety of tubers, yams, tapioca and other deep-rooted plants that can supplement the daily diet and which can be grown in the sparsely covered forest tract; this will help reduce the area that need to be put under plough cultivation. If on an average 2 hectares of land are to be made available to each family it will mean that about 20 thousand hectares of additional land will have to be distributed among the tribal families. At present the Forest Development Corporation is clear-felling good forests at the rate of 4,000 hectares per year and the target in Chandrapur district is 185 thousand hectares. Thus, a relatively small area would meet the needs of the tribal population. Besides this would be taken mainly from the protected forest area where the tree-cover is already sparse and not from the best quality reserved forest area as is being done by the FDC. Moreover, if the tribals are not given the land necessary for their sustenance they have to resort to forcible occupation of land. However, since they do not have the means and the manpower to develop the land the yield remains low. Thus, the land occupied is not put to the optimum use and the tribal remains under-nourished despite all the labour he puts in. Instead of such a wasteful use of the natural resource and the human labour it is best that the Government makes the land available to the tribal in a developed form.

Forest: Reforestation of the lands where tree-cover is lost due to commercial exploitation and afforestation of waste lands should be organized by the Forest Department in cooperation with the tribals. The scheme should be so drawn that the tribals can maintain adequate number of livestock to meet their household requirements for milk, egg, meat; for this fodder trees and pasture lands will have to be provided.

It is also necessary to ensure adequate supply of fuel-wood, bamboo and other timber needed by the tribals. Trees like mahua, char, temru, palms, specially valued by the tribals must also find a place in the scheme. The variety of uses of different trees as reported by the tribals are indicated in Table 6.3. It is necessary to plan for the preservation and regrowth of the trees valued by the tribals. Special research efforts must be put in to work out the appropriate methods of propagation of these trees, the proper mix of trees, shrubs, climbers, etc., under different local conditions. The tribals can work during the lean period in the reforestation work and they should be given responsibility for the nurture and protection of these reforested areas.

Table 6.3 : Important Trees in Chandrapur District Valued by the Local Population

Timber for implements	- Khair, Dhawda
Timber for house construction	- Khair, Garradi, Bija, Rohan, Surya, Bilwa, Shivan
Roofing material	- Tad, Shindi, Palas
Cattle-fodder	- Ain, Bija, Arjun, Dhawda, Palas
Fruit/Flower	- Mahua, Tad, Tendu, Char, Avala, Jambhool, Mango, Chinch, Bor, Kavath, kusum, Lasora, Sitaphal
Seed	- Mahua, Neem, Sal, Bamboo, Kusum
Gum	- Ain, Khair, Dhawada, Char, Bija, Dikemali
Tan	- Dhawda, Rohan, Ain
Resin	- Salai, Sal, Dhawada
Lac	- Palas, Khair, Kusum
Medicinal	- Hirda, Behada, Avala, Bel, Kuda, Biba
Liquor	- Mahua, Tad, Shindi
Mats/Baskets	- Shindi, Bamboo
Catechu	- Khair
Bidi leaves	- Tendu

In return, they should have the right of free access to the forest area for obtaining all the necessities of life and the collection of minor forest produce. A village level committee or panchayat of the tribals should be formed to oversee the work of protection of the reforested area, collection of the forest produce from the same and its distribution among the tribal families. The social cohesion and cooperative ethos among the tribal community will find a new basis if the work of organization and operation of the forest areas is entrusted to the tribals.

Exploitation of timber, bamboo on a selective basis may be carried out only by the Forest Department and such rights should not be sold to the private parties e.g. industries or contractor. Clear-felling of forest should be totally prohibited. Consequently the quantum of forest work will not be very large. Local labour can partly help in the forest exploitation and if necessary outside labour can be brought in temporarily for special work like bamboo cutting. Transport of forest produce by motor vehicle should not be permitted, except for the departmental vehicles. This will help control the illicit felling activity. It is important to provide for a Forest Conservation Committee in each range (where forest exploitation is to take place) consisting of the tribal and non-tribal representatives from the villages in the vicinity, forest officials and knowledgeable citizens to ensure that indiscriminate or illicit exploitation does not take place.

It should be possible to develop forest resource-based activities on the basis of the present skill and knowledge base of the tribals and to improve upon it gradually. With this view, small plots may be allotted for agro-silvicultural work where intensive forestry work may be

taken up by the tribals with guidance and research inputs being provided by the Forest Department. The choice of plants should be governed by the potential industrial uses particularly as feed stock for chemical production, polymers and fibres (rubber and other latex), medicinal preparations, etc. It is essential to carry out pilot studies to explore chemical conversions of biomass that can be worked on (a) a small scale (b) at the local level and which can open up new developmental vistas. The tribals can be introduced first to the techniques and skills demanded by intensive forestry and the younger generation can master the skills needed in the processing industry so that they do not remain mere wood cutters, but become skilled workers.

Once the tribals are viewed as the custodians of the forest wealth and all the commercial elements are eliminated, conservation and development of the forest resources will not be a problem. The tribals will benefit from the wealth of forest produce e.g. fruit, nut, flower, seed, leaves and the policy should be to use the produce and not the stock. The collection of oilseeds, tendu leaves, resins, gums, dyes, tan-bark, etc., can provide them with a small cash income. Processing of a variety of plant materials on a small scale at the local level for further industrial uses can make for some increase in the incomes of the tribals.

It is also important to minimize waste in forest exploitation through the use of proper tools and equipment and put all the residue to appropriate use. Special efforts to explore methods for increasing the durability of forest products (e.g. timber against pest and decay, grass against decay, fire, etc.) and improvements in equipment consuming the forest produce (e.g. saving of firewood through improved chula, better design for fence so that less material will be

needed) will also effect savings in the forest material used and the labour hours spent for the collection of the material.

Livestock: Livestock also serves as an additional source of income to the tribals in a variety of ways e.g. (i) supply of working cattle, (ii) meat/mutton/eggs for home consumption, (iii) young calves, pigs, etc., for sale. It was noted that out of the new litter of say 7 to 8 pigs half would be sold and half retained; a sale of 4 piglets gave an income of about Rs.200 or sale of 2 goats (one to two year old) yielded Rs.200. The sale is effected locally. On the basis of improved fodder resources e.g. leaves, pods, straw, etc., and regulated grazing facility in the forest the livestock production can be increased. However, the aim should be to augment home consumption and sales should be confined only to the local market and not cater to some distant market. Similarly, fish production can be increased for local consumption.

Commodity Component: The cash income will be obtained mainly through the sale of forest produce and the forest-based work. However, since all the basic food requirements, liquor, housing, fuel-wood would be satisfied fully on the basis of strengthened agriculture/livestock/forest resource base, the cash needs will not be considerable in the initial stages. In the meantime, advancement in education and skills and its use/application in agro-silviculture, processing/conversion industries should make for a steady increase in the cash income so that newer needs viz. educational, consumer durables, etc., can be satisfied.

In relation to the items that the tribals buy in the market, it is necessary to examine the implications of certain shifts from the traditional mode. For example, consider the shift to the purchase of country liquor. Actually the liquor

extracted from mahua flowers, from palm trees can better satisfy their needs. Hence the policy should be to permit the home-brewn liquor and restrict the sale of country liquor.

Clothing is another item, where the demand pattern is changing and cash needs are increasing. In the coming years the influence of urban culture might lead to a shift to synthetic fibre or unsuitable dresses - which are expensive to buy and maintain and also not comfortable. Ways to design clothing which is convenient in the work-life and comfortable to wear in view of the climatic conditions must be explored and blind imitation avoided.

If housing is considered it is noted that in the traditional method grass, palm leaves and mud are used for roofing and the house remains warm in winter and does not get too hot in summer (unlike the structure with tin roof or cement concrete slab) but the problems of upkeep are considerable. The houses have to be thatched and repaired every year, the floor smeared with cowdung every day, there are fire hazards, etc. However, these problems can be overcome with marginal improvements and innovations, e.g. use of smokeless chula (that can be indigenously made), make the material used for thatching fire-resistance by simple chemical treatment, etc.

Special attention should be given to the problems of improving the durability and quality of the local material used for housing and also the designing of storages, community hall, etc., using the local materials. The outside inputs in the form of specific processing and appropriate designing can help improve the facility without increasing the dependence on outside resources and the monetary costs.

Village as a Unit of Planning: Instead of approaching the problem schemewise, a scheme for animal husbandry, for fishery, for transport, for gobar gas plant, for nutrition

of school children, etc., the problem should be approached villagewise. The resource base of the village and the families has to be first examined and strengthened mainly through the development of land, reforestation and closure of forests to the outsiders. The development work will not involve much inputs from outside but can be completed mainly with the help of the local labour.

Special Provisions for the Interim Period: It will take some years to develop the resource base of the tribals. It is therefore essential to make a special provision for the supply of the basic necessities viz. cereals and pulses, oil, gur at subsidized rate for the interim period. It is urgent that the tribals get adequate and nutritional food and attain a minimum health status. Then alone will it be possible for them to put in sustained effort. This will also help build confidence, as the benefit will be direct and immediate. The approach today is to extract work and then give them wages which are also not adequate. In view of the age-old neglect, low vitality, undernourishment⁹ of the tribals the supply of foodgrains in the initial stages should be viewed as the essential building block. The government has accepted the responsibility of providing education, health services, etc., but the fundamental responsibility of providing for the proper physical and mental growth of the

⁹ In a study of Health and Nutritional Status of the Madia Gonds carried out in Etapalli Block (Sironcha Taluka) it was noted that the average per capita consumption of different food items was as follows:

	Cereals	Pulses	Roots	Vegetables
Grams per day	350	10	3	7

The per capita calorific value of the diet came to 1385 and the consumption of protein was 44 grams per day. It was noted that out of 222 children covered in the study 181 children suffered from calorie deficiency, calcium, vitamin A and protein deficiency. (For details see, G.M. Gare, "Health and Nutritional Status of Madia Gonds," in Tribal Research Bulletin, Vol. II, No. II, March 1980, pp. 12-15.)

individual is not accepted. When the individual thus remains weak and feeble for want of adequate food from childhood, all the expenditure showered for the supplementary services is of little benefit. It is high time that this basic issue is attended to urgently. The supply of food-grains should continue till the resource base for the provision of the basic necessities of life is well-developed. In addition, the wages in the forest-related work should be raised so that the basic cash needs could be met. The wage level was noted to be around Rs.3 per day in the forest work. If the case of tendu leaf collection is taken, the gross revenue obtained by the Government from Chandrapur circle was Rs.2.6 crore in 1976-77 and the net revenue amounted to Rs.1.4 crore. About Rs.90 lakh were paid for the work of collection of tendu leaves. There is, thus, a definite margin for the increase in the share of the labour even at the present price at which the leaves are sold. The question of upward revision of the price must also be investigated.

The long-term plan should be so worked out that over a period of years, as the labour force increases, there should be a possibility of moving from extensive agriculture to intensive agriculture and extensive forestry to intensive forestry in part of the forest land near the village, but not to introduce modern machines and methods at once. It is also important to go in for local level trials and experimentation before introducing new methods to improve productivity in agriculture, agro-silviculture and in forestry. The emphasis should be on obtaining multiple products on a sustained basis rather than a single product, with a long maturity period.

Plan Implementation

Appropriate organizational support will have to be built up so as to effectively implement the tasks like (i) development and distribution of agricultural land, (ii)

forest redevelopment work and, (iii) supply of requisite inputs and consumer goods. For a variety of reasons noted above the government machinery cannot serve as the implementing agency. A new approach to the recruitment and organization of the implementing agency is called for. A special cadre, recruited both from the local tribals and non-tribals and the outside personnel, specifically interested in working in the tribal area will have to be created. They should work within the tribal area and take up the responsibility of multifarious functions in relation to the implementation of the village-level plan. They should be given appropriate training so as to learn the tribal languages, know in detail the economic cycle and work pattern of the tribals, understand the nuances of their social and cultural life, the working of social organizations like youth organization, tribal panchayat, methods of communication, the tribal environment, values, attitudes and aspirations. They should thus acquire a background that would help understand the problems faced by the tribals and establish good rapport with them, so that in formulating the programme a constant dialogue with the tribals will be maintained and thought will be given to, how best to use the specificity of the tribal society e.g. some forms of cooperation and social cohesion, harmony between work life and festivity-play, egalitarianism. The cadre will have to approach the specialist in agronomy, fishery, forestry, etc., as and when a specific problem is to be handled.

A team of special cadre will have to be stationed at a central village to cater to the needs of a cluster of villages. They will organize the work of land development, reforestation and other local resource developmental works. They will have to work in cooperation with the village-level committee of tribals for the management of local resources,

particularly the forest resources.

The village level team should be responsible for the collection of marketable forest produce and agricultural produce; so also arrangements to deliver the consumer goods against these products should be made through the team. Till the roads are developed mobile unit of pack of animals or bullock-carts can be used to collect the produce from the villages and to deliver the supplies to the villages from the central storages. The local population can take up the transportation work; the bullock-carts, if necessary, being provided through the central unit. The central unit will have to have credit links with the District Bank, but be free to operate either through the Sale-Purchase Union or in the market both for the purpose of sales and purchases. The marketable produce like foodgrains if locally obtained will have to be stored mainly at the village level itself for using it during the lean season as kind wages for the local workers. Similarly arrangements for storage of edible oil, gur, kerosene, etc., will have to be made at the village level. Since a large number of villages are rendered inaccessible during the rainy season, adequate storage facility and supply of essentials has to be effected on a priority basis. The cash transactions would be minimal in the initial period and the emphasis will be on self-sufficiency and provision of the other requisites in the form of kind wages or kind exchange.

Roads: Lack of a road network is considered today to be the major problem in the development of the tribal region. This would be true if the aim is commercial exploitation of the forests. However, if the aim of planning is to meet the basic needs of the local population, this deficiency can be made up in a stage-by-stage development of the roads, and in

the meantime certain special measures e.g. provision of godown facility, mobile units, and use of bullock-cart transport will have to be taken to meet the situation.

It is not advisable to take up huge road construction programme for a variety of reasons. The region is sparsely populated and the population is largely poor. Consequently the demand for the movement of consumer goods as well as marketable surplus is very limited, so also the passenger traffic. The utilization of road network will be very low and the huge investments made will not pay. Even the maintenance of the roads will be quite an expensive proposition. Moreover, forest exploitation is likely to be the main economic activity if the region is opened up fast. As stated earlier, it is in fact necessary to restrict, at present, the commercial exploitation of forest, rather than extend it. Otherwise the outside vested interests will take advantage of the economic potential of the region at the cost of the local population. Thus, in order to protect the forest resource and the local population it seems advisable not to develop extensive motorable road network in the immediate future. The road network should be developed keeping in view the needs of the local population, and to see that the weakest group in the remotest area is reached rather than keep the benefit of road development confined to the narrow strip along the motorable road. Instead of investing on motorable roads in a big way it would be better to subsidize on the transport cost to deliver the essential supplies to the remote villages; since the numbers to be reached are small and the needs limited, transport subsidy is likely to be less than the cost of road maintenance.

Network of Nodal Centres: The tribal villages are very small in size. Only the villages near the main road are somewhat larger. When the population of several clusters

of villages was examined, it was noted that within a radius of about 5 km. there lie about 14 to 20 villages with a total population varying between 2,500 and 4,000. A cluster of about 15 to 20 can be treated as a unit for planning purposes. These will have to be linked up to a conveniently located central village where upgrading of facilities will have to be planned. In Gadchiroli taluka there will be about 50 to 60 clusters and in Sironcha taluka 35 to 40 clusters.

The central village will have to be provided with facilities like a primary school with residential accommodation, secondary school, post office, mobile veterinary service and medical service, dispensary and storage facility for consumer goods and agricultural and other inputs, and provision for the credit supply.

For a group of 6 clusters or 20,000 population a town centre with following facilities needs to be developed. (a) High school with residential facility and technical training facility. (b) Veterinary aid centre. (c) Health centre. (d) Central godown for agricultural and forest produce. (e) Agriculture, fishery, forestry related services, training and extension centre. (f) Cooperative bank. (g) Post and telegraph office.

In the predominantly tribal areas of Gadchiroli 9 to 10 town centres and in Sironcha 6 town centres need to be developed.

Special efforts may be made to develop fairs at suitable season at the central villages to meet the other than the routine needs of the tribal population. Special health camps can also be organized or educational programmes arranged at the time of the fair.

The road network should be so developed that the central villages are communicated by all-weather road (even if a cart road) and the town centres on which the central villages will depend for certain special services are on a motorable road. To link the villages in the cluster to the central village, it is necessary to provide for cycle tracks and make these accessible even during the rainy season. This would involve several nala crossings. However, since the construction of a permanent bridge is highly expensive, arrangements for floating bridge can be made for nalla crossings. The cycle vehicle with arrangements to transport a small load or one individual (in case of sickness, disability, old age, etc.) can take care of the urgent needs of the village population. The basic services needed by the villagers are (i) arrangements for the treatment of the sick, (ii) child delivery in case of difficulty, and (iii) certain consumer articles. These will have to be provided for through the central village, all the year round.

Education: The problem of education is equally complex. Today it is impossible to run a formal school in most of the villages in Sironcha taluka because the villages are in such remote areas that the teachers are not willing to stay there, the children cannot reach the school during the rainy season and the formal education imparted is of little relevance to the tribals. For the tribals living near bigger villages like Aheri, Ankisa, etc., formal education is of some significance since there is a possibility of completing the secondary education and then try to enter the job market. Mere completion of primary education is of little use as primary education is designed as a first step towards secondary education and is almost of no value so far as the job market is considered. In addition, the incidence of relapse into illiteracy is high due to the lack of contact

with the literate world. The present approach of segregating the population into age classes and starting from the primary education does not seem appropriate for the remote tribal villages. In fact, some kind of informal education can be organized in the tribal villages with the help of the local educated youth - tribal or non-tribal. The educated youth will have to be given a special training for organizing the informal educational programme. This can consist of upgrading the existing knowledge of the immediate environs viz. the flora and fauna, agriculture, animal husbandry and fishery and other traditional skills, and new skills like counting and mensuration, etc.; this will have to be imparted in the local language. The non-working children will join it when they are free during the day and the working adults in the evening. The classes can be closed during the busy seasons of harvesting, festivals and fairs, etc. If it is desired to learn Marathi a special class can be conducted and the standard books can be followed when the language is learnt. At the end of 3 to 4 years, the pupil if he/she so desires can appear for a primary school examination and join a secondary school. Formal primary schools should be organized only at the central villages and high schools at the town centres. At the grass-root level the informal arrangement will help create interest in education and impart some useful skills and knowledge and this could be organized with the help of one/two educated local youth who should be paid for this service an adequate salary through the government.

Health: As regards health the major problems are (i) lack of adequate land/cash income so as to get a nourishing diet, (ii) lack of proper drinking water facility, (iii) lack of immunization service for children, (iv) lack of medical aid in the case of sickness.

The first problem is the basic problem and it can be met effectively only if the resource base of the tribals is strengthened and special arrangements for the provision of essential food items is made for the interim period. Provision of safe drinking water to a large number of small hamlets is fraught with many difficulties. The approach so far has been to construct a well. Again flexibility in approach is necessary. In certain parts of the district viz. Bhamaragad the iron content is very high and the water is not potable; special measures are necessary in this area. The lime content is high in some areas (Allapalli). Wherever natural water sources are available, the use of water with some protective measures will have to be considered.

The immunization service can be extended through mobile units. It is necessary to visit the villages during the fair weather season when all the villages are accessible and immunize the eligible children. The health service for the sick and safe child delivery in case of complexities has to be available all the year round. As indicated earlier if all season cycle-tract is extended to the group of villages from the central village and if this service is available at the central villages all the cases of emergency can be attended to.

It must be noted that the Government service, even if accessible, is found to be expensive and at times ineffective by the people (due to inefficient or careless medical personnel and lack of proper medication due to shortages, etc.). It is important to make special provisions for extending the health service to the remote tribal areas. The career-oriented medical personnel is not likely to be interested in working in these remote areas. It is necessary to create, through special selection, a cadre motivated to work in these areas, if the service is to be effective and acceptable to the tribals.

Once the confidence is secured, the tribals shift (as is noted in the case of health service at Hemalkasa) from the traditional pujari to the modern health service. The medical aid will have to be organized with the community as the focus. For the cluster of 15 to 20 villages two community health workers - one male and one female - will have to be provided. They will have to be given training regarding immunization, nutrition, protected water supply, sanitation and hygiene, treatment of simple ailments and care of pregnant mothers and children and normal child delivery. The workers should be given 3 months formal training and 3 months in-service training and should be able to do symptomatic diagnosis and dispense simple drugs and suggest remedies for worm infestation, digestive disorders, fever, malaria, scabies, etc. The community health worker would cover about 15 villages which will mean, a visit to every village twice a month.

The workers should discuss with the villagers the traditional practices, the basis for various taboos and the rationale of the new approach. It is important that they pay special attention to immunization and nutrition of small children. The health workers can also help improve the diet on the basis forest resources, introduction of a few new crops and use of other local resources e.g. fish and game. If they help in the improvement of diet and the drinking water supply and sanitation-hygiene the incidence of sickness will be considerably reduced.

In addition a mobile team of a nurse and a paramedical worker should be provided for a group of 4 clusters. They should tour round the cluster during the fair weather season and examine chronic cases of illness (tuberculosis, leprosy, malaria), examine pregnant women and young children's progress. The team can also be approached in case of emergency.

Summary of Recommendations(A) Forests and the Tribals

1. The operations of the Forest Development Corporation of clear-felling blocks of forests should be stopped forthwith.
2. The Forest Department should thoroughly evaluate its own policy. The aim of forest management should be altered from profit making to conservation, restoration and augmentation of forest resources and in deciding the perspective for future development proper consideration should be given to the end-use of the forest products, social priorities therein and the needs of the local population. As forests affect the soil quality, water flow, agricultural productivity, etc., the planning should be governed keeping in view all these aspects. The Forest Department should devote their energies to research and prepare a development plan on the basis of scientific information rather than be engrossed in forest management for profit making.
3. The present methods of forest exploitation viz. contracts to private merchants and leases to paper mills be reviewed. A shift from these private operations to conservation and development of the forests through active participation of the local population, tribal and non-tribal, in planning, management and exploitation of the forests with guidance and research inputs being provided by the Forest Department is essential.
4. Tribals should be considered as the partners in the conservation and development of forest resources. They should be given developed land necessary for cultivation to meet their foodgrains requirements and land for reforestation to ensure establishment of the trees they value viz. mahua, tendu, shindi, khair, tad, dhawda, bija, bamboo, etc.

5. By stages a move from extensive to intensive forestry may be taken. Again the choice of species must be made in view of the social needs and the potential of the trees selected, to provide a basis for a variety of advanced processes, so that in the long-run a move from simple collection and processing to modern processes is made on the basis of forest wealth. The stress should be on selecting species that yield valuable products that can be harvested for a number of years rather than on one time felling and a very long waiting period till the tree matures. As the tribals acquire new skills needed to work in the new industries (chemical etc.), where the value added per unit will be high, their earnings will increase considerably.

(B) Infrastructural Requirements

1. Special provisions will have to be made for the interim period i.e. till the asset developmental work is completed and the output from the same is available to the tribals to improve, in the first instance, the nutrition and health status of the tribals. Each family must be provided with adequate cereals, pulses and oil, gur ration at subsidized price so that the present malnourishment is ended. This could be supplemented by the tribals by fruits, nuts, fish and some game obtained from the forests.

2. The native skills of the tribals should be used in the development of forests, fishery and the processing of the forest produce. Arrangements to impart literacy in Marathi and the new skills necessary for the projected chemical and other industries in region will have to be made. Emphasis should not be given to remaining within the orbit of traditional skills and crafts (e.g. lac, tussore, mats, brooms making, etc.) but new and modern avenues must be explored.

3. The present target-group-oriented, schemewise approach should be changed. The village settlements should

be taken as the unit of planning. The plan should encompass the forests, water and land, livestock and fish i.e. all the local resources. A comprehensive plan of development should be prepared keeping in view optimum utilization of the local resources to meet the basic needs of the people and the availability of local workforce. The local population must be provided with year round employment; and the works should not entail large-scale in-migration of outside workers.

4. The inputs from outside should be mainly in terms of research and design inputs so that it will help improve the houses using the local material, the diet using the forest produce, the income on the basis of new forest development techniques or modern processes, etc.

5. In the immediate future the attempt should be made to produce and provide for as much of the basic necessities of life as possible on the basis of local resources. The responsibility of providing the essentials e.g. foodgrains, oil, kerosene, match box, etc., that cannot be produced locally must be taken by the government. Till the time the tribals are quite weak in their production base and educational and information base the links with the market should be kept minimal. When this base improves through planned efforts over, say the period of next ten years, then the exchange component can increase.

6. For the supply of basic necessities and essential services the present bureaucratic machinery has proved to be inappropriate. It is therefore suggested that a new cadre which includes both the tribals and non-tribals specifically interested in the work be created and associated with the implementation of the plans to be prepared in consultation with the local people and for the village as a whole. The experts and specialists from the Government, research institutions, etc., can help/advise in relation to specific problems.

7. For the smooth flow of goods and services a three-tier network of centres - e.g. village, central village and town to be connected with appropriate roads and communications systems is suggested. The region should not be opened up too fast; large investments should not get locked up in road works. The development of road network should keep pace with the progress in the other sectors.

8. Informal educational programme and a three-tier health service should be developed to meet the immediate needs of the tribals.

Socio-Economic Survey of Tribal Families in
Chandrapur District (1979)

Name of the village Taluka

I. S. No.

Name (Head of the Family)

Caste

Place of Origin

Who out-migrated from the place of origin

Year of migration

Reasons for migration

II. Family members

1)

S. No.	Name	Relation	Sex	Age	Education	Main Occupation	Subsidiary Occupations

1.

2.

3.

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2) Changes in occupation, if any

3) If children are not enrolled in the School, reasons for the same

4) Information about children who have died:

	1	2	3	4
Sex				
Age				
Cause of death				

5) Information about the children living away from the family

	1	2	3	4
Sex				
Place				
Since when living away				
Reason				

III. Economic Activity

1) No. of days of work

	Season					
	Rainy		Winter		Summer	
	M	F	M	F	M	F
Cultivation of own land	1					
	2					
	3					
Agricultural labour work	1					
	2					
	3					
Wage work in Forest	1					
	2					
	3					
Other Labour work	1					
	2					
	3					

2) Wage Labour

	Agricultural Labour		Forest Work		Other Work	
	M	F	M	F	M	F
	Type of work					
Place of work						
Distance						
Hours of work per day						
Wage rate						
Instruments of labour						

3) Collection of Forest Produce

Type of produce

Place/Distance

No. of days spent

Quantity of produce collected

Produce sold and its value

4) Fishing/Hunting

- Type of fish/game
- Place/distance
- No.of days spent
- Method of fishing/Hunting
- Quantity collected
- Produce sold and its value

5) Non-Agricultural Economic Activity

- Type of produce
- Instruments of work
- No.of days spent
- Quantum of produce sold and its value
- Expenses for purchase of raw material and other inputs

6) Types of Occupations followed so far

- Preferences in relation to type of occupations
- Reasons for the same

IV. Land Owned and Cultivated

1) Land ownership	Area in acres	Irrigated acreage	Area cultivated	Crops grown
Owned				
Leased out				
Leased in				
Jabranjot				
Mortgaged				

2) Sources of irrigation				
3) Land mortgated - to whom				
Land leased out - to whom				
Land leased in - from whom				

4) Land transactions during last ten years -
 Sale/Purchase/Jabranjot land

V. Crop Production

Crop	Area under crop	Total production	Home consumption	Share rent paid	Sale	Value
1						
2						
3						

2. Crop production - for leased out land

Crop	Area	Production	Share	Sale	Value
1					
2					
3					

3. Sale of Crop

Crop	To whom sold	Place	Terms and conditions of sale
1			
2			
3			

4. Famine/Drought years during the last thirty years and how the situation was met.

VI. Assets**1) Livestock**

	No.	Estimated Value	If purchased, Purchase Price
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Bullock

Cow

Buffalo

Goat

Chicken

Pig

Other

2) Implements

Type	Agricultural	Forest work	Other
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Type

Value

VII. Livestock Production

	Total production	House consumption	Sale quantity	Value	Where sold	To whom
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Milk - Cow

Buffalo

Goat

Manure

Eggs

Other

VIII. Housing

1) No. of rooms :

2) Type of material used for roofing

3) Type of material used for walls

4) Courtyard :

5) Type of animal enclosures/shelters

IX.

1) Indebtedness

	1	2	3
Amount outstanding			
Source of borrowing			
Place-distance			
Purpose			

2) Lending

Amount lent

To whom

3) Savings : amount

How invested

X.

1) Cash Purchases during the last week

	Quantity	Value	Place	Terms
Cereals				
Pulses				
Cooking oil				
Kerosene				
Salt				
Chilli				
Gur				
Sugar				
Tobacco				
Liquor				
Bidi				
For last year				
Cloth				
Durables				

2) Problems in relation to purchase of consumer goods

(a) Shortages

(b) Price rise-seasonality and reasons

II. A. Source of drinking water

Distance

Shortages during summer season

B. 1) Major illness in the family - nature/type of treatment

2) Illness during the last year

Type of treatment

Place, distance

Expenditure

3) Child delivery

4) Family Planning : Information/Practice

C. Marriage Own Son Son Daughter Daughter

How arranged

Amount of bride-price

Total expenditure

D. 1) Festivals celebrated

2) Fairs attended (Place, distance)

3) Entertainment - Film etc. (Place, distance)

E. Travel:

Place (Taluka)

Reason for visit

1

2

XIII. A. Mode of resolving village-level disputes

B. Problems in relation to dealing with -

1) Forest Personnel

2) Obtaining loans and inputs from ACS

3) Dealing with Government functionaries

4) Obtaining loan from cooperative/nationalized banks

5) Employment Guarantee Scheme

6) Benefits from legislation providing for debt relief,
land distribution, etc.

7) Benefits from schemes taken up under the Tribal Sub-Plan.

D. Voting Pattern - Parliament - 1977

Legislative Assembly - 1978

Glossary of Vernacular Terms for Plants
Mentioned in the Text

- Ain - *Terminalia Tomentosa*
 Amba - *Mangifera Indica*
 Ambadi - *Hibiscus Cannabinus*
 Anjan - *Hardwickia Binata*
 Arjun or Koha - *Terminalia Arjuna*
 Avla - *Emblica Officinalis*
 Bamboo - *Dendrocalamus Strictus*
 Behda - *Terminalia Belerica*
 Bel - *Aegle Marmelos*
 Bheria - *Chloroxylon Swietenia*
 Bhilava or Biba - *Semecarpus Anacardium*
 Bibla or Bija - *Pterocarpus Marsupium*
 Bokhra - *Casearia Graveolens*
 Bor - *Zizyphus Jujuba*
 Char or Charoli - *Buchania Lanzas*
 Chikma or Sika - *Panicum Miliare*
 Chinch - *Tamarindus Indica*
 Dhawda or Dhaura - *Anogeissus Latifolia*
 Dikemali - *Gardenia Lucida*
 Dudhi-bhopala - *Cucurbita Pepo*
 Erand - *Ricinus Communis*
 Garadi - *Cleistanthus Collinus*
 Gelphal - *Randia Dumatorum*
 Ghatka or Amu - *Panicum Frumentaceum*
 Ghont - *Zizyphus Xylohyra*
 Haldu - *Adina Cordifolia*
 Hirda - *Terminalia Chebula*
 Hiver - *Acacia Leucophloea*
 Jambhul - *Syzygium Cumini*
 Kadulimb or Neem - *Azadirachta Indica*
 Kanchan - *Bauhinia Variegata*

- Kang - *Setaria Italica*
 Karam or Kadamb - *Anthocephalus Cadamba*
 Karanja - *Pongamia Pinnata*
 Kavath - *Feronia Limonia*
 Khair - *Acacia Catechu*
 Kinhai - *Albizia Procera*
 Kodon or Kodra - *Paspalum Scrobiculatum*
 Kuda - *Holarrhena Antidysenterica*
 Kultha or Kulith - *Glycine Hispida*
 Kusum - *Schleichera Oleosa*
 Kutki or Kosra - *Panicum Milieceum*
 Lassora or Bhokar - *Cordia Obliqua*
 Lendi - *Lagerstroemia Parviflora*
 Madia or Mandia - *Eleusine Coracana*
 Mahua - *Madhuca Longifolia*
 Modi - *Casearia Tomentosa*
 Moi or Mowai - *Lannea Grandis*
 Palas - *Butea Monosperma*
 Palasvel - *Butea Superba*
 Papat vel - *Aristolochia Brasiliensis*
 Pupal or Urad - *Phaseolus Radiatus*
 Rohan - *Soymida Febrifuga*
 Sag - *Tectona Grandis*
 Sal - *Shorea Robusta*
 Salai - *Boswellia Serrata*
 Savar - *Salmalia Malabarica*
 Sem or Jata - *Dolichos Lablab*
 Shemat - *Lannea Coromandelica*
 Shindi - *Phoenix Sylvestris*
 Shisvi - *Dalbergia Sissoo*
 Shivan - *Gmelia Arborea*
 Sitaphal - *Anona Squamosa*
 Suria - *Xylia Dolabriformis*

- Tad - *Borassus Flabellifer*
- Tendu or Temru - *Diosphyros Melanoxylon*
- Til - *Sesamum Indicum*
- Tiwas or Tinsa - *Ougeinia Dalberiodes*
- Wal - *Dolichos Lablab*